Product Specifications Reference
Lenovo® ThinkPad® Notebooks
2005 to 2013 - withdrawn

December 2013 - Version 447
ThinkPad Tablet 1838 (TopSeller) - withdrawn

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**Small and medium business (SMB) model(s), part of the US TopSeller™ Program**

**Positioning**
- Touchscreen tablet for on-the-go business

**Processor**
- Dual-core ARM Cortex™-A9 processor (1.0 GHz per core), 1MB L2 cache

**Memory**
- 1GB / 600MHz LPDDR2, mobile DDR / soldered to systemboard, no sockets

**Storage**
- 16GB, 32GB, or 64GB / eMMC (embedded Multi Media Card) flash memory on board

**Multicard reader**
- 3-in-1 reader (SD, SDHC, MMC), SD card encryption supported

**Graphics**
- NVIDIA® ULP (Ultra-low power) GeForce® GPU, integrated in Tegra™, supports 1080p video out via mini-HDMI™ connector, HDCP-compliant

**Display**
- 10.1" (256.5mm) WXGA (1280x800) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, WideView (170°) viewing, MultiTouch screen supports pen & fiinger gesture

**Tablet pen**
- Some: ThinkPad Tablet Pen (PA33887), supports hover, tip, and pressure modes / a button for "long press" function / user replaceable AAAA battery, up to 18 months

**Camera**
- Front camera: 2.0-megapixel, fixed focus
- Rear camera: 5.0-megapixel, auto focus, digital zoom

**Video support**
- 720p video capture (back camera)

**Audio support**
- High Definition (HD) Audio, Wolfson WMB903 codec / monaural speaker, 0.5 watt x 1 / analog monaural microphone, combo audio/microphone jack

**Ear buds**
- None

**Media capable**
- Audio formats: MP3, AAC, AAC+, eAAC+, WAV, PCM, WMA
- Video formats: MPEG-4, H.263, H.264, VC-1, WMV9, Xvid

**Control buttons**
- Power button, volume control button, reset switch, 4 function buttons (Home, Back, Open Browser, Display Lock)

**Keyboard folio case**
- 6 row, TrackPoint® pointing device, leather cover, magnetic 3-position landscape stand

**ThinkPad tablet dock**
- One USB 2.0, one micro-USB 2.0 (not for power supply), microphone input jack, headphone jack, DC-IN connector (supports 65W AC Adapter, RapidCharge)

**Light sensor**
- Ambient Light Sensor

**Proximity sensor**
- Proximity sensor, Azoteq IQS128

**G-sensor**
- Accelerometer (G) sensor, supports 3-axis accelerometer

**Gyroscope**
- 3-axis gyroscope

**eCompass**
- 3-axis electronic compass, AKM AK8975C

**Platform**
- NVIDIA® Tegra 2 T20

**Ports**
- One USB 2.0, one micro-USB 2.0 (power supply / charging support), one mini-HDMI, headphone/microphone combo jack, one ThinkPad Tablet Dock connector

**WLAN**
- 11b/g/n wireless, Azurewave AW-NH931 module, WiFi + BT combo chip

**WWAN**
- Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS

**Carrier**
- Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider

**GPS**
- Global Positioning System, Broadcom® BCM4751

**Bluetooth™**
- Bluetooth 2.1+EDR wireless, integrated in Tegra, supports Bluetooth 3.0

**Dimensions**
- 10.25" x 7.15" x 0.57"; 260.4mm x 181.7mm x 14.5mm

**Weight**
- WiFi model: from 1.64 lb (0.74kg); 3G model: from 1.67 lb (0.76kg)

**Case color**
- Black

**Case material**
- PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**System states**
- Active, Deep Sleep, Off

**Battery - type**
- Lithium Polymer 2-cell (24Whr)

**Battery - life**
- up to 5 days (suspend); up to 10 hr (idle); up to 9 hr (WiFi browsing); up to 8 hr (3G browsing and video playback)

**Limited Warranty**
- 1-year - depot repair service / service upgrade(s) available

See footnotes for more detailed information

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US model(s) announced August 16 or November 22, 2011

US model(s) withdrawn effective December 2012

(IDG1-1) February 2013
ThinkPad® Tablet 1839 - withdrawn

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**Preloaded operating system**
Android™ 3.1 (HoneyComb)

**Preloaded applications**
- Lenovo® App Shop
- Documents To Go™
- MyScript Notes Mobile
- USB Data Transfer Utility
- User Data and SD Card Encryption
- Lenovo SocialTouch
- PrinterShare™ Mobile Print
- McAfee® Mobile Security
- Google Voice Search
- Google Talk
- Google Maps
- Netflix
- YouTube app
- Adobe® Flash player 10.2
- BlackBerry®
- Amazon MP3
- mSpot Music
- mSpot Movies
- Google Books
- Kindle for Android
- Zinio Magazine Reader
- eBuddy Messenger
- PokéTALK Tablet Version
- goVox™ Video Calls
- Angry Birds
- ArcSoft® PowerMobia® Gallery
- ArcSoft PowerMobia eBook Reader and Bookshelf

**Preloaded applications**
- International Warranty Service
- 24-hour x 7-day toll-free support during the warranty period
- For Lenovo service upgrade options, please go to O-Tablet sheet.
- For Lenovo service upgrade options, please go to O-Tablet sheet.

**Dimensions**
10.25" x 7.15" x 0.57"; 260.4mm x 181.7mm x 14.5mm

**Weight**
WiFi model: from 1.64 lb (0.74kg); 3G model: from 1.67 lb (0.76kg)

**Case color**
Black

**Limited Warranty**
1-year - depot repair service / service upgrades available

See footnotes for more detailed information
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US model(s) announced August 16 or November 22, 2011
US model(s) withdrawn effective December 2012
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More info at [www.lenovo.com/support/poweradapters](http://www.lenovo.com/support/poweradapters)

For more information on accessories:
[www.lenovo.com/accessories](http://www.lenovo.com/accessories)
[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)
[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)
[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

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## ThinkPad R40e - withdrawn

### Type-model  Processor  Speed Frequency  Memory  Screen  Disk Bay  Optical  Mini PCI Comm Bay wireless  CDC Comm GB  Ethernet on planar  Security chip  Preload  Workhorse or (Global) (W) or Entry (E)  Avail date

| Type-model | Processor | Speed Frequency | Memory | Screen | Disk Bay | Optical | Mini PCI Comm Bay wireless | CDC Comm GB | Ethernet on planar | Security chip | Preload | Workhorse or (Global) (W) or Entry (E)  Avail date |
|------------|-----------|----------------|--------|--------|----------|---------|---------------------------|-------------|-------------------|--------------|---------|------------------------------------------------|----------------------|
| 2684-22U   | Celeron®  | 1.7            | 128MB  | 13.3"  | XGA      | 20GB    | CD                        | None        | Modern            | 10/100       | No           | Windows XP Home E                        | Mar 2003              |
| 2684-G2U   | Celeron®  | 1.8            | 128MB  | 14.1"  | XGA      | 20GB    | CD                        | None        | Modern            | 10/100       | No           | Windows XP Home E                        | May 2003              |
| 2684-GBU   | Celeron®  | 1.8            | 128MB  | 14.1"  | XGA      | 20GB    | CD                        | None        | Modern            | 10/100       | No           | Windows XP Home E                        | May 2003              |
| 2684-CAU   | Pentium® 4-M | 1.7          | 256MB  | 14.1"  | XGA      | 20GB    | Combo                      | None        | Modern            | 10/100       | No           | Windows XP Home E                        | Mar 2003              |
| 2684-B2U   | Pentium® 4-M | 1.8          | 256MB  | 14.1"  | XGA      | 20GB    | CD                        | None        | Modern            | 10/100       | No           | Windows XP Home E                        | May 2003              |
| 2684-Q2U   | Pentium® 4-M | 2.2          | 128MB  | 14.1"  | XGA      | 20GB    | Combo                      | None        | Modern            | 10/100       | No           | Windows XP Home E                        | May 2003              |
| 2684-QUU   | Pentium® 4-M | 2.2          | 256MB  | 14.1"  | XGA      | 30GB    | Combo                      | None        | Modern            | 10/100       | No           | Windows XP Home E                        | May 2003              |
| 2684-GBU   | Pentium® 4-M | 2.2          | 256MB  | 14.1"  | XGA      | 40GB    | Combo 11b Wi-Fi®          | 10/100       | No           | Windows XP Home E                        | May 2003              |

### Positioning Processor
- Mainstream performance and features: two-spindle system
- Mobile Intel® Celeron 1.7 or 1.8 GHz with 400MHz frontside bus or
- Mobile Intel Pentium 4 Processor-M 1.8 or 2.2GHz with enhanced Intel SpeedStep technology and 400MHz frontside bus

### L2 cache Memory
- Celeron: 256KB; Pentium 4-M: 512KB; All: on die (at processor speed) / ECC
- 128 or 256MB std / 1GB max / PC100 266MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

### Diskette drive
- Standard drive: none; standard drives: none
- USB drive: none; standard drives: none
- CD drive: none; standard drives: standard drives

### Disk drive
- DVD drive: none; standard drives: standard drives

### Display
- 13.3" (337.8mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- All: Easy-open cover to unlatch and open with one hand (two latches)

### Graphics
- ATI® RADEON® IGP 330M / IGP 330M in integrated northbridge / 16MB DDR1 (DDR-SRAM)
- External monitor support via analog XGA/1280x1024 at 85Hz on planar

### Keyboard
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass / soft dome TrackPoint® / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

### Touchpad
- No UltraNav® multi-pointing system

### Dimensions
- 12.3 x 10.0 x 1.53" / 313mm x 254mm x 38.9mm
- with optical drive and battery: 52U/G82/B2U/Q2U: 5.9 lb (2.67kg); 22U/CAU/QUO/B6U / 6.2 lb (2.72kg)

### Case material
- Color: Black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

### Battery type
- Lithium Ion 6-cell / intelligent
- Celeron models: 2.1 hrs; Pentium 4-M models: 2.6 hrs

### Architecture
- ATI® RADEON® IGP 330M chipset / IGP 330M northbridge (memory controller, graphics controller, PCI bus) / ALI® M1535+ southbridge (ATA-100 IDE, Low Pin Count [LPC] interface, USB, parallel, audio) / PCI1.2, 32-bit 33MHz (T'T PCI1151 CardBus controller) / LPC bus 33MHz (PC87392 Super I/O for parallel)

### Port replicator
- No port replicator support

### Docking station
- No docking station support

### PC Card Std slots
- Two Type II or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
- Two USB (Version 1.1) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet)

### Video out
- None

### IEEE 1394
- None

### Wireless antenna
- None (non-wireless models): none / can upgrade to wireless via optional PC Cards

### Mini PCI
- 11b Wi-Fi® (R40E) October 2005
- None (non-wireless models): No Mini PCI slot / Communications Bay

### CDC
- Some (non-wireless models): No Mini PCI slot / Communications Bay

### Modem
- Some (wired models): 56K6 V.90 (V.92-designed) modem in CDC / Agere
- Some (wireless model QBU): UltraConnect
- Some (non-wireless models): None / can upgrade to wireless via optional PC Cards

### Audio support
- Some (wired models): 56K6 V.90 (V.92-designed) modem in CDC / Agere
- Some (wireless model QBU): UltraConnect
- Some (non-wireless models): None / can upgrade to wireless via optional PC Cards

### Security
- Power-on password / hard disk password / supervisor password / security keyhole

### Limited warranty
- 1 year - EasyServ® onsite pickup and delivery courier service
- Service options: upgrade years up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)

### Service options
- Service upgrades: provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)

### Workhorse or (Global) (W) or Entry (E)
- Windows XP Home models
- - Microsoft® Windows® XP Home Edition
- - Disk-to-Disk Recovery (in hidden protected area)
- Windows XP Pro models
- - Microsoft Windows XP Professional
- - Disk-to-Disk Recovery (in hidden protected area)

### Preloaded
- Access IBM
- Adobe Reader
- Rapid Restore® PC
- RecordNOW and DLA
- by Veritas (com部委 models)
- InterVideo WinDVD (combo models)
- Norton® AntiVirus (OEM edition)
- PC-Doctor®
- ThinkPad Utilities
- Update Connector®TM,15

### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

### License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Additional Features
- ThinkPad notebooks implement ThinkVantage® technologies and design;
- visit thinkpad.com/thinkvantage

### Universal 72 watt AC adapter
- PC 2001 and P2X 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during warranty via 800-IBM-SEVR (426-7378)

### ServicePac®
- 2year IOR 9x5 NBD
- ServicePac 2 yr IOR 9x5 NBD
- ServicePac 4 yr IOR 9x5 NBD
- ServicePac 5 yr IOR 9x5 NBD
- ServicePac 2 yr P&L P/U Depot
- ServicePac 3 yr P&L P/U Depot
- ServicePac 4 yr P&L P/U Depot
- ServicePac 5 yr P&L P/U Depot
- Other ServicePac options at ibm.com/services/its/us-source/
- Post-warranty annual maintenance agreements at ibm.com/services/its/us-source/maspspleu.pdf
### ThinkPad R40 (2723) - withdrawn

Created by Lenovo Training Solutions Personal Systems Reference (PSRF) Edition

**2723 models have a 2 year limited warranty; ThinkPad R40 systems have a 1 year limited warranty.**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Speed</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Ethernet</th>
<th>Workload (W) or Global (G)</th>
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<td>Pentium M 1.3</td>
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<td>Modem</td>
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<td>Modem</td>
<td>10/100</td>
<td>Yes XP Pro W</td>
<td>G Apr 2003</td>
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</tbody>
</table>

#### Positioning

**Mainstream performance and features: two-spindle system**

**Processor**

- Intel® Pentium® M Processor 1.3, 1.4, or 1.5GHz with enhanced Intel SpeedStep™ technology and 400MHz frontside bus

**L2 cache**

- 1MB / on die (at processor speed) / ECC

**Memory**

- 266MB std / 2GB max / PC2100 266MHz DDR1 (DDR-SRAM) / non-parity / CL2.5 / two 20-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive**

- None standard / use optional Ultrabay™-based or USB-based diskette drive

**Graphics**

- Some: DVD-ROM / 8X/3.5X speed / bootable / removable from Ultrabay 2000

**Ports**

- One modular board / two 20-pin SO-DIMM sockets / removable and upgradable / 9.5mm high / supports 2nd disk with optional HDD Adapter in Ultrabay 2000

**Display**

- Some: 14.1" (358mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

**Weight**

- Some: 15.0" (381mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

**Dimensions**

- Some: 15.0" (381mm) XGA (1024x768) SXGA+ (1400x1050) TFT color / 150 nits

**Graphics external**

- Some: ATI® MOBILITY RADEON™ AGP 4X / 16MB DDR 1 (DDR-SRAM)

**Disk**

- Some: ATI MOBILITY RADEON™ 7500 AGP 4X / 32MB DDR 1 (DDR-SRAM)

**Universal 72 watt AC adapter**

- Post-warranty annual maintenance agreements at ibm.com/services/its/us/source/maspspleu.pdf

### Additional Information

- See footnotes for important warranty information
- © 2003 Lenovo
- US models announced March 12, 2003
- ©Lenovo (R403M) October 2005

### Software

- Windows XP Professional
- IBM® ThinkPad Utilities
- IBM® ThinkPad Terminal Emulation
- IBM® ThinkPad Multiple Battery Charger II 22P9040
- GemPC400 Smart Card Reader/Writer 31P8901
- 40GB HS Hard Disk 9.5mm (5400 rpm) 08K9816
- GenPC400 Smart Card Reader/Writer 31P8901
- ThinkPad R32/R40 Series Li-Ion Battery 02K0752
- Ultrabay 2000 Li-Ion Battery 02K6649
- ThinkPad PD CardBus Adapter 31P9071
- ThinkPad Wireless Mini PCI Adapter 31P9070
- ThinkPad Wired Workmate 420 31P9740
- ThinkPad Wireless Workmate 400 31P9730
- ThinkPad Carry Case - Expand 73P3597
- ThinkPad Port Replicator II 74P6733
- ThinkPad Mini Dock 287B10U
- ThinkPad Wireless Adapter 72W 02K6699
- ThinkPad 72W Slim AC/DC Combo Adapter 73P4485
- USB 2.0 Portable CDRW Drive 72P5297
- Other options at lenovo.com/options
ThinkPad R40 (XP Home) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Type-model | Processor | Speed (MHz | Memory | Screen | Graphics | Disk Memory | Optical | Mini PCI | Comm Bay | Warranty
---|---|---|---|---|---|---|---|---|---|---
2681-1SU | Celeron® | 1.6 | 128MB | 13.3" XGA | 16MB | 20GB | CD: Open; wireless upg™ | Modem 10/100 | 1394 | No XP Home | E Jan 2003
2681-2SU | Celeron® | 1.6 | 128MB | 14.1" XGA | 16MB | 20GB | CD: Open; wireless upg™ | Modem 10/100 | 1394 | No XP Home | E Jan 2003
2681-3SU | Pentium 4-M | 1.8 | 128MB | 14.1" XGA | 16MB | 20GB | Modem 10/100 | 1394 | No XP Home | E May 2003
2681-4SU | Celeron® | 1.8 | 128MB | 15.0" XGA | 16MB | 20GB | CD: Open; wireless upg™ | Modem 10/100 | 1394 | No XP Home | May 2003
2681-5SU | Celeron® | 1.8 | 128MB | 15.0" XGA | 16MB | 20GB | CD: Open; wireless upg™ | Modem 10/100 | 1394 | No XP Home | Nov 2003
2681-6SU | Celeron® | 2.0 | 128MB | 15.0" XGA | 16MB | 20GB | CD: Open; wireless upg™ | Modem 10/100 | 1394 | No XP Home | Nov 2003
2681-7SU | Pentium® 4-M | 2.2 | 128MB | 14.1" XGA | 16MB | 20GB | CD: Open; wireless upg™ | Modem 10/100 | 1394 | No XP Home | E May 2003

SOFTWARE

Windows XP Home models
- Microsoft® Windows® XP Home Edition
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Access Connections
- Access Help
- Access Support
- Adobe Reader
- Rapid Restore™, PC
- Intel/VideoDrivers, DVD models
- Norton AntiVirus (OEM edition)
- IBM PC-Doctor™
- ThinkPad Utilities
- Update Connector

License
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

Universal 72 watt AC adapter
- Asset ID (system-specific info in chip accessed over network)

PC 2001 and PXE 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service

Limited warranty

1 year - EasyServ™ onsite pickup and delivery / service upgrades available

Limited warranty information

See footnotes for important warranty information

US models announced on January 28, May 21, or November 11, 2003
US models withdrawn effective January 4, 2004, April 15, 2004, or December 20, 2005
ThinkPad® R40 (2682) - October 2003 - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

See footnotes for important warranty information

US models withdrawn effective October 2004 or December 2005

SOFTWARE

Windows XP Professional
- Microsoft® Windows® XP Professional

Disk-to-Disk Recovery
(in hidden protected area)

Preloaded
- Access IBM
- Access Connections™
- Adobe Reader
- Rapid Restore™ PC
- RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (DVD model)
- Norton Antivirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Update Connector™

Downloadable
- IBM Direct Download Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement thinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
ENERGY STAR®-compliant
ImageUltra™'s services available
International Warranty Service17

24 hour x 7 day18 toll-free warranty
support during the warranty12 via ibm.com/services/its/us/source/
Access IBM
Preloaded
Post-warranty annual maintenance

ServicePac 4 yr IOR 9x5 NBD
ServicePac 5 yr IOR 9x5 NBD
30L9190
30L9192
69P9198
30L9198
69P9199
69P9199
69P9191
69P9190

Limited warranty12

3 years/1 year battery - EasyServ13/14 onsite pickup and delivery
Service upgrades15 provide up to five years of depot or repair service coverage from date of ThinkPad purchase (including warranty period)

128MB PC 2100 DDR-SDRAM CL2.5 SOD 10K0028
256MB PC 2100 DDR-SDRAM CL2.5 SOD 10K0030
512MB PC 2100 DDR-SDRAM CL2.5 SOD 10K0032
CD-RW/DVD UltraBay Drive 08K9028
UltraLight 8X Max DVD UltraBay 22P9102
24X-10X CD-ROM UltraBay 2000 09K9233
Second HDD Adapter for UltraBay 2000 08K6068
Multi-Burner Plus UltraBay Enhanced Drive 31P9312
USB Portable Diskette Drive 05K9276
USB Serial Parallel Adapter 22P5298
USB 2.0 Combo Drive 73P4515
USB 2.0 Portable 80GB Hard Disk 40Y7826
USB 2.0 Memory Key 256MB 22P9202
USB 2.0 Memory Key 512MB 22P9230
Optical 3-Bus Travel Wheel Mouse 31P7410
Optical 3-Bus Travel Wheel Mouse 2878170
USB Travel Keyboard with UltraNav 31P9490
GemPC 400 Smart Card Reader/Writer 31P8901

ThinkPad R32/R40 Series Li-Ion Battery 02K7052
ThinkPad Multi Battery Charger II 22P9040
ThinkPad Multi Battery Charger II 09V3955
ThinkPad Multi Battery Charger II 09V3955
ThinkPad Multi Battery Charger II 09V3955
ThinkPad Multi Battery Charger II 09V3955
ThinkPad Multi Battery Charger II 09V3955

30L9190
30L9192
69P9198
30L9198
69P9199
69P9199
69P9191
69P9190

Other ServicePac options at ibm.com/services/its/us/source/wamomxeu.pdf

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### ThinkPad R40 (2682) - Education - withdrawn

**Positioning Processor**
- Mainstream performance and features, two-spindle system
- Mobile Intel® Celeron 1.8 or 2.0GHz with 400MHz system bus or
- Mobile Intel® Pentium 4 Processor-M 2.0, 2.2, or 2.4GHz with enhanced Intel SpeedStep™ technology and 400MHz system bus

**L2 cache Memory**
- Celeron®: 256KB, Pentium 4-M: 512KB, All: on die (at processor speed)

**Audio support**
- US models withdrawn effective April 2004, October 2004, or December 2005

**IEEE 1394 Architecture**
- Battery - type
- Case material
- Weight2
- Touch pad
- Keyboard
- Graphics external
- Display

**2682-48U**
- Celeron® 1.8 128MB 14.1" XGA 32MB 40GB CD
- Mini PCI Comm Bay: 11a/b/Wi-Fi®
- CD-ROM: 10/100/1000: 1394
- Workhorse (W) or Global (G): Preload: 0<span>Avail</span>

**2682-FXU**
- Pentium®-M 2.0 256MB 14.1" XGA
- Mini PCI Comm Bay: 11a/b/Wi-Fi®
- CD-ROM: 10/100/1000: 1394
- Workhorse (W) or Global (G): Preload: 1003

**2682-LAU**
- Pentium 4-M 2.2 256MB 15.0" SXGA+ 40GB CD
- Mini PCI Comm Bay: 11a/b/Wi-Fi®
- CD-ROM: 10/100/1000: 1394
- Workhorse (W) or Global (G): Preload: 1003

**2682-QGU**
- Pentium 4-M 2.4 256MB 15.0" SXGA+ 32MB 40GB CD
- Mini PCI Comm Bay: 11a/b/Wi-Fi®
- CD-ROM: 10/100/1000: 1394
- Workhorse (W) or Global (G): Preload: 1003

These educational models of the ThinkPad R40 notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.

This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.

**2682 models have a 3 year limited warranty (2683 and 2896 ThinkPad R40 systems have a 1 year limited warranty)**

**SOFTWARE**
- Windows XP Professional
- IBM Director Agent
- IBM eServer Tivoli® Management Console
- IBM Director Agent
- i2 ToxT™ Discovery

**Preloaded**
- Access IBM
- Access Connections™
- Adobe Reader
- Embedded Security Subsystem 2.0
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**
- Linux (CD not included)
- Lotus® SmartSuite® Millennium

**Performance**
- 2682-48U: 128MB 14.1" XGA 32MB 40GB CD
- 2682-FXU: 256MB 14.1" XGA
- 2682-LAU: 256MB 15.0" SXGA+ 40GB CD
- 2682-QGU: 256MB 15.0" SXGA+ 32MB 40GB CD

**Limited warranty**
- 3 years/1 year battery - EasyServ™ on-site pickup and delivery

---

**See footnotes for important warranty information**

© Lenovo

US models announced March 25 or October 7, 2003

US models withdrawn effective April 2004, October 2004, or December 2005

(R403E) October 2005
### ThinkPad R40 (March 2003) - withdrawn

**SOFTWARE**

- Windows XP Pro models
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden protected area)

- Windows XP Home models
  - Microsoft Windows XP Home Edition
  - Disk-to-Disk Recovery (in hidden protected area)

**INCLUDED SOFTWARE**

- Access IBM
- Adobe Reader
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**

- Lotus® Smartsuite® Millennium
- Lotus Notes® Stand-alone Client

**Preloaded**

- Access IBM
- IBM Connectra
- IBM Director Agent
- TCG-compliant
- CIM and DMI 2.0-compliant
- ACPI 1.0b and 2.0-compliant
- PC 2001 and PXE 2.0-compliant
- Universal 72 watt AC adapter

**Universal**

- 72 watt AC adapter

- Asset ID™ (system-specific info in chip accessible over network)
- Windows 2000 and PKE 2.0-compliant

**Limited warranty**

- 1 year - EasyServ™ onsite pickup & delivery / service upgrades™ available

**ServicePac**

- 3yr P&L P/U Depot
- 3yr P&L P/U Depot
- 3yr P&L P/U Depot
- 3yr P&L P/U Depot

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics Disk</th>
<th>Mini PCI Comm Bay</th>
<th>CDC modem/ Bluetooth®</th>
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<th>IEEE 1394 Security Subsystem</th>
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<td>16MB 20G DVD</td>
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<td>wireless upg</td>
<td>10/100</td>
<td>1394 Yes XP Pro</td>
<td>Mar 2003</td>
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</table>

See footnotes for important warranty information. *©* Powered by Intel Centrino™ mobile technology

US models announced March 12, October 21, or November 21, 2002.


(R04M) October 2005

Lenovo

US models announced March 12, October 21, or November 21, 2002.


(R04M) October 2005

Lenovo
## Type-model  Processor  Speed  L2 cache  Memory  Screen  Disk drive  Mini PCI  Comm Bay  Optical  CDC  modem  Integrated graphics  Security chip  Limited warranty  Workhorse (W)  Global (G)  Availability

<table>
<thead>
<tr>
<th>Type-model</th>
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<th>Memory</th>
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<th>CDC  modem</th>
<th>Integrated graphics</th>
<th>Security chip</th>
<th>Limited warranty</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
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<td>12MB</td>
<td>256MB</td>
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<td>DVD-ROM</td>
<td>Non-removable</td>
<td>3.5 mm high bay</td>
<td>1.35-1.46&quot;</td>
<td>314mm x 260mm x 34-37mm</td>
<td>1.35-1.46&quot;</td>
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<td>1 yr</td>
<td>No XP Home 1 yr</td>
<td>E Dec 04</td>
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<td>1 yr</td>
<td>No XP Home 1 yr</td>
<td>E Dec 04</td>
<td></td>
</tr>
</tbody>
</table>

## Graphics

- **Integrated Intel Extreme Graphics 2** in 855GM GMCH
- **uses main memory (up to 64MB) / 200MHz**

## Architecture

- **Intel 855GM chipset / 82801DBMICH 4-M I/O Controller Hub (MCH-M) / 82801DBMICH 4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB) / PCI bus 2.32-bit, 33MHz (TI 131510 Carbus controller, Mini PCI) / LPC bus 33MHz (PC87392 Super I/O for parallel)**

## Power/Performance

- **400-500 MHz with 400MHz system bus or Intel Pentium M Processor 710 / 715 1.4 GHz, or 2.0GHz with enhanced Intel SpeedStep technology**

## Display

- **14.1" (358.1mm) XGA (1024x768)**
- **TFT color / Active Matrix / 150 nits**
- **Dimensions: 14.1" (358.1mm) / 10.2" (260mm) / 34-37mm (combo models)**

## Energy Star

- **ENERGY STAR compliant**
- **CIM and DMI 2.0-compliant**
- **Supported in Windows XP Home and Pro model configurations**

## Security

- **Power-on password / hard disk password / supervisor password / security keyhole**
- **Password-to-RecordNOW and Drive Letter**
- **24 hour x 7 day toll-free warranty support during warranty period**

## Availability

- **IBM ThinkVantage technologies**
- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**
- **Windows XP Home models**
- **Windows XP Professional**
- **Disk-to-Disk Recovery (in hidden protected area)**
- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**

## Support

- **ServicePac 1 year**
- **ServicePac 2 year**
- **ServicePac 3 year**
- **ServicePac 4 year**
- **ServicePac 5 year**

---

*Lenovo* 

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US models announced Sept 14, Oct 12, or Dec 21, 2004, or Jan 11, 2005

US models withdrawn effective September 2005

See footnotes for important warranty information

* Powered by Intel Centrino mobile technology

_lenovo.com_
ThinkPad R50e (1834) - March 2005 - withdrawn

See footnotes for important warranty information

<table>
<thead>
<tr>
<th>Type-Model</th>
<th>Processor</th>
<th>Speed</th>
<th>L2 Cache</th>
<th>Memory</th>
<th>Screen</th>
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<th>Disk</th>
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<th>Security Chip</th>
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<td>MB 256MB</td>
<td>14.1” XGA</td>
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<td>No</td>
<td>XP Pro</td>
<td>1</td>
<td>No</td>
<td>No Mar 05</td>
</tr>
</tbody>
</table>

Positioning

Processor

Mainstream performance and features: two-socket system

Celeron M Processor 350 (1.3GHz) with 400MHz system bus or
Intel Pentium M Processor 735 (1.7GHz) with enhanced Intel SpeedStep™ technology1 and 400MHz system bus

L2 cache

Celeron M 350: 1MB; Pentium M 735: 2 MB; All: on die (at processor speed) / ECC

Memory

256MB std / 2GB max / PC2700 333MHz DDR1 (memory controller limits speed to 266MHz) / non-parity / CL2.5 / two-200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive

None standard / use optional USB-based diskette drive

Audio support

Soft audio / ICH AC97 controller / DirectSound

Ethernet

10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN

Mini PCI

One Communications Daughter Card (CDC) socket (used by modem) / not accessible

Some: 11b/g wireless4, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

Some: no Mini PCI slot (Communications Bay)

Docking station

No docking station support

Battery - type

Lithium Ion 6-cell / intelligent / supports optional 9-cell battery

Battery - life

Celeron M models: up to 3.4 hr; Pentium M models: up to 4.0 hr; Optional High Capacity 9-cell: up to 5.4 hr

Graphics external

Integrated Intel Extreme™ Graphics 2 / In 855GM GMCH / uses main memory (up to 64MB) / 200MHz

Display

Some: 14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0” (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Keyboard

External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Touchpad

No UltraNav™ multi-pointing system

ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

Port replicator

No port replicator support

PC Card Std slots

One Type I, One Type II, or One Type III / CardBus 32-bit / PCMCIA 2.1 / integrated doo

Some: USB 2.0 Memory (Version 2.0) / parallel / external monitor (DB-15) / RJ -11 (modem) / RJ -45 (ethernet) / no keyboard or mouse or serial or infrared port

Wireless antenna

None / can upgrade to wireless via optional PC Cards

Some: UltraConnect™ Antenna built into the cover display

Some: one Mini PCI slot (Communications Bay) / no customer upgradeable

Intell 11b/g12

Some: 11b/wireless, InteliMini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

C/D

One Communications Daughter Card (CDC) socket (used by modem) / not accessible

Intel PRO/Wireless 2200BG, Intel 82532 chipset

Modem

Intel 11b/g

Ethernet

10/100 ethernet on planar / Intel 82562EZ chipset (physical layer) / Wake on LAN

Audio support

Soft audio / ICH AC97 controller / DirectSound™ support / AD1981B AC 97 codec / mono speaker / 1 watt / volume up, down, mute buttons / no internal microphone / microphone input jack (3.5mm) / headphone jack (3.5mm) / no line in jack

Security

Power-on password / hard disk password / supervisor password / security keyhole

Security chip

None

Limited warranty

3 year - EasyServ™ onsite pickup and delivery courier service

1 year - EasyServ™ onsite pickup and delivery courier service

SOFTWARE

Windows XP Home models

Microsoft Windows XP Home Edition™ (Service Pack 2)

Disk-to-Disk Recovery (in hidden protected area)

Windows XP Professional models

Microsoft Windows XP Professional™ (Service Pack 2)

Disk-to-Disk Recovery (in hidden protected area)

Preloaded (all)

Rescue and Recovery™

Access IBM

Access Connections

Norton AntiVirus (OEM edition)

PC-Doctor™

ThinkPad Utilities

Update Connectivity™

RecordNOW and Drive Listener

Access powered by Sonic products (combo models)

InterVideo WinDVD (combo models)

Downloadable (all)

IBM Director Agent

Software Delivery Assistant

System Migration Assistant

License

CD (not included)

Lotus® SmartSuite® Millennium and Lotus Notes™ Stand-alone Client

ServicePac

3 year IOR 9x5 NBD

3 year IOR 9x5 NBD

2 year IOR 9x5 NBD

1 yr IOR 9x5 NBD

1 year - EasyServ™ onsite pickup and delivery courier service

* Powered by Intel Centrino™ mobile technology

Lenovo

(1834M) October 2005

See footnotes for important warranty information

US models announced March 1, 2005

US models withdrawn effective November 2005
**ThinkPad R50e (1834) - Education - withdrawn**

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<th>Speed GHz</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Screen</th>
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<th>Mini PCI</th>
<th>Comm Bay</th>
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<tr>
<td>1834-LGU</td>
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<td>1834-L4U</td>
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</table>

**The 1834 has a 1 year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**SOFTwARE**

- Windows XP Professional
- Microsoft Windows XP Professional
- Disk-to-Disk Recovery

**Preloaded**

- Education software from Vital Source Technologies
- vitsource KEY™ and Personal Portable Library™
- Access IBM
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OEM edition)
- PC-Doctor®
- ThinkPad Utilities
- Adobe Reader
- Update Connect®
- RecordNOW and Drive Letter
- InterVideo WinDVD (combo models)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**

- Lotus® SmartSuite Millennium
- Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter

Asset ID®** 5** (system-specific info in chip accessed over network)

PC 2001 and PXE 2.0-compliant

ACPI 1.0b and 2.0-compliant

ENERGY STAR®-compliant

Inteúmeral Services available

International Warranty Service

24 hour x 7 day** 7** toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)

Service Pac® 2 yr IOR 5¥ NBD 30L9194

Service Pac 3 yr IOR 5¥ NBD 30L9195

Service Pac 4 yr IOR 5¥ NBD 30L9196

Service Pac 5 yr IOR 5¥ NBD 30L9197

See footnotes for important warranty information  *

* Powered by Intel Centrino™ mobile technology

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US models announced September 14, 2004, March 1, 2005, or July 6, 2005

US models withdrawn effective September or November 2005

(1834E) October 2005
### ThinkPad R50e (1842) - Express - withdrawn

#### Type-model
- **1842-2QU** Celeron M, 1.3 GHz, 256 MB, 15.0" XGA, 30 GB, CD
- **1842-2RU** Celeron M, 1.3 GHz, 256 MB, 15.0" XGA, 30 GB, Combo
- **1842-BJU** Pentium M, 715 - 1.5 MHz, 256 MB, 15.0" XGA, 30 GB, Combo (Intel 11b/g)
- **1842-PPU** Pentium M, 715a - 1.5 MHz, 256 MB, 15.0" XGA, 30 GB, Combo
- **1842-GQU** Celeron M, 330 - 1.4 GHz, 512 MB, 15.0" XGA, 30 GB, Combo
- **1842-GRU** Celeron M, 330 - 1.4 GHz, 512 MB, 15.0" XGA, 30 GB, Combo
- **1842-G3U** Celeron M, 340 - 1.5 GHz, 512 MB, 15.0" XGA, 30 GB, Combo
- **1842-G7U** Celeron M, 350 - 1.5 GHz, 512 MB, 15.0" XGA, 30 GB, Combo
- **1842-M50** Celeron M, 350 - 1.5 GHz, 512 MB, 15.0" XGA, 30 GB, Combo
- **1842-GDU** Celeron M, 350 - 1.3 GHz, 256 MB, 15.0" XGA, 30 GB, Combo
- **1842-HRU** Pentium M, 725 - 1.6 MHz, 256 MB, 15.0" XGA, 30 GB, Combo (Intel 11b/g)

#### Processor
- **Intel® Celeron Processors** (1.2 GHz, 300 MHz, 340 MHz, 350 MHz, 375 MHz)
- **Intel® Pentium Processors** (715 MHz, 715a MHz)

#### Memory
- **128 MB PC2700 DDR-SDRAM CL2.5 512MB, 256MB, 15.0" XGA, 30 GB, Combo**
- **1 GB PC2700 DDR-SDRAM CL2.5 512MB, 256MB, 15.0" XGA, 30 GB, Combo**
- **4 GB Microdrive™ with PC Card**
- **USB Portable Diskette Drive**
- **USB 2.0 Portable Multi-Burner Drive**
- **USB 2.0 Memory Key S12MB**
- **M400 Projector**
- **Kensington® MicroSaver® Security Cable**

#### Graphics
- **Intel Extreme 2 Graphics**
- **Integrated Intel Extreme Graphics 2 in 855GM GMA**
- **Windows XP Professional**
- **IBM® Director Agent**

#### Security
- **Power-on password**
- **Hard disk password**
- **Supervisor password**
- **Security keyhole**

#### Worldwide warranty
- **1 year - EasyServ™ on-site pickup and delivery courier service**

See footnotes for important warranty information
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*Powered by Intel Centrino™ mobile technology*
### ThinkPad R50e (1842) - TopSeller (June 2005) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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*These small and medium business (SMB) models are part of the US TopSeller™ Program

**The 1842 has a 1 year limited warranty**

**SOFTWARE**

- **Windows XP Home models**: Microsoft® Windows® XP Home Edition™ (Service Pack 2)
- **Disk-to-Disks Recovery** (in hidden protected area)

- **Windows XP Professional models**: Microsoft Windows XP Professional Edition (Service Pack 2)
- **Disk-to-Disks Recovery** (in hidden protected area)

Preloaded (all):
- Access Program
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OE edition)
- PC-Doctor™
- ThinkPad™ Utilities
- Adobe® Reader
- RecordNOW® and Drive
- Letter Access powered by Sonic products (combo, DVD:RW)

**ThinkPlus**

- 24 hour x 7 day 18 toll-free warranty
- ThinkPlus 3-year P&L P/U Depot
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD

*See footnotes for important warranty information*
SOFTWARE

Windows XP Professional models
- Microsoft Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disk Recovery
    (in hidden protected area)

Windows XP Home models
- Microsoft Windows XP Home Edition™ (Service Pack 2)
  - Disk-to-Disk Recovery
    (in hidden protected area)

Preloaded (all)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec™ Client Security
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think Orthers
- Sonic RecordNOW and Drive
- Letter Access (combo)
- InterVideo WinDVD (combo)

License - CD not included (all)
- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client
  (Notes client not supported on XP Home)

ThinkPad notebooks implement ThinkVantage® technologies and design. See Lenovo.com/thinkpad

Lenovo

Universal 72 watt ac adapter
- PC 2001 and PXE 2.0-compliant
- ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service™
- 24 hour x 7 day™ toll-free warranty support during the warranty

ThinkPlus™ 1-year LOR 9x5 NBD
41C9166
ThinkPlus 2-year LOR 9x5 NBD
41C9167
ThinkPlus 3-year LOR 9x5 NBD
41C9168
ThinkPlus 4-year LOR 9x5 NBD
41C9171
ThinkPlus 5-year LOR 9x5 NBD
41C9173
ThinkPlus 2-year P&L P/U Depot
41C9169
ThinkPlus 3-year P&L P/U Depot
41C9170
ThinkPlus 4-year P&L P/U Depot
41C9172
ThinkPlus 5-year P&L P/U Depot
41C9174

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

ThinkPad® R51e (1843) - withdrawn

ThinkPad

US models withdrawn effective April 2006

See footnotes for important warranty information

Made by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Created by Lenovo Training Solutions

(K61) April 2006
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- **These models have an EasyServ™ on-site pickup and delivery 1-year limited warranty.**

### SOFTWARE™

**Windows XP Professional models**
- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

- **Preloaded**
  - Rescue and Recovery™
  - Access Connections
  - ThinkVantage® Solution
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec® Client Security
  - PC-Doctor®
  - ThinkPad utilities
  - Adobe® Reader
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive
  - Letter Access (combo)
  - InterVideo WinDVD (combo)

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage technologies and design: thinkpad.com/thinkvantage

- Universal 72 watt AC adapter
- APIC 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- ENERGY STAR®-compliant
- RoHS compliant

- **International Warranty Service**
- 24 hour x 7 day** till-free warranty support during the warranty**

**ThinkPlus**
- 2-year LOR 9x5 NBD
- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD

See footnotes for important warranty information

US models announced January 10, 2006
US models withdrawn effective October 2006

© Lenovo

(K6D-3) October 2006
ThinkPad® R51e (1843) - Education - withdrawn

See footnotes for important warranty information
US models announced January 10, 2006
US models withdrawn effective October 2006

### Type-model Processor Speed L2 Cache Memory Screen Disk GB Modi Mini PCI Caching CDS Integrated graphics Secu-

- **1843-A2U Celeron® M 380 1.6 1MB 256MB 14.1" XGA 40GB CD 11a/b/g II™ Modem Xpress 200M No XP Pro 1-yr No Jan 06**

### SOFTWARE™

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disco Recovery (in hidden protected area)

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

#### Preloaded

- Education software from Vital Source Technologies™, vitalsource.com™ and PersoInal Portable Library™
- Rescue and Recovery™
- Access Connections™
- Client Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- SymantecLiveSafe™ Client Security
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think
- Offerings
- Sonic RecordNow® and Drive
- Letter Access (combo)
- InterVideo WinDVD® (combo)

#### License

- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

- **These EasyServ™-ing onsite pickup and delivery 1-year limited warranty models have an EasyServ™,19 onsite pickup and delivery 1-year limited warranty**

#### Limited warranty² 1-year - EasyServ™,19 onsite pickup and delivery courier service

- **256MB PC2-4200 DDR2 NP CL4 SOD 73P3840 ThinkPad T40/T50 Li-Ion Battery 6-cell 92P1101**
- **512MB PC2-4200 DDR2 NP CL4 SOD 73P3842 ThinkPad T40/T50 Li-Ion Battery 9-cell 92P1102**
- **1GB PC2-4200 DDR2 NP CL4 SOD 73P3844 ThinkPad Multi Battery Charger II 22P9040**
- **USB Portable Diskette Drive 05K9276 SonyEricsson® GC833 EDGE PC Card 26K3393**
- **USB 2.0/Analog Headset by Sennheiser 40V8518 Verizon Wireless Voice 408 62P137**
- **USB 2.0 Lenovo Webcam 40V8519 72W Slim AC/DC Combo Adapter 73P4485**
- **USB 2.0 Portable 80GB Hard Disk 40Y8726 Optical 3-BUTTON Wheel Mouse 31P7405**
- **USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8657 Optical 3-BUTTON ScrollPoint® Mouse 31P7405**
- **USB 2.0 Memory Key 1GB 40Y7421 ThinkPad Nylon Carrying Case 10K0207**
- **60GB Hard Disk 9.5mm (5400 rpm) 73P3357 ThinkPad Carrying Case - BackPack 73P3599**
- **80GB Hard Disk 9.5mm (5400 rpm) 09N4273 ThinkPad Carrying Case - Organizer 73P3599**
- **100GB Hard Disk 9.5mm PATA (5400 rpm) 40Y8761 ThinkPad Carrying Case - Organizer 73P3599**
- **USB Travel Keyboard with UltraNav 31P9490 ThinkVision® L1717 17” Monitor (black) 9417H00**
- **USB Keyboard with UltraNav 31P8950 ThinkVision® L1919 19” Monitor (black) 9417H00**
- **Enh Perf Wireless Keyboard and Mouse 73P4067 ThinkVision® L1919 19” Monitor (black) 9417H00**
- **Kensington® MicroSaver© Security Cable 73P2582 ThinkVision® L2010 20” Monitor (black) 9320HB1**
- **TrackPoint Cap Card Reader 31P2988 ThinkPad Multiple Battery Charger II 22P9040**
- **ThinkVision® E500 Projector 0038A05 Other options at lenovo.com/options**
- **ThinkVision C400 Wireless Projector 0039W41 ThinkPad Monitor Stand 22P5265**

#### Footnotes:

18. ThinkPad notebooks implement ThinkVantage® technologies and design. thinkpad.com/thinkvantage

24. hour x 7 day toll-free warranty support during the warranty²

26. 72-watt 2AC adapter

27. ACPI 1.0b and 2.0-compliant

28. RoHS-compliant

29. ENERGY STAR®-compliant

30. ThinkPlus³,22 1-year LOR 9x5 NBD

31. thinkpad.com/psref

32. Windows XP Professional

33. Microsoft® Windows® XP Professional (Service Pack 2)

34. Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad R51e (1844) - TopSeller - withdrawn

#### Key Features
- **Processors**
  - Intel® Celeron M Processor 360 (1.4GHz) or 370 (1.5GHz) with 400MHz system bus
  - Intel® Pentium M Processor 740 (1.73GHz) with Enhanced Intel SpeedStep™ technology
- **Memory**
  - Main memory (32MB up to 511MB main memory)
  - Memory in 1 socket / one socket available
- **Hard Disk**
  - 80GB 7200 rpm, 9.5mm high / EIDE / removable and upgradable
- **Keyboard**
  - Standard IBM keyboard with palm rest / pitch: 19mm; stroke: 2.7mm (standard keys)
  - NO-TOUCH PAD
- **Display**
  - XGA (1024x768) TFT color / active matrix / 150 nits
  - XGA (1024x768) TFT color / active matrix / 200 nits
- **Audio Support**
  - Integrated sound card / two channels / two 200-pin SO-DIMM sockets / std memory in 1 socket / one socket available
- **Security**
  - Power-on password / hard disk password / supervisor password / security keyhole
- **Limited Warranty**
  - 1-year ExpressServ® on-site pickup and delivery service and 1-year on-site parts and labor warranty

#### Other Options
- **Carrying Cases**
  - ThinkPad Carrying Case - Backpack
  - ThinkPad Carrying Case - Expander
- **Universal AC Adapter**
  - 72W Slim AC/DC Combo Adapter
- **Other Options**
  - ThinkPlus® 2-year LOR 9x5 NBD
  - ThinkPlus® 4-year LOR 9x5 NBD

### Software
- **Windows XP Professional models**
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- **Windows XP Home models**
  - Microsoft® Windows® XP Home Edition™ (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- **Preloaded (all)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symanetc® Client Security
  - PC-Doctor for Windows
  - ThinkPad utilities
  - Adobe® Reader
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW! and Drive Letter Access (combo)
  - InterVideoVDVD (combo)

The ThinkPad R51e TopSeller model is no longer available on the Lenovo website. However, the above specifications are based on the model's technical details as documented at the time of its release. Lenovo maintains a strong commitment to customer support, even for older models, through dedicated call centers and online support resources. Customers interested in these models should contact Lenovo directly for current pricing and availability details.
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<td>Xpress 200M</td>
<td>No XP Pro 1-yr Apr 06</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

Software:
- Windows XP Professional models
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
- Windows XP Home models
  - Microsoft Windows XP Home Edition™ (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution
  - ThinkVantage Productivity Center
  - ThinkVantage System Migration Express
  - Symantec® Client Security
  - PC-Doctor™
  - Multimedia Center for Think
  - Sonic RecordNOW and Drive Letter Access (combo)
  - InterVideo WinDVD (combo)

License - CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

ThinkPad notebooks implement ThinkVantage™ technologies and design; thinkpad.com

ThinkPad models are ENERGY STAR®-compliant

Universal 72 watt AC adapter

PC 2006 and PXE 2.0-compliant

ACPI 1.0b and 2.0-compliant

CDM and 2.0-compliant

ENERGY STAR®-compliant

RoHS - compliant

International Warranty Service®
- 24 hour x 7 day®-toll-free warranty support during the warranty®

ThinkPlus®
- 1-year LOR 9x5 NBD
  - 41C9166
- 2-year LOR 9x5 NBD
  - 41C9167
- 3-year LOR 9x5 NBD
  - 41C9168
- 4-year LOR 9x5 NBD
  - 41C9171
- 5-year LOR 9x5 NBD
  - 41C9173
- 2-year P&L P/U Depot
  - 41C9169
- 3-year P&L P/U Depot
  - 41C9170
- 4-year P&L P/U Depot
  - 41C9172
- 5-year P&L P/U Depot
  - 41C9174

See footnotes for important warranty information
### ThinkPad R51 - withdrawn

#### Key Features
- **Limited warranty**: 3-year limited warranty;
- **Security Chip**: Embedded Security Subsystem 2.0™
- **Graphics Support**: UltraNav Technologies
- **Operating Systems**: Windows XP Professional
- **Accessories**: Lenovo ThinkPlus

#### Specifications
- **Lithium-Ion Battery**: 6-cell
- **Processor**: Intel Pentium M 1.6 GHz
- **Memory**: 256MB SDRAM CL2.5 SODIMM
- **Diskette Drive**: USB 2.0 Type III slot (Communications Bay)
- **Ethernet**: PC CardBus and 1394 controller, Mini PCI, external expansion
- **Display**: 15.0” SXGA+ (1280x1024)
- **Power**: 110-120V AC/DC

#### Additional Information
- **Operating System Support**: Windows XP Professional
- **Post-warranty Support**: Lenovo ThinkPlus
- **Pre-sales Support**: Lenovo ThinkPlus

---

**Table: Key Specifications**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics Support</th>
<th>Ethernet</th>
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<td>Combo 11gb/12</td>
<td>Modem Gigabit</td>
<td>1394 Yes XP Pro W Apr 2004</td>
</tr>
</tbody>
</table>

**Note:** All models have a 3-year limited warranty (other 1829/1836 ThinkPad R51 systems have a 1-year limited warranty).

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**Lenovo ThinkPlus**

- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD

---

**Lenovo ThinkPad Convertible Monitor Stand**

- 40Y7620

---

**Lenovo ThinkPad Port Replicator II**

- 74P6733

---

**Lenovo ThinkPad 4-year P&D PLAN**

- 41C9179

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**Lenovo ThinkPlus 3-year LOR 9x5 NBD**

- 41C9175

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**Lenovo ThinkPlus 4-year LOR 9x5 NBD**

- 41C9176

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**Lenovo ThinkPlus 5-year LOR 9x5 NBD**

- 41C9178

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**Lenovo ThinkPlus 4-year P&D PLAN**

- 41C9180

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**Lenovo ThinkPlus 5-year P&D PLAN**

- 41C9190

---

**Lenovo ThinkPlus 3-year 2-year LOR 9x5 NBD**

- 41C9195

---

**Lenovo ThinkPlus 4-year 2-year LOR 9x5 NBD**

- 41C9196

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**Lenovo ThinkPlus 5-year 2-year LOR 9x5 NBD**

- 41C9197

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**Lenovo ThinkPlus 4-year P&D PLAN**

- 41C9198

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**Lenovo ThinkPlus 5-year P&D PLAN**

- 41C9199

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**Lenovo ThinkPlus Post-warranty maintenance agreements**

- for thinkplus/warranty
| Type-model | Processor | Speed (GHz) | Memory | Graphics | Disk | Mini PCI | Comm Bay | CDC | Ethernet | Secu- | Workhorse | Global (G) | Avail-
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<td>No</td>
<td>07 Jul</td>
<td>2004</td>
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</table>

### Positioning
- Mainstream performance and features: two-spindle system
- **Intel® Pentium® M Processor 725 (1.6GHz) or 735 (1.7GHz)** with Enhanced Intel SpeedStep® technology and 400MHz system bus

### L2 cache
- 2MB / on die (at processor speed) / ECC

### Memory
- 256 or 512MB std / 2GB max / PC 2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL 2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

### Diskette drive
- None standard / use optional USB-based diskette drive

### Ultrabay Enhanced
- One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7 mm high

### Disk
- 40GB1B (4200 rpm) or 40GB (HS 5400 rpm), 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’

### Display
- **Some:** 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Some:** 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

### Graphics
- **Some:** ATI Mobility™ RADEON™ 7500 / AGP 4X / 32MB DDR1 (DDR-SGRAM)
- **Some:** ATIMOBILITYRADEON™ 4000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)

### Graphics external
- External monitor via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

### Keyboard
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)

### Trackpad
- Trackpoint pointing device / “press-to-Select” Internet S scroll Bar / “Pointing Bar” multi-pointing system / touch pad below keyboard / Tap Zones illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 14.1" models (WxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm
- 15.0" models (WxHxD): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

### Weight
- with optical drive and battery: 14.1" models: 6.0 (2.7kg); 15.0" models: 6.6 (3.0kg)
- **Color:** black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

### Battery
- Lithium Ion 6-cell / intelligent / supports 2nd battery in Ultrabay Enhanced
- Model with SXGA+ up to 3.7 hours; Others: up to 4.0 hours; Optional 9-cell up to 6.2 hours

### Architecture
- **Intel** 855PM chipset / 82855PM Memory Controller Hub (MCH-MI)
- **Intel** 82801DM ICH (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [ LPC] interface, USB, [Bluetooth] / PCI bus / 2.3-3.2bit, 33MHz (T1)
- **CDC** Ultrabay Enhanced
- **Controller** (such as: AT89C512) / not accessible
- **Memory** 512K V 90 (V.92-modified) modem in CDC / Conexant1 chip
- **Bluetooth** None standard
- **Ethernet** Gigabit Ethernet on planar / Intel 82540EP chipset / Wake on LAN

### Audio support
- Soft audio / ICH AC97 controller / DirectSound / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone jack (3.5mm) / line in jack

### Security
- Power-on password / hard disk password / supervisor password / security keyhole

### Security Chip
- Embedded Security Subsystem 2.0 / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TC-compliant

### Software
- **Windows XP Professional**
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden protected area)
- **Preloaded**
  - Access Program
  - Access Connections™
  - Rescue and Recovery™
- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant
  - Client Security Software (for security chip)

### License
- (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72-watt AC adapter
- Asset ID™, (system-specific info in chip access over network)

PC 2001 and PXE 2.0-compliant
- CMI and DMI 2.0-compliant
- ENERGY STAR®-compliant

Software
- Windows
- Microsoft® Windows® XP Professional
- Microsoft® Windows® XP Home Edition
- Microsoft® Windows® XP Media Center Edition
- Microsoft® Windows® XP Tablet PC Edition

ThinkPad notebook support during the warranty via 800-IBM-SERV (426-7378)

Software Support
- LookForNow and Drive Rescue and Recovery (CD not included)
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 4-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**ThinkPad® R51 (1830) - Education - withdrawn**

**Positioning Processor**

*Intel® Pentium® M Processor 1.56 GHz or Intel Pentium M Processor 725 (1.66 GHz)* with Enhanced Intel SpeedStep technology speed step selection for low power consumption in system bus

L2 cache

1.56 GHz: 1MB; 1.66 GHz: 2MB; All: on die (at processor speed)

Memory

512MB std / 2GB max / PC2700 333 MHz DDR1 (DDR-SDRAM) / non-parity / CLK2.5 / two 200-pin S-DIMM sockets / std memory in one socket / one socket available

**Diskette drive**

None standard / use optional USB-based diskette drive

**Audio support**

Mini PCI

Wireless antenna

IEEE 1394

Video out

PC Card Std slots

Battery - life

10

Battery - type

ThinkPad

Weight

2

ThinkLight

Touch pad

**Memory**

1830-9QU Pentium M 725 1.6 512MB 15.0” SXGA+ 60GB Combo

1830-PUU Pentium M 725 1.6 512MB 15.0” XGA 40GB Combo

1830-AHU Pentium 1.5 512MB 14.1” XGA 60GB Combo

1830-BTU Pentium 1.5 512MB 14.1” XGA 60GB Combo

1830-8LU Pentium M 725 1.6 512MB 15.0” SXGA+ 60GB DVD-RW

1830-PBU Pentium M 725 1.6 512MB 15.0” XGA 40GB Combo

1830-AHU Pentium 1.5 512MB 14.1” XGA 60GB Combo

US models withdrawn effective November 2005 or February 2007

**Display**

Some: 14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0” (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

Some: 15.0” (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

Some: 15.0” (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

FlexibleView display with wide viewing angle and high density using in plane switching (IPS) technology

Graphics

ATI Mobility™ RADEON® 9000 / AGP 4X / 32MB DDR1 (DDR-SDRAM)

External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Keyboard

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®

Magnifying glass

ThinkLight™

illuminates the keyboard to improve visibility in low-light conditions

Dimensions

14.1” models (WxDxH): 12.4“ x 10.2” x 1.35-1.46’’. 314mm x 260mm x 34-37mm

15.0” models (WxDxH): 13.1” x 1.61” x 1.47-1.58’’. 332mm x 269mm x 37-40mm

With optical drive and battery: 14.1” models: 6.0 (2.7kg); 15.0” models: 6.6b (3.0kg)

Weight

1.0-2.0 kg

File size

No file size

Battery - type

Lithium Ion 6-cell / intelligent  / supports unique 2nd battery in Ultrabay Enhanced

Battery - life

10

Architecture

Intel 855PM chipset / 82855PM Memory Controller Hub (MCH-M1)


PC Card Std slots

Ports

One Type I, one Type II, or one Type III / Card Bus 32-bit / PCMCIA 2.1 / integrated door / USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port

Video out

S-video out port (TV out) / one 4-pin industry standard connector

IEEE 1394

IEEE 1394 (FireWire) port / 4-pin connector, 1394a-2000 standard

Wireless antenna

UltraConnect™Antenna built into the display cover for optimal wireless signal reception

Mini PCI

One Mini PCI type III slot (Communications Bay) / customer upgradable

Intel 11b/g

11b/g wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

CDC

One Communications Daughter Card (CDC) socket (used by modem) / not accessible

Modem

56K V.90 (V.92-modem) modem in CDC / Conexant® chip

Bluetooth

None standard

Ethernet

Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN®

Audio support

Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone jack (3.5 mm) / line in jack

Security

Power-on password / hard disk password / supervisor password / security keyhole

Security chip

Embedded Security Subsystem 2.0 / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant

**Limited warranty**

3-year / 1yr battery - EasyServ™ / onsite pickup and delivery / service upgrades / 24x7 support

3-year / 1yr battery - EasyServ™ / onsite pickup and delivery / service upgrades / 24x7 support

Universal 72 watt AC adapter

Asset ID™, (system-specific info in chip accessed over network)

PC 2001 and PXE 2.0-compliant

ACPI 1.0B and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR®-compliant

Integrity 7.13

24 hour x 7 day toll-free warranty support during the warranty via 800-IBM-VIDEO (824-6976)

ThinkPad™ options at lenovo.com/thinkplus/warranty

SOFTWARE

Windows XP Professional - Microsoft® Windows® XP Professional

Disk-to-Disk Recovery (in hidden protected area)

Preloaded

Education software from VitalSource Technologies™ intellectual KEY™ and Portable Personal Library™

Acces Protocols

Access Connections™

Rescue and Recovery™

Norton AntiVirus (QEM edition)

PC-Doctor™

ThinkPad Utilities

Adobe® Reader

Update Connections-15

RecordNow® and Drive

Letter Access powered by Sonic products (combo, DVD-R, DVD-RW)

Wired (DVD-R, DVD-RW, DVD-RW)

Simple Backup (DVD-R, DVD-RW)

Downloadable

IBM Director Agent

Software Delivery Assistant

System Migration Assistant

Client Security Software (for security chip)

License (CD not included)

Lotus® Smart Suite® Millennium and Lotus Notes® Stand-alone Client

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools and organized and operated exclusively for educational purposes for use by qualified students and teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.

© Lenovo (R51E) February 2007

See footnotes for important warranty information

* © Powered by Intel Centroino™ mobile technology

US models announced April 6 or September 14, 2004

US models withdrawn effective November 2005 or February 2007
### ThinkPad R51 (1831) - Education - withdrawn

#### Positioning
- **Processor**: Intel® Pentium® M Processor 1.56 GHz or Intel® Pentium® Processor 725 (1.66 GHz)
- **Chipset**: Intel 865PM chipset
- **Operating System**: Windows XP Professional

#### Key Features
- **3-year limited warranty**
- **Security**: Embedded Security Subsystem 2.0™
- **Display**: 14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

#### Options
- **Battery**: 11.1V Li-Ion Battery 9-cell
- **Memory**: 512MB PC2700 DDR-SDRAM CL2.5 SOD 31P9832
- **Graphics**: AGP 4X
- **USB**: 2.0
- **Ports**: Multi-Pointing System / Touch Pad

#### Specifications
- **Dimensions**: 305.2 x 237 x 26.9 mm
- **Weight**: 1.6Kg
- **Keyboard**: 86-key / Access IBM button / palm rest

#### Workhorse (W)
- **Power-on password**
- **Hard disk password**
- **Supervisor password**
- **Security keyhole**

#### Software
- **Windows XP Professional**
- **ThinkPad Utilities**

#### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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### Table

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See footnotes for important warranty information. *Powered by Intel® Centroino® mobile technology* ©Lenovo (1831) February 2007

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools and other organizations. They are not available for resale to any other organization or individual.
This page contains a table with specifications of ThinkPad R51 (1836) models. The table includes information on dimensions, ThinkPad dimensions, US models withdrawn effective February 2007, Limited warranty, and software options. The table lists models with their corresponding processor, memory, storage, and other features. The software options are highlighted in a separate section titled "SOFTWARE."
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**ThinkPad R51 (2888) - withdrawn**

**Type-model** | **Processor** | **Speed** | **GHz** | **Memory** | **Disk Drive** | **Mini PCI** | **Ethernet** | **Limited warranty** | **Workhorse (W)** | **Preloaded** | **Global** | **Entry (E)** | **Avail date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2888-4AU Pentium M | 1.6 | 256MB | 14.1" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-7T Pentium M | 1.6 | 256MB | 14.1" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-6U Pentium M | 1.6 | 256MB | 15.0" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-6Y Pentium M | 1.6 | 256MB | 15.0" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-8U Pentium M | 1.6 | 256MB | 14.1" XGA | 40GB | Combo | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-7U Pentium M | 1.6 | 256MB | 14.1" XGA | 40GB | Combo | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-5RU Pentium M | 1.6 | 256MB | 15.0" XGA | 40GB | Combo | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-47U Pentium M | 1.5 | 256MB | 14.1" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-4AU Pentium M | 1.6 | 256MB | 14.1" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-47U Pentium M | 1.5 | 256MB | 15.0" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-47U Pentium M | 1.6 | 256MB | 15.0" XGA | 30GB | CD | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004
2888-8G Pentium M | 1.5 | 256MB | 15.0" XGA | 40GB | Combo | *Intel 11b/g* | Mod/10/100 | No | Yes | XP Pro | 3-yr | W Apr 2004

**Positioning**

**Processor**

Intel® Pentium M Processor 1.5 or 1.6GHz or Intel Pentium M Processor 725 (1.6GHz) with Enhanced Intel SpeedStep™ technology and 400MHz system bus

**L2 cache**

2MB in 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Memory**

256MB standard / 2GB max. / 200-pin SDRAM DDR-SDRAM CL2.5 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Display**

14.1" (358.1mm) XGA (1280x768) TFT color / Active Matrix / 150 nits

**Graphics**

Integrated Intel Extreme Graphics 2 / in 855GME GMCH / main memory (up to 64MB) / 250MHz

**Software**

Windows XP Professional

- Microsoft® Windows® XP Professional
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Access Program
- Access Connections™
- Rescue and Recovery™
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™
- RecordNOW and Drive Letter

**License (CD not included)**

Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Limited warranty**

3-year/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades² available

**See footnotes for important warranty information**

US models announced April 6 or July 13, 2004

US models withdrawn effective March 2006

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**ThinkPad R51 (2888) - September 2004 - withdrawn**

**Positioning**
Mainstream performance and features; two-spindle system

**Processor**
Intel® Pentium® M Processor 715/715a (1.5GHz) or 735 (1.7GHz)

**Speed**

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<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Screen</th>
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**Graphics**

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<td>30GB DVD</td>
<td>72W Slim AC/DC Combo Adapter (2888S) February 2007</td>
</tr>
</tbody>
</table>

**Software**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional®
  - Pxx models only: Service Pack 2

**Preloaded**
- Access Program
- Access Connections™
- Norton AntiVirus (OEM edition)
- Norton Antivirus (OEM edition)
- PC-Doctor™
- ThinkPad® Utilities
- Adobe® Reader
- Update Connector™
- RecordNow and Drive Letter Access powered by Sonic products (combo models)
- InterVideo WinDVD (combo, DVD models)

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**
- (CD not included)
- Lotus® Smartsuite® Millennium and Lotus® Notes® Stand-alone Client

**Post-warranty annual maintenance**
- Post-warranty annual maintenance

**See footnotes for important warranty information**

*Powered by Intel® Centrino® mobile technology*

Lenovo

US models announced September 14, 2004 or January 11, 2005

US models withdrawn effective November 2005 or February 2007

© Lenovo (2888S) February 2007
### ThinkPad R51 (2887/2888) - Education - withdrawn

**Type-model** | Processor | Speed | GHz | Memory | Screen | Disk | MB | Mini PCI | Comm Bay | CDC | modem | Integrated graphics | IEEE Secu- | Limited warranty | Workhorse | Global (G) | Avail date
2887-2RU Celeron™ M | 1.3 | 256MB | 14.1 | XGA | 30GB | CD | Intel® 11b/g | Modem | Extreme™2 | No | Yes | 1-year XP Pro | Educ Apr 04 | -- | -- | -- | 2002-05-01
2888-2RU Celeron M | 1.3 | 256MB | 14.1 | XGA | 30GB | CD | Intel® 11b/g | Modem | Extreme™2 | No | Yes | 1-year XP Pro | Educ Apr 04 | -- | -- | -- | 2002-05-01
2888-EVU Celeron M 340 | 1.5 | 256MB | 14.1 | XGA | 30GB | CD | Intel® 11b/g | Modem | Extreme™2 | No | Yes | 1-year XP Pro | Educ Apr 04 | -- | -- | -- | 2002-05-01
2888-2WU Pentium™ M | 1.5 | 256MB | 14.1 | XGA | 40GB | Combo | Intel® 11b/g | Modem | Extreme™2 | No | Yes | 1-year XP Pro | Educ Apr 04 | -- | -- | -- | 2002-05-01
2888-EWU Pentium M 725 | 1.6 | 256MB | 14.1 | XGA | 40GB | Combo | Intel® 11b/g | Modem | Extreme™2 | No | Yes | 1-year XP Pro | Educ Apr 04 | -- | -- | -- | 2002-05-01

- The 2887 has an EasyServ™ onsite pickup and delivery 1-year limited warranty
- The 2888 has an EasyServ™ onsite pickup and delivery 3-year limited warranty

*These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.*

### SOFTWARE

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery
  - Preloaded
    - Access Program
    - Access Connections™
    - Rescue and Recovery™
    - Norton AntiVirus (OEM edition)
    - PC-Doctor™
    - ThinkPad Utilities
    - Adobe® Reader
    - Update Connect
    - RecordNOW and Drive Letter
  - Access powereded by Sonic products (combo model)
- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant
  - Client Security Software (for security chip)
- **License**
  - CD (not included)
  - Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

**Universal 72 watt AC adapter**

**Asset ID**

**Added at**

**In hidden protected area**

**Not standard / use optional USB-based diskette drive**

**Supported during the warranty** via **800-IBM-SERV (426-7378)**

**Post-warranty**

**Maintenance agreements** at **lenovo.com/thinkplus/warranty**

### Positioning

**Processor**

- **Mainstream performance and features:**
  - Two-spindle system
  - Intel® Celeron M Processor 1.3GHz or 340 (1.5GHz) with 400MHz system bus or Intel Pentium M Processor 1.5GHz or Intel Pentium M Processor 1.7GHz (1.6GHz) with Enhanced Intel® SpeedStep technology™ and 400MHz system bus

### L2 cache

**Memory**

- **Celeron® M 512KB:**
  - Pentium M 1.5GHz: 1MB;
  - Pentium M 725: 2MB:
  - All: on die / ECC

**526MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-partly / CL5 / two 20-pin SO-DIMM sockets / std memory in one socket / one socket available**

### Diskette drive

**CD/COM**

- **No standard / use optional USB-based diskette drive**

- **Some:**
  - CD-ROM / 24X10X speed / removable from Ultrabay Enhanced

### Touchpad

**ThinkPad™**

- **TrackPoint® pointing device, **
  - F lexible mouse,
  - 19mm: stroke: 2.7mm (std-size keys)

### Display

- **14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits**

### Architecture

**Intel 855GME Chipset**

- **82855GME Memory Controller Hub (MCH-M)**
  - 82801DBM ICH4-MA Controller Hub (ATA-100 IDE, PCI bus, controller MAC, LPC bus, 2.2 -bit, 33MHz (T1) / PCI1450 Cardbus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip, PC3792 SuperIO for diskette, parallel, infrared, docking-based ports)

### Video out

**IEEE 1394**

- **REMOTE WINDOWS MEDIA Player**
  - AV Media Port 2 / 2GB hard disk / Windows Media Player 7.0 / Windows Media Center / Video out port / TV output

### Security chip

**Embedded Security Subsystem 2.0**

- **Hard Disk Drive Shock Absorber / Active Protection System™**

### Security

**Security cable**

- **ThinkPad Security Cable 73P2582**

### Audio support

- **Audio:**
  - Low Pin Count [LPC] interface, USB)
  - PCI bus 2.2 32-bit, 33MHz (TI 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, UltraConnect [mini PCI, external expansion]) / LPC bus 33MHz (security chip, PC3792 SuperIO for diskette, parallel, infrared, docking-based ports)

### USB

**USB 2.0**

- **Universal 72 Watt AC adapter**
  - 73P4485
  - 72W Slim AC/DC Combo Adapter

### Other options at lenovo.com

- **ThinkPlus options**
  - US models withdrawn effective January 2005, September 2005

### Footnotes

- *Power by Intel Centrino mobile technology*
- *Lenovo*
- *ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage*
- *Windows XP Professional*
- *Microsoft® Windows® XP Professional*

See footnotes for important warranty information.

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US models announced April 6 or September 14, 2004

US models withdrawn effective J anuary 2005, November 2005, or February 2007

(2887) F ebruary 2007
### ThinkPad R51 (2889) - Education - withdrawn

#### Mainstream performance and features: two-spindle system

- **Processor**: Intel® Celeron M Processor 1.3GHz or 340 (1.5GHz) with 400MHz system bus or Intel Pentium M Processor 1.5GHz or Intel Pentium M Processor 725 (1.6GHz) with Enhanced Intel SpeedStep™ technology and 540MHz system bus.
- **L2 cache Memory**: Celeron M: 512KB; Pentium M 1.5GHz: 1MB; Pentium M 725: 2MB; All: on die / ECC
- **Diskette drive**: Non-standard / use optional USB-based diskette drive
- **Optical Drive**: DVD-ROM / CD-ROM
- **Graphics**: Intel® Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 250MHz
- **Keyboard**: 67-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (standard-size keys)
- **Touchpad**: Pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass
- **UltraNav multi-pointing system / touchpad below keyboard / Tap Zones illuminates the keyboard to improve visibility in low-light conditions
- **Architecture**: Intel 855GME chipset / 82855GME Memory Controller Hub (MCH-M) / 82801DBICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, low pin count interface, USB) / PCI bus 2.2, 32-bit, 33MHz (TI PC'4510 Cardbus and 1394 controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC'87392 Super I/O for parallel, infrared, [docking-based ports])

#### Other options

- **Video out**: IBM Director Agent
- **Audio support**: Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
- **Security**: Power-on password / hard disk password / supervisor password / security keyhole

#### Limited warranty

- **Time**: 3-year / 1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

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### Table: ThinkPad R51 (2889) Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Disk GB</th>
<th>Mini PCI</th>
<th>CAM Bay</th>
<th>Graphics</th>
<th>CSM</th>
<th>Secure-Integrated graphics</th>
<th>IEEE Secu-</th>
<th>Preload</th>
<th>Workhorse</th>
<th>Limited Global (W)</th>
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<tr>
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<td>1.3</td>
<td>256MB</td>
<td>14.1&quot;XGA</td>
<td>30GB</td>
<td>CD</td>
<td>Intel11/1g</td>
<td>Modem</td>
<td>Extreme™</td>
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<td>Yes</td>
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<td>Yes</td>
<td>XP Pro</td>
<td>Onsite</td>
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<td>No</td>
<td>Yes</td>
<td>XP Pro</td>
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<td>No</td>
<td>Yes</td>
<td>XP Pro</td>
<td>Onsite</td>
<td>Educ Sep 04</td>
</tr>
</tbody>
</table>

#### Software

- **Operating System**: Windows XP Professional
- **Preloaded**: Access Program
- **Additional Options**: Access Connections™, Rescue and Recovery™, Norton AntiVirus (OEM edition)
- **Security**: ThinkPad Utilities
- **Security**: Adobe® Reader
- **Security**: Internet Explorer™, Windows Media Player(TM), Adobe Acrobat Reader(TM)
- **Security**: ThinkPad Notebook Assistant
- **Security**: ThinkPad Terminal Access Controller software
- **Security**: ThinkPad rescue and Recovery
- **Security**: ThinkPad security key
- **Security**: ThinkPad One Communications Daughter Card (CDC) socket (used by modem)
- **Security**: ThinkPad security key
- **Security**: ThinkPad security key
- **Security**: ThinkPad security key

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*powered by Intel Centrino® mobile technology

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(2889E) February 2007

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**Footnotes**

1. The 2889 has a limited onsite service 3-year limited warranty
2. These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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**References**

- lenovo.com
- thinkpad.com
ThinkPad® R51 (2883) - TopSeller (September 2004) - withdrawn

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The R51 has a 1-year limited warranty

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk Drive</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>CDC modem</th>
<th>Integrated graphics</th>
<th>Limited warranty</th>
<th>Workload (W)</th>
<th>Global (G)</th>
<th>Available date</th>
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<td>2883-GXU</td>
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<td>Modem</td>
<td>Extreme™</td>
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<td>Yes</td>
<td>1-yr XP Pro</td>
<td>No</td>
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<td>Modem</td>
<td>Extreme™</td>
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<td>Modem</td>
<td>Extreme™</td>
<td>2</td>
<td>Yes</td>
<td>1-yr XP Pro</td>
<td>No</td>
<td>Sep 04</td>
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</tbody>
</table>

Positioning
Processor: Mainstream performance and features: two-spindle system

Intel® Celeron® M Processor 330 (1.4GHz), 340 (1.5GHz) or 350 (1.3GHz) with 400MHz system bus or Intel® Pentium® M Processor 725 (1.6GHz) with Enhanced Intel® SpeedStep™ technology and 400MHz system bus

L2 cache: Celeron M 330: 512KB, Celeron M 340: 1MB, Pentium M 725: 2MB; All: ECC 256MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / 2-200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive: Combo

Disk: Standard (9.5mm) / USB diskette drive (optional)

COMBO

Hard Disk Drive Shock Absorber / Active Protection System™

Display

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Graphics

Integrated Intel® Extreme™ Graphics 2 in 855GM GMA / uses main memory (up to 256MB)

Graphics external: External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Keyboard

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)

Trackpoint®: Trackpoint® pointing device, P@ss-Select®, Intel® 512KB / backlit point stick

Touchpad

UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™: White LED / illuminates the keyboard to improve visibility in low-light conditions

Dimensions

14.1" models (WxHxD): 12.4" x 10.2" x 1.35"-1.46"; 315mm x 259mm x 35-40mm

15.0" models (WxHxD): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

Weight

Intel®: 3.3-3.9kg / 7.3-8.6lbs

Case material

Color: black / all plastic

Battery - life: 11h-13h / Intel® Lithium ion 6-cell / gives 2nd battery in Ultrabay Enhanced

Graphics

Graphics2: 3D engine on planar / PCI-Express x16 slot (used by modem) / not accessible

Graphics3: 3D engine on planar / PCI-Express x16 slot (used by modem) / not accessible

BIOS

82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB) / PCI bus 2.2 32-bit, 333MHz (11" models) / CardBus 32-bit / memory controller / Intel 82562EZ chipset (physical layer) / Wake on LAN

CIM and DMI 2.0-compliant

Security

Authentication / local file encryption / Atmel® security chip (accessed over network)

Security Cable 73P2582

Software

Windows XP Professional

- Microsoft® Windows® XP Professional
- Disk-to-Drive Recovery (in hidden-protected area)

Preloaded

- Access Program
- Access Connections™
- Rescue and Recovery™

Record NOW and Drive Letter Access powered by Sonic products (combo models)

InterVideo WinDVD (combo models) / Norton AntiVirus (OEM edition)

PC-Doctor™

ThinkPad® Utilities

Adobe® Reader

Update Connector™

Downloadable

IBM Director Agent

Software Delivery Assistant

System Migration Assistant

Client Security Software (for security chip)

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad® R51 (2883) - TopSeller (September 2004) - withdrawn

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The R51 has a 1-year limited warranty

<table>
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<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
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ThinkPad® R52 (1846) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Type-model | Processor | Speed | GHz | Memory | Screen | Graphics controller and memory | Disk GB | Optical | Mini PCI Comm Bay | CDC modem/Bluetooth™ | IEEE Finger Security chip | Workhorse or Global Entry | Availability
---|---|---|---|---|---|---|---|---|---|---|---|---|---|
1846-59U Pentium® M 740 1.73 256MB 14.1" XGA X300 64MB 40GB Combo * Intel 11b/g/n Modem No No Yes No Mar 05

**This model has a 1 year limited warranty**

### Positioning
- Processor: Mainstream performance and features; two-spindle system
- Processor: Intel® Pentium® 4 Processor 740 (1.73GHz) w/ enhanced Intel SpeedStep™ technology. Execute Disable Bit, and 533MHz system bus
- L2 cache: 256MB x 16 (at processor speed) / ECC

### Memory
- 256MB standard / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200 pin 32-bit SO-DIMM sockets / one socket / one socket available

### Diskette drive
- Combo drive: DVD-ROM/CW/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabase Enhanced
- Ultrabay Enhanced: One modular bay for interchangeable devices / Ultrabay Slim compatible / 12.7mm high

### Display
- 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

### Audio support
- Enhanced audio / ICH AC97 controller / DirectSound

### Ethernet
- 56K6 V.90 (V.92-designed) modem in CDC / Conexant

### Security
- Power on password / hard disk password / supervisor password / security keyhole

### Limited warranty
- 1 year - EasyServ™ on site pickup and delivery / service upgrades available

### Software
- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
  - (in hidden protected area)
- Preloaded
  - Rescue and Recovery™
  - Access IBM
  - Access Connections
  - Norton AntiVirus
  - PC-Diag™
- ThinkPad Utilities
  - Adaptec
  - Update Connector™
- RecordNOW and Drive Letter Access powered by Sonic products (combo model)
- InterVideo WinDVD (combo model)
- Client Security Software (for security chip)
- Universal 72 watt AC adapter
- P.C. 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant
- International Warranty Service
- 24 hour / 7 days a week toll-free warranty support during the warranty

### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® Smartsuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

See footnotes for important warranty information
US model announced March 1, 2005
US model withdrawn effective September 2005

* Powered by Intel Centrino™ mobile technology

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(R2) July 2005
ThinkPad® R52 (1846) - August 2005 - withdrawn

**SOFTWARE**

- Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive Letter Access powered by Sonic products (combo model)
- Intel® Video WindDVD (combo model)
- Fingerprint Software (fingerprint models)
- Client Security Software (for security chip)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72-watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CMI and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant

International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

Visit lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(J N61) February 2007
<table>
<thead>
<tr>
<th>Model number</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk drive</th>
<th>Mini PCI</th>
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<th>Modem</th>
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<th>Software platforms</th>
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**Positioning and Processor:** Mainstream performance and features; two spindle system

**Cache:**
- L2 cache: 2MB or 512MB standard 2GB max. / P-2420 533MHz DDR2 1/ non-parity / CL4
- Dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive:**
- Combo drive: DVD-ROM/CD-RW/24X/24X/4X/8X speed / removable from Ultrabay Enhanced
- Ultrabay Enhanced: One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high

**Display:**
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits
- Some: 15.0" (381.0mm) SXGA (1400x1050) TFT color / Active Matrix / 200 nits

**Architectures:**
- Mobile Intel 915PM Express Chipset / 82951PM Memory Controller Hub / 82801FBM IC H6-M Controller Hub
- SATA150, ATA-100 EIDE, PCI Express x1, customer upgradable / Intel 82373 MM/DD controller / Mini PCI
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- One Type I or Type II slot / CardBus 32-bit / integrated door
- Hardware event log, parallel, infrared, docking-based ports (serial, diskette)

**Sound:**
- Some: 1GB PC2-4200 DDR2 NP CL4 SOD 512MB 256 MB PC2-4200 DDR2 NP CL4 SOD 40961MB 2GB PC2-4200 DDR2 NP CL4 SOD 40961MB
- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm
- 14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm

**License Information:**
- 3-year / 1847-22U / 3-year / 1847-28U / 3-year / 1847-29U / 3-year / 1847-38U / 3-year / 1847-39U / 3-year / 1847-3CU / 3-year / 1847-38U / 3-year / 1847-46U / 3-year
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SOFTWARE

Windows XP Professional
- Microsoft Windows XP Professional Service Pack 2

Preloaded
- Access Program
- Access Connections
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities
- Adobe Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo, DVD, DW)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (CD not included)
- Lenovo SmartSuite Millennium and Lenovo Notes Stand-alone Client

ThinkPad notebooks implement ThinkVantage technologies and designs:

visit thinkpad.com/thinkvantage

See footnotes for important warranty information

* Powered by Intel Centrino mobile technology

Lenovo

US models announced August 2, 2005

US models withdrawn effective June or November 2006
These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.

Windows XP Professional
- Microsoft Windows XP Professional™ (Service Pack 2)
- Disk-to-Disk-Redistribution (in hidden protected area)

Preloaded
- Education software from Vital Source Technologies™: vitalsource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton Antivirus
- PC-Doctor
- ThinkPad Utilities
- Adobe Reader
- RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW)
- InteVideo WinDVD (combo, DVD-RW models)
- InteVideo WinDVD Creator (DVD-RW models)
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Universal 72 Watt AC adapter
PC 2001-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant
ENERGY STAR®-compliant
International Warranty Service™
24 hour 7 days a week toll-free warranty support during the warranty

ThinkPlus™, 2-year LOR 9x5 NB
41C9175
ThinkPlus 3-year LOR 9x5 NB
41C9176
ThinkPlus 4-year LOR 9x5 NB
41C9177
ThinkPlus 5-year LOR 9x5 NB
41C9178
ThinkPlus 4-year P&L P/U Dept.
41C9179
ThinkPlus 5-year P&L P/U Dept.
41C9180
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® R52 (1848) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

SOFTWARE
- Windows XP Professional
  - Microsoft Windows® XP Professional22 (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- Preloaded
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
  - Norton AntiVirus
  - PC-Doctor™
  - ThinkPad Utilities
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(J N64) December 2006

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Universal 72-watt AC adapter
P. 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR® 3.0-compliant
- 24 hour 7 days toll-free warranty support during the warranty

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® R52 (1848) - Education - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

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- **These models have a limited onsite service** - 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### SOFTWARE

**Windows XP Professional**
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Education software from Vital Source Technologies®
- Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
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- Intel® Wireless-WiFi (combo, DVD IR models)
- Intel® Video WinDVD Creator (DVD IR models)
- Client Security Software (for security chip)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Hardware Specifications

- **Processor:**
  - Intel® Pentium M (1.73GHz) or 750 (1.06GHz) with Enhanced Intel SpeedStep technology 1, Execute Disable Bit, and 533MHz system bus

- **Display:**
  - Some: 11.0" (301mm) SXGA+ (1024x768) TFT color / Active Matrix / 150 nits
  - Some: 15.0" (381mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

- **Memory:**
  - One 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

- **Disk:**
  - None standard / use optional USB-based diskette drive
  - Some: DVD-ROM/CD-RW / 24X/24X/24X/8x21 speed / removable from Ultrabay Enhancer

- **Hard Drive:**
  - Some: 2.5" / 9.5mm high bay / supports 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / Hard Drive Disk Shock Absorber / Active Protection System

- **Keyboard:**
  - UltraNav

- **Fingerprint reader:**
  - Fingerprint reader on palm rest

- **Power:**
  - Up to 3.6 hr; Optional 9-cell: up to 5.6 hr

- **Dimensions:**
  - 11.9" x 7.9" x 1.21" / 307.7mm x 200.7mm x 30.7mm

- **Weight:**
  - Some: 6.8 lb (3.0kg)

- **Battery Life:**
  - Some: Up to 3.6 hr

### Additional Features

- **Active Protection System**
- **Wireless:**
  - Some: 11a/b/g wireless 4, ThinkPad 11a/b/g Mini PCI Adapter II, Atheros® chipsets

- **Audio:**
  - Soft audio / ICH AC97 controller / DirectSound

- **Cardbus Controller:**
  - One Cardbus slot / CardBus 32-bit / integrated door

- **CD-ROM/CD-RW:**
  - 40GB / 8X/8X/8X/8X speed / removable from Ultrabay Enhanced

- **Memory:**
  - 1GB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

- **Photosensitive:**
  - None standard / use optional USB-based diskette drive

- **Video:**
  - Some: Video / 14" / 1024x768 TFT color / 150 nits
  - Some: Video / 15" / 1024x768 TFT color / 150 nits

- **Port:**
  - One Communications Daughter Card (CDC) slot / customer accessible

- **Security:**
  - Embedded Security Subsystem 2.0® / in NS PC8394T chip / TC-02-compliant

### Additional Software

- **Adobe Reader**
- **Macromedia® Dreamweaver**
- **Microsoft® Office Professional**
- **Norton AntiVirus**
- **VitalSource Technologies®:**
  - Disk-to-Disk Recovery (in hidden protected area)

### Additional Information

- **Post-warranty annual maintenance agreements at lenovo.com**

See footnotes for important warranty information. *Powered by Intel Centrino® mobile technology

US models announced March 1, 2005, or August 16, 2005

US models withdrawn effective November 2005, June 2006, or February 2007
<table>
<thead>
<tr>
<th>Type/Model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Color</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>DVD±RW</th>
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<td>No</td>
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<td>Mar 05</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US ThinkPad Express Program
- These 1849 models have a 1 year limited warranty

### Positioning
- Processor: Intel® Pentium® M Processor 740 (1.73GHz), 750 (1.86GHz), or 760 (2.00GHz) with enhanced Intel SpeedStep™ technology.
- Execute Disable Bit, and 533MHz system bus 2MB / on die (at processor speed) / ECC

### L2 cache
- 256 or 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin 50-DIMM sockets / std mem in 1 socket / 1 socket avail

### Diskette drive
- None standard / use optional USB-based diskette drive

### DVD±RW
- No Y es / No  Mar 05

### CD-ROM
- Intel 11b/g Modem No No Y es / No  Mar 05

### WiFi
- Intel 11a/b/g Mod/Blue No Y es / No  Mar 05

### Software
- Windows XP Professional
- Acrobat Reader
- Adobe Reader
- Norton AntiVirus
- ThinkPad Utilities
- IBM Director Agent
- IBM Director Agent
- RecordNOW and Drive

### License (CD not included)
- Lenovo® SmartSuite® Millennium
- Lenovo® Notebooks Stand-alone Client

### Video out
- S-videow out port (TV out) / one 4-pin industry standard connector
- IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard

### Wireless antenna
- Mini PCI
  - Intel 11b/g/a
  - Intel 11b/a/g
  - Intel 11a/b/g
  - Intel 11b/g

### Audio support
- Gigabit ethernet on system board / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE soft audio / ICH AC97 controller / DirectSound support / AD1981B AC97 codec / stereo speakers / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

### Security chip
- Embedded Security Subsystem 2.0
- IBM Director Agent

### Other options
- ThinkPad Carrying Case - Rolltop 73P3599
- ThinkPad Dock II 287710U
- ThinkPad Port Replicator II 74P6733
- ThinkPad Port Replicator III 73P8394

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**Notes:**
- Powered by Intel Centrino™ mobile technology
- Lenovo® technologies and design: Use the terms “Lenovo” and “ThinkVantage”.
- Universal 72 watt AC adapter PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CSM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant
- International Warranty Service
- 24 hour 7 day toll-free warranty support during the warranty

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**SERVICE P RICING**

<table>
<thead>
<tr>
<th>Service pack</th>
<th>1yr IR O/S NBD</th>
<th>2yr IR O/S NBD</th>
<th>3yr IR O/S NBD</th>
<th>4yr IR O/S NBD</th>
<th>5yr IR O/S NBD</th>
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**Limited warranty**
- 1 year - EasyServ™ onsite pickup and delivery / service upgrades available

---

**See footnotes for important warranty information**

© Lenovo

(R3) July 2005
## ThinkPad R52 (1858) - withdrawn

**Type-model** | **Processor** | **Speed** | **Chip** | **Memory** | **Screen** | **Graphics** | **Optical** | **Mini PCI / Trellis** | **CD/CDC** | **Work or Global Entry date** |
---|---|---|---|---|---|---|---|---|---|---|
1858-22U | Celeron M 360 | 1.4 | 256MB | 14.1” XGA | GMA 900 | 40GB CD | Open; upg** | Modem | No/No | Mar 05/05 |
1858-4UU | Celeron M 360 | 1.4 | 256MB | 14.0” XGA | GMA 900 | 40HS | Open; upg Mod | No/No | Mar 05/05 |
1858-3BU | Pentium M 740 | 1.73 | 512MB | 14.1” XGA | GMA 900 | 40HS | Combo | Intel 11b/g Mod/Blue | 1394Yes/Yes | Mar 05/05 |
1858-4MU | Pentium M 760 | 2.00 | 512MB | 15.0” SXGA+ | GMA 900 | 80GB DVD-RW | Intel 11a/b/g Mod/Blue | 1394Yes/Yes | Mar 05/05 |

### Positioning
- **Processor**: Intel® Celeron M Processor 360 (1.4GHz) with 400MHz system bus or Intel® Pentium M Processor 740 (1.73GHz) or 760 (2.00GHz) with enhanced Intel® SpeedStep Technology, and 533MHz system bus
- **Memory**: 256 or 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std in mem / 1 socket available

### Diskette drive
- None standard / use optional USB-based diskette drive

### Display
- **Type**: S-video out port (TV out) / one 4-pin industry standard connector
- **Resolution**: 14.1” (358.1mm) / XGA / 640x480 / 150cd/m² / 300:1 / 400:1 / 1024x768 / 400nits / 640x480 / 640x480

### Software
- **Windows XP Home models**
  - Microsoft Windows® XP Home Edition** (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- **Windows XP Professional models**
  - Microsoft Windows® XP Professional** (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

### License
- **(CD not included)**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Limitations
- **Limited warranty**: 1 year - EasyServ**/optional pickup and delivery / service upgrades** available

### Post-warranty annual maintenance
- **IBM**: 3 years parallel / 1 year support during the warranty
- **Lenovo**: 2 years parallel / 1 year support during the warranty

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*See footnotes for important warranty information* 

**Powered by Intel Centrino™ mobile technology**

© Lenovo

(RY2) july 2005

US models announced March 1, 2005

US models withdrawn effective September 2005
## ThinkPad R52 (1858) - withdrawn

### Windows XP Professional
- Microsoft® Windows® XP Professional® 64-bit (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

### Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo, DVD-RW)
- Intel Video WinDVD (combo, DVD+RW models)
- Intel Video WinDVD Creator (DVD+RW models)
- FingerPrint Software
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)

### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

### License (CD not included)
- Lenovo SmartCard™ Millennium and Lenovo Notes™ Stand-alone Client

---

### Type-model

<table>
<thead>
<tr>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Integrated graphics</th>
<th>64-bit support</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>Optical</th>
<th>CDC</th>
<th>Modem/ modem</th>
<th>IE Modem/</th>
<th>Finger Chip</th>
<th>Base-Limited</th>
<th>Workbench</th>
<th>or Global</th>
<th>Avail Date</th>
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<td>14.1” XGA</td>
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<td>GMM 6-cell</td>
<td>1 year</td>
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<td>256 MB</td>
<td>14.1” XGA</td>
<td>GMA 40 GB</td>
<td>CD: Combo Yes</td>
<td>Intel 11bb/g</td>
<td>GMM 6-cell</td>
<td>1 year</td>
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<td>Aug 05</td>
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</table>

### Positioning

- **Processor**: Mainstream performance and features: two-spinle system
  - Intel® Celeron M Processor 370 with Execute Disable Bit and 400MHz system bus or
  - Intel® Pentium® M Processor 740, 750, 770, 780 with enhanced Intel SpeedStep™ technology. Execute Disable Bit and 533MHz system bus

### L2 cache

- **Celeron M 1 MB**: All (except Separate Processor speed) / ECC

### Memory

- **256 or 512 MB**: std / 2GB max / P2C-4200 533MHz DDR2 / non-/ parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std in 1 socket / 1 socket avail

### Diskette drive

- None standard / use optional USB-based diskette drive

### CD

- Some: CD-ROM / 24x10x speed / removable from Ultrabay Enhanced

### DVD/RW

- Some: DVD-ROM/CD-RW / 24x/24x/24x8x8x speed / removable from Ultrabay Enhanced

### Ultrabay Enhanced

- One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high

### Disk

- **40GB** (5400 rpm), **60GB** (5400 rpm), **80GB** (5400 rpm), or **100GB** (5400 rpm)
- 9.5mm removable, upgradeable / 9.5mm high bay / supports 2nd disk in Ultrabay
- Ultrabay Enhanced with option / Hard Disk Drive Shock Absorber / Active Protection System

### Display

- **14.1” (358.1mm)** XGA (1024x768) TFT color / Active Matrix / 150 nits
- **15.0” (381.0mm)** XGA (1024x768) TFT color / Active Matrix / 200 nits
- **15.0” (381.0mm)** SXGA (1400x1050) TFT color / Active Matrix / 200 nits

### Graphics

- **Interlaken Graphics Accelerator 900 (GMA 900)** / integrated graphics in 915GM

### Processor

- **Mobile Intel 915GM Express Chipset** / 82956GM Graphics Mem Cont Hub

### Memory

- 128MB (2x64MB) / up to 1GB with Execute Disable Bit and 400MHz system bus

### Weight

- **Lithium Ion 6-cell** / intelligent / supports unique 2nd battery in Ultrabay Enhanced

### Battery - type

- 6-cell: up to 3.9 hr; 9-cell: up to 5.7 hr

### Dimensions

- **14.1” models** (WxDxH): 12.4” x 10.2” x 1.35-1.46”; 314mm x 260mm x 34-37mm

### Keyboard

- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

### TrackPoint

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar13, magnifying glass

### ThinkLight

- Illuminates the keyboard to improve visibility in low-light conditions

### Architectue

- Some: Mobile Intel 915GM Express Chipset / 82956GM Graphics Mem Cont Hub

### PC Card Slot

- Some: 1 Type I or Type II slot / CardBus 32-bit / integrated door
- One ExpressCard/Large ExpressCard/4 or ExpressCard/3 slot / USB 2.0 / integrated door
- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet) / no keyboard or mouse or serial ports (use USB)

### Optical Drive

- 80GB HS Hard Disk 9.5mm (5400 rpm) / removable, upgradeable / 9.5mm high bay / supports 2nd disk in Ultrabay

### Security Chip

- Embedded Security Subsystem 2.0 / in NSW PC83947 chip / TPM

### FingerPrint Reader

- Some: FingerPrint reader on palm rest / swipe sensor / integrated with security chip

### Limited warranty

- 1 year / EasyServ®/onsite pickup and delivery / service upgrades® available

---

### SOFTWARE

- Windows XP Professional
  - Lenovo branded PC
  - Lenovo Productivity Solution (including Quick Start and ThinkVantage software)

- Lenovo ThinkVantage technologies and design: visit think.lenovo.com/thinkvantage

### Universal 72 watt AC adapter

- AC100-260v, 50-60Hz, 1A, 2-Pin (US plug) / 3-Pin (UE plug)

### PowerConnect A970

- Infrared / 200MHz / integrated graphics in 915GM

### Security

- Battery - type

### Security Chip

- Embedded Security Subsystem 2.0 / in NSW PC83947 chip / TP

### FingerPrint Reader

- Some: FingerPrint reader on palm rest / swipe sensor / integrated with security chip

### Limited warranty

- 1 year / EasyServ®/onsite pickup and delivery / service upgrades® available

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**Note:** See footnotes for important warranty information.

*Powered by Intel® Centrino® mobile technology*
ThinkPad® R52 (1859) - Express - withdrawn

See footnotes for important warranty information

US models announced March 1, 2005
US models withdrawn effective September 2005

Type-model  Processor Speed Memory Screen Graphics controller Disk drive Optical Mini PCI Comm Bay Modem/Bluetooth Security port Chipset Workforce or Global Area

1859-2BU Pentium® M 740 1.73 256MB 14.1" XGA GMA 900 40GB Combo = Intel 11b/g Modem 1394 Yes 915GM No Mar 05

1859-4YU Celeron® M 350 1.3 256MB 15.0" XGA GMA 900 40GB Combo = Intel 11b/g 1394 Yes 910GM No Mar 05

1859-5RU Pentium® M 740 1.73 256MB 15.0" XGA GMA 900 40GB Combo = Intel 11b/g 1394 Yes 915GM No Mar 05

1859-4AU Pentium® M 740 1.73 512MB 15.0" SXGA+ GMA 900 60GB Combo = Intel 11a/b/g 1394 Yes 915GM No Mar 05

- These small and medium business (SMB) models are part of the US Think Express Program
- These 1859 models have a 1 year limited warranty

Positioning
Mainstream performance and features; two-spindle design

Processor
Intel® Celeron® M Processor 350 (1.3GHz) with 400MHz system bus or Intel® Pentium® M Processor 740 (1.73GHz) with enhanced Intel SpeedStep™ technology. Execute Disable Bit, and 533MHz system bus

L2 cache
Celeron® M 1MB; Pentium® M 2MB; All: on die (at processor speed) / ECC

Memory
256 or 512MB / 2GB max / PC2-4200 / 128MB / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

Disks
Drive None standard / use optional USB-based diskette drive

Optical Drive DVD-ROM/CD-RW / 24X/24X/24X/8x: speed / removabled from Ultrabay Enhanced

Battery-type 40GB (4200 rpm) or 60GB GMA 900 Fingerprint reader Security

Combi 9.5mm high bay / supports 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / Hard Disk Drive Shock Absorber / Active Protection System

Display
Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

Graphics
Intel® Graphics Media Accelerator 900 (GMA 900)

Sound Soft audio / ICH AC97 controller / DirectSound

Networking
Intel® 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI1510 CardBus controller, Mini PCI, external expansion) / 82910GML Graphics Mem Cont Hub

some: on die (at processor speed) / ECC

power: on die / Intel Processor 740 (1.73GHz)

spindle: 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

Architecture
Some: Mobile Intel 915GM Express Chipset / 82951GM Graphics Mem Cont Hub


Some: Intel 82801GME Express Chipset / Intel 82801GME ICH6-M

Support
PC Card Std slot One Type I or Type II slot / CardBus 32-bit / integrated
guard: One ExpressCard54 / PCI Express x1 or USB 2.0 / integrated
guard: Two USB (Version 2.0) / external / DB-15 monitor / infrared (4Mbps) / RJ-11 modem / RJ-45 (Ethernet) / no keyboard or mouse or serial ports (use USB)

Some: 150 nits

Some: 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip

Some: Intel 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2915ABG, 82353 chip

Some: Intel 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2915ABG, 82353 chip

Cable
Some: on die / Intel Processor 740 (1.73GHz)

some: on die / Intel Processor 740 (1.73GHz)

power: on die / Intel Processor 740 (1.73GHz)

spindle: 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm

Memory
64MB / 128MB / 256MB / 512MB / 1GB / 2GB / 4GB / 8GB / 16GB / 32GB / 64GB / 128GB / 256GB / 512GB / 1TB / 2TB / 4TB / 8TB / 16TB / 32TB / 64TB / 128TB / 256TB / 512TB / 1PB / 2PB / 4PB / 8PB / 16PB / 32PB / 64PB / 1EB / 2EB / 4EB / 8EB / 1ZB / 2ZB / 4ZB / 8ZB / 1YB / 2YB / 4YB / 8YB / 10YB / 20YB / 40YB / 80YB / 100YB / 200YB / 400YB / 800YB / 1TB YB

Port
RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

Sound
Some: 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip

Some: 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2915ABG, 82353 chip

Some: 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 2915ABG, 82353 chip

Security
Power-on password / hard disk password / supervisor password / security keyhole

Security chip Embedded Security Subsystem 2.0 / 829549AT chip / TC/TPM-compliant

Fingerprint reader None

Limited warranty 1 year - EasyServon uptake and delivery / service upgrades available

Software
Windows XP Professional

- Microsoft Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access IBM
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- RecordNOW and Drive Letter Access provided by SonicXtreme (up to 128MB memory / up to 200MHz)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology
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Other ServicePac options at ibm.com/services/its/us/source/ or visit http://www.lenovo.com/lenovo/options

ThinkPad notebooks implement ThinkVantage™ technologies and design:

ThinkPad notebooks implement ThinkVantage™ technologies and design:

ThinkPad notebooks implement ThinkVantage™ technologies and design:
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>CDC</th>
<th>IEEE</th>
<th>Workhorse Chipset or Global Entry</th>
<th>Available date</th>
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<td>1394</td>
<td>Yes</td>
<td>910GML</td>
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</table>

**Positioning**

Mainstream performance and features; two-spindle system

**Processor**

Intel® Celeron M Processor 360 (1.4GHz) or 370 (1.5GHz) with 400MHz system bus

**L2 cache**

1 MB / on die (at processor speed) / ECC

**Memory**

256MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

**Diskette drive**

None standard / optional USB-based diskette drive

**Display**

15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

**Graphics**

Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM

**Keyboard**

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard-size keys)

**Trackpoint**

TrackPoint® pointing device, "Press-to-Select" / SmartScroll Bar®, magnifying glass

**Touchpad**

UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

**Disk Cache**

200GB in 9.5mm (5400 rpm)

**USB**

USB 2.0 / Analog Headset by Sennheiser 40Y8518 / USB Portable Diskette Drive 05K9276

**Batteries**

256MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

**Battery**

Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced

**Battery life**

Option: extended or standard (up to 2.2 hours) / Optional: keyboard up to 4.2 hours

**Architecture**

Mobile Intel 915GML Express Chipset / 82910GML Graphics Memory Cont Hub / 82801FB BM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth]) / PCI bus (TI 11b/11g CardBus controller, Mini PCI, external expansion) / LPC bus (National Semiconductor iension2431cou (TPM), Asset ID, hardware event log, parallel, infrared, [docking-based ports (serial, diskette)]

**Operating System**

Windows XP Professional / Microsoft Windows XP Professional (Service Pack 2) / Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

• Rescue and Recovery™
• Access Program
• Access Connections™
• Norton AntiVirus
• PC-Doctor™
• ThinkPad Utilities
• Adobe Reader
• RecordNOW and Drive

**License**

CD (not included)

• Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

**Software**

ThinkVantage technologies and desktop management software

visit thinkpad.com/thinkvantage

Universal 72-watt AC adapter PC 2001-compliant

ACPI 1.0b and 2.0-compliant

CMI and DMI 2.0-compliant

PXE 2.1-compliant

Energy Star®-compliant

International Warranty Service 17

24 hour x 7 day toll-free warranty support during the warranty12

See footnotes for important warranty information

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(lenovo.com/accessories)

Post-warranty annual maintenance

IBM Director Agent

Software Delivery Assistant

System Migration Assistant

IBM Training Solutions

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)

ThinkPad® R52 (1859) - TopSeller (July 2005) - withdrawn

ThinkPad® Limited warranty™

These small and medium business (SMB) models are part of the US TopSeller™ Program

These 1859 models have a 1-year limited warranty
**Type-model** | **Processor** | **Speed GHz** | **Memory** | **Graphics controller** | **Disk drives** | **Mini PCI Comm Bay** | **CDC modem** | **IEEE 1394 port** | **Finger print reader** | **Limited Workforce warranty** | **Global or Entry date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1859-B6U | Pentium® M 740 | 1.73 | 256MB | GMA 900 | 40GB | DVD | Open | 11b/g | No | 1-year | No Aug 05
1859-B7U | Pentium M 740 | 1.73 | 256MB | GMA 900 | 40GB | DVD | Open | 11b/g | No | 1-year | No Aug 05
1859-B8U | Pentium M 740 | 1.73 | 512MB | GMA 900 | 60GB | DVD | Open | 11b/g | No | 1-year | No Aug 05
1859-B9U | Pentium M 740 | 1.73 | 512MB | GMA 900 | 60GB | DVD | Open | 11b/g | No | 1-year | No Aug 05
1859-BAU | Pentium M 740 | 1.73 | 512MB | GMA 900 | 60GB | DVD | Open | 11b/g | No | 1-year | No Aug 05

**Features**
- 1859 models have a 1-year limited warranty
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These 1859 models have a 1-year limited warranty

**Display**
- Mainstream performance and features: two-disc system
- Intel® Pentium® M Processor
- L2 cache technology: Execute Disable Bit, and 533Mhz system bus
- Audio support
- Ethernet
- Modem
- CDC
- Intel 11b/g 32

**Battery - life**
- 100GB Hard Disk 9.5mm PATA (5400 rpm) 40Y8716
- 1GB PC2-4200 DDR2 NP CL4 73P3842
- 1GB PC2-4200 DDR2 NP CL4 73P3842
- 512 MB PC2-4200 DDR2 NP CL4 73P3840

**Thinklight™**
- Optional 6-cell: up to 2.2 hr; Optional 9-cell: up to 4.2 hr
- 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Dimens**
- Mainstream performance and features: two-disc system
- Intel® Pentium® M Processor
- L2 cache technology: Execute Disable Bit, and 533Mhz system bus
- Audio support
- Ethernet
- Modem
- CDC
- Intel 11b/g 32

**Software**
- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo models)
- Client Security Software (for security chip)

**License**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**Video**
- Mobile Intel 915GM Express Chipset / 82351GM Graph Mem Cont Hub (GMCH-M) / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, ACPI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth]) / PCI bus (TI® ICH10/110 Cardbus controller, Mini PCI, external expansion)

**Architecture**
- Mobile Intel 915GM Express Chipset / 82351GM Graph Mem Cont Hub (GMCH-M) / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, ACPI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth]) / PCI bus (TI® ICH10/110 Cardbus controller, Mini PCI, external expansion)

**License**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**Security chip**
- Embedded Security Subsystem 2.0® / in NS PC89347 chip / TC/compiegel

**Fingerprint reader**
- Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip

**Limited warranty**
- 1-year - EasyServ™ on-site pickup and delivery / service upgrades available

**Other accessories**
- at lenovo.com/accessories

See footnotes for important warranty information

© 2006 Lenovo (YK63) February 2007
**Software**

Windows XP Professional:
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disco Recovery (in hidden protected area)

Preloaded:
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™
- RecordNow and Drive
- Client Security Software (for security chip)

Downloadable:
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included):
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage technologies and design. Visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter PC 2001-compliant
AFC 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant
ENERGY STAR®-compliant
International Warranty Service
24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus™ 2-year LOR 9x5 NBD
ThinkPlus 3-year LOR 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P/L P/U Depot
ThinkPlus 5-year P/L P/U Depot
Post-warranty annual maintenance agreements

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology*

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**Footnotes**

1. See footnotes for important warranty information
2. US models announced March 1, 2005
3. US models withdrawn effective February 2007
4. Lenovo

**(RY1) February 2007**
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<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Cache MB</th>
<th>Memory GB</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk controller</th>
<th>Mini PCI</th>
<th>Boot CD</th>
<th>CDC modem/ software</th>
<th>Workhorse (W)</th>
<th>Other accessories</th>
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<td>No</td>
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</table>

**Positioning**
Mainstream performance and features: two-spindle system

**Processor**
- Intel® Pentium® M Processor 750 (1.86GHz) or 760 (2.00GHz) with Enhanced Intel SpeedStep™ technology
- Execute Disable Bit

**L2 cache**
- 2MB, on die (at processor speed) / ECC
- 256MB, 512MB, or 1GB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / dual-channel DDR2 capability / 200-pin SO-DIMM sockets / standard mem in 1 socket / 1 socket available

**Display**
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits
- Some: 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits

**Graphics**
- Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM

**Keyboard**
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)
- TrackPoint® pointing device / 5 press-to-select™ Internet Sroll Bar® / right-clicking glass

**Touchpad**
- UltraNav™ multi-pointing system / touchpad below keyboard / Tap Zones

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 14.1" models (WxDxH): 12.4"x9.6"x0.75"; 314mm x 244mm x 19mm
- 15.0" models (WxDxH): 15.0"x10.2"x1.35-1.46"; 381.0mm x 260mm x 34-37mm

**Weight**
- 14.1" models: 2.4 lb (1.09kg)
- 15.0" models: 2.9 lb (1.32kg)

**Battery**
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- Battery Life (up to 3.8 hours) / Optional 9-cell: up to 5.8 hours

**Architecture**
- Mobile Intel® 915GM Express Chipset / Intel® 82801BM ICH5-M Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI bus, external MAC, USB, Low Pin Count [LPC] interface, [Bluetoot])
- PCI bus (TI® PCI1510 CardBus controller, Mini PCI, external expansion)
- LPC bus (National Semiconductor® PC87394T Super I/O for security chip (TPM), Intel® PRO/Wireless 2915ABG, 82533 chipset)
- All: 1-yr battery - EasyServ™, ThinkPlus® 3-year LOR

**Driver**
- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem / Ethernet) / no keyboard or mouse or serial ports (use USB)

**Video**
- S-video out port (TV out) / one 4-pin industry standard connector
- One Elletra 1494 (FireWire) port / 4-pin connector / 1394a-2000 standard

**IEEE 1394**
- Some: 1494 (FireWire) port / 4-pin connector / 1394a-2000 standard

**Wireless upgradable**
- Some: wireless upgradable with wireless Mini PCI options
- Some: 11b/g wireless® / Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip
- Some: 11a/b/g wireless®, Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset

**Audio support**
- One Communications Daughter Card (CDC) / socket / additional channels
- One Communications Daughter Card (CDC) / socket / additional channels
- Gigabit ethernet on system board / Broadcom BCM5751/P (MAC/PHY) / PCIe x1 / PXE / Soft audio / ICH AC97 controller / DirectSound® support / AD1891B AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input microphone jack (3.5 mm stereo)

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole
- Security Subsystem (embedded Security Subsystem 2.0™) / in / NS PC83974 chip / TCG-compliant

**Fingerprint reader**
- Some: Fingerprint reader on palm rest / swipe sensor / integrated with security keyhole

**Limited warranty**
- 3-year / battery - EasyServ™ / onsite pickup and delivery / service upgrades available

**SOFTWARE**
- Windows XP Professional
- - Microsoft® Windows® XP Professional® (Service Pack 2)
- - Disk-to-Disk Recovery
- - (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Program
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive

**Downloadable**
- IBM Device Agent
- Software Delivery Assistant
- System Migration Assistant

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

**Lenovo** (Y(K62)) February 2007

US models announced August 2, 2005 or January 17, 2006

US models withdrawn effective August 2006, November 2006, or February 2007

Visit thinkpad.com

Lenovo Training Solutions

ThinkPad notebooks implement ThinkVantage® technologies and design; visit: thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- C1M and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant

International Warranty Service
- 24 hour 7x7 day toll-free support during the warranty

ThinkPlus®
- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 4-year P/L/P/U depot
- 5-year P/L/P/U Depot

Post-warranty annual maintenance agreements available at lenovo.com/thinkplus/warranty
ThinkPad R52 (1860) - Education - withdrawn

**Type-model** | **Processor** | **Speed** | **Cache Memory** | **Graphics Controller** | **Disk Drive** | **Mini PCI Controller** | **Security** | **Availability**
---|---|---|---|---|---|---|---|---
1860-25U Celeron M 350 | 1.3 | 256MB | 14.1" XGA | GMA | 40GB 4200 | CD | Intel I11b/g | Modem | 1394 Yes GML EasyServ Mar05
1860-26U Celeron M 350 | 1.3 | 256MB | 14.1" XGA | GMA | 40GB 4200 | Combo | Intel I11b/g | Modem | 1394 Yes GML EasyServ Mar05
1860-3RU Celeron M 360 | 1.4 | 256MB | 14.1" XGA | GMA | 5400 | CD | Intel I11b/g | Modem | 1394 Yes GML EasyServ Jul05
1860-3SU Celeron M 360 | 1.4 | 256MB | 14.1" XGA | GMA | 40GB 4200 | Combo | Intel I11b/g | Modem | 1394 Yes GML EasyServ Jul05
1860-3MU Pentium M 725a 1.60 | 256MB | 14.1" XGA | GMA | 40GB 4200 | CD | Intel I11b/g | Modem | 1394 Yes GML EasyServ Jul05
1860-2YU Pentium M 740 | 1.73 | 412MB | 14.1" XGA | GMA | 40GB 4200 | Combo | Intel I11b/g | Modem | 1394 Yes GML EasyServ Jul05
1860-5SU Pentium M 740 | 1.73 | 512MB | 15.0" XGA | GMA | 40GB 4200 | Combo | Intel I11b/g | Modem | 1394 Yes GML EasyServ Jul05

*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning Processor**
- Intel® Celeron M Processor 350 or 360 or Pentium M Processor 725a (1.60GHz)
- Intel® Pentium M Processor 740 (1.73GHz) with Enhanced Intel SpeedStep™ technology
- Execute Disable Bit
- Intel® Celeron M, 1 MB; Pentium M, 2 MB; All: on-die (at processor speed) / ECC
- 256 or 512MB std / 2GB max / PC/2-4200 333MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std in 1 socket / 1 socket avail

**SOFTWAR™**
- Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Education software from Vital Source Technologies
- Personal Portable Library
- Rescue and Recovery
- Access Program
- Access Connections
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**
- IBM License adherence
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

**Universal 72 Watt AC adapter**
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant International Warranty Service
- 24 hour 7 day 8 hour toll-free warranty support during the warranty

ThinkPlus™, 2-year LOR 9x5 NBD
41C9175
ThinkPlus 3-year LOR 9x5 NBD
41C9176
ThinkPlus 4-year LOR 9x5 NBD
41C9177
ThinkPlus 5-year LOR 9x5 NBD
41C9180
ThinkPlus 4-year P & L P / U Depot
41C9180
ThinkPlus 5-year P & L P / U Depot
41C9180
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

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(RY) February 2007
Processor:
- Intel® Celeron M Processor 360 with 400MHz system bus or Intel Pentium M Processor 740 (1.73GHz) or 750 (1.86GHz) Bus

L2 cache:
- Celeron M: 1 MB; Pentium M: 2 MB; All: on die (at processor speed) / ECC

Memory:
- 256 or 512MB std / 2GB max / PC2-4200 533MHz DRR2 / non-parity / CL4 / dual channel capable to two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket available

Diskette drive:
- None standard / use optional USB-based diskette drive

CD:
- Some: CD-ROM / 24X-10X speed / removable from Ultrabay Enhanced

Ultrabay Enhanced:
- Some: DVD-ROM/CD-RW / 24X/24X/24X/6X speed / removable from Ultrabay Enhanced

Disk:
- 40GB (4200 or 5400 rpm) / 9.5mm height removable, upgradable / 9.5mm high bay supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / Hard Drive Shock Absorber / Active Protection System

Display:
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Graphics:
- Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM and 915GV / 400MHz up to 1250MHz / 200MHz

Keyboard:
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

TrackPoint:
- Tracking point device, "Press-to-Select," Internal Scroll Bar

Touchpad:
- UltraNav™ multi-pointing system / touch point below keyboard / Tap Zones

ThinkLight™:
- Illuminates the keyboard to improve visibility in low-light conditions

Dimensions:
- 14.1" models (WxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm

Weight:
- 15.0" models (WxHxD): 13.8" x 10.1" x 1.8-2.1"; 345mm x 257mm x 45-53mm

Case material:
- Color: black; All: Acrylic/nitride-butadiene-Styrene (ABS) plastic

Battery
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced

Architecture:
- Some: Mobile Intel 910GML Express Chipset / 8291GM Graphics Mem Cont Hub
- Some: Mobile Intel 915GM Express Chipset / 8291GM Graphics Mem Cont Hub

PC Card Std slot:
- One Type I or Type II slot / CardBus 32-bit / CardBus controller

ExpressCard slot:
- One ExpressCard/54 or ExpressCard/34 or USB 2.0 / integrated door

Ports:
- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-45 (10/100)
- RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

Video out:
- S-video out (TV out) / one 4-pin industry standard connector

IEEE 1394:
- IEEE 1394 (FireWire) port / 4-pin connector / 1394a-2000 standard

Mini PCI:
- UltraConnect™ Antenna built into the display cover for optional wireless signal reception

Intel 11b/g or b/g (or both):
- Some: 11b/g wireless*, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip
- Some: 11a/b/g wireless*, Mini PCI, Intel PRO/Wireless 2915ABG, 82353 chip
- Some: 11a/b/g wireless*, ThinkPad 11a/b/g Mini PCI Adapter II, Atheros AR5001X

Ethernet:
- Some: Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PXE chip / PXE
- Soft audio / ICH AC97 controller / DirectSound / integrated sound / 192KHz 16-bit audio / USB

Audio support:
- Some: Speaker, 1 watt / volume up, down, mute buttons / microphone internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

Security:
- Power-on password / hard disk password / supervisor password / security keyhole

Security chip:
- Some: Embedded Security Subsystem 2.0

Fingerprint reader:
- Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip

Limited warranty:
- 3-year / 1 year battery - EasyServ™ onsite pickup and delivery / service upgrades available

Software:
- Windows XP Professional
  - Microsoft® Windows® XP Professional / Service Pack 2
  - Disk-to-Disk Recovery

Preloaded:
- Education from Vital Source Technologies: vitalsource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections
- Norton AntiVirus
- PC-Doctor™

Downloadable:
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC ADP

Access Connections: ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

PK2 1.0-compliant

ENERGY STAR®-compliant

International Warranty Service 17

24 hour x 7 day toll-free warranty support during the warranty 12

Limited warranty 2-year OR 5-year NBD

Post-warranty annual maintenance agreements

Lenovo® Training Solutions

See footnotes for important warranty information * Powered by Intel Centrino® mobile technology © Lenovo (YK64) February 2007

US models announced August 2 or August 16, 2005

US models withdrawn effective June 2006 or February 2007
### ThinkPad R52 (1861) - Education - withdrawn

#### Positioning

**Processor**
- Mainstream performance and features; two-spindle system
- Intel® Celeron M Processor 350 (1.3) or 360 (1.4GHz) with 600MHz system bus or Intel® Pentium M Processor 740 (1.7GHz) with Enhanced Intel SpeedStep™ technology;
- Execute Disable Bit

**L2 cache Memory**
- 1MB; Pentium M: 2MB; All: on-die (at processor speed) / ECC
- 256 or 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive CD**
- None standard / optional USB-based diskette drive
- Some: CD-ROM / 24X10X speed / removable from Ultrabay Enhanced

**Modem**
- Toshiba (Rancho) 14.4k modem / 0.1-Mbps modem
- Optional Bluetooth

**Disk Drive**
- 40GB hard drive
- Ultrabay Enhanced
- One: 11b/g wireless
- One: 11a/b/g32 modem

**Battery**
- Battery - life10
- 1861-5SU: 9.5 hours
- 1861-3TU: 9.5 hours
- 1861-26U: 9.5 hours

**Graphics**
- Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM
- Intel® Graphics Media Accelerator 900
- Intel® Graphics Media Accelerator 900

**Keyboard**
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard keys)
- TrackPoint® pointing device, "Press-to-Select" Internet Scroll Bar, magnifying glass

**Touch pad**
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**Display**
- 14.1" (358.1mm) XGA (1024X768) TFT color / Active Matrix / 150 nits
- 15.0" (381.0mm) XGA (1024X768) TFT color / Active Matrix / 200 nits

**Architecture**
- Some: Mobile Intel 915GL Express Chipset
- 82801FB ICH-6 M / ICH-5 I/O Controller Hub (SATA150, ATA-100 IDE / PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], PCI bus (T"): PCI11510 CardBus controller, Mini PCI, external expansion)
- 11b/g/wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- One Communications Daughter Card (CDC) socket / customer accessible
- Gigabit Ethernet
- Broadcom BCM5751M (MAC/PHY) / PCIe x4 / PXE support

**Audio support**
- Soft audio / ICH AC97 controller / DirectSound® support / AD19818 AC97 codec / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)
- Some: 11a/b/g wireless
- Some: 11a/b/g wireless

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole

**Fingerprint reader**
- None

### Limited warranty
- 3-year limited warranty
- Excluding holidays, next business day response time

### Software

**Windows XP Professional**
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery
- Rescue and Recovery™

**Preloaded**
- Education software from Vital Source Technologies®
- Personal Portable library™

**Additional**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**License**
- CD not included
- Lotus™ Smartsuite® Millennium
- Lotus Notes® Stand-alone Client

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*See footnotes for important warranty information
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(RYS) February 2007*
ThinkPad R52 (1861) - Education (August 2005) - withdrawn

Processor
- Intel® Celeron M Processor 360 with 400MHz system bus
- Intel Pentium M Processor 740 (1.73GHz) or 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology

L2 cache
- None standard

Memory
- 256MB or 512MB SDRAM / 2GB max / PCI Express 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket available

Diskette drive
- None standard

CD
- Some: CD-ROM / 24X/10X speed / removable from Ultrabay Enhanced

Modem
- One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high

Wireless
- 802.11a/b/g wireless

Hard Disk Drive
- 40GB (4200 or 5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / Hard Disk Drive Shock Absorber / Active Protection System

Display
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Graphics
- ThinkPad Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz

Keyboard
- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (state-size keys)

Touchpad
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

Dimensions
- 14.1" models (WiXoDH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm

Weight
- 15.0" models: 6.1 lb (2.8kg); 15.0" models: 6.6 lb (3.0kg)

Material
- Some: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type
- Battery: 6-cell

Battery - life
- 1-year battery, 3-year warranty

Architecture
- Some: Mobile Intel 915GML Express Chipset / 82915GML Graphics Mem Cont Hub
- All: 82801FBM ICH6-M I/O Controller Hub (SATAP150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth]

PC Card Std slot
- One Type I or Type II slot / CardBus 32-bit / integrated door

ExpressCard slot
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door

Ports
- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

Video out
- S-video out port (TV out) / one 4-pin industry standard connector

Wireless antenna
- UltraConnect™ Antenna built into the display cover for optimal wireless signal reception

Mini PCI
- One Mini PCI type III slot (Communications Bay) / customer upgradable

Intel 11a/b/g/b
- Some: 11a/b wireless; Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset

Intel 11a/b/g/b
- Some: 11a/b wireless, ThinkPad 11a/b/g Mini PCI Adapter II, Atheros AR5004X chipset

Modem
- 56K V.92 V.92-designated modem in CDC / Conexant® chipset

Audio support
- Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC7 codec / stereo speakers / 1 watt / volume up/down, mute buttons / internal microphone / microphone input jack (3.5mm; pink) / headphone jack (3.5mm; green)

Security
- Power-on password support / password diskette keyhole

Security chip
- Embedded Security Subsystem 2.0 / in NS 83984T chip / TCG-compliant

Security
- Some: Fingerprint reader on palm rest / swipe sensor / integrated with security excluding holidays, next business day response time

Limited warranty
- 3-year 1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays

Universal 72 watt AC adapter
- AC adapter

IBM Director Agent
- Support Delivery Assistant / System Migration Assistant

Lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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US models announced August 2 or August 16, 2005

US models withdrawn effective February 2007

SOFTWARE
- Windows XP Professional
  - Microsoft® Windows® XP Professional(32/64-bit) (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Education software from Vital Source Technologies®; vitalsource KEY™ and Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (CD not included)
  - Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- PC 2001-compliant
- AC1 100v and 200-240v 50/60Hz / 1.0A / PXE 2.1-compliant
- ENERGY STAR®-compliant

International Warranty Service
- 24 hour / 7 day toll-free support during the warranty

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

* These models have a limited onsite service or 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
ThinkPad R52 (1958) - TopSeller and Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Ctrl Bay</th>
<th>Modem</th>
<th>Chipset</th>
<th>Limited warranty</th>
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<tr>
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<td>Celeron M 350</td>
<td>1.3</td>
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<td>256MB</td>
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<td>GMA 40GB 5400</td>
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<td>GML EasyServ</td>
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<td>1958-3GU</td>
<td>Pentium M 740</td>
<td>1.73</td>
<td>256MB</td>
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<td>GMA 60GB 4200</td>
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<td>GML EasyServ</td>
<td>Mar 05</td>
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<td>1958-60U</td>
<td>Pentium M 740</td>
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<td>512MB</td>
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<td>Combo = Intel 11a/b/g</td>
<td>394</td>
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<td>Mar 05</td>
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<tr>
<td>Windows XP Professional</td>
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<tr>
<td>- Microsoft Windows XP Professional (Service Pack 2)</td>
</tr>
<tr>
<td>- Disk-to-Disk Recovery (in hidden protected area)</td>
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</table>

Preloaded:
- Education software from Vital Source Technologies™
- Personal Portable library™
- Rescue and Recovery™
- Access Program
- Access Connect™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive Letter Access powered by Sonic products (combo models)
- InteViewWindVDS (combo models)
- Client Security Software (for security chip)

Downloadable:
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included):
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

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US models announced April 12, June 28, or July 6, 2005

US models withdrawn effective September 2005 or February 2007

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- ACPI 1.0b and 2.0-compliant
- CMI and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR® compliant
- International Warranty Service17
- 24 hour x 7 day toll-free warranty support during the warranty

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

ThinkPad R52 (1958) - TopSeller and Education - withdrawn
| Type-model | Processor | Speed/GHz | Memory | Cache | Graphics | Controller | Disk/SATA | EIDE optical | Mini PCIe | Mini PCIe | BlueTooth | Firewire | Chipset | Preload | Avail date |
|------------|-----------|-----------|--------|-------|----------|------------|-----------|--------------|-----------|-----------|-----------|---------|---------|---------|---------|-----------|
| 0657-44U | Celeron® M 420 | 1.66 | 512MB | 1.60 | 15.0” XGA GMA250 | 60GB 5400 DVD | 60GB 5400 DVD | None | None | None | None | None | None | GM X2 Pro | May 06 |
| 0657-45U | Core Duo T2300 E | 1.73 | 512MB | 1.73 | 15.0” XGA GMA250 | 60GB 5400 DVD | 60GB 5400 DVD | None | None | None | None | None | None | GM X2 Pro | May 06 |

**Software**

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Adobe® Reader
- Google Toolbar
- Malicious Software Removal Tool (MSRT)
- Microsoft Office® 2003 Professional®
- Norton™ Antivirus 2007
- Symantec Client Security®
- ThinkVantage System Update
- ThinkVantage Client Security®
- Disk Keeper Lite
- ThinkPad Utilities (Power Manager and Presentation Director)

**License**

- CD not included (all)
- Windows® XP Home Edition
- Windows® XP Professional®
- ThinkPlus 3-year LOR 9x5 1 NBD

**Supported Technologies**

- 64-bit Windows® XP Professional®
- 64-bit AutoCAD®
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour 7 day toll-free one year warranty support during the warranty 12

See footnotes for important warranty information

- Powered by Intel® Centrino® mobile technology
- Powered by Intel® Centrino® Duo mobile technology

Lenovo (PC1-1) September 2007

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US models: 41c9167, 41c9166

41c9167

41c9166

Other ThinkPlus services at lenovo.com/thinkplus/warranty
### ThinkPad® R60e (0657) - TopSeller (October 2006) - withdrawn

#### Created by Lenovo Training Solutions

**Personal Systems Reference (PSREF)**

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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Anti-glare Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe Finger-print print</th>
<th>Chip-set</th>
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<td>ThinkPad 11n</td>
<td>None</td>
<td>None</td>
<td>GM</td>
<td>XP Pro Oct 06</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 1-year limited warranty*

#### Positioning

**Processor**

Eeveryday computing; two spindles

**Memory**

512MB or 1GB std / 4GB max¹ / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 290-pin SO-DIMM sockets / 512MB model: std memory in one socket; one socket available; 1GB model: std memory in two sockets; no sockets available

**Diskette drive**

None standard / use optional USB-based diskette drive

**EIDE DVD:RW**

Some: DVD-ROM/CD-RW / 24x/24x/24x/8X² speed / fixed, not removable / 12.7mm

**UltraBay Enhanced**

None / no support for removable Ultrabay options

**Battery & type**

ThinkPad 11n wireless / Hard Disk Drive Shock Absorber

**Dimensions**

15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio

**Graphics**

Intel Graphics Media Accelerator 9500 (GMA 950) / in 945GM / 250MHz

**Keyboard**

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar² (no touch pad)

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Weight²**

15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm with optical drive and battery: up to 6.6 lb (3.0kg)

**Battery - life**

6-7 hours

**Display**

ThinkVision L192p 19" Monitor (black) 9419HC1

**Graphics**

Intel Graphics Media Controller Hub / in 945GM / 250MHz

**Docking station**

No port replicator or docking station support

**PC Card Std slot**

One Type I or Type II slot / CardBus 32-bit / integrated door

**ExpressCard slot**

None

**Ports**

Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial, parallel, infrared, S-video out, or 1394 FireWire port (use USB)

**Wireless antenna**

UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Mini PCI Express**

ThinkPad 11n wireless / ThinkPad 11n wireless²

**Modem**

ThinkPad 11n wireless / ThinkPad 11n wireless²

**Bluetooth™**

None

**Audio support**

High Definition (HD) Audio / AD1981HD codec / mono speaker, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Security**

Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

None

**Fingerprint reader**

None

### Limited warranty² 1-year - EasyServ¹ onsite pickup and delivery / service upgrades² available

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<th>100GB Disk 9.5mm SATA150 (7200 rpm)</th>
<th>120GB Disk 9.5mm SATA150 (5400 rpm)</th>
<th>160GB Disk 9.5mm SATA150 (5400 rpm)</th>
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<th>USB 2.0 Lenovo Webcam</th>
<th>USB 2.0 Security Memory Key 2GB</th>
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</tr>
</tbody>
</table>

#### SOFTWARE²

- **Windows XP Professional**
  - Microsoft Windows XP Professional³ / Service Pack 2
  - Disk-To-Disk Recovery (in hidden protected area)

#### Preloaded

- Microsoft Office OneNote® 2003
- Rescue and Recovery®
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Life (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Thinkpad Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive Image Manager (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

#### CD included

- Microsoft Office OneNote 2003

#### License - CD not included

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service¹ 24 hour x 7 day toll-free warranty support during the warranty¹²

#### PowerSpecd, R60e (0657) - TopSeller (October 2006) - withdrawn

See footnotes for important warranty information

*Powered by Intel Centrino® Duo mobile technology*
| Type-model | Processor | GHz | Memory | Anti-glare screen | Graphics controller MHz | Disk | SATA | rpm | EIDE optical | Mini PCIe 802.11 wireless | Mini PCIe WWAN wireless | Finger-print reader | Workhorse Global (G) | Avail date |
|------------|-----------|-----|--------|------------------|------------------------|------|-------|------|-------------|--------------------------|-------------------------|-------------------|----------------------|----------------------|-----------|
| 0658-53U Celeron M 420 | 1.60 | 256MB | 15.0" XGA | GMA166 | 40GB | 5400 | DVD | None | None | None | None | None | None | None | May 06 |
| 0658-55U Celeron M 420 | 1.60 | 256MB | 15.0" XGA | GMA166 | 40GB | 5400 | DVD | None | None | None | None | None | None | None | May 06 |
| 0658-5YU Celeron M 420 | 1.60 | 256MB | 15.0" XGA | GMA166 | 40GB | 5400 | CD | None | None | None | None | None | None | None | May 06 |
| 0658-60U Core Duo T2300E | 1.66 | 512MB | 15.0" XGA | GMA950 | 60GB | 5400 Combo | DVD | Intel 11a/b | None | None | None | None | None | None | May 06 |
| 0658-65U Core Duo T2300E | 1.66 | 512MB | 15.0" XGA | GMA250 | 60GB | 5400 DVD | *Intel 11a/b | None | None | None | None | None | None | None | May 06 |
| 0658-75U Core Duo Solo T1300 | 1.66 | 512MB | 15.0" XGA | GMA250 | 60GB | 5400 DVD | *Intel 11a/b | None | None | None | None | None | None | None | May 06 |
| 0658-G4U Core Duo Solo T1400 | 1.83 | 512MB | 15.0" XGA | GMA250 | 60GB | 5400 DVD | *Intel 11a/b | None | None | None | None | None | None | None | May 06 |
| 0658-95U Core Duo T2400 | 1.83 | 512MB | 15.0" XGA | GMA250 | 60GB | 5400 DVD | *Intel 11a/b | None | None | None | None | None | None | None | May 06 |
| 0658-CLU Core Duo T2500 | 2.00 | 512MB | 15.0" XGA | GMA250 | 80GB | 5400 DVD | *Intel 11a/b | None | None | None | None | None | None | None | May 06 |

**Positioning:** Everyday computing; two spinners

**Hard Drive Drive:** None standard / use optional USB-based disk drive

**EIDE CD Drive:** Some: CD-ROM / 24X-10X speed / fixed, not removable / 12.7mm high

**EIDE DVD Drive:** Some: DVD-ROM / 8X-33X speed / fixed, not removable / 12.7mm high

**EIDE Combo Drive:** Some: DVD-ROM/CD-RW / 24X24X24X8x2 speed / fixed, not removable / 12.7mm high

**EIDE DVD RW Drive:** Some: DVD burner / Super Multi-Burner DL (40Y8624) / fixed, not removable / 12.7mm high

**Audio Support:** Intel High Definition (HD) Audio / AD1981HD codec / mono speaker, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Graphics:**

- **Type:** Some: Intel Graphics Media Accelerator 950 (GMA 950) / in 940GML / 166MHz
- **Max Memory:** Some: Intel Graphics Media Accelerator 950 (GMA 950) / in 945GML / 250MHz

**Display:**

- **Model:** 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio

**Keyboard:**

- **89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- **TrackPoint:** Some: TrackPoint pointing device, "Press-to-Select," Intel Scrolling Bar (no touch pad)

**Port Coax**

- **Two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive:** None standard / use optional USB-based disk drive

**Substantiation:**

- **Diskette drive:** None standard / use optional USB-based disk drive

**Graphics:**

- **Type:** Some: Mobile Intel 940GML Express Chipset / 8240GML Graphics Mem Cont Hub
- **Max Memory:** Some: Mobile Intel 940GML Express Chipset / 82945GML Graphics Memory Cont Hub

**Docking Station:**

- **Type:** One Type I or Type II slot / CardBus 32-bit / integrated port

**Manuals:**

- **One:** ThinkPad Hardware Manual / One: ThinkPad X30 577556 32-bit guide
- **Two:** ThinkPad U30 577557 32-bit guide

**Ports:**

- **One:** ThinkPad U30 577557 32-bit guide
- **Two:** ThinkPad X30 577556 32-bit guide

**Wireless LAN:**

- **UltraConnect Technology**: Antenna built into the display cover / on/off switch for all wireless radios
- **Mini PCI Express**: None
- **11a/b/g**: Some: Intel Pro/Wireless 2100AGN / Intel Pro/Wireless 2100AGN

**Audio Support:**

- **High Definition (HD) Audio**: Audio AD1981HD codec / mono speaker, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Security Chip:**

- **Power-on password / hard disk password / supervisor password / security keyhole
- **Security Chip:** None

**Print-in-reader:**

- **None**

**Limited warranty:**

- **1-year**: EasyServ on-site pickup and delivery / service upgrades available

**Software:**

- **Windows XP Professional models**
  - Microsoft Windows XP Professional SP2
  - Disk-to-Disk Recovery
  - Windows XP Home models
  - Microsoft Windows XP Home Edition SP2

**Preloaded:**

- **(all)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec Client Security™
  - Diskeeper™
  - PC-Doctor (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - MultiMedia Center for Think

**License:**

- **CD - not included (all)**
  - Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client (Notes client not supported on XP Home)

Supports ThinkVantage technologies

- **65-watt AC adapter**
- **ThinkPad Roll Cage (one-piece magnesium frame)**
- **Rohs compliant**
- **International Warranty Service**
- **24 hour x 7 day toll-free warranty support during the warranty**

**ThinkPlus**

- **1-year LOR 9x5 NBD**
- **2-year LOR 9x5 NBD**
- **3-year LOR 9x5 NBD**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**
- **2-year P&L P/U Depot**
- **3-year LOR 9x5 NBD**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**

See footnotes for important warranty information

*Powered by Intel Centrino® Duo mobile technology

US models announced May 16, May 30, or October 17, 2006

US models withdrawn effective May 30, or July 30, 2007

© Lenovo

(PCI-2) September 2007

Lenovo Training Solutions

Personal Systems Reference (PSREF)
ThinkPad® R60e (0658) - Education - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Type-model  | Processor  | Speed  | GHz Memory  | Anti-glare screen  | Graphics controller  | Disk | SATA  | Gbps  | rpm  | EIDE controller  | Mini PCIe | WWAN16 | Bluetooth-  | 1-year limited warranty  | Avail date
0658-5XU | Celeron M 420 | 1.60 | 256MB | 15.0” XGA GMA166 | 40GB 5400 CD | 11a/b/g None | None None | None None | GML EasyServ May 06
0658-6GU Core Duo T2300E | 1.66 | 512MB | 15.0” XGA GMA250 | 40GB 5400 Combo | Intel 11a/b/g None | None None | GML EasyServ May 06

**This model has an EasyServ™ onsite pickup and delivery 1-year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning
Processor: Everyday computing; two spindles
Intel® Celeron M Processor 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or
Intel® Core Duo processor T2300E or T2400 with dual-core,
Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

Memory: 256MB or 512MB std / 940GM models: 2GB max; 945GM models: 4GB max / PC2-5300 DDR2 / 940GM models: PC2-5300 memory supported at slower 533MHz (not 667MHz) speed / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available.

Diskette drive: None standard / use optional USB-based diskette drive
EIDE CD: Some: CD-ROM / 24X 10X speed / fixed, not removable / 12.7mm high
EIDE Combo: Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / fixed, not removable / 12.7mm high
UltraBay Enhanced: None / no support for removable UltraBay™ options
Serial ATA disk (SATA150): 40GB (5400 rpm) / 9.5mm high / removable / upgradeable / 9.5mm high bay / Hard Drive Disk Shock Absorber

Display: 15.0” (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect ratio


Keyboard: 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar / (no touch pad)

Dimensions: 15.0” models (WxDxH): 13.1” x 10.6” x 1.47-1.58”; 332mm x 269mm x 37.3-40.2mm with optical drive and battery / up to 6.3 lb (2.8 kg)
Weight: Case material: Black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type: Lithium Ion 6-cell / supports optional 9-cell battery
Battery - life: 6-cell: up to 5.2 hr; 9-cell: up to 7.6 hr

Architecture: Some: Mobile Intel 940GML Express Chipset / 82945GM Graphics Memmory Memory Cont Hub All: 82801GBM ICH7-M I/O Controller Hub (SATAS300: ATA-100 IDE, PCI express x1, PCI bus, USB, LPC interface) / PCI bus (TI PCI1152 CardBus controller) / no Super I/O

Docking station: One Type I or Type II slot / CardBus 32-bit / integrated door
PC Card Std slot: None
ExpressCard slot: None
Ports: Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial, parallel, infrared, S-video out, or 1394 Firewire port (use USB)

Wireless antenna: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
Mini PCI Express: One Mini PCI Express slot / not customer upgradable

Intel® 11a/b/g None

WWAN16 None

Modem: 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

Ethernet: None

Audio support: Gigabit ethernet on systemboard / Broadcom™ BCM5751M (MAC/PHY) / PCIe x1 / PXE High Definition (HDA) Audio / AD1981HD codec / mono speaker, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

Security: Power-on password / hard disk password / supervisor password / security keyhole
Security chip: None
Fingerprint reader: None

Limited warranty12 - 1-year limited warranty - EasyServ™ onsite pickup and delivery / service upgrade2 available

512MB PC2-5300 DDR2 CLS SODIMM 40Y7733 T60/R60 Series Li-Ion Battery 6-cell 60G6567 T60/R60 Li-Ion Battery 9-cell 40Y6799
1GB PC2-5300 DDR2 CLS SODIMM 40Y7734 260G6566 T60/R60 Li-Ion Battery 9-cell 40Y6797
60GB Disk 9.5mm SATA150 (7200 rpm) 41N3012 ThinkPad External Battery Charger 40Y7625
100GB Disk 9.5mm SATA150 (7200 rpm) 41N3013 ThinkPad 90W AC Adapter 40Y7659
120GB Disk 9.5mm SATA150 (7200 rpm) 41N5681 ThinkPad 90W AC/DC Combo Adapter 40Y7630
160GB Disk 9.5mm SATA150 (5400 rpm) 41N5692 Lenovo M500 Projector 003A070
USB Portable Diskette Drive 05K9276 Lenovo C500 Projector 003A050
USB 2.0 Lenovo Multimedia Headset 40Y8518 ThinkPad Carrying Case - Expander 73P3597
USB 2.0 Lenovo Webcam 40Y8519 ThinkPad Carrying Case - Organizer 73P3598
USB 2.0 Security Memory Key 2GB 41U5119 ThinkPad Convertible Carrying Case 4227AC1
USB 2.0 Security Memory Key 4GB 41U5120 ThinkPad Convertible Carrying Case 4228660
USB 2.0 Port Replicator with Video 40Y8132 USB Fingerprint Reader 73P4774
USB 2.0 Portable 80GB Hard Disk 41N8978 ThinkPad Convertible Monitor Stand 40Y7620
USB 2.0 Portable 20GB Hard Disk 41N8979 Lenovo L171 17” Monitor (black) 9419HC1
USB 2.0 Super Multi-Burner Drive 41N5565 Lenovo L192 Wide 19” Monitor (black) 6920AB1
USB Travel Keyboard with UltraWide 31P9490 Lenovo D221 Wide 22” Monitor (black) 6622BH1
Preferred Pro USB Keyboard 73P5220 ThinkVision™ L171p 17” Monitor (black) 9417HC2
Enhd Peripherals Laser Keyboard and Mouse 73P5467 ThinkPad L171 17” Monitor (black) 9419HC2
TrackPoint Cap Collection 73P2888 ThinkVision L201p 20.1” Monitor (black) 9208AB1
Lenovo Laser Mouse (USB, PS/2) 41U3074 Other accessories at lenovo.com/accesories

SOFTWARE11

Windows XP Professional
- Microsoft® Windows® XP Professional, Service Pack 2
- Disk-To-Disk Recovery

Preloaded
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec™ Client Security™
- Diskeeper Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think
- Sonic RecordNOW and Drive Letter Access (combo model)
- InterVideo WinDVD (combo model)
- CD
- Adobe Photoshop Elements plus Adobe Premiere Elements

License - CD not included
- "Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage™ technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
RoHS-compliant
International Warranty Service
24 hour / 7 day toll-free warranty support during the warranty12

See footnotes for important warranty information
* Powered by Intel Centroino® Duo mobile technology
Lenovo

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

US models announced May 16 or May 30, 2006
US models withdrawn effective May or September 2007

Lenovo

(PCI-1) September 2007
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<th>Anti-glare screen</th>
<th>Graphics controller</th>
<th>Disk S/C</th>
<th>EIDE controller</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
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<th>Limited warranty</th>
<th>Avail date</th>
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<td>15.0&quot; XGA</td>
<td>GM250</td>
<td>40GB 5400 Combo</td>
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<td>3-year</td>
<td>Oct 06</td>
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**Positioning and Processor**

- Everyday computing; two spinners
- **Intel Core Duo processor T2300E** with dual-core, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache or
- **Intel Core Duo processor T5500** with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

- 512MB std | 4GB max
- PC2-5300 667MHz DDR2 | non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive / EIDE Combo / Ultrabay Enhanced / Serial ATA disk**

- None / no support for removable Ultrabay™ options
- 40GB (5400 rpm) or 80GB (5400 rpm) | 9.5mm high | removable / upgradeable / 5.2mm high bay / Hard Disk Drive Shock Absorber

**Display**

- 15.0" (381.0mm) XGA (1024x768) TFT color | 150 nits | anti-glare / 4:3 aspect ratio

**Graphics**

- Intel Graphics Media Accelerator 950 (GM950) | in 945GM / 250MHz

**Keyboard / TrackPoint™**

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys
- TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar (no touch pad)
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions / Weight / Case material**

- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm
- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm
- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm
- 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37.3-40.2mm

**Fingerprint reader / Security chip / Security**

- None / no support for removable Ultrabay™ options
- Down, mute buttons / mono microphone / microphone input jack / headphone jack
- High Definition (HD) Audio / AD1981HD codec / mono speaker, 1 watt / volume up, / 82945GM Graphics Memory Controller Hub / optional

**Battery / type / Case material / Weight / Dimensions**

- 6-cell: 9-cell / supports optional 9-cell battery
- 6-cell: 9-cell / supports optional 9-cell battery
- 6-cell: 9-cell / supports optional 9-cell battery
- 6-cell: 9-cell / supports optional 9-cell battery

**Graphics / Display / Memory**

- Intel 11a/b/g None None None GM 3-year Oct 06
- Intel 11a/b/g None None None GM 3-year May 06
- Intel 11a/b/g32 None None None GM 3-year May 06
- Intel 11a/b/g None None None GM 3-year May 06

**Processor / Memory / Architecture**

- Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache or
- Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Windows XP Professional**

- Microsoft® Windows® XP Professional w/ Service Pack 2
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think
- Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo model)
- InteView WinDVD (combo model)

**License - CD not included**

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Software**

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

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(PC1-3) September 2007

US models announced May 30 or October 17, 2006

US models withdrawn effective July or September 2007
Partial list of accessories supported on ThinkPad R60e originally announced on May 16, 2006

**Memory**
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06

**Ultrabay Slim 9.5mm**
None (no removable bay options)

**Ultrabay Enhanced 12.7mm**
None (no removable bay options)

**Storage and removable storage**
- 60GB Disk 9.5mm SATA150 (7200 rpm) 41N3012 ann 01/05/06
- 80GB Disk 9.5mm SATA150 (5400 rpm) 41N5662 ann 08/15/06
- 100GB Disk 9.5mm SATA150 (7200 rpm) 41N3013 ann 01/05/06
- 120GB Disk 9.5mm SATA150 (5400 rpm) 41N5691 ann 03/20/07
- 160GB Disk 9.5mm SATA150 (5400 rpm) 41N5692 ann 03/20/07

**USB 2.0 Essential Memory Key 1GB** 41U4940 ann 01/23/07
- **USB 2.0 Essential Memory Key 2GB** 41U4944 ann 01/23/07
- **USB 2.0 Security Memory Key 1GB** 41U5118 ann 07/17/07
- **USB 2.0 Security Memory Key 2GB** 41U5119 ann 07/17/07

**USB Portable Diskette Drive** 05K9276 ann 06/05/00

**USB 2.0 CD-RW/DVD-ROM Combo II Drive** 40Y8637 ann 01/05/06

**USB 2.0 Portable 80GB Hard Disk** 41N8378 ann 04/17/07

**USB 2.0 Portable 120GB Hard Disk** 41N8379 ann 04/17/07

**USB 2.0 Super Multi-Burner Drive** 41N5665 ann 01/23/07

**Wireless LAN (Mini PCI Express)**
No Mini PCI Express upgrade supported (use PC Card)

**ThinkPad Expansion**
- **USB Serial Parallel Adapter** 22P5298 ann 10/09/01
- **USB 2.0 Port Replicator with Video** 40Y8132 ann 02/23/06

**ThinkPad Adjustable Notebook Stand**
- **USB 2.0 Essential Memory Key Stand** 40Y7676 ann 09/05/05

**IBM Fingerprint Reader**
- **USB Fingerprint Reader** 41U3167 ann 01/05/06

**External Keyboard**
- **TrackPoint Cap Collection** 73P2698 ann 12/16/03
- **USB Numeric Keypad** 33L3225 ann 05/01/00

**Enhanced Performance USB Keyboard** 73P2620 ann 03/23/04

**Enh Perf Wireless Keyboard and Mouse** 73P4067 ann 12/07/04

**USB Keyboard with UltraNav** 31P9450 ann 04/27/04

**Preferred Pro USB Fingerprint Keyboard** 73P4730 ann 02/22/05

**External Mouse**
- **USB Optical Wheel Mouse** 06P4069 ann 05/21/03
- **Optical 3-Button ScrollPoint® Mouse** 31P7405 ann 08/27/02
- **Optical 3-Button ScrollPoint Pro Mouse** 31P8700 ann 10/01/02

**Optical 3-Button Travel Wheel Mouse** 31P7410

**Lenovo Laser Mouse (USB, PS/2)** 41U3074 ann 01/23/07

**Multimedia**
- **USB 2.0 Lenovo Multimedia Headset** 40Y8518 ann 06/27/06
- **USB 2.0 Lenovo Webcam** 40Y8519 ann 08/29/06

**Batteries**
- **ThinkPad T60/R60 Series Li-Ion Battery 6-cell 40Y6799 ann 01/05/06
- **ThinkPad Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797 ann 09/20/05
- **ThinkPad External Battery Charger** 40Y7625 ann 09/20/05

**Note:** Requires the ThinkPad 90W AC Adapter 40Y7659.

**ThinkPad 65W AC Adapter** 40Y7696

**Carrying Cases**
- **Lenovo Carry Case - Messenger Max** 41U5253 ann 05/01/07
- **Lenovo Carry Case - Performance Backpack** 41U5254 ann 05/01/07
- **ThinkPad Nylon Carrying Case** 10K0207
- **ThinkPad Carrying Case - FlexPack** 73P3597
- **ThinkPad Carrying Case - BackPack** 73P3598
- **ThinkPad Premiere Leather Carrying Case** 10K0209
- **ThinkPad Convertible Carrying Case** 22P8860

**Monitors**
- **Lenovo E75 17” CRT Monitor (16.0” vis) black** 6307BTN ann 01/16/07
- **Lenovo L151 15” Monitor (black)** 9165AB6 ann 02/28/06
- **Lenovo L171 17” Monitor (black)** 9227AC1 ann 11/07/06
- **Lenovo L191 19” Monitor (black)** 6135AB1 ann 06/27/06
- **Lenovo L192 Wide 19” Monitor (black)** 6307BTN ann 11/21/06
- **ThinkVision L171p 17” Monitor (black)** 9417HC2 ann 10/31/06
- **ThinkVision L192p 19” Monitor (black)** 9419HC2 ann 10/31/06
- **ThinkVision L201p 20.1” Monitor (black)** 9420HB1 ann 10/31/06

**Batteries**
- **ThinkPad T60/R60 Series Li-Ion Battery 6-cell 40Y6799 ann 01/05/06
- **ThinkPad Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797 ann 09/20/05
- **ThinkPad External Battery Charger** 40Y7625 ann 09/20/05

**Note:** Requires the ThinkPad 90W AC Adapter 40Y7659.

**ThinkPad 65W AC Adapter** 40Y7696

**Security**
- **Kensington® Cable Lock from Lenovo** 73P2582 ann 12/29/03
- **USB Gemplus GemPC Smart Card Reader** 41N3040 ann 02/21/06
- **PC Card Gemplus Smart Card Reader** 41N3004 ann 12/13/05
- **USB Fingerprint Reader** 41U3167 ann 10/24/06

**Memory**
- **USB 2.0 Memory Key Stand** 40Y7676 ann 09/05/05

**System** will not physically attach to stand but can be placed on the ledge of the stand.

**USB 2.0 Portable 80GB Hard Disk** 41N8378 ann 04/17/07

**USB 2.0 Portable 120GB Hard Disk** 41N8379 ann 04/17/07

**USB 2.0 Super Multi-Burner Drive** 41N5665 ann 01/23/07

**External Keyboard**
- **ThinkPad Carrying Case - BackPack** 73P3598
- **ThinkPad Carrying Case - Messenger Max** 41U5253 ann 05/01/07
- **Lenovo Carry Case - Performance Backpack** 41U5254 ann 05/01/07
- **ThinkPad Nylon Carrying Case** 10K0207
- **ThinkPad Carrying Case - BackPack** 73P3598
- **ThinkPad Premiere Leather Carrying Case** 10K0209
- **ThinkPad Convertible Carrying Case** 22P8860

**External Keyboard**
- **Thinkpad Adjustable Notebook Stand**

**USB 2.0 Essential Memory Key Stand** 40Y7676 ann 09/05/05

**IBM Fingerprint Reader**
- **USB Fingerprint Reader** 41U3167 ann 01/05/06
- **ThinkVision L171p 17” Monitor (black)** 9417HC2 ann 10/31/06
- **ThinkVision L192p 19” Monitor (black)** 9419HC2 ann 10/31/06
- **ThinkVision L201p 20.1” Monitor (black)** 9420HB1 ann 10/31/06

**Monitor Accessories**
- **ThinkVision USB Soundbar** 40Y7616 ann 08/23/05
- **Kensington Cable Lock from Lenovo** 73P2582 ann 12/29/03
- **ThinkPad Convertible Monitor Stand** 40Y7620 ann 01/05/06
- **Radial Arm** 19K4464 ann 05/05/00

**Other accessories at lenovo.com/accessories**

Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.
Positioning
- Every computing; two spindles

Processor
- Intel® Celeron Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or
- Intel® Core™ Solo processor T1300 or T1400 with single-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache or
- Intel Core Duo processor T2300E, T2400, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory
- 256MB, 512MB, or 1GB std / 4GB max* / PC2-5300 DDR2 CL5 SODIMM 40Y7734
- 512MB 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

EIDE CD
- Some: CD-ROM / 24X-10x speed / removable from Ultrabay™ Enhanced
- Some: DVD-RAM / 8X-4X speed / removable from Ultrabay Enhanced
- Some: DVD drive / 12X speed / removable from Ultrabay Enhanced

Ultra bay or removable drives / Ultrabay Slim-compliant system
- Serial ATA disk (SATA150) / 4GB* (5400 rpm), 60GB (5400 rpm), or 100GB (5400 or 7200 rpm) / 9.5mm high / removable,upgradeable, 9.5mm high bay / supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’

Display
- Some: 14.1” (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect
- Some: 14.1” (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare / 4:3 aspect
- Some: 15.0” (381.0mm) SXGA+ (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect
- Some: 15.0” (381.0mm) SXGA+ (1024x768) TFT color / 200 nits / anti-glare / 4:3 aspect

Graphics
- Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

Keyboard
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

TrackPoint®
- Touch pad / some: UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
- 14.1” models (WxDxH): 12.4” x 10.2” x 1.35-1.46”; 314mm x 260mm x 34.3-37.2mm
- 15.0” models (WxDxH): 13.1” x 10.6” x 1.47-1.58; 332mm x 269mm x 37.3-40.2mm

Weight
- With optical drive and battery: 14.1” models: up to 5.9 lb (2.6kg); 15.0” up to 6.3 lb (2.9 kg)

Case material
- Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic
- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Enhanced

Battery - life
- 6-cell: up to 5.2 hr; 6-cell: up to 7.8 hr; 9-cell plus Ultrabay battery: up to 10 hr

Cellular
- Mobile Intel 945G/945T Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC, Bluetooth®, PCI bus (PCIX32 x13), PCI bus controller) / LPC bus (National Semiconductor® PC87382 Super I/O, Atmel® 9753203)

PC Card Std slot
- One Type I or Type II slot / CardBus 32-bit / integrated door

Ports
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- Two USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / some: 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) / 15° models: S-video out / no keyboard, mouse, serial, parallel, or infrared port

Wireless antenna
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

Mini PCI Express
- Two Mini PCI Express slots / both: 64-bit / 32-bit / 33MHz / 2x power consumption

11a/b/g/n WWAAN
- Some: 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

Auto support
- Ethernet Gigabit Ethernet on system board / Broadcom® BCM5751M (MAC/PHY) / PCI x1 / PXE High Ethernet (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

Security
- Power-on password / hard disk password / supervisor password / security keyhole

Security chip
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

Fingerprint reader
- Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty
- 1-year - EasyServ™ onsite pickup and delivery / service upgrades* available

See footnotes for important warranty information

Italics = Powered by Intel Centrino® mobile technology

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US models announced May 16, May 30, or Oct 17, 2006
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US models withdrawn effective February, July, or September 2007
ThinkPad R60 (9456) - TopSeller (Celeron) - withdrawn

Type-model | Processor                    | Speed - GHz Memory | Anti-glare Graphics | Disk - SATA | IDE - EIDE | PCI Express MiniCard 802.11n | Mini PCI Express WWAN | Blueooth 4.0 | Finger-print reader | Finger-print print-ready | Batteries (Standard) | Batteries (Optional) | Availability date | Availability
date
9456-59U Celeron M 420 | 1.60 | 256MB | 14.1" XGA | GMA | 40GB | 5400 | Combo | 11a/b/g | None | None | None | None | None | 6 XP Home May 06
9456-5BU Celeron M 420 | 1.60 | 256MB | 14.1" XGA | GMA | 40GB | 5400 | Combo | 11a/b/g | None | None | None | None | None | 6 XP Pro May 06
9456-5AU Celeron M 420 | 1.60 | 512MB | 14.1" XGA | GMA | 60GB | 5400 | DVD\:RW | 11a/b/g | None | None | None | None | None | 6 XP Home May 06
9456-5TU Celeron M 410 | 1.46 | 256MB | 14.1" XGA | GMA | 40GB | 5400 | Combo | 11a/b/g | None | None | None | None | None | 6 XP Pro May 06
9456-5SU Celeron M 410 | 1.46 | 256MB | 14.1" XGA | GMA | 60GB | 5400 | DVD\:RW | 11a/b/g | None | None | None | None | None | 6 XP Pro May 06
9456-5UW Celeron M 410 | 1.46 | 512MB | 14.1" XGA | GMA | 60GB | 5400 | CD | 11a/b/g | None | None | None | None | None | 6 XP Pro May 06
9456-5UW Celeron M 410 | 1.46 | 256MB | 14.1" XGA | GMA | 60GB | 5400 | CD | 11a/b/g | None | None | None | None | None | 6 XP Pro May 06

Positioning
Program
Everyday computing; two spindles
Intel® Celeron M Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache

Memory
256MB or 512MB std | 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket

Diskette drive
None standard / use optional USB-based diskette drive

EIDE Combo
Some: CD-ROM/CD-RW / 24X/24X/4X/8X5 speed / removable from Ultrabay™ Enhanced

EIDE DVD:RW
Some: DVD burner / Super Multi-Burner DL (40Y8624) / removable Ultrabay Enhanced

Ultrabay Enhanced One bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezel

Serial ATA disk
40GB (5400 rpm) or 50GB (6400 rpm)

Dimensions
14.1" (358.1mm) XGA TFT color / 150 nits / anti-glare / 4:3 aspect ratio

Weight
6-cell: up to 2.5 hr; opt 9-cell: up to 3.8 hr; opt 9-cell + battery: up to 4.7 hr

Battery - life
14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34.3-37.2mm

Active Protection System
supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’ / Hard Disk Drive Protection

Illuminates the keyboard to improve visibility in low-light conditions

Multi-pointing system / touch pad below keyboard / Tap Zones

TrackPoint®
89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys / integrated in 945GM / 250MHz

Integrated Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

Processor
Everyday computing; two spindles
Intel® Celeron M Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache

ThinkVision® L171p 17" Monitor (black) 9417HC2

Windows XP Professional models
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-To-Disk Recovery

Windows XP Home models
- Microsoft Windows XP Home Edition® (Service Pack 2)
- Disk-To-Disk Recovery

Preloaded (all)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symanetc Client Security™
- Diskeeper Lite
- PC Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Translate
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offerings
- Sonic® SecondNOW and Drive Letter Access (combo, combo, combo)
- InterVideo WinDVD combo, combo, combo
- InterVideo WinDVD Creator (combo, combo, combo)

License - CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

Supported ThinkVantage® technologies
- 65-watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)

RoHS-compliant

International Warranty Service
24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus 1 Year LOR 8x5 NBD
ThinkPlus 2 Year LOR 8x5 NBD
ThinkPlus 3 Year LOR 8x5 NBD
ThinkPlus 5 Year LOR 8x5 NBD
ThinkPlus 2 Year P L P U Depot
ThinkPlus 3 Year P L P U Depot
ThinkPlus 5 Year P L P U Depot

Other ThinkPlus services at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced May 16 or May 30, 2006
US models withdrawn effective October 2006 or September 2007

Lenovo (R1-C2) September 2007
**Type-model** | **Processor** | **Speed** | **Memory** | **Graphics** | **Disk** | **EIDE optical** | **Mini PCIe** | **Mini PCIe** | **Fingerprint reader** | **1394/ S-Video port** | **OneNote preload** | **Avail date**
---|---|---|---|---|---|---|---|---|---|---|---
9456-FBU Cur 2 Duo T5500 1.66 1GB 15.0" XGA 80GB 5400 Combo *Intel 11a/b/g*| **Intel Core 2 Duo processor** | 152MHz | 1GB std | GMA optical | 802.11n | Wireless combo | None | None | | | Finger 1394S | Oct 06
9456-FCU Cur 2 Duo T5500 1.66 1GB 15.0" XGA 100G 5400 DVD±RW *Intel 11a/b/g* | None | 1GB 4GB max | GMA optical | 802.11n | Wireless combo | None | None | | | Finger 1394S | Oct 06

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 1-year limited warranty

**Positioning**
- Everyday computing; two spindles

**Processor**
- **Intel Core 2 Duo processor**

**Memory**
- 1GB std
- 4GB max
- 256MB shared L2 cache

**Diskette drive**
- None standard / use optional USB-based diskette drive

**EIDE Combo**
- 5.6ms: DVD-ROM/CD-RW / 24X/24X/8X(4) speed / removable from Ultrabay™ Enhance

**UltraBay Enhanced Serial ATA disk (SATA150)**
- 80GB(5400 rpm) or 100GB (5400 rpm)
- 9.5mm high / removable/upgradeable / 9.5mm high bay / supports 2nd hard drive with optional "SHELL Adapter for UltraBay Slim"
- Hard Drive Disk Shock Absorber / Active Protection System

**Display**
- 15.0" (381.9mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

**Graphics**
- **Intel Graphics Media Accelerator 9500 (GMA 950)** / integrated in 945GM / 250MHz

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**TrackPoint®**
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®13, magnifying glass

**Touch pad**
- UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

**Dimensions**
- 15.0" models (WXxDH): 13.1" x 10.6" x 1.47-1.58": 332mm x 269mm x 37.3-40.2mm

**Weight**
- 15.0" models only: up to 6.8 lb (3.1 kg)

**Case material**
- Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Color**
- None

**Architecture**
- Mobile Intel 945GM Express Chipset / 82895GM Graphics Memory Controller Hub / 82801GMB ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (16 PCI slots) / LPC bus (National Semiconductor® PCI7382 Super I/O, Atmel® 757SC3203)

**Wireless antenna**
- UltraConnect™ Antenna built into the display case / on-off switch for all wireless radios

**Mini PCI Express**
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable

**Modem**
- 56K V.90 (V.92-designed®) modem in Communications Daughter Card socket

**Ethernet**
- Gigabit ethernet on motherboard / Broadcom® BCM5751M (MAC/PHY) / PCIe x1 / PCIe x4 High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Audio support**
- Power-on password / hard disk password / supervisor password / security keyhole

**Security**
- Security chip

**Fingerprint reader**
- FingerPrint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty**
- 1-year / EasyServ® on-site pickup and delivery / service upgrade available

**Desktop**
-®
- [Profile: Lenovo:ThinkPad R60 (9456) 2 Duo Processor] - withdrawn

**SOFTWARE**
- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

Preloaded
- Microsoft Office OneNote 2003
- Rescue and Recovery®
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec™ Client Security™
- Diskeeper Lite
- PC-Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Multimedia Center for Think Offers
- Sonic RecordNow! and Drive Letter Access (combo, DVD±RW)
- InterVideo WinDVD (combo, DVD±RW models)
- InterVideo WinDVD Creator (DVD±RW models)

CD included
- Microsoft Office OneNote 2003
- License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage® technologies

**65-watt AC adapter (GMA graphics)**
ThiinkPad Roll Cage (one-piece magnesium frame)
RoHS-compliant
International Warranty Service 17
24 hour x 7 day toll-free warranty support during the warranty 12

**Lenovo®** 2003

* See footnotes for important warranty information

* Powered by Intel® Centrino® Duo mobile technology

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(RC2-1) August 2007

US models announced October 17, 2006

US models withdrawn effective July 2007
| Type-model | Processor | Speed (GHz) | Memory | Graphics | Disk | Mini PCIe | Mini PCIe | Finger- | Workhorse (W) | Avail date |
|-----------|-----------|------------|--------|----------|------|----------|----------| ret print-reader | (Gbl (G)|
| ThinkPad T2300E | Intel Core Solo T1300 | 1.83 | 512MB | 14.1" SXGA | 40GB | 80GB | 1394 | XP Pro | 5 Oct 06 |
| ThinkPad T2400 | Intel Core Duo T2167 | 1.66 | 512MB | 14.1" WXGA | 40GB | 80GB | 1394 | XP Pro | 5 Oct 06 |
| ThinkPad T2400 | Intel Core Duo T2300 | 1.66 | 512MB | 14.1" WXGA | 40GB | 80GB | 1394 | XP Pro | 5 Oct 06 |
| ThinkPad T2400 | Intel Core Duo T2400 | 1.83 | 512MB | 14.1" WXGA | 40GB | 80GB | 1394 | XP Pro | 5 Oct 06 |
| ThinkPad T2400 | Intel Core Duo T2500 | 1.83 | 512MB | 14.1" WXGA | 40GB | 80GB | 1394 | XP Pro | 5 Oct 06 |

SOFTWARE

Windows XP Professional models:
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery

Windows XP Home models:
- Microsoft Windows Home Edition (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded (all):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive (combo, DVD/CD-RW)
- Intel® Video and Audio (combo, DVD/CD-RW models)
- Intel® Video and Audio DVD Creator (DVD/CD-RW models)

License - CD/DVD included (all):
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

Supports ThinkVantage™ technologies

65 watt AC adapter (GMA graphics)
ThinkPad Roll Cage (one-piece magnesium frame)
RoHS-compliant
International Warranty Service
24 hour x 7 day off-line warranty support during the warranty

ThinkPlussm.22 2-year LOR 9x5xNBD
ThinkPlussm.3-year LOR 9x5xNBD
ThinkPlussm.3-year LOR 9x5xNBD
ThinkPlussm.5-year LOR 9x5xNBD
Other ThinkPlussm. services at lenovo.com/thinkplussm
## Specifications

### Processor

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<td>9457-G3U Core 2</td>
<td>Duo T7200</td>
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<td><em>Intel 11a/b/g/n</em></td>
<td>None</td>
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### Memory

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<th>Type-model</th>
<th>Memory</th>
<th>Storage</th>
<th>Display</th>
<th>Graphics</th>
<th>Disk</th>
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<td>12.7” WXGA</td>
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<td><em>Intel 11a/b/g/n</em></td>
<td>None</td>
<td>Blue Finger</td>
<td>3-year</td>
</tr>
</tbody>
</table>

### Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW® and Drive Letter Access (combo, DVD RW)
  - Intel Video WinDVD combo, DVD RW models
  - Intel Video WinDVD Creator (DVD RW models)

### License

- **CD not included**
- **Lenovo® SmartStart®** Millennium and Lenovo Notes®-Stand-alone Client

### Other Accessories

- ThinkPad Essential Port Replicator 250510W
- Lenovo L192 Wide 15” Monitor (flatsheet) 6920A81
- ThinkPad Advanced Dock 250310U
- ThinkVision® L201p 20.1” Monitor (blk) 9201H01
- Other accessories at lenovo.com/accessories

---

1. **Limited warranty**
2. **2-year LOR 9x5 NBD**
3. **3-year LOR 9x5 NBD**
4. **4-year LOR 9x5 NBD**
5. **5-year LOR 9x5 NBD**
6. **4-year P&L P/U Depot**
7. **5-year P&L P/U Depot**
8. **Postarranty availability agreements at lenovo.com/thinkplus/warranty**
### Specifications

<table>
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<tr>
<th>Type/Model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Anti-glare Screen</th>
<th>Graphics Controllers</th>
<th>Disk @ 7200 RPM</th>
<th>Mini PCI Express</th>
<th>Mini PCI Express Council</th>
<th>Finger-IEEE 802.11</th>
<th>3-Year Warranty</th>
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<td>M 420</td>
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<td>Core Duo</td>
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<td>512MB</td>
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<td>M 420</td>
<td>GMA 80GB</td>
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<td>None</td>
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<td>945-8JU</td>
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<td>512MB</td>
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<td>M 420</td>
<td>GMA 80GB</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>1994 May</td>
</tr>
</tbody>
</table>

- **These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.**

This type model is available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Software

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

#### Preloaded

- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think offerings
- Sonic RecordNOW and Drive Letter Access (combo, DVD ROM)
- InterVideo WinDVD (combo, DVD RW models)
- InterVideo WinDVD Creator (DVD RW models)

- **CD**
  - Adobe Photoshop Elements plus Adobe Premiere Elements

- **License**
  - CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Dimensions

- **ThinkPad® R60 (9457) - Education - withdrawn**

#### Architecture

- **Mobile Intel 945GM Express Chipset** / 82895GM
generated Memory Controller Hub / 82801GBMICH-7 M I/O Controller Hub (SATA300, ATA-100 IDE, EIDE, PCI Express x1, PCI Express x1, USB, LPC, interface, [Bluetooth], [fingerprint]) / PCI bus (Tc® PCI512 CardBus controller) / PCI bus (National Semiconductor® PCI7832 Super I/O, Atmel® 9753203)

#### Graphics

- **Intel® Graphics Media Accelerator 9500 (GMA 9500)** / integrated in 945GM / 250MHz

#### Processor

- **Everyday computing; two spindles**

- **Intel® Celeron M Processor 420** with Execute Disable Bit, Enhanced Intel SpeedStep technology®, Execute Disable Bit, 667MHz system bus, and 2MB L2 cache

#### Memory

- **512MB std / 4GB max** / PC-2700 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory available in one socket / one socket available

#### Display

- **50% V.90 (9.2x9.2x9.2x9) modem in Communications Daughter Card socket**

#### Ports

- **Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door**

#### Security

- **Security keyhole**

### Additional Information

- **Limited warranty - 3-year - 1yr battery - EasyServ™ onsite pickup and delivery / service upgrades**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

- **SOFTWARE**
  - VitalSource Library education software
  - Adobe® Photoshop® Elements plus Adobe Premiere® Elements
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security
  - Diskeeper Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Multimedia Center for Think offerings
  - Sonic RecordNOW and Drive Letter Access (combo, DVD ROM)
  - InterVideo WinDVD (combo, DVD RW models)
  - InterVideo WinDVD Creator (DVD RW models)

- **CD**
  - Adobe Photoshop Elements plus Adobe Premiere Elements

- **License**
  - CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

- **65-watt AC adapter (GMA graphics) ThinkPad Roll Cage (one-piece magnesium frame)**

- **RoHS-compliant**

- **International Warranty Service**

- **24 hour x 7 day toll-free warranty support during the warranty**

---

*Powered by Intel Centrino® Duo mobile technology*
### ThinkPad R60 (9457) - Education (Vista™) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GB Memory</th>
<th>Anti-glide screen</th>
<th>Graphics controller</th>
<th>Disk Sata GB</th>
<th>RPM</th>
<th>IDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN wireless</th>
<th>Finger-print reader</th>
<th>S-Video output</th>
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<th>3-year limited warranty</th>
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<td>None</td>
<td>S-Vid</td>
<td>K12</td>
<td>EasyServ</td>
<td>Apr 07</td>
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**Positioning**

- Everyday computing: two spindles

**Processor**

- Intel® Core 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

**Memory**

- 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE Combo**

- DVD-ROM/CD-RW / 24x/24x/24x/BRX speed / removable from Ultrabay Enhanced

**Serial ATA disk (SATA150)**

- 80GB (5400 rpm) / 9.5mm high / removable/upgradable / 9.5mm high bay / supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’ / Hard Disk Drive Shock Absorber / Active Protection System

**Display**

- 15.0” (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

**Graphics**

- Intel Graphics Media Accelerator 950 (950M) / integrated in 945GM / 250MHz

**Keyboard**

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**TrackPoint**

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

**Touch pad**

- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**Dimensions**

- 15.0” models (WXxDH): 13.1” x 10.6” x 1.47-1.58” / 332mm x 269mm x 37.3-40.2mm with optical and 6-cell battery: 14.1” models: up to 5.8 lb (2.6kg); 15”: up to 6.3 lb (2.9kg)

**Weight**

- Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery - type**

- Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Enhanced

**Battery - life**

- 9-cell: up to 7.8 hr; 9-cell plus Ultrabay battery: up to 10 hr

**Architecture**

- Mobile Intel 945GM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (11a PCi-x32 CardBus controller) / LPC bus (National Semiconductor® PC75862 Super I/O, Atmel® AT97C3203)

**PC Card Std slot ExpressCard slot**

- One Type I or Type II slot / CardBus 32-bit / integrated/3rd party card

**Ports**

- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated/3rd party card

- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) / 15” models: S-video out / no keyboard, mouse, serial, or infrared port (use USB)

**Wireless antenna**

- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Mini PCI Express**

- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**WWAN**

- None

**Modem**

- 56K* V.99 (V.92-designed*2) modem in Communications Daughter Card socket

**Bluetooth™**

- None

**Ethernet**

- Gigabit ethernet on systemboard / Broadcom® BCM5751M (MAC/PHY) / PCIex1 / PXE

**Audio support**

- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up / down, mute buttons / mono microphone / microphone input jack / headphone jack

**Security**

- Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**

- None

**Limited warranty**

- 3-year / 1-year battery - EasyServ™ / onsite pickup and delivery / service upgrades2 available

**Preloaded operating system**


**Preloaded applications**

- K-12 education software
- - VivaSource Library School Edition
- - Adobe® Instructor Resource Center
- - Adobe® Digital School Collection
- - Photoshop Elements 5 (and CD)
- - Premiere Elements 3 (and DVD)
- - Acrobat 8 Professional (and CD)
- - Contribute 4 (and CD)
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center with Away Manager
- - ThinkVantage System Update
- - Norton Internet Security (90 days of virus definitions)
- - Diskeeper™ Home
- - PC-Doctor™ (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Picasa from Google

**License**

- CD - not included
- - Lotus® Notes® Stand-alone Client

**Supports ThinkVantage technologies**

- 65-watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service17 / 24 hour x 7 day 7 toll-free warranty support during the warranty12

**Notes**

- Lenovo

**Lenovo.com**

- Other accessories at lenovo.com/accessories

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*See footnotes for important warranty information*

US model announced April 24, 2007

US model withdrawn effective July 2007
ThinkPad® R60 (9458) - TopSeller and Education - withdrawn

SOFTWARE

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
- **Preloaded**
  - VitalSource Library education software
  - Adobe® Photoshop® Elements plus Adobe Premiere® Elements
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskkeeper Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Multimedia Center for Think Offerings
  - Sonic SoundNow® and Drive Letter Access (combo models)
  - InterVideo WinDVD (combo models)
- **CD**
  - Adobe Photoshop Elements plus Adobe Premiere Elements
- **License** - CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

**Lenovo**

US models announced May 16, 2006
US models withdrawn effective May 2007
These models have a limited onsite service³ 3-year limited warranty
These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Anti-glide screen</th>
<th>Graphics controller</th>
<th>Disk SAVATA GB</th>
<th>rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN wireless</th>
<th>Finger-print reader</th>
<th>S-Video out port</th>
<th>Educ</th>
<th>pre-load</th>
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<td>Core 2 Duo T7200</td>
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<td>15.0&quot; XGA</td>
<td>GMA</td>
<td>80GB 5400</td>
<td>Combo</td>
<td>11a/b/g⁹</td>
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<td>Educ</td>
<td>K12</td>
<td>Online</td>
<td>Apr 07</td>
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</tbody>
</table>

### Preloaded operating system²⁰
- Microsoft® Windows® Vista™
- Business Edition (32-bit)
- Vista Basic logo

### Preloaded applications¹⁴
- K-12 education software
  - VitalSource Library School Edition
  - Adobe® Instructor Resource Center
  - Adobe Digital School Collection
- Photoshop Elements 5 (and CD)
- Premier Elements 3 (and DVD)
- Acrobat 8 Professional (and CD)
  - Contribute 4 (and CD)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - System Migration Assistant
  - Norton Internet Security
  - (90 days of virus definitions)
  - Diskeeper® Home
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe Reader
  - Picasa from Google

### License - CD not included
- Lotus® Notes® Stand-alone Client

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See footnotes for important warranty information
US model announced April 24, 2007
US model withdrawn July 2007

© Lenovo

(2C2-4) August 2007
## ThinkPad R60 (9460) - ATI graphics - withdrawn

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<th>Graphics</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe</th>
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<td>XGA</td>
<td>64MB</td>
<td>80GB</td>
<td>5400</td>
<td>DVD+RW</td>
<td>* Intel</td>
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</table>

### Processor
- **Intel® Core™ Solo processor T1300** with single-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache or **Intel® Core™ Duo processor T2300E, T2400, or T2500** with dual-core. Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus system, and 2MB shared L2 cache.

### Memory
- 512MB or 1GB std / 4GB max  
- / Two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

### Diskette drive
- None standard / use optional USB-based diskette drive

### EIDE Combo
- Some: DVD-ROM/CD-RW / 24x/24x24x8x speed / removable from Ultrabay Enhance

### RAID UltraBay
- One bay for removable UltraBay One bay for removable UltraBay
- 12/17mm high / curvy bezel

### Serial ATA disk (SATA150)
- 40GB* (5400 rpm), 60GB (5400 rpm), 80GB (5400 rpm), or 100GB (5400 rpm) / 9.5mm high / removable,upgradeable / 9.5mm high bay
- supports 2nd disk with optional 'Second HDD Adapter for Ultrabay Slim' / Hard Drive Shock Absorber / Active Shock Protection System

### Display
- Some:
  - 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4.3 aspect
  - 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare / 4.3 aspect
  - 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4.3 aspect
  - 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / 200 nits / anti-glare / 4.3 aspect

### Graphics
- Some: ATI® MOBILITY Radeon™ X1300  
- Some: ATI® MOBILITY Radeon™ X1400M

### Keyboard
- 99-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- TrackPoint® pointing device, *Press-to-Select,* Internet Scroll Bar®, magnifying glass

### Touchpad
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

### ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 14.1" models (WxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34.3-37.2mm
- 15.0" models (WxHxD): 15.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40.2mm

### Weight
- Optical and 6-cell battery: 14.1" models: up to 5.8 lb (2.69kg); 15" up to 6.4 lb (2.9kg)

### Case material
- Color: All: Acrylonitrile Butadiene Styrene (ABS) plastic

### Battery - type
- Lithium Ion-6 cell or 9-cell

### Battery - life (6-cell)
- 6-cell: up to 3.1 hr; 9-cell: up to 4.6 hr; 9-cell plus Ultrabay battery: up to 6.6 hr

### Architecture
- Mobile Intel® 945PM Express Chipset / 82801GB IMCH-I M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Ti® PCI4512 CardBus controller) / LPC bus (National Semiconductor® PCI8732 Super I/O, Attmel® 975C3203)

### Wireless antenna
- Mini PCI Express
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

### Security
- Power-on password / hard disk password / supervisor password / security keyhole

### Security chip
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

### Finger-print reader
- Some: Finger-print reader on palm rest supports the security chip

### Limited warranty
- 1-year - EasyServ®/onsite pickup and delivery / service upgrades available

### Software
- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery

### Preloaded
- Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Access Manager
  - ThinkVantage System Update
  - Symanetc® Client Security™
  - Diskeeper Life
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)
  - Multimedia for Think
  - Sonic RecordNow and Drive Letter Access (combo, DVD:RW)
  - InterVideo WinDVD (combo, DVD:RW models)
  - InterVideo WinDVD Creator (DVD:RW models)

### License
- CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### ThinkPad notebooks
- visit thinkpad.com/thinkvantage

### Other accessories
- Lenovo M500 Projector 0037A05
- ThinkPlus 5-year P&L P/U Depot 41C9170
- ThinkPlus 4-year LOR 9x5 NBD 41C9171
- ThinkPlus 3-year LOR 9x5 NBD 41C9172
- ThinkPlus 2-year LOR 9x5 NBD 41C9166
- ThinkPlus 1-year LOR 9x5 NBD 41C9167

### See footnotes for important warranty information
- Lenovo Mobile Intel® Core™ 2 Duo processor technology
- (RC1-E) September 2007

### US models withdrawn effective September 2007
- *Powered by Intel® Centrino® mobile technology
- *Powered by Intel® Core™ Duo processor technology
### ThinkPad® R60 (9461) - ATI® graphics (TopSeller) - withdrawn

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<th>Battery life</th>
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### Positioning

- Everyday computing; two spindles
- Intel® Core™ Solo processor T1300 with single-core, Enhanced Intel SpeedStep™ technology
- Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel® Core Duo processor T2300E. T2400, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology
- Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache

### Memory

- 256MB, 512MB, or 1GB std | 4GB max
- 256MB, 512MB, or 1GB std
- 5400 rpm
- 24X/24X/24X speed | removable from Ultrabay™Enh

### Diskette drive

- None standard
- use optional USB-based diskette drive

### Display

- Some: 14.1" (358.1mm) SXGA (1024x768) TFT color
- 150 nits / anti-glare / 4:3 aspect
- 150.0" (381.0mm) SXGA (1024x768) TFT color
- 150 nits / anti-glare / 4:3 aspect

### Graphics

- ATI® MOBILITY™Radeon X1300 M52 / PCI Express x1
- 64MB GDDR3

### Software

- Windows XP Professional models
  - Microsoft® Windows XP® Professional (Service Pack 2)
  - Disk-To-Disk Recovery
- Windows XP Home models
  - Microsoft Windows XP Home Edition® (Service Pack 2)
  - Disk-To-Disk Recovery

### Preloaded

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor™(diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offers
- Sonic RecordNow! and Drive Letter Access (combo, DVD±RW)
- UltraConnect
- Antenna built into the display cover / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- UltraNav multi-pointing system / touch pad below keyboard / Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions
- 14.1" models (WxHxD): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34.3-37.2mm
- 9.5mm high / removable upgradeable / 9.5mm high bay
- supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’ / Hard Disk Drive Shock Absorber / Active Protection System

### Architecure

- Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub
- 82801GBM ICH7-M I/O Controller Hub (SATA300, 100-E10 I/O, PCI Express x1, PCi bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (TI® PCI4512 CardBus controller) / LPC bus (National Semiconductor® PC75382 Super I/O, Atmel® 79C5230)

### PC Card Std slot

- One Type I or Type II slot / CardBus 32-bit / integrated door
- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) /1394 FireWire 400 (4-pin connector, 1394a-2000 standard) / 15mb models: S-video out / no keyboard, mouse, serial, parallel, or infrared port (use USB)

### Wireless antenna

- UltraConnect™Antenna built into the display cover / on-off switch for all wireless radios
- Mini PCI Express Intel 11a/b/g/ 11a/b/g/ 11a/b/g/ (S-WAN)

### Modem

- 56K V.90 (V.92-designed®) modem in Communications Daughter Card socket

### Bluetooth™

- None

### Audio support

- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / mono microphone / input / mono microphone jack

### Security

- Power-on password / hard disk password / supervisor password / security keyhole

### Security chip

- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

### Finger print reader

- Fingerprint reader / palm rest / swipe sensor / supports the security chip

### Limited warranty

- 1-year - EasyServ on/off onsite pickup and delivery / service upgrades available

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*See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

US models announced May 16 or May 30, 2006

*Powered by Intel Centrino® Duo processor technology


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ThinkPlus®22 1-year LOR 9x5 NBD
41C9169
ThinkPlus®3-year LOR 9x5 NBD
41C9168
Other ThinkPlus services at lenovo.com/thinkplus/warranty
**ThinkPad R60 (9461) - ATI graphics (TopSeller) - Oct 2006 - withdrawn**

- **These small and medium business (SMB) models** are part of the US TopSeller Program
- **These models have a 1-year limited warranty**

### Positioning

**Processor**

Everyday computing; two spindles

- **Intel® Core 2 Duo processor T5500 or T7200** with dual-core, Intel 6 Technology.

**Memory**

- 512MB or 1GB std / 4GB max¹ / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**Diskette drive**

- None standard / use optional USB-based diskette drive

**EIDE CD**

- Some: CD-ROM / 24X-10X² speed / removable from Ultrabay™ Enhanced

**EIDE DVD+RW**

- Some: DVD burner / Super Multi-Burner DL (40Y862A) / removable Ultrabay™ Enhanced

**Ultrabay Enhanced**

- One bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezel

**Serial ATA disk (SATA150)**

- 40GB or 120GBB (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional "Second HDD Adapter for Ultrabay Slim" / Hard Disk Drive Shock Absorber / Active Protection System

**Display**

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4.3 aspect

**Graphics**

- Some: ATI® MOBILITY Radeon™ X1300 M52 / PCI Express x16 / 64MB memory

**Keyboard**

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**Touchpad**

- TouchPad™ multi-touch pointing device / TouchPad™ pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**ThinkLight™**

- Illuminates the keyboard to improve visibility in low-light conditions

**Weight**

- 14.1" models: up to 6.2 lb (2.8kg); 15.0" models (WxDxH): 14.1" models (WxDxH): 1200GB

**Battery**

- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Enhanced

**Architecture**

- Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, 100-100 EIDE I/O, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [touchpad], [ThinkPad Extreme];[1] PCI bus) / Mobile Northbridge Chipset (Intel® 915GM
e) / Mobile Southbridge Chipset (Intel® ICH7-M)

**PC Card Std slot**

- One Type I or Type II slot / CardBus 32-bit / integrated door

**ExpressCard slot**

- One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door

**Ports**

Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / 1394 FireWire 400 (4-pin connector, 1394a-2000 standard) / 15 models: S-video out / 14: Enhanced Intel SpeedStep Technology

**Modem**

- 56K6 V.90 (V.92-designed2) modem in Communications Daughter Card socket

**MultiMedia Card**

- Supports ThinkVantage Productivity Center with Away Manager

**Security**

- Some: Finger-Print reader / swipe sensor / supports the security chip

**Fingerprint reader**

- Supported ThinkVantage technologies

**Others**

- 90-watt AC adapter (discreetographics)
  - ThinkPad Roll Cage (one-piece magnesium frame)

**Software**

- Microsoft Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

**Windows XP Home models**

- Microsoft Windows XP
  - Home Edition (Service Pack 2)
  - Disk-to-Disk Recovery

**Preloaded**

- (all; only some listed)
  - Microsoft Office OneNote 2003
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - Windows XP System Update
  - Symantec® Client Security™
  - Diskeeper Life
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - FingerPrint Software (fingerprint models)
  - MultiMedia Center for Think
  - Sonic RecordNOW and Drive
  - Letter Access (DVD:RW models)
  - InterVideo WinDVD (DVD:RW models)
  - InterVideo WinDVD Creator (DVD:RW models)

**CD included**

- Microsoft Office OneNote 2003

**License**

- CD not included

**Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Limited warranty**

- 1-year EasyServ on-processor pickup and delivery / service upgrades available

- Power-on-button / hard disk password / supervisor password / security keyhole

**Security chip**

- Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**

- Some: FingerPrint reader on palm rest / swipe sensor / supports the security chip

**See footnotes for important warranty information

See footnotes for important warranty information

*Powered by Intel Centrino® Duo processor technology

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US models announced October 17 or November 21, 2006

US models withdrawn effective July 2006


[2] Windows XP Professional only

[3] Windows XP Professional 64-bit only

[4] Windows XP Professional x64 Edition only
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<td>14.1&quot; XGA</td>
<td>64MB</td>
<td>80GB</td>
<td>5400</td>
<td>DVD+RW</td>
<td>* Intel 11a/b/g</td>
<td>3-yr W GbL May 06</td>
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<td>9462-94U</td>
<td>Core Duo T2400</td>
<td>1.83</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>64MB</td>
<td>40GB</td>
<td>5400</td>
<td>Combo</td>
<td>* Intel 11a/b/g</td>
<td>3-yr W GbL May 06</td>
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<td>14.1&quot; XGA</td>
<td>64MB</td>
<td>60GB</td>
<td>5400</td>
<td>Combo</td>
<td>* Intel 11a/b/g</td>
<td>3-yr W GbL May 06</td>
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<td>5400</td>
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<td>* Intel 11a/b/g</td>
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<td>* Intel 11a/b/g</td>
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<td>5400</td>
<td>Combo</td>
<td>* Intel 11a/b/g</td>
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<td>60GB</td>
<td>5400</td>
<td>Combo</td>
<td>* Intel 11a/b/g</td>
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<td>60GB</td>
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<td>Combo</td>
<td>* Intel 11a/b/g</td>
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<td>60GB</td>
<td>5400</td>
<td>Combo</td>
<td>* Intel 11a/b/g</td>
<td>3-yr W GbL May 06</td>
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<tr>
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<td>64MB</td>
<td>60GB</td>
<td>5400</td>
<td>Combo</td>
<td>* Intel 11a/b/g</td>
<td>3-yr W GbL May 06</td>
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</tr>
</tbody>
</table>

Positioning Processor: Everyday computing; two spindles

- Intel® Core™ Solo processor T1300 with single-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel Core Duo processor T2300E or T2400 with dual-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

Memory: 512MB std / 4GB max® / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / standard memory in one socket / one socket available.

Diskette drive: None standard / use optional USB-based diskette drive

EIDE Combo: Some: DVD-ROM/CD-RW / 2x4/2x4x2/8x speed / removable from Ultrabay™ Enh Ultrabay™ RW combo bay for removable drives / Ultrabay Slim combo bay for removable drives / 12.7mm high / curved bezel / 40GB® (5400 rpm), 60GB® (5400 rpm), or 80GB® (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk with optional Second HDD Adapter for Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System.

Display: Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect / 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare / 4:3 aspect / 15.0" (381.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect / 15.0" (381.0mm) SXGA+ (1400x1050) TFT color / 200 nits / anti-glare / 4:3 aspect.

Graphics: Some: ATI® MOBILITY™ Radeon™ X1300 M52 / PCI Express x16 / 64MB GDDR1

Keyboard: 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys / TrackPoint® pointing device, Press-to-Socket, Internet Scroll Bar®, magnifying glass.

Touch pad: UltrNav™ multi-pointing system / touchpad below keyboard / Tap Zones illuminates the keyboard to improve visibility in low-light conditions.

Dimensions: 14.1" models (WX:D:H): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34.3-37.2mm

Weight: 15.0" models (WX:D:H): 15.0" x 9.8" x 0.8-1.4"; 368mm x 240mm x 20.1-22.8mm

Case material: Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery: Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Enhanced

Battery - life: 6-cell: up to 3.1 hr, optional 9-cell: up to 4.6 hr, 9-cell plus Ultrabay battery: up to 6.6 hr

Architecture: Mobile Intel® 945PM Express Chipset / 8945PM Memory Controller Hub / 8801GB ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Intel® PX4152 CardBus controller / LPC bus (National Semiconductor® PC87382 Super I/O), Atmel® 9732C032)

PC Card Std slot (ExpressCard slot): One Type I or Type II slot / CardBus 32-bit / integrated door

ExpressCard slot: One ExpressCard x4 or PCI ExpressCard x1 or USB 2.0 / integrated door

Ports: Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / 1394 FireWire 400 (4-pin connector; 1394a/-2000 standard) / 15 models: S-video out / no keyboard, mouse, serial, parallel, or infrared port (use USB)

Wireless antenna: UltraConnect™ antenna built into the display cover / on/off switch for all wireless radios / supports ThinkVantage® technologies / 2x2 MIMO wireless radio / 802.11a/b/g

Modem: 90 watt AC adapter (discrete graphics) / Supports ThinkVantage technologies

International Warranty Service: 24 hour x 7 day toll-free warranty support under the warranty

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

US models announced May 16 or May 30, 2006

US models withdrawn effective September 2007
### ThinkPad R60 (9462) - ATI graphics (October 2006) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Hard Disk Drive</th>
<th>Display</th>
<th>Keyboard</th>
<th>Graphics</th>
<th>Positioning</th>
<th>Memory</th>
<th>Diskette drive</th>
<th>Weight (std)</th>
<th>3-year limit date</th>
</tr>
</thead>
</table>
| 9462-G9U Core 2 Duo T7200 2.00 1GB | Intel® Core™ 2 Duo processor T7200 | 1667MHz | 4GB SODIMM | 40Y7733   | T60/R60 Series Li-Ion Battery 6-cell 40Y7679 | 11/11/11 | 11/11/11 | 11/11/11 | 11/11/11 | 40Y7733   | up to 6.8 lb (3.1 kg) | 3-year warranty Global Availability
| 9462-GAU Core 2 Duo T7200 512MB | 512MB or 1GB std / 4GB max | 100% 667MHz DDR2 | 14.2MBXGA | 40Y7733   | 512MB or 1GB std / 4GB max | 11/11/11 | 11/11/11 | 11/11/11 | 11/11/11 | 40Y7733   | up to 6.8 lb (3.1 kg) | 3-year warranty Global Availability

### SOFTWARE

- Windows XP Professional
  - Microsoft® Windows® XP Professional2 (Service Pack 2)
  - Disk-to-Disk Recovery

### Preloaded

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symbolic™ Client Security™
- Diskeeper Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD:R)
- Internet DVD (combo, DVD:R models)
- InterVideo WinDVD Creator (DVD:R models)

### License - CD not included

- Lotus® Smartsuite® Millennium and Lotus Notes® Stand-alone Client

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*Powered by Intel® Centrino® Duo processor technology*
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Anti-glare</th>
<th>Discrete</th>
<th>Disk</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe WWAN</th>
<th>Finger-5-Vdeo print reader (combo, DVD)</th>
<th>3-year limited warranty</th>
<th>Avail date</th>
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<tr>
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<td>512MB</td>
<td>14.1&quot; SXGA+</td>
<td>64MB EIDE</td>
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<td>DVD=RW</td>
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<td>EasyServ May 06</td>
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<td>Core Duo T2500</td>
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<td>15.0&quot; XGA</td>
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<td>7200 DVD=RW</td>
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<td>64MB Combo</td>
<td>5400</td>
<td>6000</td>
<td>DVD=RW</td>
<td>None</td>
<td>None</td>
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</tbody>
</table>

**These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty**

These models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning**

**Processor**

- Intel® Core™ Duo processor T2400 or T2500 with dual core, Enhanced Intel SpeedStep™ technology¹, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

- 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel memory in one socket / one socket available

**Diskette drive**

- None standard / use optional USB-based diskette drive

**EIDE Combo**

- Some: DVD-ROM/CD-RW / 24x/24x/24x8x/6x speed / removable from Ultrabay Enh

**Serial ATA disk (SAT150)**

- 60GB (5400 rpm), 80GB (5400 rpm), or 100GB (7200 rpm)

**Battery - type**

- Lithium Ion

**Case material**

- Black; supports 2nd disk with optional ‘Second HDD Adapter for Ultrabay Slim’ / Hard Drive Absorber / Active Protection System

**Display**

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare / 4:3 aspect

**Graphics**

- ATI Mobility Radeon™ X1300 MX / ATI Mobility Radeon X1400 MX / PCI Express x16 / 128MB GDDR1

**Software**

- Microsoft® Windows® XP Professional² / Service Pack 2

**Preloaded**

- Microsoft® Windows® XP

**CD**

- Adobe Photoshop Elements plus Adobe Premiere Elements

**License**

- CD as noted

**Limited warranty**

- 3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades™ available

**See footnotes for important warranty information**

- Powerd by Intel Centrino® Duo processor technology

© Lenovo

(1)C-1) September 2007

US models withdrawn effective September 2007

See footnotes for important warranty information

*Powerd by Intel Centrino® Duo processor technology

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(1)C-1) September 2007

US models withdrawn effective September 2007

- Created by Lenovo Training Solutions

- Personal Systems Reference (PSREF)
### ThinkPad R60 (9463) - ATI® graphics (TopSeller and Educ) - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Speed (MHz)</th>
<th>Memory</th>
<th>Anti-glare Screen</th>
<th>Discrete Graphics</th>
<th>Disk Capacity</th>
<th>LAN</th>
<th>Mini PCI-e</th>
<th>Mini PCI-e WWAN/3G</th>
<th>Finger-Sketch Reader</th>
<th>Finger-Sketch Sensor</th>
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<tr>
<td>1.83 GHz</td>
<td>512 MB</td>
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<td>60 GB 5400 rpm</td>
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</table>

### Software

- **Windows XP Professional**
  - Microsoft Windows XP Professional
  - Disk-to-Disk Recovery
- **Preloaded**
  - VitalSource Library education software
  - Adobe Photoshop Elements plus Adobe Premiere Elements
  - Rescue and Recovery
  - Access Connections
  - Client Security Solution
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec Client Security
  - Diskeeper Lite
  - PC-Doc (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Multimedia Center for Think Offerings
  - Sonic RecordNow and Drive
  - Letter Access (combo models)
  - InterVideo WinDVD (combo models)

### CD

- Adobe Photoshop Elements plus Adobe Premiere Elements

### License

- **License - CD not included**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Limited warranty

- **3-year limited warranty**

- **1-year battery - EasyServ onsite pickup and delivery service upgraded**

- **Post-warranty annual maintenance**
  - ThinkPlus 2-year LOR 9x5 NBD 41C9175
  - ThinkPlus 3-year LOR 9x5 NBD 41C9176
  - ThinkPlus 4-year LOR 9x5 NBD 41C9177
  - ThinkPlus 5-year LOR 9x5 NBD 41C9178
  - ThinkPlus 4-year P&L P/U Depot 41C9179
  - ThinkPlus 5-year P&L P/U Depot 41C9180
  - Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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*Powered by Intel Centrino® Duo processor technology © Lenovo (RC1-D) September 2007*
Partial list of accessories supported on ThinkPad R60
originally announced on May 16, 2006

Memory
512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 and 40Y7734
1GB PC2-5300 DDR2 CL5 SODIMM 40Y7733 and 40Y7734
2GB PC2-5300 DDR2 CL5 SODIMM 40Y7755 and 40Y7756

Ultraport Slim 5.9mm (best to use curved bezel options)
Serial Hard Drive Ultraport Slim Adapter (flat)™ 40Y8725
USB-Port Serial Adapter (flat)™ 40Y8725
USB-Port USB Adapter (flat)™ 40Y8725
External Mouse Preferred Pro USB Fingerprint Keyboard 73P4730
USB Keyboard with UltraNav 31P8950
Enh Perf Wireless Keyboard and Mouse 73P4067
Enhanced Performance USB Keyboard 73P4067
ThinkPad DVD Ultraport Slim Burner (flat)™ 41N5643 and 41N5644

Ultraport Enhanced 12.7mm (best to use curved bezel options)
USB-Port DVD Ultraport Enhanced Drive (curved) 39X2642
USB-Port DVD Ultraport Enhanced (curved) 73P3275

Storage and removable storage
60GB Disk 9.5mm SATA150 (7200 rpm)™ 41N3012 and 41N3013
80GB Disk 9.5mm SATA150 (5400 rpm)™ 41N5662 and 41N5663
100GB Disk 9.5mm SATA150 (7200 rpm)™ 41N3013 and 41N3014
120GB Disk 9.5mm SATA150 (5400 rpm)™ 41N5691 and 41N5692
160GB Disk 9.5mm SATA150 (5400 rpm)™ 41N5692 and 41N5693

Can be used as the main HDD or as a
ThinkPad Serial ATA Hard Drive Ultraport Slim Adapter 40Y8725 in the Ultraport or in the
ThinkPad Advanced Dock 250310U.

USB 2.0 Essential Memory Key 1GB 41U4940
USB 2.0 Essential Memory Key 2GB 41U4944
USB 2.0 Security Memory Key 1GB 41U5118
USB 2.0 Security Memory Key 2GB 41U5119
USB 2.0 Security Memory Key 4GB 41U5120

USB Portable Diskette Drive 06K9276
USB 2.0 CD-W/DVD-ROM Combo II Drive 40Y8657
USB 2.0 Portable 80GB Hard Disk 41N8378
USB 2.0 Portable 120GB Hard Disk 41N8379
USB 2.0 Super Multi-Burner Drive 41N5565

Wireless LAN (Mini PCI Express)
11a/b/g Wireless Mini PCI Express Adapter™ 40Y7026
Intel PRO/Wireless 3945ABG Mini PCIe Adapter™ 41N3008

* System must be wireless upgradeable.

Kensington WiFi Finder Plus 40Y7717

ThinkPad Expansion
USB Serial Parallel Adapter 22P5298
ThinkPad Adjustable Notebook Stand 40Y7676
ThinkPad Essential Port Replicator 250510W
ThinkPad Advanced Mini Dock 250410U
ThinkPad Advanced Dock™ 250310U

* ThinkPad Advanced Dock supports dual-head graphics adapters:
  - ATI® X1300 256MB Dual Head/TV-out 41U5028
  - ATI Radeon™ X300 SE 128MB Dual Head 41U4813

External Keyboard
TrackPoint Cap Collection 73P2698
USB Numeric Keypad 33L8232
Preferred Pro USB Keyboard 73P5220
Enhanced Performance USB Keyboard 73P2620
Enh Perf Wireless Keyboard and Mouse 73P4067
USB Keyboard with UltraNav 31P8950
USB Travel Keyboard with UltraNav 31P9490
Preferred Pro USB FingerPrint Keyboard 73P4730

External Mouse
USB Optical Wheel Mouse 06P4069
Optical 3-Button ScrollPoint® Mouse 31P7405
Optical 3-Button ScrollPoint Pro Mouse 31P8700
Optical 3-Button Travel Wheel Mouse 31P7410
Lenovo Laser Mouse (USB, PS/2) 41U3074

Batteries
T60/R60 Series Li-Ion Battery 6-cell 40Y6799
Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797
ThinkPad Advanced Ultraport Battery 3-cell™ 40Y6789

* Used in Ultraport Enhanced bay.

ThinkPad External Battery Charger™ 40Y7625

* Requires the ThinkPad 90W AC Adapter 40Y7659 (adapter provided with some systems).

ThinkPad 65W AC Adapters™ 40Y7696

* Only compatible with the 945GM and GM965 chipset models.

ThinkPad 90W AC Adapter 40Y7659
ThinkPad 90W AC/DC Combo Adapter 40Y7630
Belkin 1 Outlet Notebook Surge 31P7658
Belkin Universal Notebook Travel Surge 22P7127
Belkin 8-outlet 6-foot Surge Protector 31P7659

Data/Video Projectors
Lenovo M500 Projector 0037A05
Lenovo C500 Projector 0039A05

Carrying Cases
Lenovo Carrying Case - Messenger Max 41U5253
Lenovo Carrying Case - Performance Backpack 41U5254
ThinkPad Nylon Carrying Case 10K0207
ThinkPad Carrying Case - Expander 73P3597
ThinkPad Carrying Case - Backpack 73P3599
ThinkPad Premiere Leather Carrying Case 10K0209
ThinkPad Convertible Carrying Case 22P8860

Security
Kensington® Cable Lock from Lenovo 73P2582

PC Card Gemplus Smart Card Reader 41N3004
USB Gemplus GemPC Smart Card Reader 41N3040
ExpressCard Gemplus GemPC Smart Card Reader 41N3043
USB FingerPrint Reader 41U3167

Monitors
Lenovo E75 17” CRT Monitor (16.0” vis) 6307BTN
Lenovo L151 15” Monitor (black) 9165AB6
Lenovo L171 17” Monitor (black) 9227AC1
Lenovo L191 19” Monitor (black) 6135AB1
Lenovo L171p 17” Monitor (black) 9417HC2

Belkin 8-outlet 6-foot Surge Protector 31P7658
Belkin Universal Notebook Travel Surge 22P7127
Belkin 8-outlet 6-foot Surge Protector 31P7659

Other accessories at lenovo.com

Need to buy accessories no longer marketed by Lenovo? See
www.itxchange.com/lenovo for the Options Continuation Program.
ThinkPad R61e 15W 7650 (GMA) - withdrawn

Personal Systems Reference (PSREF)

| Type-model | Processor | GHz | Memory | Wide-screen display | Graphics controller | Disk | EIDE optical | Mini PCIe | Finger | Blue- | Bat- | Workhorse | Global | Aval | Preloaded operating system | Preloaded applications |
|------------|-----------|-----|--------|---------------------|---------------------|------|-------------|----------|--------|tooth| cells | (W) | (G) | | |
| 7650-84U | Celeron 540 | 1.86 | 512MB | 15.4" WXGA | GMA | 80GB 5400 | Combo | 11b/g | None | 6 XP Pro | No July 07 |
| 7650-82U | Celeron 540 | 1.86 | 512MB | 15.4" WXGA | GMA | 80GB 5400 | Combo | 11b/g | None | 6 Business 32 | No July 07 |
| 7650-BPU | Celeron 540 | 1.86 | 1GB | 15.4" WXGA | GMA | 80GB 5400 | Combo | 11b/g | None | 6 Business 32 | No Oct 07 |
| 7650-EEU | Celeron 550 | 2.00 | 1GB | 15.4" WXGA | GMA | 80GB 5400 | Combo | Intel 11a/b/g | None | 6 Business 32 | No April 08 |
| 7650-03U | T5670 | 1.80 | 15.4" WXGA | GMA | 80GB 5400 | Combo | * Intel 4965AG | None | 6 XP Pro | No July 08 |

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

Positioning
- Everyday computing; two spindles
- Intel® Celeron® Processor 540 or 550 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel® Core™ 2 Duo processor T5670 with dual-core, 800MHz system bus, and 2MB L2 cache
- Memory: 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; non-italics: standard memory in one socket; one socket available
- Diskette drive: None (use optional USB-based diskette drive)
- EIDE Combo: DVD-ROM/CD-RW, 24X/24X/24X/8X, fixed, not removable, 12.7mm high
- Ultrabay Enhanced: None (no support for removable Ultrabay™ options)
- Serial ATA disk: 80GB (5400 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

- Widescreen display: 15.4" (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera: None
- Graphics: Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, no DVI pass-through (no port replicator or docking station support)
- Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar (no touch pad)
- ThinkLight: Imitates the keyboard to improve visibility in low-light conditions
- Dimensions³: 6-cell 15.4W (WxDxH): 14.1" x 10.2" x 1.39–1.52; 358.5 x 260.0mm x 35.3–38.5mm
- Weight³: 6-cell: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)
- Case material: Black color, Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Battery - type: Lithium Ion 6-cell
- Battery - life: 6-cell Celeron: up to 2.1 hr
- Chipset: Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE)
- PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], / PCI bus (Ricoch R5C804 Cardbus)
- PC Card Std slot: One Type I or Type II slot, CardBus 32-bit
- ExpressCard slot: None
- Smart Card Read: None
- Multicard Reader: None
- Ports: Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet)
- Mini PCI Express: One Mini PCI Express slot / not customer upgradable

- 11b/g: Some: 11b/g wireless, ThinkPad 11b/g Mini PCIe Adapter II, Atheros AR5007EG
- Intel 11a/b/g: Some: 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- Intel 4965AG: Some: 11a/b/g wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AG
- WWAN: None
- Modem: 56K V.92 modem, on systemboard, ConnectX 205048
- Bluetooth™: None
- Ethernet: Gigabit ethernet on systemboard, Broadcom™ BCM5787M (MAC/PHY), PCIe x1, PXE
- Intel AMT: None
- Audio support: High Definition (HD) Audio, CX20549 codec / stereo speakers, 1 watt / volume up, down, mute buttons / microphone input jack, headphone jack
- Security: Password-on password, hard disk supervisor password, security keyhole
- Securitychip: None
- Fingerprint reader: None

Limited warranty¹ - 1-year - EasyServ™¹² depot repair service / service upgrades¹² available

- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999
- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000
- 160GB Disk 9.5mm SATA 1.5Gb/s (7200) 41N5737
- 200GB Disk FDE SATA 1.5Gb/s (7200 rpm) 41N5738
- 320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403
- USB 2.0 Lenovo Multimedia Headset 40Y8518
- USB 2.0 Ultra Secure Memory Key 8GB 45J5918
- USB 2.0 Super Multi-Burner Drive 41N5655
- ThinkPad Convertible Monitor Stand 40Y7620
- Other accessories on O-R61E sheet

Preloaded operating system²⁰
- Some: Microsoft® Windows® XP Professional with Vista COA

Preloaded applications²⁴ (all OSes)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo, DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

Supports ThinkVantage™ technologies
- 65-watt (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day¹⁷ toll-free support during the warranty period¹⁷ via 800-426-7378

- ThinkPlus™ 2-year LOR 9x5 NBD 41C9167
- ThinkPlus™ 3-year LOR 9x5 NBD 41C9168
- ThinkPlus™ 4-year LOR 9x5 NBD 41C9171
- ThinkPlus™ 5-year LOR 9x5 NBD 41C9173
- ThinkPlus™ 3-year P&L P/U Depot 41C9170
- ThinkPlus™ 4-year P&L P/U Depot 41C9172
- ThinkPlus™ 5-year P&L P/U Depot 41C9174

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Lenovo (KON11-1) November 2008
**ThinkPad R61e 15W (GMA Graphics) - 1-year - withdrawn**

### Part 1: Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Workload (W) Global (G)</th>
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<td>7649-22U</td>
<td>T7300 2.00</td>
<td>1GB</td>
<td>15.4” WXGA</td>
<td>GMA 80GB</td>
<td>5400 Combo</td>
<td>Intel 11a/b/g</td>
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<td>6</td>
<td>Business 32</td>
<td>G</td>
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</tbody>
</table>

- **This model has a 1-year limited warranty**

### Part 2: Preloaded operating system

- Microsoft Windows Vista™
- Business Edition (32-bit)
- Vista Premium logo

### Part 3: Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security
- (90 days of virus definitions)
- Diskeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Windows Live™ toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo)
- Corel™ WinDVD™ (combo)

**Supports ThinkVantage® technologies**

- 65-watt (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Part 4: Limited warranty

- **1-year - EasyServ™/99 depot repair service / service upgrades available**

### Footnotes

See footnotes for important warranty information.

- Intel Centrino™ processor technology
- Lenovo

© Lenovo (KON11-2) May 2009

US model announced July 10, 2007
US model withdrawn effective May 2009
Partial list of accessories supported on:
• ThinkPad R61e 15W originally announced on July 10, 2007

Memory
512MB PC2-5300 DDR2 SODIMM 40Y7733 ann 01/05/06
1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999 ann 03/25/06
1GB PC2-5300 DDR2 SODIMM 40Y77334 ann 04/06/06
2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000 ann 03/25/06
2GB PC2-5300 DDR2 SODIMM 40Y77535 ann 11/28/06

UltraBay Slim 9.5mm
None (no removable bay options)

UltraBay Enhanced 12.7mm
None (no removable bay options)

Storage and removable storage
160GB Disk 9.5mm SATA 1.5Gb/s (5400 rpm) 41N5692 ann 03/20/07
160GB Disk 9.5mm SATA 1.5Gb/s (7200 rpm) 41N5737 ann 10/16/07
250GB Disk 9.5mm SATA 1.5Gb/s (5400 rpm) 43R8152 ann 01/15/08
250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410 ann 01/20/09
320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403 ann 08/05/08
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ann 01/20/09

USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07
USB 2.0 Essential Memory Key 2GB 41U4944 ann 01/23/07
USB 2.0 Essential Memory Key 4GB 45J7904 ann 06/24/08
USB 2.0 Essential Memory Key 8GB 45J7905 ann 07/15/08
USB 2.0 Essential Memory Key 32GB 41U5258 ann 10/28/08
USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07
USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07
USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07
USB 2.0 Ultra Secure Memory Key 1GB 45J5915 ann 08/26/08
USB 2.0 Ultra Secure Memory Key 2GB 45J5916 ann 08/26/08
USB 2.0 Ultra Secure Memory Key 4GB 45J5917 ann 08/26/08
USB 2.0 Ultra Secure Memory Key 8GB 45J5918 ann 08/26/08

USB Portable Diskette Drive 05K9276 ann 06/05/00
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8657 ann 01/05/06
USB 2.0 Portable 160GB Hard Disk 43R1784 ann 09/23/06
USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
USB 2.0 Super Multi-Burner Drive 41N5965 ann 01/23/07

Wireless LAN (Mini PCI Express)
No Mini PCI Express upgrade supported (use PC Card)

ThinkPad Expansion
USB 2.0 Lenovo Enhanced Port Replicator 43R6770 ann 02/26/08
ThinkPad Adjustable Notebook Stand 40Y7676 ann 09/20/05

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/02
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04
USB Keyboard with UltraNav 31P9950 ann 01/28/03
USB Travel Keyboard with UltraNav 31P9490 ann 04/27/04
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Optical Wheel Mouse (USB) 06P4069 ann 05/21/03
Optical ScrollPoint® Mouse (USB, PS/2) 31P7405 ann 08/27/02
Optical Wheel Travel Mouse (USB, PS/2) 31P7410 ann 06/04/02
LaserTilt Wheel Mouse (USB, PS/2) 41U3074 ann 01/23/07
Lenovo Wireless Laser Mouse (blk, via USB) 45K1696 ann 11/25/08
Lenovo Wireless Laser Mouse (red, via USB) 51J0198 ann 11/25/08
Laser Wheel Tilt Mouse (Bluetooth) 73P0008 ann 01/22/02
Wireless Kybd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04

Security
Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
USB Gemplox GempC Smart Card Reader 41N3040 ann 02/21/06
PC Gemplox GempC Smart Card Reader 41N3004 ann 12/13/05

MultiMedia
USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06
USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

Batteries
T/R/WSL Series Li-ion Battery 6-cell 40Y6799 ann 01/05/06
T/R/WSL Series Li-ion Battery 9-cell 40Y6797 ann 09/20/05
ThinkPad External Battery Charger® 40Y6765 ann 09/20/05
44 Requires the ThinkPad 90W AC Adapter 40Y7659 (adapter provided with some systems).
ThinkPad 65W AC Adapter® 40Y7696 ann 01/05/06
44 Only compatible with the 945GM and GM965 chipset models.
ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
ThinkPad 90W Slim AC/DC Combo Adapter 41N8460 ann 11/27/07

Charging tips for 90W Slim AC/DC Combo Adapter 41N8460
• Dual (ThinkPad+Phone) Charging Y-Cable 41R4345 ann 12/18/07
• Palm device charge tip (L7) 41R4315 ann 12/18/07
• BlackBerry charge tip (L8a) 41R4478 ann 12/18/07
• iPod and iPhone charge tip (L10a) 41R4481 ann 12/18/07

Carrying Cases
Up to 15.4" widescreen models:
Lenovo Carrying Case - Messenger Max 41U5253 ann 05/01/07
Lenovo Car Case - Performance BackPack 41U5254 ann 05/01/07
Lenovo Standard Case 45K1697 ann 11/25/08
Lenovo Standard Backpack 45K1698 ann 11/25/08
Checkpoint Friendly Business Topload Case 51J0418 ann 02/24/09
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08
Up to 17.0" widescreen models:
ThinkPad 17W Business Topload Case 43R9117 ann 08/12/08

Monitors
ThinkVision® L174 17" Monitor 9227A81 ann 04/15/08
ThinkVision L1700p 17" Monitor 9417HE2 ann 09/17/08
ThinkVision L1800p 19" Monitor 443H1E1 ann 11/17/08
ThinkVision L1840p Wide 19" Monitor 443H8B6 ann 09/17/08
ThinkVision L200p Wide 20.1" Monitor 443H8B6 ann 04/15/08
ThinkVision L2240p Wide 22" Monitor 442H8B6 ann 09/17/08
ThinkVision L2440p Wide 24" Monitor 442H8B6 ann 09/17/08
ThinkVision L2440w Wide 24" Monitor 442H8B6 ann 09/17/08

Monitor Accessories®
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
ThinkVision Convertible Monitor Stand 40Y7620 ann 01/05/06
Radial Arm 19K4464 ann 05/05/00
44 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

© Lenovo
(O-R61E) May 2009
ThinkPad® R61 14W 7732 (GMA) - TopSeller - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Battery - life10</th>
<th>Workhorse (W)</th>
<th>Weight2</th>
<th>Dimensions3</th>
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<tbody>
<tr>
<td>7732-19U</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB 14.1&quot; WXGA</td>
<td>80G</td>
<td>5400 Combo</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>10-cell</td>
<td>250310W</td>
<td>4</td>
<td>335mm x 237mm</td>
</tr>
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</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year limited warranty

Positioning
Everyday computing; two spindles

Processor
Intel® Core™ 2 Duo processor T7100 with dual-core.

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Diskette drive
None (use optional USB-based diskette drive)

Serial ATA disk
80GB8 (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
14.1" (358.1mm) WXGA (1280x800) color; anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Graphics
Intel® Graphics Media Accelerator X3100, integrated in GM965,

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

TrackPoint®
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

Touchpad
UltraNav® multi-pointing system, touch pad below keyboard, Tap Zone

Dimensions
4-cell 14.1" (WXxHxD): 13.2" 9.3" x 1.2-1.37; 335mm x 237mm x 30.6-34.9mm

Weight
4-cell: starting at 5.2 lb (2.4kg)

Case material
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - type
Lithium Ion 4-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life
4-cell: up to 3.6 hr; optional 6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

Chipset
Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);

PC Card Std slot
One Type I or Type II slot, CardBus 32-bit

Multicard Reader
None

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet)

Wireless antenna
UltraConnect® II antenna / on-off switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

WWAN
None

Modem
56K V.90 (V.92-designed) modem in Communications Daughter Card socket

Bluetooth®
Bluetooth® 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet
Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

Intel AMT
None

Audio support
High-definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Limited warranty
1-year - EasyServ® depot repair service / service upgrades22 available

See footnotes for important warranty information

© Lenovo

 lame.com/thinkplus/warranty

Lenovo offers the following extensive line of ThinkPlus services for TopSeller models:

Preloaded operating system
- Microsoft® Windows® Vista™ Business Edition (64-bit) + Vista Basic logo

Preloaded applications
- Microsoft Office OneNote 2007 (and CD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- WindowsLive™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter

In addition to the standard Limited Warranty, Lenovo offers the following convenient service options:

ThinkPlus® 22 1-year LOR 9x5 NBD

ThinkPlus® 3-year LOR 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 2-year P&L P/U Depot

ThinkPlus® 3-year P&L P/U Depot

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Intel Centrino® processor technology

US model announced May 9, 2007

US model withdrawn effective June 2008

Fingerprint reader: Fingerprint reader on palm rest, swipe sensor, supports the security chip

© Lenovo

LAG-1-1 (July 2008)
ThinkPad® R61 14W 7734 (GMA) - 3-year (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc-</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-</th>
<th>Camera</th>
<th>Graphics</th>
<th>Diska</th>
<th>EIDE</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe Intel</th>
<th>Card</th>
<th>Battery</th>
<th>Workhorse/W (W) Global (G) Edu</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>T7100</td>
<td>1.80</td>
<td>1GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA</td>
<td>120G 5400</td>
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<td>T8100</td>
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<td>/54</td>
<td>/54</td>
<td></td>
<td>/84</td>
<td>/39</td>
<td>/39</td>
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</tbody>
</table>

Positioning
Everyday computing; two spindles

Processor
Intel® Core™ 2 Duo processor T5670, T7100, T7250, or T8100 with dual-core, 800MHz system bus; T5670/T7100/T7250: 2MB shared L2 cache; T8100: 3MB L2

Memory
1GB or 2GB std / 4GB max(v); PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-ilics: standard memory in 1 socket; 1 socket available

Diskette drive
None (use optional USB-based diskette drive)

UltraBay Enhanced
One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, flat or curved cover

Serial ATA disk
120GB(5400 rpm) or 160GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera
Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Graphics
Intel® Graphics Media Accelerator X3100 (GMA X3100), included in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

Touchpad
UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

Dimensions
4-cell 14.1W" (WxDxH): 13.2" x 9.3" x 1.2–1.37"; 335mm x 237mm x 30.6–34.9mm

Weight
4-cell: starting at 5.2 lbs (2.4kg)

Battery
- Battery - type: Lithium Ion 4-cell or 6-cell, supports unique 2nd battery in UltraBay Slim
- Battery - life*: 4-cell: up to 3.6 hrs; optional 6-cell: up to 5.7 hrs; 6-cell plus UltraBay: up to 7.2 hrs

Chipset
Mobile Intel GM965 Express Chipset (Graphics Media Controller Hub);ICH9M-Enhanced I/O Controller Hub (SATA 3Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Rico/ R58474 Cardbus/1394/MultiCard) / LPC bus (WPNC385 Super I/O, Atmel 97SC3203 TPM)

PC Card Std slot
One Type 1 or Type II slot, CardBus 32-bit

ExpressCard slot
Some: /54 One ExpressCard/34 or ExpressCard/54

Smart Card Read
None

Multicard Reader
Some: 4-in-1 reader (MultiMediaCard, Mem Stick® PRO, Secure Digital, xD-Picture Card®)

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), 185 nits, 16:10 aspect ratio, WXGA (1280x800) color

Serial ATA disk
SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Wireless antenna
UltraConnect® II antenna / on-off switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11n is customer upgradeable

Audio
Some: Intel 11a/b/g wireless®, Mini PCIe adapter, Intel PRO/Wireless 3945AG
Some: Intel 11a/b/g wireless®, Mini PCIe adapter, Intel WiFi Link 4965AG
WWAN
None

Turbo Memory
None

Bluetoohl
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8, LED indicator

Ethernet
Gigabit ethernet on systemboard, Intel 82566MMNineveh (PHY), PCIe x1 (GLCI), PXE

Intel AMT
None

Battery
High-definition audio, AD1984HD codec, speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty: 3-years/1-year battery, EasyServ®/3rd-party depot repair service / service upgrades/available

See footnotes for important warranty information * Intel Centrino® processor technology

Lenovo

US models announced Aug 7 or Sep 18, 2007; or Jan 8 or Aug 1, 2008

US models withdrawn effective Dec 2007, June 2008, or Nov 2008
## ThinkPad R61 14W 7734 (GMA) - 3-year (Linux) - TopSeller - withdrawn

**Personal Systems Reference (PSREF)**

### Technical Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe Turbo</th>
<th>Card slot</th>
<th>Camera</th>
<th>Battery cells</th>
<th>Linux Preload</th>
<th>Workhorse (W): Global (G) Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7734-15U</td>
<td>T7250</td>
<td>2.00</td>
<td>1GB</td>
<td>7734-15U WXGA (GMA)</td>
<td>120G 5400</td>
<td>3.5k</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>/54</td>
<td>No</td>
<td>1394</td>
<td>4</td>
<td>SLED10</td>
</tr>
</tbody>
</table>

#### Positioning

- Everyday computing; two spindles

#### Processor

- **Intel® Core™ 2 Duo processor T7250 with dual-core**, Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 2MB shared L2 cache

#### Memory

- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-italic: standard memory in 1 socket; 1 socket available

#### Diskette drive

- None (use optional USB-based diskette drive)

#### EIDE DVD±RW

- DVD burner, Multi-MultiBurner (40Y6244) dual-layer, removable UltraBay™ Enhanced

#### Serial ATA disk

- 120GB (5400 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

#### Widescreen display

- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Graphics

- **Intel Graphics Media Accelerator X3100 (GMA X3100)**, integrated in GM965

#### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

#### Touch pad

- TrackPoint® pointing device, *Press-to-Select*, Intel Scrolling Bar, magnifying glass

#### Dimensions

- 4-cell: 14.1"WXDH: 13.2" x 9.3" x 1.2 – 1.37"; 335mm x 237mm x 30.6 – 34.9mm
- 4-cell: starting at 5.2 lb (2.4kg)

#### Weight

- Top: Super-Elastic PolyCarbonate (SEP); Bottom: Carbon-Fiber Reinforced Plastic

#### Battery - type

- Lithium Ion 4-cell, supports unique 2nd battery in UltraBay Slim

#### Battery - life

- Not published

#### Chipset

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
- ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoch R5C647 Cardbus/1394/Multicard) / LPC bus (WPCN3038 Super I/O, Atmel 97SC3203 TPM)

#### PC Card Std slot

- None

#### ExpressCard slot

- None

#### Smart Card Reader

- None

#### Multicard Reader

- None

#### Ports

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

#### Wireless antenna

- UltraConnect™ II antenna on-off switch for all wireless radios

#### Mini PCI Express

- Two Mini PCI Express slots; only 802.11 wireless is customer upgradable

#### WWAN

- None

#### Modem

- 56K V.92 modem in Communications Daughter card socket

#### Bluetooth

- None

#### Ethernet

- Gigabit ethernet on systemboard, Intel 82566MM Nivevah (PHY), PCIe x1 (GLC), PXE

#### Intel AMT

- None

#### Audio support

- High Definition (HD) Audio, AD1984H codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

#### Security

- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

#### Fingerprint reader

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty

- 3-years / 1-year battery - EasyServ<sup>®</sup> depot repair service / service upgrades available

### Important Notes

- Lenovo
- Post-warranty annual maintenance
- Preloaded applications
- No
- Supported devices
- (only some listed)
  - HD Audio
  - Intel 3945ABG wireless
  - Intel Graphics Media Accelerator X3100 (GMA X3100)
  - NVIDIA Quadro NVS 140M
  - Fingerprint reader
  - Bluetooth
  - Function keys
  - ThinkPad Advanced Dock
- Preloaded operating system
- None
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- RoHS-compliant
- International Warranty Service for 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Additional Features

- ThinkPlus<sup>®</sup> 2-year LOR<sup>®</sup> 9x5 NBD
- 41C9175
- ThinkPlus 3-year LOR 9x5 NBD
- 41C9176
- ThinkPlus 4-year LOR 9x5 NBD
- 41C9177
- ThinkPlus 5-year LOR 9x5 NBD
- 41C9179
- ThinkPlus 4-year P&L P/U Depot
- 41C9178
- ThinkPlus 5-year P&L P/U Depot
- 41C9180
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### Footnotes

- Lenovo
- Personal Systems Reference (PSREF) LAG1-8 November 2008
- Optical (not supported)
- Preloaded applications
- Supported devices
- (only some listed)
- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock
- Preloaded operating system
- None
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- RoHS-compliant
- International Warranty Service for 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### See footnotes for important warranty information

**Lenovo (LAG1-8) November 2008**

© Lenovo

* Intel CentriX® processor technology

US model announced January 8, 2008

US model withdrawn effective November 2008

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1. **See footnotes for important warranty information**
2. **Lenovo**
3. **ThinkPad R61 14W 7734 (GMA) - 3-year (Linux) - TopSeller - withdrawn**
4. **Personal Systems Reference (PSREF)**
5. **Lenovo (LAG1-8) November 2008**
6. **© Lenovo**
7. **Intel CentriX® processor technology**
8. **US model announced January 8, 2008**
9. **US model withdrawn effective November 2008**
### ThinkPad R61 14W 7733 (GMA) - Linux - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk / SATA rpm</th>
<th>EIDE Optical</th>
<th>Mini PCIle 802.11 WWAN or Bluetooth</th>
<th>Card slot</th>
<th>Blueooth</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Linux preload</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7733-3BU T7500 2.20</td>
<td>Intel Core™ 2 Duo processor</td>
<td>1GB</td>
<td>14.1” WXGA</td>
<td>GMA</td>
<td>80G 5400</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>None</td>
<td>None</td>
<td>6</td>
<td>SLED10</td>
<td>W</td>
<td>G</td>
</tr>
</tbody>
</table>

**Positioning** Everyday computing; two spindles

**Processor** Intel Core™ 2 Duo processor T7500 with dual-core.

**Memory** 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-itlacs: standard memory in 1 socket; 1 socket available

**Diskette drive** None (use optional USB-based diskette drive)

**EIDE Combo** DVD-ROM/CD-RW (73P3288), 24X/24X/24X/8X1, removable Ultrabase™ Enhanced

**Ultrabay Enhanced** Serial ATA

**Internal ATA disk** 80GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk

**Widescreen display** 14.1” (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera** None

**Graphics** Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

**Keyboard** 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appi keys

**Trackpoint** Trackpoint™ pointing device, “Press-to-Select,” Intel Internal Scroll Bar®, magnifying glass

**Touch pad** UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**Thinklight™** Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions** 6-cell 14.1”WxHxD: 13.2”x 10.2” x 1.2”-1.37”; 335mm x 261mm x 30.6-34.9mm

**Weight** 6-cell starting at 5.5 lb (2.5kg)

**Case material** Top: Super-Elatic PolyCarconate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type** Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life** Not published

**Chips** Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICHOM™-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE), PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]; [PCI bus] (Ricon® R5847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)

**PC Card Std slot** One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot** [/54] One ExpressCard/34 or ExpressCard/54

**Smart Card Read** None

**Multicard Reader** None

**Ports** Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet); IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna** UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express** Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**WWAN** 11a/b/g wireless, Mini PCIle adapter, Intel PRO/Wireless 3945ABG

**Turbo Memory** None

**Modem** 56K V.92™ in Communications Daughter Card socket

**Bluetooth™** Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE

**Ethernet** Non-supported applications

**Audio support** Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader** Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Limited warranty** 3-years/1-year battery - EasyServ™ depot repair service / service upgrades available

**65-watt (GMA) AC adapter** ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

**RoHS-compliant** International Warranty Service, 24 hour x 7 day toll-free support during the warranty period²

**Post-warranty annual maintenance** via 800-426-7378

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*See footnotes for important warranty information

© Lenovo
US model announced January 15, 2008
US model withdrawn effective May 2009

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**Supported devices**

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

**Non-supported devices**

- Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless
- WWAN
- Active Protection System™
- ThinkVantage button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

---

**Preloaded operating system**

- SUSE Linux™ Enterprise Desktop10 Service Pack 1

**Preloaded applications**

- None

---

**Non-supported applications**

- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

---

**Post-warranty annual maintenance agreements**

via lenovo.com/thinkplus/warranty
ThinkPad® R61 14W (GMA) - withdrawn

Positioning

**Italic MTM:** not a base model for building a custom model

**Type-model**

**Proc micro-**

**EIDE**

**Mini PCIe**

**CPU**

**Battery**

**Whose (W)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc Series</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk Sata rpm</th>
<th>Mini PCIe slot</th>
<th>Card slot</th>
<th>Battery Model</th>
<th>Whose (W) Gb (G) Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7733-2UU 540</td>
<td>1.86 1GB 14.1&quot; WXGA 5400 GMA</td>
<td>80G 4GB 5400 Combo</td>
<td>Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>Blue 4 Business 3-yr W G Nov07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7738-1GU T7300</td>
<td>2.00 1GB 14.1&quot; WXGA+ GMA</td>
<td>120G 5400 DVD:RW</td>
<td>*Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>Blue 4 Business 3-yr W G Jun07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7738-11U T7300</td>
<td>2.00 1GB 14.1&quot; WXGA+ GMA</td>
<td>120G 5400 DVD:RW</td>
<td>*Intel 11a/b/g</td>
<td>None</td>
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<td>Blue 4 Business 3-yr W G May07</td>
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<tr>
<td>7733-1GU T7300</td>
<td>2.00 1GB 14.1&quot; WXGA+ GMA</td>
<td>120G 5400 DVD:RW</td>
<td>*Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>Blue 4 Business 3-yr W G Jun07</td>
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<tr>
<td>7733-11U T7300</td>
<td>2.00 1GB 14.1&quot; WXGA+ GMA</td>
<td>120G 5400 DVD:RW</td>
<td>*Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>Blue 4 Business 3-yr W G May07</td>
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<tr>
<td>7733-1EU T7300</td>
<td>2.00 1GB 14.1&quot; WXGA+ GMA</td>
<td>120G 5400 DVD:RW</td>
<td>*Intel 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>Blue 4 Business 3-yr W G May07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Memory**

1GB std / 4GB max / PC2-5300 667MHz DDR2. non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italic standard memory in 1 socket; 1 interface available

**Disk drive**

None (use optional USB-based diskette drive)

**EIDE Combo**

None

**EIDE DVD:RW**

Some: DVD-ROM/CD-RW (73P3288), 24X/24X/24X/8X*, removable Ultrabay™ Enh

**Serial ATA disk**

One bay for removable devices, Ultrabay Slim-compatible, 9.5mm high bay, supports 2nd disk, Ultrabay Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

Some: WXGA (1280x800) color

**Camera**

None

**Graphics**

Intel Graphics Media Accelerator X1000 (GMA X1000), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys

**Touchpad**

UltraNav™ multi-touchpoint system, touch pad below keyboard, Tap Zones

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

4-cell: 14.1" (WxHxD): 13.2 x 9.3 x 1.2-1.37", 335mm x 237mm x 30.6-34.9mm

**Weight**

4-cell: starting at 5.2 lb (2.4kg), optional-cell: starting at 5.5 lb (2.5kg)

**Case material**

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

Lithium Ion 4-cell or 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life (h)**

4-cell: up to 3.6 hr; 6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

**Chipset**

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 EIDE, PCI Express x1, PCi bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon: RC847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel 97S3203 TPM) PC Card Std slot One Type I or Type II slot, CardBus 32-bit Card ExpressCard slot Some: [5/4] One ExpressCard/34 or ExpressCard/54 Smart Card Read Some: Smart Card Reader Multicard Reader Key Ports None

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet); Model I1EU: IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**

Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable

**Intel 11a/b/g**

11a/b/g wireless*, Mini PCIe adapter, Intel PRO/Wireless 3945ABG

**WWAN**

None

**Turbo Memory**

None

**Modem**

56K V.92* modem in Communications Daughter Card socket

**Bluetoooth**

Some: Bluetooth 2.0 wireless, USB 2.0 interface via ICH6M, LED indicator

**Ethernet**

Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCI x1 (GLC), PXE

**Intel AMT**

None

**Audio support**

High Definition (HD) Audio, AD1984 HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Fingerprint reader on palm rest**

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

**ENERGY STAR**

4.0-compliant RoHS-compliant International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7738

**ThinksPlus options at**

lenovo.com/thinkplus/warranty Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

**Preloaded operating system**

- Some: Microsoft Windows® XP Professional
- Some: Microsoft Windows Vista® Business Edition (64-bit)
- Vista models: Vista Basic logo

**Preloaded applications**

- Rescue and Recovery®
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offers (XP)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo, DVD:RW)
- Corel® WinDVD™ (combo, DVD:RW)

**Limited warranty**

3-years/1-yr battery - EasyServ depot repair service / service upgrades available

**Limited warranty**

3-years/1-yr battery - EasyServ depot repair service / service upgrades available

**See footnotes for important warranty information

✶ Intel Centrino® processor technology

© Lenovo (LAG1-3) May 2009

US models announced May 9, June 19, Aug 21, Sept 4, or Nov 20, 2007

US models withdrawn effective May 2008 or May 2009
<table>
<thead>
<tr>
<th>Feature</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel® Celeron® Processor 540 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz bus system, and 1MB L2 cache or Intel Core™ 2 Duo processor T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
</tr>
<tr>
<td>Memory</td>
<td>1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets, Non-ittalic: standard memory in 1 socket, 1 socket available</td>
</tr>
<tr>
<td>Diskette drive/EIDE Combo</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>Ultrabatt Enhanced Serial ATA disk</td>
<td>80GB* (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
</tr>
<tr>
<td>Widescreen display Camera</td>
<td>14.1&quot; (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys</td>
</tr>
<tr>
<td>Touchpad</td>
<td>ThinkLight™ UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions Weight</td>
<td>4-cell 14.1W (WxDxH): 13.2&quot; x 9.3&quot; x 1.2<del>1.37&quot;, 335mm x 233mm x 30.6</del>34.9mm</td>
</tr>
<tr>
<td>Case material</td>
<td>Top: Super-Plastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
</tr>
<tr>
<td>Battery - type / life</td>
<td>Lithium Ion 4-cell; supports unique 2nd battery in Ultrabatt Slim; 4-cell: up to 3.6 hr; 6-cell: up to 5.7 hr; 6-cell plus Ultrabatt battery: up to 7.2 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [Fingerprint]) / PCI bus (Ricoch R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)</td>
</tr>
<tr>
<td>Wireless antenna Mini PCI Express</td>
<td>UltraConnect™ II antenna / on-off switch for all wireless radios</td>
</tr>
<tr>
<td>WWAN</td>
<td>None</td>
</tr>
<tr>
<td>Modem</td>
<td>56K V.92 modem in Communications Daughter Card socket</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Gigabit ethernet, Intel 82586EM Nineveh (PHY), PCI x1 (GC1), PXE</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>None</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, Atmel chip, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Security fingerprint reader</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Battery warranty</td>
<td>3-years/1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades** available</td>
</tr>
</tbody>
</table>

---

* These models are part of the Global Models Plus program with limited onsite service** 3-year limited warranty. Preloaded operating system³²
  - Some: Microsoft® Windows® XP Professional
  - Vista models: Vista Basic logo Preloaded applications*⁴ (all OSeS)
  - Rescue and Recovery⁴
  - Access Connections⁴
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - System Migration Assistant
  - Norton Internet Security
    - (90 days of virus definitions)
  - Diskeeper® Home
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Windows Live™ Toolbar
  - Windows Live Search
  - Picasa from Google
  - Fingerprint Software (fingerprint models)
  - Multimedia Center for Think Offerings (XP)
  - Microsoft Office 2007 Trial (60-day)
  - Sonic RecordNow and Drive Letter Access
  - Corel® WinDVD® (combo) Supports ThinkVantage® technologies

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* Intel Centrino® processor technology ¥

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** Lenovo

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See footnotes for important warranty information

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(LAG1-11) May 2009

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US models announced May 9, June 19, or November 20, 2007

US models withdrawn effective May 2008 or May 2009
### ThinkPad R61 14W (GMA Graphics) - Education (EasyServ) - withdrawn

**Positioning**  
**Processor**

| Type-model | GHz | Memory | Wide-screen display | Graphics controller | Disk | EIDE optical | Mini PCIe | Intel Turbo | Finger print reader | Battery warranty | Vista preloaded | Limited Gbl (G) | Workhorse (W) | Avail date |
|------------|-----|--------|--------------------|---------------------|------|-------------|----------|-------------|-----------------|----------------|---------------|---------------|--------------|-------------|------------|
| 7733-1BU   | T7300 2.00 | 1GB | 14.1" WXGA | GMA | 120G | 5400 | DVD/IRW | 11a/b/g | 4-in-1 | Fingerprint reader | None | B32 | HE | EasyServ | W May 07 |
| 7733-1CU   | T7300 2.00 | 1GB | 14.1" WXGA | GMA | 80G | 5400 | Combo | 11a/b/g | 4-in-1 | None | B32 | K12 | EasyServ | W May 07 |

**Memory**

- 1GB std / 4GB max / 2PC-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-illuminated: standard memory in 1 socket; 1 socket available

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE combo**

- Some: DVD-ROM/CD-RW (73P3288), 24x/24x/24x/8x\(^\text{TM}\), removable Ultabay\(^\text{TM}\) Enh
- EIDE DVD/RAID

- Some: DVD burner, UltraBay enhanced OneBay for removable devices, UltraBay Slim-compatible, 12.7mm high

**Serial ATA disk**

- 80GB\(^\text{TM}\) (5400 rpm) or 120GB\(^\text{TM}\) (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System\(^\text{TM}\)

**Widescreen display**

- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio

**Audio support**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up

**Bluetooth**

- None

**Modem**

- None

**MultiCard Reader**

- None

**USB 2.0 Essential Memory Key **

- 8GB, Mini PCI Express, 802.11a/b/g 4-in-1, Fingerprint Software

**UltraDrive**

- 6-cell 11W (WxHxD): 13.2" x 10.2" x 1.1" - 1.73"; 335 x 261mm x 30.6 - 34.9mm

**Weight**

- 6-cell: starting at 5.5 lb (2.5kg)

**Battery - life**

- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Chipset**

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [finger print]) / PCI bus (Ricoh\(^\text{TM}\) R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel\(^\text{TM}\) 9732CS03 TPM)

**Card Slot**

- None

**CardBus slot**

- None

**MultiCard Reader**

- None

**Ports**

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Wireless antenna**

- UltraConnect\(^\text{TM}\) II antenna / on-off switch for all wireless radios

**Min PCI Express slots**

- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**WWAN**

- None

**Turbo Memory**

- None

**Advanced operating system**


**Preloaded applications**

- Microsoft Office OneNote 2007 (and CD)

**Preloaded software**

- Norton Internet Security (90 days of virus definitions)

**Limited warranty**

- 3-years / 1-year battery - EasyServ\(^\text{TM}\) depot repair service / service upgrades\(^\text{TM}\) available

**Supplementary information**

- 65-watt (GMA graphics) AC adapter

- ThinkPad Roll Cage and Top Cover

- Roll Cage (one-piece magnesium)

- ENERGY STAR\(^\text{TM}\) 4.0-compliant

- RoHS-compliant

- International Warranty Service

- 24 hour x 7 day\(^\text{TM}\) toll-free support during the warranty period\(^\text{TM}\) via 800-426-7378

### Lenovo

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(LAG1-5) May 2009

See footnotes for important warranty information

US models announced May 9, 2007

US models withdrawn effective May 2009
ThinkPad R61 14W (GMA Graphics) - Education (Onsite) - withdrawn

- **These models have a limited onsite service**
- **3-year limited warranty**

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Type-model  | Processor  | Wide-screen display  | Graphics controller  | Disk SATA  | EIDE optical  | Mini PCIe  | Mini PCIe  | Finger print reader  | Battery  | Edu pre- | Limited  | Workhorse  | Preloaded operating system  
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>7735-1BU T7300</td>
<td>Intel® Core™ 2 Duo processor T7100 or T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300: 4MB shared L2 cache</td>
<td>14.1&quot; (358.1mm) WXGA (1280x800) color</td>
<td>None</td>
<td>1GB</td>
<td>2MB</td>
<td>0/2</td>
<td>0/2</td>
<td>4-in-1</td>
<td>HE</td>
<td>W</td>
<td>May 07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7795-1CU T7100</td>
<td>Intel® Core™ 2 Duo processor T7100 or T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300: 4MB shared L2 cache</td>
<td>14.1&quot; (358.1mm) WXGA (1280x800) color</td>
<td>None</td>
<td>1GB</td>
<td>2MB</td>
<td>0/2</td>
<td>0/2</td>
<td>4-in-1</td>
<td>HE</td>
<td>W</td>
<td>May 07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Positioning

**Processors**

- Everyday computing; two spindles
- Intel® Core™ 2 Duo processor T7100 or T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300: 4MB shared L2 cache
- Intel® Core™ 2 Duo processor T7400 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7400: 4MB shared L3 cache

**Memory**

- 1GB standard memory in 1 socket; 1 socket available
- 2GB standard memory in 1 socket; 2 sockets available
- 2GB standard memory in 1 socket; 2 sockets available

**Diskette drive**

- None (use optional USB-based diskette drive)
- EIDE
- IDE

**EIDE DVD:**

- RW
- ±
- 11a/b/g

**Serial ATA disk**

- 8GB (5400 rpm)
- 12GB (5400 rpm)

**Dimensions**

- 6-cell: 14.1W (WxDxH): 13.2" x 10.2" x 1.2–1.37"; 335 x 261mm x 30.6–34.9mm
- 6-cell plus UltraBay battery: up to 7.6 hr

**Widescreen display**

- WXGA (1280x800) color

**Graphics**

- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®
- UltraNav® multi-pointing system, touchpad toolbox, "scroll" key, Touchpad Tabs

**Weight**

- 6-cell: starting at 5.5 lb (2.5kg)

**Case material**

- Top: Super-Elastic PolyCarbonate (SEPC);
- Bottom: Carbon-Fiber Reinforced Plastic

**Battery - life**

- Lithium Ion 6-cell, supports unique 2nd battery in UltraBay Slim
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Chipset**

- Mobile Intel GM965 Express Chipset
- Intel®ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon® R5C647 Cardbus/1394/Multicard) / LPC bus (WPCCN385 Super I/O, Atmel® 97SC302 TPM)

**PC Card slot**

- One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**

- None

**Smart Card Reader**

- None

**Multicard Reader**

- 4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card®)

**Ports**

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

- UltraConnect® II antenna / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g
- WWAN
- Turbo Memory

**Modem**

- 56K,9.62 modem in Communications Daughter Card slot
- None

**Ethernet**

- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCi), PXE

**Audio support**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years/1-year battery, limited onsite service 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

**Preloaded applications**

- Microsoft Office OneNote® 2007 (all and CD)
- Microsoft Office OneNote® 2007 (all and CD)
- Norton Internet Security® (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- WebCam Live Search
- Sonic RecordNow and Drive Letter Access (combo, DUX/RW)
- Corel® WinDVD® (combo, DUX/RW)

### System specifications

- Intel® Pentium® 3, 2.2GHz
- 1GB RAM
- Windows® XP Professional
- Adobe® Creative Suite 2 (PSREF)
- Norton AntiVirus 2007 (30-day)
- Adobe® Photoshop Elements 5 (all)
- Adobe® Photoshop Elements 5 (all)
- Adobe® Premiere Elements 3 (and CD)
- Adobe® Acrobat Reader 7 Professional
- Sonic RecordNow and Drive Letter Access (combo, DUX/RW)
- Corel® WinDVD® (combo, DUX/RW)

### Preloaded operating system

- Vista Basic logo

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

**Lenovo Roll Cage and Top Cover Roll Cage (one-piece magnesium)**

**ENERGY STAR® 4.0-compliant**

**RoHS-compliant International Warranty Service**

- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

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US models announced May 9, 2007

US models withdrawn effective May 2009

L018-1 (LUG-1-6) May 2009
<table>
<thead>
<tr>
<th>Processor/Model</th>
<th>Frequency</th>
<th>Memory</th>
<th>Graphics</th>
<th>Storage</th>
<th>Display</th>
<th>Bluetooth</th>
<th>Finger Bracket</th>
<th>Workhorse</th>
<th>Preloaded System</th>
<th>Preloaded Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkPad R61u 14W 7733 (GMA) - Education (EasyServ)</td>
<td>2.40 GHz</td>
<td>2GB</td>
<td>Intel GMA X3100</td>
<td>160GB</td>
<td>14.1&quot; WXGA+</td>
<td>2.4G</td>
<td>None</td>
<td>5/4</td>
<td>B32</td>
<td>Microsoft Office 2007 (and CD)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td><strong>Intel Core™ 2 Duo processor T8300</strong></td>
<td><strong>with dual-core</strong></td>
<td><strong>Intel 64 Technology, Enhanced SpeedStep™ technology</strong>, <strong>Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache</strong></td>
<td><strong>Security chip</strong></td>
<td><strong>Audio support</strong></td>
<td><strong>Ethernet</strong></td>
<td><strong>Bluetooth</strong></td>
<td><strong>Finger Bracket</strong></td>
<td><strong>Workhorse</strong></td>
<td><strong>Preloaded operating system</strong></td>
</tr>
<tr>
<td><strong>Type-model GHz</strong></td>
<td><strong>41U3198</strong></td>
<td><strong>41N8460</strong></td>
<td><strong>41N6840</strong></td>
<td><strong>41C9175</strong></td>
<td><strong>45K6021</strong></td>
<td><strong>45K6022</strong></td>
<td><strong>45K6023</strong></td>
<td><strong>45K6024</strong></td>
<td><strong>45K6025</strong></td>
<td><strong>- Microsoft Windows Vista® Business Edition (32-bit)</strong></td>
</tr>
<tr>
<td><strong>US models withdrawn effective May 2009</strong></td>
<td><strong>Cell Processor</strong></td>
<td><strong>Touchpad</strong></td>
<td><strong>Modem</strong></td>
<td><strong>Turbo Memory</strong></td>
<td><strong>POST-WARRANTY</strong></td>
<td><strong>Supports ThinkVantage technologies</strong></td>
<td><strong>ENERGY STAR® 5.0-compliant</strong></td>
<td><strong>RoHS-compliant</strong></td>
<td><strong>International Warranty Service 24-hour 7 days/maintenance during the warranty period via 800-426-7378</strong></td>
<td><strong>Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty</strong></td>
</tr>
</tbody>
</table>

- 5-years/1-year battery - EasyServ®/EasyServ® depot repair service - service upgrades available
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 6.0-compliant
- RoHS-compliant
- International Warranty Service 24-hour 7 days/maintenance during the warranty period via 800-426-7378
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced February 19 or April 10, 2008
US models effective May 2009

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(LAG2-1) May 2009
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Operating System</th>
<th>Warranty</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>T8100</td>
<td>Intel Core 2 Duo</td>
<td>1GB</td>
<td>WXGA</td>
<td>Linux</td>
<td>3-year limited</td>
<td>90W Slim AC/DC Combo Adapter</td>
</tr>
<tr>
<td></td>
<td>GHz</td>
<td>GB</td>
<td></td>
<td></td>
<td>warranty</td>
<td></td>
</tr>
<tr>
<td>7733-3AU</td>
<td>2.10</td>
<td>1GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA</td>
<td>No</td>
<td>6 SLED10 EasyServ</td>
</tr>
</tbody>
</table>

- **ThinkPad R61u 14W 7733 (GMA) - Edu (EasyServ) - Linux - withdrawn**

**Personal Systems Reference (PSREF)**

- **Type-model**: ThinkPad R61u 14W 7733 (GMA)
- **Processor**: Intel Core 2 Duo
- **Memory**: 1GB
- **Display**: WXGA
- **Operating System**: Linux
- **Warranty**: 3-year limited
- **Accessories**: 90W Slim AC/DC Combo Adapter

**See footnotes for important warranty information**

**Notes**:

- *This model has an EasyServTm decree repair service 3-year limited warranty*

- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

- US model withdrawn effective May 2009

- Preloaded operating system:
  - SUSE® Linux® Enterprise Desktop 10 Service Pack 1

- Preloaded applications:
  - None

- Supported devices:
  - (only some listed)
  - HD Audio

- Non-supported devices:
  - (only some listed)
  - Intel 4965AG, Intel 4965AGN, ThinkPad T9

- Non-supported applications:
  - (only some listed)
  - ThinkPad Utilities

- Preloaded applications:
  - None

- Post-warranty annual maintenance:
  - Lenovo.com/thinkplus/warranty
### ThinkPad R61 14W 7744 (NVIDIA Graphics) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe Intel Turbo</th>
<th>Card slot</th>
<th>Battery port cells</th>
<th>Workhorse (W) Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>7744-1AU  T7500 2.20</td>
<td>1GB 14.1&quot; WXGA+ 128MB 160GB5400 DVD±RW Intel 11a/b/g Ç None /54 Cam 1394 6 Business32 No Sep 07</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty

### Positioning
- Processor: Intel® Core™ 2 Duo processor T7500 with dual-core.

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

### Memory
- 1GB std / 4GB max
- 25300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets.
- Non-italics: standard memory in 1 socket; 1 socket available

### Diskette drive
- None (use optional USB-based diskette drive)

### IDE DVD±RW
- DVD burner, Super Multi-Burner (40Y8624) double-layer, removable Ultrabay™ Enhanced

### Ultrabay Enhanced
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, flat or curved
- SATA 1.5Gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera
- Integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Graphics
- NVIDIA® Quadro® NVS140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

### TrackPoint®
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar13, magnifying glass

### Touchpad
- Ultragray™ multi-pointing system, touch pad below keyboard, Tap Zones

### ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 6-cell 14.1"W (360mm); 13.2" x 10.2"x 1.2"-1.37"; 335 x 261mm x 30.6-34.9mm

### Weight
- 6-cell: starting at 5.5 lb (2.5kg)

### Case material
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

### Battery - life
- 6-cell: up to 3.7 hr; 6-cell plus Ultrabay battery: up to 5.2 hr

### Chipset
- Mobile Intel PM965 Express Chipset (Memory Controller Hub);
- ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprompt]) /
- LPC bus (WPN385 Super I/O, Atmel® 97SC3203 TPM)

### PC Card Std slot
- One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot
- [54] One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0

### Smart Card Reader
- None

### Multicard Reader
- None

### Ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Wireless antennae
- UltraConnect™ II antenna / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

### Mini PCI Express
- 11a/b/g wireless®, Mini PCI adapter, Intel PRO/Wireless 3945ABG

### WWAN
- None

### Turbo Memory
- None

### Modem
- 56K V.90 (V.92-designed®) modem in Communications Daughter Card socket

### Bluetooth™
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

### Intel AMT
- None

### Audio support
- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprompt reader
- Fingerprompt reader on palm rest, swipe sensor, supports security chip

### Limited warranty
- 3-years/1-yr battery - EasyServ™ depot repair service / service upgrades available

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See footnotes for important warranty information

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US model announced September 18, 2007

US model withdrawn effective June 2008

(LAG1-7) July 2008
### ThinkPad® R61 14W 7743 (NVIDIA® Graphics) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE controller</th>
<th>Mini PCI Express</th>
<th>Mini PCI Express</th>
<th>Card slot</th>
<th>Camera</th>
<th>Bat-</th>
<th>Workhorse (W)</th>
<th>Preloaded operating system</th>
<th>Preloaded applications**</th>
<th>Supports ThinkVantage technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>7743-1GU T7300 2.00</td>
<td>1GB</td>
<td>14.1” WXGA+ 128MB 80GB 5400 Combo</td>
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<td>Smart</td>
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</tbody>
</table>

**Italic MTM:** not a base model for building a custom model

---

### Positioning
- Everyday computing; two spindles

### Processor
- **Intel Core™ 2 Duo processor T7300 or T7500 with dual-core.**
- Intel 64 Technology, Enhanced Intel SpeedStep® technology.
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory
- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket; 1 socket available

### Diskette drive
- None (use optional USB-based diskette drive)

### EIDE Combo
- Some: DVD-ROM/CD-RW (73P3288), 24x/24x/24x/8x**, removable UltraBay™ Enh
- Some: DVD burner, Super Multi-Burner (40x/86x24) dual-layer, removable UltraBay Enh

### UltraBay Enhancer base
- Some: for removable devices. UltraBay Slim-compatible, 12.7mm high, flat or curved

### Serial ATA disk
- Some: 80GB** (5400 rpm), (100GB 7200 rpm), or (120GB 5400 rpm) / SATA 1.5Gbs, 9.5mm high, removable, upgradable, 9.5mm bay, supports 2nd disk,
- ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- Some: 14.1” (358.1mm) WXGA (1280x800) color, anti-glare, 116, 160:1, 300:1
- Some: 14.1” (358.1mm) WXGA+ (1440x900) color, anti-glare, 200, 160:1, 300:1

### Camera
- Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0
- Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Graphics
- **NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache,** 64-bit pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

### TrackPoint®
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar**, magnifying glass

### Touch pad
- UltraNav® multi-pointing system, touch pad below keyboard, Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions

### Lightweight
- 4-cell 14.1W** (Wx Dx H): 13.2” x 9.3” x 1.2”-1.37”; 335mm x 237mm x 30.6–34.9mm
- 6-cell 14.1W** (Wx Dx H): 13.2” x 10.2” x 1.2”-1.37”; 335mm x 261mm x 30.6–34.9mm

### Weight
- 4-cell: starting at 5.2 lb (2.4kg); 6-cell: starting at 5.5 lb (2.5kg)

### Case material
- Top: Super-Elastic PolyCarbonate (SEPC)
- Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type
- Lithium Ion 4-cell** or 6-cell**, supports unique 2nd battery in UltraBay Slim
- 4-cell: up to 2.5 hr; 6-cell: up to 3.7 hr; 6-cell plus UltraBay battery: up to 5.2 hr

### Battery - life
- 4-cell: 2.5 hr, 6-cell: 3.7 hr, 6-cell plus UltraBay battery: up to 5.2 hr

### Chipset
- Mobile Intel PM965 Express Chipset (Memory Controller Hub):
- ICH8M-Enhanced I/O Controller Hub (SATA 3Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerPrint])/ PCI bus (RiSchip® 5R847 Cardbus/1394/MultiCard)
- LPC bus (WPNC385 Super I/O, Atmel® 97SC3203 TPM)
- PC Card Std slot One Type I or Type II slot, CardBus 32-bit
- ExpressCard slot Some: [54] One ExpressCard/34 or ExpressCard/54
- Smart Card Read Some: Smart Card Reader
- Multicard Reader Some: 4-in-1 reader (MultiMediaCard, Mem Stick®, PRO, Secure Digital, x-D Picture Card**)
- Ports Three USB 2.0, 15-external VGA monitor, RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

### Wireless antenna
- Mini PCI Express UltraConnect II antenna / on-off switch for all wireless is customer upgradable
- Mini PCI Express Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

### WWAN
- None

### 1G Turbo
- Some: Intel Turbo Memory, Mini PCI adapter, 1GB flash, disk-cache accelerator

### Modern
- 56K V.92 modem in Communications Daughter Card socket

### Bluetooth**
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE support

### Audio support
- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty**
- 3-years/1-year battery - EasyServ**, depot repair service / service upgrades available**

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See footnotes for important warranty information

* Intel Centrino® processor technology

US models announced May 9, June 19, Aug 21, or Sept 4, 2007

US models withdrawn effective May or November 2008

© Lenovo

(LAG1-4) November 2008

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**Preloaded operating system**
- Some: Microsoft® Windows® XP Professional
- Some: Microsoft Windows Vista® Business Edition (64-bit)
- Vista models: Vista Premium logo

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Multimedia Center for Think Offerings (XP)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo; DVD:RW)
- Corel® WinDVD® (combo; DVD:RW)

**Supports ThinkVantage® technologies**
- 90-watt (NVIDIA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**ThinkPlus®**
- 2-year LOR** 9x5 NBD
- 41C9175
- ThinkPlus 3-year LOR** 9x5 NBD
- 41C9176
- ThinkPlus 4-year LOR 9x5 NBD
- 41C9177
- ThinkPlus 5-year LOR 9x5 NBD
- 41C9179
- ThinkPlus 4-year P&L P/U Depot
- 41C9178
- ThinkPlus 5-year P&L P/U Depot
- 41C9180
**ThinkPad® R61 14W 7743 (NVIDIA®) - Linux - withdrawn**

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>SODIMM</th>
<th>Memory controller</th>
<th>Disk SATA rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11a/b/g</th>
<th>Intel Turbo</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Camera</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Linux Global (G) Available date</th>
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<tr>
<td>7743-2JU</td>
<td>T7500 2.20</td>
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<td>14.1” WXGA+</td>
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<td>1200GB</td>
<td>5400 rpm</td>
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<td>None</td>
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<td>/54</td>
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<td>1394 6</td>
<td>SLED10</td>
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**Positioning Processor**

Everyday computing; two spindles

Intel® Core™ 2 Duo processor T7500 with dual-core,

Intel 64 Technology, Enhanced Intel SpeedStep technology™, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**

1GB std / 4GB max™ / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Non-italics: standard memory in 1 socket; 1 socket available

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE DVD:RW**

D V D burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay Enh

**Serial ATA disk**

120GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

**Widescreen display**

14.1” (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics**

NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

**TrackPoint®**

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

**TouchPad®**

Ultranav™ multi-pointing system, touch pad below keyboard. Tap Zones illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

6-cell 14.1”W (WxDxH): 13.2” x 10.2” x 1.2–1.37”; 335 x 261mm x 30.6–34.9mm

6-cell: starting at 5.5 lb (2.5kg)

**Weight**

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

Lithium Ion 6-cell, supports universal 2nd battery in Ultrabay Slim

**Battery - life**

Not published

**Chipset**

Mobile Intel PM965 Express Chipset (Memory Controller Hub):

ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoh® R5C947 Cardbus/1394/MultiCard) / LPC bus (WPCN385 Super I/O, Atmel® 973C3203 TPM)

**PC Card Slot**

One Type I or Type II slot, CardBus 32-bit

**ExpressCard Slot**

(S5) One ExpressCard/34 or ExpressCard/54

**Multicard Reader**

None

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

Intel 11a/b/g®

WWAN

None

**Modem**

56K V.92® modem in Communications Daughter Card socket

**Bluetooth™**

Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet**

Gigabit ethernet on systemboard, Intel 82566MNI Nineveh (PHY), PCIe x1 (GLCI), PXE

**Intel AMT**

None

**Audio support**

High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years / 1-year battery - EasyServ™, 1394a-2000 standard warranty upgradeable

| 512MB PC2-5300 DDR2 SODIMM | 40Y7734 | T/R 14W Standard Battery 4-cell | 41U3196 |
| 1GB PC2-5300 DDR2 SODIMM | 40Y7734 | T/R 14W Enhanced Battery 6-cell | 41U3198 |
| 2GB PC2-5300 DDR2 SODIMM | 40Y7735 | T/R 14W High Capacity Batt 9-cell | 43R2499 |
| ThinkPad DVD Ultrabay Slim Burner (flat) | 41N5643 | Advanced Ultrabay Battery II 3-cell | 43R2950 |
| Serial Hard Drive Ultrabay Slim Adapter (flat) | 40Y8725 | ThinkPad External Battery Charger | 40Y7625 |
| 320GB Disk SATA 1.5Gb/s (5400 rpm) | 43N3403 | 90W Slim AC/DC Combo Adapter | 41N8460 |
| USB 2.0 Security Module 4GB | 41US120 | ThinkPad Business Case | 43R2476 |
| ThinkPad Essential Port Replicator | 250510W | ThinkVision® L1940p Wide 19” Monitor | 424H86 |
| ThinkPad Advanced Mini Dock | 250410U | ThinkVision L2240p Wide 22” Monitor | 424H86 |
| ThinkPad Advanced Dock | 250310U | ThinkVision L2440p Wide 24” Monitor | 424H86 |
| Check Linux compatibility for other accessories | | Other accessories at lenovo.com/accessories | |

**Preloaded operating system**

- SUSE® Linux™ Enterprise Desktop10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- ThinkPad Advanced Dock

**Non-supported devices**

- Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless
- WWAN
- Active Protection System™
- ThinkVantage® button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

**Non-supported applications**

- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

**90-watt (NVIDIA graphics) AC adapter**

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) RoHS-compliant

**International Warranty Service**

24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**ThinkPlus®**

- 22-year LOR® 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 3-year P/L U Depot
- ThinkPlus 4-year P/L P/U Depot
- ThinkPlus 5-year P/L P/U Depot

**See footnotes for important warranty information**

* Intel Centrino® processor technology

**Lenovo**

(LAG1-10) November 2008
• These models are part of the Global Models Plus program with limited onsite service—3-year limited warranty

Positioning
Everyday computing; two spinpdes

Processor
Intel® Core™ 2 Duo Processor T7300 with dual-core.

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

Diskette drive
None (optional USB-based diskette drive)

EIDE Combo
UltraNav Enhancd

Serial ATA disk
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, flat or curved

Widescreen display
14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Graphics
NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI-D (through support to optional Advanced Mini Dock or Advanced Dock)

Battery - type
8-cell: 14.1V (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Battery - life
4-cell: up to 2.5 hr; 6-cell: up to 3.7 hr; 8-cell: up to 5.2 hr

Chipset
Mobile Intel PM965 Express Chipset (Memory Controller Hub /ICH7M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]), PCI bus (Ricon® R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)

PC Card Std slot
One Type I or Type II slot, CardBus 32-bit

Smart Card Reader
Smart Card Reader

Multicard Reader
None

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna
UltraConnect™ II antenna / on-switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

11a/b/g
8-cell: starting at 5.5 lb (2.5kg)

WWAN
None

Modem
Some: Intel Turbo Memory, Mini PCIe adapter, 1GB flash, disk-cache accelerator

Bluetooth™
656K V.92 modem in Communications Daughter Card socket

Ethernet
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Intel AMT
Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCl), PXE None

Audio support
High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years / 1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades** available

Battery port cells
14.8V / 14.4V

Preloaded operating system
- Some: Microsoft® Windows® XP Professional
- Some: Microsoft Windows Vista Business Edition (64-bit)
- Vista models: Vista Premium logo

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Multimedia Center for Think Offerings (XP)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo)
- Corel® WinDVD® (combo)

Wireless broadband
ThinkPad Mobile Broadband - 802.11a/b/g, 54M data rate, Category 5 Ethernet network, Auto Gain Control, Power over Ethernet, IEEE 802.11a/b/g

Modem
ThinkModem 8 Modem (RCA 56K, internal modem)

External Modem
ThinkModem 56K EVDO (RCN 56K Cardbus/1394/Multicard) / Don't show for US

Continued on next page

See footnotes for important warranty information

* Intel Centrino® processor technology
** Lenovo

US models announced May 9, June 19, or September 4, 2007
US models withdrawn effective May or November 2008

Lenovo (LGI1-12) November 2008
<table>
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk Controller</th>
<th>EIDE optical</th>
<th>Mini PCI Controller</th>
<th>Finger Battery</th>
<th>Workhorse (W)</th>
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<tr>
<td>7743-NA4U T8300</td>
<td>Intel® Core™ 2 Duo processor T8300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology1, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache</td>
<td>1GB or 2GB std / 4GB max2 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets</td>
<td>Non-italics: standard memory in 1 socket; 1 socket available</td>
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<td>Limited warranty12</td>
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<tr>
<td>7743-OS5U T8300</td>
<td>1000GHz (7200 rpm) or 1600GHz (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System4</td>
<td>None (use optional USB-based diskette drive)</td>
<td>DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay Enhanced</td>
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<td>None</td>
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<td>EIDE UltraBay Enhanced</td>
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<td>EasyServ No Apr 08</td>
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<td>Serial ATA disk</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
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<td>Widescreen display</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>No Feb 08</td>
</tr>
<tr>
<td></td>
<td>LED</td>
<td>Camera</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>EasyServ No Apr 08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graphics</td>
<td>NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Touchpad</td>
<td>ThinkLight™ pointing device, <em>Press-to-Select,</em> Internet Scroll Bar®12, magnifying glass</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dimensions</td>
<td>6-cell: 14.1&quot; (WxDxH): 13.2&quot; x 10.2&quot; x 1.2&quot;-1.37&quot;3; 335 x 261mm x 30.6-34.9mm</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weight</td>
<td>6-cell: starting at 5.5 lb (2.5kg)</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Case</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Battery - life</td>
<td>6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub): ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Riconch R5C847 Cardsbus/1394/Multicare) / LPC bus (WPcn385 Super I/O, Atmel™ 973SC3203 TPM)</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Notes:
1. These models have an EasyServ™-13 depot repair service 3-year limited warranty.
2. Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
3. Includes Windows XP Professional and Microsoft Office 2007 (60-day)

See footnotes for important warranty information.

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LAPG-2) May 2009

Lenovo.com/thinkplus/warranty
**ThinkPad® R61u 14W 7743 (NVIDIA) - Edu (EasyServ) - Linux - withdrawn**

Personal Systems Reference (PSREF)

---

### Positioning

**Processor**

Intel® Core™ 2 Duo processor T8300 with dual-core.

Intel 64 Technology, Enhanced Intel SpeedStep® technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache.

### Memory

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Intel Turbo</th>
<th>Card Blue- slot</th>
<th>Finger- print reader</th>
<th>IBM- pre- load</th>
<th>Linux- pre- load</th>
<th>Limited Gbl (G)</th>
<th>Shift</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7743-3BU T8300</td>
<td>2.40</td>
<td>1GB</td>
<td>WXGA+ 128MB</td>
<td>120G</td>
<td>5400</td>
<td>DVD±RW</td>
<td>Intel 11a/b/g²²</td>
<td>None</td>
<td>/54 Blue</td>
<td>None</td>
<td>56 SLED10 EasyServ No Feb 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- This model has an EasyServ¹² depot repair service 3-year limited warranty

---

### Diskette drive

- None (use optional USB-based diskette drive)

### EIDE DVD:RW

- DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay Enhanced
- Ultrabay one bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

### Ultrabay Serial ATA disk

- SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2 disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera

- None

### Graphics

- NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

### Touchpad

- ThinkPad Pointing device, "Press-to-Select," Internet Scroll Bar¹², magnifying glass

### ThinkLight™

- UltraNav multi-pointing system, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions

### Dimensions³

- 6-cell: 14.1W (WxDxH): 13.2" x 10.2" x 1.2-1.37"; 335 x 261mm x 30.6-34.9mm

### Weight³

- 6-cell: starting at 5.5 lb (2.5kg)

### Case material

- Top: Super-Elatic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type

- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

### Battery - life³

- 6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

### Chipset

- Mobile Intel PM965 Express Chipset (Memory Controller Hub):ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATAPI-100 EIDE, PCI Express x1, xbus, USB, LPC bus, [Bluetooth], [fingerprint]), [PC card bus], [PC card bus]

### ExpressCard slot

- One Type I or Type II slot, CardBus 32-bit

### PC Card Std slot

- One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot

- [5/4] One ExpressCard/34 or ExpressCard/54

### Smart Card Read

- None

### SmartCard Reader

- None

### Ports

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector: 1394a-2000 standard)

### Wireless antenna

- UltraConnect™ II antenna / on-off switch for all wireless radios

### Mini PCI Express

- Mini PCI Express slots / only 802.11 wireless is customer upgradeable

### WWAN

- None

### Turbo Memory

- None

### WWAN

- None

### Bluetooth™

- Wireless 2.0 interface via ICH8M, LED indicator

### Ethernet

- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

### Intel AMD

- None

### High Definition (HD) Audio

- Audio 1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security

- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader

- None

### Limited warranty³

- 3-years/1-yr battery - EasyServ¹¹ depot repair service / service upgrades²²

### Preloaded operating system²⁰

- SUSE® Linux™ Enterprise Desktop10 Service Pack 1

### Preloaded applications¹⁴

- None

### Supported devices

- None (only some listed)

- HD Audio

- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Intel Centri® processor technology

- INTEL 4965AGN, INTEL 4965AN, ThinkPad 11a/bg, ThinkPad 11n wireless

### WWAN

- Active Protection System™

- Intel Turbo Memory

- Intel AMD technology

- Integrated camera

### Non-supported applications

- None (only some listed)

### ThinkPad Utilities

- Preloaded application

### ThinkVantage technologies

- Desktop

### Presentation Director

- Encrypted DVD playback

### Keyboard Customizer

- Supports ThinkVantage® technologies

### 65-watt (GMA graphics) AC adapter

- ThinkPad Roll Cage and Top Cover

### Roll Cage (one-piece magnesium)

- ENERGY STAR® 4.0-compliant

### RoHS-compliant

- International Warranty Service¹⁷

### 24 hour x 7 day² day toll-free support during the warranty period¹³

### via 800-426-7378

### ThinkPlus™ ²² 2-year LOR ⁹ 5x BD

- ThinkPlus 3-year LOR 9x BD 41C9175

- ThinkPlus 4-year LOR 9x BD 45K6021

- ThinkPlus 5-year LOR 9x BD 45K6024

- ThinkPlus 4-year P&L P/U Depot 45K6023

- ThinkPlus 5-year P&L P/U Depot 45K6025

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### See notes for important warranty information

© Lenovo (LAG-2-4) May 2009

US model announced February 19, 2008

US model withdrawn effective May 2009
Partial list of accessories supported on:
ThinkPad R61 14W originally announced on May 9, 2007

**Memory**
- 512MB PC2-5300 DDR2 SODIMM: 40Y7733
- 1GB PC2-5300 DDR2 SODIMM (TopSeller): 43R1999
- 1GB PC2-5300 DDR2 SODIMM (TopSeller): 40Y7734
- 2GB PC2-5300 DDR2 SODIMM (TopSeller): 43R2000
- 2GB PC2-5300 DDR2 SODIMM: 40Y7735

**Ultrabay Slim 9.5mm** (supports both flat and curved bezel options)
- Serial Hard Drive Ultrabay Slim Adapter (flat)™: 40Y8725
- Slim 9.5mm device in 12.7mm bay shows gap above the device.

**Ultrabay Enhanced 12.7mm** (supports both flat and curved bezel)
- CD-RW/DVD Combo Ultrabay Enhanced (cur): 73P3275

**Storage and removable storage**
- 160GB Disk SATA 1.5Gbps (5400 rpm): 41N5692
- 160GB Disk SATA 1.5Gbps (7200 rpm): 41N5737
- 250GB Disk SATA 1.5Gbps (5400 rpm): 43R8152
- 250GB Disk SATA 1.5Gbps (7200 rpm): 43N3410
- 320GB Disk SATA 1.5Gbps (7200 rpm): 43N3403
- 320GB Disk SATA 1.5Gbps (7200 rpm): 43N3411
- Can be used as the main HDD or with ThinkPad
- T/UAV Slim Drive: 40Y8725 in the Ultrabay or in the ThinkPad Advanced Dock 250310U.
- USB 2.0 Essential Memory Key 4GB: 45J7904
- USB 2.0 Essential Memory Key 8GB: 45J7905
- USB 2.0 Essential Memory Key 32GB: 45K1258
- USB 2.0 Security Memory Key 2GB: 41U5119
- USB 2.0 Security Memory Key 4GB: 41U5120
- USB 2.0 Ultra Secure Memory Key 2GB: 45J5916
- USB 2.0 Ultra Secure Memory Key 4GB: 45J5917
- USB 2.0 Ultra Secure Memory Key 8GB: 45J5918
- USB Portable Security Drive: 05K2270
- USB 2.0 CD-RW/DVD-ROM Combo II Drive: 40Y8637
- USB 2.0 Portable 160GB Hard Disk: 43R1784
- USB 2.0 Portable 320GB Hard Disk: 45K1689
- USB 2.0 Portable Secure 160GB Hard Disk: 43R2018
- USB 2.0 Portable Secure 320GB Hard Disk: 43R2019
- USB 2.0 Super Multi-Burner Drive: 41N5565

**ThinkPad Expansion**
- USB 2.0 Lenovo Enhanced Port Replicator: 43R8770
- ThinkPad Adjustable Notebook Stand: 40Y7676
- ThinkPad Essential Port Replicator: 250510W
- ThinkPad Advanced Mini Dock: 250410U
- ThinkPad Advanced Dock: 250310U

**Keyboard**
- TrackPoint Cap Collection: 73P2698
- USB Numeric Keypad: 33L3225
- Preferred Pro USB Keyboard: 73P2520
- Enhanced Performance USB Keyboard: 73P2620
- ThinkPad Wireless Mouse (via USB): 73P3467
- ThinkPad USB Keyboard with UltraNav: 31P9850
- ThinkPad Travel Keyboard with UltraNav: 31P9490
- Lenovo® USB Fingerprint Keyboard: 73P4730
- Lenovo USB Smartcard Keyboard: 51J0155

**Mouse**
- Optical Wheel Mouse (USB): 06P4069
- Optical ScrollPoint® Mouse (USB, PS/2): 31P7405
- Optical Travel Mouse (USB, PS/2): 31P7410
- Laser Tilt Wheel Mouse (USB, PS/2): 41U3074
- Lenovo Wireless Laser Mouse (blk, via USB): 45K1696
- Lenovo Wireless Mouse (red, via USB): 51J0198
- Lenovo Laser Tilt Wheel Mouse (Bluetooth): 41U5008
- Laser Tilt Wheel Mouse (via USB): 73P3467

**Security**
- Kensington® Cable Lock from Lenovo: 73P2582
- Kensington® Twain Head Cable Lock: 45K1620
- ThinkPad Memory Key (4GB, via USB): 41N5643
- ThinkPad External Battery Charger: 40Y7625
- Lenovo Wireless Laser Mouse (red, via USB): 51J0198
- Enhanced Performance USB Keyboard: 73P4730
- Preferred Pro USB Keyboard: 73P4730
- USB Numeric Keypad: 33L3225

**Multipurpose**
- USB 2.0 Lenovo Multimedia Headset: 40Y8518
- USB 2.0 Lenovo Webcam: 40Y8519

**Batteries**
- T/R 14W Battery 4-cell: 41U3196
- T/R 14W Battery 6-cell: 41U3198
- T/R 14W High Capacity Battery 9-cell: 43R2499
- Advanced Ultrabay Battery II 3-cell: 43R9250

**Charging tips**
- Dual (ThinkPad+Phone) Charging Y-Cable: 41R4345
- BlackBerry charge tip (L6a): 41R4478
- iPod and iPhone charge tip (L10a): 41R4481

**Carrying Cases**
- Up to 14.1" widescreen models:
  - ThinkPad Expander Case: 43R9118
  - ThinkPad Women's Microfiber Tote: 22P8855
  - ThinkPad Women's Leather Trim Tote: 22P8856
  - ThinkPad Convertible Carrying Case: 22P8860
  - ThinkPad Women's Executive Leather Tote: 22P8877
  - ThinkPad Women's Executive Red Leather Tote: 22P8878

- Up to 15.4" widescreen models:
  - Lenovo Carrying Case - Messenger Max: 41U5253
  - Lenovo Carrying Case - Performance BackPack: 41U5254
  - Lenovo Standard Case: 45K1697
  - Lenovo Standard Backpack: 45K1698
  - Checkpoint Friendly Business Topload Case: 41J0418
  - ThinkPad Business Topload Case: 43R2476
  - ThinkPad Business Backpack: 43R2482
  - ThinkPad Deluxe Expander Case: 43R2478
  - ThinkPad Executive Leather Case: 43R2480

**Up to 17.0" widescreen models**
  - ThinkPad 17W Business Topload Case: 43R9117

**Monitors**
- ThinkVision® L174 17" Monitor: 9227AE1
- ThinkVision L1700p 17" Monitor: 9417TE2
- ThinkVision L1900p 19" Monitor: 4341H11
- ThinkVision L1940p Wide 19" Monitor: 4424H86
- ThinkVision L2000p Wide 20.1" Monitor: 4438H86
- ThinkVision L2240p Wide 22" Monitor: 4422H86
- ThinkVision L2440p Wide 24" Monitor: 4420H82
- ThinkVision L2440x Wide 24" Monitor: 4412H82

**Monitor Accessories**
  - ThinkVision USB Soundbar: 40Y7616
  - ThinkVision Soundbar: 45K1263
  - Kensington Cable Lock from Lenovo: 73P2582
  - Kensington Twin Head Cable Lock: 45K1620
  - ThinkPad Convertible Monitor Stand: 40Y7620
  - Lenovo Radial Arm: 19K4464

More information at www.lenovo.com/support/monitoraccessories

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(R61-14W) May 2009
ThinkPad® R61 15W (GMA Graphics) - 1-year (TopSeller) - withdrawn

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year warranty

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor T7100 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and CMB shared L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB std / 4GB max/2</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>Serial ATA disk (SATA150)</td>
<td>120GB (5400 rpm)</td>
</tr>
<tr>
<td>Wide-screen display</td>
<td>15.4&quot; (391mm) WXGA (1280x800) color, 200 nits, 16:10 aspect ratio, LED backlight</td>
</tr>
<tr>
<td>Camera</td>
<td>300:1 contrast ratio, anti-glare</td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, no DVI pass-through to support optional Advanced Dock or Advanced Dock</td>
</tr>
</tbody>
</table>

**Positioning**

- Everyday computing; two spindles
- FingerPrint reader
- Security chip
- Security
- Audio support
- Intel AMT
- Bluetooth™
- WWAN 16
- Battery - life
- Weight2

**Disks**

- 2GB PC2-5300 DDR2 SODIMM 40Y7733
- 1GB PC2-5300 DDR2 SODIMM 40Y7732
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7734

**Ports**

- 39-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys
- Touchpad:
  - UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones
  - ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 6-cell 15.4W (WxHxD): 14.1" x 10.2" x 1.39–1.52"
- 6-cell: starting at 6.4 lb (2.9kg)
- 9-cell: starting at 7.0 lb (3.1kg)
- Case material: Black color, Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Battery - type: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced
- Battery - life: up to 5.0 hr; 9-cell: up to 7.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

**Architecture**

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH8M I/O Controller Hub (SATA300, ATA-100 IDE), PCI Express x1, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- PC Card Slot
- Smart Card Reader
- Multicard Reader
- Port: Three USB 2.0, external DB9 monitor, RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard), S-Video out
- Wireless antenna: UltraConnect™ II antenna / on-off switch for all wireless radios
- Preloaded operating system:
  - Windows Vista™ Business Edition (64-bit)
  - Vista Basic logo

**Preloaded applications**:

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial
- Sonic RecordNow! and Drive Letter Access (DVD:RW)
- InteVideo WinDVD (DVD:RW)
- License - CD not included
- Lotus® Notes® Stand-alone Client

**Other accessories**

- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 1-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 2-year P&L U/Depot
- ThinkPlus 5-year P&L U/Depot
- ThinkPlus 3-year P&L U/Depot
- ThinkPlus 5-year P&L U/Depot
- Lenovos SupportPlus

**Preload support**

- ENERGY STAR® 4.0-compliant
- RoHS-compliant

**Stand-alone Client**:

- Lenovo M500 Projector
- Lenovo ThinkPro 19" LCD Monitor
- Lenovo ThinkPlus 20" LCD Monitor

**Power-on**

- 65-watt (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)

**Post-warranty maintenance agreements at**

- lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced July 10, 2007

US model withdrawn effective December 2007

© Lenovo

(WKK11-1) December 2007
### ThinkPad R61 15W 8934 (GMA) - 3-year (TopSeller) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA 3.0Gb/s</th>
<th>EIDE</th>
<th>Mini PCIE 802.11a/b/g/n</th>
<th>Card slot</th>
<th>Fingerprint reader</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>8934-ATU T7100</td>
<td>Intel® Celeron® Processor 550</td>
<td>1.80</td>
<td>1GB 15.4&quot; WXGA</td>
<td>GMA</td>
<td>120G 5400</td>
<td>DVD±RW *Intel 11a/b/g/n2</td>
<td>/54</td>
<td>Fingerprint reader</td>
<td>Battery 4-cell</td>
<td>ThinkPlus 3-year LOR 9x5 NBD</td>
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<tr>
<td>8934-BTU T7250</td>
<td>Intel® Celeron® Processor 550</td>
<td>2.00</td>
<td>1GB 15.4&quot; WXGA</td>
<td>GMA</td>
<td>160G 5400</td>
<td>DVD±RW *Intel 11a/b/g/n</td>
<td>/54</td>
<td>Fingerprint reader</td>
<td>Battery 4-cell</td>
<td>ThinkPlus 3-year LOR 9x5 NBD</td>
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<td>8934-F9U T8100</td>
<td>Intel® Celeron® Processor 550</td>
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<td>1GB 15.4&quot; WXGA</td>
<td>GMA</td>
<td>160G 5400</td>
<td>DVD±RW *Intel 11a/b/g/n</td>
<td>/54</td>
<td>Fingerprint reader</td>
<td>Battery 4-cell</td>
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<td>2.40</td>
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<td>Fingerprint reader</td>
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<td>8934-01U T8100</td>
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<td>2.10</td>
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<td>160G 5400</td>
<td>DVD±RW *Intel 11a/b/g/n</td>
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<td>Fingerprint reader</td>
<td>Battery 4-cell</td>
<td>ThinkPlus 3-year LOR 9x5 NBD</td>
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</table>

**These small and medium business (SMB) models are part of the US Thinkplus® Program.**

**The models have a 3-year limited warranty.**

---

**Preloaded operating system: 20**

- Some: Microsoft® Windows® XP Professional with Vista® COA

**Vista models:** Vista Basic logo

**Preloaded applications: (all OSes)**

- Some: Education software
- Windows Live™
- Windows Live Software (fingerprint models)
- Multimedia Center for Think Offerings (XP Pro)
- Windows Live Manager and Presentation Director
- Windows Update
- Windows Live Search
- Picasa from Google
- Security solutions

---

**System Information**

- Processor: Intel® Core™ 2 Duo processor T7100
- Memory: 1GB 15.4" WXGA
- Graphics controller: GMA 955AG
- Disk: 6-cell Battery
- EIDE: 1GB 15.4" WXGA + Cam
- Mini PCIE: 802.11a/b/g/n
- Card reader: MultiMediaCard, Mem Stick
- Camera: 1.3MP fixed, fixed focus, USB 2.0
- Widescreen display: 15.4" WXGA 1280x800
- Audio: Intel® HDMI Audio
- Battery: 9-cell: up to 5.0 hr; 6-cell: up to 7.0 hr; 3-cell: up to 8.5 hr
- Chipset: Mobile Intel® GM965 Express Chipset
- OS: Windows 7 Ultimate
- 65-watt (GMA graphics)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service**
- 24 hour x 7 day toll-free support during the warranty period
- 5-year LOR
- 5-year LOR
- 2-year LOR
- 4-year LOR
- 3-year LOR
- 2-year LOR
- 4-year LOR
- 1-year LOR
- 3-year LOR
- 4-year LOR
- 5-year LOR
- 2-year LOR
- 4-year LOR
- 5-year LOR
- 2-year LOR
- 4-year LOR
- 5-year LOR

---

See footnotes for important warranty information

* Intel® Centrino® processor technology

© Lenovo

US models announced July 10 or September 18, 2007; or January 8, May 9, or August 1, 2008

US models withdrawn effective December 2007 or May 2009
ThinkPad® R61 15W (NVIDIA Graphics) - 3-year (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller Memory Key</th>
<th>Disk SATA/RAID</th>
<th>EIDE optical</th>
<th>Mini PCIe Socket</th>
<th>Finger print reader</th>
<th>Camera</th>
<th>Battery port cells</th>
<th>Whorse (W) Gbl (G)</th>
<th>Availability</th>
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<td>2.00 GHz</td>
<td>1GB 15.4&quot; WSXGA+</td>
<td>128MB</td>
<td>160G</td>
<td>5400 DVD±RW</td>
<td>Intel 11a/b/g</td>
<td>Finger</td>
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<td>6</td>
<td>Business32 No</td>
<td>September 08</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty

Positioning
Processor: E veryday computing; two spindles

Intel® Core™ Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory: 1GB std / 4GB max† / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 20-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

Disk drive
EIDE DVD±RW: None (use optional USB-based diskette drive)

5400 rpm / SATA 1.5Gb/s | 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk
ThinkPad Shock Mounted Hard Drive, Active Protection System™

Serial ATA disk

Audio support

Modem: 56K V.92 modem in Communications Daughter Card socket

WWAN: None

WWAN: 802.11 wireless is customer upgradable

IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard), Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), 4-in-1 reader (MultiMediaCard, Memory Stick, Memory Stick Duo, Memory Stick Pro, M2, SmartMedia, SD, SmartMedia Pro, xD Picture Card, Memory Stick Media)

ThinkPad Advanced Mini Dock

ThinkPad Business Backpack

ThinkPad Business Topload Case

90-watt (NVIDIA graphics)

ThinkPad Roll Cage (one-piece magnesium frame)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service17
24 hour x 7 day18 toll-free support during the warranty period via 800-426-7378

Supports ThinkVantage technologies

Norton Internet Security™

Norton AntiVirus™

Microsoft Office OneNote™ 2007 (and CD)

Rescue and Recovery™

Client Security Solution™

ThinkVantage Productivity Center™

ThinkVantage System Update

System Migration Assistant

Norton Internet Security™

90 days of virus definitions

Diskkeeper® Home

PC-Doctor (diagnostics)

ThinkPad Utilities (Power Manager and Presentation Director)

Adobe® Reader

Windows Live™ Toolbar

Windows Live Search

Picasa from Google

Fingerprint Software (fingerprint models)

Lenovo.com

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 1-year LOR 9x5 NBD
### ThinkPad® R61 15W (GMA Graphics) - 1-year - withdrawn

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<th>Type-model</th>
<th>Processor</th>
<th>Ghz Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Graphics controller</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Card slot</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
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<th>Vista Global (G)</th>
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<tr>
<td>8930-23U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>None</td>
<td>GMA</td>
<td>80GB</td>
<td>5400 Combo</td>
<td>Intel 11a/b/g</td>
<td>Smart</td>
<td>None</td>
<td>6</td>
<td>Business</td>
<td>32</td>
</tr>
</tbody>
</table>

- This model has a 1-year limited warranty.

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper™ Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial
- Sonic RecordNow and Drive Letter Access (combo)
- InterVideo WinDVD (combo)

License - CD not included - Lotus® Notes® Stand-alone Client

Supports ThinkVantage® technologies

- 65-watt (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

#### Preloaded operating system

- Vista Premium logo

#### Limited warranty

- 1-year - EasyServ™ on-site pickup and delivery / service upgrades available

See footnotes for important warranty information.

*Powered by Intel Centrino® Duo processor technology.

US model announced July 10, 2007

US model withdrawn effective December 2007

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(WKK11-3) December 2007

Other accessories on O-R61-15W sheet

See footnotes for important warranty information.
<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics</th>
<th>Optical Drive</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Finger</th>
<th>Battery</th>
<th>Workhorse (W)</th>
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<tbody>
<tr>
<td>8933-22U T7300</td>
<td>Intel® Celeron® Processor 540</td>
<td>1GB/4GB max</td>
<td>Intel® Graphics Media Accelerator X3100</td>
<td>DVD-ROM/CD-RW, 16x DVD-RW/CD-RW/CD-R/DVD-ROM</td>
<td>Intel 11a/b/g</td>
<td>Finger Blue</td>
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<td>Business64 W G Jul 07</td>
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<td>8933-ACU T7300</td>
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<td>1GB/4GB max</td>
<td>Intel® Graphics Media Accelerator X3100</td>
<td>DVD-ROM/CD-RW, 16x DVD-RW/CD-RW/CD-R/DVD-ROM</td>
<td>Intel 11a/b/g</td>
<td>Finger Blue</td>
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<td>Intel® Celeron® Processor 540</td>
<td>1GB/4GB max</td>
<td>Intel® Graphics Media Accelerator X3100</td>
<td>DVD-ROM/CD-RW, 16x DVD-RW/CD-RW/CD-R/DVD-ROM</td>
<td>Intel 11a/b/g</td>
<td>Finger Blue</td>
<td>6</td>
<td>Business32 Sep07</td>
<td>3-years, 3 years, 3 years</td>
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</table>

These models have a 3-year limited warranty.

Positioning
Processor: Everyday computing; two spindles
Intel® Celeron® Processor 540 with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel® Core™ 2 Duo processor T7300 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; 4MB shared L2 cache.

Memory: 1GB std / 4GB max PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available.

Diskette drive: None (use optional USB-based diskette drive)
EIDE Combo: DVD-ROM/CD-RW (73P3288), 24X/24X/24X/8X, removable from Ultrabay Enhanced
Hard Drive: One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, flat or curved

Weight: 850g (5400 rpm)

Dimensions: 6.15gW (WxHxD): 14.1" x 10.2" x 1.39–1.52"; 358.5 x 260.0mm x 35.3–38.5mm

Battery - type: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced
Battery - life: 6-cell: up to 5.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

Chipset: Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH7M I/O Controller Hub (SAT.3Gbs/s, ATA 100 IDE, PCI Exp x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricochet R5C847 Cardbus/1394/Multiard) / LPC bus (WPCN385 Super I/O, Ambient 97SC3203 TPM)

PC Card Std slot: None
ExpressCard slot: None
Smart Card Reader: None
Multicard Reader: 4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card)
Ports: Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard), S-Vide output

Wireless antenna: Mini PCI Express
Fingerprint reader: Finger Print reader on palm rest, swipe sensor, supported with security chip

Limited warranty: 3-years / 1-year battery - EasyServ™, 10 depot repair service / service upgrades available

Preloaded operating system:
- Some: Microsoft Windows Vista® Business Edition (64-bit)

Vista Basic logo

Preloaded applications:
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo)
- Corel® WinDVD® (combo)

Supports ThinkVantage® technologies

ENERGY STAR® 4.0-compliant

65-watt (GMA graphics)

Post-warranty annual maintenance agreements at

Some: Install WinDVD® for business (combo)

**Note:** Lenovo reserves the right to change product specifications and features at any time without notice.

See footnotes for important warranty information.

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US models withdrawn effective November 2008

US models announced July 10, July 24, or September 18, 2007

* Intel® Centrino® processor technology

Lenovo.com/thinkplus/warranty

Lenovo.com/thinkplus/warranty
## ThinkPad® R61u 15W 8933 (GMA) - Education (EasyServ) - withdrawn

### General Information
- **Preloaded operating system**:
  - Vista Basic logo
- **Preloaded applications**:
  - Education software:
    - Windows Live
    - Vista Training Center
  - System Migration Assistant
  - Norton Internet Security
- **Supports ThinkVantage technologies**:
  - 65-watt (GMA graphics)
  - ThinkPad Roll Cage (one-piece magnesium frame)
  - ENERGY STAR® 4.0-compliant
  - RoHS-compliant
- **International Warranty Service**:
  - 24 hour x 7 day toll-free support during the warranty period
  - 360-day toll-free support thereafter
- **Notebook**: Lenovo

### Technical Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Storage</th>
<th>Display</th>
<th>Battery</th>
<th>Weight</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>8933-ETU T8100</td>
<td>Intel® Core™ 2 Duo processor T8100</td>
<td>1GB</td>
<td>320GB (7200 rpm)</td>
<td>15.4” WXGA</td>
<td>Battery: 6-cell</td>
<td>2.4 lb (1.1kg)</td>
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<tr>
<td>8933-ETU T8300</td>
<td>Intel® Core™ 2 Duo processor T8300</td>
<td>2GB</td>
<td>500GB (7200 rpm)</td>
<td>15.4” WXGA+</td>
<td>Battery: 9-cell</td>
<td>3.2 lb (1.5kg)</td>
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</tbody>
</table>

### Additional Features
- **Security**:
  - Fingerprint reader on palm rest
  - ThinkPad Shock Mounted Hard Drive, Active Protection System™
  - 3-years International Warranty Service

### Warranty Information
- **Limited warranty**:
  - 3-years: 1-year battery - EasyServ® depot repair service - service upgrades available

### Other Accessories
- **Software**:
  - Microsoft® Office 2007 (Trial-day 60)
  - Sonic RecordNow and Drive Letter Access (Combo)
- **Drivers and Utilities**:
  - ThinkPlus 4-year P&L P/U Depot
  - ThinkPlus 5-year LOR 9x5 NBD
  - ThinkPlus 4-year LOR 9x5 NBD
  - ThinkPlus 4-year P&L/PU Depot
  - ThinkPlus 5-year P&L/PU Depot

### Footnotes
- See footnotes for important warranty information
- US models announced February 19, 2008
- US models withdrawn effective May 2009

© Lenovo (WKK-2-1) May 2009
ThinkPad® R61 15W (NVIDIA Graphics) - 1-year - withdrawn

Personal Systems Reference (PSREF)

<table>
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<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>EIDE optical wireless</th>
<th>Finger print reader</th>
<th>Bluetooth 1394</th>
<th>Battery ports</th>
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<td>128MB</td>
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<td>Intel 11a/b/g</td>
<td>None</td>
<td>1394 6</td>
<td>Business 32</td>
<td>G</td>
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</tbody>
</table>

- This model has a 1-year limited warranty.

Positioning Processor: Everyday computing; two spindles

Intel Core™ 2 Duo processor T7300 with dual-core

Intel 64 Technology,Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory: 1GB std / 4GB max

PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Italics: standard memory in both sockets; no sockets available

Disk drive

IDE Combo None (use optional USB-based diskette drive)

EIDE Combo DVD-ROM/CD-RW (73P3288), 24x/24x/24x/8x21, removable Ultrabay™ Enh, curved UltraBay Enhanced

Serial ATA disk 80GB (5400 rpm) / 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk,

ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display

15.4" (391mm) WXGA (1280x800) color, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio, anti-glare

Camera

None

Graphics

NVIDIA Quadro NVS 140M, PCI Express x16, 128MB memory, TurboCache, ITAC pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard

Intel Multi-Burner Keyboard

TrackPoint® Touch pad

ThinkPoint™

Dimensions

6-cell 15.4" (WXxDxH): 14.1" x 10.2" x 1.39–1.52"; 358.5 x 260.0mm x 35.3–38.5mm

6-cell Weight: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)

Case material

Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - type

Lithium Ion 6-cell 2.4 Ah, supports unique 2nd battery in Ultrabay Enhanced

Battery - life

6-cell: up to 5.0 hr; 9-cell: up to 7.0 hr; 6-cell plus Ultrabay Battery: up to 8.5 hr

Architecture

Mobile Intel PM965 Express Chipset (Memory Controller Hub);

ICH8M I/O Controller Hub (SATA300, ATA-100 IDE, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / ICH8M I/O Controller Hub (SATA300, ATA-100 IDE, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / LPC bus (WPCI385 Super I/O, Atmel 97SC3203 TPM)

PC Card Std slot

None

ExpressCard slot

One Type I or Type II slot, CardBus 32-bit

Smart Card Reader

None

MultiCard Reader

4-in-1 reader (MultiMediaCard, Mem Stick PRO, Secure Digital, x-Diagram Card™)

Ports

USB 2.0, external DB-15 monitor, RJ-11 (modern), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394A-2000 standard), S-Video out

Wireless antenna

UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCi Express

One Mini PCi Express slot / 802.11 wireless is customer upgradable

Intel 11a/b/g

11a/b/g wireless, Mini PCi adapter, Intel PRO/Wireless 3945ABG

WWAN™

None

Turbo Memory

None

Modem

56K V.90 (V.92-designed) modem in Communications Daughter Card socket

Bluetooth™

None

Ethernet

Gigabit ethernet on systemboard, Intel 82566MC Ninevah (PHY), PCle x1 (GLCI), PXE boot controller

Intel AMT

None

Audio support

High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, Atmel chip, TC1.2-compliant

Fingerprint reader

None

Limited warranty

1-year - EasyServ™ onsite pickup and delivery / service upgrades available

512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733

1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734

2GB PC2-5300 DDR2 SODIMM 40Y7735

ThinkPad DVD UltraBay Slim Burner (flat) 41NS643

Serial Hard Drive UltraBay Slim Adapter (flat) 40Y7825

160GB Disk 9.5mm SATA150 (5400 rpm) 41NS692

160GB Disk 9.5mm SATA150 (7200 rpm) 41NS573

200GB Disk FDE SATA150 (7200 rpm) 41NS572

USB 2.0 Super Multi Burner 41NS565

ThinkPad Convertible Monitor Stand 40Y7620

ThinkPad Convertible Monitor Stand 40Y7620

ThinkPad Essential Port Replicator 250S10W

ThinkPad Advanced Mini Dock 250S10U

ThinkPad Advanced Dock 250S10U

Other accessories on O-R61-15W sheet

Other accessories on o-r61-15w sheet

See footnotes for important warranty information

© Lenovo (WKK-1) December 2007
**ThinkPad R61 15W (NVIDIA Graphics) - 3-year - withdrawn**

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
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<tr>
<td>8919-22U</td>
<td>Intel® Core™ 2 Duo processor T7300 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB 15.4” WSXGA+</td>
<td>128MB 80GB 5400</td>
<td>Combo  ★Intel 11a/b/g 2</td>
<td>Finger</td>
<td>Blue</td>
<td>1394 6</td>
<td>Business 32 W</td>
<td>G Jun 07</td>
<td></td>
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</table>

- This model has a 3-year limited warranty**2**

| Positioning | Processor Everyday computing: two spindles Intel® Core™ 2 Duo processor T7300 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache |
|-------------|--------------------------------------------------|---|
| Memory      | 1GB std / 4GB max**11** / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-illatics: standard memory in one socket; one socket available | 80GB**8** (5400 rpm) / SATA 1.5GBs, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System**™** |
| Widescreen display | 15.4” (391mm) WSXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio | None |
| Camera      | None | |
| Graphics    | NVIDIA® Quadro® NVS 140M, PCIe Express x16, 128MB memory, TurboCache, DVί pass-through support to optional Advanced Mini Dock or Advanced Dock | |
| Keyboard    | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys | |
| Trackpad    | TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®; magnifying glass UltraNav® multi-pointing system, touch pad below keyboard, Tap Zones | |
| ThinkLight™ | 6-cell 15.4” (WxHxD): 14.1” x 10.2” x 1.39–1.52”; 358.5 x 260.0 mm x 35.3–38.5 mm 6-cell: starting at 6.2 lb (2.9kg); 9-cell: starting at 7.6 lb (3.1kg) | |
| Dimensions | 6-cell: starting at 6.2 lb (2.9kg); 9-cell: starting at 7.6 lb (3.1kg) | |
| Weight      | Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic | |
| Material    | Lithium Ion 6-cell 2.4 Ah, supports unique 2nd battery in Ultrabay Enhanced 6-cell: up to 5.0 hr; 9-cell: up to 7.0 hr; 6-cell plus Ultrabay battery: up to 8.5 hr | |
| Battery life | Mobile Intel PM965 Express Chipset (Memory Controller Hub);ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / ICH8M I/O Controller Hub (SATA 3.0Gb/s, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) | |
| Chipset     | None | |
| Wireless antenna | One Mini PCI Express slot / 802.11 wireless is customer upgradable | |
| Mini PCI Express | UltraConnect™ II antenna / on-off switch for all wireless radios | |
| WWAN       | Mobile Intel PM965 Express Chipset (Memory Controller Hub); ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / ICH8M I/O Controller Hub (SATA 3.0Gb/s, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) | |
| Turbo Memory | None | |
| Battery     | None | |
| Modem       | 56K V.90 (V.92-designed) modem in Communications Daughter Card socket | |
| Bluetooth   | 6-cell: starting at 6.2 lb (2.9kg); 9-cell: starting at 7.6 lb (3.1kg) | |
| Ethernet    | Giga bit ethernet on system board, Internet 802566MC Nineveh (PHY), PCIe x1 (GLC), PXE | |
| Intel AMT   | None | |
| Audio support | High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack | |
| Security    | Power-on-password, hard disk password, supervisor password, security keyhole | |
| Security chip | Trusted Platform Module, Atmel chip, TOG 1.2-compliant | |
| Fingerprint reader | Finger print reader on palm rest, swipe sensor, supported with security chip | |
| Limited warranty | 3-years/1-year battery - EasyServ™, depot repair service / service upgrades**3** | |

| 1GB PC2-5300 DDR2 SODIMM | T60/R60 Series Li-Ion Battery 6-cell | 40Y7724 | 260m/R60 Li-Ion Battery 9-cell | 40Y6797 |
| 2GB PC2-5300 DRR2 SODIMM | T60/R60 Series Li-Ion Battery 6-cell | 40Y7735 | 40Y7735 |
| Serial Hard Drive Ultrabay Slim Adapter (flat) | Advanced Ultrabay Battery II 3-cell | 40Y8725 | 43R9250 |
| ThinkPad DVD Ultrabay Slim Battery (flat) | ThinkPad External Battery Charger | 41N5643 | 40Y7625 |
| ThinkPad DVD Ultrabay Slim Battery (curved) | ThinkPad 90W AC Adapter | 41N5737 | 40Y76569 |
| 200GB Disk 9.5mm SATA 1.5Gb/s (7200 rpm) | ThinkPad Shock Enhanced DC Adapter | 41N5738 | 40Y76569 |
| 250GB Disk 9.5mm SATA 1.5Gb/s (5400 rpm) | ThinkPad Basic Case | 43R8152 | 43R9113 |
| Blu-ray® Burner Ultrabay Enhanced (curved) | ThinkPad Business BackPack | 43N3200 | 43R2482 |
| USB 2.0 Multi-Burner Drive | ThinkPad Shock Enhanced DC Adapter | 41N5565 | 4927AE1 |
| USB 2.0 Lenovo Enhanced Port Replicator | ThinkVision L171p 17” LCD Monitor | 43R8770 | 4917042 |
| ThinkPad Convertible Monitor Stand | ThinkVision L190x 19” LCD Monitor | 40Y7620 | 4439H8B |
| ThinkPad Advanced Mini Dock | ThinkVision L193p 19” LCD Monitor | 250410U | 431H8B2 |
| ThinkPad Advanced Dock | ThinkVision L220x Wide 22” LCD Monitor | 250310U | 433H8B2 |
| Other accessories on O-R61-15W sheet | | | |

See footnotes for important warranty information

* Intel Centrino® processor technology © Lenovo

(WKK1-2) July 2008

US model announced May 31, 2007

US model withdrawn effective June 2008

Supported Vantage technologies

90-watt (NVIDIA graphics) ThinkPad Roll Cage (one-piece magnesium frame)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service**17** 24 hour / 7 days**17** toll-free support during the warranty period**12** via 800-426-7378

ThinkPlus™ 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P&R/ Depot

ThinkPlus 3-year P&R/ Depot

ThinkPlus 4-year P&R/ Depot

ThinkPlus 5-year P&R/ Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad R61 15W 8935 (GMA) - 3-year (Onsite) - withdrawn

#### Preloaded operating system
- Microsoft Windows Vista Business Edition (64-bit)
- Vista Basic logo

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo)
- Corel® WinDVD™ (combo)

#### Limited warranty
- 3-years/1-year battery, limited onsite service**
- 8 am - 5 pm, Mon - Fri coverage

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### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Battery</th>
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<tr>
<td>8935-22U</td>
<td>2.00</td>
<td>1GB</td>
<td>WXGA</td>
<td>6-cell</td>
</tr>
</tbody>
</table>

---

**This model is part of the Global Models Plus program with limited onsite service**

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### Other accessories
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 4.0-compliant
- ROHS-compliant
- International Warranty Service

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**Post-warranty annual maintenance**

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**Diskeeper® Home**

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**ThinkPlus® 4-year LOR**

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**ThinkPlus® 5-year LOR**

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**lenovo.com/thinkplus/warranty**

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### Notes
- See footnotes for important warranty information
- Intel Centrino® processor technology

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*WKK11-5* November 2008

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### ThinkPad R61 15W 8927 (NVIDIA) - 3-year (Onsite) - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Video</th>
<th>Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>8927-22U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4&quot; WXSGA+</td>
<td>Combo</td>
<td>5400</td>
<td>8GB</td>
<td>800.11</td>
<td>Finger</td>
<td>- Microsoft Windows Vista Business Edition (32-bit)</td>
</tr>
</tbody>
</table>

- **This model is part of the Global Models Plus program with limited onsite service**
  - 3-year limited warranty

#### Positioning

- **Everyday computing; two spindles**
- **Intel Core™ 2 Duo processor T7300 with dual-core.**
- Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

#### Memory

- **1GB std / 4GB max.** (5400 rpm)
- **PC2-5300 667MHz DDR2.**
- non-parity, dual-channel capable, two 200-pin SO-DIMM sockets.
- Non-italics: standard memory in one socket; one socket available

#### Disk drive

- **None (use optional USB-based diskette drive)**
- **EIDE Combo**
- **UltraBay Enhanced Serial ATA disk**
- **None (1.8" drive)**
- **UltraBay Enhanced Serial ATA disk**
- **None**

#### Wide-screen display

- **15.4" (391mm) WXSGA+ (1680x1050) color**
- anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

#### Graphics

- **NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache**, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

#### Keyboard

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys**
- **TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar**, magnifying glass
- **UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones**
- **ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions**

#### Dimensions

- **6-cell 15.4" (WxDxH): 14.1" x 10.2" x 1.39-1.52"**
- **358.5 x 260.0mm x 35.3-38.5mm**
- **6-cell: starting at 6.4 lb (2.9kg); 9-cell: starting at 6.7 lb (3.1kg)**

#### Battery

- **Lithium Ion 6-cell**
- **2.4 Ah, supports 2nd battery in UltraBay Enhanced**
- **6-cell plus UltraBay battery: up to 7.6 hr; 6-cell plus Ultrabay battery: up to 8.5 hr**

#### Chipset

- **Mobile Intel PM965 Express Chipset (Memory Controller Hub);**
- **ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])/ PCI bus (Riconch R5C847 Cardbus/1394/Multicard)**
- **LPC bus (WPCN385 Super I/O, Atmel 97SC3203 TPM)**

#### Wireless antenna

- **UltraConnect™ II antenna / on/off switch for all wireless radios**
- **802.11 wireless Live! customer upgradable 11a/b/g wireless, Mini PCI adapter, Intel PRO/Wireless 3945ABG**

#### WWAN

- **None**

#### Modem

- **56k V.90 (V.92-designed™) modem in Communications Daughter Card socket**
- **Ethernet**
- ** Carnegie Monarch 3.3V (32-bit)**

#### Bluetooth

- **Ethernet**
- **Gigabit ethernet on system board, Intel 82566MC Nineveh (PHY), PCle x1 (GLC1), PXE Boot**
- **Intel AMT**

#### Audio support

- **High Definition (HD) Audio, AD1984JC9 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack**

#### Security

- **Power-on password, hard disk password, supervisor password, security keyhole**

#### Security chip

- **Trusted Platform Module, Atmel chip, TCG 1.2-compliant**

#### Hand reader

- **Fingerprint reader on palm rest, swipe sensor, supported with security chip**

#### Limited warranty

- **3-years / 1-year battery, limited onsite service**
- **8 am - 5 pm, Mon - Fri coverage excluding holidays, second business day response time / service upgrades available**

#### Other accessories

- **9-cell: starting at 6.4 lb (2.9kg); 9-cell plus Ultrabay battery: up to 7.6 hr; 6-cell plus Ultrabay battery: up to 8.5 hr**

### Preloaded operating system

- **Microsoft Windows Vista Business Edition (32-bit)**
- **Vista Premium logo**

### Preloaded applications

- **Rescue and Recovery™**
- **Access Connections™**
- **Client Security Solution™**
- **ThinkVantage Productivity Center**
- **ThinkVantage System Update**
- **System Migration Assistant**
- **Norton Internet Security**
- **Diskeeper™ Home**
- **PC-Doctor™ (diagnostics)**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Adobe® Reader**
- **Windows Live™ Toolbar**
- **Windows Live Search**
- **Picasa from Google**
- **Fingerprint Software (fingerprint models)**
- **Microsoft Office 2007 Trial (60-day)**
- **Sonar RecordNow and Drive Letter Access (combo)**
- **InterVideo WinDVD (combo)**

###湖泊

- **Supports ThinkVantage technologies**

- **90-watt (NVIDIA graphics)**
- **ThinkPad Roll Cage (one-piece magnesium frame)**
- **ENERGY STAR® 4.0-compliant**
- **RoHS-compliant International Warranty Service**
- **24 hour x 7 day toll-free support during the warranty period via 800-426-7378**

### Lenovo

- **ThinkPlus™**
- **4-year LOR 9x5 NBD**
- **5-year LOR 9x5 NBD**
- **Post-warranty maintenance agreements at lenovo.com/thinkplus/warranty**

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* Intel Centrino® processor technology

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(WKK1-4) July 2008

See footnotes for important warranty information

US model announced May 31, 2007

US model withdrawn effective June 2008
### ThinkPad® R61 15W Accessories

**Partial list of accessories supported on:**
- ThinkPad R61 15W originally announced on May 31, 2007

#### Memory
- 512MB PC2-5300 DDR2 SODIMM: 40Y7733
- 1GB PC2-5300 DDR2 SODIMM (TopSeller): 43R1999
- 1GB PC2-5300 DDR2 SODIMM (TopSeller): 43Y7734
- 2GB PC2-5300 DDR2 SODIMM (TopSeller): 43R2000
- 2GB PC2-5300 DDR2 SODIMM: 40Y7735

#### Ultrabay Slim 9.5mm
- Supports both flat and curved bezel options
- Serial Hard Drive Ultrabay slim Adapter (flat): 40Y8725
- Serial Hard Drive Ultrabay slim Adapter (curved): 48 Serial Hard Drive Ultrabay slim Adapter
- USB Gemplus GemPC Smart Card Reader: 41N3040
- ExpressCard Gemplus Smart Card Reader: 41N3043

#### Storage and removable storage
- 160GB Disk SATA 1.5Gbps (5400 rpm): 41N5692
- 160GB Disk SATA 1.5Gbps (7200 rpm): 41N5737
- 250GB Disk SATA 1.5Gbps (5400 rpm): 43R8152
- 250GB Disk SATA 1.5Gbps (7200 rpm): 43N3410
- 320GB Disk SATA 1.5Gbps (5400 rpm): 43N3403
- 320GB Disk SATA 1.5Gbps (7200 rpm): 43N3411

#### Multimedia
- USB 2.0 Lenovo Multimedia Headset: 40Y8518
- USB 2.0 Lenovo Webcam: 40Y8519

#### Batteries
- T/R/W/SL Series Li-ion Battery 6-cell: 40Y7699
- T/R/W/SL Series Li-ion Battery 9-cell: 40Y7697
- Advanced Ultrabay Battery II 3-cell: 43R2950

#### Carrying Cases
- Up to 15.4" widescreen models: Lenovo Carrying Case - Messenger Max: 41U5253
- Lenovo Carrying Case - Performance BackPack: 41U5254
- Lenovo Standard Case: 45K1697
- Lenovo Standard Backpack: 45K1698

#### Monitor Accessories
- ThinkVision L174 17" Monitor: 9227AE1
- ThinkVision L1700p 17" Monitor: 9417E2
- ThinkVision L1900p 19" Monitor: 4431HE1
- ThinkVision L1940p Wide 19" Monitor: 4424H86
- ThinkVision L2000p Wide 20.1" Monitor: 4438H86
- ThinkVision L2240p Wide 22" Monitor: 4422H86
- ThinkVision L2440p Wide 24" Monitor: 4420H82
- ThinkVision L2440x Wide 24" Monitor: 4421H82

#### Security
- Kensington® Cable Lock from Lenovo: 73P2582
- Kensington Twin Head Cable Lock: 45K1620

#### USB Fingerprint Keyboard
- ThinkVision L174 17" Monitor: 9227AE1
- ThinkVision L1700p 17" Monitor: 9417E2
- ThinkVision L1900p 19" Monitor: 4431HE1
- ThinkVision L1940p Wide 19" Monitor: 4424H86
- ThinkVision L2000p Wide 20.1" Monitor: 4438H86
- ThinkVision L2240p Wide 22" Monitor: 4422H86
- ThinkVision L2440p Wide 24" Monitor: 4420H82
- ThinkVision L2440x Wide 24" Monitor: 4421H82

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(O-R61-15W) May 2009

www.lenovo.com/accessoriesguide
## ThinkPad R61i 14W 7732 (GMA) - TopSeller - withdrawn

**Personal Systems Reference (PSRef)**

### Type-model

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Screen type</th>
<th>Camera</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>IDE option</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Card slot</th>
<th>Battery watt</th>
<th>Workhorse (W) Global (G)</th>
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<td>T5250</td>
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<td>GMA</td>
<td>120G 5400</td>
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<td>Intel 11a/b/g</td>
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</table>

### Positioning
- Everyday computing; two spindles
- Dual-Core Processor T2330 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep technology1
- Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache

### Processor
- Intel Pentium® Dual-Core Processor T2330 with dual-core
- Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache
- Intel Core™ 2 Duo processor T5250 or T5450 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep technology1
- Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory
- 1GB std / 4GB max1 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets
- Non-italics: standard memory in 1 socket; 1 socket available

### Diskette drive
- None (use optional USB-based diskette drive)

### IDE/EIDE
- DVD drive, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay™ Enhanced

### Serial ATA disk
- 120GB (9400 rpm) or 160GB (5400 rpm) SATA 1.5Gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk

### Ultrabay Shock Mounted Hard Drive, Active Protection System12

### Dimensions
- Some: 14.1" (358.1mm) WXGA (1280x800) TFT color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA (1280x800) TFT color, VibrantView(glossy), 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera
- Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Graphics
- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

### Touch pad
- None

### TouchThink™
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions (Weight)
- 4-cell: 14.1W (WXDxH): 13.2" x 9.3" x 1.2-1.37"; 335mm x 237mm x 30.6-34.9mm
- 4-cell: starting at 5.2 lb (2.4kg)

### Case material
- Top: Super-elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type
- Lithium ion 4-cell, supports unique 2nd battery in Ultrabay Slim
- 4-cell: up to 3.6 hr; optional 6-cell: up to 5.7 hr; 4-cell plus Ultrabay battery: up to 7.2 hr

### Chipset
- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
- ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 I/OE, PCIe Express x1, PCI bus, USB bus, [Blueteeth], [fingerprint]) / PCI bus (Ricoch R58547 Cardbus/1394/Multicard)
- LPC bus (WPONCS85 Super I/O, Atmel 97SC3203 TPM)

### Wireless antenna
- UltraConnect™ II antenna / on-off switch for all wireless radios

### Mini PCI Express
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g wireless, Mini PCI adapter, Intel PRO/Wireless 3945AGB

### WWAN
- None

### Turbo Memory
- None

### Network
- 56K V.92 modem in Communications Daughter Card socket

### Bluetooth
- Bluetooth 2.0 wireless, USB 2.0 interface via ICH6M, LED indicator

### Ethernet
- Gigabit ethernet on systemboard, Intel 82566MV Nernve (PHY), PCIe x1 (GLX), PXE boot support

### Audio support
- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security chip
- Power-on password, hard disk password, supervisor password, security keyhole

### Fingerprint reader
- Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 1-year - EasyServ™ / 15 depot repair service / service upgrades available

### Preloaded operating system
- Some: Microsoft® Windows® XP Professional
- Vista models: Vista Basic logo

### Preloaded applications
- Lenovo Care™ for Think (Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper®
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Multimedia Center for Think Offerings (XP Pro model)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Vista models)
- Corel® Starter Kit, compatible with WordPerfect® Office 12 (Oct Vista models)
- QuickBooks Financial Center (Vista models)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- Corel® WinDVD Creator (DVD+RW)
- Adobe® Reader
- Preloaded applications (XP Pro model)

### Supports
- Lenovo Care™
- ThinkPlus®
- ENERGY STAR®
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period
- via 800-426-7378

**See footnotes for important warranty information**

* Intel Centrino® processor technology

**Notes:**
- US models announced July 3 or October 2, 2007 or January 8, 2008
- US models withdrawn effective Dec 7, 2008, or Nov 2008
ThinkPad® R61i 14W 7732 (GMA) - TopSeller (March 2008) - withdrawn

**Processor**

Intel® Pentium® Dual-Core Processor T2370 or T2390 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep® technology, Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache or

Intel Core™ 2 Duo processor T5550 or T5750 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology. Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

1GB or 2GB 800 MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; *Italics:* standard memory in both sockets; no sockets available; *Non-Italics:* standard memory in 1 socket; 1 socket available

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE DVD±RW**

DVD burner, Super Multi-Burner (40Y8624) dual-layer, removable Ultrabay™ Enhanced

**ThinkPad Shock Mounted Hard Drive, Active Protection System**

**Battery**

- *Type:* 65-watt (GMA graphics) AC adapter
- *Technology:* 4.0-compliant RoHS-compliant

**Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, dual-channel capable, 200-pin SO-DIMM sockets;**

**Display Memory**

Some: 14.1" (358.1mm) WXGA (1280x800) TFT color, anti-glare, 165 nits, 160-170 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358.1mm) WXGA (1280x800) TFT color, VibrantView (glossy), 165 nits, 160-170 aspect ratio, 300:1 contrast ratio

**Wirelesss antenna**

UltraCom2® II antenna / on-off switch for all wireless radios

**Driver support**

- *Corporate colleagues:* 22 1-year LOR24 9x5 NBD
- *Support during the warranty period:* 12
- *24 hour x 7 day:* toll-free support via 800-426-7378
- *ENERGY STAR:* 4.0-compliant
- *Lenovo CareSM for Think:** 2-year LOR24 9x5 NBD

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- *Ehanced Protection Plan (EPP):* 1-year, EarlyCare™ depot service / service upgrades available

See footnotes for important warranty information. *© Lenovo 2008

US models announced March 4, 2008, May 12, or August 5, 2008

US models withdrawn effective May 2009

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Preloaded operating system:

- *Some:* Microsoft Windows® XP Professional with Vista® COA
- *Some:* Microsoft Windows Vista® Business
- *Some:* Microsoft Windows Vista® Home Basic (32-bit)
- *Some:* Microsoft Windows Vista® Home Premium (64-bit)

Preloaded applications (all OSes; on some models):

- *SMB:* Adobe Reader - *SMB:* Multimedia Center for Think (*XP* models)
- *SMB:* Microsoft Office Professional 2007 and CD (OUI model)
- *SMB:* Microsoft Office 2007 Trial (60-day)
- *SMB:* Network Magic™
- *SMB:* Corel® Small Business Center™ with WordPerfect® Office 12
- *SMB:* QuickBooks Financial Center
- *SMB:* Sonic RecordNow and Drive Letter Access (DVD±RW)
- *SMB:* Corel WinDVD™ (DVD±RW)
- *SMB:* Corel WinDVD Creator (XP Pro DVD±RW models)

Supports ThinkVantage® technologies

- *65-watt (GMA graphics) AC adapter:***
  - *ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium):***
  - *ENERGY STAR:* 4.0-compliant
  - *RoHS-compliant International Warranty Service:** 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
ThinkPad® R61i 15.4" WUXGA (GMA) - TopSeller - withdrawn

**Processor**
- Intel® Pentium® Dual-Core Processor T2330, T2370, or T2390 with dual-core, Intel® 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 533MHz system bus, and 1MB shared L2 cache or
- Intel Core™ 2 Duo processor T5250, T5450, T5550, or T5750 with dual-core, Intel Technology, Enhanced Intel Speedstep Technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**
- 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; *Non-ittals*: standard memory in both sockets; *Italics*: no sockets available;

**Diskette drive**
- None (use optional USB-based diskette drive)

**Default partitioning**
- SATA 1.5gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**
- 15.4" (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 30:1 contrast ratio

**Graphics**
- None

**Chipset**
- Mobile Intel GM965 Express Chipset

**Preloaded operating system**
- Some: Microsoft Windows® XP Professional with Vista® COA

**Battery**
- Lithium Ioni 6-cell

**Supports ThinkVantage technologies**
- 65-watt (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant

**International Warranty Service**
- 24 hour x 7 day x 365 day toll-free support during the warranty period ± via 800-426-7378

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**See footnotes for important warranty information**

[1] - EasyServ 1-year - depot repair service / service upgrades ± available

**Models have a 1-year limited warranty**

**Preloaded applications**
- Some: Education software

- *- Some: Microsoft Office OneNote® 2007 and CD (OEM models) — Lenovo Care® for Think (9MU and 2008 models)
- Microsoft Signature Model® (9MU and 2008 models)
- Corel® Small Business Center™ with WordPerfect® Office 12 (9MU and 2008 models)
- QuickBooks® Financial Center (9MU and 2008 models)
- Corel® WinDVD® (DVD±RW)
- Corel® WinDVD Creator (XP Pro DVD±RW model)

**Limited warranty**
- 1-year - depot repair service / service upgrades ± available

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**Note:** The information provided is for reference purposes only and may not be comprehensive. Please consult the official Lenovo website or documentation for the most up-to-date and accurate information. The table and details provided are subject to change. Lenovo is not liable for any errors or omissions in the information provided. Use of the information is at your own discretion.
### Preloaded operating system
- Some: Microsoft® Windows® XP Professional with Vista® COA
  - Vista models: Vista Basic logo

### Preloaded applications
- Lenovo Care™ for Think (Oct Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper™ Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Multimedia frame for Think Offers (XP Pro model)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Oct Vista models)
- Core i5 Small Business Center™ with WordPerfect® Office 12 (Oct Vista models)
- QuickBooks Financial Center (Oct Vista models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel WinDVD® (DVD:RW)
- Corel WinDVD Creator (XP Pro DVD:RW model)

### Supports ThinkVantage technologies
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service!
  - 22 1-year LOR™ 9x5 NBD
  - 14 (all OSes)

### Preload
- Lenovo Care™ for Think (Oct Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper™ Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Multimedia frame for Think Offers (XP Pro model)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Oct Vista models)
- Core i5 Small Business Center™ with WordPerfect® Office 12 (Oct Vista models)
- QuickBooks Financial Center (Oct Vista models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel WinDVD® (DVD:RW)
- Corel WinDVD Creator (XP Pro DVD:RW model)

### Supports ThinkVantage technologies
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service!
  - 22 1-year LOR™ 9x5 NBD
  - 14 (all OSes)

### Preload
- Lenovo Care™ for Think (Oct Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper™ Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
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- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Oct Vista models)
- Core i5 Small Business Center™ with WordPerfect® Office 12 (Oct Vista models)
- QuickBooks Financial Center (Oct Vista models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel WinDVD® (DVD:RW)
- Corel WinDVD Creator (XP Pro DVD:RW model)

### Supports ThinkVantage technologies
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service!
  - 22 1-year LOR™ 9x5 NBD
  - 14 (all OSes)

### Preload
- Lenovo Care™ for Think (Oct Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
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- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel WinDVD® (DVD:RW)
- Corel WinDVD Creator (XP Pro DVD:RW model)

### Supports ThinkVantage technologies
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service!
  - 22 1-year LOR™ 9x5 NBD
  - 14 (all OSes)

### Preload
- Lenovo Care™ for Think (Oct Vista models)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Diskeeper™ Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Multimedia frame for Think Offers (XP Pro model)
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Network Magic™ (Oct Vista models)
- Core i5 Small Business Center™ with WordPerfect® Office 12 (Oct Vista models)
- QuickBooks Financial Center (Oct Vista models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel WinDVD® (DVD:RW)
- Corel WinDVD Creator (XP Pro DVD:RW model)
## ThinkPad® R61i 15W 8932 (GMA) - TopSeller (January 2008) - withdrawn

### Personal Systems Reference (PSREF)

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<tr>
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<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>8932-DZU</td>
<td>T5450 1.66 1GB 15.4” WXGA</td>
<td>GMA 120G 5400 DVD RW</td>
<td>* Intel 11a/b/g*5</td>
<td>6 XP Pro</td>
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<td>T5450 1.66 1GB 15.4” WXGA Glossy Cam</td>
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<td>GMA 120G 5400 DVD RW</td>
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<td>GMA 160G 5400 DVD RW</td>
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<td>T5750 2.00 2GB 15.4” WXGA</td>
<td>GMA 160G 5400 DVD RW</td>
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<td>Blue</td>
<td>6 Business32</td>
<td>No Apr 08</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

These small and medium business (SMB) models are part of the US TopSeller® Program.

These models have a 1-year limited warranty.

### Processor
- **Intel® Pentium® Dual-Core Processor T2370 or T2390 with dual-core**
- **Intel 64 Technology**, **Enhanced Intel SpeedStep**
- **Execute Disable Bit**, **533MHz system bus**, and **1MB shared L2 cache**

### Memory
- **1GB or 2GB std / 4GB max**
- **PC2-5300 667MHz DDR2**, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets
- **Non-italsics**: standard memory in both sockets; no sockets available
- **Italics**: standard memory in 1 socket; 1 socket available

### Diskette Drive
- None (use optional USB-based diskette drive)

### EIDE DVD/RW
- DVD burner, Super Multi Burner (40Y8624) 2x-speed, removable Ultrabay™ Enhanced

### Ultrabay Enhancements
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

### Serial ATA disk
- **120GB** (5400 rpm) or **160GB** (5400 rpm) / SATA 1.5Gb/s, 5.95mm high, removable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- **15.4” (391mm) WXGA (1280x800) TFT color**, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **VividView (Vivid)**, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera
- **camera on top of screen, 1.3-megapixel fixed focus, USB 2.0**

### Graphics
- **Intel Graphics Media Accelerator X3100 (GMA X3100)**, integrated in GM965
- **no DVI pass-through to support optional Advanced Mini Dock or Advanced Dock**

### Keyboard
- **99-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys**
- **TrackPoint® pointing device**, "Press-to-Select," Internet Scroll Bar13, magnifying glass
- **Touch pad**, **ThinkLight™ multirouting system**, touch pad below keyboard, Tap Zones

### Dimensions
- **6-cell 15.4” (391mm) WXGA (1280x800) TFT color**, 14.1” x 10.2” x 1.39–1.52”; 358.5 x 260.0mm x 35.3–38.5mm
- **Lithium Ion 6-cell**: up to 5.0 hr; **6-cell plus Ultrabay battery**: up to 8.5 hr

### Chipset
- **Mobile Intel GM965 Express Chipset** (Graphics Memory Controller Hub)
- **ICH8M I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE**, PCI-Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / **LPC bus (WPN385 Super I/O, Atmel® 97SC3203 TPM)**
- **One Type I or Type II slot, CardBus 32-bit**

### Wireless antenna
- **UltraConnect™ II antenna / on/off switch for all wireless radios**
- **Mini PCI Express slot / 802.11 a/b/g wireless**, **Internal 802.11 a/b/g wireless**, **6-cell (11a/b/g)**
- **Intel 11a/b/g**
- **Intel 11n**
- **WWAN**
- **Turbo Memory**
- **Modem**
- **Bluetooth**
- **Ethernet**
- **Gigabit ethernet, Broadcom® BCM5787M (MAC/PHY), PCI x1, PXE**
- **Intel AMT**
- **Audio**
- **High Definition (HD) Audio, CX20549 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack**
- **Security**
- **Security chip**
- **Fingerprint reader**
- **Limited warranty**

See footnotes for important warranty information

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US models announced January 8, March 11, April 8, July 1, 2008

US models withdrawn effective May 2009
### ThinkPad R400 7438 (TopSeller) - withdrawn

- **Type-model**: 7438-T6U, P8400 2.26 GHz, 2GB, 14.1” WXGA, SDA 160G, DVD±RW; - Intel 5100
- **Type-model**: 7438-T7U, T9400 2.53 GHz, 2GB, 14.1” WXGA Cam, SDA 160G, DVD±RW; - Intel 5100
- **Type-model**: 7438-PAU, P8600 2.40 GHz, 2GB, 14.1” WXGA, SDA 160G, DVD±RW; - Intel 5100

<table>
<thead>
<tr>
<th>Name</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Case Material</th>
<th>Weight</th>
<th>Battery</th>
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</tr>
</thead>
<tbody>
<tr>
<td>7438-T6U</td>
<td>P8400</td>
<td>2GB</td>
<td>14.1” WXGA</td>
<td>Steel</td>
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<td>Windows 7 Ultimate</td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have an EasyServ™,19 depot repair service 3-year limited warranty**

### Positioning and Processor
- **Positioning**: Mainstream business performance; two spindles
- **Processor**: Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache

### Memory
- **Memory**: 2GB std / 4GB max / PC3-8500 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Memory (continued)**: standard memory in both sockets; no sockets available; *Non-Italics:* standard memory in one socket; one socket available; *Standard memory in one or two sockets (variable DIMMs)*

### SATA DVD:RW
- **SATA DVD:RW**: One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- **SATA disk**: 160GB (5400 or 7200 rpm)

### Display and Camera
- **Display**: 14.1” (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Camera**: Some: camera on top of screen, 1.3-megapixel, fixed focus

### Integrated Graphics
- **Graphics**: Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock
- **Chipset**: Intel® GM45 Express Chipset

### Preloaded Operating System
- **Windows**: XP Professional preinstalled through downgrade rights in Genuine Windows Vista®
- **Vista logo**: None

### Preloaded Applications
- **Microsoft**: Office 2007 Trial (60-day)
- **Corel® WinDVD® (DVD:RW)

### Limited Warranty
- **Warranty**: 3-years / 1-year battery - EasyServ™,19 depot repair service / service upgrades20 available

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See footnotes for important warranty information

[1] Intel Centrino®2 processor technology

© Lenovo (LAG31-1) January 2010

US models announced August 5, 2008 or March 24, 2009

US models withdrawn effective June or December 2009
• This small and medium business (SMB) model is part of the US TopSeller™ Program
• This model has a depot repair service 3-year limited warranty

Positioning
Processor
Mainstream business performance: two spindles
Intel® Core™ 2 Duo processor P8700 with dual-core,
Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

Memory
2GB std / 4GB max* / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available:
SATA DVD±RW
DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43RF9149)
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
250GB† (5400 rpm)
SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk,
ThinkPad Shadow Mounted Hard Drive, Active Protection System™

Widescreen display
14.1" (358.11mm) WXGA (1280x800) color, anti-glare, CCFL backlight,
185 nits, 16:10 aspect ratio, 300:1 contrast ratio
Camera
Camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), In GM45,
DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
Track pad
TrackPoint®, pointing device, "Press-to-Select," Internet Scroll Bar†, magnifying glass
Touch pad
UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

Dimensions
6-cell 14.1W (WxDxH): 13.2" x 9.4" x 1.2–1.4"; 335.5 x 238mm x 31–35mm
Weight
6-cell starting at 5.42 lb (2.46kg)
Battery - type
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
Battery - life††
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced
6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 2.0,
PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)
PC Card
One slot (Type I, Type II), CardBus 32-bit
SmartCard Reader
None
Multicard Reader
None
Ports
Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45),
IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express
Three Mini PCI Express slots
Intel 5100™ WWAN
2G Turbo
None
UWB
None

Modem
56K V.92* modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Limited warranty†‡ 3-years/1-yr battery - depot repair service / service upgrades§ available

Preloaded operating system§§ - Windows® XP Professional
preinstalled through downgrade rights in Genuine Windows 7
Professional 32

Preloaded applications§§ (only some listed)
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• ThinkVantage System Update
• Fingerprint Software (fingerprint models)
• McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
• Lenovo System Toolbox
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader
• Windows Live™ Toolbar
• Roxio® Creator® Business Edition (DVD±RW)
• Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
EPETATM Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service§§ 24 hour x 7 day* toll-free support
during the warranty period‡ during
via 800-426-7378

ThinkPlus™ 3-year LOR§§ 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information
© Lenovo
US model announced October 22, 2009
US model withdrawn effective August 2010

LAG3-7 August 2010
This small and medium business (SMB) model is part of the US TopSeller™ Program

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Mainstream business performance; two spindles Intel® Core™ 2 Duo processor T6670 with dual-core, Intel HD Boost, 800MHz system bus, 2MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD±RW</td>
<td>DVD burner, SATA 1.5Gbps, 12.7mm Ultrabay Enhanced, removable (43R9149)</td>
</tr>
<tr>
<td>Ultrabay Enhanced</td>
<td>One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high</td>
</tr>
<tr>
<td>S3020 GB (5400 rpm)</td>
<td>/ SATA 1.5Gbps, 2.5” wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>14.1” (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300.1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>None</td>
</tr>
<tr>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock Maximum external resolution: 2048x1536@75Hz</td>
<td></td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>TrackPoint</td>
<td>Ultranav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Touchpad</td>
<td>6-cell: 14.1” (WxDxH): 13.2” x 9.4” x 1.2–1.4; 335.5 x 238mm x 31–35mm</td>
</tr>
<tr>
<td>Touchpad</td>
<td>6-cell: starting at 5.1 lb (2.3kg)</td>
</tr>
<tr>
<td>Top Weight</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced 6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr</td>
</tr>
</tbody>
</table>
| Battery - type        | Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)  
| Battery - life        | Supports ThinkVantage® technologies 65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day toll-free support during the warranty period18 via 800-426-7378 |
| Chipset               | Mobile Intel GM45 Express Chipset |  
| ExpressCard/54        | One slot (ExpressCard/34, ExpressCard/54) |
| PC Card               | One slot (Type I, Type II), CardBus 32-bit |
| Smart Card Read       | None |
| Multicard Reader      | None |
| Ports                 | Three USB 2.0, external monitor (VGA DB-15), modem (RIJ-11), ethernet (RIJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) |
| Mini PCI Express      | Three Mini PCI Express slots  
| 11m®                  | 11b/g/n wireless, Mini-PCIe Adapter II  
| WWAN                  | None |
| UWB                   | None |
| Modern                | None |
| Bluetooth®           | 56K V.92® modem |
| Ethernet              | Bluetooth 2.0 wireless, LED indicator Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1 |
| Intel AMT             | None |
| Audio support         | High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant FingerPrint reader FingerPrint reader on palm rest, swipe sensor, supports the security chip Limited warranty 1-year - EasyServ®/Premium depot repair service / service upgrades® available  
| 1GB PC3-8500 DDR3 L-H SODIMM | T/R 14W Standard Battery 4-cell  
| 2GB PC3-8500 DDR3 L-H SODIMM | T/R 14W Enhanced Battery 6-cell  
| 4GB PC3-8500 DDR3 L-H SODIMM | T/R 14W High Capacity Battery 9-cell  
| Serial ATA Hard Drive Bay Adapter III | 90W Ultrasilm AC/DC Combo Adapter |
| 64GB SSD SATA 3.0Gbps 1.8” (2.5” cover) | ThinkPad Business Topload Case |
| 320GB Disk SATA 1.5Gbps (7200 rpm) | ThinkPad Business Backpack |
| USB 2.0 Ultra Secure Memory Key 8GB | ThinkVista® L1940p Wide 19” Monitor |
| USB 2.0 Super Multi-Burner Drive | ThinkVision L2240p Wide 22” Monitor |
| Lenovo® Easy Reach Monitor Stand | ThinkVision L2240s Wide 24” Monitor |
| ThinkPad Advanced Dock | Other accessories on O-R400 sheet |

See footnotes for important warranty information  
US model announced July 7, 2009  
US model withdrawn effective October 2009

Preloaded operating system:  
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)  
- Vista logo: None

Preloaded applications:  
- Rescue and Recovery®  
- Access Connections™  
- Client Security Solution™  
- ThinkVantage Productivity Center  
- ThinkVantage System Update  
- FingerPrint Software (fingerprint models)  
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)  
- PC-Doctor™ (diagnostics)  
- ThinkPad Utilities (Power Manager and Presentation Director)  
- Adobe® Reader®  
- Windows Live™ Toolbar  
- Microsoft® Office 2007 Trial (60-day)  
- Roxio® Creator® Business Edition  
- Roxio MyDVD® (DVD±RW)  
- Corel® WinDVD® (DVD±RW)  

Lenovo® R400 7443 (TopSeller) - withdrawn

[LAG3-6] July 2009
### ThinkPad R400 7443 (TopSeller) - XP with Win 7 License - withdrawn

![ThinkPad Logo](lenovo.com/thinkplus/warranty)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory (GB)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA rpm</th>
<th>Mini PCIe Slot</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>7443-31U</td>
<td>T6670 2.20</td>
<td>2GB</td>
<td>14.1&quot; WXGA Cam</td>
<td>GMA</td>
<td>802.11 wireless</td>
<td>DVD±RW 5400</td>
<td>None</td>
<td>11m±</td>
<td>None</td>
<td>Finger Blue</td>
<td>6</td>
</tr>
</tbody>
</table>

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

| Positioning Processor | Mainstream business performance: two spindles Intel® Core™ 2 Duo processor T6670 with dual-core, Intel HD Boost, 800MHz SO-DIMM sockets. Non-italics: standard memory in one socket; one socket available: SATA DVD±RW: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149) One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high 250GB (5400 rpm) SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™ Widescreen display: 14.1" WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio Camera: Camera on top of screen, 1.3-megapixel, fixed focus Integrated graphics: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock Maximum external resolution: 2048x1536@75Hz Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint: TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar±, magnifying glass Touchpad: UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions Dimensions³: 6-cell 14.1W (WxDxH): 13.2" x 9.4" x 1.2–1.4"; 335.5 x 238mm x 31–35mm 6-cell± starting at 5.42 lb (2.46kg) 6-cell± Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced 6-cell: up to 5 hr; 6-cell± Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr Chipset: Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WP3N385 Super I/O) ExpressCard/54: One slot (ExpressCard/34, ExpressCard/54) PC Card: One slot (Type I, Type II), CardBus 32-bit Smart Card Reader: None Multicard Reader: None Ports: Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Mini PCI Express: Three Mini PCI Express slots 11n± WWAN: None 2G Turbo: None UWB: None Modern: 56K V.92 modem Bluetooth™: Bluetooth 2.1 wireless, LED indicator Ethernet: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1 Intel AMT: None Audio support: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack Security: Power-on password, hard disk password, supervisor password, security keyhole Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant Limited warranty12 1-year - depot repair service / service upgrades12 available

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See footnotes for important warranty information
US model announced October 22, 2009
US model withdrawn effective August 2010

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(LAG3-8) August 2010

- Windows® XP Professional preinstalled downgraded rights in Genuine Windows 7 Professional 32

**Preloaded applications**¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections¹³
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software
- Lenovo System Toolbox
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷
- 24 hour x 7 day²⁴ toll-free support during the warranty period²³ via 800-426-7378

| ThinkPlus® | 1-year LOR²² 9x5 NBD | 45K968 |
| ThinkPlus 2-year LOR 9x5 NBD | 45K969 |
| ThinkPlus 3-year LOR 9x5 NBD | 45K970 |
| ThinkPlus 4-year LOR 9x5 NBD | 45K973 |
| ThinkPlus 5-year LOR 9x5 NBD | 45K975 |
| ThinkPlus 2-year P&L P/U Depot | 45K971 |
| ThinkPlus 3-year P&L P/U Depot | 45K972 |
| ThinkPlus 4-year P&L P/U Depot | 45K974 |
| ThinkPlus 5-year P&L P/U Depot | 45K976 |

Post-warranty annual maintenance agreements are listed at lenovo.com/thinkplus/warranty
ThinkPad® R400 7439 - withdrawn

- **US models withdrawn effective August 2009, October 2009, January 2010 or August 2010**
- **US models announced Aug 5, Sep 2, Sep 30, October 7, or December 2, 2008**
- See footnotes for important warranty information

**Type-model** | **Processor** | **Gig Memory** | **Wide-screen graphics display** | **Integrated graphics display** | **Disk SATA** | **SATA optical** | **Mini PCIe 802.11a/b/g/n** | **Mini PCIe USB or Turbo** | **Battery** | **Whose (W) Date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
7439-1WU Cel 575 2.0 2GB 14.1" WXGA GMA 160G 5400 DVD:RW - Intel 1100None
7439-11U P4400 2.26 1GB 14.1" WXGA GMA 840 5400 Combo - Intel 5100 None
7439-12U T9400 2.53 1GB 14.1" WXGA Cam Intel 160G 7200 DVD:RW - Intel 5100 None
7439-V1U T9400 2.53 2GB 14.1" WXGA Cam Intel 160G 7200 DVD:RW - Intel 5100 None
7439-V2U P8400 2.26 1GB 14.1" WXGA Cam Intel 160G 5400 Combo - Intel 5100 None
7439-VSU T9400 2.53 1GB 14.1" WXGA Cam Intel 160G 7200 DVD:RW - Intel 5100 None
7439-1BU P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-1CU T9400 2.53 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-17U P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-PAU P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-PCU P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-T1U P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-V1U T9400 2.53 2GB 14.1" WXGA Cam Intel 160G 7200 DVD:RW - Intel 5100 None
7439-T2U P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None
7439-17U P8600 2.40 2GB 14.1" WXGA+ Intel 160G 5400 DVD:RW - Intel 5100 None

**US Govt (TAA)**

- Processor: **Intel® Celeron® Processor 575** with single-core, 667MHz system bus, and 1MB L2 cache
- **Intel Core® 2 Duo processor P8400, P8600,** or **T9400 with dual-core,** Intel HD Boost, 1200MHz system bus; **P8400/P8600: 5MB L2 cache; T9400: 6MB L2 cache**

**Memory**

- 1GB or 2GB std / 4GB max / PC3-8500 1066 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- **Italics:** standard memory in both sockets; no sockets available.
- **Non-italics:** standard memory in one socket; one socket available

**SATA Combo DVD Recorder**

- Some: DVD-ROM/CD-RW, SATA 1.5GB/s, 12.7mm Ultrabay Enh, removable (43R9148)
- Some: DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

**Ultrabay Enhancements**

- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm height
- Some: DVD-ROM/CD-RW, SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- Some: 14.1" (398.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nit, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (398.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nit, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

- Some: camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock
- Maximum external resolution: 2048x1536@75Hz (VGA DB-15)

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® point**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®

**Touchpad**

- UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Dimensions**

- 6-cell: 14.1"W (358.1mm); 13.2" x 9.4" x 1.2–1.4" (335.5 x 238mm x 31–35mm)

**Weight**

- 6-cell: starting at 5.42 lb (2.46kg)

**Battery - type**

- Lithium Ion 6-cell Preload
- 9-cell: supports unique 2nd battery in Ultrabay Enhanced
- up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr

**Chipsets**

- Mobile Intel GM45 Express Chipset (Graphic Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/54**

- One slot (ExpressCard/34, ExpressCard/54)
- PC Card

**Smart card reader**

- Some: Smart card reader

**Multicard reader**

- Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Mini PCI Express**

- Three Mini PCI Express slots
- Intel 5100® WWAN 2G Turbo
- None

**Modem**

- 56K V.92 modem

**Bluetooth**

- Some: Bluetooth 2.1 wireless, LED indicator

**Ethernet**

- Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

- Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years/1-yr battery - depot repair service / service upgrades® available

**Preloaded operating system®**

- Some: Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

**Preloaded applications**

- Some: McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Some: Lenovo System Toolbox, ThinkPad Utilities (Power Manager and Presentation Director)
- Corel® WinDVD® (DVD:RW)

**Supports**

- ThinkVantage® technologies

**65-watt (GMA graphics) AC adapter**

- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- PEAT® Silver rating (except Celeron models)
- ENERGY STAR® 5.0-compliant (except Celeron models)
- RoHS-compliant

**International Warranty Service**

- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**Lenovo thinkplus/warranty**

- Can be purchased separately from computer

See footnotes for important warranty information. © Intel Centrino® 2 processor technology (LAG3-2) August 2010

US models announced Aug 5, Sep 2, Sep 30, October 7, or December 2, 2008

US models withdrawn effective August 2009, October 2009, January 2010 or August 2010
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<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Preloaded o/s</th>
<th>Battery</th>
<th>Battery-life</th>
</tr>
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<tbody>
<tr>
<td>7440-11U P8400</td>
<td>Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core,</td>
<td>1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>WXGA</td>
<td>UltraBay Enhanced 2-in-1 slot Preload</td>
<td>ThinkVantage System Update</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7440-12U P9400</td>
<td>Intel® Core™ i3 or Intel® Core™ i5 processor,</td>
<td>2GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
<td>Access Connections™, Client Security Solution™</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7440-12U T9400</td>
<td>Intel® Core™ i5 processor,</td>
<td>4GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>SiteAdvisor™ Rescue and Recovery™, Fingerprint Software (fingerprint models)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7440-V1U T9400</td>
<td>Intel® Core™ i5 processor,</td>
<td>4GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7440-12U T9400</td>
<td>Intel® Core™ i5 processor,</td>
<td>4GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>Lenovo System Toolbox, ThinkPad Utilities (Power Manager and Presentation Director)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7440-V5U T9400</td>
<td>Intel® Core™ i5 processor,</td>
<td>4GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>Microsoft Office 2007 Trial (60-day)</td>
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<tr>
<td>7440-V1U T9400</td>
<td>Intel® Core™ i5 processor,</td>
<td>4GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>Roxio® Creator® Plus with SiteAdvisor® (combo, DVD-ROM)</td>
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<td>7440-12U T9400</td>
<td>Intel® Core™ i5 processor,</td>
<td>4GB DDR3, non-parity,</td>
<td>WXGA</td>
<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>Corel® WinDVD® (combo, DVD-ROM)</td>
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<td>7440-V5U T9400</td>
<td>Intel® Core™ i5 processor,</td>
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<td>14.1” WXGA Cam GMA 160G 7200 DVD</td>
<td>65-watt (GMA graphics) AC adapter, ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) EPEAT® Silver rating ENERGY STAR® 5.0-compliant RohS-compliant International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378</td>
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<td>Type-model</td>
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<td>Wide-</td>
<td>Cam-</td>
<td>SATA</td>
<td>Mini PCIe</td>
<td>Mini PCIe</td>
<td>Mini PCIe</td>
<td>Finger</td>
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<td>2G Turbo</td>
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<td>2G Turbo</td>
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<tr>
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<td>2GB</td>
<td>Port</td>
<td>Intel 5100®</td>
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<td>2G Turbo</td>
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<td>7439-ESU</td>
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<td>7439-ESU</td>
<td>P8700</td>
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<td>2GB</td>
<td>Port</td>
<td>Intel 5100®</td>
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<td>2G Turbo</td>
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<td>7439-EAU</td>
<td>T9600</td>
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<td>Intel 5100®</td>
<td>None</td>
<td>2G Turbo</td>
<td>7-in-1</td>
</tr>
</tbody>
</table>

**Positioning**

- **Intel** Celeron® Processor 585 with single-core, 667MHz system bus, and 1MB L2 cache
- **Intel Core™** 2 Duo processor P8600, P8700, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, P8600/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 cache

**Memory**

- 1GB, 2GB, or 3GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Ittalic: standard memory in both sockets; no sockets available;
- Non-Italic: standard memory in one socket; one socket available

**SATA Combo**

- Some: DVD-ROM/CD-RW, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9148)
- Some: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

**Ultrabay Enhanced**

- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- 80GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400 rpm)
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- Some: 14.1" (358.1mm) WXGA (1280x800 color), anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

- Some: camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock
- Maximum external resolution: 2048x1536@75Hz

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

- ThinkPad pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**ThinkLight™**

- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolled regions label
- UltraNav illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 6-cell: 14.1" (WxHxD): 13.2" x 9.4" x 0.94-1.4"; 335.5 x 238 x 23-35mm
- 6-cell: starting at 5.42 lb (2.46kg)

**Weight**

- Black

**Battery - type**

- Top: Super-Elastic PolyCarbonate (SEPC);
- Bottom: Carbon-Fiber Reinforced Plastic

**Battery - life**

- Lithium Ion 6-cell or 9-cell, supports unique 2nd battery in Ultrabay Enhanced
- 6-cell: up to 5 hr; 6-cell plus Ultrabay battery: up to 6.5 hr; 9-cell: up to 7.5 hr

**Chipset**

- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPC3385 Super I/O)
- ExpressCard/x4
- ExpressCard/x5

**PC Card**

- None

**Smart Card read**

- None

**Multicard reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick PRO™, SD, SDHC, XD, XD Type H)

**Ports**

- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394A-2000 standard)

**Mini PCI Express**

- Three Mini PCI Express slots
- 11a/b/g/n wireless, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- None

**WWAN**

- 2G Turbo
- USB

**Bluetooth™**

- 2.1 wireless, LED indicator
- Bluetooth™ 2.1 wireless, LE™ indicator

**Ethernet**

- Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio support**

- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Finger reader sensor: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years / 1-yr battery - depot repair service - service upgrades available
**ThinkPad® R400 7440 (Education) - Onsite - withdrawn**

**See footnotes for important warranty information**  
*†* Not available to private or public K-12 or higher accredited schools organized and operated exclusively for educational purposes by use for qualified students and teachers.

### Preloaded operating system

- Genuine Windows® Vista Business 32
- Visa Premium logo

### Preloaded applications

- Education software  
  - Microsoft® Office OneNote® 2007 (and CD)
  - VitalSource Library College Edition
  - Adobe® Instructor Resource Cntr
  - Adobe Digital School Collection – Photoshop Elements (and CD)  
    - Première Elements (and DVD)
  - Acrobat 8 Professional  
    - Contribuye 4
  - Rescue and Recovery™  
  - Access Connections™
  - Client Security Solution™  
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader  
  - Windows Live® Toolbar
  - Windows Live Search  
  - Microsoft Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition
  - Roxio MyDVD® (DVD+RW)
  - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Windows Live® Toolbar
  - Windows Live Search
  - Microsoft Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition
  - Roxio MyDVD® (DVD+RW)

### Limited warranty

- **3-years**
- **1-year battery, limited onsite service**‡‡
- **8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades**§ available

### Preloaded applications

- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Microsoft Office 2007 Trial (60-day)
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- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Microsoft Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD® (DVD+RW)
<table>
<thead>
<tr>
<th>Memory</th>
<th>1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706</th>
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<tbody>
<tr>
<td></td>
<td>1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385</td>
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<td>2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707</td>
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<td>2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386</td>
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<tr>
<th>Ultrabay Slim 9.5mm*4</th>
<th>Serial ATA Hard Drive Bay Adapter III 43N3412</th>
<th>ann 06/23/09</th>
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</thead>
<tbody>
<tr>
<td>Slim 9.5mm device in 12.7mm bay</td>
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| Storage and removable storage | 160GB Disk SATA 3.0Gb/s (7200 rpm)**1 | 41N5737 | ann 10/16/07 |
|                                | 250GB Disk SATA 3.0Gb/s (5400 rpm)**1 | 43R8152 | ann 01/15/08 |
|                                | 250GB Disk FDE SATA 3.0Gb/s (7200 rpm)**1 | 43N3410 | ann 01/20/09 |
|                                | 320GB Disk SATA 3.0Gb/s (5400 rpm)**1 | 43N3403 | ann 08/05/08 |
|                                | 320GB Disk SATA 3.0Gb/s (7200 rpm)**1 | 43N3411 | ann 01/20/09 |
|                                | 500GB Disk SATA 3.0Gb/s (7200 rpm)**1 | 43N3423 | ann 01/07/10 |
|                                | Can be used as the main HDD or | | |
|                                | with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay | | |

<table>
<thead>
<tr>
<th>Multimedia</th>
<th>ThinkPad In-Ear Headphones</th>
<th>57Y4388</th>
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<table>
<thead>
<tr>
<th>Security</th>
<th>Kensington® MicroSaver® Cable Lock</th>
<th>73P2582</th>
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<tr>
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<td>Kensington Twin Head Cable Lock</td>
<td>45K1620</td>
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<td></td>
<td>ThinkPad T400/T410/R400 Privacy Filter</td>
<td>43R2472</td>
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<td>USB Gemplus GemPC Smart Card Reader</td>
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<td>PC Card Gemplus Smart Card Reader</td>
<td>41N3004</td>
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<td>ExpressCard Gemplus Smart Card Reader</td>
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<td>ThinkPad Battery 33++ (9-cell)</td>
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<td>ThinkPad Battery 42 (3-cell, bay)**3</td>
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<td>Used in Ultrabay Slim bay.</td>
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<td>ThinkPad External Battery Charger**4</td>
<td>40Y7625</td>
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<td></td>
<td>Requires the ThinkPad 90W AC Adapter</td>
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### More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

<table>
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<th>Accessories</th>
<th>ThinkPad 65W AC Adapter**5</th>
<th>40Y7696</th>
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<td></td>
<td>Only compatible with the integrated graphics models.</td>
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<td>ThinkPad 90W AC Adapter 40Y7659</td>
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<td>90W Ultraslim AC/DC Combo Adapter 41R4493</td>
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<td>More info at <a href="http://www.lenovo.com/support/poweradapters">www.lenovo.com/support/poweradapters</a></td>
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### Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

- **BlackBerry charge tip (L8a)** 41R4478 | ann 12/18/07
- **Pod and iPhone Charge Tip (L10a)** 41R4481 | ann 12/18/07
- **Generic Micro USB charge tip (L18)** 41R4490 | ann 01/06/09

### More information at [www.lenovopowertips.com](http://www.lenovopowertips.com)

### Carrying Cases

**Up to 14" widescreen models:**

- ThinkPad 14W Case Sleeve 57Y4294 | ann 03/16/10

**Up to 15.4" widescreen models:**

- ThinkPad 15W Case Sleeve 51J0477 | ann 08/19/08
- Lenovo Business Messenger Case 51J0475 | ann 08/19/08
- Lenovo Messenger Max 41U5253 | ann 05/01/07
- Lenovo Performance BackPack 41U5254 | ann 05/01/07
- Checkpoint Friendly Business Topload Case 51J0418 | ann 05/05/09
- ThinkPad Business Topload Case 43R2476 | ann 05/13/08
- ThinkPad Business Backpack 43R2482 | ann 05/13/08
- ThinkPad Deluxe Expander Case 43R2478 | ann 05/13/08
- ThinkPad Executive Leather Case 43R2480 | ann 05/13/08

**Up to 15.6" widescreen models:**

- Wenger Backpack for Lenovo 57Y4271 | ann 01/07/10
- Wenger Slim Case for Lenovo 57Y4272 | ann 01/07/10
- Wenger Deluxe Slim Case for Lenovo 57Y4273 | ann 01/07/10

More information at [www.lenovo.com/support/cases](http://www.lenovo.com/support/cases)

### Monitors

- Lenovo L2230x Wide 21.5" Monitor 54S3HB1 | ann 06/10/10
- ThinkVision® L1711p 17" Monitor 5047HB2 | ann 10/20/09
- ThinkVision L1900p 19" Monitor 4431HE1 | ann 11/11/08
- ThinkVision L1915p Wide 19" Monitor 24A8HB6 | ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor 2572HB6 | ann 10/20/09
- ThinkVision L2251p Wide 22" Monitor 2572HD6 | ann 10/20/09
- ThinkVision L2251x Wide 22" Monitor 2576HB6 | ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor 4014HB6 | ann 06/10/10
- ThinkVision L2440p Wide 24" Monitor 4420HB2 | ann 09/17/08

### More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

### Monitor Accessories**6

- Lenovo USB-to-DVI Monitor Adapter 45K5296 | ann 05/12/09
- ThinkVision Soundbar 40Y7616 | ann 08/23/05
- ThinkVision Soundbar 45K1263 | ann 09/16/08
- Kensington MicroSaver Cable Lock 73P2582 | ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 | ann 09/30/08
- Lenovo Easy Reach Monitor Stand 55Y9258 | ann 09/22/09
- Radial Arm 19K4464 | ann 05/05/00

**6** Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on ThinkPad accessories, please visit:

- [www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)
- [www.lenovo.com/support/notebookaccessories](http://www.lenovo.com/support/notebookaccessories)
- [www.lenovo.com/support/security](http://www.lenovo.com/support/security)
- Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

More information at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)
### ThinkPad R500 2714 (TopSeller) - withdrawn

#### Preloaded operating system:
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Ultimate 32bit
- Vista models: Vista Premium logo

#### Preloaded applications:
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- ThinkPad Software (fingerpad models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Roxio® Creator™ Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

#### Table: System Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>PCE/LCD</th>
<th>Graphic Memory</th>
<th>Intel Processor Technology</th>
<th>Bluetooth</th>
<th>Security</th>
<th>Fingerprint Rater</th>
<th>Preloaded Operating System</th>
<th>Preloaded Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2714-96U</td>
<td>T6570</td>
<td>2GB</td>
<td>520G S400</td>
<td>DVD±RW</td>
<td>1GB</td>
<td>Intel Core2 Duo processor</td>
<td>2.10 GHz</td>
<td>11 MB</td>
<td>None</td>
<td>Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business</td>
<td>Some: Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center, ThinkVantage System Update, ThinkPad Software (fingerpad models), Lenovo System Toolbox, ThinkPad Utilities (Power Manager and Presentation Director), Roxio® Creator™ Business Edition (DVD+RW), Roxio MyDVD® (DVD+RW), Corel® WinDVD® (DVD+RW)</td>
</tr>
<tr>
<td>2714-A7U</td>
<td>T6670</td>
<td>2GB</td>
<td>520G S400</td>
<td>DVD±RW</td>
<td>1GB</td>
<td>Intel Core2 Duo processor</td>
<td>2.10 GHz</td>
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</tr>
</tbody>
</table>

### See notes for important warranty information

US models announced March 17 or July 7, 2009
US models withdrawn effective December 2009

- Intel Centrino® processor technology

 Lenovo (WKK3-6) January 2010

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### ThinkPad R500 2714 (TopSeller) - XP with Win 7 License - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
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<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>SATA</th>
<th>Mini PCle</th>
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<th>Blue-tooth cells</th>
<th>Battery - type</th>
<th>Workhorse (W)</th>
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<tr>
<td>2714-AFU</td>
<td>T6670</td>
<td>2.20</td>
<td>2GB</td>
<td>15.4&quot; WXGA</td>
<td>Cam</td>
<td>GMA 500G 5400</td>
<td>DVD±RW</td>
<td>11n³⁵</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
<td>6</td>
<td>XP Pro</td>
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</tbody>
</table>

**Positioning**
- Mainstream business performance; two spindles
- **Intel® Core™ 2 Duo processor T6670 with dual-core**, Intel HD Boost, 800MHz system bus, and 2MB L2 cache

**Memory**
- 2GB std / 4GB max⁴ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Non-italics**: standard memory in one socket; one socket available;

**SATA DVD±RW**
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

**Ultrabay Enhanced**
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk,
- ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Dimensions**
- 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Integrated graphics**
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45,
- digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- Maximum external resolution: 2048x1536 @75Hz
- Intel® Mobile GPU: Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD)
- Intel® Graphics Media Accelerator 4500MHD

**Keyboard**
- 9-cell: 65-watt (GMA graphics) AC adapter
- 6-cell: 45K5972
- 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

**Chipset**
- Mobile Intel GM45 Express Chipset
- ExpressCard/54
- PC Card
- Smart Card Reader
- Multi Card Reader
- Ports

**Widescreen display**
- Camera on top of screen, 1.3-megapixel, fixed focus

**Battery - life**
- One slot (ExpressCard/34, ExpressCard/54)
- One slot (Type I, Type II), CardBus 32-bit
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor⁶ (VGA DB-15, DisplayPort), modem (RJ-11),
- ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCle Express**
- Two Mini PCie Express slots
- 11n³⁵
- 11b/g/n wireless, Mini-PCie Adapter II
- 2G Turbo
- WWAN
- UWB

**Modem**
- 56K V.92 modem
- Bluetooth™
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11),
- ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Audio support**
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**
- FingerPrint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**
- 1-year - depot repair service / service upgrades⁴ available

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**Preloaded operating system**
- **Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32**

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software
- Lenovo System Toolbox
- Adobe® Reader®
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

**Supports ThinkVantage® technologies**
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information

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US model announced October 22, 2009

US model withdrawn effective August 2010

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**This small and medium business (SMB) model is part of the US TopSeller™ Program**
**ThinkPad® R500 2717 (TopSeller) - withdrawn**

### Positioning Processor
Mainstream business performance: two spindles
- **Intel® Core™ 2 Duo processor T6570 or T6670 with dual-core**, Intel HD Boost, 800MHz system bus, and 2MB L2 cache or
  - **Intel Core 2 Duo processor P8400, P8600 or T9400 with dual-core**, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 4MB L2 cache

### Memory
- 2GB or 3GB std / 4GB max
- dual-channel capable, two 204-pin SO-DIMM sockets
- standard memory in both sockets; no sockets available
- standard memory in one socket; one socket available
- standard memory in one or two sockets (variable DIMMs)

### SATA DVD:RW
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

### UltraBay Enhancements
- Ultrabay Enhanced BiMedia II Serial ATA 2.5GB
- SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, 2nd slot, 2nd disk

### Widescreen display
- **15.4” (391mm)** WXGA (1280x800) color, anti-glare, CCFL backlight
- 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera
- Some: camera on top of screen, 1.3-megapixel, fixed focus

### Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Ultimate 32
  - Vista Premium logo

### Preloaded applications
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

### Integrated graphics
- **Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD)**, in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Touchpad
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

### Dimensions
- 6-cell 15.4” (WxDxH): 14.1” x 10.2” x 1.4–1.5”; 358.6mm x 260mm x 36–39mm

### Weight
- 6-cell: starting at 6.4 lb (2.93kg)

### Camera
- TrackPoint®: TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

### Battery - type
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Enhanced

### Battery - life
- 6-cell: up to 4.5 hr; 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

### Chipset
- **Mobile Intel GM45 Express Chipset** (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPN385 Super I/O)
- One slot (ExpressCard/34, ExpressCard/54)
- One slot (Type I, Type II), CardBus 32-bit

### Preloaded applications
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Post-warranty annual maintenance agreements
- Lenovo.com/thinkplus/warranty

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### Footnotes:
- Lenovo (WKK3-1) January 2010
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
- See footnotes for important warranty information
ThinkPad R500 2717 (TopSeller) - XP with Win 7 License - withdrawn

Positioning Processor: Mainstream business performance; two spinndles
- Intel® Core™ 2 Duo processor T6670 with dual-core, Intel HD Boost, 800MHz system bus, and 2MB L2 cache or
- Intel Core 2 Duo processor P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

Memory: 2GB or 3GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- standard memory in both sockets; no sockets available;
- Non-italics: standard memory in one socket; one socket available;
- SATA DVD±RW Ultrabay Enhancer SATA disk
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- 250GB2 (5400 rpm) or 320GB2 (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display: 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backligh, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator™ Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Desktop Support
- 24 hour x 7 day toll-free support via 800-426-7378
- ENERGY STAR®
- EPEAT® Global (G)
- ENERGY STAR® RoHS-compliant
- International Warranty Service17
- Post-warranty annual maintenance
- Lenovo Service Pack 3-year LOR24 9x5 NBD
- Lenovo Plus with 3-year LOR24 9x5 NBD
- Technical Support Lenovo System Toolbox
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
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(WKK3-7) August 2010

These small and medium business (SMB) models are part of the US TopSeller™ Program
These models have a depot repair service 3-year limited warranty
Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 32

Preloaded applications*14 (all OSes; only some listed)
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• ThinkVantage System Update
• Fingerprint Software (fingerprint models)
• Lenovo System Toolbox
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader®
• Windows Live™ Toolbar
• Microsoft® Office 2007 Trial (60-day)
• Roxio® Creator® Business Edition (combo, DVD; RW)
• Roxio MyDVD® (DVD; RW)
• Corel® WinDVD® (combo, DVD; RW)

Supports ThinkVantage™ technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Silver rating (except Celeron models)
- ENERGY STAR® 5.0-compliant (except Celeron models)
- RoHS-compliant
- International Warranty Service17

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information © Intel Centrino® 2 processor technology
US models announced August 5, September 2, or September 30, 2008
US models withdrawn effective August or October 2009, or August 2010

© Lenovo (WK3-2) August 2010

The models listed below were withdrawn effective August or October 2009, or August 2010. These models have a depot repair service 3-year limited warranty.

For ThinkPad R500 models, the warranty period for the system was extended to 4 years (LOR 9x5, NBD) for customers in the Americas as of February 2010. To extend the warranty period, customers must contact their Lenovo reseller, authorized service provider, or Lenovo."
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk</th>
<th>SATA GB</th>
<th>Mini PCIe</th>
<th>Mini PCIe Turbo</th>
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<th>Avail date</th>
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<tbody>
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<td>Cam</td>
<td>GMA 80G</td>
<td>6400</td>
<td>Combo</td>
<td>Intel T1500™️</td>
<td>None</td>
<td>Finger Blue</td>
<td>6GB</td>
<td>Bus 32</td>
<td>G P</td>
<td>Aug 08</td>
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<td>2.53</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>Cam</td>
<td>GMA 160G</td>
<td>6400</td>
<td>DVD+RW</td>
<td>Intel T1500™️</td>
<td>None</td>
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<td>6GB</td>
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<td>6400</td>
<td>DVD+RW</td>
<td>Intel T1500™️</td>
<td>None</td>
<td>Finger Blue</td>
<td>9GB</td>
<td>Bus 32</td>
<td>W P</td>
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<td>1GB</td>
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<td>GMA 80G</td>
<td>5400</td>
<td>DVD+RW</td>
<td>Intel T1500™️</td>
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<td>Finger Blue</td>
<td>6GB</td>
<td>XP Pro</td>
<td>G P</td>
<td>Sep 08</td>
<td></td>
</tr>
</tbody>
</table>

• These models are part of the Global Models Plus program with limited onsite service\(^{1}\) 3-year limited warranty

Positioning Processor: Mainstream business performance; two spindles

Intel®️ Core™️ 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400: 3MB L2 cache; T9400: 6MB L2 cache

Memory 1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italic: standard memory in both sockets; no sockets available; Non-italic: standard memory in one socket; one socket available

SATA Combo Some: DVD-ROM/CD-RW, SATA 1.5Gbps, 12.7mm Ultrabay Enh, removable (43R9148) Some: DVD burner, SATA 1.5Gbps, 12.7mm Ultrabay Enhanced, removable (43R9149) One bay for removable devices, Ultrabay Sim-compatible, 12.7mm high

SATA DVD RW Ultrabay Enhanced SATA disk Some: DVD-ROM/CD-RW, 12.7mm Ultrabay Enh, removable (43R9148) Some: DVD burner, SATA 1.5Gbps, 12.7mm Ultrabay Enhanced, removable (43R9149) One bay for removable devices, Ultrabay Sim-compatible, 12.7mm high

Widescreen display Camera 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio


Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad(s) TrackPoint®️ pointing device, "Press-to-Select," Internet Scroll Bar®️, magnifying glass

TouchNav®️ UltraNav®️, wide touch pad below keyboard, Tap Zones, scrolling regions label

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions Weight Case color Case material Battery - type Battery - life Lithium ion 6-cell - 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

Chipset Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M I/O Controller Hub (SATA 3.0Gbps, USB 2.0, PCI Express®️ 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard/54 One slot (ExpressCard/34, ExpressCard/54)

PC Card One slot (Type I, Type II), CardBus 32-bit

Smart Card Read None

Multicard Reader 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express Two Mini PCI Express slots

Intel 5100™️ 2G Turbo None

WWAN None

UWB None

Modem 56K V.92 modem

Bluetooth®️ Some: Bluetooth 2.1 wireless, LED indicator

Ethernet Gigabit ethernet, Broadcom®️ BCM5787M (MAC/PHY), PCIe x1, PXE

Intel AMT None

Audio support High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty 3-years/1-year battery, limited onsite service\(^{2}\), 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades\(^{8}\) available


Preloaded applications (all OSes, only some listed) - Rescue and Recovery - Access Connections®️ - Client Security Solution™️ - ThinkVantage Productivity Center - ThinkVantage System Update - Fingerprint Software (fingerprint models)

- McAfee VirusScan®️ Plus with SiteAdvisor™️ (30 days of virus definitions)

- Lenovo System Toolbox

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe®️ Reader

- Windows Live®️ Toolbar

- Microsoft®️ Office 2007 Trial (60-day)

- Roxio®️ Creator®️ Business Edition (DVD+RW)

- Roxio®️ MyDVD®️ (DVD+RW)

- Corel®️ WinDVD®️ (DVD+RW)

Supports ThinkVantage®️ technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT®️ Silver rating

ENERGY STAR®️ 5.0-compliant

RoHS-compliant

International Warranty Service\(^{17}\) 24 hour x 7 day toll-free support during the warranty period\(^{12}\) via 800-426-7378

ThinkPlus®️ 4-year LOR 9x5 NB

45K6038 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

\(^{1}\) Intel Centrino®️ 2 processor technology

\(^{2}\) Lenovo (WKK3-3) August 2010

US models announced on August 5 or September 2, 2008

US models withdrawn effective August 2009 or August 2010

\(^{3}\) 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400: 3MB L2 cache; T9400: 6MB L2 cache

\(^{4}\) Standard memory in both sockets; no sockets available; Non-italic: standard memory in one socket; one socket available

\(^{5}\) Dual-channel capable, two 204-pin SO-DIMM sockets; Italic: standard memory in both sockets; no sockets available; Non-italic: standard memory in one socket; one socket available

\(^{6}\) Lithium ion 6-cell - 6-cell plus Ultrabay battery: up to 6.0 hr; 9-cell: up to 7.1 hr

\(^{7}\) 2G Turbo: 64GB (5400 rpm) / 160GB (5400 rpm); Sata 1.5Gbps, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™️

\(^{8}\) Includes memory in one socket; one socket available

\(^{9}\) 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400: 3MB L2 cache; T9400: 6MB L2 cache

\(^{10}\) 3-years/1-year battery, limited onsite service\(^{2}\), 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades\(^{8}\) available
### ThinkPad R500 2716 (Education) - EasyServ - withdrawn

**Personal Systems Reference (PSREF)**

#### Preloaded operating system:
- **Some:** Genuine Windows Vista® Business 32
- **Some:** Genuine Windows Vista Ultimate 32
  - **Vista Premium logo**

#### Preloaded applications:
- (all OSes, only some listed)
  - **Rescue and Recovery™**
  - **Access Connections™**
  - **Client Security Solution™**
  - **ThinkVantage Productivity Center**
  - **ThinkVantage System Update**
  - **Fingerprint Software (fingerprint models)**
  - McAfee® VirusScan™ Plus with SiteAdvisor™ (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Windows Live™ Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio® MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter

**ThinkPad Roll Cage**
- (one-piece magnesium frame)
**EPEAT® Silver rating**
- (except Celeron models)
**ENERGY STAR® 5.0-compliant**
- (except Celeron models)
**RoHS-compliant**
- International Warranty Service
  - 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

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US models announced August 5 or September 30, 2008, or February 17 or March 24, 2009

US models withdrawn effective August 2009, February 2010, March 2010, or August 2010

### Type-models

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<th></th>
<th>Integrated</th>
<th>Disk</th>
<th>SATA</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger print</th>
<th>Blue-</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avalanc</th>
<th>Date</th>
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<tbody>
<tr>
<td>2716-ECU</td>
<td>Cel 575</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4” WXGA</td>
<td>Cam</td>
<td>GMA</td>
<td>80G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel</td>
<td>5100®</td>
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<td>5400</td>
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<td>5100®</td>
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<td>2GB</td>
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<td>5400</td>
<td>DVD+RW</td>
<td>Intel</td>
<td>5100®</td>
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<td>Finger</td>
<td>Blue</td>
</tr>
<tr>
<td>2716-5SU</td>
<td>P8600</td>
<td>2.40</td>
<td>2GB</td>
<td>15.4” WXGA</td>
<td>Cam</td>
<td>GMA</td>
<td>160G</td>
<td>7200</td>
<td>DVD+RW</td>
<td>Intel</td>
<td>5100®</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
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<tr>
<td>2716-8YU</td>
<td>Cel T1600</td>
<td>1.86</td>
<td>1GB</td>
<td>15.4” WXGA</td>
<td>Cam</td>
<td>GMA</td>
<td>160G</td>
<td>5400</td>
<td>Combo</td>
<td>Intel</td>
<td>5100®</td>
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<td>DVD+RW</td>
<td>Intel</td>
<td>5100®</td>
<td>None</td>
<td>Finger</td>
<td>Blue</td>
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</tbody>
</table>

### Positioning

**Processor**
- Mainstream business performance; two spindles
- Intel® Celeron® Processor 575 with single-core
- Intel® Celeron® Processor T1600 with dual-core

**Memory**
- 1GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- **Italics:** standard memory in both sockets; no sockets available
- **Non-italics:** standard memory in one socket; one socket available

**SATA Combo**
- DVD-ROM/CD-RW, SATA 1.5Gbps, 12.7mm UltraBay Enh, removable (43R9148)
- DVD burner, SATA 1.5Gbps, 12.7mm UltraBay Enhanced, removable (43R9149)

**Audio**
- Intel® 89K6024
- 1.1-compliant
- Digital audio output

**Dimensions**
- 6-cell: 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight

**Weight**
- 6-cell: starting at 6.4 lb (2.93kg)
- Case: 3.6 lbs

**Chipset**
- Mobile Intel GM45 Express Chipset
- ICH9M I/O Hub
- SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, 24 hour x 7 day®

**ExpressCard slot**
- One ExpressCard/34 or ExpressCard/54

**Multicard Reader**
- 7-in-1 reader
- Supports all cards

**Ports**
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11)
- Ethernet (RJ-45)
- IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Preloaded applications**
- **Preloaded operating system**
  - **Some:** Genuine Windows Vista® Business 32
  - **Some:** Genuine Windows Vista Ultimate 32
  - **Vista Premium logo**

**Preloaded applications**
- (all OSes, only some listed)
  - **Rescue and Recovery™**
  - **Access Connections™**
  - **Client Security Solution™**
  - **ThinkVantage Productivity Center**
  - **ThinkVantage System Update**
  - **Fingerprint Software (fingerprint models)**
  - McAfee® VirusScan™ Plus with SiteAdvisor™ (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Windows Live™ Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio® MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

**Battery**
- up to 4.5 hr; 6-cell: 9-cell: up to 6.0 hr; up to 7.1 hr

**Display**
- 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- 250GB (5400 rpm), or 250GB (5400 rpm)
- Camera on top of screen, 1.3-megapixel, fixed focus
- Non-italics:
  - standard memory in both sockets; no sockets available
  - dual-channel capable, two 204-pin SO-DIMM sockets;

**Standards**
- EPEAT® Silver rating (except Celeron models)
- ENERGY STAR® 5.0-compliant (except Celeron models)
- RoHS-compliant

**Warranty**
- 3-years 1-year battery service / service upgrades available

See footnotes for important warranty information

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US models announced August 5 or September 30, 2008, or February 17 or March 24, 2009

US models withdrawn effective August 2009, February 2010, March 2010, or August 2010

(WK3-2) August 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA GB</th>
<th>Optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe Turbo</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Preload Whorse (W)</th>
<th>Gbps (G)</th>
<th>MPP</th>
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<td>7200</td>
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<td>6</td>
<td>Ult 32</td>
<td>No</td>
<td>Feb 09</td>
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</table>

**This model has a limited onsite service** 3-year limited warranty

- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

- **Preloaded operating system**
  - Genuine Windows® Vista®
  - Ultimate 32
  - Vista Premium logo

- **Preloaded applications**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Windows Live™ Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio® MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

- **Limited warranty** 3-years/1-year battery, **limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

- **45K6038**
- **Post-warranty annual maintenance agreement**

- Lenovo.com/thinkplus/warranty

See footnotes for important warranty information

- Intel Centrino® 2 processor technology

Lenovo System Reference (PSREF)

Other accessories at lenovo.com/accessories
### ThinkPad® R500 Accessories - withdrawn

| Memory | 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 anno 06/23/09  
|        | 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 anno 06/23/09  
|        | 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 anno 06/23/09  
|        | 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 anno 06/23/09  

#### Ultrabay Slim 9.5mm

- Serial ATA Hard Drive Bay Adapter III 43N3412 anno 06/23/09  
- Serial ATA Hard Drive Bay Adapter with Slide-out Tray 43N3413 anno 06/23/09  
- Slim 9.5mm device in 12.7mm bay shows gap above the device.

#### Storage and removable storage

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
<th>Description</th>
<th>Model</th>
<th>anno</th>
</tr>
</thead>
</table>
| 160GB Disk SATA 3.0Gb/s (7200 rpm) | 160GB | 41N5737 anno 10/16/07  
| 250GB Disk SATA 3.0Gb/s (5400 rpm) | 250GB | 43R8152 anno 01/15/08  
| 250GB Disk FDE SATA 3.0Gb/s (7200 rpm) | 250GB | 43N3410 anno 01/20/09  
| 320GB Disk SATA 3.0Gb/s (5400 rpm) | 320GB | 43N3403 anno 08/05/08  
| 320GB Disk SATA 3.0Gb/s (7200 rpm) | 320GB | 43N3411 anno 01/20/09  
| 500GB Disk SATA 3.0Gb/s (7200 rpm) | 500GB | 43N3423 anno 01/07/10  
| Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay. |

#### Multimedia

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
<th>anno</th>
</tr>
</thead>
</table>
| USB 2.0 Portable 320GB Hard Disk | 45K1689 anno 03/17/09  
| USB 2.0 Portable 500GB Hard Disk | 45K1690 anno 05/26/09  
| USB 2.0 Portable Secure 160GB Hard Disk | 43R2018 anno 11/18/08  
| USB 2.0 Portable Secure 320GB Hard Disk | 43R2019 anno 11/18/08  
| eSATA/USB 2.0 Secure 500GB Hard Drive | 57Y4400 anno 01/07/10  
| USB 2.0 Portable DVD Burner | 43N3264 anno 01/05/10  

#### ThinkPad Expansion

- Lenovo Essential Notebook Stand 45J9292 anno 05/12/09  
- USB Port Replicator with Digital Video 45K1610 anno 07/28/09  

#### Keyboard

- TrackPoint Cap Collection 73P2698 anno 12/16/03  
- USB Numeric Keypad 33L3225 anno 05/01/00  
- Preferred Pro USB Keyboard 73P5220 anno 06/21/05  
- Enhanced Performance USB Keyboard 73P5280 anno 03/23/04  
- Ultralight Wireless Keyboard and Mouse 57Y4700 anno 09/15/09  
- Ultralight Wireless Keyboard and Mouse with 2.4GHz technology using a micro-size USB receiver. 41R4905 anno 01/05/07  

#### Mouse

- Lenovo Optical Mouse (USB) 06P4069 anno 05/21/03  
- Lenovo Laser Mouse (USB) 41U3074 anno 01/23/07  
- ThinkPad USB Laser Mouse 57Y4635 anno 12/15/09  
- Lenovo ScrollPoint Mouse (USB, Optical) 31P7405 anno 08/27/02  
- ThinkPad Travel Mouse (USB, Optical) 31P7410 anno 06/04/02  
- ThinkPad Bluetooth Laser Mouse 41U5008 anno 01/22/08  

#### Multimedia

- ThinkPad In-Ear Headphones 57Y4488 anno 01/07/10  

#### Security

- Kensington® MicroSaver® Cable Lock 73P2582 anno 12/29/03  
- Kensington Twin Head Cable Lock 45K1620 anno 09/30/06  
- Lenovo Security Cable Lock 57Y4303 anno 08/24/10  
- T500/R500/W500 Series 15W Privacy Filter 43R2474 anno 08/05/08  
- USB Gemplus GemPC Smart Card Reader 41N3040 anno 02/21/06  

#### Batteries

- ThinkPad Battery 41+ (6-cell) 40Y6799 anno 01/05/06  
- ThinkPad Battery 41++ (9-cell) 40Y6797 anno 09/20/05  
- ThinkPad Battery 42 (3-cell, bay) 57Y4596 anno 08/25/09  
- Used in Ultrabay Slim bay.  
- ThinkPad External Battery Charger 40Y7625 anno 09/20/05  
- Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.  


#### Carrying Cases

- ThinkPad 15W Case Sleeve 51J0477 anno 08/18/09  
- Lenovo Business Messenger Case 51J0475 anno 08/18/09  
- Lenovo Messenger Max 41U5253 anno 05/01/07  
- ThinkPad Business BackupPack 41U5254 anno 05/01/07  
- ThinkPad Business Topload Case 43R2476 anno 05/13/08  
- ThinkPad Business Backpack 43R2482 anno 05/13/08  
- ThinkPad Deluxe Expander Case 43R2478 anno 05/13/08  
- ThinkPad Executive Leather Case 43R2480 anno 05/13/08  


#### Monitors

- ThinkPad 2230x Wide 21.5" Monitor 5453HB1 anno 06/10/10  
- ThinkVision L171p 17" Monitor 5047HB2 anno 10/20/09  
- ThinkVision L1951p Wide 19" Monitor 2448HB6 anno 10/20/09  
- ThinkVision L2250p Wide 22" Monitor 2572HB6 anno 10/20/09  
- ThinkVision L2251p Wide 22" Monitor 2572HD6 anno 10/20/09  
- ThinkVision L2321x Wide 23" Monitor 4014HB6 anno 06/10/10  
- ThinkVision L2440p Wide 24" Monitor 4420HB2 anno 09/17/08  

#### Monitor Accessories

- Lenovo USB-to-DVI Monitor Adapter 45K5296 anno 05/12/09  
- Lenovo DisplayPort to VGA Monitor Cable 57Y4393 anno 08/04/08  
- DisplayPort to Single-link DVI-D Cable 45J7915 anno 08/05/08  
- ThinkVision USB Soundbar 40Y7616 anno 09/23/05  
- ThinkVision Soundbar 45K1263 anno 09/16/08  
- Kensington MicroSaver Cable Lock 73P2582 anno 12/29/03  
- Kensington Twin Head Cable Lock 45K1620 anno 09/30/06  
- Lenovo Security Cable Lock 57Y4303 anno 08/24/10  
- Lenovo Easy Reach Monitor Stand 55Y9258 anno 01/05/06  
- Compatible on selected Lenovo and ThinkVision monitors.  


For more information on ThinkPad accessories, please visit: www.lenovo.com/support/accessories www.lenovo.com/support/notebookaccessories www.lenovo.com/support/security  

Other accessories at www.lenovo.com/accessories  

Accessories Guide pdf at www.lenovo.com/accessoriesguide  

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### ThinkPad L412 4403 (TopSeller) - XP with Win 7 License - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>4403-32U</td>
<td>i3-350M</td>
<td>2.26</td>
<td>2GB</td>
<td>14.0&quot; HD</td>
<td>2.0M</td>
<td>160G</td>
<td>7200</td>
<td>DVD±RW</td>
<td>11b/g/n</td>
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<td>May 10</td>
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<td>4403-68U</td>
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<td>2GB</td>
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<td>7200</td>
<td>DVD±RW</td>
<td>11b/g/n</td>
<td>None</td>
<td>Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>Jul 10</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program

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**Positioning Processor**

Mainstream business performance: two spindles

Intel® Core™ i3 processor i3-350M or i3-370M with dual-core.

DMI (Direct Media Interface); integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

**Memory**

- 2GB std / 8GB max
- PC3-10600 1.333GHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - Non-italics: standard memory in one socket; one socket available
  - PC3-10600 1.333GHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW SATA disk**

- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
  - 160GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

**Widescreen display**

- 14.0" (355mm) HD (1366x768) color, anti-glace, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Integrated graphics**

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
  - Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
  - 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touch pad**

- UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch

**Dimensions**

- 14.0"W (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm

**Battery**

- UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch

**Chipset**

- Mobile Intel HM55 Express Chipset

**Multicard Reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ports (VGA DB-15, DisplayPort, ethernet (RJ-45))

**PCle Mini Card WWAN upg**

- Two PCI Express Mini Card slots

**Modern**

- None

**Bluetooth**

- Bluetooth 2.1 wireless, LED indicator

**Intel AMT**

- None

**Audio support**

- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Preloaded operating system**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**

- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Power Manager
  - Presentation Director
  - Corel WinDVD™ (DVD±RW)
  - Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

**Battery**

- Lithium Ion 6-cell

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

US models announced May 11 or July 6, 2010

US models withdrawn effective October 2010

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(DM3D-6) October 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
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<th>Avail date</th>
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<tr>
<td>4403-33U</td>
<td>i3-350M</td>
<td>2.26</td>
<td>2GB</td>
<td>14.0” HD</td>
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<td>160G 7200</td>
<td>Intel 6200™</td>
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<td>i5-480M</td>
<td>2.66</td>
<td>2GB</td>
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<td>Blue</td>
<td>Pro 64</td>
<td>Jan 11</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Mainstream business performance: two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-480M or i5-520M with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
</tr>
</tbody>
</table>

- Preloaded operating system: Genuine Windows 7 Professional 64

- Supports ThinkVantage® technologies

- 65-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service®

- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

US models announced May 11, July 6, 2010, or January 11, 2011

US models withdrawn effective June 2011 or January 2012
ThinkPad® L412 4404 (TopSeller) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card WWAN</th>
<th>PCIe Mini Card WWAN</th>
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<td>2.0M</td>
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<td>Intel 6200</td>
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<td>Blue</td>
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<td>May</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor: Intel® Core™ i3 processor i3-350M or i3-370M with dual-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz).
Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz).
Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
- 2GB std / 8GB max/
- PC3-10600 1333MHz DDR3.
- Non-italics: standard memory in one socket; one socket available
- Dual-channel capable, two 204-pin SO-DIMM sockets;
- 802.11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2

SATA DVD:RW
- DVD burner, SATA 1.5GB/s, 12.7mm high, fixed, not removable, tray-in
- 160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0GB/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System

Widescreen display
- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight,
- 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Integrated graphics
- Intel HD Graphics in processor,
- external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- supports dual independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
- 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass

Touchpad
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch gestures

ThinkLight™
- None

Dimensions
- 14.0"W x 9.2"D x 0.8"H; 3.6Lb (1.63kg)

Weight
- 4-cell: from 4.92 lb (2.23kg);
- 6-cell: from 5.11 lb (2.32kg);
- 9-cell: from 5.45 lb (2.47kg)

Case color
- Black

Case material
- Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type
- Lithium Ion 6-cell
- up to 2.8 hr; 6-cell: up to 8.1 hr; 9-cell: up to 5.0 hr

Battery - life
- up to 2.8 hr; 6-cell: up to 8.1 hr; 9-cell: up to 5.0 hr

Chipset
- Mobile Intel HM55 Express Chipset

ExpressCard34
- One slot (ExpressCard34)

Multicard Reader Ports
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, one USB 2.0 (powered), one USB 2.0/eSATA combo port, one USB 2.0 (powered), one USB 2.0/eSATA combo port, one USB 2.0 (powered), one USB 2.0/eSATA combo port, one USB 2.0 (powered), one USB 2.0/eSATA combo port, one USB 2.0 (powered), one USB 2.0/eSATA combo port

PCIe Mini Card
- Two PCI Express Mini Card slots
- 11b/g/n
- Some: 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1
- No: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2

WWAN upg
- Wireless WAN upgradeable

Modem
- None

Bluetooth
- 2.1 wireless, LED indicator

Ethernet
- Realtek® RTL8111DL Gigabit Network Connection

Audio support
- Realtek® ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Security chip
- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
- UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
- 3-years/1-y battery - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced May 11 or July 6, 2010
US models withdrawn effective June 2011 or January 2012

Preloaded operating system
- Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel WinDVD® (DVD+RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

Supports ThinkVantage® technologies
- 65-watt AC adapter
- EPET® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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(DM03-8) January 2012
ThinkPad® L412 4403 (Discrete) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN upg</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Preload</th>
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<td>Intel 6200®</td>
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</table>

• This small and medium business (SMB) model is part of the US TopSeller™ Program
• This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Mainstream business performance: two spindles

Processor
Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB std / 8GB max¹ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

SATA DVD±RW
SATA disk
DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB(7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

Widescreen display
14.0" (355mm) HD (1366x768) color, anti-glares, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
ATI® Mobility Radeon™ HD 5145 graphics, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, Internet Scroll Bar, magnifying glass
Touch pad
ThinkLight™

Dimensions³
14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm

Weight³
4-cell: from 5.09 lb (2.31kg); 6-cell: from 5.28 lb (2.40kg); 9-cell: from 5.62 lb (2.55kg)

Battery - type
Lithium Ion 9-cell
Battery - life³
4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr

Chipset
Mobile Intel HM55 Express Chipset

ExpressCard/34
One slot (ExpressCard/34)

Multicard Reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor port (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card
Two PCIe Express Mini Card slots

Intel 6200® WWAN upg
11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WWAN upgradable

Modem
None

Bluetooth®
Bluetooh 2.1 wireless, LED indicator

Ethernet
Realtek® RTL8111DL Gigabit Network Connection

Intel AMT
None

Audio support
High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
None

Limited warranty² 1-year - depot repair service / service upgrades² available

Preloaded operating system²⁰
- Genuine Windows® 7 Professional 64

Preloaded applications¹⁴ (only some listed)
• Rescue and Recovery™
• Access Connections™
• Password Manager
• ThinkVantage Power Manager
• ThinkVantage Toolbox
• Microsoft Office 2010 preloaded; purchase product key to activate
• Corel® WinDVD® (DVD:RW)
• Corel Burn.Now™ Lenovo Edition (DVD:RW)
• Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Supports ThinkVantage® technologies
90-watt AC adapter
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day²² toll-free support during the warranty period¹² via 800-426-7375

Post-warranty support

ThinkPlus™ 1-year LOR²¹ 9x5 NBD 45K9568
ThinkPlus 2-year LOR 9x5 NBD 45K9569
ThinkPlus 3-year LOR 9x5 NBD 45K9570
ThinkPlus 4-year LOR 9x5 NBD 45K9571
ThinkPlus 5-year LOR 9x5 NBD 45K9572
ThinkPlus 2-year P&L P/U Depot 45K9573
ThinkPlus 3-year P&L P/U Depot 45K9574
ThinkPlus 4-year P&L P/U Depot 45K9575
ThinkPlus 5-year P&L P/U Depot 45K9576

See footnotes for important warranty information
US model announced June 22, 2010
US model withdrawn effective June 2011
**ThinkPad® L412 4404 (Discrete) - TopSeller (Windows 7) - withdrawn**

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base clock (GHz)</th>
<th>Max clock (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Carrier</th>
<th>Finger print reader</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor Mainstream business performance: two spindles
Intel® Core™ i3 processor i3-350M or i3-370M with dual-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology: 3MB cache or Intel® Core i5 processor i5-520M with dual-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology: 3MB cache

Memory
2GB std / 8GB max*/ PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
Non-Italic: standard memory in one socket; one socket available

SATA DVD: RW
SATA disk
DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

Widescreen display
14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight
220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Discrete graphics
ATI® Mobility Radeon™ HD 5145 graphics. 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent displays.

Keyboard
6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint®
TrackPoint® pointing device, Internet Scroll Bar®3, magnifying glass

Touch pad
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch capable

Dimensions
14.0W" (355.6mm) x 9.2" (233.7mm) x 1.26" (32mm)

Weight
4-cell: from 5.09 lb (2.31kg); 9-cell: from 5.62 lb (2.55kg)

Battery - type
Lithium Ion 9-cell

Battery - life
4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr

Chipset
Mobile Intel HM55 Express Chipset

Multicard Reader
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

PCle Mini Card
Two PCI Express Mini Card slots
Intel 6200® WWAN upg
Gobi® 2000

Carrier
Some: AT&T®, contract required with service provider

Modem
None

Bluetooth®
2.1 wireless, LED indicator

Ethernet
Realtek® RTL8111DL Gigabit Network Connection

Intel® AMT
None

Audio support
High Definition (HD) Audio, Realtek ALC2690 codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-yr battery - depot repair service / service upgrades available

Preloaded operating system
- Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype® for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVDr:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVDr:RW)

Supports ThinkVantage® technologies

- 90-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service (90 days of warranty + 24 hour x 7 day toll-free support for the warranty period)

ThinkPlus® 3-year LOR® 6x5 NBD

ThinkPlus® 4-year LOR® 9x5 NBD

ThinkPlus® 5-year LOR® 9x5 NBD

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced June 22, 2010
US models withdrawn effective June 2011

Lenovo (D363-10) June 2011
ThinkPad® L412 0530 (XP with Win 7 License) - withdrawn

| Type-model | Processor | GHz | Memory | Wide-screen display | Camera | Disk SATA GB^2^ rpm | SATA optical | PCIe Mini Card 802.11 | PCIe Mini Card WWAN | Finger print reader | Blue tooth cells | Battery cells | Preload | Avail | Preload operating system^2^ | Preload applications^1^ (only some listed) |
|------------|-----------|-----|--------|--------------------|--------|-------------------|--------------|--------------------|-----------------|-------------------|----------------|---------------|-------------|---------|-------|-------------------------------------------------|-------------------------------------------------|
| 0530-52U  | i3-330M   | 2.13| 2GB    | 14.0" HD          | 2.0M   | 160G 7200         | DVD±RW       | 11b/g/n            | WWAN upg        | None              | None           | 6             | XP Pro      | Apr 10  |
| 0530-62U  | i3-330M   | 2.13| 2GB    | 14.0" HD          | 2.0M   | 160G 7200         | DVD±RW       | 11b/g/n            | WWAN upg        | None              | None           | 6             | XP Pro      | Apr 10  |

Positioning

Mainstream business performance: two spindles

Processor

Intel® Core™ i3 processor i3-330M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

Memory

2GB std / 8GB max^7^ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

SATA DVD±RW

DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

SATA disk

160GB^7^ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System™

Widescreen display

14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera

Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard

6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint^®^ UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch gestures

Touchpad

None

ThinkLight™

None

Dimensions^6^

14.0W^6^ (WxDxH): 13.5" x 9.2" x 1.26 to 1.42"; 344mm x 233mm x 32 to 36mm

Weight^6^

4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)

Case color

Black

Case material

Acrylonitrile-Butadiene-Styrene (ABS) plastic

Battery - type

Lithium Ion 6-cell

Battery - life^10^ 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

Chipset

Mobile Intel HM55 Express Chipset

ExpressCard/34

One slot (ExpressCard/34)

Multicard Reader

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor^11^ (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCIe Mini Card

Two PCI Express Mini Card slots 11b/g/n wireless^3^, ThinkPad 11b/g/n, PCIe Half Mini Card

Wireless WAN upgradable

Modem

None

Bluetooth™

Some: Bluetooth 2.1 wireless, LED indicator

Ethernet

Realetek® RTL8111DL Gigabit Network Connection

Intel AMT

None

Audio support

High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

None

Limited warranty^13^ 1-year - depot repair service / service upgrades^22^ available

See footnotes for important warranty information

US models announced April 20, 2010

US models withdrawn effective July 31, 2010

Lenovo (DMD3-2) August 2010
ThinkPad® L412 0530 (Windows 7) - withdrawn

### Type-model, Processor

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<th>Processor</th>
<th>Base Turbo (GHz)</th>
<th>Max Turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>Mini Card PCIe</th>
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<th>Carrier</th>
<th>Finger print reader</th>
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<tbody>
<tr>
<td>0530-63U</td>
<td>i5-520M</td>
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<td>2GB</td>
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<td>Intel 6200</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>Pro 64</td>
<td>Jul 10</td>
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</table>

**These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

**Positioning Processor**
- Mainstream business performance: two spindles
- Intel® Core™ i3 processor i3-370M with dual-core.
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or
- Intel Core i5 processor i5-520M with dual-core.
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
- 2GB std / 8GB max³ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italsics: standard memory in one socket; one socket available

**SATA DVD:RW SATA disk**
- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- 160GB⁴ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System®

**Widescreen display Camera**
- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad ThinkVantage™**
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- None

**Dimensions Weight**
- 14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
- 4-cell: from 9.12 lb (4.15kg); 6-cell: from 11.45 lb (5.2kg); 9-cell: from 13.05 lb (5.9kg)

**Chipset ExpressCard/34 Multicard Reader Ports**
- Mobile Intel HM55 Express Chipset
- One slot (ExpressCard/34)
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**PCle Mini Card WWAN upg Gobi™ 2000**
- Two PCI Express Mini Card slots
- Intel Centrino® Advanced-N 6200, 2x2
- Some: Wireless LAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PCl e Mini Card, EV-DO Rev. A, GPRS/WDMA/HSPA, GPS, contract required with service provider
- Some: AT&T®, contract required with service provider

**Power**
- None
- Bluetooth⁹
- Some: Bluetooth 2.1 wireless, LED indicator
- Ethernet
- Realtek® RTL8111DL Gigabit Network Connection
- None
- Audio support
- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack
- Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader
- None

**Preloaded applications**
- Supports ThinkVantage® technologies
- 65-watt AC adapter
- ENERGY STAR® 5.0-compliant
- RoHS-compliant International Warranty Service™ 24 hour x 7 day toll-free support during the warranty period² during the warranty period³ via 800-426-7378

See footnotes for important warranty information

US models announced April 20 or July 6, 2010
US models withdrawn effective June 2011 or January 2012
**ThinkPad L412 0553 (XP with Win 7 License) - withdrawn**

### Key Features

- **Type-model:** 0553-6SU
- **Processor:** i3-330M with dual-core
- **Memory:** 2GB std / 8GB max
- **Battery - life:** 10h
- **Display:** 14.0" Widescreen HD (1366x768)
- **Audio:** Intel HD Audio
- **Camera:** Camera on top of screen, 2.0-megapixel, fixed focus
- **Weight:** from 4.92 lb (2.23kg)
- **Dimensions:** 13.5" x 9.2" x 0.86–1.42"; 344mm x 233mm x 21–36mm
- **SATA DVD:** 802.11b/g/n wireless

### Preloaded Operating System

- Windows XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded Applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Power Manager
- Presentation Director
- ThinkVantage Productivity Center
- ThinkVantage System Update
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)

### Additional Features

- Supports ThinkVantage® technologies
- ENERGY STAR®
- EPEAT® Gold rating
- 65-watt AC adapter
- RoHS-compliant
- 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

### Preload Notes

- Lenovo Edition (DVD-ROM)
- Corel DVD MovieFactory® Lenovo Edition
- Adobe Reader®
- Microsoft® Office Trial (60-day)
- Lenovo Edition (DVD-ROM)

### Limited Warranty

- 3-years/1-yr battery - depot repair service / service upgrades available

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See footnotes for important warranty information.

US model announced April 20, 2010

US model withdrawn effective July 31, 2010

© Lenovo (D3D3-4) August 2010
### ThinkPad L412 0553 (Windows 7) - withdrawn

#### Personal Systems Reference (PSREF)

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base (GHz)</th>
<th>Max turbo (GHz) Memory</th>
<th>Wide-screen display</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Blue tooth</th>
<th>Workhorse (W)</th>
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<td>Intel 6200®</td>
<td>Gobi 2000</td>
<td>Finger</td>
<td>Blue</td>
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</tbody>
</table>

#### Positioning

- **Processor**: Mainstream business performance; two spindles. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost. Hyper-Threading technology; 3MB cache

#### Memory

- **2GB, 3GB, or 4GB std / 8GB max / PC3-10600 1333MHz DDR3**, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **Italics**: standard memory in both sockets; no sockets available; **Non-italics**: standard memory in one socket; one socket available

#### Widescreen display

- **14.0” (355mm) HD (1366x768) color, anti-glare, LED backlight.** 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

#### Integrated graphics

- **Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; **Maximum external resolution**: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

#### Keyboard

- **6-row, ThinkVantage button, spill-resistant, multimedia Fn keys**

#### TrackPoint

- **TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass**

#### Touch pad

- **ThinkPad® UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch gestures, some**

#### Dimensions

- **14.0”W (WxDxH): 13.5” x 9.2” x 1.26~1.42”; 344mm x 233mm x 32~36mm**

#### Weight

- **4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (3.23kg); 9-cell: from 5.45 lb (2.47kg)**

#### Battery

- **Lithium Ion 6-cell**

#### Chipset

- **Mobile Intel HM55 Express Chipset**

#### ExpressCard/34

- **Some: Genuine Windows® 7 Professional 32**
- **Some: Genuine Windows 7 Professional 64**

#### Preloaded applications

- **Some: Education software**
- **Some: Adobe Digital School Collection**
- **Some: Learning Creative Suite 4 (DVD)**
- **Some: Photoshop Elements 7 (DVD)**
- **Some: Acerbis 9 Professional (DVD)**
- **Some: Configure for CS4 (and DVD)**
- **Some: Rescue and Recovery™**
- **Some: Access Connections**
- **Some: Corel WordPerfect (DVD:RW)**
- **Some: Corel WordPerfect® Lenovo Edition (DVD:RW)**
- **Some: Corel MovieFactory® Lenovo Edition (DVD:RW)**

#### Supports ThinkVantage® technologies

- **65-watt AC adapter**
- **ENERGY STAR® 5.0-compliant RoHS-compliant**
- **International Warranty Service**
- **24 hour x 7 days toll-free support during the warranty period via 800-426-7378**

#### Post-warranty annual maintenance agreements

- **Post-warranty annual maintenance agreements**

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See footnotes for important warranty information

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US models announced April 6, April 29, or July 6, 2010

US models withdrawn effective June, August, or October, 2011, or January 2012

(DMD3-1) January 2012
**ThinkPad L412 0553 (Discrete) - Windows 7 - withdrawn**

<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>Base frequency (GHz)</th>
<th>Turbo frequency (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>PCIe</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery</th>
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<td>Blue</td>
<td>9</td>
<td>Pro 64</td>
<td>W G</td>
<td>Jun 10</td>
</tr>
</tbody>
</table>

*These models have a depot repair service 3-year limited warranty*

*These systems are Microsoft Office 2010 Product Key Ready (O10PKR)*

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| Positioning Processor | Mainstream business performance: two spindles
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Core™ i3 processor i3-350M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology: 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology: 3MB cache</td>
<td></td>
</tr>
</tbody>
</table>

| Memory | 2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets, Non-italics: standard memory in one socket: one socket available |

<table>
<thead>
<tr>
<th>SATA DVD:RW</th>
<th>DVD burner, SATA 1.5GB/s, 12.7mm high, fixed, not removable, tray-in</th>
</tr>
</thead>
<tbody>
<tr>
<td>SATA disk</td>
<td>160GB (7200rpm) or 320GB (5400 or 7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, Active Protection System™</td>
</tr>
</tbody>
</table>

| Widescreen display | 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio |

| Camera | Some: camera on top of screen, 2.0-megapixel, fixed focus |

| Discrete graphics | ATI™ Mobility Radeon™ HD 5145 graphics, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display, Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915) |

| Keyboard | 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys |

| TrackPoint® Touch pad | TrackPoint® pointing device, Internet Scroll Bar™, magnifying glass |

| ThinkVantage™ Touch | UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None |

| Dimensions³ | 14.0W² (Wx Dx H): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm |
| Weight³ | 4-cell: from 5.09 lb (2.31kg); 6-cell: from 5.28 lb (2.40kg); 9-cell: from 5.62 lb (2.55kg) |

| Case color | Black |

| Battery - type | Acrylonitrile-Butadiene-Styrene (ABS) plastic |

<table>
<thead>
<tr>
<th>Battery - life¹⁰</th>
<th>Lithium Ion 6-cell or 9-cell</th>
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<tr>
<td>4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr</td>
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<table>
<thead>
<tr>
<th>Chipset</th>
<th>Mobile Intel HM55 Express Chipset</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExpressCard/34</td>
<td>One slot (ExpressCard/34)</td>
</tr>
</tbody>
</table>

| Multicard Reader Ports | 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) |

| Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor¹⁰ (VGA DB-15, DisplayPort), ethernet (RJ-45) |

<table>
<thead>
<tr>
<th>PCE Mini Card</th>
<th>Two PCI Express Mini Card slots</th>
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<tbody>
<tr>
<td>11b/g/n</td>
<td>Some: 11b/g/n wireless, ThinkPad 11b/g/n, PCIle Half Mini Card</td>
</tr>
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</table>


| Security Chip | Trusted Platform Module, TCG 1.2-compliant |

| Security chip | Power-on password, hard disk password, supervisor password, security keyhole |

| Fingerprint reader | Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip |

**Preloaded operating system²⁰**
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications¹⁴ (only some listed)**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype® for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

Supports ThinkVantage technologies

- 90-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant

International Warranty Service¹⁷
24 hour 7 x 7 toll-free support during the warranty period¹² via 800-426-7378

**Lenovo Edition (DVD+RW)**

See footnotes for important warranty information

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US models announced June 22, 2010
US models withdrawn effective September 2010 or June 2011
**ThinkPad® L412 0585 (Onsite) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Max turbo (GHz)</th>
<th>Memory</th>
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<th>Camera</th>
<th>Disk SATA GB/ rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Workhorse (W) GMP (P)</th>
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<td>2.0M</td>
<td>160G 7200</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>Blue</td>
<td>Pro 32</td>
<td>W G P</td>
<td>Apr 10</td>
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<tr>
<td>0585-44U  i5-540M</td>
<td>2.53</td>
<td>3.06</td>
<td>3GB</td>
<td>14.0&quot; HD</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Blue</td>
<td>Pro 32</td>
<td>W G P</td>
<td>Apr 10</td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service at 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

**Processor**
- Mainstream business performance: two spindles
- Intel® Core™ i5 processor i5-520M or i5-540M with dual-core
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
- 2GB or 3GB std / 8GB max*/ PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italics:* standard memory in both sockets; no sockets available; 
- Non-Italics: standard memory in one socket; one socket available

**SATA DVD±RW SATA disk**
- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- 160GB® (7200 rpm) or 320GB® (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

**Widescreen display**
- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Camera: some camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution:* 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, Internet Scroll Bar® magnifying glass

**Touch pad**
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

**Dimensions**
- 14.0W" (Wx Dx H): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
- 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)
- Black color
- Acrylonitrile-Butadiene-Styrene (ABS) plastic
- Battery - type: Lithium Ion 6-cell
- Battery - life: 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr

**Chipset**
- Mobile Intel HM55 Express Chipset
- Mobile Intel HM55 Express Chipset
- Mobile Intel HM55 Express Chipset
- Mobile Intel HM55 Express Chipset
- Mobile Intel HM55 Express Chipset
- Mobile Intel HM55 Express Chipset

**Preloaded operating system**
- Genuine Windows® 7 Professional 32

**Preloaded applications**
- (only some listed)
  - Rescue and Recovery®
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - ThinkVantage Toolbox
  - Norton™ Internet Security 2011 (30 days of virus definitions)
  - Adobe® Reader®
  - Adobe Flash® Player
  - Skype™ for Windows
  - Windows Live™ Toolbar
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Microsoft Research AutoCollage Touch
  - Corel® WinDVD® (DVD±RW)
  - Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

**Supports ThinkVantage® technologies**
- 65-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service (24 hour 7 day toll-free support during the warranty period via 800-426-7378)

**See footnotes for important warranty information**

© Lenovo (DMD3-5) January 2012

US models announced April 20, 2010

US models withdrawn effective October 2011 or January 2012

See footnotes for important warranty information

lenovo.com/thinkplus/warranty

45K6038

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty
**ThinkPad L412 0585 (Discrete) - Onsite (Windows 7) - withdrawn**

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<th>Turbo MHz</th>
<th>Memory</th>
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<th>Disk</th>
<th>PCIe Mini Card</th>
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<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>0585-6XU</td>
<td>Intel® Core™ i5-520M with dual-core.</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
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<td>11b/g/n</td>
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<td>Pro 64</td>
<td>Windows 7</td>
<td>Jun 10</td>
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<td>2GB</td>
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<td>2.0M</td>
<td>1600 GB 7200</td>
<td>Intel 6200™</td>
<td>WWAN upg</td>
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<td>Pro 64</td>
<td>Windows 7</td>
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<td>1600 GB 7200</td>
<td>Intel 6200™</td>
<td>WWAN upg</td>
<td>Blue</td>
<td>Pro 64</td>
<td>Windows 7</td>
<td>Jun 10</td>
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<td>1600 GB 7200</td>
<td>Intel 6200™</td>
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<td>Pro 64</td>
<td>Windows 7</td>
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<td>WWAN upg</td>
<td>Blue</td>
<td>Pro 64</td>
<td>Windows 7</td>
<td>Jun 10</td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service. 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

### Positioning
- Processor: **Mainstream business performance: two spindles**
  - **Intel® Core™ i3 processor i3-350M with dual-core.**
  - **Intel® Core™ i5 processor i5-520M with dual-core.**
  - **Intel® Core™ i5 processor i5-540M with dual-core.**

### Memory
- 2GB std / 8GB max
- **PC3-10600 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;**
- Non-italics: standard memory in one socket; one socket available

### SATA DVD and RW
- No unlabeled SATA drive, SATA 1.5GB/s
- High, fixed, removable, tray-in
- **160GB (7200 rpm) or 320GB (5400 or 7200 rpm)** / SATA 3.0GB/s, 2.5" wide, 9.5mm high, removable, upgradeable, Active Protection System

### Widescreen display
- **14.0" (355mm) HD (1366x768) color, anti-glace, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio**

### Keyboard
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint
- 6-touchpad pointing device, Internet Scroll Bar, magnifying glass

### Touchpad
- **UltraNav**, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

### Dimensions
- **14.0W (WxDxH): 13.5" x 9.2" x 1.26–1.42"** / 344mm x 233mm x 32–36mm
- **Weight**: 2.93 lb (1.33kg)

### Case material
- **Acrylonitrile-Butadiene-Styrene (ABS) plastic**

### Battery
- **Lithium Ion 6-cell or 9-cell**
  - **4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr**
  - **6-cell: up to 4.5 hr**

### Chipset
- Mobile Intel HM55 Express Chipset

### ExpressCard/34
- One slot (ExpressCard/34)

### MultiCard Reader
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

### Ports
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
  - **Mobile Intel HM55 Express Chipset**
  - **802.11n**
  - **PCI Express Mini Card slots**
  - **PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2**

### Power
- **6-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr**

### Security
- **ThinkVantage Password Manager**
- **ThinkVantage System Update**
- **ThinkVantage Power Manager**
- **ThinkVantage Access Connections**
- **ThinkVantage Rescue and Recovery**
- **ThinkVantage Fingerprint Software**
- **ThinkVantage Toolbox**
- **Norton™ Internet Security 2011**
- **Microsoft Research AutoCollage Touch**
- **Adobe Flash Player**
- **NVIDIA® GeForce® Workstation**
- **Intel® Core™ i5 processor i5-540M**
- **Intel® Core™ i3-350M**
- **Intel® Core™ i5-520M**

### Software
- **ThinkPlus® 3-year LOR**
  - **ThinkPad® 4-year LOR**
  - **9x5 NBD**
- **ThinkPlus® 4-year LOR**

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

US models announced June 22, 2010

US models withdrawn effective September 2010 or June 2011

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(DMD3-12) June 2011
ThinkPad L412 Accessories - withdrawn

Personal Systems Reference (PSREF)

Memory
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4146 ann 03/02/10
4GB PC3-10800 DDR3 L-H SODIMM 55Y711 ann 03/02/10

Storage and removable storage
SL410/510 500GB Disk SATA 3Gb/s (5400 rpm) 43N3422 ann 10/22/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 06/26/09
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11
Lenovo Slim USB Portable DVD Burner 0A39988 ann 06/14/11

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi™ 2000 Broadband Option 78Y1399 ann 01/07/10
ThinkPad AT&T™ 2000 Broadband Option 78Y1398 ann 01/07/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
ThinkPad Port Replicator Series 3 43S610W ann 06/23/09
ThinkPad Mini Dock Series 3 - 90W 43S610U ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W® 43S810U ann 06/23/09
 AUDIO ports are inactive, ThinkPad Audio ports are active.
USB Fingerprint Keyboard 73P4730 ann 12/15/09
Enhanced Performance USB Keyboard 73P5220 ann 03/23/04
ThinkPad USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Modem
USB 2.0 Lenovo Modem 43R1814 ann 02/26/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 49K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries
ThinkPad Battery 55+ (6-cell) 57Y4185 ann 03/30/10
ThinkPad Battery 55++ (9-cell) 57Y4186 ann 03/30/10
ThinkPad External Battery Charger® 40Y7625 ann 09/20/05
Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter® 40Y7696 ann 01/05/06
Only compatible with the integrated graphics models.
ThinkPad 90W AC Adapter 57Y4690 ann 09/20/05
ThinkPad 90W AC Adapter with USB Hub 57Y4691 ann 09/07/10
90W Ultrasil 11AC/DC Combo Adapter 41R4493 ann 09/22/09

More info at www.lenovo.com/support/_poweradapters

Carrying Cases
Up to 14” widescreen models:
ThinkPad 14W Case Sleeve 57Y4294 ann 03/16/10
Up to 15.6” widescreen models:
ThinkPad 15W Case Sleeve 51J0477 ann 08/18/09
Lenovo Messenger Max 41U5253 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08

More information at www.lenovopowertips.com

Monitors
ThinkVision® L1711p 17” Monitor 5047H82 ann 10/20/09
ThinkVision L1900p 19” Monitor 4431HE1 ann 11/11/08
ThinkVision L1951p Wide 19” Monitor 2448H86 ann 10/20/09
ThinkVision L2250p Wide 22” Monitor 2572H86 ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 2572H86 ann 10/20/09
ThinkVision L2251x Wide 22” Monitor 2578H86 ann 10/20/09
ThinkVision L2321x Wide 23” Monitor 4014H86 ann 06/10/10
ThinkVision L2440p Wide 24” Monitor 4420H82 ann 09/17/08

More information at www.lenovo.com/support/monitors

Monitor Accessories®
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4383 ann 08/04/09
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09
Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories: www.lenovo.com/accessories
Purchase Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/compatibilityguide
An Options Compatibility Matrix (OCM) and accessory brochures

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(O-L412) January 2012
### ThinkPad® L420 7854 (TopSeller) - withdrawn

**Positioning**
- Mainstream business performance; two spindles

**Processor**
- Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), HT technology
- Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), HT technology
- Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), HT technology
- Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), HT technology
- Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), HT technology

**Memory**
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical**
- DVD burner, 12.7mm high, fixed, not removable, tray-in
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, removable, upgradable, Active Protection System™

**SATA disk**
- None

**mSATA™ SSD**
- None

**Display**
- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- HD720p resolution, wider view angle, low light sensitive, fixed focus

**Integrated graphics**
- Intel HD Graphics 3000 in processor,
- external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
- 2048x1536 (VGA) @ 75Hz;
- 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

**Dimensions**
- 14.0W” (WxDxH): 13.5” x 9.2” x 1.26–1.42”;
- 344mm x 233mm x 32–36mm

**Weight**
- 4-cell: from 4.94 lb (2.24kg);
- 6-cell: from 5.47 lb (2.48kg)

**Battery - type**
- Lithium Ion 4-cell, 6-cell, or 9-cell

**Battery - life**
- 4-cell (32Whr): up to 3.9 hr;
- 6-cell (57Whr): up to 6.9 hr;
- 9-cell (94Whr): up to 11.6 hr

**Chipset**
- Mobile Intel H61 Express Chipset

**ExpressCard**
- One slot (ExpressCard/34, ExpressCard/54)

**Multicard Reader**
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

**Ports**
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card WLN4**
- Two PCi Express Mini Card slots

**WWAN**
- Wireless WAN upgrade available

**Modem**
- None

**Bluetooth™**
- Bluetooth 3.0 wireless, LED indicator

**Ethernet**
- Realtek® RTL8111DL Gigabit Network Connection

**Intel® AMT**
- None

**Audio support**
- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 /
- volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM

**Limited warranty12**
- 1-year - depot repair service / service upgrades22 available

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**Notes**
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

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**Ready to install applications14** (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

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**Preloaded operating system17**
- Genuine Windows® 7 Professional 64

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**Preloaded applications14** (all OSes; only some listed)
- Lenovo SimpleTap
- Lenovo ThinkVantage toolbox
- Lenovo ThinkVantage Power Manager
- Lenovo ThinkVantage System Update
- Lenovo ThinkVantage Rescue and Recovery™

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**See footnotes for more detailed information** © Lenovo

US model(s) announced February 22 or October 4, 2011
US model(s) withdrawn effective January, March, or December 2012

(DMD4-1) February 2013
**ThinkPad® L420 7856 (TopSeller) - withdrawn**

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<td>Blue</td>
<td>6</td>
<td>Pro 64</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

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**Positioning**
- Mainstream business performance; two spindles

**Processor**
- Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), HT technology
  - Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache)

**Memory**
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical SATA disk**
- DVD burner, 12.7mm high, fixed, not removable, tray-in
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™

**mSATA™ SSD**
- None

**Widescreen display**
- 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Camera**
- HD720p resolution, wider view angle, low light sensitive, fixed focus

**Integrated graphics**
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J915); supports dual independent display, Maximum external resolution: 2560x1600 (DisplayPort)@60Hz, 2048x1536 (VGA) @75Hz; 1920x1080@60Hz (single-link DVI-D via cable 45J915)

**Keyboard**
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint®**
- TrackPoint® pointing device, Internet Scroll Bar®3, magnifying glass

**Touch pad**
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

**ThinkLight™**
- None

**Dimensions**
- 14.0W (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm
- 4-cell: from 4.94 lb (2.24kg); 6-cell: from 5.14 lb (2.33kg); 9-cell: from 5.47 lb (2.48kg)

**Battery - type**
- Lithium Ion 4-cell, 6-cell, or 9-cell

**Battery - life**
- 4-cell (32Whr): up to 3.9 hr; 6-cell (57Whr): up to 6.9 hr; 9-cell (94Whr): up to 11.6 hr

**Chipset**
- Mobile Intel HM65 Express Chipset

**ExpressCard**
- One slot (ExpressCard/34, ExpressCard/54)

**Multicard Reader**
- Ports
  - Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor11 (VGA DB-15, DisplayPort), ethernet (RJ-45)
  - Two PCI Express Mini Card slots
  - Two PCI Express Mini Card slots, ThinkPad 11b/g, 1x1
  - Wireless WAN upgradable
  - None
  - Bluetooth 3.0 wireless, LED indicator
  - Realtek® RTL8111DL Gigabit Network Connection
  - None
  - High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
  - Power-on password, hard disk password, supervisor password, security keyhole
  - Trusted Platform Module, TCG 1.2-compliant
  - UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM

**Limited warranty**
- 3-years/1-yr battery - depot repair service / service upgrades available

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See footnotes for more detailed information
© Lenovo
US model(s) announced February 22, 2011
US model(s) withdrawn effective January or December 2012

DMD4-2 (February 2013)
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning
- Processor: Mainstream business performance; two spindles
- Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- Intel® Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

### Memory
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical
- DVD burner, 12.7mm high, fixed, not removable, tray-in
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high, removable, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5” wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™

### mSATA™ SSD
- None

### Display
- 14.0” (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: HD720p resolution, wider view angle, low light sensitive, fixed focus

### Graphics
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, Internet Scroll Bar® magnesium glass
- Touchpad UltraNav, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- ThinkLight™

### Dimensions
- 14.0”W (WxDxH): 13.5” x 9.2” x 1.26–1.42”; 344mm x 233mm x 32–36mm
- 4-cell: from 4.94 lb (2.24kg); 6-cell: from 5.14 lb (2.33kg); 9-cell: from 5.47 lb (2.48kg)

### Case material
- Acrylonitrile-Butadiene-Styrene (ABS) plastic
- Battery - type
- Battery - life

### Chipset
- Mobile Intel HM65 Express Chipset

### Preloaded operating system™
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

### Ready to install applications¹⁴ (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

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- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

### Further information
- 65-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷
- 24 hour x 7 day²⁰ toll-free support during the warranty period

For compatible accessories, please go to O-L420 sheet;
For Lenovo service²² upgrade options, please go to S-TA sheet

See footnotes for more detailed information
© Lenovo
US model(s) announced April 5, 2011 or February 22, 2012
US model(s) withdrawn effective October 2011 or December 2012

(DMD4-3) February 2013
## ThinkPad® L420 7829 (Onsite) - withdrawn

### Personal Systems Reference (PSREF)

### Specifications

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### Highlights
- **Limited warranty**: 3-years/1-year battery, limited onsite service®•, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available
- **Preloaded operating system®**: Some: Genuine Windows® 7 Professional 32, Some: Genuine Windows 7 Professional 64
- **Ready to install applications®**: (all OSes; only some listed)
  - Norton™ Internet Security 2011
  - Windows Live® Essentials
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Corel® WinDVD® (DVD±RW)
  - Corel® Burn.Pro™ Lenovo Edition (DVD±RW)
  - Corel® MovieFactory® Lenovo Edition (DVD±RW)

### Footnotes
- Some models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Additional Information
- **Memory**: 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- **Optical SATA disk**: DVD burner, 12.7mm high, fixed, not removable, tray-in
- **Battery**: Lithium Ion 4-cell, 6-cell, or 9-cell
- **Processor**: Mainstream business performance; two spindles
- **Graphic Card**: Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort
- **Dimensions**: 14.0"W (355mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- **Weight**: 1.7 kg (3.75lb)
- **Camera**: HD720p resolution, wider view angle, low light sensitive, fixed focus
- **Keyboard**: 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys
- **Touchpad**: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- **Preloaded applications®**: (all OSes; only some listed)
  - Norton™ Internet Security
  - Windows Live® Essentials
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Corel® WinDVD® (DVD±RW)
  - Corel® Burn.Pro™ Lenovo Edition (DVD±RW)
  - Corel® MovieFactory® Lenovo Edition (DVD±RW)
- **Battery life**: up to 11.6 hr
- **Ports**: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor 13 (VGA DB-15, DisplayPort), ethernet (RJ-45)
- **PCle Mini Card**: Two PCI Express Mini Card slots
  - **WLAN**: Some: 11b/g/n, PCie Half Mini Card, ThinkPad 11b/g/n, 1x1
  - **WWAN**: Some: 11a/b/g/n, PCie Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
- **Modem**: Wireless WAN upgradable
- **Bluetooth**: Some: Bluetooth 3.0 wireless, LED indicator
- **Ethernet**: Realtek® RTL8111DL Gigabit Network Connection
- **Intel AMT**: None
- **Audio support**: High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Fingerprint reader**: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM
- **Limited warranty®**: 3-years/1-year battery, limited onsite service®•, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available
- **65-watt ac adapter**: EPEAT® Gold rating
- **ENERGY STAR®**: 5.0-compliant
- **RoHS-compliant**: Certifies for safe electronics
- **International Warranty Service**: 24 hour x 7 day 18 toll-free support during the warranty period
- **Supports ThinkVantage® technologies**

### See notes for more detailed information

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US models announced February 22, 2011

US model(s) withdrawn effective October 2011 or December 2012
ThinkPad® L420 Accessories - withdrawn

Memory
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

Storage and removable storage
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11
USB 3.0 Secure 1TB Hard Drive 0A65621 ann 08/28/12
Lenovo Slim USB Portable DVD Burner 0A3988 ann 06/14/11

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
Wireless WAN (Mini PCI Express)

TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W 433815U
ThinkPad Mini Dock Series 3 - 90W 433710U

ThinkPad Gobi

52 Wireless via 2.4GHz technology using a micro-size USB receiver.

TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W 433815U
ThinkPad Mini Dock Series 3 - 90W 433710U

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:

ThinkPad Gobi® Mobile Broadband Option 0A36185 ann 04/12/11

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
ThinkPad Port Replicator Series 3 with USB 3.0 433615W ann 06/05/12
ThinkPad Mini Dock Series 3 - 90W 433710U ann 06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W 433715U ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W 433815U ann 06/05/12

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
Ultrasonic Plus Wireless Keyboard and Mouse 0A34032 ann 04/05/11
Prefereed Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4750 ann 02/22/05
Lenovo USB Smartcard keyboard 51J0155 ann 03/24/09

Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/08
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 0A36407 ann 06/26/12
Lenovo Wireless Laser Mouse 0A36188 ann 12/20/11

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Modem
USB 2.0 Lenovo Modem 43R1814 ann 02/26/08

Security
3M 14.0W Privacy Filter from Lenovo 0A61769 ann 04/05/11
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
ExpressCard Gemplus Smart Card Reader® 41N3043 ann 06/27/06

Batteries
ThinkPad Battery 70+ (6-cell) 0A36302 ann 06/05/12
ThinkPad Battery 70++ (9-cell) 0A36303 ann 06/05/12
ThinkPad External Battery Charger® 40Y7625 ann 09/20/05

44 Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alladaycomputing

ThinkPad 65W AC Adapter 40Y7696 ann 01/05/06

44 Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
90W Ultralight AC/DC Combo Adapter 41R4493 ann 02/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralight AC/DC Combo Adapter 41R4493

ThinkPad Traveling Tip (L14a) 41R4481 ann 12/18/07

44 Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases
Up to 14" widescreen models:
ThinkPad 14W Case Sleeve 57Y4294 ann 03/16/10
Up to 15.6" widescreen models:
ThinkPad 15W Case Sleeve 51J0477 ann 08/18/09

Lenovo Messenger Max 41U2523 ann 05/01/07

44 Lenovo Performance Backpack 41U2524 ann 05/01/07
ThinkPad Business Loadpad Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08
Lenovo Sport Backpack - Red 0A33896 ann 02/28/12
Lenovo Sport Slimcase - Red 0A33897 ann 02/28/12
Lenovo Sport Messenger - Red 0A33898 ann 02/28/12

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 ann 11/11/08
ThinkVision LT1952p Wide 19" (VGA, DVI-D, DVI-D) 2448B66 ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572B66 ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP) 2578B66 ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) 2572B66 ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) 4420B62 ann 09/13/11

DisplayPort to DisplayPort Monitor Cable 0A36537.

ThinkPad LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0) 1452DS6 ann 08/16/11

More information at www.lenovo.com/support/monitors

Monitor Accessories

Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable 45J915 ann 08/05/08
DisplayPort to DisplayPort Monitor Cable 0A36537 ann 09/13/11
Lenovo USB Soundbar 0A36190 ann 05/01/12
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

44 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovopowertips.com

An Options Compatibility Configurator for Lenovo systems
Lenovo® ThinkPad L512

Lenovo ThinkPad L512 with ThinkPad Battery 55++ (9-cell) 57Y4186

Lenovo ThinkPad L512

Lenovo ThinkPad L512

Lenovo ThinkPad L512

Lenovo ThinkPad L512
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor / Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>Memory</th>
<th>Processor</th>
<th>DCIM</th>
<th>Battery</th>
<th>Finger print reader</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>4444-32U i3-350M</td>
<td>2.26 GHz 2GB 15.6&quot; HD 2.0M</td>
<td>160G 7200 11b/g/n WWAN upg</td>
<td>Blue</td>
<td>6</td>
<td>Pro 32</td>
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<td>4444-33U i3-350M</td>
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<td>160G 7200 Intel 6200</td>
<td>Blue</td>
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<td>Pro 64</td>
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<td>Jul 10</td>
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</table>

*These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

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**Positioning Processor**

Mainstream business performance; two spindles

Intel® Core™ i3 processor i3-350M or i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or

Intel Core i5 processor i5-520M or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 5MB cache

**Memory**

2GB std / 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics: standard memory in one socket; one socket available*

**SATA DVD: RW SATA disk**

DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

160GB® (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System®

**Widescreen display Camera**

15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; *Maximum external resolution: 2560x1600 (DisplayPort) at 60Hz; 2048x1536 (VGA) at 75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)*

**Keyboard**

6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint®**

TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass

**Touchpad**

UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch None

**Dimensions**

15.6W" (WXxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm

**Case color**

black

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

**Chipset**

Mobile Intel HM55 Express Chipset

One slot (ExpressCard/34)

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor® (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**

Two PCI Express Mini Card slots

**Modem**

Wireless WAN upgradable

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Realtek® RTL8111DL Gigabit Network Connection

**Audio support**

High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

1-year - depot repair service / service upgrades available

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Preloaded operating system®

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications® (only some listed)

- Rescue and Recovery™
- Access Connections®
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory®, Lenovo Edition (DVD+RW)

Supports ThinkVantage® technologies

65-watt AC adapter

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service®

24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378

ThinkPlus® 1-1 year LOR® 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P/L P/U Depot

ThinkPlus 3-year P/L P/U Depot

ThinkPlus 4-year P/L P/U Depot

ThinkPlus 5-year P/L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

US models announced May 11, July 6, or September 28, 2010

US models withdrawn effective June or October 2011

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(RUBS-3) October 2010
**ThinkPad L512 4447 (TopSeller) - Windows 7 - withdrawn**

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo GHz</th>
<th>Max turbo GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Bluetooh cells</th>
<th>Battery</th>
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<td>i3-350M</td>
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<td>160G 7200</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
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<td>Pro 32</td>
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<td>Intel 6200s</td>
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<td>WWAN upg</td>
<td>Blue</td>
<td>6</td>
<td>Pro 64</td>
<td>Jul 10</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

Mainstream business performance; two spindles

- **Intel® Core™ i3 processor i3-350M or i3-370M with dual-core,** DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or
- **Intel Core i5 processor i5-520M with dual-core,** DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

- 2GB std / 6GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in one socket; one socket available

**SATA DVD:RW SATA disk**

- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in
- 160GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System

**Widescreen display**

15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (75Hz) / 1920x1200 (60Hz) (single-link DVI-D via cable 45J7915)

**Keyboard**

- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**TouchPoint®**

- TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass

**ThinkLight™**

- UltraNav® wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch
- None

**Dimensions**

15.6"W (WXDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm

- 4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg)
- Black

**Case material**

Acrylonitrile-Butadiene-Styrene (ABS) plastic

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

- 4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

**Chipset ExpressCard/34**

- Mobile Intel HM55 Express Chipset
- One slot (ExpressCard/34)

**Multicard Reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- External monitor11 (VGA DB-15, DisplayPort), ethernet (RJ-45)
- 802.11a/b/g/n wireless4, ThinkPad 11b/g/n, PCIe Half Mini Card
- Two PCI Express Mini Card slots

**PCle Mini Card**

- One slot (Avail)(RUB3-6) October 2010
- Online manual

**Modes**

- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in one socket; one socket available

**Bluetooh**

- 2.1 wireless, LED indicator

**Ethernet**

- Realtek® RTL8111DL Gigabit Network Connection
- None

**Audio support**

- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

- UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years/1-yr battery / depot repair service / service upgrades22 available

See footnotes for important warranty information

US models announced May 11 or July 6, 2010

US models withdrawn effective June or October 2011

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Preloaded operating system

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications14 (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory®
- Lenovo Edition (DVD+RW)

SUPPORTS THINKVANTECH®

65-watt AC adapter

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service17

24 hour x 7 day18 toll-free support during the warranty period12 via 800-426-7378

ThinkPlus® 3-3-year LOR® 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Preload 100% Base turborg (GHz) Memory Wide-screen display Camera Disk SATA GB rpm PCIe Mini Card PCIe Mini Card Finger print reader Bluetooth cells Preload Avail date

Preload

See footnotes for important warranty information

US models announced May 11 or July 6, 2010

US models withdrawn effective June or October 2011

© Lenovo

(RUB3-6) October 2010

See footnotes for important warranty information

US models announced May 11 or July 6, 2010

US models withdrawn effective June or October 2011
### ThinkPad L512 2597 (XP with Win 7 License) - withdrawn

<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
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<td>7200</td>
<td>DVD±RW</td>
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<td>None</td>
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<td>6</td>
<td>XP Pro</td>
<td>Apr 10</td>
</tr>
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**Positioning Processor**

Mainstream business performance: two spindles Intel® Core™ i3 processor i3-330M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

**Memory**

2GB std / 8GB max\(^2\) / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italsics: standard memory in one socket; one socket available

**SATA DVD±RW**

DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB\(^8\) (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System\(^9\)

**Widescreen display**

15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Battery - life\(^10\)**

up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

**Battery - type**

Lithium Ion

**Chipset**

Mobile Intel HM55 Express Chipset One slot (ExpressCard/34)

**Multicard Reader**

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**PCIe Mini Card**

Two PCI Express Mini Card slots 11b/g/n/ wireless\(^8\), ThinkPad 11b/g/n, PCIe Half Mini Card

**Modem**

None

**Audio support**

High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**

None

**Limited warranty\(^12\)**

1-year - depot repair service / service upgrades\(^2\) available

---

**Preloaded operating system\(^25\)**

- Windows\(^®\) XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications\(^14\)** (only some listed)

- Rescue and Recovery™
- Access Connections\(^13\)
- Client Security Solution™
- ThinkVantage Power Manager
- Presentation Director
- Corel\(^®\) WinDVD\(^®\) (DVD±RW)
- Corel Burn.Now\(^®\) Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory\(^®\) Lenovo Edition (DVD±RW)

Supports ThinkVantage\(^®\) technologies

---

See footnotes for important warranty information

US model announced April 20, 2010

US model withdrawn effective July 31, 2010

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(RUB3-2) August 2010
### ThinkPad L512 2597 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card</th>
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<td>None</td>
<td>Blue</td>
<td>Pro 64</td>
<td>Jul 10</td>
<td></td>
</tr>
</tbody>
</table>

**Preloaded operating system**
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD+RW)
- Corel® MovieFactory®
- Lenovo Edition (DVD+RW)

Supports ThinkVantage technologies

- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information.

US models announced April 20 or July 6, 2010

US models withdrawn effective June or October 2011

© Lenovo (RUB3-3) October 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base clock (GHz) Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Fingerprint reader</th>
<th>Blue-tooth</th>
<th>Workhorse (W)</th>
<th>Availability</th>
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</thead>
</table>
| 2598-34U  | i5-520M   | 2.40 2.93 2GB 15.6" HD 2.0M 320G 7200 Intel 6200\textsuperscript{10} | Gobi 2000          | Finger Blue Pro 32 Apr 10
| 2598-35U  | i5-520M   | 2.40 2.93 4GB 15.6" HD 2.0M 320G 7200 Intel 6200 Gobi 2000 Pro 32 Apr 10
| 2598-42U  | i5-520M   | 2.40 2.93 2GB 15.6" HD 2.0M 320G 7200 Intel 6200 Gobi 2000 Pro 32 W G Apr 10
| 2598-43U  | i5-520M   | 2.40 2.93 2GB 15.6" HD 2.0M 320G 7200 Intel 6200 Gobi 2000 Pro 32 W G Apr 10
| 2598-44U  | i5-520M   | 2.53 3.06 3GB 15.6" HD 2.0M 320G 7200 Intel 6200 Gobi 2000 Pro 32 W G Apr 10
| 2598-45U  | i5-520M   | 2.40 2.93 2GB 15.6" HD 2.0M 320G 7200 Intel 6200 Gobi 2000 Pro 32 Apr 10
| 2598-6NU  | i5-520M   | 2.40 2.93 2GB 15.6" HD 2.0M 320G 7200 Intel 6200 Gobi 2000 Pro 32 Apr 10

Preloaded operating system\textsuperscript{20}
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications\textsuperscript{14} (only some listed)
- Some: Education software
- Adobe Digital School Collection
- Instructor Resources (and DVD)
- Learning Creative Suite 4 (DVD)
- Photoshop Elements 7 (DVD)
- Premiere Elements 7 (and DVD)
- Acrobat 9 Professional (DVD)
- Contribute CS4 (and DVD)
- Soundboom CS4 (and DVD)
- Rescue and Recovery\textsuperscript{16}
- Access Connections\textsuperscript{16}
- Password Manager
- ThinkVantage System Update
- ThinkVantage Software (fingerprint models)
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Core\textsuperscript{18} WinDVD\textsuperscript{19} (DVD:RW)
- Corel Burn.Now\textsuperscript{20} Lenovo Edition (DVDs:RW)
- Corel DVD MovieFactory\textsuperscript{20} Lenovo Edition (DVDs:RW)

Supports ThinkVantage technologies
- 65-watt AC adapter
- EPEAT\textsuperscript{21} Gold rating
- ENERGY STAR\textsuperscript{22} 5.0-compliant
- RoHS-compliant

International Warranty Service\textsuperscript{17}
24 hour x 7 day\textsuperscript{18} toll-free support during the warranty period\textsuperscript{12} via 800-426-7378

ThinkPlus\textsuperscript{23} 3-year LOR\textsuperscript{24} 9x5 NBD
- 45K6021
- ThinkPlus 4-year LOR 9x5 NBD
- 45K6022
- ThinkPlus 4-year P&L P/U Depot
- 45K6023
- ThinkPlus 5-year P&L P/U Depot
- 45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(RUB3-1) October 2011

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft\textsuperscript{16} Office 2010 Product Key Ready (O10PKR)
| Type-model | Processor | Base turbo | Max turbo | Memory | Wide-screen | Disk | PCIe Mini Card | PCIe Mini Card | Finger print reader | Blue-tooth | Whorsee (W) | Batteries | Weight | Dimensions | Battery type | Power-on password | Preloaded operating system | Preloaded applications

| 2598-6SU | i5-520M | 2.40 | 2.93 | 2GB | 15.6" HD | 2.0M | 160G 7200 | 11b/g/n | WWAN upg | Blue | Pro 64 W G Jun 10
| 2598-6TU | i5-520M | 2.40 | 2.93 | 2GB | 15.6" HD | 2.0M | 160G 7200 | Intel 6200®a | WWAN upg | Blue | Pro 64 W G Jun 10
| 2598-6UU | i5-540M | 2.53 | 3.06 | 2GB | 15.6" HD | 2.0M | 320G 7200 | Intel 6200 | WWAN upg | Finger | Blue | Pro 64 Jun 10
| 2598-6VU | i5-520M | 2.40 | 2.93 | 2GB | 15.6" HD | 2.0M | 160G 7200 | Intel 6200 | Gobi 2000 AT&T23 | Finger | Blue | Pro 64 Jun 10
| 2598-6WU | i5-540M | 2.53 | 3.06 | 2GB | 15.6" HD | 2.0M | 320G 7200 | Intel 6200 | WWAN upg | Finger | Blue | Pro 64 Jun 10

**Positioning Processor**
- Mainstream business performance; two spindles
  - Intel Core™ i5 processor i5-520M or i5-540M with dual-core
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading Technology; 3MB cache

**Memory**
- 2GB std / 8GB max
- PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- Non-italics: standard memory in one socket; one socket available

**SATA DVD:RW**
- 160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™

**Widescreen display Camera**
- 15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**
- ATI™ Mobility Radeon™ HD 5145 graphics, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**SATA disk**
- DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in

**Dimensions³**
- Weight³
  - 15.6W (Wx Dx H): 15" x 9.7" x 1.26~1.42; 380mm x 247mm x 32~36mm
  - 4-cell: from 5.56 lb (2.52kg); 6-cell: from 5.76 lb (2.61kg); 9-cell: from 6.10 lb (2.77kg)

**Chipset**
- Mobile Intel HM55 Express Chipset
  - One slot (ExpressCard/34)
  - 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
  - Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
  - 9-cell: up to 7.3 hr

**PCle Mini Card**
- Two PCI Express Mini Card slots
  - Some: 11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card
  - Some: Intel 6200 WWAN upg
  - Some: Wireless WAN upgradable
  - Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HS/PS, GPS, contract required with service provider

**Carrier**
- Some: AT&T, contract required with service provider

**Modem**
- None

**Bluetooth™**
- 2.1 wireless, LED indicator

**Audio support**
- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**
- UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty³**
- 3-years/1-yr battery - depot repair service / service upgrades² available

*See footnotes for important warranty information

US models announced June 22, 2010
US models withdrawn effective July, 2010

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- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

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**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader™
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

**Supports ThinkVantage technologies**
- 90-watt AC adapter
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service 24 hour x 7 day x toll-free support during the warranty period via 800-426-7378
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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(RUB3-7) July 2010
## ThinkPad L512 2550 (Onsite) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk Sata GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
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<th>Blue-tooth</th>
<th>Workhorse (W) Global (G) GMP (P)</th>
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<td>WWAN upg</td>
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<td>Finger</td>
<td>Blue</td>
<td>Pro 32 W G P Apr 10</td>
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- These models are part of the Global Models Plus program with limited onsite service\(^4\) 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

### Positioning Processor
Mainstream business performance: two spindles
Intel\(^\text{®}\) Core\(^\text{™}\) i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory
2GB or 3GB std / 8GB max\(^7\) / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

#### Italics
standard memory in both sockets; no sockets available;

#### Non-italics
standard memory in one socket; one socket available

### SATA DVD:\(^\text{±}\)RW

#### DVD burner:
SATA 1.5Gbps, 12.7mm high, fixed, not removable, tray-in

#### Sata disk
160GB\(^8\) (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm) / Sata 3.0Gb/s, 2.5", wide 9.5mm high, removable, upgradable, Active Protection System\(^\text{™}\)

### Widescreen display

#### Camera
15.6” (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

#### Some:
camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

#### Intel HD Graphics in processor
external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715);
supports dual independent display;

#### Maximum external resolution:
2560x1600 (DisplayPort)@60Hz: 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J9715)

### Keyboard

#### TrackPoint\(^\text{®}\)
6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

#### Touchpad
TrackPoint\(^\text{®}\) pointing device, Internet Scroll Bar\(^\text{™}\), magnifying glass

#### ThinkLight\(^\text{™}\)
UltraNav\(^\text{™}\), wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch support

### Dimensions\(^\text{³}\)
15.6W” (WxDxH): 15” x 9.7” x 1.26-1.42”, 380mm x 247mm x 32-36mm

#### 4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg) black

### Weight\(^\text{²}\)

#### Case color
Acrylonitrile-Butadiene-Styrene (ABS) plastic

#### Battery - type
Lithium Ion 6-cell

#### Battery - life\(^\text{⁸}\)
4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr

### Chipset

#### Mobile Intel HM55 Express Chipset
One slot (ExpressCard/34)

#### Multicard Reader Ports
7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

### PCIe Mini Card

#### 11b/g/n
Two PCIe Express Mini Card slots

#### Some:
11b/g/n wireless\(^\text{®}\), ThinkPad 11b/g/n, PCIe Half Mini Card

#### Intel 6200\(^\text{™}\) WWAN upg
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

#### None

### Bluetooth\(^\text{™}\)

#### Ethernet
Realtek\(^\text{®}\) RTL8111DL Gigabit Network Connection

### Intel AMT

#### Audio support
High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack

### Security

#### Security chip
Power-on password, hard disk password, supervisor password

#### Finger print reader
Some: UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty\(^\text{³}\)
3-years/1-year battery, limited onsite service\(^4\), 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades\(^2\) available

### Preloaded operating system\(^\text{²⁰}\)
- Some: Genuine Windows\(^\text{®}\) 7 Professional 32
- Some: Genuine Windows\(^\text{®}\) 7 Professional 64

### Preloaded applications\(^\text{¹⁴}\) (only some listed)
- Rescue and Recovery\(^\text{™}\)
- Access Connections\(^\text{™}\)
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Norton\(^\text{™}\) Internet Security 2011 (30 days of virus definitions)
- Adobe\(^\text{®}\) Reader\(^\text{®}\)
- Adobe Flash\(^\text{®}\) Player
- Skype\(^\text{™}\) for Windows
- Windows Live\(^\text{™}\) Toolbar
- Microsoft Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage Touch
- Corel\(^\text{®}\) WinDVD\(^\text{®}\) (DVD:\(^\text{±}\)RW)
- Corel\(^\text{®}\) Burn\text{™} Lenovo Edition (DVD:\(^\text{±}\)RW)
- Corel\(^\text{®}\) DVD MovieFactory\(^\text{™}\) Lenovo Edition (DVD:\(^\text{±}\)RW)

### Supports ThinkVantage\(^\text{™}\) technologies
65-watt AC adapter
EPET\(^\text{™}\) Gold rating
ENERGY STAR\(^\text{®}\) 5.0-compliant
RoHS-compliant
International Warranty Service\(^\text{®}\)
24 hour x 7 day\(^\text{®}\) toll-free support during the warranty period\(^\text{¹²}\)

### ThinkPlus\(^\text{™}\) 4-year LOR\(^\text{®}\) 9x5 NBD
45K6038
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced April 20 or May 11, 2010

US models withdrawn effective August or October 2011

(RUB3-4) October 2010

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<th>Turbo speed/ (GHz)</th>
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<td>Blue</td>
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<td>W G P</td>
<td>Jun 10</td>
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</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service** - 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor: Mainstream business performance; two spindles

- **Intel® Core™ i5 processor i5-520M or i5-540M with dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory: 2GB std / 8GB max** / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- **Non-italics**: standard memory in one socket; one socket available

SATA DVD:1RW

- **SATA disk**: DVD burner, SATA 1.5Gbps, 12.7mm high, fixed, not removable, tray-in

Widescreen display:

- **15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight**, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Integrated graphics:

- **ATI™ Mobility Radeon™ HD 5145 graphics, 512MB memory**, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

Keyboard:

- **6-row, ThinkVantage button, spill-resistant, multimedia Fn keys**

Touchpad:

- **6-row, ThinkVantage button, spill-resistant, multimedia Fn keys**

ThinkLight™:

- **6-row, ThinkVantage button, spill-resistant, multimedia Fn keys**

Dimensions:

- **15.6W™ (WxDxH): 15" x 9.7" x 1.26-1.42"**, 380mm x 247mm x 32-36mm

Battery:

- **4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.3 hr**

Chipset:

- **Mobile Intel HM55 Express Chipset**, One slot (ExpressCard/34)

Multicard Reader Ports:

- **7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)**

PCle Mini Card:

- **Two PCI Express Mini Card slots**

- **11b/g/n wireless**, ThinkPad 11b/g/n, PCle Half Mini Card

Audio support:

- **High Definition (HD) Audio, Realtek ALC2690 codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack**

Security:

- **Power-on password, hard disk password, supervisor password, security keyhole**

Limited warranty** - 3-years/1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

Preloaded operating system**

- Genuine Windows® 7 Professional 64

Preloaded applications** (only some listed)

- Rescue and Recovery™

- Access Connections™

- Password Manager

- ThinkVantage Power Manager

- ThinkVantage System Update

- Fingerprint Software (fingerprint models)

- ThinkVantage Toolbox

- Norton™ Internet Security 2009 (30 days of virus definitions)

- Adobe® Reader®

- Adobe Flash® Player

- Skype™ for Windows

- Windows Live™ Toolbar

- Microsoft Office 2010 preloaded; purchase product key to activate

- Microsoft Research AutoCollage Touch

- Corel® WinDVD™ (DVD:RW)


- Corel DVD MovieFactory™ Lenovo Edition (DVD:RW)

Supports ThinkVantage technologies

- 90-watt AC adapter

- EPEAT® Gold rating

- ENERGY STAR® 5.0-compliant

- RoHS-compliant

- International Warranty Service17

- 24 hour x 7 day** toll-free support during the warranty period** via 800-426-7378

- ThinkPlus™ 4 years LOR** 9x5 NBD 45K6038

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced June 22, 2010

US models withdrawn effective July, 2010
Memory
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

Storage and removable storage
SL410/510 500GB Disk SATA 3Gb/s (5400 rpm) 43N3422 ann 10/22/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 920GB Hard Disk 43R2019 ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 ann 01/07/10
Lenovo Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi™ 2000 Broadband Option 78Y1399 ann 01/07/10
ThinkPad AT&T™ ThinkPad Gobi 2000 Broadband Option 78Y1398 ann 01/07/10

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
USB 2.0 Port Replicator with Digital Video 0A33942 ann 03/22/11
ThinkPad Port Replicator Series 3 433610W ann 01/06/09
ThinkPad Mini Dock Series 3 - 90W 433710U ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W 433810U ann 06/23/09
41 When docked, ThinkPad Mini Dock Series 3 - 90W (433710U)
Audio ports are in active, ThinkPad Audio ports are active.
ThinkPad Mini Dock Series 3 - 90W61 433710U ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W (433810U)
eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Modem
USB 2.0 Lenovo Modem 43R1814 ann 02/26/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries
ThinkPad Battery 55+ (6-cell) 57Y4185 ann 03/30/10
ThinkPad Battery 55++ (9-cell) 57Y4186 ann 03/30/10
ThinkPad External Battery Charger44 40Y7625 ann 09/20/05
44 Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alladaycomputing

Carrying Cases
Up to 15.6" widescreen models:
ThinkPad 15W Case Sleeve 51J0477 ann 08/18/09
Lenovo Messenger Max 41U5253 ann 05/01/07
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Business Backpack 43R2482 ann 05/13/08

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
ThinkVision L1951p Wide 19" Monitor 2448HB ann 10/20/09
ThinkVision L2250p Wide 22" Monitor 2572HB6 ann 10/20/09
ThinkVision L2251p Wide 22" Monitor 2572HD6 ann 10/20/09
ThinkVision L2511x Wide 22" Monitor 2578HD6 ann 10/20/09
ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10
ThinkVision L2440p Wide 24" Monitor 4420HB2 ann 09/17/08

More information at www.lenovo.com/support/monitors

Monitor Accessories44
Lenovo USB-to-DVI Monitor Adapter 45K5290 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4850 ann 08/04/09
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y2528 ann 09/22/09
44 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
Purchase Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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(O-L512) October 2011
### ThinkPad® L520 7859 (TopSeller) - withdrawn

<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN/mSATA</th>
<th>Finger print reader</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Preloaded operating system
- Genuine Windows® 7 Professional 64

#### Ready to install applications
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

#### Preloaded applications
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

#### Dimensions
15.6" (396mm) x 9.7" (247mm) x 1.2" (32mm)±

### Positioning
Mainstream business performance; two spindles

#### Processor
- **Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache),**
- DDR3 memory controller (up to 1333MHz), HT technology
- Intel Core i5-2410M processor (dual-core, 2.90GHz, 3MB Cache),
- DDR3 memory controller (up to 1333MHz), HT technology

#### Memory
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, 204-pin SO-DIMM sockets

#### Optical SATA disk
- DVD burner, 12.7mm high, fixed, not removable, tray-in
  - **Some:** Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable
  - **Some:** Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Intel Turbo Boost 2.0, HT technology

#### Widescreen display
- **Some:** 15.6" (396mm) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- **Some:** 15.6" (396mm) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

#### Camera
- HD720p resolution, wider view angle, low light sensitive, fixed focus

#### Integrated graphics
**Intel HD Graphics 3000** in processor

#### Keyboard
- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

#### TrackPoint®
- TrackPoint® pointing device, Internet Scroll Bar®, magnifying glass

#### Touchpad
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

#### Dimensions
- 15.6" (396mm) x 9.7" (247mm) x 1.2" (32mm)

#### Weight
- 4.09 lb (1.85kg) ±

#### Case material
- Acrylonitrile-Butadiene-Styrene (ABS) plastic

#### Battery - type
- Lithium Ion 4-cell, 6-cell, or 9-cell

#### Battery - life
- 6-cell (32Whr): up to 5.5hr; 9-cell (94Whr): up to 10.7 hr

#### Chipset
**Mobile Intel HM65 Express Chipset**

#### ExpressCard
- One slot (ExpressCard/34, ExpressCard/54)

#### Multicard Reader Port
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

#### Ports
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor13 (VGA DB-15, DisplayPort), ethernet (RJ-45)

#### Preloaded applications
- Supports ThinkVantage® technologies
- 65-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service17 24 hour x 7 day 18 toll-free support during the warranty period14

#### For compatible accessories, please go to O-L520 sheet; For Lenovo service22 upgrade options, please go to S-TA sheet

See footnotes for more detailed information

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US model(s) announced February 22 or October 4, 2011
US model(s) withdrawn effective January, March, or December 2012

(RUB4-1) February 2013
**ThinkPad® L520 7860 (TopSeller) - withdrawn**

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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>Mini Card</th>
<th>Mini Card WWAN/SATA</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

- **Mainstream business performance; two spindles**
- **Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache),**
- DDR3 memory controller (up to 1333MHz), HT technology
- Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache),
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology
- Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

**Memory**

- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical SATA disk**

- DVD burner, 12.7mm high, fixed, not removable, tray-in
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System

**Wide-screen display**

- Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Camera**

- HD720p resolution, wider view angle, low light sensitive, fixed focus

**Integrated graphics**

- Intel HD Graphics 3000 in processor,
- external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

- 6-row, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint™ Touch pad**

- TrackPoint™ pointing device, Internet Scroll Bar, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- None

**Dimensions²**

- 15.6"W (396mm) x 9.7"D (247mm) x 1.26–1.42"H (32–36mm)
- Weight²: 3.69 lb (1.68kg)
- Case material: Acrylonitrile-Butadiene-Styrene (ABS) plastic
- Battery - type: Lithium Ion (4-cell, 6-cell, or 9-cell)
- Battery - life³: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Chipset**

- Mobile Intel HM65 Express Chipset
- Supports ThinkVantage® technologies

**Supports ThinkVantage® technologies**

- 65-watt AC adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period

**Preloaded applications¹⁴ (all OSes; only some listed)**

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

**Ready to install applications¹⁴ (all OSes; only some listed)**

- Rescue and Recovery™
- Access Connections³⁴
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

**Preloaded operating system¹⁰**

- Genuine Windows® 7 Professional 64

**Preloaded operating system¹⁰**

- Windows 7 Professional

**Modem**

- None

**Bluetooth™**

- Bluetooth 3.0 wireless, LED indicator

**Ethernet**

- Realtek® RTL8111/1DL Gigabit Network Connection

**Internet**

- None

**Audio support**

- High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM

**Limited warranty**²²

- 3-years: 1-year battery - depot repair service / service upgrades²² available

See footnotes for more detailed information

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US model(s) announced February 22, 2011

US model(s) withdrawn effective January or December 2012
### ThinkPad® L520 5016 - withdrawn

#### Personal Systems Reference (PSREF)

<table>
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<th>Camera</th>
<th>Disk SATA</th>
<th>PCle Mini Card WLAN</th>
<th>PCle Mini Card WWAN/sSATA</th>
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</tr>
<tr>
<td>5016-49U</td>
<td>i5-2540M</td>
<td>2GBx1</td>
<td>15.6&quot; HD</td>
<td>720p</td>
<td>320G-7200</td>
<td>Intel 6205®</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>Blue</td>
<td>6</td>
<td>W G</td>
<td>Pro 64</td>
<td>9</td>
</tr>
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Positioning

<table>
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<tr>
<th>Processor</th>
<th>Mainstream business performance; two spindles</th>
<th>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology</th>
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#### Memory

<table>
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<th>SATA disk</th>
<th>8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</th>
<th>8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</th>
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#### Optical Disk Drive

<table>
<thead>
<tr>
<th>DVD burner</th>
<th>12.7mm high, fixed, not removable, tray-in</th>
<th>12.7mm high, fixed, not removable, tray-in</th>
</tr>
</thead>
</table>

#### Preloaded operating system

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

#### Ready to install applications

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel® MovieFactory® Lenovo Edition (DVD±RW)

#### Preloaded applications

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel® MovieFactory® Lenovo Edition (DVD±RW)

See footnotes for more detailed information

© Lenovo

US model(s) announced February 22 or April 5, 2011

US model(s) withdrawn effective October 2011 or December 2012
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<th>Type-model</th>
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<th>Global (G)</th>
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<td>2GBx1</td>
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<td>Pro 64</td>
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</tbody>
</table>

- Some models are part of the Global Models Plus program with limited onsite service² three-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning _Mainstream business performance; two spindles_
Processor _Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)_
_DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology_
Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)_
_DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology_
Memory 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Optical DVD burner, 12.7mm thin, fixed, not removable, tray-in
SATA disk _Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7nm high, removable, upgradable_ _Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7nm or 9.5nm high, removable, upgradable, Active Protection System™_
Audio support Intel AMT
Blu-ray Drive
Modem Wireless WAN upgradable
Network adapter
Similar product Lenovo ThinkPad L520 5017 (Onsite) - withdrawn

- Preloaded operating system
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Ready to install applications
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

Preloaded applications
- Norton Internet Security 2011 (30 days of virus definitions)
- Adobe Reader
- Skype for Windows
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel WinDVD (DVD+RW)
- Corel DVD MovieFactory Lenovo Edition (DVD+RW)

See footnotes for more detailed information
US model(s) announced February 22, 2011
US model(s) withdrawn effective October 2011 or December 2012

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ThinkPad® L520 Accessories - withdrawn

Memory
- 2GB PC3-10600 DDR3 L-H SODIMM: 55Y3710
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack): 57Y4416
- 4GB PC3-10600 DDR3 L-H SODIMM: 55Y3711

Storage and removable storage
- USB 2.0 Portable 500GB Hard Disk: 45K1690
- USB 2.0 Portable Secure 320GB Hard Disk: 43R2019
- USB 3.0 Secure 500GB Hard Drive: 0A65619
- USB 3.0 Secure 750GB Hard Drive: 0A65616
- Lenovo Slim USB Portable DVD Burner: 0A33988

Wireless WAN (Mini PCI Express)
- Only WWAN upgradable models:
  - Wireless WAN (Mini PCI Express)

Batteries
- ThinkPad Battery 70+ (6-cell): 0A36302
- ThinkPad Battery 70++ (9-cell): 0A36303
- ThinkPad External Battery Charger**: 40Y7625
  - Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/aldaycomputing

ThinkPad 65W AC Adapter**: 40Y7696
- Only compatible with the integrated graphics models.
- ThinkPad 90W AC Adapter: 40Y7659

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W UltraSlim AC/DC Combo Adapter 41R4493
- iPod and iPhone Charge Tip (L10a): 41R4481
- • Generic Micro USB charge tip (L18): 41R4490

More information at www.lenovopowertips.com

ThinkPad Wireless Laser Mouse 0A36407
- 52 Wireless via 2.4GHz technology using a micro-size USB receiver.

Carrying Cases
- Up to 15.6" widescreen models:
  - ThinkPad 15W Case Sleeve: 51J0477
  - Lenovo Messenger Max: 41U5253
  - Lenovo Performance BackPack: 41U5254
  - ThinkPad Business Topload Case: 43R2476
  - ThinkPad Business BackPack: 43R2482
  - Lenovo Sport BackPack - Red: 0A33896
  - Lenovo Sport Slimcase - Red: 0A33897
  - Lenovo Sport BackPack - Blue: 0B47298
  - Lenovo Sport Slimcase - Blue: 0B47300
  - Lenovo Sport Messenger - Blue: 0B47299
  - Lenovo Sport Slimcase - Grey: 0B47303
  - Lenovo Sport Messenger - Grey: 0B47302

More information at www.lenovo.com/support/cases

Monitors
- ThinkVision® L1711p 17" (VGA, DVI-D): 5047H82
  - ThinkVision L1900p 19" (VGA, DVI-D): 4431H81
  - ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)**: 2448MB6
  - ThinkVision L2250p Wide 22" (VGA, DVI-D): 2572H86
  - ThinkVision L2251p Wide 22" (VGA, DVI-D): 2572MB6
  - ThinkVision LT2452p Wide 24" (VGA, DVI-D)**: 4420MB2

- DigitalPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable: 0A36537.
- ThinkVision LT1421 Wide 14" Monitor with Protective Screen Cover (USB 2.0): 1452D56

More information at www.lenovo.com/support/monitors

Modem
- Lenovo Optical Mouse (USB): 06P4069
- Lenovo Laser Mouse (USB): 41U3074
- ThinkPad USB Laser Mous: 57Y4635
- Lenovo ScrollPoint® Mouse (USB, Optical): 31P7410
- ThinkPad Travel Mouse (USB, Optical): 31P7410
- Lenovo Bluetooth Laser Mouse: 0A36407
- Lenovo Wireless Laser Mouse**: 0A36188

Multimedia
- ThinkPad In-Ear Headphones with mic: 57Y4488

Modem
- USB 2.0 Lenovo modem: 43R1814

Security
- 3M 15.6" Privacy Filter from Lenovo: 0A61771
- Kensington® MicroSaver® Cable Lock: 73P2582
- Kensington Travel Head Cable Lock: 45K1620
- Lenovo Security Cable Lock: 57Y4303
- ExpressCard Gemplus Smart Card Reader**: 41N3043

For more information on accessories:
www.lenovo.com/accessories

Purchase Lenovo accessories
www.lenovo.com/support/accessories

Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoquickpick.com

An Options Compatibility Configurator for Lenovo systems

© Lenovo

(O-L520) February 2013
### ThinkPad T41 - withdrawn

#### Type-models and Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory (MB)</th>
<th>Graphics</th>
<th>Screen</th>
<th>Mini PCI</th>
<th>DC/AC Adapter</th>
<th>Battery</th>
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<td>256MB 14.1&quot;XGA</td>
<td>30GB DVD</td>
<td>DVD</td>
<td>Intel 11b/Wi-Fi</td>
<td>Modem Gigabit Yes</td>
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<td>Combo</td>
<td>Intel 11b/Wi-Fi</td>
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<td>6 XP Pro W G Oct 2003</td>
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</table>

#### Positioning

Perfect balance of performance and portability: two-spiral design

Intel® Pentium M Processor 1.4, 1.6 or 1.66 GHz with enhanced Intel SpeedStep™ technology and 400MHz system bus

#### L2 Cache Memory

1MB / on die (at processor speed) / ECC

256MB, 512MB, or 1GB std / 2GB max / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin 80-DIMM sockets / std mem in one socket / one socket available

#### Diskette Drive

None standard / use optional USB-based diskette drive

#### Display

2373-1HU: 14.1" (358.1mm) XGA (1024x768) TFFT color / Active Matrix / 150 nits

2373-7U: 14.1" (358.1mm) XGA+ (1040x1050) TFT color / Active Matrix / 150 nits

#### Graphics

Some: ATI® MOBILITY RADEON 7500 / AGP 4X / 32MB DRR1 (DDR-SGRAM)

#### Keyboard

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

#### Touchpad

One Mini PCI type III slot (Communications Bay) / customer upgradable

#### Audio Support

Sound: One Mini PCI type III slot (Communications Bay) / customer upgradable

#### Video Out

5-video output ports (TV-out) / one 4-pin industry standard connector

#### Bluetooth

Some: Bluetooth wireless technology in / CDC (with modem)

#### Security Chip

Embedded Security Subsystem 2.0 / hardware key storage / multi-factor authentication

#### Power-on password / supervisor password / hard disk password / asset ID (in hidden protected area)

#### Additional Security Features

- Active Protection System
- Active Matrix / 150 nits
- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover
- Hard Disk Drive Shock Absorber
- Bad Sector Scan
- Enhanced Intel SpeedStep
- Local File Encryption
- Passwords (client, supervisor, or local file encryption)
- Pointing device, "Press-to-Select," Internet Scroll Bar
- Palm Rest / pitch: 19mm; stroke: 2.5mm (std-size keys)
- One Communications Daughter Card (CDC) socket / customer accessible
- One Mini PCI type III slot (Communications Bay) / customer upgradable
- Two Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
- Optional travel bezel

#### Optical Disk

One optical drive in the display cover for optimal wireless signal reception

#### Hard Drive

Two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

#### Diskette Drive

None standard / use optional USB-based diskette drive

#### Diskette Drive

Some: DVD-ROM / 2/4X / speed / single-layer / removable from Ultrabay™ Slim

Some: DVD-ROM / 2/4X / speed / removable from Ultrabay Slim

One modular bay for interchangeable devices (right side) / 9.5mm high bay bay

30GB (4200 rpm) / 40GB HS (5400 rpm) / 60GB Ultra HS (7200 rpm) / 3.9mm high / removable and upgradeable 2nd disk / 9.5mm high bay

Some: 11a/b/g Wi-Fi32 wireless4, Mini PCI, Atheros

Some: 802.11b wireless4, Mini PCI, Cisco

#### Systemboard

Intel 82540EP chipset (MAC/PHY) / PXE boot

#### Ports

She PC Card Std slots 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door

Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (usb output)

Universal 72 watt AC adapter

Asset ID™ (system-specific info in use)

PC 2000-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

PXE 2.0-compliant

Image data Services available

International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty

### Software

Windows XP Professional

- Microsoft® Windows® XP Professional
- Disk-to-Disk Recovery
- (in hidden protected area)

#### Preloaded

- Access IBM
- Access Controls
- Adobe Reader
- Apple QuickTime Ultra
- RecordNow and Drive Letter
- Access (combo models)
- InterVideo WinDVD (combo models)
- Norton AntiVirus ( OEM edition)
- PC-Docor®
- ThinkPad Utilities
- Update Connector®

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Management Tools

Some: Intel 11b Wi-Fi Modem Gigabit Yes 6 XP Pro W G Oct 2003


### Model Numbers

- 2373-7U: Pentium M 1.6 512MB 14.1" XGA 7500 40HS Open; wireless upg 36 Modem Gigabit Yes 6 XP Pro W G Oct 2003

#### Limited Warranty

3 years / 1 yr battery - EasyServ™ on-site pickup and delivery / service upgrades available

#### Notes

- Powered by Intel Centrino™ mobile technology
- Lenovo US models announced 10/7/03

#### See footnotes for important warranty information

* © Lenovo

** Created by Lenovo Training Solutions Personal Systems Reference (PSREF)
## ThinkPad T41 (2379) - Express - withdrawn

### Positioning
- **Perfect balance of performance and portability; two-spindle system**

### Processor
- **Intel® Pentium® M Processor 1.66GHz with enhanced Intel SpeedStep™ technology and 400MHz system bus**
- **1MB L2 cache on die (at processor speed) / ECC 256MB or 512MB standard / 2GB max / P2C700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available**

### Diskette drive
- **None standard / use optional USB-based diskette drive**

### Ethernet
- **Gigabit ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE**

### Disk
- **40GB HS (5400 rpm), 9.5mm high / removable and upgradeable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / Hard Disk Drive Shock Absorber (shock protection)**

### Display
- **Active Matrix / 150 nits**
- **14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits**
- **All: one latch to unlatch and open with one hand**

### Graphics external
- **Embedded Security Subsystem 2.0**
- **RADEON® 9000 technology1 and 400MHz system bus**

### Audio support
- **16-bit stereo / 1 watt / volume up, down, mute buttons / internal mic / InterVideo WinDVD (combo mdls) / RecordNOW and Drive Letter Access / 24 hour x 7 day18 toll-free warranty**

### Software
- **Windows XP Professional**
  - **Microsoft Windows XP Professional**
  - **Disk-to-Disk Recovery (in hidden protected area)**

### Battery
- **6-cell models: 4.4 to 4.7 hr; Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim battery: 9 hr with optical drive and battery: 256MB DDR1 (DDR-SDRAM) CL2.5 / non-parity / support with optical drive and battery: DUK: 4.8 (2.2 kg); DU: 5.0 lb (2.3 kg) / Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover / Lithium Ion 6-cell or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim / 6-cell: 4.4 to 4.7 hr; Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim battery: 9 hr**

### System Reference
- **Lenovo Personal Systems Reference (PSREF)**
- **ThinkPad notebooks implement Embedded Security Subsystem 2.0 (security chip)**
- **ImageUltra™ technology1 and 400MHz system bus**
- **Intel® Centrino™ mobile technology**

### Limited warranty
- **3 years/1 year battery - EasyServ™ onsite pickup and delivery / service upgrades22 avail**

### Preloaded
- **Access IBM**
- **Access Connections™**
- **Adobe Reader**
- **Rapid Restore™ Ultra**
- **RecordNOW and Drive Letter Access (combo models)**
- **InterVideo WinDVD (combo mdls)**
- **Norton AntiVirus (OEM edition)**
- **PC-Doctor®**
- **ThinkPad Utilities**
- **Update Connector22 avail**

### Downloadable
- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**
- **Client Security Software (for security chip)**
- **License (CD not included)**
  - **Lotus® Smartsuite Millennium and Lotus Notes® Stand-alone Client**

### ServicePac
- **ServicePac 5yr IOR 9x5 NBD**
- **ServicePac 4yr IOR 9x5 NBD**
- **ServicePac 3yr IOR 9x5 NBD**
- **ServicePac 2yr IOR 9x5 NBD**
- **ServicePac 1yr IOR 9x5 NBD**
- **ServicePac 4yr P/L P/U Depot**
- **ServicePac 5yr P/L P/U Depot**

---

### Additional Notes
- **See footnotes for important warranty information**
- **Powered by Intel Centrino™ mobile technology**
- **Lenovo**
- **© Lenovo**
- **(T41B3) October 2005**
- **US models announced October 7, 2003**
- **US models withdrawn effective October 2004 or December 2005**

### Table

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<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz Memory</th>
<th>Graphics controller</th>
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<td>3 yrs Oct 2003</td>
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### Footnotes
- **1** Windows XP Professional
- **2** Disk-to-Disk Recovery (in hidden protected area)
- **3** Preloaded
- **4** Some: 11a/b/g Wi-Fi wireless, Mini PCI, Atheros
- **5** All: one latch to unlatch and open with one hand
- **6** Ultrabay Slim
- **7** 2GB max
- **8** ATRON 9000
- **9** Embedded Security Subsystem 2.0
- **10** Active Protection System
- **11** Universal 72 watt AC adapter
- **12** Asset ID™ system-specific info in chip accessed over network
- **13** PC 2001-compliant
- **14** ACPI 1.0b and 2.0-compliant
- **15** CMM and 2.0-compliant
- **16** PXE 2.0-compliant
- **17** ENERGY STAR® compliant
- **18** ImageUltra™ Services available International Warranty Service
- **19** 24 hour x 7 day toll-free warranty during the warranty period via 800-IBM-SE RV (426-7378)
- **20** 6-cell models: 4.4 to 4.7 hr; Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim battery: 9 hr
- **21** 24 hour x 7 day toll-free warranty during the warranty period via 800-IBM-SE RV (426-7378)
- **22** 6-cell models: 4.4 to 4.7 hr; Optional 9-cell: 7 hr; 9-cell plus Ultrabay Slim battery: 9 hr
- **23** 24 hour x 7 day toll-free warranty during the warranty period via 800-IBM-SE RV (426-7378)
- **24** 24 hour x 7 day toll-free warranty during the warranty period via 800-IBM-SE RV (426-7378)
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<th>Display</th>
<th>Diskette drive</th>
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<th>Processor</th>
<th>Optional</th>
<th>Mini PCI</th>
<th>CDC modem/Bluetooth</th>
<th>Ethernet on planar</th>
<th>Security chip</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
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</table>

**Software**

- Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-To-Disk Recovery
  - In hidden protected area

**Preloaded**

- Access IBM
- Access Connections
- Adobe Reader
- Rapid Restore Ultra
- RecordNOW! and Drive Letter Access (combo models)
- InterVideo WinDVD (combo mdls)
- Norton Antivirus (OEM edition)
- PC-Doctor
- ThinkPad Utilities
- Update Connectors

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**

( CDDL not included)

- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client

---

**Limited warranty**

3 years/1 yr battery - EasyServ® on-site pickup and delivery / service upgrades available

<table>
<thead>
<tr>
<th>Type-model</th>
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<th>Memory</th>
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See footnotes for important warranty information

US models announced October 28, 2003

US models withdrawn effective October 2005

* Powered by Intel Centrino™ mobile technology

© Lenovo (T41p) October 2005

Online at ibm.com/services/its/us/source/computers/pdfs/ThinkPad® T41p (2373) - withdrawn.pdf
ThinkPad T42 (Entry) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSRF)

SOFTWARE

Windows XP Professional
	- Microsoft Windows XP Professional
	- Disk-To-Disk Recovery (in hidden protected area)

Preloaded
	- Access Program
	- Access Connections
	- Rescue and Recovery
	- RecordNOW and Drive Letter
	- Access powered by Sonic products
	- InterVideo WinDVD (combo models)
	- Norton AntiVirus (OEM edition)
	- PC-Doctor
	- ThinkPad Utilities
	- Adobe Reader
	- Update Connector

Downloadable
	- IBM Director Agent
	- Software Delivery Assistant
	- System Migration Assistant
	- Client Security Software (for security chip)

License (CD not included)
	- Lotus SmartSuite Millennium
	- Lotus Notes Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.0-compliant
ENERGY STAR-compliant
ImageUltra Services available
International Warranty Service
24 hour x 7 day toll-free support
Extensive post-warranty support during the warranty via 800-IBM-SERV (426-7378)

The UltraBay Slim supports:
	- standard or optional CD-R/DVD combo drive
	- optional DVD or DVD-RW drive
	- optional second battery
	- optional HDD adapter (for 2nd disk)
	- optional travel bezel

ThinkPlus
	- 2-year LOR 9x5 NBD
	- 3-year LOR 9x5 NBD
	- 4-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel Centrino mobile technology

US models announced May 11 or August 17, 2004
US models withdrawn effective August 2005 or October 2006

© Lenovo (T42) October 2006
## ThinkPad T42 (14.1" display) - withdrawn

### Type-model Processor Speed GHz Memory Screen Graphics controller Disk size GB Optical Mini PCI Comm Bay Modem/ Bluetooth™ Security bonus preorder Workhorse (W) W/ (G) Avail.
<table>
<thead>
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<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
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<th>Graphics controller</th>
<th>Disk size</th>
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<td>Mod/Blue</td>
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<td>XP Pro W</td>
<td>May 2004</td>
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### Positioning

- **Processor**: Perfect balance of performance and portability; two-spindle system
- **L2 cache**: 2MB on die (at processor speed) / ECC
- **Memory**: 256MB, 512MB or 1GB std / 2GB max / P2C720 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

### Disk drive

- **Hard drive**: None standard / use optional USB-based disk drive
- **DVD-ROM**: Some: DVD-ROM/CD-RW / 24X/24X/24X/24X/i3 speed / removable from Ultrabay Slim

### Display

- **Some**: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Some**: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits

### Graphics

- **Desktop**: ATI MOBILITY™ RADEON 7500 / AGP 4X / 64MB DDR1 / D3 DRAM 9600
- **External monitor support**: via analog DB-15 connector / up to 2048x1536x16.7M / DDC2B

### Battery

- **Battery**: Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim
- **Battery life**
  - Up to 6.5 hours: Optional Card
  - Up to 7.5 hours: 9-cell Ultrabay Slim: battery: up to 9.5 hours

### Architecture

- **Processor**: Intel 855PM chipset / B2855P Memory Controller Hub (MCH-M) / 82801DBM ICH-4 M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet, MAC, Low Pin Count [LPC] interface, USB, Bluetooth) / PCI bus 2.2 32-bit, 33MHz
- **Keyboard**: 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)
- **Touchpad**: UltraNav multi-pointing system / touch pad below keyboard / Tap Zones
- **ThinkLight™**: Illuminates the keyboard to improve visibility in low-light conditions

### PC Card Std slots

- **PC Card Std slots**: 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door
- **Ports**: Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / 2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door
- **Modem**: Intel 11b/g Mod/Blue Yes XP Pro W G May 2004
- **Ethernet**: 802.11b / Intel 82531 chipset

### Limited warranty

- **3-year**: 3-year 1st-year battery - EasyServ™ / on-site pickup and delivery / service upgrades available
- **256MB**: PC2700 DDR-SDRAM CL2.5 SOD 31P9830
- **512MB**: PC2700 DDR-SDRAM CL2.5 SOD 31P9830
- **1GB**: PC2700 DDR-SDRAM CL2.5 SOD 31P9830
- **USB 2.0**: Portable Diskette Drive 05K9276
- **USB 2.0**: CD-RW/DVD-ROM Combo II Drive 40Y8637
- **Multi-Burner**: Ultrabay Slim Drv (curve) 40Y8622
- **Video out**: S-video out port (TV out) / one 4-pin industry standard connector
- **Audio support**: Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

### License

- **CD (not included)**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Preload

- **Preload**: Access Program
- **Preload**: Access Connections
- **Preload**: Rescue and Recovery™

### Downloadable

- **Downloadable**: IBM Director Agent
- **Downloadable**: Software Delivery Assistant
- **Downloadable**: System Migration Assistant
- **Downloadable**: Client Security Software (for security chip)

### Other options

- **ThinkPlus 5-year LOR 9x5 NBD**: 41C9175
- **ThinkPlus 3-year LOR 9x5 NBD**: 41C9176
- **ThinkPlus 4-year LOR 9x5 NBD**: 41C9178
- **ThinkPlus 5-year LOR 9x5 NBD**: 41C9180
- **ThinkPlus 2-year LOR 9x5 NBD**: 41C9175
- **ThinkPlus 3-year LOR 9x5 NBD**: 41C9176
- **ThinkPlus 4-year LOR 9x5 NBD**: 41C9178
- **ThinkPlus 5-year LOR 9x5 NBD**: 41C9178
- **ThinkPlus 2-year LOR 9x5 NBD**: 41C9180
- **Post-warranty annual maintenance agreements at.lenovo.com/thinkplus/warranty

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*See footnotes for important warranty information*  
+ Powered by Intel Centrino™ mobile technology  
+ Lenovo US models announced May 11, 2004  
+ Lenovo US models withdrawn effective May 2005 or May 2006
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<tr>
<th>Type-model</th>
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**Positioning**

- **ThinkPad Processor**
  - Intel® Pentium® M Processor 725 (1.6GHz), 735 (1.7GHz) or 745 (1.8GHz) with Enhanced Intel SpeedStep™ technology and 400MHz system bus
- **L2 cache Memory**
  - 2MB or 512MB standard 2GB max / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std mem in one socket / one available
- **Diskette Drive**
  - None standard / use optional USB-based diskette drive
- **None** D-ROM / 24x/8x speed / single-layer / removable from Ultrabay™ Slim
- **Combo** D-ROM / 24x/24x/24x/4x/4x speed / removable from Ultrabay Slim
- **Ultrabay Slim** One modular bay for interchangeable devices (right side) / 9.5mm high bay
- **Disk** 30GB8 (4200 rpm), 40GB HS (5400 rpm), 60GB Ultra HS (7200 rpm), or 80GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd disk / Hard Disk Drive Shock Absorber / Active Protection System™

**Software**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- **Preloaded**
  - Rescue and Recovery™
  - Access Preloaded programs and files
  - Access Connections
  - Norton AntiVirus
  - PC-Doctor®
  - ThinkPad Utilities
  - Adobe Reader
  - Update Connector™
  - RecordNOW and Drive Letter
  - Access powered by Sonic products (combo models)
  - InterVideo WinDVD (combo, DVD)
  - Fingerprint Software (fingerprint models)
  - Client Security Software (for security chip)

**License**

- CD (not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**ThinkPad notebooks implement**

ThinkVantage™ technologies and design:

Visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter

Asset ID™, (system-specific info in chip accessed over network)

PC 2001-compliant

ACPI 1.0b and 2-compliant

CIM and DMI 2.0-compliant

PXE 2.1-compliant

ENERGY STAR®-compliant

International Warranty Service

24 hour 7 day 7 day toll-free warranty support during the warranty

Limited Warranty

- 3-year: 1 year battery - EasyServ™ onsite pickup and delivery / service upgrades avai

See footnotes for important warranty information.

* Powered by Intel Centrino™ mobile technology

US models announced October 5 or November 30, 2004 or January 11 or November 15, 2005

US models withdrawn effective May 2005

© Lenovo (T4214C) April 2006
<table>
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**Positioning Processor**

Perfect balance of performance and portability: two-spindle system

**L2 cache Memory**

2MB / on die (at processor speed) / ECC

**2373-6YU**

512MB or 1GB Std / 2GB max / PCI2700 333MHz DDR1 / non-parity / CL2.5 / 200-pin SOM-DIMM sockets / 80-pin memory in die socket / one socket available

**Diskette drive Combo**

None standard / use optional USB-based diskette drive

**DVD-ROM/RW**

Some: DVD-ROM/CD-RW/DVD-RW / 24X/24X/24X/8X speed / removable from Ultrabay Slim

**Ultrabay Slim Disk**

Some: CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Slim

**Dimensions**

Up to 4.4 hr; Optional 9-cell: up to 7 hr; 9-cell plus Ultrabay Slim battery: up to 9 hr

**Weight**

Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

**Battery- type**

Embedded Security Subsystem 2.0

**Security chip**

Standard Security Subsystem 2.0.1 and 400MHz system bus

**Supported software**

- Microsoft® Windows® XP Professional
  - Embedded Security Subsystem 2.0
  - Rescue and Recovery®
  - RecordNOW and Drive Letter
  - Microsoft® Windows® XP Media Center Edition
  - IBM Director Agent
  - ThinkVantage® technologies and desktop services
  - ThinkPlus® 3-year LOR 9x5 NBD
  - ThinkPlus® 3-year LOR 9x5 NBD
  - ThinkPlus® 3-year LOR 9x5 NBD
  - ThinkPlus® 3-year LOR 9x5 NBD
  - ThinkPlus® 3-year LOR 9x5 NBD

**Limitations**

- 3-year/1-year battery - EasyServ® on-site pickup and delivery / service upgrades® available

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See footnotes for important warranty information

© Lenovo

US models announced May 11, 2004

US models withdrawn effective May 2005 or May 2006
### ThinkPad T42 (15" display) - withdrawn

#### Type-model | Processor | Speed (GHz) | Memory | Screen | Graphics controller | Disk | Optical | Mini PCI | Comm Bay | Bluetooth™ | Finger reader | Security chip | Battery life | Workhorse (W) or Global (G) Avail date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2373-L1U | Pentium M 735 | 1.7 | 512MB | 15.0" XGA | 7500 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 5.0 hr | W G | Oct 04
2373-LAU | Pentium M 735 | 1.7 | 750MB | 15.0" XGA | 9600 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 5.0 hr | W G | Nov 04
2373-L4U | Pentium M 735 | 1.7 | 512MB | 15.0" SXGA+ | 9600 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 3.9 hr | W G | Oct 04
2373-LSU | Pentium M 735 | 1.7 | 750MB | 15.0" SXGA+ | 9600 | 40HS Combo | Intel 11b Wi-Fi™ | Mod/Blue | Finger | Yes | 3.9 hr | W G | Feb 05
2373-LGU | Pentium M 735 | 1.7 | 512MB | 15.0" SXGA+ | 9600 | 40HS Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 3.9 hr | W G | Feb 05
2373-NU1 | Pentium M 745 | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 80HS Combo | Intel 11a/b/g / Wi-Fi™ | Mod/Blue | Finger | Yes | 3.9 hr | W G | Feb 05
2373-NZ2 | Pentium M 745 | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 80HS Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 3.9 hr | W G | Feb 05
2373-NZ4 | Pentium M 745 | 1.8 | 512MB | 15.0" SXGA+ | 9600 | 80HS Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 4.1 hr | W G | Nov 05
2373-LCU | Pentium M 745 | 1.8 | 750MB | 15.0" SXGA+ | 9600 | 80HS Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 4.1 hr | W G | Nov 05

---

#### Software

- Windows XP Professional
- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Disk-to-Disk Recovery

#### Preloaded

- Rescue and Recovery™
- Access Passwords
- Access Connections™
- Norton AntiVirus (with 90 days of virus definitions)
- PC-Doctor®
- ThinkPad Utilities
- Adobe® Reader®
- Update Connector®
- RecordNOW!® and Drive Letter

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

### Specifications

- **Processor**
  - Intel® Pentium® M Processor 735 (1.7 GHz)
- **Memory**
  - 512MB / 750MB / 1GB (SO-DIMM)
- **Graphics controller**
  - Intel® 915P / 915G / GMA 900MSE / DP / AGP 4X
- **Battery**
  - 6-cell / 9-cell / Li-Polymer / Li-Ion
- **Display**
  - WXGA / SXGA+ / XGA
- **Diskette drive**
  - Standard
- **Disk Drives**
  - 512MB / 2GB hard drive / DVD/CD-RW drive
- **Audio support**
  - Stereo speakers / microphone
- **Ports**
  - USB / Ethernet / Parallel / Serial / Audio / Video / Ethernet
- **Video out**
  - S-video / Composite / component / DVI-D / HDMI / DisplayPort
- **Sensors**
  - Fingerprint / Airbag / Infrared
- **Dimensions**
  - 360 x 257 x 25.6 mm
- **Weight**
  - 2.7 kg

### Limited warranty

- **3-year** - 1-yr battery - EasyServ® - onsite pickup and delivery - service upgrades available

### Contact Information

- 800-IBM-SERV (426-7378)

### Lenovo Corporate Knowledge Base

- lenovo.com
<table>
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<th>Type-model</th>
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**Notes:**
- *these small and medium business (SMB) models are part of the US TopSeller™ program*
- *the ThinkPad 2378 has a 3-year limited warranty (other ThinkPad T42 2379 TopSeller models have a 3-year limited warranty)*

**Software:**
- Windows XP Professional
  - *Microsoft® Windows® XP Professional*
  - *Disk-to-Disk Recovery (in hidden protected area)*

**Downloadable:**
- *IBM Director Agent*
- *software Delivery Assistant*
- *System Migration Assistance*
- *Client Security Software (for security chip)*

**License:**
- *Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client*

**Limited warranty:**
- *1-year - EasyServ™ onsite pickup and delivery, service upgrades available*
### ThinkPad T42 (2378) - TopSeller (October 2004) - withdrawn

#### Type-model Processor Speed GHz Memory Screen Graphics controller Disk Optical Mini PCI Comm Bay wireless CDC modem/Bluetooth Finger print reader security chip Battery life cells Battery limited warranty Avail date

| 2378-R1U | Pentium M 725 | 1.6 | 256MB | 14.1" XGA | 7500 | 40HS | Combo | Intel 11b/g | Modem | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04 |
|----------|---------------|------|--------|----------|------|------|-------|-----------|--------|--------|-----|-----|-------|
| 2378-R2U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 9600 | 60U | Combo | Intel 11b/g | Modem | Finger | Yes | 7.2 hr | 9 | 1-yr Oct 04 |
| 2378-R3U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 9600 | 60U | Combo | Intel 11b/g | Modem | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04 |
| 2378-R4U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 9600 | 60U | Combo | Intel 11b/g | Modem | Finger | Yes | 7.2 hr | 9 | 1-yr Oct 04 |
| 2378-R5U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 7500 | 60U | Combo | Intel 11b/g | Modem | Finger | Yes | 5.1 hr | 6 | 1-yr Oct 04 |
| 2378-R6U | Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 9600 | 60U | Combo | Intel 11b/g | Modem | Finger | Yes | 4.3 hr | 6 | 1-yr Nov 05 |

* These small and medium business (SMB) models are part of the US TopSeller™ Program

#### SOFTWARE

- **Windows XP Professional**
  - Microsoft Windows XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
- **Preloaded**
  - Rescue and Recovery™ technology
  - Access Program
  - Access Connections® technology
  - Norton AntiVirus
  - PC-Doctor® for Windows
  - ThinkPad Utilities
  - Adobe® Reader
  - Update Connector™
  - RecordNOW and Drive Letter Access powered by Sonic products
  - Gemstone wireless and Bluetooth
  - ThinkVantage Technologies
  - ThinkPlus services at Lenovo.com/thinkplus

#### Architectures

- **Intel® Pentium® M Processor 725 (1.6GHz)**, 735 (1.7GHz), or 745 (1.8GHz)
  - With enhanced Intel SpeedStep™ technology and 400MHz system bus

#### Graphics

- **ThinkView Graphics**
  - Ultrabay Slim™
  - 1-year limited warranty (other ThinkPad T42 2379 TopSeller models have a 3-year limited warranty)

#### Diskette drive

- **20MB** on die (at processor speed) / **ECO**

#### Diskette drive

- **None standard** / use optional USB-based diskette drive

#### Display

- **14.1"** (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
  - Some: **14.1"** (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
  - Some: **15.0"** (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits
  - Some: **15.0"** (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

#### Dimensions

- **14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2", 311mm x 255mm x 26.6-31.4mm, 15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4", 339mm x 268mm x 31.6-35mm**

#### Weight

- **14.1" XGA models**: 4.9 lb (2.3kg) / 14.1" SXGA+: 5.4 lb (2.5kg) / 15.0" XGA: 5.7 lb (2.6kg) / 15.0" SXGA+: 5.8 lb (2.6kg)

#### Case material

- **Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover, Lithium Ion-6 or 9-cell / intelligent / supports unique 2nd battery in Ultrabay Slim

#### Battery - life

- **6-cell: up to 4.9 hr; 9-cell: up to 7.0 hr; 9-cell plus Ultrabay Slim battery: up to 9.0 hr**

#### Architecture

- **Intel 855PM chipset / 82855P Memory Controller Hub (ICH-M / MCH-8) / 82801DBM**
  - ICH4-M/IO Controller Hub (ATA-100 IDE, PCI bus, Ethernet MAC, Low Pin Count [LPC] interface, USB, Bluetooth, fingerprint) / PCI bus 2.2 32-bit, 33MHz
  - Pentium M Processor 725 (1.6GHz)
  - Mini PCI 1-socket expansion slot / PCI bus 33MHz (security chip; PC7392 Super I/O for diskette, parallel, infrared, docking-based ports)

#### PC Card Std slots

- **2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door (security chip; PC87392 Super I/O for diskette, parallel, infrared, docking-based ports)**

#### Video output

- **S-video output port (TV out) / one 4-pin industry standard connector**

#### Audio

- **Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)**

#### Power

- **Power button / power-on password / hard disk password / supervisory password / security keyhole

#### Security

- **ThinkPad Security Subsystem 2.0™ / Fingerprint Reader / TC-compliant**

#### Finger print reader

- **Fingerprint Reader on palm rest / swivel sensor / integrated with security chip**

#### Limited warranty

- **Limited warranty™ - 1-year** - EasyServ™ onsite pickup and delivery / service upgrades available

#### Licenses

- **Windows XP Professional**
  - Microsoft Windows XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
- **Preloaded**
  - Rescue and Recovery™ technology
  - Access Program
  - Access Connections® technology
  - Norton AntiVirus
  - PC-Doctor® for Windows
  - ThinkPad Utilities
  - Adobe® Reader
  - Update Connector™
  - RecordNOW and Drive Letter Access powered by Sonic products
  - Gemstone wireless and Bluetooth
  - ThinkVantage Technologies
  - ThinkPlus services at Lenovo.com/thinkplus

#### Other options

- **ThinkPad Port Replicator II 74P6733**
- **ThinkPad Mini Dock 287810U**
- **ThinkPlus 5-year P&L P/U Depot 41C9170**
- **ThinkPlus 5-year P&L P/U Depot 41C9171**
- **ThinkPlus 5-year P&L P/U Depot 41C9172**
- **ThinkPlus 5-year P&L P/U Depot 41C9173**
- **ThinkPlus 5-year P&L P/U Depot 41C9174**
- **ThinkPlus 2-year P&L P/U Depot 41C9166**
- **ThinkPlus 2-year P&L P/U Depot 41C9167**
- **ThinkPlus 2-year P&L P/U Depot 41C9168**
- **ThinkPlus 3-year P&L P/U Depot 41C9169**
- **ThinkPlus 3-year P&L P/U Depot 41C9170**
- **ThinkPlus 3-year P&L P/U Depot 41C9171**
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- **ThinkPlus 4-year P&L P/U Depot 41C9175**
- **ThinkPlus 4-year P&L P/U Depot 41C9176**
- **ThinkPlus 4-year P&L P/U Depot 41C9177**
- **ThinkPlus 4-year P&L P/U Depot 41C9178**
- **ThinkPlus 4-year P&L P/U Depot 41C9179**
- **ThinkPlus 4-year P&L P/U Depot 41C9180**
- **ThinkPlus 5-year LOR 9x5 41C9166**
- **ThinkPlus 5-year LOR 9x5 41C9167**
- **ThinkPlus 5-year LOR 9x5 41C9168**
- **ThinkPlus 5-year LOR 9x5 41C9169**
- **ThinkPlus 5-year LOR 9x5 41C9170**
- **ThinkPlus 5-year LOR 9x5 41C9171**
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- **ThinkPlus 5-year LOR 9x5 41C9177**
- **ThinkPlus 5-year LOR 9x5 41C9178**
- **ThinkPlus 5-year LOR 9x5 41C9179**
- **ThinkPlus 5-year LOR 9x5 41C9180**

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

US models announced October 5, 2004 or November 15, 2005

US models withdrawn effective May or October 2006

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**Type-model** | **Processor** | **Speed (GHz)** | **Cache Memory** | **Graphics Controller** | **Disk Controller** | **Mini PCI/Comm Bay** | **CDC modem/Bluetooth** | **Security chip** | **Workhorse (W)** | **Global (G)** | **Limited warranty/valid date**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2379-DWU Pentium® M | 1.5 | 256MB | 15.0" XGA | 7500 | 400HS | Combo | Intel 11b/g | Modem | Yes | XP Pro | No | 3-yr May 2004
2379-5VU Pentium M 725 | 1.6 | 512MB | 14.1" XGA | 9000 | 400HS | Combo | Intel 11b/g | Modem | Yes | XP Pro | No | 3-yr Aug 2004
2379-DXU Pentium M 735 | 1.7 | 512MB | 15.0" SXGA+ | 9600 | 60U | Combo | Intel 11b/g | Mod/Blue | Yes | XP Pro | No | 3-yr Aug 2004

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The 2379 has a 3-year limited warranty (other ThinkPad T42 2378 TopSeller models have a 1-year limited warranty)

### SOFTWARE

**Windows XP Professional**
- Microsoft Windows XP Professional

- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNOW and Drive Letter
- Access powered by Sonic products (combo models)
- Intel/Video WinDVD (combo models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License** (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- Assisted ID (allows specific info in chip accessed over network)
- PC100-1 compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.0-compliant
- ENERGY STAR®-compliant

ImageUltra™ services available internationally

Warranty 24 hour 7 day toll-free warranty support during the warranty via 800-IBM-SEVR (426-7378)

ThinkPlus™
- 2 year LOR 9x5 NBD
- 3 year LOR 9x5 NBD
- 4 year LOR 9x5 NBD
- 5 year LOR 9x5 NBD
- 4 year P&L P/U Depot
- 5 year P&L P/U Depot

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
| Type-model | Processor | Speed (MHz) | Memory | Screen | Graphic controller | Disk controller | Graphics card | CDC modem/Bluetooth | Finger print reader | Security chip | Battery life | Battery limited warranty | Avail date |
|------------|-----------|-------------|--------|--------|--------------------|---------------|--------------|-------------------|-------------------|----------------|--------------|------------------|------------------|----------|
| 2379-R1U  | Pentium M 725 | 1.6 | 256MB | 14.1" XGA | 7500 | 40HS | Combo | *Intel 11b/g* | Finger | Yes | 5.1 hr | 6 | 3-yr | Oct 04 |
| 2379-RSU  | Pentium M 745 | 1.8 | 256MB | 15.0" XGA | 7500 | 40HS | Combo | *Intel 11b/g* | Finger | Yes | 7.2 hr | 9 | 3-yr | Oct 04 |
| 2379-R6U  | Pentium M 725 | 1.6 | 512MB | 15.0" XGA | 7500 | 40HS | Combo | *Intel 11b/g* | Finger | Yes | 5.0 hr | 6 | 3-yr | Oct 04 |
| 2379-R8U  | Pentium M 745 | 1.8 | 512MB | 15.0" XGA | 7500 | 40HS | Combo | *Intel 11b/g* | Finger | Yes | 5.0 hr | 6 | 3-yr | Oct 04 |
| 2379-RBU  | Pentium M 745 | 1.8 | 512MB | 15.0" XGA+ | 9600 | 60U | Combo | *Intel 11b/g* | Finger | Yes | 5.9 hr | 9 | 3-yr | Oct 04 |
| 2379-R8U  | Pentium M 745 | 1.8 | 512MB | 15.0" XGA+ | 9600 | 60U | Combo | *Intel 11b/g* | Finger | Yes | 4.9 hr | 6 | 3-yr | Nov 05 |
| 2379-RHU  | Pentium M 745 | 1.8 | 512MB | 14.1" XGA | 9600 | 60U | Combo | *Intel 11b/g* | Finger | Yes | 4.3 hr | 6 | 3-yr | Nov 05 |

*These small and medium business (SMB) models are part of the US TopSeller® Program*

*The ThinkPad 7390 is a 3-year limited warranty (other ThinkPad T42 2378 TopSeller models have a 1-year limited warranty)*

**SOFTWARE**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus (with 90 days of virus definitions)
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™
- RecordNOW and Drive Letter

**License (CD not included)**

- Lenovo® SmartSuite Millennium and Lotus® Notes® Stand-alone Client

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
### ThinkPad T42 (2373) - Education - withdrawn

#### Type-model | Processor | Speed | GHz | Memory | Screen | Graphics controller | Disk | Optical | Mini PCI | Comm | wave Frequency | CDC | modem | Bluetooth**™** | Security | chip | Preload | Limited warranty**™** Available date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
2373-6U | Pentium® M 735 | 1.7 | 512MB | 1.5 | XGA+ | 9600 | 40HS | Combo | Intel 11b/g | Modern | Yes | XP | Pro | EasyServ | May 2004
2373-3XU | Pentium® M 735 | 1.7 | 512MB | 1.5 | XGA+ | 9600 | 40HS | Combo | Intel 11b/g | Modern | Yes | XP | Pro | EasyServ | May 2004

*The 2373 has an EasyServ™ on-site pickup and delivery 3-year limited warranty*

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes and limited for use by qualified students and/or teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.

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**Software**

Windows XP Professional
- Microsoft® Windows® XP Professional
- Disk-to-Disk Recovery

**Preloaded**
- Education software from Vital Source Technologies®
- Local File Encryption

**License** (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

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See footnotes for important warranty information

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US models announced May 11, 2004
US models withdrawn effective May 2006
#### ThinkPad T42 (2374) - Education - withdrawn

The 2374 has a limited onsite service** 3-year limited warranty

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.

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** The 2374 has a limited onsite service** 3-year limited warranty

#### Windows XP Professional

- Microsoft Windows XP Professional
- Disk-to-Disk Recovery

#### Preloaded

- Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™
- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNOW and Drive Letter Access powered by Sonic products (combo, DVD-RW models)
- IntelVideo WinDVD (combo, DVD-RW models)
- IntelVideo WinDVD Creator (DVD-RW models)
- Norton AntiVirus (OEM edition)
- PC-Documents
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

#### License (CD not included)

- Lenovo™ SmartSuite Millennium and Lenovo™ Notes Stand-alone Client

#### Security chip

- Embedded Security Subsystem 2.0™ / hardware key storage / multi-factor authentication / local file encryption / Atmel™ chip / TCG-compliant

#### Limited warranty**

- 3-year 1-year battery, limited mobility service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

#### See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

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(2374) April 2006
## Specifications

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<th>Security chip</th>
<th>Battery</th>
<th>Workhorse or Global (G) (A)</th>
<th>Preload</th>
<th>Software</th>
<th>Downloadable</th>
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<tbody>
<tr>
<td>2373-GVU</td>
<td>Pentium M</td>
<td>745</td>
<td>1.8</td>
<td>512M</td>
<td>SXGA+</td>
<td>FireGL 600 Combo</td>
<td>11a/b/g Wi-Fi</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>No</td>
<td>Windows XP Professional</td>
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<td>745</td>
<td>1.8</td>
<td>1GB</td>
<td>SXGA+</td>
<td>FireGL 600 Combo</td>
<td>11a/b/g Wi-Fi</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>No</td>
<td>Windows XP Professional</td>
<td></td>
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<tr>
<td>2373-GTW</td>
<td>Pentium M</td>
<td>745</td>
<td>1.8</td>
<td>1GB</td>
<td>SXGA+</td>
<td>FireGL 600 Combo</td>
<td>11a/b/g Wi-Fi</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>No</td>
<td>Windows XP Professional</td>
<td></td>
</tr>
<tr>
<td>2373-GRU</td>
<td>Pentium M</td>
<td>745</td>
<td>1.8</td>
<td>1GB</td>
<td>SXGA+</td>
<td>FireGL 600 Combo</td>
<td>11a/b/g Wi-Fi</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>May 2004</td>
<td>Windows XP Professional</td>
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<tr>
<td>2373-KTU</td>
<td>Pentium M</td>
<td>755</td>
<td>2.0</td>
<td>1GB</td>
<td>SXGA+</td>
<td>FireGL 600 Combo</td>
<td>11a/b/g Wi-Fi</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>No</td>
<td>Windows XP Professional</td>
<td></td>
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<tr>
<td>2373-KUU</td>
<td>Pentium M</td>
<td>755</td>
<td>2.0</td>
<td>1GB</td>
<td>SXGA+</td>
<td>FireGL 600 Combo</td>
<td>11a/b/g Wi-Fi</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>No</td>
<td>Windows XP Professional</td>
<td></td>
</tr>
</tbody>
</table>

### Security Features

- **ThinkPad Security**: Features Enhanced Intel SpeedStep™ technology and Intel 11b/g 32-bit Ethernet and Bluetooth™

### Display

- **Display**: 14.1" (358.1mm) SXGA+ (+1400x1050)**T** color / Active Matrix / 150 nits

### Graphics

- **Graphics**: ATI® MOBILITY™ FireGL™ T2 / AGP 4X / 128MB DDR1 / OpenGL® support

### Architecture

- **Architecture**: Intel® Pentium® M (745) 1.8GHz with Enhanced Intel SpeedStep™ technology and 400MHz system bus

### L2 cache

- **L2 cache**: 2MB / on die (at processor speed) / ECC

### Memory

- **Memory**: 512MB or 1GB std / 2GB max / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / one socket / one socket available

### Diskette drive

- **Diskette drive**: None standard / use optional USB-based diskette drive

### Computer Combo

- **Combo**: Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay™ Slim DVD-RW

### Ultrabay Slim Disk

- **Disk**: One modular bay for interchangeable devices (right side) / 9.5mm high bay

### Dimensions

- **Dimensions**: 14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm

### Weight

- **Weight**: 2.373 to 2.379 lbs / 1.07 to 1.13 kg

### Case material

- **Case material**: Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

### Battery

- **Battery**: Lithium / support / intelligent 2nd battery in Ultrabay Slim

### Video

- **Video out**: S-video out port (TV out) / one 2-pin industry standard connector

### Built-in Wireless

- **Built-in Wireless**: ThinkPad Bluetooth™ Wireless Technology / in CDC (with modem)

### Audio support

- **Audio support**: Soft audio / ICH AC97 controller / DirectSound®

### Security

- **Security**: Optical Hard disk drive password / supervisor password / security keyhole

### Limited warranty

- **Limited warranty**: 3-year 1-year battery - Savvy™, 3-year onsite pickup and delivery / service upgrades available

---

*See footnotes for important warranty information*
### ThinkPad T42p (15" display) - withdrawn

#### Type-model Processor Speed GHz Memory Screen Graphics controller Disk writer Modems Bluetooth Security chip Battery Workhorse (W) or Global (G) (Avail. (E) date)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk writer</th>
<th>Modems</th>
<th>Bluetooth</th>
<th>Security chip</th>
<th>Battery</th>
<th>Workhorse</th>
<th>or Global (G)</th>
<th>(Avail. (E) date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2373-HYU</td>
<td>Pentium M</td>
<td>1.5/1.6G</td>
<td>1GB</td>
<td>UXGA</td>
<td>FireGL 60U Combo 11a/b/g Wi-Fi&lt;sup&gt;20&lt;/sup&gt;</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>Free 2004</td>
<td>Yes</td>
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<td>May 2004</td>
<td>2004</td>
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<td>1GB</td>
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<td>Free 2004</td>
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<td>9 XP Pro</td>
<td>May 2004</td>
<td>2004</td>
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<tr>
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<td>1GB</td>
<td>UXGA</td>
<td>FireGL 60U DVD-RW</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>Free 2004</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>May 2004</td>
<td>2004</td>
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<tr>
<td>2373-KYU</td>
<td>Pentium M</td>
<td>1.5/1.6G</td>
<td>1GB</td>
<td>UXGA</td>
<td>FireGL 60U Combo 11a/b/g Wi-Fi&lt;sup&gt;20&lt;/sup&gt;</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>Free 2004</td>
<td>Yes</td>
<td>9 XP Pro</td>
<td>May 2004</td>
<td>2004</td>
</tr>
</tbody>
</table>

#### Positioning Processor
- Intel® Pentium® M Processor 745 (1.6GHz) or 755 (2.0GHz)
- With Enhanced Intel SpeedStep<sup>™</sup> technology and 400MHz system bus

#### L2 cache
- 2MB / on die (at processor speed) / ECC

#### Diskette drive
- No standard / use optional USB-based diskette drive

#### Memory
- Standard or optional CD-ROM/DVD-ROM / 2x2x4x24x8x2/<sup>32</sup> support / removable from Ultrabay Slim
- Some: CD-RW/DVD-RW Multi-Burner / removable from Ultrabay Slim

#### DVD-RW
- One modular bay for interchangeable devices (right side) / 9.5mm high bay
- 60GB<sup>B</sup> Ultra HS (7200 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay Slim / Hard Disk Drive Shock Absorber / Active Protection System<sup>TM</sup>

#### Display
- 15.0" (381.0mm) UXGA (1600x1200) TFT color / Auto Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

#### Graphics
- ATI® MOBILITY<sup>™</sup> FireGL T2 / AGP 4X / 128MB DDR1 / OpenGL® support

#### Keyboard
- 87-key / access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (size/key sizes)

#### TrackPoint<sup>®</sup>
- TrackPoint<sup>®</sup> pointing device, "Press-to-Select," Internet Scroll Bar<sup>™</sup>, magnifying glass / 87-key / Access IBM button / palm rest / touch pad / ThinkLight<sup>™</sup>

#### ThinkLight<sup>™</sup>
- Illuminates the keyboard to improve visibility in low-light conditions

#### Case Material
- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

#### Ultrabay Slim
- Battery life<sup>10</sup> / Weight<sup>3</sup> / Hard Disk Drive Shock Absorber / Active Protection System<sup>TM</sup>

#### Architecture
- Intel® 855PM chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBMICH-4/M I/O Controller Hub (ATA100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB, Bluetooth) / PCI bus 2.2 32-bit, 33MHz

#### PC Card Std
- 2 slots / Type 2, Type II, or Type III / CardBus 32-bit / integrated door
- Two USB (Version 2.0) / parallel / external DB-15 monitor / integrated (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

#### Video out
- 5-video out port (TV out) / one 4-pin industry standard connector

#### Wireless antenna
- UltraConnect<sup>®</sup> Antenna built into the display cover for optimal wireless signal reception

#### Mini PCI
- One Mini PCI type III slot (Communications Bay) / customer upgradable

#### Intel 11b Wi-Fi<sup>32</sup>
- One Mini PCI type III slot (Communications Bay) / customer upgradable

#### Intel 11g/b/g<sup>TM</sup>
- One Mini PCI type III slot (Communications Bay) / customer upgradable

#### CDC
- One Communications Daughter Card (CDC) / customer accessible

#### Modem
- 56K V.92 (96K-designed<sup>TM</sup>) modem in CDC / Conexant<sup>™</sup> chipset

#### Audio support
- Sound card / I/O / AC97 controller / DirectSound<sup>™</sup> / Gigabit ethernet on systemboard / Intel 82531 chipset / Enhanced Intel SpeedStep<sup>™</sup> technology and 400MHz system bus

#### Security chip
- Power-on password / hard disk password / supervisor password / security keyhole

#### Embedded Security System<sup>2.0</sup>
- Hardware key storage / multi-factor authentication / local file encryption / Atmel<sup>™</sup> chip / TCG-compliant

#### Limited warranty<sup>2</sup>
- 3-years/1-year battery - EasyServ<sup>TM</sup> on-site pickup and delivery / service upgrades<sup>™</sup> available

#### Preloaded
- Access Program / Access Connections<sup>™</sup> / Rescue and Recovery<sup>™</sup> / RecordNOW and Drive Letter

#### SOFTW ARE<sup>14</sup>
- Windows XP Professional
- Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional<sup>20</sup>
- Disk-to-Disk Recovery (in hidden protected area)

#### Downloadable
- IBM Director Agent / Software Delivery Assistant / System Migration Assistant / Client Security Software (for security chip)

#### License
- CD (not included)
- Lotus<sup>®</sup> SmartSuite<sup>™</sup> Millennium and Lotus<sup>®</sup> Notes<sup>™</sup> Stand-alone Client

#### Post-warranty annual maintenance agreements
- Universal 72 watt AC adapter / ACPI 1.0b and 2.0-compliant / CIM and DMI 2.0-compliant / PXE 2.0-compliant / ENERGY STAR<sup>®</sup>-compliant ImageUltra<sup>™</sup> Services available

#### Workhorse (W)
- 2-year LOR 9x5 NBD
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

* Powered by Intel Centrino<sup>®</sup> mobile technology

© Lenovo (T42P15) April 2006

See footnotes for important warranty information

US models announced May 11, 2004

US models withdrawn effective May 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk GB</th>
<th>Optical</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>Wireless</th>
<th>CDC modem/ Bluetooth</th>
<th>Finger Secu-Bat-</th>
<th>Workhorse (W) or Global (G) (Avail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2373-P1U</td>
<td>Pentium® M Processor 765 (2.1GHz) with Enhanced Intel SpeedStep™ technology an 400MHz system bus</td>
<td>2/0MB</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>FireGL 60U</td>
<td>DVD-RW</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>Mod/Blue</td>
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<td>5.8</td>
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<td>Pentium® M Processor 765 (2.1GHz)</td>
<td>2/0MB</td>
<td>1GB</td>
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<td>DVD-RW</td>
<td>11a/b II</td>
<td>11a/b II</td>
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<td>11a/b II</td>
<td>Mod/Blue</td>
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<td>FireGL 60U</td>
<td>DVD-RW</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>Mod/Blue</td>
<td>Finger Yes</td>
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<td>DVD-RW</td>
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<td>11a/b II</td>
<td>Mod/Blue</td>
<td>Finger Yes</td>
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<td>FireGL 60U</td>
<td>DVD-RW</td>
<td>11a/b II</td>
<td>11a/b II</td>
<td>11a/b II</td>
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<td>11a/b II</td>
<td>Mod/Blue</td>
<td>Finger Yes</td>
<td>5.3</td>
</tr>
</tbody>
</table>

**Positioning**
Perfect balance of performance and portability; two-spindle system

**Processor**
US models withdrawn effective May 2006

**L2 cache**
2MB

**Memory**
2GB std / 2GB max / PC2700 333MHz DDR1 / non-parity / CL2.5 / 2/0MB

**Disk drive**
No standard / use optional USB-based disk drive

**Display**
Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color | Active Matrix / 150 nits

**Keyboard**
87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-key sizes)

**Touchpad**
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**ThinkLight™**
UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm

**Weight**
Some: 6.4 lbs (2.9kg) / 11a/b II / 10.2 lbs (4.6kg)

**Battery - life**
9-cell: up to 6.0 hr; 9-cell plus Ultrabay Slim battery: up to 8.5 hr

**Architecture**
Intel 855PM chipset / 82855PM Memory Controller Hub (MCH-M) / 82810DBM ICH4-M IO Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB, Bluetooth, fingerprint) / PCI bus 2.2 32-bit, 33MHz

**Video out**
S-video out port (TV out) / one - per four industry standard connector

**Wireless antenna**
None

**Wireless**
Some: 11a/b wireless, PCI, PCI-Express 2200BG, Intel 82532 chipset

**Optical**

**Audio**

**Security**
Power-on password / hard disk password / supervisor password / security keyhole

**Fingerprint reader**

**Limited warranty**
3-year 1-year battery - EasyServ™ onboard pickup and delivery / service upgrades available

**SOFTWARE**
Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)

**Preloaded**
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus (with 90 days of virus definitions)
- PC-Doctor™
- ThinkPad Utilities
- Acrobat Reader
- Update Connector (for ThinkPad Dock)
- RecordNow! and Drive Letter Access powered by Sonic products (combo, DVD-RW)
- InterVideo WinDVD Creator (combo, DVD-RW)
- InterVideo WinDVD Creator (combo, DVD-RW)
- FingerPrint Software
- Client Security Software (for security chip)

**License**
- Lenovo (not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Additional information**
ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

**Universal 72 watt AC adapter**

**License**

**CD-ROM**

**Battery**

**Security chip**

**Fingerprint reader**

**Limited warranty**

**See footnotes for important warranty information**

* Powered by Intel Centrino® mobile technology

Lenovo (T42PO) April 2006

US models withdrawn effective May 2006

US models announced October 20, 2004 or January 11, 2005
**Type-model** | **Processor** | **Speed** | **Memory** | **Display** | **Battery** | **Limited** | **Avail date**
--- | --- | --- | --- | --- | --- | --- | ---
2378-DVU | Pentium® M 745 1.8 GHz | 15.0” UXGA | FireGL 80G DB-RW | Lithium Ion 6-cell | Yes | XP Pro 1-year | May 2004
2379-RKU | Pentium M 755 2.0 GHz | 15.0” UXGA | FireGL 80G DB-RW | Lithium Ion 6-cell | Yes | XP Pro 3-year | Nov 2005

*These small and medium business (SMB) models are part of the US TopSeller® Program*

---

**Positioning**

**Processor**

Perfect balance of performance and portability; two-sindle system

**L2 cache**

6 MB / on die (at processor speed) / ECC

**Memory**

512MB std / 2GB max / PC2700 333 MHz DDR 1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SODIMM sockets / standard 30-pin SIMM socket / one socket available

**Diskette drive**

None standard / use optional USB-based diskette drive

**Ethernet**


**Bluetooth**

One modular bay for interchangeable devices (right side) / 9.5mm high bay

**Display**

ATI® MOBILITY® FireGLTM T2 / AGP 4X / 128MB DDR1 / OpenGL® support

**Graphics external**

External monitor support via analog DB-15 connector / up to 2048x1536 at 75Hz / DDC2B

**Keyboard**

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

**TrackPoint®**

TrackPoint® pointing device, “Prio-to-Select,” Internet Scroll Bar®, magnifying glass

**Touchpad**

UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

**Weight**

15.0” models (WxHxD): 13.0” x 10.6” x 1.2-1.4”; 329mm x 268mm x 31-36mm

**Battery - type**

Lithium Ion 6-cell / intelligent / supports unique 2nd battery in UltraBay Slim

**Battery life**

Up to 3.5 hr. / Optional 3rd-cell / up to 5.7 hr. / up to 7 hr. / 2 Type II, 2 Type II, or 1 Type III / CardBus 32-bit / integrated
door

**Architecture**

ATI® 855PM chipset / 82801DBM Memory Controller Hub (MATX-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 IDE, PCI bus, ethernet MAC, Low Pin Count [LPC] interface, USB, Bluetooth) / PCI bus 2.2 32-bit, 33MHz (Ty; PCI 4x520A CardBus controller, Mini PCI, external expansion) / LPC bus 33MHz (security chip: PC-87922 Super I/O for diskette, parallel, infrared, [locking-based ports]) / UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

**PC Card Std slots**

2 Type II, 2 Type II, or 1 Type III / CardBus 32-bit / integrated
door

**Ports**

Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

**Video & Audio**

UltraConnect® / wireless antenna / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Software**

Windows XP Professional

1. **Processor**

- Microsoft® Windows® XP Professional

2. **Disk-Diag Recovery**

(Accessed in hidden protected area)

**Preloaded**

- Access Program
- Access Connections™
- Rescue and Recovery
- RecordNOW and Drive Letter Access
- IBM Director Agent
- PC-Doctor
- ThinkPad Utilities
- Adobe® Reader
- Update Connector

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**

(CD not included)

- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

---

**Limited warranty**

- 1yr LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD

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See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

© Lenovo

Lenovo TopSeller—withdrawn

(1427) October 2006
## ThinkPad T42p (2379) - Express - withdrawn

The 2379 T42p has a 3 year limited warranty (other ThinkPad T42p 2378 Express models have a 1 year limited warranty).

### Positioning

**Processor**
- Perfect balance of performance and portability; two-sip/nle
- Intel® Pentium® M Processor 745 (1.8GHz)
- with enhanced Intel SpeedStep™ technology and 400MHz system bus

**L2 cache Memory**
- 2MB / on die (at processor speed) / ECC
- 512MB std / 2GB max / PC2700 333MHz DDR1 (DDR-SGRAM) / non-parity / CL2.5 / two-200-pin S0-DIMM sockets / std memory in one memory / one socket available

**Diskette drive**
- None standard / use optional USB-based diskette drive
- Ultraslim drive option / removable from Ultraslim™ Slim

**Disk**
- One modular bay for interchangeable devices (right side) / 9.5mm high bay
- Supports 2nd dock with optional HDD Adapter in Ultraslim / Hard Disk Drive

**Display**
- 15.0" (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

**Graphics**
- ATI® MoDULa™ FireGL® 72 / AGP 4X / 128MB DRR / OpenGL® support
- External monitor support via analog DB-15 connector / up to 2048x1536 at 75Hz / DDC2B

**Keyboard**
- 97-key / Access IBM button / palm rest / pitch: 2mm (size key)
- TrackPoint® pointing device, *Press-to-Select*, Internet Scroll Bar®, magnifying glass / UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 13.0" x 10.6" x 1.2" (339mm x 268mm x 31-36mm) with optical drive in position / 5.3 lb (2.4kg) and battery / 6.9lb (3.2kg) and battery

**Weight**
- 1.5" model (WXGA): 13.0" x 10.6" x 1.4" (339mm x 268mm x 36-38mm) with optical drive / 5.3 lb (2.4kg) and battery

**Battery**
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultraslim

**Battery life**
- Up to 3.5 hr; Optional 9-cell: up to 7.7 hr; 9-cell plus Ultraslim battery: up to 7.7 hr

**Architecture**
- Intel® 855PM chipset / B8255PM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ICH4-M) / PCI 100 ED/IDE / PCI bus / integrated MAC / Low Pin Count (LPC) interface, USB, (Bluetooth®) / PCI bus 2.2 32-bit, 33MHz
- (T™) PCI4520A CardBus controller, Mini PCI, external expansion / LPC bus 33MHz (security chip: PCI87392 Super I/O for diskette, parallel, infrared, [docking-based ports])

**Video**
- UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
- One Mini PCI type II slot (Communications Bay/ intimidated computer upgradeable)
- 11a/b/g Wi-Fi® wireless®, Mini PCI, Atheros® AR5001X+ chipset

**Audio support**
- One Communications Daughter Card (CDC) / customer accessible
- 56K V.90 (920-based)™ modem in CDC / Conexant® chipset
- Bluetooth® support in CDC (wireless in CIRD Std)

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**
- Embedded Security Subsystem 2.0® / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TG4-compliant

### SOFTWARE

- **Windows XP Professional** - Microsoft® Windows® XP Professional
- **Disk-To-Disk Recovery** (in hidden protected area)

#### Preloaded
- Access IBM
- Access Connections
- Rescue and Recovery™
- RecordNOW and Drive Letter
- Access powered by Sonic products (DVD-RW)
- InterVideo WinDVD (DVD-RW)
- InterVideo WinDVD Creator (DVD-RW)
- Norton AntiVirus (OE edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector®

#### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

#### License
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

### Limited warranty

- **3 years** / 1 yr battery - EasyServ® / mobile technology
- **1 year** / battery maintenance

**ThinkPad notebooks implement ThinkVantage® technologies and design:** visit thinkpad.com/thinkvantage

**Universal 72 watt adapter**
- Asset ID™ (system-specific info in chip accessed over network)
- PC 2001-compliant
- AC/DC 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.0-compliant

**ENERGY STAR® compliant**
- ImageUltra® Services available
- International Warranty Service
- 24 hour x 7 days toll-free warranty support during the warranty 12 via 800-IBM-IBERV (426-7378)

**IBM Services & Support**
- 30L9190
- 30L9197
- 69P9200
- 69P9201
- 69P9203
- 69P9204
- 69P9202
- 69P9205

**ThinkPad**
- 30L9190
- 30L9197
- 69P9198
- 69P9200
- 69P9201
- 69P9203
- 69P9204

**Lotus Notes® Stand-alone Client**
- IBM.com/services/its/us/source/maspspleu.pdf

**Personal Systems Reference (PSREF)**
- Created by Lenovo Training Solutions

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**See footnotes for important warranty information**

*Powered by Intel Centrino™ mobile technology

© Lenovo

(T42P B3) July 2005
**ThinkPad T42p (2373) - Education - withdrawn**

**Type-model** | **Processor** | **Speed** | **GHz** | **Memory** | **Screen** | **Graphics controller** | **Disk** | **Optical** | **Mini PCI** | **Comm Bay** | **Branded** | **CDC modem** | **Bluetooth** | **Security chip** | **Preload** | **Limited warranty** | **Avail date**
2373-7XU | Pentium M + Processor 745 (1.8 GHz) with Enhanced Intel SpeedStep technology and 400MHz system bus | 1.8 | 512MB | 15.0” UXGA | FireGL 80HS | DVD-RW | Intel 11b/g

**The 2373 has an EasyServ onsite pickup and delivery 3-year limited warranty**

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.

### Positioning

**Processor**

Perfect balance of performance and portability; two-spindle system

**L2 cache Memory**

2MB / on die (at processor speed) / ECC

**Diskette drive**

None standard / use optional USB-based diskette drive

**DVD-ROM**

None standard / use optional USB-based diskette drive

**Dimensions**

15.0” models (WXDxH): 13.0” x 10.6” x 1.2-1.4”; 329mm x 268mm x 31-36mm

**Display**

15.0” (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and advanced IPS technology

**Graphics**

ATI Mobility FireGL™ T2 / AGP 4X / 128MB DDR1 / OpenGL support

**Internal monitor support via analog DB-15 connector**

- up to 2048x1536x16.7M / DDC2B

**Keyboard**

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard-size keys)

**TrackPoint® pointing device**

Pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

**Touch pad**

UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Weight**

15.0” models (WXD): 13.0” x 10.6” x 1.2-1.4”; 329mm x 268mm x 31-36mm with optical drive and battery; 5.9 lb (2.7kg)

**Case material**

Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

**Battery - life**

Up to 3.5 hr; Optional 9-cell; up to 7.5 hr; 9-cell plus UltraBay Slim battery: up to 7.7 hr

**Architecture**

Intel 855PM chipset / 82855PM Memory Controller Hub (MCH-M)

**PC Card Std slots**

Type I, Type II, or Type III / CardBus 32-bit / integrated door

**Ports**

2 Type I, 2 Type II, or 1 Type III / CardBus 32-bit / integrated door

**Audio**

Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Security chip**

Accessibility / local file encryption / Atmel

**Limited warranty**

3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

**SOFTWARE**

- Windows XP Professional
- Norton AntiVirus (OEM edition)
- InterVideo WinDVD (DVD-RW)
- Lenovo Port Replicator II

**License**

CD (not included)

- Lenovo ThinkPad SmartSuit Millennium and Lotus Notes Stand-alone Client

**Limited warranty**

3-year / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

US model announced May 11, 2004

US model withdrawn effective May 2006

© Lenovo

(T42PE) April 2006

Lenovo

ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

**Universal 72 watt AC adapter**

- Asset ID for the system-specific info in chip (acquired over network)

**ENERGY STAR® compliant**

ImageUltra services available through Lenovo Worldwide Warranty Service 24 hour x 7 day toll-free warranty support during the warranty 2 year via 800-IBM-REV (426-7378)

- 2 year LOR 9x5 NBD

**ThinkPlus**

- 3-year LOR 9x5 NBD

**ThinkPlus**

- 4-year LOR 9x5 NBD

**ThinkPlus**

- 5-year LOR 9x5 NBD

**ThinkPlus**

- 4-year P&L P/U Depot

**ThinkPlus**

- 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at thinkplus.com/warranty
This model has a limited onsite service3-3-year limited warranty

These educational models of the ThinkPad notebook are available only to private or public K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller. The model or models for education are not available for resale to any other organization or individual.

SOFTWARE4

Windows XP Professional
- Microsoft® Windows® XP Professional
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Education software from Vital Source Technologies®: vitalsource KEY™ and Personal Portable library™
- Access Program
- Access Connections™
- Rescue and Recovery™
- RecordNOW and Drive Letter Access powered by Sonic products (DVD-ROM models)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® Smartsuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

© Lenovo (2374P) April 2006
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<td>Yes XP Pro</td>
<td>Entry Feb 05</td>
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</tbody>
</table>

Positioning
Processor

**Perfect balance of performance and portability: two-spindle system**

*Intel Pentium® M Processor 730 (1.60GHz)* with enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz system bus

L2 cache

2MB / on die (at processor speed) / ECC

Memory

256MB std / 512MB max / 333MHz DDR2 / non-parity / CL4 / 24-bit channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

Diskette drive

No standard / use optional USB-based diskette drive

DVD

Some: DVD-ROM / 24x-8x speed / single-layer / removable from Ultrabay™ Slim

Some: DVD-ROM/CD-RW / 24x/24x/24x/8x speed / removable from Ultrabay Slim

Ultrabay Slim

One modular bay for interchangeable devices (right side) / 9.5mm high bay

Disk

40GB HS (5400 rpm) / 9.5mm high / removable, upgradable / 9.5mm high bay / supports 2nd DVD / Hard Disk Drive Shock Absorber / Active Protection System™

Display

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

Graphics

Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM / GMCH / uses main memory (up to 128MB) / 200MHz

Keyboard

87 keys / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass / Touchpad

UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

Dimensions

14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm

15.0" models (WxDxH): 13.0" x 10.0" x 1.0-1.4"; 330mm x 255mm x 26.8mm x 31.6mm

Weight

with optical drive and battery: 14.1" models: up to 1.1kg (2.5 lbs): 15.0" models: up to 1.7kg (3.7 lbs)

Case material

Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

Battery - type

Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim

Battery - life

Up to 4.0 hr: Optional Second Ultrabay Slim battery: up to 5.5 hr: 14.1" models: up to 5.1 lb (2.3kg); 15": up to 5.8 lb (2.6 kg)

Architecture

Mobile Intel 915GM Express Chipset / 82801BM Chipset Mem Cont Hub (GMCH-M) / 82801BFM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI Express x16 / PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (T) / PCI110 CardBus controller, Mini PCI, external expansion) / LPC bus (National Semiconductor Corp. PC8394T Super I/O Security Chip (TPM), Asset ID, Hardware event log, parallel, logarithmic, infrared, (docking-based ports, serial diskette))

PC Card Std slot

One Type I or Type II slot / CardBus 32-bit / integrated drive

ExpressCard port

ExpressCard or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated drive

Ports

Two USB (2.0) / parallel / external DB-15 monitor / infrared (4Mops) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

Video out

S-video out port (TV out) / one 4-pin industry standard connector

Wireless antenna

UltraConnect™ antenna built into the display cover for optimal wireless signal reception

Mini PCI

One Mini PCI type III slot (Communications Bay) / battery upgradeable

Intel 11b/g/802.11b/g wireless / 802.11b wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 22632 chip

One Communications Daughter Card (CDC) / socket / customer accessible

Modem

56K V.90 (V.92 designed-in) modem in CDC / Conexant® chipset

Bluetooth

None

Ethernet

Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCI x1 / PXE Soft / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / wall up, down, mute buttons / internal microphone / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

Audio support

Power-on password / hard disk password / supervisor password / security keyhole

Security

Fingerprint reader

Some: Fingerprint reader on palm rest / swipe sensor / integrated with security keyhole

Limited warranty

3 years / 1 year battery - EasyServ®, 10 years / onsite pickup and delivery / service upgrades available

SOFTWARE

Windows XP Professional models

- Microsoft® Windows® XP Professional / Service Pack 2

Disk-to-Disk Recovery (in hidden protected area)

Windows XP Home models

- Microsoft Windows XP

Home Edition® (Service Pack 2)

Disk-to-Disk Recovery (in hidden protected area)

Preloaded (all)

- Rescue and Recovery™
- Access Program
- Access Connections™

PC-Doctor®

ThinkPad Utilities

Adobe Reader

Update Connections™

RecordNOW and Drive

Letter Access powered by Sonic products (combo models)

InterVideo WinDVD (combo, DVD models)

Fingerprint Software

fingerprint models

Client Security Software (for security chip)

Downloadable (all)

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebookships

ThinkVantage™ technologies and design:

visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter

PC 2001-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service

24 hour x 7 days toll-free warranty support during the warranty

ThinkPlus™

2yr LOR 9x5 NBD

41C9175

ThinkPlus 3yr LOR 9x5 NBD

41C9176

ThinkPlus 4yr LOR 9x5 NBD

41C9177

ThinkPlus 5yr LOR 9x5 NBD

41C9178

ThinkPlus 4yr P&R U/P Depot

41C9179

ThinkPlus 5yr P&R U/P Depot

41C9180

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

*Powered by Intel Centrino® mobile technology

Lenovo (T1) January 2006

US models withdrawn effective January 2006

See footnotes for important warranty information

Paraod notes for combo models

ThinkVantage technologies and design:

visit thinkpad.com/thinkvantage

Lenovo

Lenovo Training Solutions

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)
### Specifications

#### Type-models

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<th>Memory</th>
<th>Screen</th>
<th>Graphics controller/Video</th>
<th>Disk Drive</th>
<th>Mini PCI Comm Bay</th>
<th>CDC modem/Bluetooth</th>
<th>Finger print reader</th>
<th>Security chip</th>
<th>Workhorse (W) or Global (G) Avail</th>
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<td>1871-31U</td>
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<td>256MB</td>
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<td>Yes</td>
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</table>

#### Processor

- **ThinkPad**: Perfect balance of performance and portability; two-spiral architecture
- **Intel Pentium M Processor 740 [1.73GHz] with Enhanced Intel SpeedStep™** technology; Execute Disable Bit, and 533MHz system bus

#### Memory

- **L2 cache**: 2MB / on die (at processor speed) / ECC
- **Memory**: 256MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 20-pin SO-DIMM sockets / std mem in one socket / one socket available

#### Video

- **Video out**: S-video out port (TV out) / one 4-pin industry standard connector
- **Wireless antenna**: UltraConnect™ antenna built into the display cover for optimal wireless signal reception

#### Security

- **Security chip**: Embedded Security Subsystem 2.0™ / in NS PC83947 chip / TCG-compliant
- **Fingerprint reader**: Some: Fingerprint reader on palm rest / swipe sensor / integrated with security keyhole

#### Other

- **Limited warranty**: 3-year / 1-year battery - EasyServ / 15 nits / 100 nits

### Software

#### Windows XP Professional

- **Professional**: Service Pack 2
- **Disk-to-Disk Recovery**

#### Windows XP Home models

- **XP Home Edition**: Service Pack 2
- **Disk-to-Disk Recovery**

### Preloaded

- **Rescue and Recovery™**
- **Access Program**
- **Software Delivery Assistant**
- **System Migration Assistant**

### License

- **Code (not included)**:
  - Lenovo Notes™ Stand-alone Client

### Additional

- **ThinkPad notebook implementation details**: ThinkVantage™ technologies and design: visit thinkpad.com/thinkvantage
- **Universal 72-watt AC adapter**
- **PC 2001-compliant**
- **ACI 1.0b and 2.0-compliant**
- **CIM and DMI 2.0-compliant**
- **PXE 2.1-compliant**
- **ENERGY STAR®-compliant**
- **International Warranty Service**

#### Post-warranty annual maintenance agreements

- **Lenovo.com**: thinkplus/warranty
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<tr>
<th>Type-model</th>
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<td>Modem</td>
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</table>

**SOFTWARE**

- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

**Preloaded**

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™
- RecordNOW and Drive
- Logic Access powered by Sonic products (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)
- Simple Backup (DVD:RW)
- Keyboard Software (fingerprint models)
- Client Security Software (for security chip)

**Downloadable**

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

*Limited warranty: 3-year* 1-year battery - EasyServ™, onsite pickup and delivery - service upgrades available

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

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(T3) December 2006

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

US models announced January 19 or March 15, 2005

US models withdrawn effective December 2005 or November 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Processor Speed</th>
<th>RAM</th>
<th>Hard Disk</th>
<th>Display Size</th>
<th>Resolution</th>
<th>Operating System</th>
<th>Operating System Type</th>
<th>Features</th>
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<td>14.1&quot; XGA</td>
<td>40MB</td>
<td>14.1&quot;</td>
<td>XP</td>
<td>W</td>
<td>3-year LOR</td>
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<td>1871-6ZU</td>
<td>Pentium M</td>
<td>750 1.86</td>
<td>512MB</td>
<td>14.1&quot; XGA</td>
<td>40MB</td>
<td>14.1&quot;</td>
<td>XP</td>
<td>W</td>
<td>3-year LOR</td>
</tr>
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</table>

**Positioning and Memory**
- Processor: Perfect balance of performance and portability; two spinners
- Intel® Pentium® M Processor 750 (1.86GHz), 760 (2.00GHz), or 770 (2.13GHz) with Enhanced Intel SpeedStep® technology, Execute Disable Bit, and 533MHz system bus
- 2MB on-die processor cache
- 512MB of 1GB or 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket available

**Software**
- Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Program
- Access Connections™ (button access)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- RecordNow! and Drive
- Letter Access powered by Sonic products (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- Fingerprint Software (fingerprint models)
- Client Security Software (for security chip)

**Downloadable**
- IBM Director Agent
- Software Service Assistant
- System Migration Assistant

**License**
- “Lotus” SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Universal**
- 72 watt AC adapter

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology*
### ThinkPad T43 (15.0” display) - withdrawn

<table>
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<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics Disk Controller</th>
<th>Optical</th>
<th>Mini PCI Comm Bay</th>
<th>DVD RW</th>
<th>Disk</th>
<th>Com/Mod</th>
<th>Finger</th>
<th>Workhorse (W)</th>
<th>Chip or Global (G)</th>
<th>Avail date</th>
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<td>GMA 40HS</td>
<td>Combo</td>
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<td>512MB</td>
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<td>Modem</td>
<td>Finger</td>
<td>Yes</td>
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<td>W</td>
<td>Feb 05</td>
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<td>GMA 40HS</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
<td>Modem</td>
<td>Finger</td>
<td>Yes</td>
<td>915PM</td>
<td>W G</td>
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<td>2668-84U</td>
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<td>Modem</td>
<td>Finger</td>
<td>Yes</td>
<td>915PM</td>
<td>W G</td>
<td>Feb 05</td>
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<td></td>
</tr>
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</table>

#### Windows XP Professional
- Microsoft Windows XP Professional Service Pack 2
- Disk-to-Disk Recovery (in hidden protected area)
- Preloaded: Norton AntiVirus, ThinkVantage, IBM Director Agent, Service Delivery Assistant, System Migration Assistant

#### ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

#### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### Universal 72 watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant

#### International Warranty Service
- 24 hour x 7 day 18 toll-free warranty support during the warranty

#### Limited warranty
- 3-year battery - Easyserv® onsite pickup and delivery / service upgrades available
- 2-year battery - 3rd party service

#### See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology*

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(T4) December 2006

US models announced January 19, 2005

US models withdrawn effective May or November 2006
**ThinkPad T43 (15.0" display) - August 2005 - withdrawn**

**Type-model**
- 1871-K1U
- 1871-K2U
- 2668-K5U
- 2668-K6U
- 2668-K7U
- 2668-K8U
- 2668-K9U
- 2668-L2U
- 2668-L8U
- 2668-L4U

**Speed/ GHz**
- 2.00
- 2.13
- 2.13
- 2.26
- 2.26
- 2.13
- 2.13
- 2.00
- 2.00
- 2.10

**Memory**
- 1GB
- 1GB
- 1GB
- 1GB
- 1GB
- 1GB
- 1GB
- 1GB
- 1GB
- 1GB

**Graphics**
- XGA
- XGA
- XGA
- XGA
- XGA
- XGA
- XGA
- XGA
- XGA
- XGA

**Mini PCI**
- Modem
- Modem
- Modem
- Modem
- Modem
- Modem
- Modem
- Modem
- Modem
- Modem

**CDC modem**
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth
- Bluetooth

**Security**
- Finger reader palindrome rest

**Display**
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA
- 15.0" XGA

**Comms Bay**
- Multi-Modem
- Multi-Modem
- Multi-Modem
- Multi-Modem
- Multi-Modem

**USB**
- Version 2.0
- Version 2.0
- Version 2.0
- Version 2.0
- Version 2.0

**Ports**
- Parallel, infrared, [docking-based ports (serial, diskette)]
- Parallel, infrared, [docking-based ports (serial, diskette)]
- Parallel, infrared, [docking-based ports (serial, diskette)]
- Parallel, infrared, [docking-based ports (serial, diskette)]
- Parallel, infrared, [docking-based ports (serial, diskette)]

**Weight**
- 5.9 lb (2.7kg)
- 5.9 lb (2.7kg)
- 5.9 lb (2.7kg)
- 5.9 lb (2.7kg)
- 5.9 lb (2.7kg)

**Dimensions**
- 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm
- 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm
- 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm
- 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm
- 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm

**Software**
- Windows XP Professional
- Windows XP Professional
- Windows XP Professional
- Windows XP Professional
- Windows XP Professional

**Preloaded**
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- Client Security Software (for fingerprint models)

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**LIMITED WARRANTY**
- 3-years/1-year battery - EasyServ™ on site pickup and delivery

**SOFTWARE**
- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Access Connections (combo, DVD+RW models)
- Software Delivery Assistant
- System Migration Assistant

**ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage**

**Universal 72-watt AD adapter**

**Access Connections**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**ThinkPlus™ 2-year LOR 9x5xNBD**

**ThinkPlus 3-year LOR 9x5xNBD**

**ThinkPlus 4-year LOR 9x5xNBD**

**ThinkPlus 5-year LOR 9x5xNBD**

**ThinkPlus 4-year P&L/PU Depot**

**ThinkPlus 5-year P&L Depot**

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**
ThinkPad T43p - withdrawn

Type-model | Processor | Speed | Memory | Screen | Graphics | controller | Disk | Storage | Optical | Mini PCI | Comm Bay | Bluetooth | Finger | Security | Battery | Weight | Dimensions | Workhorse (W) | Avail date |
2668-G1U M 770 | 2.13 | 1GB | 14.1" SXGA+ | 128MB | 60U | Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 5.2 hr | Apr 05 |
2668-G2U M 770 | 2.13 | 1GB | 14.1" SXGA+ | 128MB | 60U | Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 5.2 hr | Apr 05 |
2668-G5U M 770 | 2.13 | 1GB | 14.1" SXGA+ | 128MB | 60U | Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 5.2 hr | Apr 05 |
2668-G6U M 770 | 2.13 | 1GB | 14.1" SXGA+ | 128MB | 60U | Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 5.2 hr | Apr 05 |
2668-G7U M 770 | 2.13 | 1GB | 14.1" SXGA+ | 128MB | 60U | Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 5.2 hr | Apr 05 |
2668-GDU M 770 | 2.13 | 1GB | 14.1" SXGA+ | 128MB | 60U | Combo | Intel 11a/b/g | Mod/Blue | Finger | Yes | 5.2 hr | Apr 05 |
2668-H2U M 770 | 2.13 | 1GB | 15.0" UXGA | 128MB | 60U | Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 4.8 hr | Apr 05 |
2668-H4U M 770 | 2.13 | 1GB | 15.0" UXGA | 128MB | 60U | Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 4.8 hr | Apr 05 |
2668-H5U M 770 | 2.13 | 1GB | 15.0" UXGA | 128MB | 60U | Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 4.8 hr | Apr 05 |
2668-H7U M 770 | 2.13 | 1GB | 15.0" UXGA | 128MB | 60U | Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 4.8 hr | Apr 05 |
2668-HBU M 770 | 2.13 | 1GB | 15.0" UXGA | 128MB | 60U | Combo | Intel 11b/g | Mod/Blue | Finger | Yes | 4.8 hr | Apr 05 |

Positioning
Processor Intel Pentium M Processor 770 (2.13GHz) with Enhanced Intel SpeedStep technology. Execute Disable Bit, and 533MHz system bus
L2 cache 2MB / on die (at processor speed) / ECC
Memory 1GB std / 2GB in 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available
Diskette drive None standard / use optional USB-based diskette drive
DVD Some: DVD-ROM / 24x / 8x speed / single-layer / removable from Ultrabay Slim
Combo Some: DVD-ROM/CD-RW / 24x/24x/24x / removable from Ultrabay Slim
DVD RW Some: DVD+RW / Multi-drive burner / compatible with Multi-Bay Slim
Ultrabay Slim One modular bay for interchangeable devices (right side) / 9.5mm high bay
Disk 60GB Ultra HS (7200 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk / Hard Disk Drive Shock Absorber

Architecture
Mobile Intel 915PM Express Chipset / 82915PM Memory Controller Hub (MCH-M) / 82801FBI ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC/INT) / PCI card (Ricoh R5C811 Cardbus controller, Mini PCI, external expansion) / LPC bus (National Semiconductor PC8394T Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, docking-based ports (serial, diskette))
PC Card Std slot One Type III or Type II slot / Cardbus 32-bit slot / Cardbus 32-bit slot
ExpressCard slot One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
Ports Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / One Type I or Type II slot / CardBus 32-bit slot / integrated door

Video output
Wireless antenna S-video out port / TV out / one 4-pin industry standard connector
Mini PCI One Mini PCI type III slot (Communications Bay) / customer upgradable
Intel 11b/g Connections Bay / customer upgradable
Intel 11a/b/g Connections Bay / customer upgradable
CDC One Communications Daughter Card (CDC) socket / customer accessible
Modem 56K V.90 (V.92-designed) modem in CDC / Conexant chipset
Bluetooth Bluetooth wireless technology / in (CDC with modem)
Ethernet Gigabit ethernet / Broadcom BCM5751M (MAC/PHY) / PCie x1 / PXE
Audio support Soft audio / ICH AC97 controller / DirectSound support / AD1981B AC97 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone jack (3.5 mm; pink) / headphone jack (3.5 mm; green)
Security Power-on password / hard disk drive / supervisor password / security keyhole
Security chip Embedded Security Subsystem 2.0 / in NS PC8394T chip / TCG-compliant
Fingerprint reader None / in NS PC8394T chip / TCG-compliant

Limited warranty 3-year / 1-year battery / EasyServTM 15 onsite pickup and delivery / service upgrades 20 available

SOFTWARE
Windows XP Professional
- Microsoft Windows XP Professional x86 (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC Doctor
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive
- Letter Access powered by Sonic products (combo, DVD:RW)
- Intel/Video WinDVD (combo, DVD:RW models)
- Intel/Video WinDVD Creator (DVD:RW models)
- Simple Backup (DVD:RW)
- FingerPrint Software (fingerprint models)
- Client Security Software (for security chip)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies an design: visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter PC 201-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
PX 2.1-compliant
ENERGY STAR®-compliant
International Warranty Service™
24 hour x 7 day toll-free warranty support during the warranty 12

Lenovo® Notebooks & Servers

Post-warranty
tional maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced January 19 or July 19, 2005
US models withdrawn effective November 2006

* Powered by Intel Centrino® mobile technology

Lenovo
(T5) December 2006
### ThinkPad T43p (August 2005) - withdrawn

#### Specifications

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<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>Optical Devices</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>CDC modem/ Bluetooth</th>
<th>Finger Security</th>
<th>Battery</th>
<th>Workhorse</th>
<th>Battery Power</th>
<th>Availability</th>
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#### Positioning

- Perfect balance of performance and portability; two-spindle system
- Intel Pentium M Processor 720 (2.26GHz) with Enhanced Intel SpeedStep technology
- Execute Disable Bit, and 533MHz system bus

#### L2 cache

- 2MB / on die (at processor speed) / ECC

#### Memory

- 1GB standard / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel
- capable / two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

#### Diskette drive

- None standard / use optional USB-based diskette drive

#### DVD

- Some: DVD-ROM / 24X/8X speed / single-layer / removable from Ultrabay slim
- Some: DVD-ROM/CD-RW / 24X/24X/24X/24X/24X speed / removable from Ultrabay Slim

#### Ultrabay Slim

- One modular bay for interchangeable devices (right side) / 9.5 mm high bay

#### Display

- Some: 14.1" (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) UXGA (1600x1200) TFT color / Active Matrix / 200 nits / FlexView display with wide viewing angle and high density using IPS technology

#### Graphics

- ATI Mobility FireGL V3200 / PCI Express x16 / 128MB GDDR1 memory

#### Keyboard

- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

#### TrackPoint

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass touchpad

#### Touch pad

- UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones

#### TrackPoint Light

- Illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions

- 14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm

#### Weight

- 14.1" models: 2.63 kg / 5.8 lb / 11.8 lbs

#### Case material

- Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

#### Battery

- Lithium Ion / Intelligent / supports unique 2nd battery in Ultrabay Slim / 9-cell: up to 5.0 hr; 9-cell plus Ultrabay Slim battery: up to 7.5 hr

#### Architecture

- Mobile Intel 915PM Express Chipset

#### PC Card Std slot

- ExpressCard slot

#### Video out

- S-video out port (TV out) / one 4-pin industry standard connector

#### Wireless antenna

- One Mini PCI type III slot (Communications Bay) / customer upgradable

#### Intel 11b/g

- One Type I or Type II slot / CardBus 32-bit / integrated door

#### Intel 11a/b/g

- One ExpressCard Slot / PCI Express x1 or USB 2.0 / integrated door

#### CDC

- Two USB (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

#### Audio support

- Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE

#### Security

- Power-on password / hard disk password / supervisor password / security keyhole

#### Security Chip

- Embedded Security Subsystem 2.0 (in NS PC89349 chip / TCG-compliant

#### Finger Print reader

- FingerPrint reader / fingerprint sensor / Integrated with security chip / ready to print / EasyServ on-site pickup and delivery / service upgrades

#### Limited warranty

- 3-year / 1-year battery - EasyServ on-site pickup and delivery / service upgrades

#### Other options at lenovo.com/options

See footnotes for important warranty information

* Powered by Intel Centri°™ mobile technology

Lenovo (T15) December 2006

Windows XP Professional
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive Letter Access powered by Sonic products
- Intel Video WinDVD (combo, DVD-RW models)
- IntelVideo WinDVD Creator (combo, DVD-RW models)
- fingerprint Software (fingerprint models)
- Client Security Software (for security chip)

Downloadable
- IBM Director Agent
- System Management Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design: visit thinkpad.com/thinkvantage

Universal 72 watt AC adapter
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- P580 2.0-compliant

ENERGY STAR®-compliant
- International Warranty Service®
- 24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus®
- 2 year LOR 9x5 NBD
- 3 year LOR 9x5 NBD
- 4 year LOR 9x5 NBD
- 5 year LOR 9x5 NBD
- 4 year P&L P/U Depot
- 5 year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**ThinkPad® T43 and T43p (1871 and 2668) - Education - withdrawn**

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<th>Screen</th>
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**These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning Processor**
- Intel® Pentium® M Processor 1.86GHz, 760 (2.00GHz), or 770 (2.13GHz) with Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz bus speed or 11a/b/g II Modem No 915PM EasyServ Aug 05
- Intel® Pentium® M Processor 1.86GHz, 760 (2.00GHz), or 770 (2.13GHz) with Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz bus speed or 11a/b/g II Modem No 915PM EasyServ Feb 05

**Software**
- Windows XP Professional
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disks Recovery (in hidden protected area)

**Preloaded**
- Education software from Vital Source Technologies™: vitalsource KEY™ and Personal Portable Library™
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW and Drive

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

**ThinkPad notebooks implement**
- ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

**Video out Wireless antenna**
- 5-video out port (TV out) / on 4-pin industry standard connector
- UltraConnect™ antenna built into the display cover for optimal wireless signal reception

**Miscellaneous**
- US models announced January 19, 2005 or August 16, 2005
- US models withdrawn effective March, October, or November 2006
- See footnotes for important warranty information
- © 2006 Lenovo
- Created by Lenovo Training Solutions
- Personal Systems Reference (PSREF)
- (T6) October 2006
**ThinkPad® T43 and T43p (1871 and 2668) - Education (Aug 05) - withdrawn**

*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- **Processor:** Perfect balance of performance and portability; two-splindle system with Intel® Pentium® M Processor 760 (2.00GHz), 770 (2.13GHz), or 780 (2.26GHz) with Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz bus speed.
- **L2 cache Memory:** 2MB (Intel processor speed) / ECC 512MB or 1GB std / 2GB max1 / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

### Diskette drive

- **Combo:** None standard / use optional USB-based diskette drive
- **UltraBay Slim Disk:** Some: DVD-ROM/CD-RW / 24X/24X/24X/8X2 speed / removable from Ultrabay Slim
- **Display:** Some: 14.1” (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits  
  Some: 14.1” (358.1mm) SXGA+ (1400x1050) TFT color / Active Matrix / 150 nits  
  Some: 15.0” (381.0mm) SXGA+ (1400x1050) TFT color / Active Matrix / 200 nits  
  FlexView display with wide viewing angle and high density using IPS technology
- **Graphics:** Some: Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GCH / uses main memory up to 128MB with 256MB+ / 3D support

### Software

- **Windows XP Professional:** 
  - Microsoft® Windows® XP Professional2 (Service Pack 2)
  - Disk-to-Disks Recovery (in hidden protected area)
- **Preloaded:** 
  - Education software from Vital Source Technologies®
  - Access Connections™
  - Norton AntiVirus
  - PC-Doctor®
  - ThinkPad Utilities
  - Adobe® Reader
  - RecordNOW! and Drive Letter Access powered by Sonic products (combo, DVD-ROM)
  - InterVideo WinDVD Creator (DVD-RW models)
  - FlipShare software
  - Client Security Software (for security chip)
- **Downloadable:**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Migration Assistant

### Architecture

- **Video out:** Mobile Intel GM Express Chipset / Intel® Mobile 915PM Express Chipset / 82801FBM ICH6-M I/O Controller Hub (SATa150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count / LPC interface, [Bluetooth], [fingerprint], [PCI bus] (CardBus controller), [Mini PCI, external expansion) / LPC bus (NS PCI8389) / Super I/O for security chip (TPM), Asset ID, hardware event log, parallel, infrared, [dock-based ports] (serial, device)  
  One Type I or Type II slot / CardBus 32-bit / integrated device  
  One ExpressCard or ExpressCard/S4 / PCI Express x1 or USB 2.0 / integrated device  
  USB 2.0 (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)
- **Security:** Embedded Security Subsystem 2.01 (in NS PC8394t Chip / TCG-compliant
- **Limited warranty:** 3-year / 1-year / EasyServ™ onsite pickup and delivery / service upgrades22 avail

### See footnotes for important warranty information.

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T43 1871-CJU Pentium® M 760 2.00 512MB 14.1" XGA 40HS Combo * Intel® 11a/b/g12 Modem Finger 915G EasyServ Aug 05
T43 2668-CMU Pentum M 770 2.13 512MB 14.1" SXGA+ X300 80HS Combo * Intel® 11a/b/g12 Modem Finger 915G EasyServ Aug 05
T43 2668-CLU Pentum M 770 2.13 512MB 14.1" SXGA+ X300 80HS Combo * Intel® 11a/b/g12 Modem Finger 915G EasyServ Aug 05
T43p 2668-CPU Pentum M 780 2.26 1GB 15.0" UXGA V3200 80HS DVD-RW/DVD+RW * Intel® 11a/b/g12 Modem Finger 915G EasyServ Aug 05

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See footnotes for important warranty information.

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US models announced August 2, 2005
US models withdrawn effective May, October, or November 2006

(T16) October 2006
ThinkPad T43 and T43p (1872 and 2669) - Education - withdrawn

- These models have a limited onsite service 3-year limited warranty
- Limited warranty excludes service available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**Processor**
- **Intel® Pentium® M Processor 750 (1.86GHz), 760 (2.00GHz), or 770 (2.13GHz)** with Enhanced Intel® SpeedStep™ technology
- **L2 cache**: 2MB / on die (at processor speed) / ECC
- **Memory**: 512MB or 1GB std / 2GB max / **PC2-4200 533MHz DDR2** / non-parity / **CL4** / dual channel capable

**Display**
- **Screen**: 14.1" (358.1mm) XGA (1280x1024) TFT color / Active Matrix / 150 nits
- **Brightness**: 200 nits / **UXGA (1600x1200)** TFT color / Active Matrix / 200 nits

**Graphics**
- **Integrated graphics** in **915GM GMCH** / uses main memory (up to 128MB with 256MB+) / 200MHz
- **Intel® Mobility RadeX® X300** / PCI Express x16 / 64MB DDR2 memory
- **Intel® Mobility FireGL® V3200** / 128MB GDDR1 memory

**CPU Speed**
- **Pentium M Processor 750 (1.86GHz)**
- **Pentium M Processor 760 (2.00GHz)**
- **Pentium M Processor 770 (2.13GHz)**

**Dimensions**
- 9.5mm high / removable, upgradable / 9.5mm high bay

**Weight**
- 2.3 lb (1.05kg) / 5.2 lb (2.3kg) / 5.9 lb (2.7 kg)

**Hard Drive**
- **40GB**, **80GB**, **160GB**, **240GB**, **400GB**

**Security**
- **Power-on password** / **hard disk password** / **supervisor password** / **security keyhole**

**Audio Support**
- Enhanced Intel® Sound and ICH AC97 controller / DirectSound

**Ethernet**
- Gigabit ethernet on system board / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE

**Bluetooth**
- Some: Bluetooth wireless technology / in CDC (with modem)

**Ports**
- **ExpressCard/34 or ExpressCard/54** / **PCI Express x1 or USB 2.0** / integrated door

**Keyboard**
- **87-key** / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (std-size keys)

**Security Software**
- **ThinkPad Client Security Software (for internal security chip)**
- **ThinkVantage Access Connections**
- **ThinkVantage Software Delivery Assistant**
- **Lenovo Rescue and Recovery**
- **Active Protection System**

**License**
- **Education software** from **Vital Source** and **Lotus**

**Software**
- **Windows XP Professional**
- **Preloaded software** / **Software Delivery Assistant** / **Access Program** / **Disk-to-Disk Recovery**

**Limited warranty**
- **2-year limited warranty** / **3-year limited warranty** / **1-year limited battery**

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

© Lenovo

US models announced January 19, 2005 or August 16, 2005

US models withdrawn effective March, October, or November 2006

(T7) October 2006
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*These models have a limited onsite service, 3-year limited warranty.*

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

**SOFTWARE**
- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
- Preloaded
  - Education software from Vital Source Technologies:®
  - Vitalsource Key™
  - IBM Personal Portable Library
  - Rescue and Recovery™
- Access Program
  - Norton AntiVirus
  - PC-Doctor™
  - ThinkPad Utilities
  - Adobe® Reader
  - RecordNOW and Drive
- Downloadable
  - IBM Director Agent
  - Software Delivery Assistant
  - System Management Utilities
- License (CD not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Video out**
- UltraConnect™
- USB 2.0

**Wireless adapter**
- Intel 11a/b/g®
- Intel 11a/b/g® Bluetooth

**Modem**
- IBM 56K V.90 (V.92-designed) or on die (at processor speed)

**Security**
- TrackPoint
- Finger Print Reader

**Limited warranty**
- 3-year+1-1-year battery, limited onsite service

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See footnotes for important warranty information. Powered by Intel Centrino® mobile technology. © Lenovo (T17) October 2006.
**Processor**

Intel® Pentium® M Processor 740 (1.73GHz) or 750 (1.68GHz) with Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 533MHz system bus

**Memory**

256MB or 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / mini 2 pin-20 SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive**

None standard / use optional USB-based diskette drive

**DVD**

Some: DVD-ROM / 4x-8x speed / single-layer / removable from Ultrabay™ Slim

**Combi**

Some: DVD-ROM/CD-RW / 4x/24x/24x/8x speed / removable from Ultrabay Slim

**Ultrabay Slim**

One modular bay (right side) / 9.5mm high bay

**Disk**

40GB* HS / 50GB* HS (4500 rpm) / 9.5mm high / removable / upgradeable / 9.5mm high bay / supports 2nd disk / Hard Disk Drive Shock Absorber / Active Protection System

**Display**

Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 200 nits

**Graphics**

Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 955GM GMCH / onboard graphics / up to 128MB shared 256MB / 200MHz

**Keyboard**

87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.5mm (standard size keys)

**TrackPoint®**

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar® magnifying glass

**Touch pad**

UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1" models (WX:DX): 12.2" x 10.0" x 1.0-1.2"; 311mm x 255mm x 26.6-31.4mm

15" models (WX:DX): 13.0" x 10.1" x 1.2-1.4"; 332mm x 263mm x 31.3-36mm

**Weight**

optical drive and battery: 14.1" models: up to 5.1 lb (2.3kg): 15" up to 5.8 lb (2.6 kg)

**Case material**

Magnesium composite in the top cover, titanium-reinforced CFRP in bottom cover

**Battery - type**

Lithium ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Slim

**Battery - life**

Up to 3.9 hr / optional 9-cell: up to 5.9 hr / 9-cell plus Ultrabay Slim battery: up to 7.7 hr

**Architecture**

Mobile Intel 955GM Express Chipset / 82915GM Graph Mem Cont Hub (GMCH-M) / 82801FB ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCIe Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (TI® PCI 11510 CardBus controller, Mini PCI, external expansion) / LPC bus (Texas Instruments Super I/O for security chip [TPM], Asset ID, hardware event log, parallel, infrared, [docking-ports serial (diskette)])

**PC Card Std slot**

One Type I or Type II slot / CardBus 32-bit / integrated door

**ExpressCard slot**

One ExpressCard/34 or ExpressCard/54 / PCIe Express x1 or x2 / integrated door / Two USB 2.0 (Version 2.0) / parallel / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial ports (use USB)

**Video out**

S-video out (port out) / one 4-pin industry standard connector

**Wireless antenna**

UltraConnect™ Antenna built into the display cover for optimal wireless signal reception

**Mini PCI**

11b/g wireless®, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip

**Intel 11b/g**

11b/g wireless®, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chip

**Intel 11a/b/g**

11a/b/g wireless®, Mini PCI, Intel PRO/Wireless 2915ABG, 82533 chipset

**CDC**

One Communications Daughter Card (CDC) / customer accessible

**Modem**

56K* V.90 (V.92-designed*) modem in CDC / Conexant® chipset

**Bluetooth**

Some: Bluetooth wireless technology / in CDC (with modem)

**Ethernet**

Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCI-e x1 / PXE Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers, 1 watt / volume, up/down, mute buttons / internal microphone / microphone input jack (3.5mm; white) / headphone jack (3.5mm: green) / microphone input jack (3.5mm: pink) / microphone input jack (3.5mm: green)

**Security**

Power-on password / hard disk password / supervisor password / security keyhole

**Security keyhole**

Embedded Security Subsystem 2.0® / in NS PC8394T chip / TCG-compliant

**Fingerprint reader**

Some: Fingerprint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty**

1-year - EasyServ® / onsite pickup and delivery / service upgrades© avail

**Contact**

512MB PC2-5300 DDR2 CLS SODIMM 40Y7733

1GB PC2-5300 DDR2 CLS SODIMM 40Y7773

1GB PC2-5300 DDR2 SODIMM 40Y7773

USB 2.0 Super Multi-Burner Drive 41N5565

100GB Hard Disk 9.5mm SATA (5400rpm) 40Y8716

USB Portable Diskette Drive 05K9276

Second HDD Adapter for Ultrabay Slim 41J8148

ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643

ThinkPad Convertible Monitor Stand 40Y7620

Other accessories at lenovo.com/accessories

**SOFTWARE**

Windows XP Professional

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC Doctor®
- ThinkPad Utilities
- Adobe® Reader
- Update Connector™

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 72-watt AC adapter

PC 2001-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

PXE 2.1-compliant

International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty

**ThinkPlus®**

1-year LOR 9x5 NBD

41C9166

ThinkPlus 2-year LOR 9x5 NBD

41C9167

ThinkPlus 3-year LOR 9x5 NBD

41C9168

ThinkPlus 4-year LOR 9x5 NBD

41C9171

ThinkPlus 5-year LOR 9x5 NBD

41C9173

ThinkPlus 2-year P&L P/U Depot

41C9169

ThinkPlus 3-year P&L P/U Depot

41C9170

ThinkPlus 4-year P&L P/U Depot

41C9171

ThinkPlus 5-year P&L P/U Depot

41C9174

See footnotes for important warranty information

© Lenovo

US models announced January 19, June 7, or August 9, 2005


(T8) August 2007
## ThinkPad T43 (1876 and 2687) - TopSeller and Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Comm Bay</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
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<th>Finger/Security</th>
<th>Chip</th>
<th>Limited warranty</th>
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<tr>
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<td>Pentium® M 750 1.86</td>
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<td>60HS</td>
<td>Combo</td>
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<td>Modem</td>
<td>No</td>
<td>Yes 915GM 3-yr EasyServ Mar 05</td>
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<tr>
<td>2687-DCU</td>
<td>Pentium M 760 2.00</td>
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<td>60HS</td>
<td>Combo</td>
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<td>Modem</td>
<td>No</td>
<td>Yes 915PM 3-yr EasyServ Mar 05</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a 3-year limited warranty.
- These models have an EasyServe™ on-site pickup and delivery 3-year limited warranty.

### Software

**Windows XP Professional**

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-To-Disk Recovery (in hidden protected area)

#### Preloaded

- Education software from Vital Source Technologies®
- Norton AntiVirus
- ThinkPlus Utilities
- Adobe® Reader
- Update Connector®
- RecordNOW and Drive
- Access Programs
- Access Connections™
- ThinkPad Utilities

#### Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

#### License

(CD not included)

- Lenovo® SmartSuite® Millennium and Lenovo® Notes® Stand-alone Client

### Limited warranty

- 3-year/1-year battery - EasyServe™ on-site pickup and delivery / service upgrade available

### See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

**US models announced January 19, 2005**

**US models withdrawn effective October or December 2006**

**Lenovo** (T10) December 2006
ThinkPad® T43 (2686) - TopSeller - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
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<th>Mini PCI</th>
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<td>Modem</td>
<td>Finger</td>
<td>6-cell</td>
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</table>

**Software**

- Windows XP Professional
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disks Recovery (in hidden protected area)

Preloaded

- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton AntiVirus
- PC-Doctor
- ThinkPad Utilities
- Adobe® Reader
- RecordNOW! and Drive Letter Access powered by Sonic products (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)
- Simple Backup (DVD:RW)
- Firmware Software
- Client Security Software

Downloadable

- IBM Director
- Software Delivery Assistant
- System Migration Assistant

**Limited Warranty**

- 1-year - EasyServ®     
  EasyServ® is available on certain models.
- 2-year - Onsite pickup and delivery
- 4-year - Onsite pickup and delivery
- 5-year - Onsite pickup and delivery

**See footnotes for important warranty information**

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(T11) December 2006

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### ThinkPad T60 (2007) - 14.1" display - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE controller</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Finger print reader</th>
<th>Finger Work (W) or Global (G)</th>
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<td>Blue</td>
<td>Finger</td>
<td>W G</td>
<td>Jun 06</td>
<td></td>
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</tbody>
</table>

#### Positioning
- Premiere performance; two spindles

#### Processor
- **Intel® Core™ Duo processor T2400 (1.83GHz) or T2500 (2.00GHz)** with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache.

#### Memory
- 512MB or 1GB std. | 4GB max |
- 
- **PC2-5300 667MHz DDR2** non-parity | CL5 | dual channel capability | two 200-pin SO-DIMM sockets | small memo in 1 socket | 1 socket available

#### Diskette drive
- None standard | use optional USB-based diskette drive

#### EIDE DVD
- Some: DVD-ROM/24X-8X9 speed | single-layer | removable from Ultrabay™ Slim
- Some: DVD-ROM/CD-ROM/RW, 4X/24X/24X speed | removable from Ultrabay Slim

#### IDE DVD RW
- Some: DVD Burner, Super Multi-Burner (40Y8623) | dual-layer, removable Ultrabay Slim

#### Ultrabay Slim
- One modular bay for interchangeable devices (right side) | 9.5mm high bay | flat bezel

#### Serial ATA disk (SATA150)
- 60GB* (5400 or 7200 rpm), 80GB (5400 rpm), or 100GB (5400 or 7200 rpm)
- 9.5mm high removable | 9.5mm high bay | supports 2nd disk

#### Display
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color | 150 nits | anti-glare
- Some: 14.1" (358.1mm) SXGA+ | (1400x1050) TFT color | 150 nits | anti-glare

#### Graphics
- ATI Mobility Radeon™ X1300 M52 | PCI Express x16 | 64MB GDDR1
- ATI Mobility Radeon X1400 M54 | PCI Express x16 | 64MB GDDR1
- ATI Mobility Radeon X1600 M58 | PCI Express x16 | 64MB GDDR1

#### Keyboard
- 89-key | ThinkVantage button | spill-resistant | multimedia Fn keys | Windows, App keys

#### Touchpad
- Trackpoint pointing device | "Press-to-Select" | TrackPoint membrane | "Scroll Bar" | high quality | glass

#### ThinkVantage™ technology
- UltraNav™ multi-pointing system | touch pad below keyboard | Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions
- 14.1" models (WxDxH): 12.4" x 10.0" x 1.0-2.2" | 316mm x 255mm x 25.6-31.3mm

#### Weight
- With optical drive and battery: up to 5.5 lb (2.5kg)

#### Case material
- Magnesium composite top cover, Carbon Fiber Reinforced Plastic (CFRP) bottom cover
- Lithium Ion 6-cell | supports unique 2nd battery in Ultrabay Slim

#### Battery
- 6-cell: up to 6.0 hr | opt-9-cell: up to 9.0 hr | 9-cell plus Ultrabay battery: up to 11.5 hr

#### Architecture
- Mobile Intel 955PM Express Chipset | 82895PM Memory Controller Hub | 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1)
- All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

#### Ports
- PC Card Std slot
- ExpressCard slot
- Three USB 2.0, external DB-15 monitor | infrared (4Mbps) | RJ-11 (modem) | RJ-45 (ethernet) | no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

#### Wireless Mini PCIe Express
- Wireless upgradable
- Intel 11a/b/g
- 11a/b/g WWAN
- 11a/b/g WWAN

#### Modem
- 56K V.90 (V.92-designed) modem | Com Daurth Card socket | Conexant® chipset Bluetooth
- Ethernet: 802.11a/b/g, 802.11a/b/g
- High Definition (HD) Audio | AD1981 HD codec | stereo speakers, 1 watt | volume up, down, mute buttons | internal microphone | microphone input jack | headphone jack
- Power-on password | hard disk password | supervisor password | security keyhole
- Trusted Platform Module
- Fingerprint reader: FingerPrint reader on palm rest | swipe sensor | supports the security chip

#### License
- **Lenovo System Update**
- **Client Security Solution**
- **ThinkVantage Access Connections**
- **ThinkVantage ThinkPlus services**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Google Toolbar**
- **Microsoft Office Professional**
- **Preload** (only some listed)
- **Applications**
- **Windows Media Player**
- **Lotus® SmartSuite® Millennium and Notes® Stand-alone Client**

### Software
- Windows XP Professional
- Microsoft Windows XP Professional (Service Pack 2)
- Disk-To-Disk Recovery
- Preloaded (only some listed)
- **Microsoft Office Professional**
- **Access Connections**
- **Client Security Solution**
- **ThinkVantage Productivity Center**
- **ThinkVantage Access Connections**
- **System Migration Assistant**
- **Symantec Client Security**
- **Diskeeper® Lite**
- **PC Doctor™ diagnostics**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Google Toolbar**
- **Microsoft Office Professional**
- **Preload** (only some listed)
- **Applications**
- **Windows Media Player**
- **Lotus® SmartSuite® Millennium and Notes® Stand-alone Client**

### Specifications
- 90-watt AC adapter (discrete graphics)
- **ThinkPad Roll Cage (one-piece)**
- **Resolution recovery**
- **RoHS-compliant**
- **International Warranty Service**
- 24 hour x 7 day toll-free warranty support during the warranty
- **ThinkPlus services at lenovo.com/thinkplus/warranty**

See footnotes for important warranty information.

*Powered by Intel Centrino® Duo mobile technology*

US models announced January 31, May 16, 2006, or June 20, 2006

US models withdrawn effective September or December 2007

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(DV1-3) December 2007
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### Software

#### Windows XP Professional

- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Disk-to-Disk Recovery

#### Preloaded

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage® Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- DiagPlus® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPoint Software (fingerprint models)
- Multimedia Center for Think Offers
- Sonic RecordNOW® and Drive Letter Access (combo, DVD:RW)
- InterVideo WinDVD® (DVD, combo, CD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

#### License

- CD not included
- © Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

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See footnotes for important warranty information

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(DV11-1) September 2007

US models announced July 11, 2006

US models withdrawn effective September 2007
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**Positioning**
- Processor: Intel® Core 2 Duo processor T5500, T5600, or T7200, or 7400 with dual-core.
- Memory: 512MB or 1GB std. 4GB max† / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / 4/8GB: standard memory in both sockets (512MB each); no sockets available / Others: standard memory in 1 socket; 1 socket available

**Diskette drive**
- IDE combo drive: One DVD burner, one Super Multi-Burner (40Y6632) dual-layer, removable UltraBay Slim.

**UltraBay Slim**
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

**Serial ATA disk (SATA1050)**
- 40GB† (5400 rpm), 60GB† (5400 rpm), 80GB† (5400 rpm), or 120GB† (5400 rpm) / removable, upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

**Display**
- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare
- Some: 14.1" (358.1mm) XGA+ (1400x1050) TFT color / 150 nits / anti-glare

**Graphics**
- Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

**Keyboard**
- ThinkPad UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

**Dimensions & Weight**
- 14.1" models (WxDxH): 12.4" x 10.9" x 1.0-1.2" / 316mm x 255mm x 26.6-31.3mm

**Battery - life**
- 6-cell: up to 5.9 hr; 9-cell: up to 9 hr; 9-cell plus UltraBay battery: up to 8.5 hr

**Architecture**
- Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Cont Hub

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

**Mini PCI Express**
- Intel 11a/b/g/n + WWAN†

**Modem**
- 56K.v.92 (V.92-designed†) modem in Com Daughter Card socket / Conexant® chipsets / 1951-4NU

**Bluetooth™**
- None standard / use optional USB-based diskette drive

**License**
- CD not included
- Lenovo M500 Projector 0037A05

**Software**
- Windows XP Professional
- IBM® ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant

**Limited warranty**
- 3-years / 1-year battery / EasyServ® onsite pickup and delivery / service upgrades available

See footnotes for important warranty information

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<td>100G 5400 Combo</td>
<td>Intel 11a/b/g2</td>
<td>Finger</td>
<td>PM 6</td>
<td>W</td>
<td>July 06</td>
<td></td>
</tr>
<tr>
<td>2007-75U</td>
<td>Core Duo T2500</td>
<td>2.00</td>
<td>1GB</td>
<td>15.0&quot; SXGA+ X1400</td>
<td>100G 5400 Combo</td>
<td>Intel 11a/b/g2</td>
<td>Finger</td>
<td>PM 6</td>
<td>W</td>
<td>July 06</td>
<td></td>
</tr>
</tbody>
</table>

### Positioning
- **Premiere performance:** two spindles
- **Processor:** Intel Core™ Duo processor T2400, T2500 or T2600 with dual-core, an Enhanced Intel SpeedStep™ technology.
- **Memory:** 512MB or 1GB standard; 4GB max11; 52C-5300 667MHz DDR2 memory; non-parity. Dual channel capable. 200-pin SO-DIMM sockets.
- **Display:** 15.0" (358.1mm) XGA (1024x768) TFT color: 150 nits anti-glare.
- **Graphics:** Intel® Graphics Media Accelerator 950 in integrated G45M/250MHz
- **Keyboard:** 89-key / ThinkVantage button: spill-resistant / multimedia Fn keys, Windows, Apple keys
- **Touchpad:** TrackPoint™ pointing device, “Press-to-Select,” and TrackPoint cardBus controller
- **Dimensions:** 13.5" (342.9mm) W x 9.5" (241.3mm) D x 0.7" (17.8mm) H
- **Weight:** 6.7 lbs (3.04kg)
- **Battery:** 9-cell: 10.2Ah; 11.1V; 110W; 8.8A

### Software
- **Windows XP Professional**
  - Microsoft® Windows® XP Professional21 (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
  - Preloaded:
    - Rescue and Recovery™
    - Access Connections™
    - ThinkVantage Productivity Center with Away Manager
    - ThinkVantage System Update
    - Symantec® Client Security
    - DiReXXX Lite
    - PC-Doctor® (diagnostics)
    - ThinkPad Utilities (Power Manager and Presentation Director)
    - Adobe® Reader
    - Google Toolbar
    - Google Desktop
  - Other:
    - Fingerprint Software (fingerprint models)
    - Multimedia Center for Think
    - SonicRecordNOW and Drive Letter Access (combo, DVD:RW)
    - InterVideo WinDVD Creator (combo, DVD:RW)
    - InterVideo WinDVD Creator (DVD:RW models)
- **License - CD not included**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Specifications
- **ThinkPad® Roll Cage (one-piece magnesium frame)**
- **RoHS-compliant**
- **AC adapter**
  - ThinkPad Roll Cage (one-piece magnesium frame)
  - RoHS-compliant
- **International Warranty Service**
  - 24 hour x 7 day toll-free warranty support during the warranty
- **Supports ThinkVantage® technologies**
  - 2-year 1-year warranty
  - 2-year 2-year warranty
  - 3-year 3-year warranty
  - 4-year 4-year warranty
  - 5-year 5-year warranty
- **izio**
  - 2-year 3-year warranty
  - 3-year 3-year warranty
  - 4-year 4-year warranty
  - 5-year 5-year warranty
- **Other ThinkPad services at Lenovo.com/thinkplus/warranty

See footnotes for important warranty information.

© Lenovo

US models announced January 31 or July 11, 2006

US models withdrawn effective October 6, 2006 or July 11, 2007

(DV1-4) September 2007
ThinkPad® T60 (15.0” display) - October 2006 - withdrawn

**Software**

- Windows XP Professional
- Microsoft Windows XP Professional (Service Pack 2)

**Disk-to-Disk Recovery**

(in hidden protected area)

**Preloaded**

- Reacliq and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Award Warranty
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Touchpad Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Microsoft Certificate Authority (combo, DVD/DVD models)
- Intel® Video WinDVD (combo, DVD/DVD models)
- Intel® Video WinDVD Creator (DVD/RW models)

**License**

- CD not included
- Lenovo® SmartSuite® Millennium and Lenovo® Notes® Stand-alone Client

**Supported ThinkVantage® technologies**

65-watt (1951) or 90-watt (2007)

**AC adapter**

ThinkPad® Power Cap (one-piece magnesium frame)

**RoHS-compliant**

International Warranty Service®

24 hour x 7 day toll-free warranty support during the warranty

**ThinkPlus® 3-year LOR 9x5 NBD**

- 2-year LOR 9x5 NBD

- 3-year LOR 9x5 NBD

- 4-year LOR 9x5 NBD

- 5-year LOR 9x5 NBD

- 4-year P&L NBD

- 5-year P&L NBD

- Post-warranty annual maintenance agreements

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)
## Hardware Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN wireless</th>
<th>Mini PCIe WWAN Blue-tooth</th>
<th>Finger Workhorse or Global (W)</th>
<th>Availability</th>
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<tbody>
<tr>
<td>2007-82U</td>
<td>Core Duo T2600</td>
<td>2.16</td>
<td>1GB</td>
<td>14.1” SXGA+</td>
<td>256MB</td>
<td>100G</td>
<td>7200</td>
<td>Combo</td>
<td>Intel</td>
<td>11a/b/g</td>
<td>Blue Finger</td>
<td>Feb 06</td>
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<tr>
<td>2007-87U</td>
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<td>7200</td>
<td>Combo</td>
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<td>11a/b/g</td>
<td>Blue Finger</td>
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<td>100G</td>
<td>7200</td>
<td>Combo</td>
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<td>11a/b/g</td>
<td>Blue Finger</td>
<td>Feb 06</td>
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<td>2007-90U</td>
<td>Core Duo T2600</td>
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<td>1GB</td>
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<td>Combo</td>
<td>Intel</td>
<td>11a/b/g</td>
<td>Blue Finger</td>
<td>Feb 06</td>
</tr>
</tbody>
</table>

### Software

#### Windows XP Professional
- **Microsoft Windows XP Professional** Service Pack 2
- **Disk-to-Disk Recovery**

#### Preloaded Software
- **Rescue and Recovery**
- **Access Connections**
- **Client Security Solution**
- **ThinkVantage Productivity Center with Away Manager**
- **ThinkVantage System Update**
- **Symantec Client Security**
- **Diskeeper Lite**
- **PC-Doctor for Windows (diagnostics)**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Adobe Reader**
- **Google Toolbar**
- **Google Desktop**
- **Picasa from Google**
- **Fingerprint Software (fingerprint models)**
- **Multimedia Center for Think Offers**
- **Sonar RecordNOW and Drive Letter Access (combo, DVD+RW)**
- **InterVideo WinDVD (combo, DVD+RW models)**
- **InterVideo WinDVD Creator (DVB+RW models)**

#### License
- **CD not included**
- **Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client**

### Other Accessories
- **Lenovo Access Connections**
- **Lenovo SmartCard Reader**
- **Lenovo Rescue and Recovery**
- **Lenovo ThinkVantage System Update**
- **Lenovo ThinkPlus 3-year LOR 9x5 NBD**

### Limited Warranty
- **3-years 1-year battery**
- **EasyServ**
- **onsite pickup and delivery**
- **service upgrades**
- **availability**

### Limited warranty
- **3-years 1-year battery**
- **EasyServ**
- **onsite pickup and delivery**
- **service upgrades**

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**Note:** Powered by Intel Centrino® Duo mobile technology

**Lenovo**

US models withdrawn effective October 2006 or September 2007

**Lenovo**

US models withdrawn effective January 31, June 20, or July 11, 2006

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**Lenovo**

Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)

(DV1-5) September 2007
ThinkPad® T60p 2007 (October 2006) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

See footnotes for important warranty information

US models announced October 17 or November 28, 2006
US models withdrawn effective September 2007

* Powered by Intel® Centrino® Duo mobile technology
© Lenovo

SOFTWARE

Windows XP Professional -
• Microsoft® Windows® XP Professional® (Service Pack 2)
• Disk-to-Disk Repairs (in hidden protected area)

Preloaded
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center with Away Manager
• ThinkVantage System Update
• System Migration Assistant
• Symantec® Client Security™
• Diskeeper® Lite
• PC-Doctor™ (diagnostics)
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader
• Google Toolbar
• Picasa from Google
• FingerPrint Software (fingerprint models)
• Multimedia Center for Think Offerings
• Sonic RecordNOW and Drive
• Letter Access (DVD:RW models)
• InterVideo WinDVD (DVD:RW)
• InterVideo WinDVD Creator (DVD:RW models)

License - CD not included
• Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage® technologies
90-watt AC adptr (discrete graphics)
ThinkPad Roll Cage (one-piece magnesium frame)
RoHS-compliant
International Warranty Service®
24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus™, 2-year LOR 9x5 NBD
41C9175
ThinkPlus 3-year LOR 9x5 NBD
41C9176
ThinkPlus 4-year LOR 9x5 NBD
41C9177
ThinkPlus 5-year LOR 9x5 NBD
41C9178

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty
### Software

- There is no preloaded software on these ThinkPad Linux-ready systems.
- Linux operating system and software applications are provided by the customer.
- Although these systems have hardware for the following security features, the Linux operating system does not support them:
  - Fingerprint reader
  - Active Protection System
  - Client Security Solution

See lenovo.com/linux for more information.

### ThinkPad T60p (Linux-ready) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed GHz</th>
<th>Memory</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-8ZU</td>
<td>Core Duo T2700</td>
<td>2.33</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
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<tr>
<td>2007-9ZU</td>
<td>Core Duo T2700</td>
<td>2.33</td>
<td>1GB</td>
<td>15.0&quot; UXGA</td>
</tr>
</tbody>
</table>

- **Fingerprint reader**
- **Security chip**
- **Security**
- **Ethernet**
- **™**
- **Battery - life**
- **Battery - type**
- **Weight**
- **ThinkLight**
- **Keyboard**
- **Graphics**
- **Display**
- **Positioning**
- **Power Management**
- **Power-on password / hard disk password / supervisor password / security keyhole**
- **down, mute buttons / internal microphone / microphone input jack / headphone jack**
- **High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up,**
- **Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE**
- **Bluetooth 2.0 wireless / USB 2.0 interface via ICH7-M / LED indicator**
- **11a/b/g wireless4, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG**
- **Two Mini PCI Express slots / only 802.11 wireless is customer upgradable**
- **™**
- **Antenna built into the display cover / on-off switch for all wireless radios**
- **UltraConnect (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)**
- **One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door**
- **One Type I or Type II slot / CardBus 32-bit / integrated door**
- **None**
- **PCI bus, USB, LPC interface, [Bluetooth], [fingerprint], / PCI bus (TI T1152 CardBus controller) / LPC bus (National Semiconductor® PC87382 Super I/O, Atmel® 9753C203)**
- **None standard / use optional USB-based diskette drive**
- **All IBM/Intel/AMD/Bluechip 2.0 GHz / 512MB RAM / 15.0" SXGA+ (1024x768) TFT color / 1200 nits / 200 cd/m² / magnifying glass**
- **Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SAT300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (National Semiconductor® PC87382 Super I/O, Atmel® 9753C203)**
- **None Type I or Type II slot / CardBus 32-bit / integrated door**
- **One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door**
- **Three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)**
- **None Modern**
- **56K V.90 (9.82-designded®) modem in Com Daughter Card slot / Connectex® chipset**
- **High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack**
- **Security**: Power-on password / hard disk password / supervisor password / security keyhole
- **Security chip**
- **Trusted Platform Module / Amel chip / TCG 1.2-compliant**
- **Fingerprint Reader / Palm rest / supports the security chip**
- **Limited warranty: 3-years / 1-year battery / EasyServ®/on-site pickup and delivery / service upgrades**

See footnotes for important warranty information.

*Powered by Intel Centrino® Duo mobile technology*
ThinkPad T60p (Linux-ready) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Bluetooth</th>
<th>Finger print reader</th>
<th>Workforce or Global Entry</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2623-8YU</td>
<td>Core Duo T2500</td>
<td>2.00</td>
<td>1GB</td>
<td>SXGA+</td>
<td>14.1&quot; SXGA+</td>
<td>256MB</td>
<td>100G 7200</td>
<td>DVD/CD</td>
<td>Intel 11a/b/g</td>
<td>None</td>
<td>Blue</td>
<td>None</td>
</tr>
</tbody>
</table>

- Linux-ready with DOS entitlement
- This small and medium business (SMB) model is part of the US TopSeller™ Program

### Positioning
Processor
Premiere performance; two spindles Intel® Core™ Duo processor T2500 with dual-core.
Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / dual-channel capable / two 200-pin SO-DIMM sockets / std memory in 1 socket / 1 socket available

### Diskette drive
EIDE Combo
UltraBay Slim
Some: DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim
One modular bay for interchangeable devices (right side) / 5.9mm high bay / flat bezel

### Display
14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare

### Graphics
ATI® MOBILITY™ FireGL® V5200 M56 / PCI Express x16 / 256MB GDDR3 / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Display
11a/b/g wireless4, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
Antenna built into the display cover / on-off switch for all wireless radios
Three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

### Power
- 9-cell: up to 5.4 hr; 9-cell plus Ultrabay battery: up to 6.9 hr
- 9-cell: supports unique 2nd battery in Ultrabay Slim
- 14.1" magnesium composite in top cover, CFRP bottom cover:
  - Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

### Security
- Power-on password / hard disk password / supervisor password / security keyhole
- Security chip
- Finger print reader
  - Finger print reader on palm rest / swipe sensor / supports the security chip

### Limited warranty
- 3-years / 1-year battery - EasyServ™-onsite pickup and delivery / service upgrades™ available

### Processor
Intel 11a/b/g WiFi

### Memory
Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

### Wireless antenna
UltraConnect™ antenna built into the display cover / on/off switch for all wireless radios

### Operating System
- Linux operating system does not support the following security features, although this system has hardware for the following security features, the Linux operating system does not support them:
  - Finger print reader
  - Active Protection System
  - Client Security Solution

### Software
There is no preloaded software on this Linux-ready system.
Linux operating system and software applications are provided by the customer.
Although this system has hardware for the following security features, the Linux operating system does not support them:
- Finger print reader
- Active Protection System
- Client Security Solution
See lenovo.com/linux for more information

See footnotes for important warranty information

© Lenovo (DV11-3) September 2007

*Powered by Intel Centrino® Duo mobile technology*
### ThinkPad T60 and T60p (1951 and 2007) - Education - withdrawn

#### Type-model | Speed | Memory | Screen | Graphics | Disk SATA | EIDE controller | Mini PCIe | Blue-tooth | Chip set | Limited warranty | Avail date |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>T60</td>
<td>1951-C2U Core™ Duo T2400 1.83 512M 14.1&quot; XGA</td>
<td>GMA 60G 5400</td>
<td>Combo * Intel 11a/b/g</td>
<td>Blue Finger 6 GM EasyServ Feb 06</td>
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<td>Combo * Intel 11a/b/g</td>
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<td>6006 100G 5400</td>
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<td>2007</td>
<td></td>
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</tr>
</tbody>
</table>

*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty. These models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.*

### SOFTWARE

**Windows XP Professional**
- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Preloaded (only some listed)
  - VitalSource Library education software
  - Adobe® Photoshop® Elements plus Adobe Premiere® Elements
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskkeeper® Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Firmware Software
  - Multimedia Center for Think
  - Offerings
  - Sonic RecordNow® and Drive Letter Access (combo, DVD_RW)
  - InterVideo WinDVD (combo, DVD_RW)
  - InterVideo WinDVD Creator (DVD_RW models)

**CD**
- Adobe Photoshop Elements plus Adobe Premiere Elements

**License**
- CD - not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

---

**Positioning**
- Performance premiere; two spindles
  - Intel® Core™ Duo processor T2400 (1.83GHz), T2500 (2.0GHz), or T2600 (2.16GHz) with dual-core, Enhanced Intel SpeedStep™ technology, © Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**
- 512MB or 1GB std / 4GB max© / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / std mem in 1 socket / 1 socket avail

**Diskette drive**
- None standard / use optional USB-based diskette drive

**EIDE Combo**
- Some: DVD-ROM/CD-RW / 24X/24X/24X/24X/24X® speed / removable from Ultrabay Slim
  - Some: DVD burner / Super Multi-Bus-UltraSlim II One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
  - Some: Ultrabay Slim 60GB® (5400 rpm), 80GB® (5400 rpm), or 100GB® (5400 rpm) / 9.5mm / removable / upgradeable 9.5mm high bay / supports 2nd disk

**ThinkPad Shock Mounted Hard Drive / Active Protection System®**
- Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- Some: ATI® Mobility™ Radeon® X1300 M52 / PCI Express x16 / 64MB GDDR3
  - Some: ATI® MOBILITY Radeon™ X1400 M54 / PCI Express x16 / 128MB GDDR3
  - Some: ATI® Mobility™ FireGL® V5200 M56 / PCI Express x16 / 256MB GDDR3
- All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**TrackPoint®**
- TrackPoint® pointing device, “Press-to-Select,” © Intellilock Bar, magnifying glass

**Touch pad**
- UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones
- Intermolecular for improved keyboard lighting and conditions

**Dimensions**
- 14.1" models (Wx DxH): 12.2" x 10.0" x 0.9-1.2"; 311mm x 255mm x 23-31mm
  - 15.0" models (Wx DxH): 13.0" x 10.6" x 1.2-1.4"; 339mm x 268mm x 31-36mm
- Optical drive and battery: up to 6.3 lb (2.8 kg)
- Lightweight lithium-ion battery: up to 11.5 lbs (5.2 kg)

**Weight**
- Case material: magnesium composite in top cover, CFRP bottom cover; 15": 6.3 lb (2.8 kg)
- Battery - life©:
  - 6-cell: up to 6.3 lb (2.8 kg)
  - 15.0" (381.0mm) Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim / 9.5mm high
  - 150 GB 7200 rpm / 9.5mm high / (5400 rpm), or
  - 100GB 80GB 5400 rpm / 9.5mm high / removable / upgradeable / supports 2nd disk
- 667MHz system bus, and 2MB shared L2 cache

**Weight©**
- Battery - life©:
  - 6-cell: up to 6.3 lb (2.8 kg)
  - 15.0" (381.0mm) supports unique 2nd battery in Ultrabay Slim

**Architecture**
- Some: Mobile Intel® 945GM Express Chipset / 82845GM Graphics Memory Cont Hub
- All: 82845GM Memory Cont Hub Controller Hub
- All: Intel® 915GML Express Chipset / 82845PM Memory Controller Hub
- All: ThinkPad Shock Mounted Hard Drive / Active Protection System®
- All: 802.11b/g
- All: ThinkPad Shock Mounted Hard Drive / Active Protection System®
- All: 802.11a/b/g

**PC Card slot std**
- One Type I or II Type II slot / CardBus 32-bit / integrated dual form factor
- One ExpressCard34 or ExpressCard54 / PCI Express x1 or 2.0 USB / integrated dual form factor
- Three USB 2.0 / external DVI-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

**Wireless**
- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- Some Mini PCI Express slots / only 208.11 wireless is customer upgradable
- Two Mini PCI Express slots / 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

**Modem**
- 56K V.90 (V.92-designed®) modem in Com Daughter Card socket / Conexant® chipset
- Gigabit ethernet on systemboard / Intel® PRO 82573L / MAC PHY / PCIe x1 / PXE

**Bluetooth**
- Digital/bluetooth / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone / headphone jack / headphone jack

**Battery**
- Power-on password / hard disk password / supervisor password / support key/keystroke
- Security Chip - Trusted Platform Module
- Security Chip - With Trusted Platform Module
- Security Chip - AMD Chip for ThinkPad® T60

**Limited warranty: 3-years* / 1yr battery - EasyServ™ onsite pickup and delivery / service upgrades© available

**License**
- 24 hour 7 day© toll-free warranty support during the warranty

**Supported technologies**
- ThinkPlus® 2-2 year LOR 9x5 NBD
- Windows XP Professional | Windows XP Professional® | Windows XP Professional® | Windows XP Professional® | Windows XP Professional®
- 65-watt (1951) or 90 watt (2007) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour 7 day© toll-free warranty support during the warranty

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(DV1-6) September 2007
ThinkPad® T60 and T60p (1952 and 2008) - Education withdrawn

Windows XP Professional  
- Microsoft® Windows® XP Professional24 (Service Pack 2)  
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded  
- VitalSource Library education software  
- Adobe® Photoshop® Elements plus Adobe® Premiere Elements  
- Rescue and Recovery™  
- Access Connections™  
- Client Security Solution™  
- ThinkVantage Productivity Center with Away Manager  
- ThinkVantage System Update  
- Symantec® Client Security™  
- Diskeeper® Lite  
- PC-Doctor® (diagnostics)  
- ThinkPad Utilities (Power Manager and Presentation Director)  
- Adobe® Reader  
- Google Toolbar  
- Google Desktop  
- Piczza from Google  
- FingerPrint Software  
- Multimedia Center for Think Offerings  
- Sonic RecordNOW! and Drive (Letter Access combo, DVD±RW)  
- InterVideo WinDVD (combo, DVD±RW)  
- InterVideo WinDVD Creator (DVD±RW models)

CD  
- Adobe Photoshop Elements plus Adobe Premiere Elements

License - CD not included  
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information  
* Powered by Intel® Centrino® Duo mobile technology

US models announced January 31 or April 4, 2006

US models withdrawn effective September 2007

** Lenovo

© Lenovo

(DV1-7) September 2007
ThinkPad® T60 (2007) - Education (Vista™) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>EIDE IDEopt.</th>
<th>MiniPCIe 802.11</th>
<th>Finger Battery</th>
<th>Edupre</th>
<th>Limited warranty</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>T60</td>
<td>2007-QXU</td>
<td>Core 2 Duo T7200</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>X1400</td>
<td>100G</td>
<td>7200 DVDxRW</td>
<td>11a/b/g</td>
<td>Finger 9</td>
<td>PM</td>
<td>EasyServ Apr 07</td>
</tr>
</tbody>
</table>

• This model has an EasyServ™ onsite pickup and delivery 3-year limited warranty

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor
Premiere performance; two spindles

Intel® Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

Diskette drive
None standard / use optional USB-based diskette drive

EIDE DVD±RW
DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

UltraBay Slim
One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel 100GB (7200rpm) / 9.5mm high / removable / upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

Display
14.1" (358.1mm) SXGA+ (1400x1050) TFT color / 150 nits / anti-glare

Graphics
ATI® MOBILITY™ Radeon™ X1400 M54 / PCI Express x16 / 128MB GDDR1 / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
9-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys

Touchpad
ThinkPad® trackpoint device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touchpad
UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
14.1" models (WxDxH): 12.2" x 10.0" x 1.0-1.2" / 311mm x 255mm x 26.6-31.5mm with optical drive and battery: 14.1" models: up to 5.5 lb (2.5kg) 14.1": magnesium composite in top cover, CFRP bottom cover

Battery - type
Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

Battery - life
6-cell: up to 6.0 hr; 9-cell: up to 6.8 hr; 9-cell plus Ultrabay battery: up to 11.5

Architecture
Mobile Intel 945PM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, and 4MB shared L2 cache)

PC Card Slot
One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door (PC1512 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel® 97SC3203)

Ports
One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door (90 days of virus definitions)

Three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

Fingerprint reader
Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty
3-years / 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

Preloaded operating system

Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskkeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities
- Adobe Reader
- Picasa from Google

License - CD not included - Lotus® Notes® Stand-alone Client

Supports ThinkVantage® technologies

90 watt (2007)AC adapter
ThinkPad Roll Cage (one-piece magnesium frame) RoHS-compliant

International Warranty Service
24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus™ 2-year LOR 9x5 NBD 41C9175
ThinkPlus 3-year LOR 9x5 NBD 41C9176
ThinkPlus 4-year LOR 9x5 NBD 41C9177
ThinkPlus 5-year LOR 9x5 NBD 41C9178
ThinkPlus 4-year P&L P/U Depot 41C9197
ThinkPlus 5-year P&L P/U Depot 41C9198

See footnotes for important warranty information

US model announced April 17, 2007
US model withdrawn effective September 2007

© Lenovo (DV2-6) September 2007
This model has a limited onsite service\(^2\) - 3-year limited warranty

This model has a limited warranty which is only available to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Preloaded operating system\(^3\)
- Microsoft® Windows® Vista™
- Business Edition (32-bit)\(^4\)
- Vista Basic logo

Preloaded applications\(^5\)
- Microsoft Office 2007 Trial
- Adobe Reader
- Adobe Premiere Elements 3
- Lotus® Notes®
- Picasa from Google
- Diskeeper
- Rescue and Recovery™
- PC-Doctor™
- Client Security Solution
- Access Connections™
- Internet Security™
- Norton Internet Security™
- ThinkVantage System Update
- System Migration Assistant
- Adobe Reader
- ThinkPad Utilities (Power Manager and Presentation Director)
- Post-workstation support
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- Microsoft Office 2007 Trial

License - CD not included
- Lotus® Notes® Stand-alone Client
- Microsoft Office 2007 Professional
- Microsoft Office 2007 Standard
- Microsoft Office 2007 Home and Student
- ThinkVantage Access Connections
- ThinkVantage Client Security Solution
- ThinkVantage Rescue and Recovery™
- Post-warranty annual maintenance agreements at lenovo.com/warranty

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Finger Battery reader Cell</th>
<th>EduDry load</th>
<th>Limited warranty</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>T60</td>
<td>2008-QXU Core 2 Duo T7200 2.00 1GB 14.1” SXGA+ X1400 100G 7200 DVDxRW</td>
<td>11a/b/g(^2)</td>
<td>Finger 9 PM HE</td>
<td>Onsite</td>
<td>Apr 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

See footnotes for important warranty information

US model announced April 17, 2007
US model withdrawn effective September 2007

\(^1\) Business Edition (32-bit)\(^4\)
\(^2\) Vista Basic logo
\(^3\) 90 watt (2007)AC adapter
\(^4\) ThinkPad Roll Cage (one-piece magnesium frame)
\(^5\) RHoS compliant
\(^6\) International Warranty Service\(^7\)
\(^7\) 24 hour x 7 day\(^8\) toll-free warranty support during the warranty\(^9\)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk (SATA)</th>
<th>EIDE (rpm)</th>
<th>Mini PCIe (wireless)</th>
<th>Mini PCIe (WWAN)</th>
<th>Finger-print reader (battery warranty)</th>
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</thead>
<tbody>
<tr>
<td>1953-D5U</td>
<td>Core Solo T1300</td>
<td>1.66</td>
<td>256MB</td>
<td>14.1&quot; XGA GMA 950</td>
<td>40GB 5400</td>
<td>Combo + Intel 11a/b</td>
<td>None</td>
<td>6-cell 1-yr Feb 06</td>
<td></td>
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<tr>
<td>1953-D6U</td>
<td>Core Duo T2300</td>
<td>1.62</td>
<td>512MB</td>
<td>14.1&quot; XGA GMA 950</td>
<td>60GB 5400</td>
<td>Combo + Intel 11a/b</td>
<td>None</td>
<td>6-cell 1-yr Feb 06</td>
<td></td>
</tr>
<tr>
<td>1953-D7U</td>
<td>Core Duo T2300</td>
<td>1.62</td>
<td>512MB</td>
<td>15.0&quot; XGA GMA 950</td>
<td>60GB 5400</td>
<td>Combo + Intel 11a/b</td>
<td>None</td>
<td>6-cell 1-yr Feb 06</td>
<td></td>
</tr>
<tr>
<td>1953-D8U</td>
<td>Core Duo T2300E</td>
<td>1.83</td>
<td>512MB</td>
<td>15.0&quot; XGA GMA 950</td>
<td>80GB 5400</td>
<td>Combo + Intel 11a/b</td>
<td>None</td>
<td>6-cell 1-yr May 06</td>
<td></td>
</tr>
<tr>
<td>1953-D9U</td>
<td>Core Duo T2400</td>
<td>1.83</td>
<td>512MB</td>
<td>15.0&quot; XGA GMA 950</td>
<td>80GB 5400</td>
<td>Combo + Intel 11a/b</td>
<td>None</td>
<td>6-cell 1-yr July 06</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These 1953 models have a 1-year limited warranty.

Positioning Processor
Premiere performance; two spindles
Intel® Core™ Solo processor T1300 (1.66GHz) with single-core, Enhanced Intel SpeedStep™ technology
Execute Disable Bit, 667MHz bus, and 2MB L2 cache or
Intel® Core Duo processor T2300, T2300E, or T2400 with dual-core, Enhanced Intel SpeedStep™ technology
Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory
256MB or 512MB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SODIMM sockets / std mem in 1 socket / 1 socket avail

Diskette drive
None standard / use optional USB based diskette drive

IDE Combo
DVD-ROM/CD-RW 24X24X24X8X / speed / removable from Ultrabay Slim

UltraBay Slim
One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel

Serial ATA disk (SATATA150)
40GB (5400 rpm) or 60GB (5400 rpm) or 80GB (5400 rpm) / 9.5mm high / flat bezel

ThinkPad Shock Mounted Hard Drive / Active Protection System™

Display
Some: 14.1" (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare
Some: 15.0" (380.0mm) XGA (1024x768) TFT color / 150 nits / anti-glare

Graphics
Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz / DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

TrackPoint
Touchpad
Pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

ThinkLight™
UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones

Dimensions
14.1" models (WxDxH): 12.2" x 10.0" x 1.2-1.4"; 311mm x 255mm x 26.6-31mm
15.0" models (WxDxH): 13.0" x 10.6" x 1.2-1.4"; 329mm x 268mm x 31-36mm

Weight
With optical drive and battery: 14.1" models: up to 5.5 lb (2.5kg); 15.0" models: up to 6.3 lb (2.8kg)

Battery case material
6-cell / supports unique 2nd battery in Ultrabay Slim

Battery - type
Lithium Ion 6-cell / 9-cell / 11-cell / 15-cell

Architecture
Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Manager Hub Controller / 82801GBM ICH7 M-I/O Controller Hub / 100-1000 EIDE, PCI Express x1, PCI bus (TI PCI1512 CardBus controller) / LPC bus (National Semiconductor PC7852 Super I/O, Altera 9573C203)

Wireless antenna
UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

Mini PCI Express
Intel 11a/b/g / WWAN

Modem
56K V.90 (V.92-designed) modem in Comman Daughter Card socket / Conexant® chipset

Bluetooth™
None

Ethernet
Gigabit ethernet on system board / Intel 82573L (MAC/PHY) / PCI x1 / PXE

Audio
High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

Security
Power-on password / hard disk password / supervisor password / security keyhole

Security chip
Trusted Platform Module / Atmel chip / F11, 1.2-compliant

Fingerprint reader
Some: Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty 1-year
EasyServ™ on-site pickup and delivery / service upgrades available

SOFTWARE™
Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive Letter Access
- IntelVideo WinDVD

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supported ThinkVantage™ technologies
- 65-watt AC adapter (GMA graphics)
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour 7 day toll-free warranty support during the warranty

Limited warranty 2-year
EasyServ™ on-site pickup and delivery / service upgrades available

See footnotes for important warranty information

* Powered by Intel CentriCor® mobile technology
* Powered by Intel CentriCor® Duo mobile technology

US models announced Jan 31, June 20, or July 11, 2006
* Powered by Intel CentriCor® Duo mobile technology

## ThinkPad T60 (1953 and 2623) - TopSeller - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Graphical controller</th>
<th>Disk</th>
<th>IDE interface</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Battalion set capability</th>
<th>Limited Avail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>T60 - 1953-DDU 1953</td>
<td>Intel® Core™ 2 Duo processor T5500</td>
<td>1.66GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>1953-1956-2623</td>
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<tr>
<td>T60 - 1953-KSC</td>
<td>Intel® Core™ 2 Duo processor T5500</td>
<td>1.66GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>1953-1956-2623</td>
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<tr>
<td>T60 - 1953-KSF</td>
<td>Intel® Core™ 2 Duo processor T5500</td>
<td>1.66GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>1953-1956-2623</td>
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<tr>
<td>T60 - 2623-DLU</td>
<td>Intel® Core™ 2 Duo processor T5600</td>
<td>1.83GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
<td>T60 - 2623-EZU</td>
<td>Intel® Core™ 2 Duo processor T5600</td>
<td>1.83GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
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<td>Intel® Core™ 2 Duo processor T5600</td>
<td>1.83GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
<td>T60 - 2623-KDU</td>
<td>Intel® Core™ 2 Duo processor T5600</td>
<td>1.83GHz</td>
<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
<td>T60 - 2623-LFU</td>
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<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
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<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
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<td>Intel® Core™ 2 Duo processor T5600</td>
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<td>1GB</td>
<td>SCH</td>
<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
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<tr>
<td>T60 - 2623-PFU</td>
<td>Intel® Core™ 2 Duo processor T5600</td>
<td>1.83GHz</td>
<td>1GB</td>
<td>SCH</td>
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<td>XGA</td>
<td>802.11b</td>
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<td>1-year EasyServ</td>
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<td>Intel® Core™ 2 Duo processor T5600</td>
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<td>1GB</td>
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<td>512MB</td>
<td>XGA</td>
<td>802.11b</td>
<td>Wireless tooth</td>
<td>1-year EasyServ</td>
<td>2623-12/27/06</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-to-3 year or limited warranty

### Features and Specifications:

- **Processor:** Intel® Core™ 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus;
- **Memory:** 1GB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two or 200-pin SO-DIMM sockets
- **Display:** 1.3-1.4GHz (358.1mm) XGA (1024x768) TFT color / 150 nits / anti-glare
- **Graphics:** Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- **Weight:** up to 5.5 lb (2.5kg)
- **Keyboard:** 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- **Touchpad:** pointing device
- **ThinkLight™:** illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions:** 14.1” (wxDxH): 12.2” x 10.0” x 1.0-1.2”; 311mm x 255mm x 26.6-31mm
- **Battery:** Lithium Ion 6-cell or 9-cell / supports unique 2nd battery in Ultrabay Slim
- **Architecture:** Mobile Intel® 945GM Express Chipset
- **Wireless connection:** UltraConnect™
- **Certification:** Lenovo Class A, B, & C, RoHs-compliant

### Software:

- **Operating System:** Microsoft Windows XP Professional
- **Preloaded programs:**
  - Microsoft Office OneNote
  - Rescue and Recovery
  - Access Connections
  - Client Security Solution
  - ThinkVantage Productivity Center with Maintenance Manager
  - ThinkVantage System Update
  - Symantec Client Security
  - Diskeeper Lite
  - PC-Doctor™
- **Other software:**
  - ThinkPad Access Client Manager and Presentation Director
  - Adobe Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Multimedia Center for Think
  - Sonic RecordNOW and Drive

### Comparison:

- **Comparison with Lenovo M500:**
  - Lenovo M500 Projector
  - Lenovo C500 Projector

### Security Features:

- **Security options:**
  - Power-on password / supervisor password / secure keyhole
  - Security keyhole

### Precautions:

- **Limited warranty:**
  - Lenovo EXPRESS Service
  - Lenovo On-Site Service

### Additional Information:

- **Shipping weight:**
  - Thinkpad T60 250310U
  - Thinkpad T60 250312U

- **Supplementary features:**
  - Desktop Tower / Lenovo ThinkStation
  - Thinkplus Technologies
  - 90-watt AC adapter (discrete graphics)
  - ThinkPad Roll Cage (one-piece magnesium frame)
  - RHs-compliant
  - International Warranty Service
  - 24 hour x 7 day toll-free warranty support during the warranty

- **License & Support Options:**

  - Lenovo.com/thinkplus
  - Lenovo.com/thinkplus/warranty

- **Lenovo Software Offerings:**

  - ThinkPlus

- **Compatibility:**

  - Lenovo SmartSuite
  - Lenovo Millennium and Lenovo Notes
  - Stand-alone Client
These small and medium business (SMB) models are part of the US TopSeller™ Program.

These models have a 1-year or 3-year limited warranty.

Preloaded operating system™:
- 2623-P2U: Vista Basic logo
- Others: Vista Premium logo

Preloaded applications™ (all):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Norton Internet Security™
- DiKeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial

License - CD not included (all)
- Lotus® Notes® Stand-alone Client

Preloaded applications™ options at lenovo.com/thinkplus/warranty
- Stand-alone Client
- Stand-alone Plus
- Stand-alone Basic

Supported ThinkVantage™ technologies

See footnotes for important warranty information.
ThinkPad T60 and T60p (2623) - TopSeller (June 2006) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Screen</th>
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<tbody>
<tr>
<td>T60</td>
<td>Core Duo</td>
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<td>512MB</td>
<td>14.1&quot; SXGA+ 64MB</td>
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<td>14.1&quot; XGA</td>
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<td>512MB</td>
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<td>14.1&quot; SXGA+ 256MB</td>
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<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN wireless</th>
<th>Mini PCIe WWAN optical</th>
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<th>License</th>
<th>Support</th>
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<tr>
<td>Windows XP Professional</td>
<td>Disk-to-Disk Recovery</td>
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<td></td>
<td>(in hidden protected area)</td>
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</table>

Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Management and Service Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software
- Multimedia Center for Think

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supported ThinkVantage® technologies

90-watt AC adapter (discrete graphics)
ThinkPad Roll Cage (one-piece magnesium frame)
RoHS-compliant

24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus™ 2-year LOR 9x5 NBD
ThinkPlus™ 3-year LOR 9x5 NBD
ThinkPlus™ 4-year LOR 9x5 NBD
ThinkPlus™ 5-year LOR 9x5 NBD
ThinkPlus™ 4-year P&L Depot
ThinkPlus™ 5-year P&L Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Blue-tooth</th>
<th>Finger-print reader</th>
<th>Bat-Whorse (W)</th>
<th>Availability</th>
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<td>6369-6XU</td>
<td>Core 2 Duo T5500</td>
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<td>GMA 40G 5400 DVD</td>
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<td>GM 6 E G Dec06</td>
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<td>Finger GM 6 G Dec06</td>
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</table>

Positioning: Premiere performance; two spindles
Processor: Intel® Core™ 2 Duo processor T5500, T7200, T7400, or T7600 with dual-core, Intel 64 Technology. Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / T5500: 2MB L2 cache (shared); Others: 4MB L2 cache (shared)

Memory: 512MB or 1GB sty, 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

Diskette drive: None standard / use optional USB-based diskette drive
EIDE DVD: Some: DVD-ROM and DVD+R / 4.7X9X speed / single-layer / removable from Ultrabay™ Slim
Some: DVD-ROM/CD-RW / 24X24X24X8X speed / removable from Ultrabay Slim
EIDE Combo: Some: DVD burner / Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim
Some: DVD burner / Super Multi-Burner / 8X4X6X speed / 8X2X4X8X speed / removable from Ultrabay Slim
ULTRabay Slim: One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
Serial ATA disk (SATA150): 40GB (5400 rpm), 60GB (5400 rpm), 100GB (7200 rpm), or 120GB (5400 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System™

WideScreen display (anti-glare): Some: 15.4” (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio
Some: 15.4” (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio
All: stainless steel hinges / one hard activates dual latches

Graphics: Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
Some: ATI® MOBILITY™ Radeon™ X1400 / PCIe Express x16 / 128MB memory All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard: 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apk keys / ThinkPad® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass
TrackPoint®: Touch pad
ThinkLight™: UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones illuminates the keyboard to improve visibility in low-light conditions

Dimensions: 15.4” models (WxD:H): 14.1” x 10.9” x 1.13–1.34” / 357.5mm x 255mm x 28.7–34mm with optical drive and battery: up to 6.06 lb (2.75kg)
Weight: Carbon-Fiber Reinforced Plastic (CFRP) in top/bottom
Battery - type: Lithium Ion 6-cell / 6-cell: up to 5.5 hr; 9-cell: up to 6.1 hr; 9-cell plus Ultrabay battery: up to 7.6 hr
Battery - life: Supports ThinkVantage technologies

Architecture: Mobile Intel 495GM Express Chipset / 82945GM Graphics Memory Cont Hub
Some: Mobile Intel 495PM Express Chipset / 82945PM Memory Cont Hub All: 82801GBM ICH7-M O/Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, USB, LPC interface, [Bluetooth], [fingerprint], PCI Express bus (Tile) PCI1512 CardBus controller) / LPC bus (NS PC87383U Super I/O, Atmel® 7S3203)

PC Card Slot: One Type I or Type II slot / CardBus 32-bit / integrated door
ExpressCard Slot: One ExpressCard or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door
Ports: Three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

Wireless antenna: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
Mini PCI Express: Two Mini PCI Express slots / only 802.11 wireless is customer upgradeable
Mini PCI Express: Two Mini PCI Express slots / 802.11b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
Some: Wireless WAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI Adapter, EV-DO/1xRTT, retractable WWAN antenna, service contract required with Verizon®
WWAN: Wireless WAN, GPRS/EDGE/UMTS/HSDPA support, Mini PCI adapter and SIM, retractable WWAN antenna, service contract required with AT&T®
Modem: 56Kv V.92 (V.92-designed) modem in Com Daughter Card socket / CardBus® chipset
Bluetooth™: Bluetooth 2.0 wireless / USB 2.0 interface / Bluetooth 2.0 interface
Ethernet: Gigabit ethernet on system board / Intel 82573L (MAC/PHY) / PCIe x1
Audio support: High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack / Power-on password / hard disk password / security keyhole
Security: Trusted Platform Module / Atmel chip / TCG 1.2-compliant
Fingerprint reader: Some: Fingerprint reader on palm rest / swipe sensor / supports the security chip

Limited warranty: 3-years / 1-year battery / EasyServ™ on-site pickup and delivery / service upgrades® available

SOFTWARE:
Windows XP Professional:
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded:
- Rescue and Recovery®
- Access Connections®
- Client Security Solution™
- thinkVantage Productivity Center with Away Manager
- thinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNow and Drive Letter Access (combo, combo, DVD+RW)
- Intel Video WindDVD (combo, combo, DVD+RW models)
- Intel Video WindDVD Creator (DVR/VHDs)

License:
- CD not included
- Lenovo® SmartSuit® Millennium and Lenovo® Notes® Stand-alone Client

See footnotes for important warranty information
© Lenovo
US models announced November 28 or December 19, 2006
US models withdrawn September 2007
(CR2-1) September 2007

Powered by Intel Centrino® Duo mobile technology

© 2006

Note: This product is designed to work with the Windows XP Professional operating system.
## T60 and T60p 15W (6370 and 8742) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Battery</th>
<th>Weight</th>
<th>Dimensions</th>
<th>Battery life</th>
<th>Additional Features</th>
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<tbody>
<tr>
<td>T60</td>
<td>Core 2 Duo</td>
<td>2.00</td>
<td>1GB</td>
<td>545.8mm x 357.5mm x 28.7–34mm</td>
<td>250G</td>
<td>5400 rpm</td>
<td>6-cell</td>
<td>10.0” x 7.9” x 1.13–1.34”</td>
<td>24, 8 am – 5 pm, Mon - Fri coverage</td>
<td>14.1” x 10.0” x 1.13–1.34”</td>
<td>24 hour x 7 day18 toll-free warranty</td>
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<tr>
<td>T60</td>
<td>Core 2 Duo</td>
<td>2.00</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Positioning

- **Processor**: Premiere performance; two spindles
- **Intel® Core™ 2 Duo processor T2700, T7400, or T6000 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology**, Execute Disable Bit, and 867MHz system bus / 4MB L2 cache (shared)

### Memory

- **1GB std / 4GB max**
- **54GB (5400 rpm) or 100GB (7200 rpm)**
- **9.5 mm high, removable, upgradeable**
- **9.5 mm high, supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System®**

### Diskette drive

- **None standard / use optional USB-based diskette drive**
- **Some: DVD-ROM/CD-RW / 24X/24X/24X/8X** speed / removable from Ultrabay Slim
- **Some: DVD Burner / Super Multi-Burner / 40Y6823 dual-layer, removable Ultrabay Slim**

### Ultrabay Slim

- **Serial ATA disk (SAT150)**
- **One modular bay for interchangeable devices (right side) / 9.5 mm high bay / flat bezel**

### USB

- **80GB (5400 rpm) or 100GB (7200 rpm)**
- **9.5 mm high / removable, upgradeable / 9.5 mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System®**

### Widescreen display (anti-glare)

- **15.4” (391mm) WXGA (1280x800) TFT / 150 nits / 16:10 aspect ratio**
- **15.4” (391mm) WXGA+ (1680x1050) TFT / 200 nits / 16:10 aspect ratio**

### Graphics

- **Intel Graphics Media Accelerator 9500**
- **Intrgrated in 945GM / 250MHz**
- **Some: ATI® MOBILITY® FireGL® V5250 / PCI Express x16 / 256MB memory**
- **DVI pass-through support to optional Advanced Mini Dock or Advanced Dock**

### Keyboard

- **9-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys**
- **None: TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar® / magnifying glass**
- **None: Touch pad UltraNav® multi-pointing system / touch pad below keyboard / Tap Zones**
- **None: Stainless steel hinges / one hand activates dual latches**

### Computer Cards

- **Two Mini PCI Express slots**
- **Some: Intel Chipset 82945PM Express Chipset / 82945PM Memory Controller Hub All: 82801BM ICH7-M / I/O Controller Hub (SAT300, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint], [PCI bus] PCI1512 CardBus controller / CardBus (not PC78392 Standard / 753C20)**

### Wireless antenna

- **Two Mini PCI Express slots**
- **Some: Mobile Intel® 915PM Express Chipset / 915PM Memory Controller Hub All: Intel 11a/b/g wireless®, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG / None**

### Modem

- **56K V.99 (V.92-designed®) modem in Com Daugher Card socket / Conexant® chipset**
- **Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE**
- **One Type I or Type II slot / CardBus 32-bit / integrated door / 82945GM Graphics Memory Cont Hub / 802.11 wireless**
- **Two Mini PCI Express slots / only 802.11 wireless is customer upgradable**
- **Some:** Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub All: Intel 11a/b/g wireless®, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG / None

### Security chip

- **Trusted Platform Module / Atmel chip / TCG 1.2-compliant**
- **ThinkPad Shock Mounted Hard Drive / Active Protection System®**
- **One modular bay for interchangeable devices (right side) / 9.5mm high bay / removable, upgradable / 9.5mm high bay / supports 2nd disk / ThinkPad Shock Mounted Hard Drive / Active Protection System®**
- **One Pocket Media Card slot / CardBus 32-bit / integrated door / 82945GM Graphics Memory Cont Hub / 802.11 wireless**
- **Two Mini PCI Express slots / only 802.11 wireless is customer upgradable**
- **Some:** Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub All: Intel 11a/b/g wireless®, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG / None

### Limited warranty

- **3-year / 1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

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*Powered by Intel Centrino® Duo mobile technology*
**ThinkPad T60 15W (8741) - Education (Vista) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk EIDE</th>
<th>Mini PCI Express</th>
<th>Mini PCI Express WWAN</th>
<th>Chipset pre-load</th>
<th>Limited warranty</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>T60 8741-HHU</td>
<td>Core 2 Duo T7200</td>
<td>2.00</td>
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<td>WSXGA+ 1400</td>
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<td>11a/b/g</td>
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<tr>
<td>T60 8741-HJU</td>
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<td>100G 7200</td>
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<td>11a/b/g</td>
<td>None</td>
<td>K9</td>
<td>EasyServ Apr 07</td>
<td></td>
</tr>
</tbody>
</table>

*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty*

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning
- **Processor**: Premier performance; two spindles
  - **Intel® Core™ 2 Duo processor T7200** with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB L2 cache (shared)

### Memory
- **1GB std / 4GB max** / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Architecture
- **Mobile Intel 945PM Express Chipset** / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATAPI EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Ti™ PCI1512 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel™ 7SC3203)

### Wireless antenna (anti-glare)
- **UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios**
  - **Mini PCI Express slots** / only 20011a/b/g wireless
  - **WWAN**

### Preloaded operating system
  - Vista Basic logo

### Preloaded applications
  - Some (K12): K-12 education software
  - [VistaSource Library Edition](http://www.lenovo.com)
  - [Adobe™ Instructor Resource Center](http://www.lenovo.com)
  - [Adobe Digital School Collection](http://www.lenovo.com)
  - [Photoshop Elements 5](http://www.lenovo.com) and [DVD](http://www.lenovo.com) (and CD)
  - [Premier Elements 3](http://www.lenovo.com) (and DVD)
  - [Acrobat 8 Professional](http://www.lenovo.com) and [DVD](http://www.lenovo.com)
  - [Contribute 4](http://www.lenovo.com) (and CD)
  - [ThinkVantage Productivity Center with Away Manager](http://www.lenovo.com)
  - [ThinkVantage System Update](http://www.lenovo.com)
  - System Migration Assistant
  - [Norton Internet Security](http://www.lenovo.com) (90 days of virus definitions)
  - [Diskeeper® Home](http://www.lenovo.com)
  - [PC-Docotr™ (diagnostics)](http://www.lenovo.com)
  - [ThinkPad Utilities](http://www.lenovo.com)
  - [Adobe Reader](http://www.lenovo.com)
  - [Picasa from Google](http://www.lenovo.com)
  - [Fingerprint Software](http://www.lenovo.com)

### License
- CD - not included
- [Lenovo Notes™ Stand-alone Client](http://www.lenovo.com)

### Limited warranty
- 3-years / 1-year battery - [EasyServ™ onsite pickup and delivery](http://www.lenovo.com) / [srv upgrades](http://www.lenovo.com) available

### Other accessories
- [ThinkPlus](http://www.lenovo.com)
- [ThinkPlus 2-2 year LOR 9x5 NBD](http://www.lenovo.com)
- [ThinkPlus 3-year LOR 9x5 NBD](http://www.lenovo.com)
- [ThinkPlus 4-year LOR 9x5 NBD](http://www.lenovo.com)
- [ThinkPlus 5-year LOR 9x5 NBD](http://www.lenovo.com)
- [ThinkPlus 4-year P/L P/U Depot](http://www.lenovo.com)
- [ThinkPlus 5-year P/L P/U Depot](http://www.lenovo.com)

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**See notes for important warranty information**

US models announced April 17, 2007

US models withdrawn effective September 2007
**ThinkPad® T60 15W (8742) - Education (Vista™) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Disk</th>
<th>SATA</th>
<th>GPA</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>WAAN</th>
<th>Chipset</th>
<th>Battery</th>
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<tr>
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<td>100G,</td>
<td>DVD±RW</td>
<td>11a/b/g</td>
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<td>PM</td>
<td>9</td>
<td>HE</td>
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<td>DVD±RW</td>
<td>11a/b/g</td>
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<td>PM</td>
<td>9</td>
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</tr>
</tbody>
</table>

These models have a limited onsite service and 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor

Premiere performance; two spindles

Intel® Core™ 2 Duo processor T7200 (with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology), Execute Disable Bit, 667MHz system bus, and 4MB L2 cache (shared)

Memory

1GB std | 4GB max | 40Y8623

UltraSlim

One modular bay for interchangeable devices (right side) | 9.5mm high bay | flat bezel

Serial ATA disk disk

100GB (7200 rpm) | 9.5mm high | removable, upgradeable

Widescreen display

15.4” (391mm) WXGA+ (1680x1050) TFT color | 200 nits | 16:10 aspect | stainless steel hinges

Graphics

ATI™ MOBILITY™ Radeon™ X1400 | PCI Express x16 | 128MB memory | DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard

TrackPoint® | Touch pad

ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys | ThinkLight™

Dimensions

15.4” models (WxDxH): 14.1” x 10.0” x 1.31–1.34” | 357.5mm x 255mm x 28.7–34mm

Weight

Lithium Ion 9-cell | supports unique 2nd battery in Ultrabay Slim

Battery - type

9-cell: up to 6.0 hr | 9-cell plus Ultrabay battery: up to 7.5 hr

Wireless antenna

UltraConnect® Antenna built into the display cover | on-off switch for all wireless radios

Mini PCI Express

11a/b/g

WWAN

None

Modem

56K V.90 (V.92-designed) modem in Com Daughter Card socket | Conexant® chip set

Bluetooth™

Bluetooth 2.0 wireless | USB 2.0 interface via ICH7-M / LED indicator

Ethernet

Gigabit ethernet on systemd board | Intel 82573L (MAC/PHY) / PCI x1 / PXE

Audio support

High Definition (HD) Audio | AD1981 HD codec | stereo speakers, 1 watt | volume up, down, mute buttons | internal microphone | microphone input jack | headphone jack

Security

Power-on password | hard disk password | supervisor password | security keyhole

Security chip

Fingerprint reader (TouchPad) | Trusted Platform Module | ThinkVantage Productivity Center | Windows, Application Access, Fingerprint Software (fingerprint chip)

Fingerprint reader

Fingerprint reader on palm rest | swipe sensor | supports the security chip

Limited warranty

3-year/1-year battery, limited onsite service | 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

Preloaded operating system

- Vista Basic logo

Preloaded applications

- Some (K12): K-12 education software
- VitalSource Library School Edition
- Adobe® Instructor Resource Center
- Adobe Digital School Collection
- Photoshop Elements 5 (and DVD)
- Acrobat 8 Professional (and CD)
- Acrobat 4 (and CD)
- Some (HE): Higher education software
- VitalSource Library College Edition
- Adobe Instructor Resource Center
- Adobe Photoshop Elements 5 (and CD)
- Adobe Premier Elements 3 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Picasa from Google
- Microsoft Office 2007 Trial

License

- CD not included
- Lotus® Notes® Stand-alone Client

At a glance

- 110W Lenovo 110W Wide 12” (90 days of virus definitions)
- Norton Internet Security
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Picasa from Google
- Microsoft Office 2007 Trial
ThinkPad T60 and T60p 15W (TopSeller) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>Disk SATA GB/ rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN Blue-tooth - Chip Blue-tooth/ Limited</th>
<th>Battery cells</th>
<th>Limited warranty</th>
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<td>6371-7DU</td>
<td>Core Duo T2300E 1.66 512MB 15.4&quot; WXGA</td>
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<td>1-yr Mar 07</td>
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<td>3-yr Dec 06</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a 1-year or 3-year limited warranty.

**Positioning**
- Processor: Premier performance; two spindles
- Intel® Core™ Duo processor T2300E with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB L2 cache (shared) or
- Intel Core 2 Duo processor T5500 or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus

**Memory**
- 512MB, 1GB, or 2GB std / 4GB max
- 667MHz DDR2 / non-parity
- CL5 / dual channel capable / two 200-pin SO-DIMM sockets
- 9:0: standard memory in both sockets; no sockets available;
- Others: standard memory in 1 socket; 1 socket available

**Diskette drive**
- None standard / use optional USB-based diskette drive

**EIDE Combo**
- Some: DVD-ROM/CD-RW / 24X/24X/24X/8X speed / removable from Ultrabay Slim
- Some: DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

**Ultrabay Slim**
- One modular bay for interchangeable devices (right side): 9.5 mm high bay / flat bezel
- 800GB (5400 rpm), or 120GB (5400 rpm), or 100GB (7200 rpm), or 100GB EIDE (7200 rpm), or 9.5mm high removable, upgradeable / 9.5mm high bay / supports 2nd disk /
- ThinkPad Shock Mounted Hard Drive / Active Protection System™

**Widescreen display (anti-glare)**
- Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio
- Some: 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio

- Stainless steel hinges / one hand actuates dual latches

**Graphics**
- Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- Some: ATI™ Mobility Radeon™ X1400 / PCI Express x16 / 128MB memory
- Some: ATI MOBILITY FireGL™ V5250 / PCI Express x16 / 256MB memory
- All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 15.4" models (WxDxH): 14.1" x 10.0" x 1.13"-1.34"; 357.5mm x 255mm x 28.7-34mm
- with optical drive and battery: up to 6.08 lb (2.76kg)

**Weight**
- Carbon-Fiber Reinforced Plastic (CFRP) in top/bottom
- Ultrabay Slim: 6-cell: up to 5.5 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 7.0 hr

**Architecture**
- Some: Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub
- Some: Mobile Intel 945PM Express Chipset / 82945PM Memory Controller Hub
- All: 82801GM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI-Bus, USB, LPC interface / Bluetooth, fingerprint / PCI Express (TI T12152 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel ® 7SC3203)
- One Type I or Type II slot / CardBus 32-bit / integrated drive
- Some: ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / internal drive
- Three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ether) / no keyboard, mouse, serial ports, parallel port, 1394, or S-video (use USB)

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- Some: 11a/b/g wireless®, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
- Some: 11a/b/g wireless®, ThinkPad 11a/b/g/n Mini PCI Express Adapter, Atheros AR5008 chipset, MIMO 2x2

**WWAN**
- 56K V.90 V.92 designed® modem in Com Daughter Card slot / Conexant® chipset
- Bluetooth® 2.0 Bluetooth / USB 2.0 interface / ICH7-M / LED indicator
- Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / Pcie x1 / PXE

**Audio support**
- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack

**Security**
- Security chip
- Trusted Platform Module / Atmel chip / TCG 1.2-compliant
- fingerprint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty**
- 1-year / EasyServ™ onsite pickup and delivery / service upgrades® available
- 8744: 3-year/1-year battery - EasyServ onsite pickup and delivery / srv upgrades® available

**SOFTWARE**
- Windows XP Professional
- - Microsoft Windows XP Professional® (Service Pack 2)
- - Disk-to-Disk Recovery (in hidden protected area)

- Preloaded
- - Microsoft Office OneNote 2003 or 2007
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center with Away Manager
- - ThinkVantage System Update with Away Manager
- - Symantec® Client Security™
- - Diskeeper Life
- - PC-Doctor® (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Google Toolbar
- - Google Desktop
- - Picasa from Google
- - FingerPrint Software (fingerprint models)
- - Multimedia Center for Think Offerings
- - Sonic RecordNOW and Drive Letter Access (combo, DVD:RW)
- - InterVideo WinDVD (combo, DVD:RW models)
- - InterVideo WinDVD Creator (DVD:RW models)

**CD included**
- - Microsoft Office OneNote 2003 License - CD not included
- - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

- Supports ThinkVantage® technologies
- 65-watt (GMA graphics) or 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service®
- 24 hour x 7 day® toll-free warranty support during the warranty®

Onsite service upgrade options® and post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad T60 and T60p 15W (TopSeller) - Vista™ - withdrawn

*Powered by Intel Centrino® Duo mobile technology*

### Table of Specifications

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics controller</th>
<th>GB</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Blue-tooth</th>
<th>Battery</th>
<th>Vesta</th>
<th>Limited warranty</th>
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**These small and medium business (SMB) models are part of the US TopSeller™ Program**

- **Positioning**
  - Premier performance; two spindles
- **Processor**
  - Intel® Core™ 2 Duo processor T5500, T5600, or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus / [T5600/T7200: Virtualization Technology not supported] / T5500/T5600: 2MB L2 cache (shared); T7200: 4MB L2 cache (shared)
- **Memory**
  - 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / E4/U 2U/JV: standard memory in both sockets; no sockets available; Others: standard memory in 1 socket; 1 socket available
- **Diskette drive**
  - None standard / use optional USB-based diskette drive
- **EIDE Combo**
  - Some: DVD-ROM/CD-RW / 24X/4X/24X/6X speed / removable from Ultrabay Slim
- **EIDE DVDRW Ultrabay Slim**
  - Some: DVD burner / Super Multi-Burner (40Y9623) dual-layer, removable Ultrabay Slim bay for interchangeable media (right side) / 9.5mm high bay / flat bezel
- **Serial ATA disk (SATA150)**
  - 80GB™ (5400 rpm), 100GB (7200 rpm), or 120GB (5400 rpm) / 9.5mm high / removable, upgradeable / 9.5mm high bay / supports 2nd disk
- **ThinkPad 11n™ Shire Hard Drive / Drive Protection System™**
  - Widescreen display (anti-glare)
    - Some: 15.4" (391mm) WXGA (1280x800) TFT color / 150 nits / 16:10 aspect ratio
    - Some: 15.4" (391mm) WSXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio
    - All: stainless steel hinges / one hand activates dual latches
  - Graphics
    - Some: Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
    - Some: ATI MOBILITY™ Radeon™ X1400 / PCI Express x16 / 128MB memory
    - Some: ATI MOBILITY™ FireGL™ V5250 / PCI Express x16 / 256MB memory
    - All: DVI pass-through support to optional Advanced Mini Dock or Advanced Dock
- **Keyboard**
  - 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys / TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
  - UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
  - Touchpad Light™
    - Illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions**
  - 13.4" models (WxDxH): 14.1" x 9.0" x 1.3" - 1.34". 357.5mm x 255mm x 28.7-34.4mm
- **Weight**
  - 26-cell: up to 5.2 lb; 9-cell: up to 6.0 lb; 9-cell plus Ultrabay battery: up to 7.0 lb
- **Battery**
  - Ultrabay 6-cell: up to 5.2 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 7.0 hr
- **Architectural**
  - Some: Mobile Intel 945GM Express Chipset / 82894GM Graphics Memory Control Hub
  - Some: Mobile Intel 945PM Express Chipset / 82845PM Memory Controller Hub
  - All: 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE)
  - PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (T1® PCI1152 CardBus controller) / LPC bus (NS PC8739 Super I/0, Atmel® 7SC3203)
  - Some: Type I or Type II slot / CardBus 32-bit / integrated door
  - Some: CardBus 32-bit / integrated door
  - Some: One ExpressCard34 or ExpressCard P4 / PCI Express x1 or USB 2.0 / integrated door
  - Three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet)
  - Some: IBM® ThinkPad (diagnostics)
  - Others: Microsoft Offi ce 2007 (90 days of virus definitions)
- **Security**
  - Support during the warranty
- **Software**
  - Preloaded operating system
    - Others: Vista Basic logo
    - E5U: Vista Basic logo
- **Software**
  - Preloaded applications (all)
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center with Away Manager
    - ThinkVantage System Update
    - Norton Internet Security™
    - Stand-alone Client
  - Others: Stand-alone Client
- **License**
  - CD - not included (all)
  - Lotus® Notes® Stand-alone Client

---

*See footnotes for important warranty information*
Partial list of accessories supported on ThinkPad T60 and T60p
originally announced on January 5, 2006

Memory
512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06
2GB PC2-5300 DDR2 SODIMM 40Y7735 ann 11/28/06

Ultrapim Slim 9.5mm (best to use flat bezel options)
Serial/Parallel Port Bay Adapter (flat bezel) 40Y8121 ann 01/31/06
Serial Hard Drive Ultrapim Slim Adapter (flat) 40Y8726 ann 09/20/05
DVD-ROM Ultrapim Slim Drive (curved) 73P3270 ann 10/07/03
Combo II Ultrapim Slim Drive (flat bezel) 40Y8621 ann 09/20/05
ThinkPad DVD Ultrapim Slim Burner (flat) 41N5643 ann 05/31/07

Ultrapim Enhanced 12.7mm
None

Storage and removable storage
80GB Disk 9.5mm SATA150 (5400 rpm) 41N5662 ann 08/15/06
100GB Disk 9.5mm SATA150 (7200 rpm) 41N3013 ann 01/05/06
120GB Disk 9.5mm SATA150 (5400 rpm) 41N5691 ann 03/20/07
160GB Disk 9.5mm SATA150 (5400 rpm) 41N5692 ann 03/20/07
160GB Disk 9.5mm SATA150 (7200 rpm) 41N5737 ann 10/16/07

Can be used as the main HDD or with
ThinkPad Serial ATA Hard Drive Ultrapim Slim Adapter 40Y8725 in the Ultrabay or in the
ThinkPad Advanced Dock 250310U.

USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07
USB 2.0 Essential Memory Key 2GB 41U4944 ann 01/23/07
USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07
USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07
USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07

USB Portable Diskette Drive 05K9276 ann 06/05/00
USB 2.0 CD-ROM/DVD-ROM Combo II Drive 40Y8637 ann 01/05/06
USB 2.0 Portable 80GB Hard Disk 41N8378 ann 04/17/07
USB 2.0 Portable 120GB Hard Disk 41N8379 ann 04/17/07
USB 2.0 Super Multi-Burner Drive 41N5655 ann 01/23/07

Wireless LAN (Mini PCI Express)
11a/b/g Wireless Mini PCI Express Adapter 40Y7026 ann 09/20/05
Intel PRO/Wireless 3945ABG Mini PCI Express Adapter 41N3008 ann 01/05/06

ThinkPad Expansion
ThinkPad Adjustable Notebook Stand 40Y7676 ann 09/20/05
ThinkPad Essential Port Replicator 25010W ann 09/20/05
ThinkPad Advanced Mini Dock 250410U ann 09/20/05
ThinkPad Advanced Dock 44 250310U ann 09/20/05

ThinkPad Advanced Dock supports dual-head graphics adapters:
- ATI® X1300 256MB Dual Head/TV-out 41U5028

External Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/06
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2662 ann 03/23/04
Enh Perf Wireless Keyboard and Mouse 73P4067 ann 12/07/04
USB Keyboard with UltraNav 31P9590 ann 01/26/03
USB Travel Keyboard with UltraNav 31P9490 ann 04/27/04
Preferred Pro USB Fingerprint Keyboard 73P4730 ann 02/22/05

External Mouse
USB Optical Wheel Mouse 06P4069 ann 05/21/03
Optical 3-Button ScrollPoint® Mouse 31P7405 ann 08/27/02
Optical 3-Button Travel Wheel Mouse 31P7410
Lenovo Laser Mouse (USB, PS/2) 41U3074 ann 01/23/07

Security
Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03
Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
PC Card Gemplus GemPC Smart Card Reader 41N3004 ann 12/13/03
Lenovo ExpressCard Gemplus Smart Card Reader 41N3043 ann 06/27/07
USB Fingerprint Reader 41U3167 ann 10/24/06

Multimedia
USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06
USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

Data/Video Projectors
Lenovo M500 Projector 0037A05 ann 02/28/06

Batteries
T60/R60 Series Li-Ion Battery 6-cell 40Y6799 ann 01/05/06
Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797 ann 09/20/05
ThinkPad Advanced Ultrabay Battery 14 40Y6799 ann 09/20/05

Used in Ultrapim Slim bay.
ThinkPad External Battery Charger™ 40Y7625 ann 09/20/05

Requires the ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
ThinkPad 90W AC/DC Combo Adapter 40Y7630 ann 12/13/05
Belkin 1 Outlet Notebook Surge 31P7658
Belkin Universal Notebook Travel Surge 22P7127
Belkin 8-outlet 6-foot Surge Protector 31P7659

Monitors
Lenovo E75 17" CRT Monitor (16.0" vis) blk 6307BTN ann 01/16/07
ThinkVision L151 15" LCD Monitor 9165AC6 ann 10/23/07
ThinkVision L171 17" LCD Monitor 9165AC7 ann 10/23/07
ThinkVision L17ip 17" LCD Monitor 9417HC2 ann 10/31/06
ThinkVision L19x 19" LCD Monitor 443HB2 ann 10/23/07
ThinkVision L193p 19" LCD Monitor 443HB2 ann 10/23/07
ThinkVision L220x Wide 22" LCD Monitor 443HB2 ann 10/23/07

Monitor Accessories™
ThinkVision USB Soundbar 40Y7616 ann 08/23/05
Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03
ThinkPad Convertible Monitor Stand 40Y7620 ann 01/05/06
Radial Arm 19K4464 ann 05/01/06

Compatible on selected Lenovo and ThinkVision monitors.

Other accessories at lenovo.com/accessories

Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.

ThinkPlus™, service upgrade options for 1-year warranty models:
1-year Lenovo Onsite Repair 9x5 Next Business Day 41C9166
2-year Lenovo Onsite Repair 9x5 Next Business Day 41C9167
3-year Lenovo Onsite Repair 9x5 Next Business Day 41C9168
4-year Lenovo Onsite Repair 9x5 Next Business Day 41C9171
5-year Lenovo Onsite Repair 9x5 Next Business Day 41C9173
5-year Parts and Labor (P&L) Pickup Depot 41C9169
3-year Parts and Labor (P&L) Pickup Depot 41C9170
4-year Parts and Labor (P&L) Pickup Depot 41C9172
5-year Parts and Labor (P&L) Pickup Depot 41C9174

ThinkPlus™, service upgrade options for 3-year warranty models:
2-year Lenovo Onsite Repair 9x5 Next Business Day 41C9175
3-year Lenovo Onsite Repair 9x5 Next Business Day 41C9176
4-year Lenovo Onsite Repair 9x5 Next Business Day 41C9177
5-year Lenovo Onsite Repair 9x5 Next Business Day 41C9179
4-year Parts and Labor (P&L) Pickup Depot 41C9178
5-year Parts and Labor (P&L) Pickup Depot 41C9180

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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(O-T60) December 2007
ThinkPad T61 8895 (GMA Graphics) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Mini PCIe WWAN/Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Battery cells</th>
<th>Vista preload</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
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</thead>
<tbody>
<tr>
<td>8895-2FU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot;XGA</td>
<td>GMA 80GB/5400 Combo</td>
<td># Intel 4965AG/12</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>6</td>
<td>Business32 W</td>
<td>Jun 07</td>
<td></td>
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<tr>
<td>8895-01U</td>
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<td>1GB</td>
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<td># Intel 4965AG/12</td>
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<td>Smart</td>
<td>Blue</td>
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<td>XP Professional</td>
<td>Sep 07</td>
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<tr>
<td>8895-02U</td>
<td>T7305</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot;XGA</td>
<td>GMA 100G/7200 DVD/RA</td>
<td># Intel 4965AG/12</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>6</td>
<td>XP Pro</td>
<td>Sep 07</td>
<td></td>
</tr>
</tbody>
</table>

Italic MT: not a base model for building a custom model

Preloaded operating system:
- Some: Microsoft Windows XP Professional

Vista models: Vista Basic logo

Preloaded applications (all Oses):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo, DVD/RA)
- IntelVideo WinDVD (combo, DVD/RA)
- IntelVideo WinDVD Creator (XP Pro DVD/RA models)

Supports ThinkVantage technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
© Lenovo (DV3-1) May 2008

US models announced May 31 or September 5, 2007
US models withdrawn effective May 2008
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Card slot</th>
<th>Battery pre-load</th>
<th>Limited warranty</th>
<th>Vista preload</th>
<th>Available date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8895-2BU T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; XGA GMA</td>
<td>120GB 5400 DVD:RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>12w</td>
<td>K12</td>
<td>EasyServ Business32</td>
<td>3 Jun 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **This model has an EasyServ™ depot repair service 3-year limited warranty**

  This educational model is only available to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning/Processor

Premiere performance; two spindles

- **Intel Core™ 2 Duo processor T7300 with dual-core**
- Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory

1GB std / 4GB max® / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

- Non-italics: standard memory in 1 socket; 1 socket available

### Diskette drive

EIDE/IDE:RW

- None (optional USB-based diskette drive)

### Ultrabay Slim

Serial ATA disk (SATA150)

- 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Display

14.1" (358.1mm) XGA (1024x768) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glare

### Graphics

- **Intel Graphics Media Accelerator X3100 (GMA X3100)**, integrated in GM965, DVI pass-through support to optional Advanced Dock (Mini Dock) or Advanced Dock II

### Keyboards

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

- TrackPoint® pointing device, "Press-to-Select," Internal Scroll Bar®, magnifying glass

### Touchpad

- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

### ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1" models (WxDxH): 12.3" x 10.0" x 1.1-1.3"; 313mm x 255mm x 27.5-32.4mm

### Weight

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

- Battery - type
  - Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim
  - 9-cell: up to 8.6 hr; 9-cell plus Ultrabay battery: up to 10.1 hr

### Chipset

Mobile Intel GM965 Express Chipset

- Intel®ICH8M-Enhanced Southbridge

### PC Card slot

- One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot

- One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0

### Smart Card Reader

None

### MultiCard Reader

None

### Ports

Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 ( ethernet)

### Wireless antenna

UltraConnect™ II antenna

- Mini PCI Express slots: /on-off switch for all wireless radios

### Mini PCI Express

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

- 11a/b/g®: 11a/b/g wireless, ThinkPad 11a/b Mini PCI Adapter, Atheros AR5006EX

### WWAN

None

### Models

- 8895-2BU T7300
- 8895-2BU T7300
- 8895-2BU T7300
- 8895-2BU T7300

### Bluetooth

- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet

Gigabit ethernet on system board, Intel 82566EM Nineveh (PHY), PCle x1 (GLC1), PXE

### Intel AMT

Intel Active Management Technology (AMT)

### Audio support

High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security

Power-on password, hard disk password, supervisor password, security keyhole

### Trusted Platform Module

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty

3-years/1-yr battery - EasyServ™ depot repair service / service upgrades® available

---

**Preloaded operating system**

- Vista Basic logo

**Preloaded applications**

- Microsoft Office OneNote® 2007 (and CD)
- (212), K-12 education software
  - Microsoft Office Library School Edition
  - Adobe Classroom Creative Suite
  - Adobe Creative Suite
  - Adobe Digital School Collection
  - Adobe Photoshop Elements 5 (and CD)
  - ThinkVantage System Update

**Preloaded accessories**

- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magneto)
- ENERGY STAR® 4.0-compliant RoHS-compliant
- International Warranty Service17
  - 24 hour x 7 day® toll-free support during the warranty period®
  - 800-426-7378

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**See footnotes for important warranty information**

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US model announced May 31, 2007
US model withdrawn effective May 2008

(DV3-2) May 2008
ThinkPad® T61 (GMA Graphics) - Education (Onsite) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Battery cells</th>
<th>Educ pre-load</th>
<th>Limited warranty</th>
<th>Vista preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8896-2BU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>441N6543</td>
<td>120GB</td>
<td>5400 DVD:RW</td>
<td>None</td>
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<td>9</td>
<td>K12</td>
<td>Onsite</td>
<td>Business32</td>
<td>June 07</td>
<td></td>
</tr>
</tbody>
</table>

- **This model has a limited onsite service** 3-year limited warranty

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded operating system

- Microsoft® Windows® Vista™

### Preloaded applications

- Microsoft Office OneNote® 2007 (and CD)
- K12, K-12 education software
- Critical Security Product
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)

### Limited warranty

- 3-years/1-year battery, limited onsite service™, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless antenna</td>
<td>UltraConnect™ II antenna / on/off switch for all wireless radios</td>
<td>78917101</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Two Mini PCI Express slots / only 802.11 wireless is customer upgradable</td>
<td>78917101</td>
</tr>
<tr>
<td>WWAN</td>
<td>None</td>
<td>78917101</td>
</tr>
<tr>
<td>Turbo Memory</td>
<td>None</td>
<td>78917101</td>
</tr>
<tr>
<td>Modem</td>
<td>56K V.90 (V.92-designed™) modem in Communications Daughter Card socket</td>
<td>78917101</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>Bluetooth 2.0 wireless, 2.0 USB interface via ICH8M, LED indicator</td>
<td>78917101</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLX), PXE</td>
<td>78917101</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack</td>
<td>78917101</td>
</tr>
<tr>
<td>Security chip</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
<td>78917101</td>
</tr>
<tr>
<td>Trusted Platform Module</td>
<td>ThinkPad Utilities (Power Manager and Presentation Director)</td>
<td>78917101</td>
</tr>
<tr>
<td>FingerPrint reader</td>
<td>FingerPrint reader on palm rest, swipe sensor, supports the security chip</td>
<td>78917101</td>
</tr>
</tbody>
</table>

### Additional accessories

- ThinkPad® Convertible Monitor Stand 40Y7620
- ThinkPad® Adjustable Notebook Stand 40Y7620
- ThinkPad® Essential Notebook Stand 40Y7620
- ThinkPad® Essential Port Replicator 250101W
- ThinkPad® Advanced Mini Dock 250410L
- ThinkPad® Advanced Dock 250310L
- Other accessories on O-T61 sheet

See footnotes for important warranty information

US model announced May 31, 2007
US model withdrawn effective May 2008

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(DV3-3) May 2008
### ThinkPad T61 8889 (NVIDIA Graphics) - withdrawn

#### Type-model  Processor GHz Memory Display Graphics controller memory Disk SDRAM EIDE Mini PCIe WWAN or Turbo Mini PCIe Card slot Bluetooth Battery cells Vista preloaded Workhorse (W) Avail Date
| Type-model | T7300 | 2.00 | 1GB | 14.1" SXGA+ | 128MB | 80GB | 5400 | Combo | # Intel 4965AG | None | None | Blue | 6 | Business32 | 7/07
| 8889-26U | T7300 | 2.00 | 1GB | 14.1" SXGA+ | 128MB | 80GB | 5400 | Combo | # Intel 4965AG | None | None | Blue | 6 | XP Pro | Sep07
| 8889-01U | T7300 | 2.00 | 1GB | 14.1" SXGA+ | 128MB | 100G | 7200 | DVD:RW | # Intel 4965AG | None | None | Blue | 9 | XP Pro | Sep07
| 8889-02U | T5700 | 2.20 | 1GB | 14.1" SXGA+ | 128MB | 80GB | 5400 | Combo | # Intel 4965AG | None | None | Blue | 6 | XP Pro | Sep07
| 8889-03U | " " | " " | " " | " " | " " | " " | " " | " " | " " | " " | " " | " " | " " | " " | " "

#### Preloaded operating system
- Some: Microsoft® Windows® XP Professional

#### Vista models: Vista Premium logo

#### Preloaded applications (all OSes)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Professional
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic Recordin and Drive Letter Access (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW)
- InterVideo WinDVD Creator (XP Pro DVD:RW models)

#### Supports ThinkVantage technologies
- 90-watt (NVIDIA graphic) AC adapter
- ThinkPad Roll Cage and Top Cover (one-piece magnesium)
- ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service (24 hour x 7 day) toll-free support during the warranty period via 800-426-7378

#### Limited warranty
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades available as of 8-2008

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See footnotes for important warranty information

* Intel Centriom™ with vPro™ technology

© Lenovo (D3V-4) May 2008

US models announced July 10 or September 5, 2007
US models withdrawn effective May 2008
### ThinkPad ® T61 (NVIDIA Graphics) - Education (EasyServ) - withdrawn

**Positioning**
Premiere performance; two spindles

**Processor**
Intel® Core™ 2 Duo processor T7300 with dual-core

**Memory**
1 GB std / 4 GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

**Diskette drive**
None (use optional USB-based diskette drive)

**Battery - life**
10 hr

**Dimensions**
14.1” (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glare

**Chipset**
Mobile Intel PM965 Express Chipset (Memory Controller Hub);
ICH6M-Enhanced I/O Controller Hub (SAT300, AT101 EED0 EED9)

**Graphics**
NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Dock Mini Dock or Advanced Dock 250310U

**Display**
14.1” (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glare

**Camera**
None

**Graphics controller memory**
Display

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Diskette drive</th>
<th>Battery - life</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>T61/R61</td>
<td>Intel Core™ 2 Duo processor T7300</td>
<td>1 GB std / 4 GB max / PC2-5300 667MHz DDR2</td>
<td>None (use optional USB-based diskette drive)</td>
<td>14.1” (358.1mm) SXGA+ (1400x1050) color, 150 nits</td>
<td>8.7 x 12.3 x 1” (221mm x 312mm x 25mm)</td>
</tr>
</tbody>
</table>

**Preloaded operating system**
- Vista Premium logo

**Preloaded applications**
- Microsoft Office OneNote® 2007 (and CD)
- [HE]; Higher education software
- [VSB]; VitalSource Library College Edition
- Adobe® Instructor Resource Center
- Adobe Photoshop Elements 5 (and CD)
- Adobe Premier Elements 3 (and DVD)
- Rescue and Recovery™
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- [DKSP]; Diskesp™ Home
- [PCT]; PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVF+RW)
- InterVideo WinDVD (DVF+RW)

**Limited warranty**
- 3-year/1-yr battery - EasyServ™ depot repair service / service upgrades available

**Other accessories on T61 sheet**
- T61/R61 Series Lim-Ion Battery 6-cell
- 90-watt (NVIDIA graphic) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period
- via 800-426-7378

**Post-warranty annual maintenance**
- ThinkPlus® 2-5 year
- ThinkPlus 5-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot

**See footnotes for important warranty information**

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(DV3-5) May 2008
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller memory</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Card slot</th>
<th>Battery</th>
<th>Educ.</th>
<th>Vista</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>8890-24U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; SXGA+</td>
<td>12MB 120G 5400 DVD/RAID</td>
<td>11a/b/g</td>
<td>9 HE</td>
<td>/54</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td></td>
</tr>
</tbody>
</table>

- **This model has a limited onsite service** - 3-year limited warranty
  - This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning/Processor

- Performance: two spindles
- Intel Core™ 2 Duo processor T7300 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory

<table>
<thead>
<tr>
<th>1GB st</th>
<th>4GB max</th>
<th>PC2-5300 667MHz DDR2 non-parity, dual-channel capable, two 200-pin SO-DIMM sockets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Italic: standard memory in 1 socket; 1 socket available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Diskette drive

- None (use optional USB-based diskette drive)

### EIDE DVD:RW

- DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

### Ultrabay Slim

- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

### Serial ATA disk (SATA150)

- 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk

### Display

- 14.1" (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glare

### Camera

- None

### Graphics

- NVIDIA Quadro NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through supports to optional Advanced Mini Dock or Advanced Dock

### Keyboard

- 89-key ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

### Trackpoint

- Top-mounted pointing device, "Press-to-Select," Internal Scroll Bar™, magnifying glass

### Touch pad

- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

### ThinkLight

- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1" models (WxHxD): 12.3" x 10.0" x 1.1-1.3"; 313mm x 255mm x 27.5-32.4mm

### Weight

- Top: Super-Elastic PolyCarbone (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery

- Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

### Battery - life

- 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

### Chipset

- Mobile Intel PM965 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATAl0030, ATAl0010 EIDE PCI Express x1, PCI bus, USB bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoh R5C804 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel 9732032 TPM)

### PC Card Std slot

- One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot

- [54] One ExpressCard/34 or ExpressCard/54, PCI Express x1 or USB 2.0

### Smart Card Read

- None

### Multicard Reader

- None

### Ports

- Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethernet)

### Wireless antenna

- UltraConnect™ II antenna / on/off switch for all wireless radios

### Mini PCI Express

- 11a/b/g/n, ThinkPad 11a/b/g Mini PCI Express Adapter, Atheros AR5006EX

### WWAN

- None

### Turbo Memory

- None

### Modem

- 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

### Bluetooth

- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet

- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE

### Intel AMT

- Active Management Technology (AMT)

### Audio support

- High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security

- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty

- 3-years / 1-year battery, limited onsite service®️, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

### Accessories

- Lenovo.com / accessories

---

**Preloaded operating system**

- Vista Premium logo

**Preloaded applications**

- Microsoft Office OneNote®️ 2007 (and CD)
- [HE]: Higher education software
- VirtualSource Library College Edition
- Adobe Instructor Resource Center
- Adobe Photoshop Elements 5 (and CD)
- Adobe Premiere Elements 3 (and DVD)
- Rescue and Recovery®️
- Access Connections™️
- Client Security Solution™️
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- InterVideo WinDVD (DVD:RW)

---

See footnotes for important warranty information

US model announced July 10, 2007
US model withdrawn effective May 2008

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![Lenovo Logo](https://www.lenovo.com)

Post-warranty annual maintenance agreements at [lenovo.com/thinkplus/warranty](https://www.lenovo.com/thinkplus/warranty)
**ThinkPad® T61 8982 (NVIDIA Graphics) - TopSeller - withdrawn**

**Positioning and Processor**
- Intel® Core™ 2 Duo processor T7100 or T7500 with dual-core.
- Intel 64 Technology. Enhanced Intel SpeedStep technology.
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus:
  - T7100: 2MB shared L2 cache; T7500: 4MB shared L2 cache.

**Memory**
- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 20-pin SO-DIMM sockets;
- Non-Intel™: standard memory in 1 socket available

**Diskette drive**
None (use optional USB-based diskette drive)

**Display**
- 14.1” (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4:3 aspect ratio, 200:1 contrast ratio, anti-glare

**Camera**
89-key, ThinkVantage button, spill-resistant, multimedia F'n keys, Windows/App keys

**Battery**
- Lithium Ion 6-cell / supports unique 2nd battery in Ultrabay Slim

**Chipset**
- Mobile Intel PM965 Express Chipset (Memory Controller Hub);
- ICH9M-Enhanced I/O Controller Hub (SATA300, ATA-100 IDE)
- PCI Express x1, PCI bus, LPC bus, Bluetooth15

**Supported technologies**
- Intel Centrino® processor technology
- Intel VPro™ technology

---

### Workhorse (W)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc-</th>
<th>Ghz</th>
<th>Memory</th>
<th>Graphics</th>
<th>controller</th>
<th>Disk</th>
<th>EIDE</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Avail</th>
</tr>
</thead>
<tbody>
<tr>
<td>8982-01U</td>
<td>T7100</td>
<td>1.80</td>
<td>1GB</td>
<td>14.1” SXGA+</td>
<td>128MB</td>
<td>100G</td>
<td>7200</td>
<td>DVD±RW</td>
<td>Intel 11a/b/g52</td>
<td>None</td>
<td>/54</td>
<td>Blue</td>
<td>6</td>
</tr>
<tr>
<td>8982-02U</td>
<td>T7500</td>
<td>2.20</td>
<td>1GB</td>
<td>14.1” SXGA+</td>
<td>128MB</td>
<td>100G</td>
<td>7200</td>
<td>DVD±RW</td>
<td>Intel 11n53</td>
<td>None</td>
<td>/54</td>
<td>Blue</td>
<td>9</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty.

---

### Preloaded operating system
- Microsoft Windows® XP Professional.

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNOW and Drive Letter Access (DVD±RW models)
- InterVideo WinDVD (DVD±RW)
- InterVideo WinDVD Creator (DVD±RW)

---

### See footnotes for important warranty information

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US models announced September 4, 2007

US models withdrawn effective May 2008

* Intel Centrino® processor technology
* Intel with vPro™ technology

(DV3-8) May 2008

Lenovo
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Ghz Memory</th>
<th>Display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB/ rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Battery cells</th>
<th>Preload Workhorse (W)</th>
<th>Global Entry (E)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8890-26U</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>Intel Core™ 2 Duo processor</td>
<td>8GB SDRAM</td>
<td>667MHz DDR2</td>
<td>3 GB</td>
<td>Intel 915PM PMH</td>
<td>2GB</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>W</td>
</tr>
</tbody>
</table>

- This model is part of the Global Models Plus program with limited onsite service. A 3-year limited warranty applies.

Positioning
Premiere performance; two spindles

Processor
Intel Core™ 2 Duo processor T7300 with dual-core

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italic: standard memory in 1 socket/1 socket available

Diskette drive None (use optional USB-based diskette drive)

EIDE Combo None (use optional USB-based diskette drive)

UltraBay Slim None (use optional USB-based diskette drive)

Serial ATA disk (SATAN150) 80GB (5400 rpm) / 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Mounted Hard Drive, Active Protection System™

Battery - life 6-cell: up to 4.0 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

Weight 14.1” (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glace

Camera None

Graphics NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI via-pass through support to optional Advanced Mini Dock or Advanced Dock

Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

Touchpad UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions

Dimensions 14.1” (WxDxH): 12.3” x 10.0” x 1.1-1.3”, 313mm x 255mm x 7.5-32.4mm

Weight 6-cell: up to 4.0 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

Battery - life 14.1” (358.1mm) SXGA+ (1400x1050) color, 150 nits, 4.3 aspect ratio, 200:1 contrast ratio, anti-glace

Chipset Mobile Intel PM965 Express Chipset (Memory Controller Hub);ICH9M-Enhanced I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI Express x16, 4GB memory, TurboCache, DVI via-pass through support to optional Advanced Mini Dock or Advanced Dock)

PC Card Std slot None

ExpressCard slot None

Smart Card Reader None

Multicard Reader None

Ports Three USB 2.0, external DB-15 monitor, RJ-11 (modem), RJ-45 (ethernet)

Wireless antenna UltraConnect™ II antenna / on/off switch for all wireless radios

Mini PCI Express Two Mini PCI Express slots: 9cell: 5.3 lb (2.4kg); 9-cell plus Ultrabay battery: up to 8.0 hr

Intel 4965AG32 Wireless antenna UltraConnect™ II antenna / on/off switch for all wireless radios

Intel 915PM PMH WiFi Link 4965AG Chipset

Intel 915PM PMH WiFi Link 4965AG Chipset

Bluetooth™ None

Modem 56K V.90 (V.92-designed) modem in Communications Daughter Card socket

Ethernet Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC1), PXE

Intel AMT None

Audio support High Definition (HDMI) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty* 3-years/1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades** available

<table>
<thead>
<tr>
<th>Preloaded applications</th>
<th>Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue and Recovery™</td>
<td>Microsoft Windows® Vista</td>
</tr>
<tr>
<td>Access Connections™</td>
<td>Windows® Live Essentials</td>
</tr>
<tr>
<td>Client Security Solution™</td>
<td>ThinkVantage Productivity Center</td>
</tr>
<tr>
<td>ThinkVantage System Update</td>
<td>System Migration Assistant</td>
</tr>
<tr>
<td>Norton Internet Security</td>
<td>Lenovo Defense</td>
</tr>
<tr>
<td>90 days of virus definitions</td>
<td>Diskeeper® Home</td>
</tr>
<tr>
<td>PC-Doctor® (diagnostics)</td>
<td>Adobe® Reader</td>
</tr>
<tr>
<td>ThinkPad Utilities (Power Manager and Presentation Director)</td>
<td>Windows Live Search</td>
</tr>
<tr>
<td>Picasa from Google</td>
<td>InterVideo WinDVD (combo)</td>
</tr>
</tbody>
</table>

Supports ThinkVantage® technologies

- 90-watt (NVIDIA graphic) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Intel Centrino® with vPro™ technology

** Lenovo

(DV3-9) May 2008
ThinkPad® T61 8897 (GMA) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

---

**Processor**
- **Type**: Intel® Core™ 2 Duo processor T5270 with dual-core.
- **GHz**: 1.40
- **Display Memory**: 512MB
- **Graphics Cards**: Intel® Graphics Media Accelerator X3100
- **Mini PCIe WWAN/WiFi**: 802.11n wireless
- **Battery**: 6-cell: up to 9.5 hr; 9-cell: up to 10.1 hr; 6-cell: up to 5.7 hr; 9-cell: up to 6.8 hr
- **Weight**: Lithium Ion 6-cell

---

**Diskette drive**
- **EIDE Combo**: None
- **Serial ATA disk**: None
- **ATA disk**: None
- **EIDE DVD RW Ultrabay**: None
- **USB 2.0 Security Memory Key 32 GB**: None

---

**Memory**
- **Type**: 512MB or 1GB std / 4GB max
- **Display**: 14.1" XGA
- **Graphics**: Intel® Graphics Media Accelerator X3100
- **Chipset**: Mobile Intel GM965 Express Chipset
- **Memory**: 1GB std / 4GB max

---

**Battery - type**
- **Battery**: Lithium Ion 6-cell

---

**Chipset**
- **Type**: Mobile Intel GM965 Express Chipset
- **Processor**: Intel® Core™ 2 Duo processor T5270 with dual-core.
- **Memory**: 512MB or 1GB std / 4GB max

---

**EIDE**
- **Controller**: Intel® Chipset ICH8M-Enhanced
- **Bus**: LPC bus (WPCN385 Super I/O, Atmel)

---

**Graphics**
- **Controller**: Intel® Chipset ICH8M-Enhanced
- **Bus**: PCI bus (Ricoh PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])

---

**Ports**
- **MultiCard Reader**: None
- **MiniPCI-E**: None

---

**Security**
- **Security Key**: Trusted Platform Module, Atmel chip, TCG 1.2-compliant

---

**Software**
- **Preloaded applications**: Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center
- **Preloaded system**: Microsoft® Windows® XP Professional

---

**Limited warranty**
- **Type**: 1-year EasyServ™ depot repair service / service upgrades 22 available

---

**See footnotes for important warranty information**

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(DV3-7) May 2008
### ThinkPad T61 8896 (GMA) - Onsite - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics controller</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Bluetooth cells</th>
<th>Battery life</th>
<th>Battery type</th>
<th>Workhorse (W)</th>
<th>Global (G) Entry (E)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8896-2FU T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>14.1&quot; XGA</td>
<td>GMA</td>
<td>80GB/5400 Combo</td>
<td>Intel 4965AG®</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>6</td>
<td>Business33 W</td>
<td>Jun 07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*This model is part of the Global Models Plus program with limited onsite service® 3-year limited warranty

### Preloaded operating system
- Vista models: Vista Basic logo

### Preloaded applications
- Rescue and Recovery™
- Access Connections®
- Client Security Solution®
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security
- 90 days of virus definitions
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live® Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (combo)
- InterVideo WinDVD (combo)

### Limited warranty
3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

### Security chip
- Intel® Active Management Technology (IAMT)
- Trusted Platform Module (TPM)
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock

### Preloaded applications
- Vista models: Vista Basic logo

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock

### Preloaded applications
- Vista models: Vista Basic logo

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock

### Preloaded applications
- Vista models: Vista Basic logo

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock

### Preloaded applications
- Vista models: Vista Basic logo

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock

### Preloaded applications
- Vista models: Vista Basic logo

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock

### Preloaded applications
- Vista models: Vista Basic logo

### Graphics
- Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Dock or Advanced Dock
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
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<th>Card slot</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Linux preload</th>
<th>Limited warranty</th>
<th>Avail date</th>
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<td>T7500</td>
<td>2.20 1GB 14.1&quot; WXGA+ 128MB 100G 7200 DVD±RW</td>
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<td>Intel 64 Technology, Enhanced Intel SpeedStep technology®, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization technology, 800MHz FSB system bus, and 4MB shared L2 cache</td>
<td>1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-DDR2: standard memory in one socket; one socket available</td>
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</table>

**Positioning and Memory**

- Diskette drive: None (use optional USB-based diskette drive)
- IDE DRIVE: None
- UltraSlim Drive: None
- Serial ATA disk: None
- Widescreen display: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics**

- NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through to support optional Advanced Mini Dock or Advanced Dock

**Chipset**

- Mobile Intel® PM965 Express Chipset (Memory Controller Hub): ICH8M-Enhanced I/O Controller Hub (SATA 3.0/bs, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth, [fingerprints]], [PCI bus (Rochester R53874 Cardbus/1394/Multicard)]
- LPC bus (WPN385 Super I/O, Atmel 97SC3203 TPM)
- One Type I or Type II slot, CardBus 32-bit
- Smart Card Reader: None
- Multicard Reader: None
- Ports: Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Wireless antenna**

- UltraConnect™ II antenna / on-off switch for all wireless radios

**Audio support**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack
- High Definition Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Preloaded operating system**

- SUSE® Linux® Enterprise Desktop10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- FingerPrint reader
- Bluetooth
- Security chip
- Intel Turbo Memory
- Intel AMT technology

**Non-supported devices**

- None (only some listed)

**Non-supported applications**

- None (only some listed)
- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

**90-watt (NVIDIA) AC adapter**

ThinkPad Roll Cage and Top Cover (one-piece magnesium) RoHS-compliant International Warranty Service17 24 hour x 7 day18 toll-free support during the warranty period12 via 800-426-7378

**Limited warranty**

- 3-years/1-year battery - EasyServ™, depot repair service / service upgrades available

**See footnotes for important warranty information**

US models announced January 15, 2008
US models withdrawn effective November 2008

* Intel Centrino® processor technology

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(ML1.1-11) November 2008

**Preloaded operating system**

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- None

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(ML1.1-11) November 2008
### Processor

<table>
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<th>Processor/GHz</th>
<th>Memory</th>
<th>Graphics Controller</th>
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</table>

### Memory

- 1GB or 2GB std / 4GB max
- Dual-channel capable, two 200-pin SO-DIMM sockets
- Non-italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available
- Some: 4-in-1 Blue Finger / 6 Bus32

### Diskette drive

- None (use optional USB-based diskette drive)
- Some: DVD-ROM/CD-RW, 24X/24X/24X8X speed, removable from Ultrabay Slim
- Some: DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable from Ultrabay Slim

### Display

- 14.1” (358.1mm) WXGA (1280x800) color
- anti-glare, 16:10 aspect ratio
- 300:1 contrast ratio
- None

### Chipset

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub;ICH6M-enhanced I/O Control Hub; SATA 3.0Gbps,ata100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (RC847 Cardbus/134/Multicap)
- LPC bus (WPN385 Super I/O, Amel® 97SC3203 TPM)
- Supports ThinkVantage technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- ENERGY STAR® 4.0-compliant

- Wireless antenna

- Limited warranty

- 2-year EasyServ® depot repair service / service upgrades available

### See footnotes for important warranty information

* Lenovo
* Intel Centrino® processor technology
* Intel Centrino® with vPro™ technology

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## ThinkPad T61 14W 7664 (NVIDIA®) - TopSeller - withdrawn

### Processor

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<td>DVD/RW</td>
<td>/54</td>
<td>Blue</td>
<td>6 Bus 32</td>
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</tbody>
</table>

### Memory

- 1GB or 2GB standard / 4GB max
- PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM slots

### Diskette drive

- None (optional USB-based diskette drive)

### Graphics

- NVIDIA Quadro NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Dimensions

- 14.1” (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 163,802 contrast ratio

### Wireless display

- Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Chipset

- Mobile Intel PM965 Express Chipset

### Preloaded operating system

- Some: Microsoft Windows® XP Professional with Vista COA

### Footnotes

- Some: Microsoft Edge software
- Adobe Acrobat Reader (ML1-2) May 2009
- Norton Internet Security (90 days of virus definitions)
- PC-Doctor (diagnostics)
- ThinkPad Utilities
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate mod)
- SONIC SEDE and Drive Letter Access (DVD:RW)
- Corel WinDVD® (DVD:RW)
- Corel WinWord Creator (XP Pro DVD:RW models)

### See notes for important warranty information

- * Intel Centrino® with vPro® technology
- Lenovo US models announced May 9, 2007, June 30, or December 6, 2007; or January 8, April 8, or August 1, 2008
- Lenovo (ML1-2) May 2009
## ThinkPad T61 14W 7659 (GMA Graphics) - withdrawn

### Type-models and Processor GHz

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<th>Type-model</th>
<th>Processor</th>
<th>Graphics</th>
<th>Disk</th>
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<th>Mini PCIe WWA</th>
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### Memory

- 1GB std / 4GB max
- PC2-5300 DDR2 SODIMM
- 41U7734

### Graphics

- Intel Graphics Media Accelerator X3100 (GMA X3100)
- Integrated camera on top of screen
- 1.3-megapixel, fixed focus
- USB 2.0

### Operating System

- Vista Business Edition (32-bit)
- Vista Premium logo
- Vista Basic logo

### Wireless

- Intel Core™ 2 Duo processor T7100, T7300, or T7500 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep™ technology
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus

### Diskette Drive

- None (optional USB-based diskette drive)

### Ultrabay Slim

- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

### Serial ATA disk

- 80GB* (5400 rpm)
- 100GB (7200 rpm)
- 120GB (5400 rpm)

### Widescreen display

- 14.1" (358.1mm) WXGA (1280x800) color

### Battery - type

- Lithium Ion 4-cell or 6-cell

### Chipset

- Mobile Intel GM965 Express Chipset
- Intel Centrino with vPro technology
- Intel Dynamic Power Management

### Power Management

- Energy Star

### Other accessories

- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Windows Live™ Toolbar
- Windows Live Search

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<table>
<thead>
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**Positioning Processor**
Premiere performance; two spinlles

**Intel Core™ 2 Duo processor T7500 with dual-core**
Intel 64 Technology, Enhanced Intel SpeedStep technology™, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**
1GB std / 4GB max™ / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-italics: standard memory in 1 socket; 1 socket available

**Diskette drive**
None (use optional USB-based diskette drive)

**EIDE Combo**
UltraBay Slim

**Serial ATA disk**
SATA 1.5GB 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

**Widescreen display**
14.1” (358.1mm) WXGA (1280x800) color, anti-glace, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics**
Intel Graphics Media Accelerator X3100 (GMA X3100), inegrated in GM965

**Keyboard**
89-key, ThinkVantage button, spil-resistant, multimedia Fn keys, Windows/Appi keys

**TrackPoint™ pointing device**
"Press-to-Select," Internet Scroll Bar™

**Touchpad**
UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**ThinkLight™**
Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
6-cell 14.1W (WxDxH): 13.2” x 10.2” x 1.09—1.26”;
335 x 261mm x 27.6—31.9mm

**Weight**
6-cell: starting at 5.3 lb (2.4kg)

**Battery - type**
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life**
Not published

**Chipset**
Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoh R5C847 Cardbus/1394/ Multicast)

**PC Card Slot**
One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**
One ExpressCard/34 or ExpressCard/54

**Smart Card Reader**
None

**Multicard Reader**
None

**Ports**
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**
UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Intel 11a/b/g/t**
11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG

**WWAN**
None

**Turbo Memory**
None

**Modem**
56K V.92 modem in Communications Daughter Card socket

**Bluetooth™**
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet**
Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE Ethernet

**Intel AMT**
Not supported

**Audio support**
High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**
Fingerprint reader on palm rest, swiss sensor, supports the security chip

**Limited warranty**
3-year/1-year battery - EasyServ™, depot repair service / service upgrades available

**Check Linux compatibility for other accessories**

**Preloaded operating system**
- SUSE® Linux Enterprise Desktop 10 Service Pack 1

**Preloaded applications**
None

**Supported devices**
None

**Non-supported devices**

**Non-supported applications**

**65-watt (GMA graphics) AC adapter**
ThinkPad Roll Cage and Top Cover

**ThinkPad Utilities**
Preloaded applications

**ThinkVantage technologies**
Fingerprint reader

**Presentation Director**

**Encrypted DVD playback**

**Keyboard Customizer**

**ThinkPlus 2-year LOR**
8x5 NBD

**ThinkPlus 3-year LOR**
9x5 NBD

**ThinkPlus 4-year LOR**
9x5 NBD

**ThinkPlus 5-year LOR**
9x5 NBD

**ThinkPlus 4-year P&L P/U Depot**
41C9177

**ThinkPlus 5-year P&L P/U Depot**
41C9176

**Post-warranty annual maintenance agreements at**
lenovo.com/thinkplus/warranty

See footnotes for important warranty information

© Lenovo

US model announced January 15, 2008

US model withdrawn effective November 2008

* Intel Centrino® processor technology

© Lenovo

(M1-L1-12) November 2008
ThinkPad T61 14W 7661 (GMA) - Onsite - withdrawn

ThinkPad 

Personal Systems Reference (PSREF)

ThinkPad 

Type-model GHz Memory 

7661-11U T7100 1.8 GHz 1 GB 14.1" WXGA GMA 80G 5400 Combo Intel 4965AG None Smart Blue Business32 W G P May07

7661-12U T7300 2.0 GHz 1 GB 14.1" WXGA GMA 80G 5400 Combo Intel 4965AG None Smart Blue 4 Business32 W G P May07

7661-28U T3300 2.0 GHz 1 GB 14.1" WXGA GMA 80G 5400 Combo Intel 4965AG None Smart Blue 4 XP Pro W G P Sep07

7661-25U T7500 2.2 GHz 1 GB 14.1" WXGA GMA 120G 5400 Combo Intel 4965AG None 4-in-1 Cam Blue 6 Business32 W G P Jan08

• These models are part of the Global Models Plus program with limited onsite service and 3-year limited warranty.

Positioning Processor 

Premiere performance; two spindles IntelCore™ 2 Duo processor T7100, T7300, or T7500 with dual-core Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7500/T7500: 4MB shared L2 cache

Memory 

1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available Italics: standard memory in both sockets; no sockets available

Diskette drive IDE Combo (None (use optional USB-based diskette drive)

UltraBay Slim One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

Serial ATA disk 80GB (5400 rpm) / 120GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display 14.1" (358.1mm) WXGA (1280x800) color; anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera - Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Graphics Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard TrackPoint™ 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

Touchpad ThinkLight™ UltraNav™ pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass, 3-button UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones illuminate the keyboard to improve visibility in low-light conditions

Dimensions³ 4-cell: 14.1W (WxDxH): 13.2" x 9.3" x 1.09--1.26"; 335mm x 237mm x 26.7--31.9mm

Weight³ 6-cell: 14.1W (WxDxH): 13.2" x 10.2" x 1.09--1.26"; 335mm x 261mm x 26.7--31.9mm

Battery - type Lithium Ion 4-cell or 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life 4-cell: up to 2.5 hr; 6-cell: up to 3.8 hr; 6-cell plus Ultrabay battery: up to 5.3 hr

Chipset Mobile Intel PM965 Express Chipset (Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooh] [fingerprint]) / PCI bus (Ricochet® R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, [Atmel® 97SC3203 TMP])

PC Card Std slot One Type I or Type II slot, CardBus 32-bit

ExpressCard slot None

Smart Card Reader Some: Smart Card Reader

Multicard Reader None

Ports Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

Intel 4965AG None 4-in-1 Cam Blue 4 XP Pro W G P Sep07

WWAN None

Turbo Memory None

Modem 56K V.92 modem / Communications Daughter Card socket

Bluetooth™ Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet Gigabit ethernet on system board, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE boot

Intel AMT None

Audio support High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty³ - 3-years/1-year battery, limited onsite service³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades² available

1GB PC2-5300 DDR2 SODIMM 40Y7734 T/R 14W Standard Battery 4-cell 41U3196

2GB PC2-5300 DDR2 SODIMM 40Y7735 T/R 14W Enhanced Battery 6-cell 41U3198

ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643 T/R 14W High Capacity Batt 9-cell 43R2499

Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y7629 43R9250

64GB SSD Sata 3.0Gb/s 1.8" (2.5" cover) 43N3400 90W Slim AC/DC Combo Adapter 41N8460

200GB Disk FDE SATA 1.5Gb/s (7200 rpm) 41N5738 ThinkPad Business Topload Case 43R2476

USB 2.0 Security Memory Key 4GB 41U1200 ThinkVision® L1940p Wide 19" Monitor 442H4B8

ThinkPad Convertible Monitor Stand 40Y7620 ThinkVision L2244p Wide 22" Monitor 442H8B6

ThinkPad Advanced Dock 25031U0 ThinkVision L2440x Wide 24" Monitor 442H1B2

Other accessories on T61 sheet

See footnotes for important warranty information

Intel Centrino® w/ vPro technology

US models announced May 9 or September 4, 2007 or January 8, 2008

US models withdrawn effective May or November 2008


Preloaded applications² (all OSes) - Rescue and Recovery™ - Access Connections™ - Client Security Solution™ - ThinkVantage Productivity Center - ThinkVantage System Update - System Migration Assistant - Norton Internet Security (90 days of virus definitions) - Diskeeper® Home - PC-Doctor™ (diagnostics) - Thinkpad Utilities (Power Manager and Presentation Director) - Adobe® Reader - Windows Live™ Toolbar - Windows Live Search - Picasa from Google - Fingerprint Software (fingerprint models) - Microsoft Office 2007 Trial (60-day) - Sonic Rea:Disk and Drive Letter Access (Combo) - Corel® WinDVD™ (Combo)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service¹ - 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus®, 2 4-year LOR® 9x5 NB 12X5630

ThinkPlus 5-year LOR 9x5 NB 43R2162

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad T61 14W 7663 (NVIDIA Graphics) - withdrawn

### Processor
- **Intel Core™ 2 Duo processor T7100, T7300, or T7500** with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; **T7100**: 2MB shared L2 cache; **T7300/T7500**: 4MB shared L2 cache

### Memory
- 1GB standard / 4GB max\(^1\), PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; **Italics**: standard memory in both AMD and Intel processors; **Non-italics**: standard memory in one socket; one socket available

### Diskette drive
- None (use optional USB-based diskette drive)

### EIDE Combo
- Some: DVD-ROM/CD-RW, 24x-24x/24X/8X\(^2\) speed, removable from UltraBay Slimbay

### Ultrabay Slim
- Some: DVD burner, Super Multi-Burner (40Y6632) + dual-layer, removable UltraBay Slimbay

### Serial ATA disk
- One modular bay for interchangeable drives (right side); 9.5mm high bay, flat bezel, 80GB\(^3\) (5400 rpm), 100GB (7200 rpm), or 120GB (5400 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System\(^4\)

### Wide-screen display
- Some: 14.1\(^\dagger\) WXGA (1280x800) color, anti-glace, 185 nits, 16:10, 300:1
- Some: 14.1\(^\dagger\) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10, 300:1
- Some: integrated camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Graphics
- **NVIDIA Quadro™ NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock**

### KeyBoard
- 89-key, ThinkVantage software, support-resistant, multimedia Fn keys, Windows/App keys

### Touchpad
- TouchPoint\(^5\), pointing device, “Press-to-Select,” Internet Scroll Bar\(^6\) technology, magnifying glass

### Dimensions\(^7\)
- 4-cell 14.1\(^\dagger\) (WxDxH): 13.2” x 9.3” x 1.09–1.26”; 335mm x 237mm x 27.6–31.9mm
- 6-cell: up to 3.8 hr; 6-cell: support unique 2nd battery in Ultrabay Slim

### Weight\(^8\)
- 4-cell: starting at 5.0 lb (2.3kg); 6-cell: starting at 5.3 lb (2.4kg)

### Case material
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type
- 4-cell: anti-glare, 200 nits, 16:10, 300:1
- 6-cell: supports unique 2nd battery in Ultrabay Slim

### Battery - life \(^9\)
- 4-cell: up to 2.5 hr; 6-cell: up to 3.8 hr; 6-cell plus Ultrabay backup: up to 5.3 hr

### Chipset
- Mobile Intel PM965 Express Chipset (Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])

### PC Card slot
- Smart Card Read: Some

### Multicard Reader
- Smart Card Read: Some

### Ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector, 1394a-2000 standard)

### Wireless antenna
- **Mini PCI Express**: Two Mini PCI Express slots

### Intel 11a/b/g\(^10\)
- Some: 11a/b/g wireless, Mini PCI adapter, Intel PRO/Wireless 3945ABG
- Some: 11a/b/g wireless, Mini PCI adapter, Intel Wireless WiFi Link 945AG

### Intel 11n\(^11\)
- Some: 11a/b/g/n wireless, Mini PCI adapter, Intel WiFi Link 945AG

### WWAN upg\(^12\)
- Some: Wireless WAN, Sierra Wireless 1xEVDO Network Adapter, Mini PCI adapter, EV-DO Rev. A, service contract req w/Verizon

### 1G Turbo
- Some: Intel Turbo Memory, Mini PCI adapter, 1GB flash, disk-cache accelerator

### Bluetooth\(^13\)
- 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet
- Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE

### Audio support
- Intel Active Management Technology (AMT), High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security
- Power on-password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Finger print reader
- Finger Print reader on palm rest, swipe sensor, supports the security chip

### Limited warranty
- 3-years / 1-year battery / EasyServ\(^15\) / depot repair service / service upgrades\(^16\) available

### Preloaded operating system\(^2\)
- Vista models: Vista Premium logo

### Preloaded applications\(^2\)
- Some: Norton Internet Security\(^3\) (all OSes; only some listed)
- Some: Fingerprint Software
- Some: Security chip
- Some: Microsoft Office 2007 Trial, Windows Live™ Toolbar, Windows Live Search
- Some: Rescue and Recovery™

### Other
- Supports ThinkVantage\(^4\) technologies
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS compliant
- International Warranty Service\(^17\)
- 24 hour x 7 day\(^17\) toll-free support during the warranty period\(^17\)
- 90 days of virus definitions
- No sockets available
- Must be ordered separately

### See footnotes for important warranty information

### US models announced May 9, Aug 21, Sept 4, or Sept 18, 2007; or Jan 8 or Feb 12, 2008

### US models withdrawn May or November 2008

\(^1\) Intel Centrino® processor technology
\(^2\) Intel Centrino® with vPro technology

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<th>Memory</th>
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<th>IDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
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<td>2GB</td>
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<td>/54</td>
<td>Blue</td>
<td>6-cell SLED10</td>
<td>W G</td>
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**Positioning**

- Premier performance: two spindles
- Intel Core™ 2 Duo processor T7500 with dual-core.
- Intel 64 Technology, Enhanced Intel SpeedStep technology. Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache.

**Memory**

- 2GB standard / 4GB max² / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Italics: standard memory in both sockets; no sockets available:
- Diskette drive
- EIDE DVD:R/W
- UltraSlim Bay
- Serial ATA disk

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE DVD:R/W**

DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

**UltraSlim Bay**

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

**Serial ATA disk**

SATA 1.5Gb/s, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

**Widescreen display**

14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Graphics**

- NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through, USB 2.0, Ethernet, Bluetooth, Gigabit Ethernet, USB, and FireWire support
- Italics: USB, Ethernet, Bluetooth, Gigabit Ethernet, USB, and FireWire support

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys

**TrackPoint®**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

**Touch pad**

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions³**

- 6-cell 14.1" (WxOxH): 13.2" x 10.2" x 1.0".9-1.6", 335 x 261mm x 27.6-31.9mm
- 6-cell: starting at 5.3 lb (2.4kg)

**Weight³**

- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - type³**

- Not published

**Battery - life³**

- Not published

**Chipset**

- Mobile Intel PM965 Express Chipset (Memory Controller Hub):
  - ICH8M-Enhanced I/O Controller Hub
  - SATA 1.5Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, Bluetooth, [ThinkPad] fingerprint
  - PCI bus (Riotech 165-C447 CardBus/1394/Multicard)
  - LPC bus (WP65/385 Super I/O, Atmel 97SC3203 TPM)

**PC Card Std slot**

- One Type I or Type II slot, CardBus 32-bit

**ExpressCard slot**

- [ThinkPad] One ExpressCard/34 or ExpressCard/54

**Smart Card Read**

- None

**Multicard Reader**

- None

**Ports**

- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

- UltraConnect™ II antenna / on-off switch for all wireless radios

**Mini PCI Express**

- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**WWAN**

- None

**Modem**

- 56K V.92 modem in Communications Daughter Card socket

**Bluetooth™**

- Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet**

- Gigabit ethernet on systemboard, Intel 82566EM9 Minev (PHY), PCIe x1 (GLCI), PXE

**Intel AMT**

- Not supported

**Audio support**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**²³

- 3-years / 1-year battery - EasyServ™, depot repair service / service upgrades available²³

---

Preloaded operating system²⁰

- SUSE® Linux™ Enterprise Desktop10 Service Pack 1

Preloaded applications¹⁴

- None

Supported devices

- Only some listed
- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- FingerPrint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

Non-supported devices

- Only some listed
- Intel 4965AGN, ThinkPad 11a/b/g
- ThinkPad 11n wireless
- WWAN
- Active Protection System™
- ThinkVantage® button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

Non-supported applications

- Only some listed
- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

Preloaded applications

- Desktop10 Service Pack 1

90-watt (NVIDIA) AC adapter

- ThinkPad Roll Cage and Top Cover

RoHS-compliant

International Warranty Service¹⁷

- 24 hour x 7 day²⁰ toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

* Intel Centrino® processor technology

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(ML-1.3) November 2008

US model withdrawn January 15, 2008

US model withdrawn effective November 2008

Other accessories at lenovo.com/accessories
7665-11U T7100 1.80GHz XGA+ 128MB 80G 5400 Combo #Intel 4965AG® 4-i Cam
7665-12U T7300 2.00GHz XGA+ 128MB 80G 5400 DVD+RW #Intel 4965AG® None Smart
7665-13U T7500 2.20GHz XGA+ 128MB 120G 5400 DVD+RW #Intel 4965AG® None 4-i in Cam
7665-26U T7300 2.00GHz XGA+ 128MB 80G 5400 Combo #Intel 4965AG® None Smart
7665-2EU T7500 2.20GHz XGA+ 128MB 120G 5400 DVD+RW #Intel 4965AG® None 4-i in Cam
7665-3EU T7500 2.20GHz XGA+ 128MB 120G 5400 DVD+RW #Intel 4965AG® None 4-i in Cam

- These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

Positioning
Processor
Core2 Duo processor T7100, T7300, or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, and 800MHz system bus; T7100: 2MB shared L2 cache; T7300/T7500: 4MB shared L2 cache

Memory
1GB std / 4GB max#7 PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available

Diskette drive
None (use optional USB-based diskette drive)

EIDE Combo
Some: DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

EIDE DVD RW
Some: DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

Ultrabay Slim
Some: DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

Serial ATA disk
SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Graphics
NVIDIA Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache,

Chipset
Mobile Intel PM965 Express Chipset (Memory Controller Hub);
ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gbps, AT100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon® RSC-847 Cardbus/1394/Multicard)/ LPC bus (WPCN385 Super I/O, Atmel® 973C0230 TPM)

PC Card Std slot
One Type I or Type II slot, CardBus 32-bit

Smart Card Reader
Some: Smart Card Reader

Multicard Reader
Some: 4-in-1 reader (MultiMediaCard, Mem Stick PRO, Sec Digital, xD Picture card®)

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector, 1394a-2000 standard)

Battery - life
4-cell: up to 2.5 hr; 6-cell: up to 3.8 hr; 6-cell plus UltraBay battery: up to 5.3 hr

Widecard reader
Type: Super-Electric PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Wireless antenna
Mini PCI Express® card
Intel 4965AG®

Modem
56K V.92™ modem in Communications Daughter Card socket

Bluetooth
Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Ethernet
Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLC), PXE

Audio support
High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, supervisor keyhole

Security chip
Fingerprint reader in palm rest, swap sensor, supports the security chip

Limited warranty® 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

1GB PC2-5300 DDR2 SODIMM
40Y7724 T/R 14W Standard Battery 4-cell 411J3196
2GB PC2-5300 DDR2 SODIMM
40Y7735 T/R 14W Enhanced Battery 6-cell 411J3196
40Y7736 T/R 14W High Capacity Batt 9-cell 43R2499

ThinkPad DVD Ultrabay Slim Drive (flat)
41N5643 Advanced Ultrabay Battery II 3-cell 43R9250
41N5646 Advanced Ultrabay Battery II 4-cell 43R9251
41N5645 Advanced Ultrabay Battery II 6-cell 43R9252

64GB SSD Sata 3.0Gbps / 1.8" (2.5" cover)
43N3400 Advanced Ultrabay Battery II 3-cell 43R9250
43N3401 Advanced Ultrabay Battery II 4-cell 43R9251
43N3402 Advanced Ultrabay Battery II 6-cell 43R9252

200GB Disk FSE Sata 1.5Gbps (7200 rpm)
41N5786 ThinkPad Business Topload Case 43R2476

320GB Disk Sata 1.5Gbps (5400 rpm)
43N3403 ThinkVision L1700p 17" Monitor 9417HE2

USB 2.0 Ultra Secure Memory Key 8GB
45J5918 ThinkVision L1440 Wide 24" Monitor 442H8B

USB 2.0 Lenovo Enhanced Port Replicator
43R8770 ThinkVision L1440 Wide 24" Monitor 442H8B

ThinkPad Converge Monitor Stand
40Y7620 ThinkVision L1440 Wide 24" Monitor 442H8B

ThinkPad Advanced Dock
250310U ThinkVision L2440x Wide 24" Monitor 4421H2B

Other accessories on O-T61 sheet

See footnotes for important warranty information
© Lenovo
US models announced May 9 or September 4, 2007 or January 8, 2008
US models withdrawn effective May or November 2008

® Intel Centrino® with vPro™ technology
© Lenovo

Preloaded operating system® - Some: Microsoft® Windows® XP Professional
- Vista models: Vista Premium logo

Preloaded applications® (all OSees)
- Rescue and Recovery®
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Multimedia Center for Think Offerings (XP Pro models)
- Sonic RecordNow and Drive Letter Access (Combo, DVD+RW)
- Corel® WinDVD® (Combo, DVD+RW)
- Corel WinDVD Creator (XP Pro DVD+RW models)

- Supports ThinkVantage® technologies
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service® 24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378
- ThinkPlus® 4-year LOR® 9x5 +2 12X5630
- ThinkPlus® 5-year LOR 9x5 12X5630
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

(ML.1-14) November 2008

Lenovo Personal Systems Reference (PSREF)
### ThinkPad T61 14W (GMA Graphics) - Education (EasyServ) - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Graphics Controller</th>
<th>Mini PCI</th>
<th>Mini PCIe</th>
<th>WWAN</th>
<th>Bluetooth</th>
<th>Vista preload</th>
<th>Educ preload</th>
<th>Workhorse (W)</th>
<th>Limited warranty (G)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-1NU T7300</td>
<td>2.00 1GB 14.1&quot;WXGA GMA 80G 5400 Combo 11a/b/g</td>
<td>11a/b/g2 None</td>
<td>4-in-1</td>
<td>Business32</td>
<td>K12 EasyServ W</td>
<td>May 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7659-PU T7300</td>
<td>2.00 1GB 14.1&quot;WXGA GMA 80G 5400 Combo 11a/b/g</td>
<td>None</td>
<td>4-in-1</td>
<td>Blue Business32</td>
<td>HE EasyServ W</td>
<td>May 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7659-XAU T7300</td>
<td>2.00 1GB 14.1&quot;WXGA+GMA 120G 5400 Dual-DVD</td>
<td>11a/b/g</td>
<td>None</td>
<td>Business32</td>
<td>HE EasyServ</td>
<td>May 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These models have an EasyServ™10 depot repair service 3-year limited warranty

These educational models are available only to private or public K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

**Processor**

Premiere performance; two spindles

**Intel® Core™ 2 Duo processor T7300 with dual-core.**

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**

1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

- Non-Italics: standard memory in one socket; one socket available

### Diskette drive

None (use optional USB-based diskette drive)

### IDE Combo Drive

Some: DVD-ROM/CD-RW, 2x4/2x4x/8x speed, removable from Ultrabay Slim

### Ultrabay Slim

One modular bay for interchangeable devices (right side), 9.5 mm high bay, flat bezel

### Serial ATA disk

80GB (5400 rpm) or 120GB (5400 rpm) / SATA 1.5GBs, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mount, ThinkPad Hard Drive, Active Protection System

### Widescreen display

Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10, 300:1

Some: 14.1" (358.1mm) WXGA+ (1440x930) color, anti-glare, 200 nits, 16:10, 300:1

### Camera

None

### Graphics

Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

### TrackPoint

Pointing device, "Press-to-Select," Internet Scroll Bar3, magnifying glass

### ThinkPad Bluetooth

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

### ThinkPad Illumination

Illuminates the keyboard to improve visibility in low-light conditions

### Weight

6-cell: starting at 3.5 lb (1.6 kg)

### Case material

Top: Super Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

### Battery - type

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

### Battery - life

6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

### Chipset

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, Bluetooth, [fingerprint]),
LPC bus (Rich+ RSC8874), Cardbus/1394/Multicard)

### PC Card Std slot

Type One or Type II slot, CardBus 32-bit, integrated door

### Smart Card Reader

None

### Multicard Reader

4-in-1 reader (MultiMediaCard, Mem Stick PRO, Sec Digital, xD-Picture Card

### Ports

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### Wireless antenna

Two Mini PCI Express slots / only 802.11 wireless is supported upgradeable

### Mini PCI Express

11a/b/g2 None

### WWAN

None

### Turbo Memory

None

### Modern

56K V.92 modem in Communications Daughter Card socket

### Bluetooth

Some: Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

### Ethernet

Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCI Express x1 (GLCI), PXE

### Intel AMT

Integrated Management and Management (AMT)

### Audio support

High Definition (HD) Audio, AD1984 HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security

Power-on password, hard disk password, supervisor password, security keyhole

### Security Chip

ThinkPad Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader

None

### Limited warranty

3-years/1-year battery - EasyServ™10 depot repair service / service upgrades available

### Preloaded operating system


- Vista Basic logo

### Preloaded applications

- Microsoft Office OneNote™ 2007 (and CD)

- Some (K12): K-12 education software

- ThinkSource Library School Edition

- Adobe® Instructor Resource Center

- Adobe Digital School Collection – Photoshop Elements 5 (and CD), Premier Elements 3 (and DVD), Acrobat 5 Professional (and CD), Contribute 4 (and CD)

- Some (HE): Higher education software

- ThinkSource Library College Edition

- Adobe Instructor Resource Center

- Adobe Photoshop Elements 5 (and CD)

- Adobe Premier Elements 3 (and DVD)

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center

- ThinkVantage System Update

- System Migration Assistant

- Norton Internet Security™

- Diskkeeper® Home

- PC-Doctor™ (diagnostics)

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe® Reader

- Windows Live™ Toolbar

- Windows Live™ Mail

- Picasa from Google

- Microsoft Office 2007 Trial (60-day)

- Sonic RecordNow and Drive Letter Access (combo. DVD:RW)

- Corel® WinDVD™ (combo, DVD:RW)

- Supports ThinkVantage™ technologies

- 65-watt (GMA graphics) AC adapter

- ThinkPad Roll Cage and Top Cover

- Energy Star® 4.0-compliant

- RoHS-compliant

- International Warranty Service

- 24 hour x 7 day toll-free support during the warranty period

- Preloaded software: Norton Internet Security, Adobe® Acrobat 8 Professional (and CD), Microsoft® Office 2007 Trial (60-day), Picasa from Google, Windows Live™ Toolbar, Windows Live™ Mail

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

These models have an EasyServ™ depot repair service 3-year limited warranty.
**ThinkPad® T61 14W (NVIDIA® Graphics) - Education (EasyServ) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11a/b/g wireless</th>
<th>Mini PCIe WWAN/Turbo Card slot</th>
<th>Blue tooth</th>
<th>Vista preload</th>
<th>Educ preload</th>
<th>Limited warranty</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7663-1TU</td>
<td>T7300 with dual-core Core™ 2 Duo processor</td>
<td>14.1&quot; WXGA+ (1440x900) color</td>
<td>None</td>
<td>128GB (5400 rpm) Sata I.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td>6-cell: up to 3.8 hr; 6-cell plus Ultrabay battery; up to 5.3 hr</td>
<td>Mobile Intel PM965 Express Chipset (Memory Controller Hub);ICH6M/Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATO-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoch R5C847 Cardbus/1394/Multicard) LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)</td>
<td>None</td>
<td>11a/b/g32</td>
<td>None</td>
<td>4-3-1 HE</td>
<td>EasyServ W</td>
<td>May07</td>
</tr>
</tbody>
</table>

- This model has an EasyServ™, depot repair service 3-year limited warranty

This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

| Processor | 7663-1TU | T7300 with dual-core Core™ 2 Duo processor | 14.1" WXGA+ (1440x900) color | None | 4-3-1 HE | EasyServ W | May07 |

Preloaded operating system®

  - Vista Premium logo

Preloaded applications®

- Microsoft Office OneNote® 2007 (and CD)
- (HE): Higher education software
  - [ VitalSource Library College Edition ]
  - [ Adobe Instructor Resource Center ]
  - [ Adobe Photoshop Elements 5 (and CD) ]
  - [ Adobe Premier Elements 3 (and DVD) ]
  - [ Rescue and Recovery™ ]
  - [ Access Connections™ ]
  - [ Client Security Solution™ ]
  - [ ThinkVantage Productivity Center ]
  - [ ThinkVantage System Update ]
  - [ System Migration Assistant ]
  - [ Norton Internet Security™ (90 days of virus definitions) ]
  - [ Diskeeper® Home ]
  - [ PC-Doctor™ (diagnostics) ]
  - [ ThinkPad Utilities (Power Manager and Presentation Director) ]
  - [ Adobe® Reader ]
  - [ Windows Live™ Toolbar ]
  - [ Windows Live Search ]
  - [ Picasa from Google ]
  - [ Fingerprint Software ]
  - [ Microsoft Office 2007 Trial (60-day) ]
  - [ Sonic RecordNow and Drive Letter Access (DVD+RW) ]
  - [ Corel® WinDVD® (DVD+RW) ]

Supports ThinkVantage® technologies

- 90-watt (NVIDIA® AC adapter)
  - ThinkPad Roll Cage and Top Cover
  - 4-hour x 7 day (100-piece magnitude)
  - ENERGY STAR® 4.0-compliant
  - RoHS-compliant
  - International Warranty Service®
  - 24 hour x 7 day toll-free support during the warranty period®

See footnotes for important warranty information

US model announced on May 9, 2007

US model withdrawn effective November 2008
### ThinkPad T61u 14W 7663 (NVIDIA) - Education (EasyServ) - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Mini PCI</th>
<th>WWAN</th>
<th>Card</th>
<th>Bluetooth</th>
<th>VISTA</th>
<th>Workhorse</th>
<th>Limited Warranty</th>
</tr>
</thead>
<tbody>
<tr>
<td>T61u</td>
<td>Intel® Core™ 2 Duo processor T9300 with dual-core</td>
<td>1GB or 2GB std</td>
<td>NVIDIA® Quadro NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI-D-pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

#### Preloaded operating system
- Vista Premium logo

#### Preloaded applications
- Microsoft Office OneNote 2007 (and CD)
- Education software
  - VitalSource Library College Edition
  - Adobe® Instructor Resource Cnt
  - Adobe Digital School Collection
- Photoshop Elements (and CD)
- – Premier Elements (and DVD)
- Acrobat® 8 Professional
- Contributions
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage® Technology Center
  - System Migration Assistant
  - Norton Internet Security™
  - (90 days of virus definitions)
  - Diskeeper® Home
  - PC-Doctor™ (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Windows Live™ Toolbar
  - Windows Live Search
  - Picasa from Google
  - Some: FingerPrint Software
  - Microsoft Office 2007 Trial (60-day)
  - Sonic RecordNow and Drive Letter Access (DVD-R/W)
  - Corel® WinDVD™ (DVD-R/W)

#### Post-warranty annual maintenance agreements
- IBM® ThinkPlus® 5-year P&L P/U Depot
- Lenovo® ThinkPlus 3-year P&L P/U Depot
- IBM® ThinkPlus® 5-year P&L P/U Depot
- IBM® ThinkPlus® 5-year P&L P/U Depot

See footnotes for important warranty information.

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US models advertised February 19 or April 10, 2008

US models withdrawn effective May 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Card slot</th>
<th>Blue-tooth</th>
<th>Finger print reader</th>
<th>Desktop</th>
<th>Linux preloaded</th>
<th>Global (G) Entry (E) Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>7659-3AU T8300</td>
<td>2.40</td>
<td>1GB</td>
<td>14.1&quot; WXGA GMA</td>
<td>80G</td>
<td>SLED10</td>
<td>None</td>
<td>/54</td>
<td>None</td>
<td>None</td>
<td>6</td>
<td>Feb 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Positioning Processor**

Premiere performance; two spindles

- Intel® Core™ 2 Duo processor T8300 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep technology™
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 3MB shared L2 cache

**Memory**

- 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-partly, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket; 1 socket available

**Diskette drive**

- None (use optional USB-based diskette drive)

**EIDE Combo**

- DVD-ROM/CD-RW, 24X/24X/24X/8X™ speed, removable from UltraSlim Drive
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

**UltraSlim Serial ATA disk**

- SATA 1.5Gbps, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive

**Widescreen display**

- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

- None

**Graphics**

- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

**Touch pad**

- TrackPoint™ pointing device, "Press-to-Select." Internet Scroll Bar™, magnifying glass
- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- Weight: 6-cell: 14.1W (WxHxD): 13.2" x 10.2" x 1.09–1.26"; 335 x 261mm x 27.6–31.9mm
- 6-cell: starting at 5.3 lb (2.4kg)

**Battery type**

- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 6-cell, supports unique 2nd battery in UltraSlim
- Not published

**Chipset**

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbps, ATA-100 EIDE, PCI Express™ x1, PCI bus, USB, LPC bus; [Bluetooth], [fingerprint]) / PCI bus (Ricochet® R5C847 Cardbus/1394/MultiCard)
- LPC bus (WPN3985 Super I/O, Atmel® 97SC3203 TPM)

**PC Card ExpressCard/54**

- One slot (Type I, Type II), CardBus 32-bit

**Smart Card Read**

- None

**Multicard Reader**

- Ports: Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Wireless antenna**

- UltraConnect™ II antenna / on/off switch for all wireless radios

**Mini PCIe Express**

- Two Mini PCIe Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g wireless™, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- WWAN
- None

**Turbo Memory**

- None

**Modem**

- 56K V.92™ modem in Communications Daughter Card socket

**Bluetooth™**

- None

**Ethernet**

- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCl), PXE

**Intel AMT**

- Not supported

**Audio support**

- High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security chip**

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- None

**Limited warranty** 3-years/1-year battery - EasyServ™, depot repair service / service upgrades available

- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM 40Y7733
- ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643
- Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8275
- 128GB SSD SATA 3.0Gbps 1.8" (2.5" cover) 43N3406
- 320GB Disk SATA 1.5Gbps (7200 rpm) 43N3411
- USB 2.0 Ultra Secure Memory Key 8GB 45J5918
- USB 2.0 Lenovo Enhanced Port Replicator 43R8770
- ThinkPad Essential Port Replicator 250310W
- ThinkPad Advanced Mini Dock 250310U
- ThinkPad Advanced Dock 250310U
- Check Linux compatibility for other accessories

**Preloaded operating system**

- SUSE® Linux™ Enterprise Desktop10 Service Pack 1

**Preloaded applications**

- None

**Supported devices**

- (only some listed)
- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator X3100 (GMA X3100)
- NVIDIA Quadro NVS 140M
- Fingerprint reader
- Bluetooth
- Function keys
- ThinkPad Advanced Dock

**Non-supported devices**

- (only some listed)
- Intel 4965AGN, Intel 4965AGN, ThinkPad 11a/b/g, ThinkPad 11n wireless
- WWAN
- Active Protection System™
- ThinkVantage® button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

**Non-supported applications**

- (only some listed)
- ThinkPad Utilities
- ThinkVantage technologies
- Presentation Director
- Encrypted DVD playback
- Keyboard Customizer

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- RoHS-compliant
- International Warranty Service17 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**ThinkPlus™ 22 2-year LOR™ 9x5 NBD**

- 41C9175
- 45K6021
- 45K6022
- 45K6024
- 45K6025
- 45K6023
- 45K6024
- 45K6025
- 45K6023
- 45K6024
- 45K6025
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

**See footnotes for important warranty information**

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US model announced February 19, 2008

US model withdrawn effective May 2009
ThinkPad® T61u 14W 7663 (NVIDIA®) - Education (Linux) - withdrawn

Positioning Processor
Premiere performance; two spindles
Intel® Core™ 2 Duo processor T8300 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep technology™, Intel Dynamic
Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus,
and 3MB shared L2 cache

Memory 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity,
dual-channel capable, two 200-pin SO-DIMM sockets;
Non-Italics: standard memory in 1 socket, 1 socket available

Diskette drive
None (use optional USB-based diskette drive)

Audio support
High Definition (HD) Audio, AD1984HD codec / stereo speakers, 1 watt / volume up,
Bluetooh® (only some listed)

Battery - life10
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim Hard Drive

Chipset Mobile Intel PM965 Express Chipset (Memory Controller Hub):
ICH8M-Enhanced I/O Controller Hub (ICH8M 3Gbps, ATA-100 EIDE,
PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) /
PCI bus (Ricoch® R5C847 Cardbus/1394/340/540/100/1000Mbps) /
LPC bus (WPON385 Super I/O, Atmel® 7SC3203 TPM)

PC Card ExpressCard/54 One slot (ExpressCard/34, ExpressCard/54)

Smart Card Read None

Multi Card Reader None

Ports Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet),
IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna UltraConnect™ 2-wireless switch for all wireless radios

Mini PCI Express Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
Intel 11a/b/g32 11a/b/g wireless; Mini PCIe adapter, Intel PRO/Wireless 3945AGB

WWAN None

Turbo Memory None

Modem 56K V.92 modem in Communications Daughter Card socket

Bluetooth™ Bluetooth 2.0 wireless, USB 2.0 interface via ICH6M, LED indicator

Ethernet Gigabit ethernet, Intel 82566SM Nineveh (PHY), PCIe x1 (GLCI), PCIe

Intel AMT Not supported

Audio support High Definition (HD) Audio, AD1984HHD codec / stereo speakers, 1 watt / volume up,
down, mute buttons / internal microphone, microphone input jack, headphone jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader FingerPrint reader on palm rest, swipe sensor, supports the security chip

Limited warranty4 3-years/1-year battery - EasyServ™, 3rd party service / service upgrades26 available

See footnotes for important warranty information

1. 1GB PC2-5300 DDR2 SODIMM 40Y7734 T/R 14W Standard Battery 4-cell 41U3196
2. 2GB PC2-5300 DDR2 SODIMM 40Y7735 T/R 14W Enhanced Battery 6-cell 41U3198
3. ThinkPad DVD Ultrabay Slim Burner (flat) 41NS643 T/R 14W High Capacity Batt 9-cell 43RF2499
4. Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725 Advanced Ultrabay Battery II 3-cell 43RF9250
5. 128GB SSD SATA 3.0Gbps 1.8" (2.5" cover) 43N3406 ThinkPad External Battery Charger 40Y7625
6. 320GB Disk SATA 1.5Gbps (7200 rpm) 43N3411 90W Slim AC/DC Combo Adapter 41N8460
7. USB 2.0 Security Key 4GB 41U5120 ThinkPad Business Topload Case 43RF2476
8. ThinkPad Essential Port Replicator 295010W ThinkPad Business Backpack 43RF2482
9. ThinkPad Advanced Mini Dock 250410U ThinkVision® L2240p Wide 22" Monitor 442HBH6
10. ThinkPad Advanced Dock 250310U ThinkVision L2440p Wide 24" Monitor 442OH2B
11. Check Linux compatibility for other accessories

Preloaded operating system20
- SUSE® Linux™ Enterprise
- Desktop10 Service Pack 1

Non-supported devices
- Intel 4965AG, Intel 4965AGN, ThinkPad 11a/b/g,
ThinkPad 11n wireless

Non-supported applications
- None

Supported devices
- HD Audio
- Intel 3945ABG wireless
- Intel Graphics Media Accelerator

WWAN
- Active Protection System™
- ThinkVantage® button
- Security chip
- Intel Turbo Memory
- Intel AMT technology
- Integrated camera

WWAN
- Service Pack 1
- Desktop10 Service Pack 1
- 3-year LOR P/U Depot
- 3-year LOR NBD
- 4-year LOR P/U Depot
- 4-year LOR NBD
- 5-year LOR P/U Depot
- 5-year LOR NBD

Lenovo
- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- RoHS-compliant
- International Warranty Service17
- 24 hour x 7 day toll-free support during the warranty period12
- via 800-426-7378

ThinkPlus™ 2-year LOR P/U Depot
- 2-year LOR NBD
- 4-year LOR P/U Depot
- 4-year LOR NBD
- 5-year LOR P/U Depot
- 5-year LOR NBD
- 7-year LOR P/U Depot
- 7-year LOR NBD

Lenovo
- ThinkPad Business Backpack 43R2482
- ThinkPad Business Topload Case 43R2476
- 90W Slim AC/DC Combo Adapter 41N8460
- ThinkPad External Battery Charger 40Y7625

ThinkPad® T61u 14W 7663 (NVIDIA®) - Education (Linux) - withdrawn

Personal Systems Reference (PSREF) © Lenovo

(ML2-4) May 2009

See footnotes for important warranty information

1. Intel Centrino® processor technology

US model announced February 19, 2008
US model withdrawn effective May 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Mini PCIe Sata</th>
<th>Mini PCIe WiFi</th>
<th>Card slot</th>
<th>Blue-tooth</th>
<th>Vista</th>
<th>Limited warranty</th>
<th>Workhorse (W)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7661-1NU T7300</td>
<td>Dual Core 1.4GHz</td>
<td>1GB</td>
<td>WXGA</td>
<td>GMA</td>
<td>SATA 5400</td>
<td>GBL</td>
<td>None</td>
<td>4-in-1</td>
<td>Blue</td>
<td>Business32</td>
<td>K12</td>
<td>W May07</td>
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<tr>
<td>7661-1PU T7300</td>
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<td>WXGA</td>
<td>GMA</td>
<td>SATA 5400</td>
<td>GBL</td>
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<td>WXGA</td>
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<td>SATA 5400</td>
<td>GBL</td>
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<td>4-in-1</td>
<td>Blue</td>
<td>Business32</td>
<td>HE</td>
<td>W May07</td>
<td></td>
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</tbody>
</table>

- These models have a limited onsite service3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for purposes of education by using students and teachers.

### Positioning Processor

Premiere performance; two spindles

**Intel Core™ 2 Duo processor T7300** with dual-core.

Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Memory

1GB std | 4GB max | 6/7 | PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-Italics: standard memory in 1 slot; 1 slot available

### Diskette drive

EIDE Combo

None (use optional USB-based diskette drive)

### UltraSlim Serial ATA disk

UltraSlim

Some: DVD burner, Super Multi-Burner (40Y6823) dual-layer, removable UltraSlim Ultrabay Slim

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

80GB (5400 rpm) or 120GB (5400 rpm)

SATA 1.5GB/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

4-in-1

Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, 185 nits, 16:10, 300:1

Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, 200 nits, 16:10, 300:1

### Graphics

Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965.

DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

### Keyboard

TrackPoint

93-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps key, UltraNav™ multi-pointing system, touch pad keyboard, Tap Zones

### Touchpad

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

6-cell: 14.1" (WxOxH): 13.2" x 10.2" x 1.09–1.26"; 335 x 261mm x 27.6–31.9mm

6-cell: starting at 5.3 lb (2.4kg)

### Weight

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life

6-cell: up to 5.7 hr; 6-cell plus Ultrabay battery: up to 7.2 hr

### Chipset

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE)

PC-Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] / PCI bus (Ricoh® R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel® 97SC3203 TPM)

### PC Card Std slot

One Type I or Type II slot, CardBus 32-bit

### ExpressCard slot

None

### Smart Card Read

None

### Multicard Reader Ports

4-in-1 reader (MultiMediaCard, Memory Stick PRO™, Sec Digital, xD-Picture Card™)

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modern), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a/2000 standard)

### WiFi

UltraConnect™ II antenna / on-switch for all wireless radios

None

### Mini PCI Express

11a/b/g

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

11a/b/g wireless, ThinkPad 11a/b Mini PCI Adapter, Aertheros AR5006EX

None

### Turbo Memory

None

### Modem

56K V.92 modem in Communications Daughter Card socket

### Bluetooth

None

### Ethernet

Dual 2.0 wireless, USB 2.0 interface via ICH6M, LED indicator

### Gigabit ethernet on systemboard, Intel 825666M Nineveh (PHY), PCIe x1 (GLCI), PXE

Intel Active Management Technology (iAMT)

### Audio support

High Definition (HD) Audio, AD1984/HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack, jack phone

### Security

Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader

None

### Limited warranty

3-years/1-year battery, limited onsite service3-years/1-year battery, excluding holidays, next business day response time

### Preloaded operating system

- Microsoft® Windows® Vista™
- ThinkPad Edge 2 (32-bit)
- Vista Basic logo

### Preloaded applications

- Microsoft Office OneNote® 2007 (and CD)
- Some (K12): K-12 education software
- WetSource Library School Edition
- Adobe® Instructor Resource Center
- Adobe Digital School Collection
- Photoshop Elements 5 (and CD)
- Premier Elements 3 (and DVD)
- Acrobat 8 Professional (and CD)
- Some (HE): Higher education software
- VitalSource Library College Edition
- Adobe Instructor Resource Center
- Adobe Photoshop Elements 5 (and CD)
- Adobe Premiere Elements 3 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Picasa from Google
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Prefix
- Adobe Instructor Resource Center
- Adobe Photoshop Elements 5 (and CD)
- Adobe Premiere Elements 3 (and DVD)
- WinDVD® (combo, DVDxRW)

### Post-warranty annual maintenance agreements

www.lenovo.com/thinkplus/warranty

© Lenovo

(ML1-7) November 2008
This model has a limited onsite service 3-year limited warranty
This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Graphic controller</th>
<th>Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Card slot</th>
<th>Blue-tooth</th>
<th>Vista preload</th>
<th>Educ pre-load warranty</th>
<th>Workhorse</th>
<th>Availability</th>
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<tbody>
<tr>
<td>7665-1TU</td>
<td>T7300</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>1GB</td>
<td>120G</td>
<td>5400</td>
<td>DVD±RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>-</td>
<td>W</td>
</tr>
<tr>
<td>7700-1TU</td>
<td>T7300</td>
<td>1GB</td>
<td>14.1&quot; WXGA+</td>
<td>128MB</td>
<td>1GB</td>
<td>120G</td>
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<td>DVD±RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>-</td>
<td>W</td>
</tr>
</tbody>
</table>

Positioning
Processor
Premiere performance; two spindles
Intel Core™ 2 Duo processor T7300 with dual-core,
Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sock./s. Non-italics: standard memory in one socket; one socket available

Diskette drive
None (use optional USB-based diskette drive)

Widescreen display
14.1" (358.1mm) WXGA+ (1440x900) color, anti-glar, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Graphics
NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App1 keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touchpad
ThinkLight™ multi-pointing system, touch pad below keyboard, Tap Zones

Dimensions
6-cell 14.1W" (WxDxH): 13.2" x 10.2" x 0.9-1.26"; 335 x 261mm x 27.6-31.9mm (358.1mm)

Weight
6-cell: starting at 5.3 lb (2.4kg)

Battery - type
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life
6-cell: up to 3.8 hr; 6-cell plus Ultrabay battery: up to 5.3 hr

Chipset
Mobile Intel PM965 Express Chipset (Memory Controller Hub);
ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [Fingerprint]) /
PCI bus (Ricoh® R8C857 Cardbus/1394/Multicard) /
PCI bus (WPON385 Super I/O, Atmel® 97SC3203 TPM)

PC Card Std slot
One Type I or Type II slot, CardBus 32-bit

ExpressCard slot
None

Smart Card Reader
None

Multicard Reader
4-in-1 reader (MultiMediaCard, Memory Stick®, Secure Digital, xD-Picture Card™)

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

Wireless antenna
UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

Wireless
11a/b/g5
11a/b/g wireless, ThinkPad 11a/b/g Mini PCIe Adapter, Atheros AR5006EX
None

Turbo Memory
None

Modem
56K V.92 modem in Communications Daughter Card socket

Bluetooth™
Bluetooth 2.0 wireless, USB 2.0 interface via ICH9M, LED indicator

Ethernet
Gigabit ethernet on systemboard, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

Intel AMT
Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, AD1984 codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-year battery, limited onsite service 3-year limited warranty
8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

Preloaded operating system
Microsoft Office OneNote® 2007
(32-bit)
Vista Premium logo

Preloaded applications
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor® diagnostics
- ThinkPad Utilities (Power Manager / presentations director)
- ThinkPad Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Access Connections™
- Rescue and Recovery™
- Access Connections™
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- Corel WinDVD® (DVD±RW)

Supported ThinkVantage® technologies
90-watt (NVIDIA) AC adapter
ThinkPad Roll Cage and Top Cover (one-piece magnesium)
ENERGY STAR® 4.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period, via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced May 9, 2007
US model withdrawn effective November 2008
## ThinkPad T61 15W 6463 (GMA) - Education (EasyServ) - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Finger print reader</th>
<th>Battery capacity</th>
<th>Limited warranty</th>
<th>Vista preload</th>
<th>Avail date</th>
</tr>
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<tbody>
<tr>
<td>6463-4JU</td>
<td>T7300 2.00</td>
<td>1GB</td>
<td>15.4&quot; WXGA GMA</td>
<td>120G 5400</td>
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<td>None</td>
<td>None</td>
<td>11a/b/g/n</td>
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<td>/54</td>
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<td>32</td>
<td>Jun 07</td>
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</table>

### Key Features
- **Processor**: Intel Core 2 Duo processor T7300 with dual-core.
- **Memory**: 1GB standard / 4GB max² / 2GB PC2-5300 DDR2-667, dual-channel capable, two 200-pin SO-DIMM sockets.
- **Diskette drive**: None (use optional USB-based diskette drive)
- **Hard Disk**: 120GB² (SATA 1.5Gbps / 5400 rpm) / SATA 1.5Gbps (7200 rpm) / 250GB Disk 9.5mm SATA 1.5Gbps (7200 rpm)
- **Graphics**: Intel Graphics Media Accelerator X1000 (GM965), integrated in GM965.
- **Battery**: Top-Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim.
- **Weight**: 9-cell up to 8.3 hr; 9-cell plus Ultrabay Slim battery up to 9.8 hr.
- **Dimensions**: 14.1” x 10.0” x 1.2–1.4”; 358.4mm x 255mm x 29.8–34.5mm.
- **Ports**: Three Mini PCIe slots / only 802.11 wireless is customer upgradable
- **Audio**: High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack.
- **Security**: Trusted Platform Module, Fingerprint Reader on palm rest.
- **Security keyhole**: Security keyhole
- **Security chip**: Trusted Platform Module
- **Fingerprint reader**: Fingerprint reader on palm rest
- **Ports**: UltraSecure II antenna / On-off switch for all wireless radios
- **Memory**: UltraConnect II / 3 channels for all Mini PCI Express slots
- **Mini PCI Express**: 11a/b/g/n / WWAN / Turbo Memory
- **USB**: None (Half-Mini PCI Express slot)
- **Ethernet**: Gigabit ethernet on systemboard, Intel 82566MMNiney (PHY), PCIe x1 (GLC), PXE
- **Audio**: High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack.
- **Security**: Password
- **Fingerprint reader**: Fingerprint reader on palm rest
- **Limited warranty**: 23 3-years / 1-year battery - EasyServ

### Additional Features
- **Processor**: Intel Dual Core Processor T7300 with dual-core.
- **Memory**: 1GB standard / 4GB max² / 2GB PC2-5300 DDR2-667, dual-channel capable, two 200-pin SO-DIMM sockets.
- **Diskette drive**: None (use optional USB-based diskette drive)
- **Hard Disk**: 120GB² (SATA 1.5Gbps / 5400 rpm) / SATA 1.5Gbps (7200 rpm) / 250GB Disk 9.5mm SATA 1.5Gbps (7200 rpm)
- **Graphics**: Intel Graphics Media Accelerator X1000 (GM965), integrated in GM965.
- **Battery**: Top-Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim.
- **Weight**: 9-cell up to 8.3 hr; 9-cell plus Ultrabay Slim battery up to 9.8 hr.
- **Dimensions**: 14.1” x 10.0” x 1.2–1.4”; 358.4mm x 255mm x 29.8–34.5mm.
- **Ports**: Three Mini PCIe slots / only 802.11 wireless is customer upgradable
- **Audio**: High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack.
- **Security**: Password
- **Fingerprint reader**: Fingerprint reader on palm rest
- **Ports**: UltraSecure II antenna / On-off switch for all wireless radios
- **Memory**: UltraConnect II / 3 channels for all Mini PCI Express slots
- **Mini PCI Express**: 11a/b/g/n / WWAN / Turbo Memory
- **USB**: None (Half-Mini PCI Express slot)
- **Ethernet**: Gigabit ethernet on systemboard, Intel 82566MMNiney (PHY), PCIe x1 (GLC), PXE
- **Audio**: High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack.
- **Security**: Password
- **Fingerprint reader**: Fingerprint reader on palm rest
- **Limited warranty**: 23 3-years / 1-year battery - EasyServ

### Preloaded operating system
- **Microsoft Windows Vista Business Edition (32-bit) ♦ Vista Basic logo

### Preloaded applications
- **Microsoft Office OneNote 2007 (and CD)
- **Adobe Acrobat Reader (and CD)
- **Windows Live Search
- **Picasa from Google
- **Fingerprint Software
- **Lenovo 2007 Trial (60-day)
- **Sonic RecordNow and Drive Letter Access (DVD:RW)
- **InterVideo WinDVD (Dvd-RW)

### Special Features
- **65-watt (GMA graphics) AC adapter
- **ThinkPad Roll Cage and Top Cover
- **Supports ThinkVantage technologies
- **ENERGY STAR 4.0-compliant
- **RoHS-compliant
- **International Warranty Service
- **24 hour x 7 days 24-hour toll-free support during the warranty period via 800-426-7378

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**See footnotes for important warranty information**

**US model announced on May 31, 2007**

© Lenovo (CRS-3) July 2008

**US model withdrawn effective June 2008**
### ThinkPad T61 15W (GMA Graphics) - Education (Onsite) - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Battery</th>
<th>Edu</th>
<th>Vista</th>
<th>Avail</th>
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</thead>
<tbody>
<tr>
<td>2.00 GHz</td>
<td>1 GB</td>
<td>1600 MHz DDR2</td>
<td>22</td>
<td>9.2 Ah</td>
<td>3</td>
<td>32</td>
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</tbody>
</table>

- This model has a limited onsite service** - 3-year limited warranty
- This educational model is available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Preloaded applications
- Microsoft Office OneNote® 2007 (and CD)
- Core2™ Duo processor at 2.00GHz T7300
- Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

### Preloaded operating system

### Windows Live
- Fingerprint Software
- Microsoft Office 2007 Trial (60-day)

### AVC bay for interchangeable devices (right side), 9.5mm high, bay bezel

### Other accessories
- Lenovo External Battery Charger
- ThinkPad Roll Cage and Top Cover
- ThinkPad Business Backpack
- ThinkPad Deluxe Expander Case
- 65-watt (GMA graphics) AC adapter

### Limited warranty
- 3-years/1-year battery, limited onsite service** - 4.00 am - 5.00 pm, Mon - Fri coverage

### Software
- Norton Internet Security
- ThinkVantage System Update
- Rescue and Recovery
- InterVideo WinDVD
- Adobe® Acrobat® 8 Professional (and CD)

### Accessories
- Other accessories on T61 sheet

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**See footnotes for important warranty information**

© Lenovo

(CR3-4) July 2008

US model announced May 31, 2007

US model withdrawn effective June 2008

Lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Processor</th>
<th>Dual-core Intel® Core™ 2 Duo processor, 800MHz system bus, and 2MB shared L2 cache</th>
<th>December 6, 2007, or January 8 or May 13, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intel® Dynamic Acceleration, Execute Disable Bit, 800MHz system bus, and 2MB shared L2 cache.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core Duo processor T7250, with 5400 rpm, or 7200 rpm, or 5400 or 7200 rpm.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core 2 Duo processor T7100, T7250, T7500, T8010, or T8300 with dual-core.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core 2 Duo processor T7100, T7250, T7500, T8010, or T8300 with dual-core.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core 2 Duo processor T7100, T7250, T7500, T8010, or T8300 with dual-core.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core 2 Duo processor T7100, T7250, T7500, T8010, or T8300 with dual-core.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core 2 Duo processor T7100, T7250, T7500, T8010, or T8300 with dual-core.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel® Core 2 Duo processor T7100, T7250, T7500, T8010, or T8300 with dual-core.</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, 200-pin SO-DIMM sockets.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Italics: standard memory in 1 socket; 1 socket available.</td>
<td></td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None (use optional USB-based diskette drive)</td>
<td></td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>One modular bay for interchangeable devices (right side). 9.5mm high bay, flat bezel.</td>
<td></td>
</tr>
<tr>
<td>Serial ATA disk</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic.</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>15.4&quot; (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 30.1 contrast ratio.</td>
<td></td>
</tr>
<tr>
<td>Camera</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel® Graphics Media Accelerator X3100 (GMA X3100), integrated in GMA965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TrackPoint® 99-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Appl keys.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Touch pad UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dimensions 15.4&quot; (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 30.1 contrast ratio.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weight Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Battery life 6-cell: up to 5.5 hr; 9-cell: up to 8.3 hr; 9-cell plus Ultrabay battery: up to 9.8 hr.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chipset Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M 100E I/O Controller Hub (SATA-100 EIDE, PCI Express x1, PCI bus, USB bus, [Bluetooth], [fingerprint]).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PC Card Std slot One Type I or Type II slot, CardBus 32-bit.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smart Card Read None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multicard Reader Options (XP Pro models)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ports Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (network), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wireless antenna UltraConnect™ II antenna / on-off switch for all wireless radios.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mini PCI Express Three Mini PCI Express slots / only 802.11 wireless is customer upgradable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mini PCI E6465AG Some: 11a/b/g wireless; Mini PCI adapter, Intel Wireless WiFi Link 4965AG.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel 11a/b/gc Some: 11a/b/g wireless; Mini PCI adapter, Intel Wireless WiFi Link 4965AG.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WWAN None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1G Turbo Some: Intel Turbo Memory, Mini PCI adapter, 1GB flash, disk-cache accelerator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modem 56K V.92 modem in Communications Daughter Card socket</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bluetooth™ Some: Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethernet Gbit eth. Ethernet Interface, Intel 82562DMM Niewenh (PHY), PCIe x1 (GLCI), PXE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intel AMT Intel Active Management Technology (IATM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Audio support High Definition (HD) Audio, AD1984JC codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Security Power-on password, hard disk password, supervisor password, security keyhole.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Security chip Trusted Platform Module, Atmel chip, TCG 1.2-compliant.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Finger print reader Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Limited warranty 2-year EasyServ service / service upgrades available</td>
<td></td>
</tr>
</tbody>
</table>

Preloaded operating system Windows® XP Professional with Vista® COA. |                                     |

Preloaded applications (all OSes; some only listed) | GB Systems Reference Edition 32-bit, Windows® Vista Business32 (CR3-1) November 2008 |                                     |

Some: Some of the following technologies | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |

Some: Education software | Total: 20 of the following technologies available |                                     |
### ThinkPad T61 15W 6465 (GMA) - TopSeller (April 2008) - withdrawn

#### Type-model | Proc- essor | GZH | Memory | Disk Sata | Mini PCIe | Mini PCIe | Card slot | Finger print reader | Battery Preload | Available date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
6465-9ZU T5270 | 1.40 GHz | 1GB | 15.4" WXGA | GMA | 80GB 5400 | Combo | • Intel 11a/b/g | None | /54 | 6 Business32 Apr 08
6465-A2U T8100 | 2.10 GHz | 2GB | 15.4" WXGA | GMA | 160G 5400 | DVD+RW | • Intel 11n | None | /54 | 6 Finger Business32 Apr 08
6465-A3U T8300 | 2.40 GHz | 2GB | 15.4" WXGA | GMA | 100G 7200 | DVD+RW | • Intel 11n | None | /54 | Blue Finger Business32 Apr 08

* These small and medium business (SMB) models are part of the US TopSeller™ Program
* These models have a 1-year limited warranty

#### Preloaded operating system
- 12U/A: Vista Basic logo
- 2AU/A3U: Vista Premium logo

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (Combo, DVD+RW)
- Corel® WinDVD® (Combo, DVD+RW)

**Supported ThinkVantage technologies**

#### Wireless antenna

| Mini PCIe Express | Some: 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945AG
| Intel 11a/b/g® | Some: 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945AG
| Intel 11n® | Some: 11a/b/g wireless, Mini PCIe adapter, Intel Wireless WiFi Link 4965AGN, MIMO 2x3 (Kedron)

#### WWAN

| None
| None (use optional USB-based diskette drive)
| None (use optional USB-based diskette drive)
| None

#### Modem

| 56K6 V.92 modem in Communications Daughter Card socket
| Some: Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator
| Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PCIe x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])

#### Ethernet

| Gigabit ethernet on systemboard, Intel 82576GM Mineveh (PHY), PCIe x1 (GLCI), PCIe x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])
| Intel AMT

#### Audio support

| High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

#### Security

| Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip

| Trusted Platform Module, Atmel chip, TCG 1.2-compliant

#### Fingerprint reader

| Fingerprint reader on palm rest, swipe sensor, supports the security chip

#### Limited warranty

- **1-year - EasyServ™**: depot repair service / service upgrades available

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*Powered by Intel Centrino® processor technology
*Powered by Intel Centrino with vPro™ technology

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See footnotes for important warranty information

US models announced April 15, 2008

US models withdrawn effective November 2008

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(CR4-3) November 2008
<table>
<thead>
<tr>
<th>Positioning Processors</th>
<th>Premier performance; two spindles Intel® Core™ 2 Duo processor T7300 with dual-core. Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB std / 4GB max*/ PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-ittics: standard memory in 1 socket, 1 socket available</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>IDE Combo, Ultrabay Slim</td>
<td>DVD-ROM/CD-RW, 24X/24X/24X/8X™ speed, removable from Ultrabay Slim</td>
</tr>
<tr>
<td>Serial ATA disk</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 80GB™ (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>15.4” (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>None</td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apply keys</td>
</tr>
<tr>
<td>Touchpad</td>
<td>TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™ multi-pointing system, touch pad below keyboard. Tap Zones illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions</td>
<td>15.4’’ models (WxDxH): 14.1” x 10.0” x 1.2–1.4”, 358.4mm x 255mm x 29.8–34.5mm with optical drive and battery: starting at 5.9 lb (2.7kg)</td>
</tr>
<tr>
<td>Weight</td>
<td>Case material</td>
</tr>
<tr>
<td>Battery</td>
<td>Top: Super-Electric PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium ion 6-cell / supports unique 2nd battery in Ultrabay Slims 6-cell: up to 5.5 hr; 9-cell: up to 8.3 hr; 9-cell plus Ultrabay battery: up to 9.8 hr</td>
</tr>
<tr>
<td>Battery - life</td>
<td>Chipset</td>
</tr>
<tr>
<td>ExpressCard slot</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
</tr>
<tr>
<td>Smart Card Reader</td>
<td>None</td>
</tr>
<tr>
<td>Multicard Reader</td>
<td>4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card™)</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)</td>
</tr>
<tr>
<td>Wireless antenna</td>
<td>UltraConnect® II antenna / on-off switch for all wireless radios</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots / only 802.11 Wireless is customer upgradable</td>
</tr>
<tr>
<td>Intel 4965AG32</td>
<td>Intel® Core™ 2 Duo Processor 2.00 GHz, 1GB, 15.4&quot; WXGA, SATA 1.5GB/s 9.5mm hard drive, flat bezel 80GB™ (5400 rpm) / 358.4mm x 255mm x 29.8–34.5mm with optical drive and battery: starting at 5.9 lb (2.7kg)</td>
</tr>
<tr>
<td>WWAN</td>
<td>15.4” models (WxDxH): 14.1” x 10.0” x 1.2–1.4”, 358.4mm x 255mm x 29.8–34.5mm with optical drive and battery: starting at 5.9 lb (2.7kg)</td>
</tr>
<tr>
<td>WWAN</td>
<td>Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, Atmel chip, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Root Key</td>
<td>Fingerprint reader Fingerprint reader on palm rest, swipes sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years / 1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades² available</td>
</tr>
</tbody>
</table>

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| Processor | GHz | Memory | Wide-screen display | Graphics controller | Disk Sata GB | rpm | EIDE optical | Mini PCIle 802.11/16 | Mini PCIle WWAN/Turbo | Card slot | Bluetooth cells | Battery cells | Vista preload | Workhorse (W) | Global (G) | GMP (P) | Avail date |
| 6464-4YU T7300 | 2.00 | 1GB | 15.4" WXGA | GMA | 80GB | 5400 | Combo | Intel 4965AG™ | None | Smart | Blue | 6 | Business32 | W G | P | Jun 07 |

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- This model is part of the Global Models Plus program with limited onsite service 3-year limited warranty
- Prepaid 3-year limited warranty
- 65-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) ENERGY STAR® 4.0-compliant RoHS-compliant International Warranty Service¹ 24 hour x 7 day³ toll-free support during the warranty period via 800-426-7378
- ThinkPlus² 4-year LOR® 9x5 NBD 45K6038
- ThinkPlus 5-year LOR 9x5 NBD 43R2162
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Intel Centrino® with vPro™ technology

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US model announced May 31, 2007
US model withdrawn effective May 2009

(CR3-14) May 2009
ThinkPad® T61 15W 6460 (NVIDIA®) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Wide-screen memory</th>
<th>Graphics controller</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe WWAN</th>
<th>Card slot</th>
<th>Battery cells</th>
<th>Workhorse</th>
<th>Global (G)</th>
<th>Availability date</th>
</tr>
</thead>
<tbody>
<tr>
<td>6460-66U</td>
<td>T7300</td>
<td>2.00 1GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>1G Turbo</td>
<td>/54</td>
<td>Blue 6</td>
<td>Bus 32</td>
<td>July 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6460-7EU</td>
<td>T7300</td>
<td>2.00 1GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>XP Pro</td>
<td>July 07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6460-01U</td>
<td>T7500</td>
<td>2.20 1GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>XP Pro</td>
<td>Jan 08</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6460-DWU</td>
<td>T8100</td>
<td>2.10 1GB 15.4&quot; WSXGA+ 128MB 100G 7200 Combo</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>UX Pro</td>
<td>Jan 08</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6460-DTU</td>
<td>T8300</td>
<td>2.40 1GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>UX Pro</td>
<td>Apr 09</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6460-EFU</td>
<td>T8100</td>
<td>2.10 2GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>Bus 32</td>
<td>Apr 09</td>
<td></td>
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<tr>
<td>6460-EGU</td>
<td>T8300</td>
<td>2.40 2GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>Bus 32</td>
<td>May 09</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6460-64U</td>
<td>T8100</td>
<td>2.10 1GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>Pro</td>
<td>Sep 09</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6460-05U</td>
<td>T8100</td>
<td>2.10 2GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>Pro</td>
<td>Sep 09</td>
<td></td>
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<td></td>
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<tr>
<td>6460-SU</td>
<td>T7300</td>
<td>2.00 1GB 15.4&quot; WSXGA+ 128MB 160G 5400 DVD±RW</td>
<td>Intel 11n®</td>
<td>/54</td>
<td>Blue 6</td>
<td>Pro</td>
<td>Sep 09</td>
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<td></td>
</tr>
</tbody>
</table>

These small and medium business (SMB) models are part of the US TopSeller™ Program

Preloaded operating system23:
- Some: Microsoft® Windows® XP Professional with Vista® COA
- Vista models: Vista Premium logo

Preloaded applications14 (all OSes; only some listed):
- Microsoft Office OneNote® 2007 and CD (66U, 05U, 06U models)
- Some: Education software
- Norton Internet Security
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities
- Windows Live™ Toolbar
- Fire望Software
- Microsoft Office 2007 Trial (60-day)
- Multimedia Center for Think Offerings (XP Pro DVD\:RW models)
- Sonic RecordNow and Drive Letter Access (DVD ±RW)
- Corel® WinDVD Creator (XP Pro DVD\:RW models)
- Corel® WinDVD (XP DVD\:RW models)

Supports ThinkVantage® technologies
- 90-watt (NVIDIA®) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service17 24 hour x 7 day 24 toll-free support during the warranty period16 via 800-426-7726

ThinkPlus® 22 2-year LOR® 9x5 NBD 41C9175
ThinkPlus® 3-year LOR® 9x5 NBD 45K6021
ThinkPlus® 4-year LOR® 9x5 NBD 45K6022
ThinkPlus® 5-year LOR® 9x5 NBD 45K6024
ThinkPlus® 4-year P&L P/U Depot 45K6023
ThinkPlus® 5-year P&L P/U Depot 45K6025

See footnotes for important warranty information
© Lenovo
CRS-3 May 2009

US models announced Jul 10, Dec 6, 2007, Jan 8, Apr 15, May 13, Aug 1, Aug 28, 2008
US models withdrawn effective December 2007, May 2008 or May 2009
## ThinkPad T61 15W (NVIDIA Graphics) - withdrawn

### Personal Systems Reference (PSREF)

#### Type-model

| Type-model | Processor | Cach | Gz/cm² | Graphics controller | Disk SATA | Mini PCIe | Mini PCIe WWAN | Battery cell | Preload | Workhorse (W) | Global (G) Entry (E) | Avail
|------------|-----------|------|--------|--------------------|----------|----------|----------------|------------|--------|--------------|----------------------|-------
| 6457-4UU T7300 | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 2.00 | 15.4" WXGA+ | 128MB 80GB 5400 Combo | | | | | | | |
| 6457-6UU T7300 | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 2.00 | 15.4" WXGA+ | 128MB 80GB 5400 Combo | | | | | | | |
| 6457-6PU T7500 | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 2.00 | 15.4" WXGA+ | 128MB 80GB 5400 Combo | | | | | | | |
| 6457-8UU T7300 | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 2.00 | 15.4" WXGA+ | 128MB 80GB 5400 Combo | | | | | | | |
| 6457-98U T7500 | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 2.20 | 15.4" WXGA+ | 128MB 80GB 5400 Combo | | | | | | | |
| 6457-6PU T7500 | Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache | 2.20 | 15.4" WXGA+ | 128MB 80GB 5400 Combo | | | | | | | |

### Processor

- **Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache**
- **Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache**
- **Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache**
- **Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache**
- **Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache**
- **Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache**

### Memory

- **1GB or 2GB std / 4GB max**
- **512MB or 1GB std / 2GB max**
- **512MB or 1GB std / 2GB max**
- **512MB or 1GB std / 2GB max**
- **512MB or 1GB std / 2GB max**
- **512MB or 1GB std / 2GB max**

### Diskette drive

- **None (use optional USB-based diskette drive)**
- **None (use optional USB-based diskette drive)**
- **None (use optional USB-based diskette drive)**
- **None (use optional USB-based diskette drive)**
- **None (use optional USB-based diskette drive)**
- **None (use optional USB-based diskette drive)**

### Display

- **15.4" WXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio**

### Multimedia Reader

- **Some:** Intel 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- **Some:** Intel 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- **Some:** Intel 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- **Some:** Intel 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- **Some:** Intel 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG
- **Some:** Intel 11a/b/g wireless, Mini PCIe adapter, Intel PRO/Wireless 3945ABG

### Security

- **Fingerprint reader on palm rest**
- **Fingerprint reader on palm rest**
- **Fingerprint reader on palm rest**
- **Fingerprint reader on palm rest**
- **Fingerprint reader on palm rest**
- **Fingerprint reader on palm rest**

### Preloaded operating system

- **Microsoft® Windows® XP Professional**
- **Microsoft® Windows® Vista® Business Edition (32-bit)**
- **Microsoft® Windows® Vista® Business Edition (64-bit)**
- **Microsoft® Windows® Vista® Ultimate Edition (32-bit)**

### Preloaded applications

- **Rescue and Recovery™**
- **Access Connections™**
- **Client Security Solution™**
- **ThinkVantage Rescue and Recovery®**
- **Microsoft Office 2007 Trial (60-day)**
- **EarthLink Trial (Vista Ultimate models)**
- **Sonar RecordNow and Drive Letter Access (combo, DVD:RW)**
- **Corel® WinDVD® (combo, DVD:RW)**
- **Corel® WinDVD Creator (XP Pro DVD:RW models)**

### Battery Life

- **Up to 3.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr**
- **Up to 6.4 hr; 9-cell plus Ultrabay Slim battery: up to 10.4 hr**
- **Up to 4.3 hr; 9-cell plus Ultrabay battery: up to 8.3 hr**
- **Up to 4.8 hr; 9-cell plus Ultrabay Slim battery: up to 6.8 hr**
- **Up to 4.9 hr; 9-cell plus Ultrabay battery: up to 8.9 hr**
- **Up to 5.0 hr; 9-cell plus Ultrabay Slim battery: up to 7.0 hr**

### Limited warranty

- **3-years/1-year battery - EasyServ™ on-site pickup and delivery / service upgrades**
- **2-years/1-year battery - EasyServ™ on-site pickup and delivery / service upgrades**

### Accessories

- **ThinkPad Executive Leather Case 43R2480**
- **ThinkPad Deluxe Expander Case 43R2478**
- **T/R/W/SL Series Li-Ion Battery 6-cell 40Y6799**
- **Other accessories at lenovo.com**
ThinkPad® T61 15W 6458 (NVIDIA) - Onsite - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen memory</th>
<th>Controller</th>
<th>Disk SATA</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Preload</th>
<th>Workhorse (W)</th>
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<td>80GB</td>
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<td>Smart</td>
<td>Blue</td>
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<td>Intel 4965AG™</td>
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<td>Smart</td>
<td>Blue</td>
<td>9 Business32</td>
<td>W G P July 07</td>
<td></td>
</tr>
</tbody>
</table>

* These models are part of the Global Models Plus program with limited onsite service**3-year limited warranty

Positioning Processor
Premiere performance; two spindles

Intel® Core™ 2 Duo processor T7300 or T7500 with dual-core,

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory
1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Non-italics: standard memory in 1 socket; 1 socket available

Diskette drive EIDE Combo
None (use optional USB-based diskette drive)

DVI/DVDRW
Some: DVD burner, Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

Ultrabay Slim
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

80GB or

120GB

(SATA 1.5Gbps, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Serial ATA disk
SATA 1.5Gbps, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
15.4" (391mm) WSXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

Camera

Graphics

NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard

TrackPoint®
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

Touchpad
None

ThinkLight™
Ultralight multi-pointing system, touch pad below keyboard, Tap Zones

Dimensions
15.4" models (WxDxH): 14.1" x 10.0" x 1.2–1.4"; 358.4mm x 255mm x 29.8–34.5mm

Battery - type
Lithium Ion 6-cell or 9-cell / supports unique 2nd battery in Ultrabay Slim

Battery - life
6-cell: up to 3.9 hr; 9-cell: up to 5.9 hr; 6-cell: up to 5.9 hr; 9-cell: up to 7.9 hr

Chipset
Mobile Intel PM965 Express Chipset (Memory Controller Hub);

ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gbps, ATA-100 EIDE, PCI Express x1, PCI bus, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoch R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel 97SC3203 TPM)

PC Card
One slot (Type I, Type II), CardBus 32-bit

ExpressCard slot
None

Smart Card Reader
Smart Card Reader

Multicard Reader
Multicard Reader

4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card®)

Ports
Three USB 2.0, DB-15 (external VGA monitor), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector: 1394a-2000 standard)

Wireless antenna
UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express
Three Mini PCI Express slots / only 802.11 wireless is customer upgradable

Intel 4965AG® with vPro™ technology

WWAN
None

UWB
None (uses Half-Mini PCI Express slot)

Modem
56K V.92 modem in Communications Daughter Card socket

Bluetooth™
Bluetooth 2.0 wireless, USB 2.0 interface via ICH9M, LED indicator

Ethernet
Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCIxe x1 (GLCI), PXE

Intel AMT
Intel Active Management Technology (IAMT)

Audio support
High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up / down, mute buttons / internal microphone / input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty**3-years/1-year battery, limited onsite service**2-year battery / 3-year limited warranty

Access Connections
• Preloaded operating system**
  – Vista Premium logo

Preloaded applications**
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• System Migration Assistant
• Norton Internet Security (90 days of virus definitions)
• Diskeeper® Home
• PC-Doctor™ (diagnostics)
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader
• Windows Live™ Toolbar
• Windows Live Search
• Picasa from Google
• Fingerprint Software (fingerprint models)
• Microsoft Office 2007 Trial (60-day)
• EarthLink Trial (Vista Ultimate models)
• Sonic RecordNow and Drive Letter Access (combo)
• Corel® WinDVD® (combo)

Supports ThinkVantage® technologies

90-watt (NVIDIA®) AC adapter

ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service17
24 hour x 7 day® toll-free support during the warranty period17 via 800-426-7378

ThinkPlus™17 4-year LOR® 9x5 BD
45K6038

ThinkPlus 5-year LOR 9x5 BD
45K6039

ThinkPlus 4-year LOR 9x5 BD
45K6038

ThinkPlus 5-year LOR 9x5 BD
45K6039

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Intel® Centrino® with vPro™ technology

Lenovo

US models announced July 10, 2007

US models withdrawn effective May 2009

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(CR3-12) May 2009

* Intel Centrino® with vPro™ technology

** Limited warranty

† Intel® Core™2 Duo processor T7300 or T7500 with dual-core,

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

‡ US models withdrawn effective May 2009

§ US models announced July 10, 2007

CR3-12 May 2009

Lenovo

US models announced July 10, 2007

US models withdrawn effective May 2009

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(CR3-12) May 2009

* Intel Centrino® with vPro™ technology

** Limited warranty

† Intel® Core™2 Duo processor T7300 or T7500 with dual-core,

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

‡ US models withdrawn effective May 2009

§ US models announced July 10, 2007
**ThinkPad T61 15W 6457 (NVIDIA) - Education (EasyServ) - withdrawn**

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB rpm</th>
<th>EIDE optical</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Battery cells</th>
<th>EduServ</th>
<th>Limited warranty</th>
<th>Vista preload</th>
<th>Avail date</th>
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<td>6454-4JU</td>
<td>T7300</td>
<td>2.00 1GB 15.4&quot; WSXGA+ 128MB 100G 7200 DVDz:RW</td>
<td>11a/bg/940</td>
<td>None /54 HE EasyServ</td>
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</tbody>
</table>

*This model has an EasyServ™/13 depot repair service 3-year limited warranty*

Educational models are available only to public or private K-12 or higher accredited schools and operated exclusively for educational purposes for use by qualified students and teachers.

**Positioning Processor**

Premiere performance; two spindles

**Intel Core™ 2 Duo processor T7300 with dual-core.**

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus; and 4MB shared L2 cache

**Memory**

1GB standard / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Non-tiltable: standard memory in 1 socket; 1 socket available

**Diskette drive**

None (use optional USB-based diskette drive)

**EIDE DVD±RW**

DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

**Ultrabay Slim**

100GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd dock, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Serial ATA disk**

**15.4"** (391mm) WXGA+ (1680x1050) color, anti-glar, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

**Widescreen display**

None

**Camera**

None

**Graphics**

NVIDIA® Quadro® NVS 140M, PCI Express® x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apple keys

Touchpad

ThinkPad™ pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**ThinkPad™ multi-pointing system**, touch pad below keyboard, Tap Zones illuminates the keyboard to improve visibility in low-light conditions

**Dimensions²**

15.4" models (WxOhD): 14.1" x 10.0" x 1.2–1.4", 358.4mm x 255mm x 29.8–34.5mm with optical drive and battery: starting at 5.9 lb (2.7kg)

**Weight³**

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

**Battery - life ⁴**

9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**

Intel Mobile PM965 Express Chipset (Memory Controller Hub):

ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gbps, ATA-100 IDE, PCI Express x1, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricon® R5C474 Cardbus/1394/MultiCard)

**PC Card**

One slot (Type I, II), CardBus 32-bit

**ExpressCard/54**

One slot (ExpressCard/34, ExpressCard/54)

**Smart Card Read**

None

**Multicard Reader**

1-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card™)

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 400 (4-pin connector; 1394A-2000 standard)

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

Mini PCI Express

11a/b/g/940 WWAN

ThinkPad 11a/b/g wireless, ThinkPad 11a/b/g Mini PCI Adapter, Atheros AR5006EX

None

**Turbo Memory**

None (uses Half-Mini PCI Express slot)

**Modem**

56K V.92® modem in Communications Daughter Card socket

**Bluetooth™**

Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

**Ethernet**

Gigabit ethernet, Intel 82566MNI Nineveh (PHY), PCIe x1 (GLC), PXE

**Intel AMT**

Intel Active Management Technology (iAMT)

**Audio support**

High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years / 1-year battery - EasyServ™/19 depot repair service / service upgrades available

1GB PC2-5300 DDR2 SODIMM

2GB PC2-5300 DDR2 SODIMM

ThinkPad DVD Ultrabay Slim Burner (flat) 41N6563

Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N406

250GB Disk FDD SATA 1.5Gb/s (7200 rpm) 43N410

250GB Disk 9.5mm SATA 1.5Gb/s (5400 rpm) 43R8152

320GB Disk SATA 1.5Gb/s (7200 rpm) 43N411

USB 2.0 Ultra Secure Memory Key 8GB 45J5918

ThinkPad Multi-Burner Drive 41N5656

ThinkPad Essential Port Replicator 250510W

ThinkPad Advanced Mini Dock 250410U

ThinkPad Advanced Dock 250310U

Other accessories on O-T61 sheet

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<th>Processor GHz</th>
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<td>ThinkVision L1700p 17&quot; Monitor</td>
<td>4317H82</td>
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<td>Other accessories on O-T61 sheet</td>
<td>Other accessories at lenovo.com/accessories</td>
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</tbody>
</table>

Preloaded operating system²


- Vista Premium logo

Preloaded applications¹⁴

- Microsoft Office OneNote® 2007 (and CD)

- (HE): Higher education software

- Technical Library College Edition

- Adobe® Instructor Resource Center

- Adobe Photoshop Elements 5 (and CD)

- Adobe Premier Elements 3 (and DVD)

- Rescue and Recovery™

- Access Connections™

- Client Security Solution™

- ThinkVantage Productivity Center

- System Migration Assistant

- Norton Internet Security™ (90 days of virus definitions)

- Diskeeper® Home

- PC-Doctor® (diagnostics)

- ThinkPad Utilities (Power Manager and Presentation Director)

- Adobe Reader

- Windows Live™ Toolbar

- Windows Live Search

- Picasa from Google

- Firefox Software (fingerprint models)

- Microsoft Office 2007 Trial (60-day)

- Sonic RecordNow and Drive Letter Access (DVDz:RW)

- Corel® WinDVD™ (DVDz:RW)

Supports ThinkVantage® technologies

90-watt (NVIDIA) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

ENERGY STAR® 4.0-compliant RoHS-compliant

International Warranty Service¹⁷

24 hour x 7 day²⁴ toll-free support during the warranty period²⁵ via 800-426-7378

ThinkPlus³² 2-year LOR²⁹ 9x5 NBD 41C9175

ThinkPlus 3-year LOR 9x5 NBD 45K6021

ThinkPlus 4-year LOR 9x5 NBD 45K6022

ThinkPlus 5-year LOR 9x5 NBD 45K6024

ThinkPlus 4-year P&L P/U Depot 45K6023

ThinkPlus 5-year P&L P/U Depot 45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced July 10, 2007

US model withdrawn effective May 2009

© Lenovo (CR3-7) May 2009
**ThinkPad T61 15W (NVIDIA Graphics) - Education (Onsite) - withdrawn**

**Personal Systems Reference (PSREF)**

---

**Type-model** | Processor GHz | Memory | Wide-screen display | Graphics controller memory | Disk SATA GB rpm | EIDE optical | Mini PCIe WWAN or Turbo | Mini PCIe Card slot | Battery cells | Edu- preload | Limited warranty | Vista preload | Avail date |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>6458-4JU</td>
<td>T7300</td>
<td>2.00</td>
<td>1GB</td>
<td>15.4” WSXGA+</td>
<td>128MB</td>
<td>1000G 7200</td>
<td>DVD±RW 11a/b/g</td>
<td>None</td>
<td>/54</td>
<td>9</td>
<td>HE</td>
<td>Onsite</td>
</tr>
</tbody>
</table>

*This model has a limited onsite service* - 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

---

**Positioning Processor**

Premiere performance; two spindles Intel® Core™ 2 Duo processor T7300 with dual-core Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

---

**Memory**

1GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; Non-italsics: standard memory in 1 socket; 1 socket available

---

**Diskette drive**

None (use optional USB-based diskette drive) DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

---

**UltraBay Slim**

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

---

**Serial ATA disk**

100GB® (7200 rpm) SATA 1.5Gbps, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

---

**Widescreen display**

15.4” (391mm) WXGA+ (1680x1050) color, anti-glare, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

---

**Camera**

None

---

**Graphics**

NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

---

**Keyboard**

99-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

---

**Touch pad**

UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones

---

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

---

**Dimensions**

15.4” models (WxD:H): 14.1” x 10.0” x 1.2–1.4”; 358.4mm x 255mm x 29.8–34.5mm

---

**Weight**

with optical drive and battery: starting at 5.9 lbs (2.7kg)

---

**Top**

Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

---

**Battery - type**

Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

---

**Battery - life**

9-cell: up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

---

**Chipset**

Mobile Intel PM965 Express Chipset (Memory Controller Hub):ICH8M/ICH9M, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [finger print]) / LPC bus (RiChs® R5C847 Cardbus/1394/ Multicard) / I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, Mobile Intel PM965 Express Chipset; up to 5.9 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

---

**Wireless antenna**

UltraConnect™ II antenna / on-off switch for all wireless radios

---

**Mini PCI Express**

Three 11a/b/g cards in CardBus slots (Type I, Type II), CardBus 32-bit

---

**Ports**

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector: 1394a:2000 standard)

---

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

---

**Security chip**

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

---

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

---

**Limited warranty** - 3-years

1-year battery, limited onsite service**®**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

---

**Preloaded operating system**

  - Vista Premium logo

---

**Preloaded applications**

- Microsoft Office OneNote® 2007 (and CD)
- (HE): Higher education software
- - VitalSource Library College Edition
- - Adobe® Instructor Resource Center
- - Adobe Photoshop Elements 5 (and CD)
- - Adobe Premier Elements 3 (and DVD)
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center
- - System Migration Assistant
- - Norton Internet Security
- - (90 days of virus definitions)
- - Diskeeper® Home
- - PC-Doctor® (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe Reader
- - Windows Live™ Toolbar
- - Windows Live Search
- - Picasa from Google
- - FingerPrint Software (fingerprint models)
- - Microsoft Office 2007 Trial (60-day)
- - Sonic RecordNow and Drive Letter Access (DVi±RW)
- - Corel® WinDVD® (DVi±RW)

---

**Other accessories**

Lenovo at lenovo.com/accessories

---

See footnotes for important warranty information

US model announced July 10, 2007

US model withdrawn effective May 2009

© Lenovo

(CR3-8) May 2009
<table>
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<tr>
<th>Type-model</th>
<th>Proc-</th>
<th>Disk</th>
<th>Mini</th>
<th>Finger</th>
<th>Visto</th>
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<tr>
<td>6463-9RU</td>
<td>T8300</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>80G</td>
<td>4500</td>
<td>None</td>
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<td>6463-9SU</td>
<td>T9300</td>
<td>1GB</td>
<td>15.4&quot; WXGA</td>
<td>100G</td>
<td>7200</td>
<td>DVD±RW</td>
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<tr>
<td>6463-0SU</td>
<td>T9300</td>
<td>2GB</td>
<td>15.4&quot; WXGA</td>
<td>160G</td>
<td>7200</td>
<td>DVD±RW</td>
</tr>
</tbody>
</table>

**Italic MTM:** not a base model for building a custom model

- **These models have an EasyServ™, 3-year limited warranty.**
  - Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- **Processor:** Intel® Core™ 2 Duo processor T8300 or T9300 with dual-core.
- **Memory:** 1GB or 2GB std / 4GB max
- **Diskette drive:** None (use optional USB-based diskette drive)
- **EIDE Combo:** Some: DVD-ROM/CD-RW, 24x/24x/24x/8x
- **Weight:** 15.4" (391mm) WXGA (1280x800) color, anti-glare, 200 nits, 16:10 aspect ratio, 3.0Hz tilting display
- **Battery:** Lithium Ion 9-cell, supports unique battery in Ultrabrain Slim

### Graphics

Intel® Graphics Media Accelerator X3100 (integrated in GM965, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock)

### Wireless

- **Antenna:** None (uses Half-Mini PCI Express slot; 802.11a/b/g
- **Modem:** 56K V.92 modem in Communications Daughter Card socket
- **Bluetooth™:** None (uses Half-Mini PCI Express slot)
- **Ethernet:** Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCI slot (R5C874 Cardbus/1394/Multicard) / Super I/O, Atmel® 97SC3203 TPM)
- **Audio support:** High Definition (HD) Audio, AD1984/JC codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security

- **Power-on password, hard disk password, master password, security keyhole, security chip:** Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Preloaded operating system

- **Microsoft Windows Vista® Business Edition (32-bit)
- **Vista Basic logo
- **ThinkPad Utilities (Power Manager and Presentation Director)
- **Adobe Reader
- **Windows Live® Toolbar
- **Picasa from Google
- **Some: Finger Print Software
- **Microsoft Office 2007 Trial (60-day)
- **Sonic RecordNow and Drive Letter Access (Combo, DVD±RW)
- **Corel® WinDVD® (Combo, DVD±RW)

### Preloaded applications

- **Microsoft Office OneNote® 2007 (and CD)
- **Education software
- **Premier Elements (and DVD)
- **Adobe Reader
- **Microsoft Office 2007 Trial (60-day)
- **Sonic RecordNow and Drive Letter Access (Combo, DVD±RW)

### Software

- **Supports ThinkVantage technologies
- **Energy STAR® 4.0-compliant
- **International Warranty Service17

### Additional features

- **Fingerprint reader on palm rest:** swipe sensor, supports the security chip
- **Limited warranty:** 3-years / 1-year battery / EasyServ™, 3-depot repair service / upgrades available

---

**See footnotes for important warranty information.**

US models announced February 19, or April 10, 2008

US models withdrawn effective May 2009

---

© Lenovo (CR4-2) May 2009
**ThinkPad® T61u 15W 6457 (NVIDIA) - Education (EasyServ) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>Mini PCIe</th>
<th>Mini PCIe Slot</th>
<th>BlueTooth Support</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Limited warranty</th>
<th>Vista</th>
<th>Preload</th>
<th>Availability</th>
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<tbody>
<tr>
<td>6457-DSU T9300</td>
<td>Intel® Core™ 2 Duo processor T9300 with dual-core</td>
<td>2GB</td>
<td>Intel® Entry Memory Key (Mini-PCIe)</td>
<td>SATA 6Gbps</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>9-cell</td>
<td>3-years</td>
<td>EasyServ 3-year limited warranty</td>
<td>ThinkPlus 3-year LOR 9x5 NBD</td>
<td>6450621</td>
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<tr>
<td>6457-05U T9300</td>
<td>Intel® Core™ 2 Duo processor T9300 with dual-core</td>
<td>2GB</td>
<td>Intel® Entry Memory Key (Mini-PCIe)</td>
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<td>None</td>
<td>None</td>
<td>9-cell</td>
<td>3-years</td>
<td>EasyServ 3-year limited warranty</td>
<td>ThinkPlus 3-year LOR 9x5 NBD</td>
<td>6450621</td>
</tr>
</tbody>
</table>

*Italic MTM: not a base model for building a custom model*

- These models have an EasyServ™, 3-year depot repair service 3-year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools or organizations and elsewhere for educational purposes for use by qualified students and teachers.

### Positioning
- **Processor:** Premier performance: two spindles
- **Intel® Core™ 2 Duo processor T9300 with dual-core**
  - Intel 64 Technology, Enhanced Intel SpeedStep® technology
  - Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 6MB shared L2 cache

### Memory
- 1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets
- **Non-italsics:** standard memory in 1 socket; 1 socket available

### Diskette drive
- None (use optional USB-based diskette drive)

### EIDE DVD/ RW
- DVD burner, Ultrabay Slim Burner (41N543), dual-layer, removable from Ultrabay Slim

### Serial ATA disk
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- **100GB** (7200 rpm) or **160GB** (7200 rpm)
  - SATA 1.5Gbps, 9.5mm high, removable, upgradable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- **15.4” (391mm) WXGA+ (1680x1050) color**

### Camera
- None

### Graphics
- **NVIDIA® Quadro® NVS 140M, PCI Express x16, 128MB memory,** TurboCache

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys

### TrackPoint™
- Touchpad
- **ThinkLight™**

### Dimensions

### Weight
- **15.4” models (WxDxH):** 14.1” x 9.0” x 1.2-1.4”
- **358.4mm x 255mm x 29.8-34.5mm** with optical drive and battery: starting at 5.9 lbs (2.7kg)

### Case material
- **Top:** Super-Elastic Polycarbonate (SEPC)
- **Bottom:** Carbon-Fiber Reinforced Plastic

### Battery - type
- Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim
- 9-cell: up to 5.9 hours; 9-cell plus Ultrabay battery: up to 7.9 hours

### Chipset
- **Mobile Intel PM965 Express Chipset** (Memory Controller Hub)
- ICH6M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, ATA-100 IDE, PCI Express x1, PCI USB, LPC bus, [BlueTooth, [fingerprint]]),

### Cardbus/1394/Multicard Reader
- One slot (Type I, Type II), CardBus 32-bit

### Ports
- Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

### Wireless antenna
- UltraConnect™ II antenna / on/off switch for all wireless radios

### Multimedia Reader
- Three Mini PCI Express slots / only 2GB wireless is upgradable

### Modem
- **56K V.92™ modem in Communications Daughter Card socket**

### Bluetooth™
- **Intel® Centrino™ Wireless-N 1400**
- **Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator**
- **Ethernet**
- Gigabit ethernet, Intel 82566MM Nineveh (PHY), PCI x1 (GLC), PCIe

### Intel AMT
- **Mobile Intel® AMT**

### Audio support
- **High Definition (HD) Audio,** AD1984J Coprocessor / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

### Security
- **Power-on password, hard disk password, supervisor password, security keyhole**

### Security chip
- **Fingerprint reader, Fingerprint reader on palm rest, multifinger support, software security chip**

### Fingerprint reader
- **Fingerprint reader on palm rest, multifinger support, software security chip**

### Trusted Platform Module
- **ThinkPlus 1.2-compliant module, Atmel chip, Truejk 1.2-compliant module**

### Limited warranty
- **3-years/1-year battery - EasyServ™, 3-year depot repair service / service upgrades available**

### Limited warranty supports
- **Supports ThinkVantage® technologies**

### Preloaded applications
- **Microsoft Office OneNote® 2007** (and CD)
- Education software
- **Vista Business Edition (32-bit)**
- **Vista Premium logo**

### Preloaded operating system
- **Microsoft Windows Vista® Business Edition**

### Post-warranty annual maintenance agreements
- **ThinkPlus**
  - 2-year LOR™ 9x5 NBD
  - 3-year LOR™ 9x5 NBD
  - 5-year LOR™ 9x5 NBD
- **ThinkPlus 5-year P&L P/U Depot**
- **ThinkPlus 5-year LOR 9x5 NBD**
  - 2-year LOR™ 9x5 NBD
  - 3-year LOR™ 9x5 NBD
  - 5-year LOR™ 9x5 NBD
  - 7-year LOR™ 9x5 NBD

---

See footnotes for important warranty information

US models announced February 19, or April 10, 2008

US models withdrawn effective May 2009

© Lenovo (CR4-1) May 2009

Note: The above information is for reference only and may be subject to change without notice.
Preloaded operating system:

- Some: Microsoft® Windows® XP Professional with or without Service Pack 3.

Preloaded applications:

- (all O/Ses): Microsoft Office OneNote 2007 and CD (Vista models).
- Rescue and Recovery®.
- Access Connections®.
- Client Security Solution™.
- ThinkVantage Productivity Center.
- System Migration Assistant.
- Norton Internet Security (90 days of virus definitions).
- Diskeeper® Home.
- PC-Doctor® (diagnostics).
- ThinkPad Utilities (Power Manager and Presentation Director).
- Adobe® Reader.
- Windows Live™ Toolbar.
- Windows Live Search.
- Picasa from Google.
- FingerPrint Software (fingerprint readers).
- Microsoft Office 2007 Trial (60-day).
- Multimedia Center for Think (XP Pro DVD:RW models).
- SonicRecordNow and Drive Letter Access (DVD:RW models).
- Corel® WinDVD® (DVD:RW).
- Corel WinDVD Creator (XP Pro DVD:RW models).

Supports ThinkVantage® technologies.

- 90-watt (NVIDIA) AC adapter.
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium).
- ENERGY STAR® 4.0-compliant.
- RoHS-compliant.
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378.

ThinkPlus™ 2-year LOR® 9x5 NBD 41C9175 (or single machine, separate purchase required).

ThinkPlus™ 3-year LOR 9x5 NBD 45K6021.

ThinkPlus™ 4-year LOR 9x5 NBD 45K6022.

ThinkPlus™ 5-year LOR 9x5 NBD 45K6024.

ThinkPlus™ 4-year P/L P/U Depot 45K6023.

ThinkPlus™ 5-year P/L P/U Depot 45K6025.

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty.

See footnotes for important warranty information.

- Intel Centrino® with vPro™ technology.
- © Lenovo


US models withdrawn effective May 2009.
### ThinkPad T61p 15W (NVIDIA Graphics) - withdrawn

#### Type-model

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc-memory</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>EIDE optical</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Preload</th>
<th>Global (G)</th>
<th>Entry (E)</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>6457-5KU T7700</td>
<td>2.40</td>
<td>2GB</td>
<td>15.4”</td>
<td>WSXGA+</td>
<td>256MB</td>
<td>100G</td>
<td>7200</td>
<td>DVD+RW * Intel 4965AG</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>9 Ultimate 32</td>
<td>July 07</td>
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<td>7200</td>
<td>DVD+RW * Intel 4965AG</td>
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<td>Smart</td>
<td>Blue</td>
<td>9 Ultimate 32</td>
<td>Sept 07</td>
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<td>DVD+RW * Intel 4965AG</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>9 Ultimate 32</td>
<td>Sept 07</td>
<td></td>
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</tr>
</tbody>
</table>

#### Positioning

Premiere performance; two spindles

#### Processor

Intel® Core™ 2 Duo processor T7700 with dual-core

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

#### Memory

2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Non-italics: standard memory in 1 socket: 1 socket available

#### Diskette drive

None (use optional USB-based diskette drive)

#### EIDE DVD RW

DVD burner, Ultrabay Slim Burner (41N5643), dual-layer, removable from Ultrabay Slim

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

#### Ultrabay Slim

100GB** (7200 rpm) or 160GB** (7200 rpm)

#### Serial ATA disk

SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, 9.5mm high bay, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

#### Widescreen display

Some: 15.4”* (391mm) WSXGA+ (1680x1050) color, anti-glare, 200 nits, 16.10, 500:1

Some: 15.4”* (391mm) WUXGA (1920x1200) color, anti-glare, 175 nits, 16.10, 500:1

#### Camera

None

#### Graphics

NVIDIA® Quadro FX 570M, PCI Express® x16, 256MB memory, TurboCache, DVI passthrough support to optional Advanced Mini Dock or Advanced Dock

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

#### Weight

15.4” models (WxD:H): 14.1” x 10.0” x 1.2–1.4”; 358.4mm x 255mm x 29.8–34.5mm

with optical drive and battery: starting at 5.9 lbs (2.7kg)

Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim

9-cell: up to 5.9 lbs; 9-cell plus Ultrabay battery: up to 7.9 lbs

#### Chipset

Mobile Intel PM965 Express Chipset (Memory Controller Hub):

ICH7M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricochet RS487 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel 9763/3203 TPM)

#### PC Card Std slot

One Type I or Type II slot, CardBus 32-bit

#### ExpressCard slot

Some: [5/4] One ExpressCard/34 or ExpressCard/54

#### Smart Card Reader

Some: Smart Card Reader

#### MultiCard Reader

4-in-1 reader (MultiMediaCard, Memory Stick® PRO™, Secure Digital, xD-Picture Card™)

#### Ports

Three USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), IEEE 1394 FireWire (4-pin connector; 1394a-2000 standard)

#### Wireless antenna

UltraConnect™ II antenna / on-off switch for all wireless radios

#### Mini PCI Express

Three Mini PCI Express slots / only 802.11 wireless is customer upgradeable

#### WWAN

None

#### UWB

None (uses Half-Mini PCI Express slot)

#### WiFi

658* V.92* modem in Communications Daughter Card socket

#### Bluetooth

Bluetooth 2.0 wireless, USB 2.0 interface via/ICH6, LED indicator

#### Ethernet

Gigabit ethernet on system board, Intel 82566MM Nineveh (PHY), PCIe x1 (GLCI), PXE

#### Intel AMT

Intel Active Management Technology (IAMT)

#### Audio support

High Definition (HD) Audio, AD1984JCP codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone, microphone input jack, headphone jack

#### Security

Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

#### Finger print reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

#### Battery - life

9-cell: up to 5.9 lbs; 9-cell plus Ultrabay battery: up to 7.9 lbs

#### Limited warranty

3-years/1-year battery - EasyServ**, 13 depot repair service / service upgrades** available

---

See footnotes for important warranty information

* Intel Centri****o® with vPro™ technology

© Lenovo

US models announced July 10 or September 18, 2007

US models withdrawn effective November 2008

### Preloaded operating system

  - Vista Premium logo

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™
- (90 days of virus definitions)
- Diske**p** Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- Corel® WinDVD™ (DVD+RW)

This model supports ThinkVantage technologies

- 90-watt (NVIDIA) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service 17
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

** ThinkPlus™ 22 2-year LOR 9x5 NBD

** ThinkPlus™ 3-year LOR 9x5 NBD

** ThinkPlus™ 4-year LOR 9x5 NBD

** ThinkPlus™ 5-year LOR 9x5 NBD

** ThinkPlus™ 4-year P&L U Depot

** ThinkPlus™ 5-year P&L U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

CRS-6 (November 2008)
ThinkPad® T61p 15.6 WUXGA (NVIDIA) - Onsite - withdrawn

Personal Systems Reference (PSREF)

**Type-model**

<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA</th>
<th>Mini PCIe WWAN/Turbo</th>
<th>Mini PCIe 802.11</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6458-5KU</td>
<td>2.4</td>
<td>2GB</td>
<td>15.4&quot; WUXGA</td>
<td>256MB</td>
<td>77000</td>
<td>DVD-RW</td>
<td>None</td>
<td>Smart</td>
<td>Blue</td>
<td>9</td>
<td>Ultimate 32</td>
</tr>
</tbody>
</table>

*This model is part of the Global Models Plus program with limited onsite service* 3-year limited warranty

---

**Positioning and Processor**

- Premier performance; two spindles
- Intel® Core™ 2 Duo processor T7700 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**

- 2GB std, 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DDIMMs
- Non-Italic: standard memory in 1 slot; add 1 to 4GB capacity

**Diskette drive/ EIDE DVD: RW Ultrabay Slim**

- None (use optional USB-based diskette drive)
- EIDE DVD: Rw
- Ultrabay Slim
- Serial ATA disk

**Widescreen display/ Camera**

- 15.4" (391mm) WUXGA (1920x1200) color, anti-glare, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio
- None

**Graphics**

- NVIDIA® Quadro® FX 570M, PCI Express x16, 256MB memory, TurboCache, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

**Keyboard/ Trackpoint/ Touchpad**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys
- TrackPoint® pointing device, "Press-to-Select," incremental/magnifying glass
- UltraNav™ multi-pointing system, touch pad below keyboard, Tap Zones
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 15.4" models (WxDxH): 14.1" x 10.0" x 1.2" - 1.4"; 38.4mm x 255mm x 29.8-34.5mm
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 9-cell / supports unique 2nd battery in Ultrabay Slim
- 9-cell: up to 9.5 hr; 9-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**

- Mobile Intel PM965 Express Chipset
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express 1x, PCI bus, LPC bus, [Bluetooth], [Fingerprint]) / PCI bus (Ricoch R5C847 Cardbus/1394/Multicard) / LPC bus (WPCN385 Super I/O, Atmel 9753203 TPM)

**Wireless antenna**

- WiFi: 802.11 a/b/g/n/ac wireless
- WWAN: 2G/3G/4G wireless
- Bluetooth™: 8 MB memory, TurboCache, 256MB x16, USB 2.0 interface, LED indicator
- Ethernet: Gigabit ethernet on systemboard, Intel 82556EN Nineveh (PHY), PCIe x1 (GLCI), PCIe x4
- Intel AMT: Intel Active Management Technology (IMAT)
- Audio support: High Definition (HD) Audio, AD1984JCP codec
- security: Power-on password, hard disk password, supervisor password, security keyhole
- Security chip: Trusted Platform Module, Atmel chip, TCG 1.2-compliant

**Fingerprint reader**

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

---

**Limited warranty**

- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

---

**Preloaded operating system**

- Windows® Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel® WinDVD® (DVD:RW)

**Preloaded applications**

- Rescue and Recovery®
- Access Connections®
- Client Security Solution®
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security®
- (90 days of virus definitions)
- Diskebook® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate models)
- Sonic RecordNow and Drive Letter Access (DVD:RW)
- Corel® WinDVD® (DVD:RW)

90-watt (NVIDIA) AC adapter

- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- ENERGY STAR® 4.0-compliant
- RoHS-compliant

**International Warranty Service**

- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus** TM** 4-year LOR® 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See notes for important warranty information

* Intel Centrino® with vPro™ technology

US model announced July 10, 2007

US model withdrawn effective November 2008

© Lenovo (CR3-13) November 2008
## ThinkPad T61p 15W 6457 (NVIDIA) - Education (EasyServ) - withdrawn

### Positioning

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB</th>
<th>EIDE optical</th>
<th>Mini PCIe 802.11b</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Mini PCIe UWB</th>
<th>Card slot</th>
<th>Bluetooth</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Vista preload</th>
<th>Availability date</th>
</tr>
</thead>
<tbody>
<tr>
<td>6457-0DU</td>
<td>T9300</td>
<td>2.50</td>
<td>2GB</td>
<td>15.4&quot; WXGA+</td>
<td>256MB</td>
<td>250G S400</td>
<td>DVD:RW</td>
<td>11a/b/g</td>
<td>None</td>
<td>UWB</td>
<td>/54</td>
<td>Blue</td>
<td>Fing</td>
<td>9</td>
<td>Business 32</td>
<td>Apr 08</td>
</tr>
</tbody>
</table>

**Italic MTM:** not a base model for building a custom model

- **This model has an EasyServ**
- **3-year limited warranty**

**Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.**

### Preloaded operating system

- **Microsoft Windows Vista**
- **Business Edition (32-bit)**
- **Vista Premium logo**

### Preloaded applications

- **Microsoft Office OneNote**
- **(and CD)**
- **Education software**
- **VitalSource Library Edition**
- **Adobe Instructor Resource Ctr**
- **Adobe Digital School Collection**
- **Photoshop Elements (CD)**
- **Premier Elements (DVD)**
- ** Acrobat Professional**
- **Contribute 4**
- **Rescue and Recovery**
- **Access Connections**
- **Client Security Solution**
- **ThinkVantage Productivity Center**
- **System Migration Assistant**
- **Norton Internet Security**
- **(90 days of virus definitions)**
- **Diskkeeper**
- **Home**
- **PC-Doctor**
- **(diagnostics)**
- **ThinkPad Utilities (Power Manager and Presentation Director)**
- **Adobe Reader**
- **Windows Live**
- **Toolbar**
- **Windows Live Search**
- **Picasa from Google**
- **Fingerprint Software**
- **Microsoft Office 2007**
- **Trial (60-day)**
- **Sonic RecordNow and Drive Letter Access (DVD:RW)**
- **Corel WinDVD**

### Supports ThinkVantage technologies

- **90-watt (NVIDIA) AC adapter**
- **ThinkPad Roll Cage and Top Cover**
- **Roll Cage (one-piece magnesium)**
- **ENERGY STAR**
- **RoHS-compliant Rols-compliant**
- **International Warranty Service**
- **24 hour x 7 day toll-free support during the warranty period**
- **via 800-426-7378**

**ThinkPlus**

- **2-year LOR**
- **9x5 NBD**
- **45K6025**
- **ThinkPlus 3-year LOR 9x5 NBD**
- **45K6022**
- **ThinkPlus 5-year LOR 9x5 NBD**
- **45K6024**
- **ThinkPlus 4-year P&L Depot**
- **45K6023**
- **ThinkPlus 5-year P&L Depot**
- **45K6025**

**Post-warranty annual maintenance agreements at lenovo.com**

## See footnotes for important warranty information

**US model announced April 10, 2008**

**US model withdrawn effective May 2009**

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(CR4-4) May 2009
ThinkPad® T61 Accessories

Partial list of accessories supported on:
• ThinkPad T61 originally announced on May 31, 2007
• ThinkPad T61 14W originally announced on May 9, 2007
• ThinkPad T61 15W originally announced on May 31, 2007

Memory
- 512MB PC2-5300 DDR2 SODIMM: 40Y7733
- 1GB PC2-5300 DDR2 SODIMM (TopSeller): 43R1999
- 2GB PC2-5300 DDR2 SODIMM (TopSeller): 43R2003
- 2GB PC2-5300 DDR2 SODIMM: 40Y7755

Ultrabay Slim 9.5mm (best to use flat bezel options)
- Serial/Parallel Port Bay Adapter (flat bezel): 40Y8121
- Serial Hard Drive Ultrabay Slim Adapter (flat): 40Y8725
- ThinkPad DVD Ultrabay Slim Burner (flat): 41N5643

Storage and removable storage
- 160GB Disk SATA 1.5Gb/s (7200 rpm): 41N5692
- 160GB Disk SATA 1.5Gb/s (7200 rpm): 41N5737
- 250GB Disk SATA 1.5Gb/s (5400 rpm): 43R8152
- 250GB Disk FDE SATA 1.5Gb/s (7200 rpm): 43N3410
- 320GB Disk SATA 1.5Gb/s (7200 rpm): 43N3403
- 320GB Disk SATA 1.5Gb/s (7200 rpm): 43N3411

USB 2.0 Lenovo Webcam 40Y8519
USB 2.0 Lenovo Multimedia Headset 40Y8518
Multimedia ExpressCard Gemplus Smart Card Reader 41N3043
PC Card Gemplus Smart Card Reader 41N3004
ExpressCard Gemplus Smart Card Reader 41N3043

Kensington Twin Head Cable Lock 45K1620
Kensington Security Lenovo Wireless Laser Mouse (red, via USB): 45K1696
Lenovo Optical Wheel Mouse (red, via USB): 51J0198
Lenovo Laser Wheel Mouse (Bluetooth): 41U5008

Lenovo Wireless Laser Mouse (blk, via USB): 45K1696
Enhanced Performance USB Keyboard 73P2620
Preferred Pro USB Keyboard 73P5220
USB Keyboard with UltraNav 31P8950
USB Numeric Keypad 33L3225
TrackPoint Cap Collection 73P2698

USB 2.0 Ultra Secure Memory Key 4GB: 45J5917
USB 2.0 Ultra Secure Memory Key 8GB: 45J5918

ThinkPad Advanced Mini Dock 250410U
ThinkPad Adjustable Notebook Stand 40Y7676
ThinkPad Expansion USB 2.0 Portable Secure 320GB Hard Disk 43R2019
USB Portable Diskette Drive 05K9276
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
USB 2.0 Portable 160GB Hard Disk 43R1784
USB 2.0 Portable 320GB Hard Disk 45K1689
USB 2.0 Secure 160GB Hard Disk 43R2018
USB 2.0 Secure 320GB Hard Disk 43R2019
USB 2.0 Super Multi-Burner Drive 41N5665
ThinkPad Advanced Dock 250310U

ThinkPad External Battery Charger 43R6787
ThinkPad External Battery Charger 43R6785

ThinkPad Expandable Case 43R9118
ThinkPad Women’s Microfiber Tote 22P8855
ThinkPad Women’s Leather Trim Tote 22P8856
ThinkPad Convertible Carrying Case 22P8860
ThinkPad Women’s Executive Leather Tote 22P8857
Women’s Executive Red Leather Tote 22P8858

Up to 14.1” widescreen models:
Lenovo Carry Case - Performance BackPack 41U5254
Lenovo Standard Case 45K1697
Lenovo Standard BackPack 45K1698

Up to 15.4” widescreen models:
ThinkPad Women’s Microfiber Tote 22P8855
ThinkPad Women’s Leather Trim Tote 22P8856
ThinkPad Convertible Carrying Case 22P8860
ThinkPad Women’s Executive Leather Tote 22P8857
Women’s Executive Red Leather Tote 22P8858

Up to 16.4” widescreen models:
ThinkPad 17W Business Topload Case 43R9117

Monitors
- ThinkVision L174 17" Monitor 9227AE1
- ThinkVision L1700p 17” Monitor 9417HE2
- ThinkVision L1900p 19” Monitor 4421HE1
- ThinkVision L1940p 19" Monitor 4424HB6
- ThinkVision L2000p Wide 20.1" Monitor 4438HB6
- ThinkVision L2240p Wide 22" Monitor 4429HB6
- ThinkVision L2440p Wide 24” Monitor 4429HB2
- ThinkVision L2440x Wide 24" Monitor 4421HB2

Monitor Accessories
- ThinkVision USB Soundbar 40Y7616
- ThinkVision Soundbar 40Y7616
Kensington Cable Lock from Lenovo 73P5282
ThinkPad Convertible Monitor Stand 40Y7620

More information at www.lenovo.com/support/monitoraccessories

Other accessories at www.lenovo.com/8accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

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Lenovo® ThinkPad T400

Lenovo® ThinkPad T400 with ThinkPad T400/T410/R400 Privacy Filter 43R2472

PC3-8500 DDR3 Low-Halogen SODIMM
1GB 55Y3706
2GB 55Y3707
4GB 55Y3708
### ThinkPad T400 6473 (GMA) - TopSeller - withdrawn

**Positioning Processor**  
Premiere performance: two spindles  
Intel® Core™ 2 Duo processor P8400 or P8700 with dual-core,  
Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Cam-Integrated graphic</th>
<th>Disk SATA</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger</th>
<th>Blue-Card reader</th>
<th>Whose</th>
<th>(W)</th>
<th>Global</th>
<th>(G)</th>
<th>Available date</th>
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<tbody>
<tr>
<td>6473-P1U P8400</td>
<td>2.26</td>
<td>2GB</td>
<td>Gigabit Ethernet</td>
<td>14.1&quot; WXGA</td>
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</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller Program

**Memory**  
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;  
Non-Italic: standard memory in one socket; one socket available

**SATA DVD±RW**  
One modular bay for interchangeable drives (right side), 9.5mm high bay, flat bezel  
160GB (5400 rpm), 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk,  
ThinkPad Track Mount Hard Drive, Active Protection System

**Widescreen display**  
Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight,  
185 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**  
Some: 1.3-megapixel, fixed focus

**Integrated graphics**  
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;  
Maximum external resolution: 2048x1536@75Hz

**Keyboard**  
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys  
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®; magnifying glass

**TrackPoint®**  
ThinkNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Dimensions**  
6-cell: 14.1W (196x135x25.8mm);  
6-cell: starting at 5.0 lb (2.3kg)

**Weight**  
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic  
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim  
6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

**Chipset**  
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),  
ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard/S4**  
One slot (ExpressCard/34, ExpressCard/54)  
Some: One slot (Type I, Type II), CardBus 32-bit

**PC Card**  
None

**Smart Card Reader**  
None

**Multicard Reader**  
Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**  
Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45),  
IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**  
Intel 5100® WWAN upg  
None

**Ethernet**  
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**  
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security**  
Some: Bluetooth 2.1 wireless, LED indicator

**Security Chip**  
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Audio support**  
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Post-warranty annual maintenance**  
Lenovo System Toolbox

**ThinkPad Utilities**  
Lenovo System Toolbox

**Preloaded applications**  
- Some: Windows® XP Professional preinstalled through downgrade rights in Goodwurn Windows Vista® Business
- Some: Genuine Windows Vista Ultimate 32®
- Some: McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® TV, Video (720p)
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Previous year’s models**  
ThinkVantage technologies

**Hardware**  
65-watt (GMA graphics) AC adapter  
ThinkPad Roll Cage and Top Cover

**Software**  
ThinkPlus® 3-year LOR® 5-year P&L P/U Depot  
Lenovo System Toolbox

**Preloaded operating system**  
- Some: Windows® XP Professional preinstalled through downgrade rights in Goodwurn Windows Vista® Business
- Some: Genuine Windows Vista Ultimate 32®
- Some: McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® TV, Video (720p)
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Spare parts**  
Supports ThinkVantage technologies

**Cooling**  
3000B: Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Virus definitions**  
30 days of virus definitions

**Customer support**  
24 hour x 7 day toll-free support

**Operating hours**  
8:00 AM to 7:00 PM Monday through Friday

**Service locations**  
support.lenovo.com

**License agreements**  
Lenovo License Agreement

**Other accessories at lenovo.com/accessories**  
Lenovo warranty and support

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See footnotes for important warranty information  
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US models withdrawn effective June or December 2009
### ThinkPad T400 6473 (GMA) - TopSeller (XP with Win 7 COA) - withdrawn

Personal Systems Reference (PSREF)

#### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)

#### Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service™

#### Limited warranty
- 3-years / 1-yr battery - depot repair service / service upgrades™22 available

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Finger reader</th>
<th>Print</th>
<th>Blue-Card slot</th>
<th>Preload date</th>
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</thead>
<tbody>
<tr>
<td>6473-41U P8700</td>
<td>2.53</td>
<td>2GB</td>
<td>14.1&quot; WXGA LED Cam</td>
<td>GMA DDR3 2GB</td>
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<td>None</td>
<td>Oct 09</td>
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<td>6473-43U P8700</td>
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<td>2GB</td>
<td>14.1&quot; WXGA LED Cam</td>
<td>GMA 128G SSD</td>
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<td>Oct 09</td>
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</tbody>
</table>

*These small and medium size (SMB) models are part of the US TopSeller™ Program*
**ThinkPad T400 6473 (GMA) - TopSeller (Windows 7) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proc-essor GHz Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Cam-era graphics</th>
<th>Disk - SATA optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe Finger print reader</th>
<th>Blue-Card readertooth slot Preload</th>
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<tr>
<td>6473-4FU P8700 2.53</td>
<td>2GB 14.1&quot; WXGA LED Cam GMA 320G 7200 DVDRW * Intel 5100\“ 7</td>
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<td>Finger Blue PC Pro 32 Oct 09</td>
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<td>6473-5BU P8700 2.53</td>
<td>2GB 14.1&quot; WXGA LED Cam GMA 320G 7200 DVDRW * Intel 5100\“ Verizon16</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program

---

**Positioning Processor**

Premiere performance: two spindles
Intel® Core™ 2 Duo processor P8700 with dual-core.
Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

**Memory**

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-Italic: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- 320GB7 (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System\”

**Widescreen display Camera**

- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight,
- 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45,
DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;
Maximum external resolution: 2048x1536@75Hz

**Keyboard TrackPoint**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touch pad**

ThinkLight™, wide touch pad below keyboard, Tap Zones, scrolling regions label
Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 335.5 x 270mm x 28–32mm
- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight,
- 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 1.3-megapixel, fixed focus

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
ICH9M-Enhanced I/O Controller Hub (SAT A 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC),
LPC bus (WP C3N365 Super I/O)

**Preloaded operating system**

- Genuine Windows 7 Professional 32

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader™
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVR/RW)
- Roxio DVD+R/DVD±R/DVD±RW
- Corel® WinDVD® (DVR/RW)

Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service°
- 24 hour x 7 day toll-free support during the warranty period° via 800-426-7378

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See footnotes for important warranty information
\* Intel Centrino®2 processor technology
© Lenovo

Front Cover

Lenovo

(TM) 2010

ML3-18 August 2010

© Lenovo
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Cam-Integrated graphics</th>
<th>Disk Sata</th>
<th>Mini PCIe</th>
<th>Mini PCIe (WWAN)</th>
<th>PCI Express Finger print reader</th>
<th>Whose (W)</th>
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<tr>
<td>7417-T1U</td>
<td>P8400</td>
<td>2.26</td>
<td>2GB</td>
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<td>GMA 160G 5400</td>
<td>DVD±RW - Intel 5100 AT&amp;T²³</td>
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<td>Blue PC</td>
<td>B32 Jan 09</td>
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<td>DVD±RW - Intel 5100 AT&amp;T</td>
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<td>DVD±RW - Intel 5100 AT&amp;T</td>
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<td>Blue PC</td>
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<td>GMA 160G 5400</td>
<td>DVD±RW - Intel 5100 AT&amp;T</td>
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<td>GMA 160G 5400</td>
<td>DVD±RW - Intel 5100 AT&amp;T</td>
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<td>Blue PC</td>
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<td>14.1&quot; WXGA</td>
<td>GMA 160G 5400</td>
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<td>B32 Jan 09</td>
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<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>GMA 160G 5400</td>
<td>DVD±RW - Intel 5100 AT&amp;T</td>
<td>Fing</td>
<td>Blue 7-in-1U3E</td>
<td>Edu Mar 09</td>
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</tr>
</tbody>
</table>

These small and medium business (SMB) models are part of the US TopSeller Program.

Preloaded operating system:
- Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Genuine Windows Vista Business
- Genuine Windows Vista Ultimate
- Vista models: Vista Premium logo

Preloaded applications (all OSes; some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint readers)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Roxio Creator Business Edition combo, DVD±RW
- Roxio MyDVD® DVD±RW
- Corel WinDVD® combo, DVD±RW

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover (Roll Cage (one-piece magnesium) Climate Savers certified
EPET™ Silver rating
ENERGY STAR® 5.0-compliant
RoHS-Compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7376

ThinkPlus® 1-year LOR®ix 5x BD
ThinkPlus 2-year LOR 9x BD
ThinkPlus 3-year LOR 9x BD
ThinkPlus 4-year LOR 9x BD
ThinkPlus 5-year LOR 9x BD
ThinkPlus 2-year P&L P/U Depot
ThinkPlus 3-year P&L P/U Depot
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information – Intel Centrino® processor technology
US models announced August 5, September 2, or October 7, 2008, January 6, 2009, or March 17, 2009
US models withdrawn effective June, August, September, or December 2009

© Lenovo (ML3-1) January 2010
### Processor

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disks</th>
<th>Graphics</th>
<th>Optical Disk Drive</th>
<th>Webcam</th>
</tr>
</thead>
<tbody>
<tr>
<td>7417-21U</td>
<td>Intel® Core™ 2 Duo processor P8600 with dual-core</td>
<td>2GB std / 8GB max</td>
<td>DVD±RW</td>
<td>Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD)</td>
<td>Non-italics: standard memory in one socket; one socket available</td>
<td></td>
</tr>
<tr>
<td>7417-23U</td>
<td>14.1” WXGA LED Cam</td>
<td>320GB (5400 rpm)</td>
<td>GMA 320G</td>
<td>None</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
<td></td>
</tr>
</tbody>
</table>

### Security chip

Security chip:
- Supports ThinkVantage technologies
- Supports unique 2nd battery in Ultrabay Slim

**Preloaded operating system**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software
- Lenovo System Toolbox
- Adobe® Reader®
- Roxio® Creator® Business Edition (DVD±RW)

Supports ThinkVantage technologies:
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service

### Dimensions

- 14.1” WXGA (1280x800) color
- Maximum external resolution: 2048x1536@75Hz (VGA DB-15)

### Chipset

- Mobile Intel GM45 Express Chipset
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN585 Super I/O)
- One slot (Type I, Type II), CardBus 32-bit
- Supports ThinkVantage technologies

### USB

- Three USB 2.0, external monitor (VGA DB-15), modern (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Warranty

- Limited warranty 1-year - depot repair service / service upgrades are available
- Preload date
- Avail date

- 7417-21U P8600 2.40 2GB 14.1” WXGA LED Cam GMA 250G 5400 DVD±RW Intel® 5100® None None None None Blue PC XP Pro Oct 09
- 7417-23U P8600 2.40 2GB 14.1” WXGA LED Cam GMA 320G 5400 DVD±RW Intel® 500® None None None None Blue PC XP Pro Oct 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program

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See footnotes for important warranty information
- Intel Centrino® 2 processor technology
- US models withdrawn effective August 2010

© Lenovo (ML3-19) August 2010
### ThinkPad T400 7417 (GMA) - TopSeller (Windows 7) - withdrawn

**Type-model** | **Processor** | **Wide-screen display** | **CCFL or LED Camera** | **Disk** | **Mini PCIe Slot** | **Mini PCIe Slot** | **Mini PCIe Slot** | **Mini PCIe Slot** | **Preload date** | **Available**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
7417-22U | P8600 | 2.40 GHz | 2GB | WXGA LED | GMA | 250G | DVD±RW | None | None | Oct 09
7417-31U | P8700 | 2.53 GHz | 2GB | WXGA LED | Cam | 250G | DVD±RW | None | None | Nov 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program

#### Processor
- Intel® Core™ 2 Duo processor P8600 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

#### Memory
- 2GB std / 8GB max
- PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- Non-Italic: standard memory in one socket; one socket available

#### SATA DVD±RW
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable (43N2214)
- One modular bay for interchangeabeble devices (right side), 9.5mm high bay, flat bezel 250GB (5 rpm)
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

#### Widescreen Camera
- 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight.
- Some: camera on top of screen, 1.3-megapixel, fixed focus

#### Integrated graphics
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45.
- DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;
- Maximum external resolution: 2048x1536@75Hz (VGA DB-15)

#### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

#### Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

#### Preloaded operating system
- Genuine Windows® 7 Professional 32

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Skype™ for Windows
- Roxio Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

#### Battery - life
- Lithium Ion 6-cell; supports unique 2nd battery in Ultrabay Slim
- 6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

See footnotes for important warranty information © Lenovo

US models announced October 22 or November 3, 2009
US models withdrawn effective August 2010
### ThinkPad T400 (GMA) - TopSeller (April 2009) - withdrawn

#### Processor

<table>
<thead>
<tr>
<th>Type-model</th>
<th>ProC</th>
<th>GHz Memory</th>
<th>Wide-screen or LED</th>
<th>CCLFL or LED Cam</th>
<th>Disk Sata</th>
<th>Sata optical</th>
<th>Mini Pcie 802.11 wireless</th>
<th>Preload operating system</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>7417-PBU</td>
<td>P8600 2.40</td>
<td>1GB</td>
<td>14.1&quot; WXGA LED</td>
<td>GMA</td>
<td>160G</td>
<td>5400</td>
<td>DVD+RW</td>
<td>-Intel i500®</td>
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<td>7417-PCU</td>
<td>P8600 2.40</td>
<td>2GB</td>
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<td>DVD+RW</td>
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<td>DVD+RW</td>
<td>-Intel i500</td>
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</table>

#### Memory

1GB, 2GB, or 3GB std / 8GB max \* PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **Italics:** standard memory in both sockets; **Non-italics:** standard memory in one socket; one socket available

#### Preload applications

© Lenovo

1-year LOR\* in 7x24 toll-free support during the warranty period.

#### Security chip

Fingerprint Software (fingerprint readers), supports the security chip

#### Intel\* \®

2 Duo processor P8600, P8700 or T9400 with dual-core, 1066MHz system bus; P8400/P8600/P8700: 3MB L2 cache; T9400: 6MB L2 cache

### Preload operating system

© Lenovo

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

### Preload applications

© Lenovo (all OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Software (fingerprint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader®
- Roxio Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Supports ThinkVantage
tm technologies

56-watt (GMA graphics) AC adapter

- Preload applications
- Roll Cage (one-piece magnesium)
- Fingerprint Software (fingerprint readers), supports the security chip
- Program Conditioning
- Early Slot Downgrade Rights
- Client Security Solution
- ThinkVantage System Update
- Software (fingerprint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Roxio Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

#### Battery - type

6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

#### Case material

Black

#### Chipset

Mobile Intel GMA45 Express Chipset (GMA 4500MHD, (GMA 4500MHD), in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz (VGA DB-15)

#### ExpressCard/54

One slot (ExpressCard34, ExpressCard54)

#### PC Card

One slot (Type I, Type II), CardBus 2-bit

#### Smart Card read

None

#### Multicard reader

None

#### Ports

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

#### Mini PCI Express

Three Mini PCI Express slots

#### WWAN upg

None

#### 2G Turbo

None

#### UWB

None

#### Modem

56K V.92 modem

#### Bluetooth\*\®

Some: Bluetooth 2.1 wireless, LED indicator

#### Ethernet

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Intel AMT

None

#### Audio input

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

#### Security

Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip

Supported Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### Fingerprint reader

Supported Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### Limited warranty

- 1-year - EasyServ\* Preload service & upgradability available

#### Other accessories

=lenovo.com/accessories

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### See footnotes for important warranty information

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### ThinkPlus® 22 1-year LOR\* in 9x5 NBD

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### ThinkPlus 2-year LOR 9x5 NBD

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### ThinkPlus 3-year LOR 9x5 NBD

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### ThinkPlus 4-year LOR 9x5 NBD

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### ThinkPlus 5-year LOR 9x5 NBD

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### ThinkPlus 2-year P&L P/U Depot

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### ThinkPlus 3-year P&L P/U Depot

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### ThinkPlus 4-year P&L P/U Depot

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### ThinkPlus 5-year P&L P/U Depot

© Lenovo

### Post-warranty annual maintenance agreement

=lenovo.com/thinkplus/warranty
**ThinkPad T400 2764 (Switchable) - TopSeller - withdrawn**

**Preloaded operating system**
- Genuine Windows® Vista®
  - Ultimate 32
- Vista Premium logo

**Preloaded applications**
- Only list of applications at lenovo.com/accessories
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - McAfee VirusScan® Plus with SiteAdvisor™
  - 30 days of virus definitions
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Windows Live® Toolbar
  - Microsoft® Office 2007 Trial (60 day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

**International Warranty Service**
- 24 hour 7 days x 7 toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

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**Positioning Processor**
- Premier performance: two spindles
  - Intel® Core™ 2 Duo processor T9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**
- 3GB std / 8GB max® / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; italics: standard memory in both sockets; no sockets available;

**SATA DVD±RW UltraBay Slim SATA disk**
- DVD burner, SATA 1.5Gb/s, UltraBay Slim, removable (43N3214)
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

**160GB™ (7200 rpm)**
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**WideScreen display**
- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**
- Camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**
- Switches between discrete and integrated graphics (Vista only)
  - Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI® Mobility Radeon™ HD 3470, PCI Express x16, 256MB memory
  - DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;
  - Maximum external resolution: 2048x1536@75Hz

**Dimensions**
- 6-cell 14.1W (WxDxH): 13.2" x 10.6" x 1.1–1.3"; 335.5 x 270mm x 28–32mm
- 9-cell: up to 9.8 hr; 9-cell plus UltraBay battery: up to 11.3 hr

**Weight**
- Top: Super-Elastic PolyCarbonate (SEPC);
- Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 9-cell, supports unique 2nd battery in UltraBay Slim
- 6-cell: up to 6.5 hr; 6-cell plus UltraBay battery: up to 8.0 hr
- 9-cell: up to 9 hr; 9-cell plus UltraBay battery: up to 11.3 hr

**Chipset**
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® x1, PCI Express x16, 256MB memory)
- DVI switchable between discrete and integrated graphics (Vista only)

**Advanced Ultrabay Battery III**
- 3GB std / 8GB max® / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; italics: standard memory in both sockets; no sockets available;

**Intel® Core™ 2 Duo processor T9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache**

**Type-model Processor GHz Memory Wide-screen display Camera Switchable graphics Disk SATA optical Mini PCI Express Mini PCI Express Battery Whose (W) Global (G) Availability**

2764-EAU T9400 2.53 3GB 14.1" WXGA+Cam GMA, HD 3470 160G 7200 DVD±RW - Intel 5100™ WWAN upg None 9 Ult 32 Educ Mar 09

**Preloaded applications**
- Only list of applications at lenovo.com/accessories
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - McAfee VirusScan® Plus with SiteAdvisor™
  - 30 days of virus definitions
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Windows Live® Toolbar
  - Microsoft® Office 2007 Trial (60 day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

Supports ThinkVantage technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

**International Warranty Service**
- 24 hour 7 days x 7 toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

© Lenovo (ML3-12) January 2010

**US model announced March 17, 2009**
**US model withdrawn effective December 2009**
ThinkPad T400 2765 (Switchable) - TopSeller - withdrawn

Positioning Processor
Premiere performance; two spindles Intel Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache
Memory
2GB or 3GB standard; two 204-pin SO-DIMM sockets; 667MHz maximum speed; 8GB maximum capacity; 4GB max.
SATA DVD:RW UltraBay Slim SATA disk
DVD burner, SATA 1.5GB/s, UltraBay Slim, removable, 6-speed CD-RW, 4-speed CD-R, 2-speed DVD±RW (±R), 2-speed DVD±R DL, 2-speed DVD±RW (±R) DL; 160GB (7200 rpm) or 320GB (7200 rpm)

Wide-screen display
Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 30:1 contrast ratio

Switchable graphics
Switches between discrete and integrated graphics (Vista only)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touch pad
ThinkVantage button, "Press-to-Select," Internet Scroll Bar™, magnifying glass

Dimensions
6-cell 14.1W (WXGA+): 13.2" x 10.6" x 1.1-1.3", 335.5 x 270mm x 28-32mm

Weight
6-cell 14.1W: starting at 5.4 lb (2.4kg)

Battery - type
Lithium Ion 9-cell, supports unique 2nd battery in UltraBay Slim

Battery - life
9-cell: up to 9.8 hr; 9-cell plus Ultrabay battery: up to 11.3 hr

Chipset
Mobile Intel GM45 Express Chipset

Ports
Mini PCI Express slots
Three Mini PCI Express slots 11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Mini PCI Express WWAN upg
None

Wireless USB
2.0 Turbo

Modem
56K V.92 modem

Bluetooth
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Thinkpad T400 2765 (Switchable) - TopSeller - withdrawn

Lenovo System Toolbox
- Lenovo System Update
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (Fingerprint technology)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

ThinkPad T400 2765 (Switchable) - TopSeller - withdrawn

Preloaded system:
- Some: Windows® XP Professional downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32
- Vista models: Vista Premium logo

Preloaded applications:
- (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solutions™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (Fingerprint technology)
  - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Windows Live™ Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Roxio® MyDVD® (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- Energy Star® 5.0-compliant
- RoHS-compliant
- International Warranty Service

Post-Warranty maintenance agreements at lenovo.com/thinkplus/warranty

Other accessories on O-T400 sheet
ThinkPad Advanced Dock 250310U
4GB PC3-8500 DDR3 L-H SODIMM 55Y3708
2GB PC3-8500 DDR3 L-H SODIMM 55Y3707
1GB PC3-8500 DDR3 L-H SODIMM 55Y3706

See footnotes for important warranty information

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US models announced Aug 5, Sep 2, or October 7, 2008 or March 24, 2009
US models withdrawn effective September 2008, June 2009, or December 2009

(ML3-2) January 2010

Lenovo
### ThinkPad T400 2765 (Switchable) - TS (XP with Win 7 COA) - withdrawn

#### Positioning Processor
Premiere performance; two spindles
- Intel® Core™ 2 Duo processor P8700 or T9600 with dual-core,
- Intel HD Boost, 1066MHz system bus; P8700: 3MB L2 cache, T9600: 6MB L2 cache

#### Memory
- 3GB or 4GB std / 8GB max
- non-parity, dual-channel capable, two 204-pin SO-DIMM sockets,
- Italics: standard memory in both sockets; no sockets available

#### SATA DVD±RW
- DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, flat bezel
- 320GB* (7200 rpm)

#### Ultrabay Slim SATA disk
- SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk,
- ThinkPad Shot Mounted Hard Drive, Active Protection System™

#### Widescreen display
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

#### Camera
- Camera on top of screen, 1.3-megapixel, fixed focus

#### Switchable graphics
- Switches between discrete and integrated graphics (Windows 7 only),
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and
- ATI™ Mobility Radeon™ HD 3470, PCI Express x16, 256MB memory,
- DVI pass-through support to optional Advanced Mini Dock or Advanced Dock;
- Maximum external resolution: 2048x1536@75Hz (VGA)

#### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label
- Illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions
- 6-cell 14.1W (WxDxH): 13.2" x 10.6" x 1.1–1.3", 335.5 x 270mm x 28–32mm

#### Weight
- Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- Lithium Ion 9-cell, supports unique 2nd battery in Ultrabay Slim
- 9-cell: up to 9.8 hr; 9-cell plus Ultrabay battery: up to 11.3 hr

#### Chipset
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),
- ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
- One slot (ExpressCard/34, ExpressCard/54)
- One slot (Type I, Type II), CardBus 32-bit
- None

#### ExpressCard/54 PC Card
- Smart Card Read
- Multicard Reader Ports
- None

#### Mini PCI Express
- 11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Some: Wireless WAN upgradeable, requires Verizon® (43RR151) or AT&T® (43RR152)
- Some: Wireless WAN, Qualcomm Gobi 1000 chipset, Mini PIe adapter and SIM,
- GPRS/WCDMA/HSPA, GPS, service contract required with AT&T

#### 2G Turbo
- None

#### UWB
- None

#### Modern
- 56K V.92 modem

#### Bluetooth™
- Bluetooth 2.1 wireless, LED indicator

#### Ethernet
- Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Intel AMT
- None

#### Audio support
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / 802.11b/g/n wireless
- volume up, down, mute buttons / digital microphone, mic input jack, headphone jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip

#### Security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- FingerPrint reader

#### Limited warranty
- 3-years/1-year battery - EasyServ®, depot repair service / service upgrades available

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### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications
- Only some listed
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)

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### Supports ThinkVantage technologies
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover (one-piece magnesium)
- Climate Safety® certified
- EPEAT® Gold rating (LED models)
- EPEAT® Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

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### International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via
  800-426-7378

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### Post-warranty maintenance agreements
- Available at lenovo.com/thinkplus/warranty

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### See footnotes for important warranty information

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(ML3-16) August 2010
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Storage</th>
<th>Graphics</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Whose (W)</th>
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</thead>
<tbody>
<tr>
<td>T9400</td>
<td>Intel® Core™ i2 Duo processor P8400, P8600, T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2</td>
<td>1GB, 2GB, or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| US Govt (TAA)° | | | | | | | | | US models withdrawn effective August 2009, or February, March, or August 2010

**Preloaded operating systems**
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business

**Preloaded applications** (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator Business Edition (combo, DVD:RW)
- Roxio® MyDVD® (combo, DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

Supports ThinkVantage technologies

56-watt (GMA graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

Climate Savers® certified EPEAT® Silver rating

ENERGY STAR® 5.0-compliant RoHS-compliant

International Warranty Service

24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 3-year LOR® 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 4-year P&L & P/U Depot

ThinkPlus® 5-year P&L & P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T400 6474 (GMA) - June 2009 - withdrawn

**General Information**
- **Processor**: Intel® Core™ 2 Duo processor P8400 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache
- **Memory**: 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz or 3GB std
- **Processor**: Intel HD Boost, 1066MHz system bus, and 3MB L2 cache
- **Memory**: 2GB or 3GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Graphics**: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD)
- **Battery**: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr
- **Dimensions**: 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Weight**: Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- **Camera**: HD Camera
- **Warranty**: 3-years / 1-yr battery - depot repair service / service upgrades available
- **Preloaded operating system**: - Genuine Windows® Vista® Business 32
- **Preloaded applications**: - Rescue and Recovery™

### Specification Table

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Screen</th>
<th>Graphics</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Whose (W)</th>
<th>CDD / WWAN</th>
<th>UWB or Turbo cells Fing</th>
<th>Pre-added software</th>
<th>Pre-added applications</th>
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<tbody>
<tr>
<td>6474-55U P8700 2.53</td>
<td>14.1” WXGA LED</td>
<td>8GB</td>
<td>-</td>
<td>-</td>
<td>None</td>
<td>None</td>
<td>6 yrs</td>
<td></td>
<td>3-years/1-yr battery - depot repair service / service upgrades available</td>
<td>Lenovo</td>
<td>Lenovo System Toolbox</td>
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<tr>
<td>6474-54U P8400 2.26</td>
<td>14.1” WXGA LED</td>
<td>2GB</td>
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<td>3-years/1-yr battery - depot repair service / service upgrades available</td>
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<td>Lenovo System Toolbox</td>
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<td>6474-53U P8700 2.53</td>
<td>14.1” WXGA LED</td>
<td>2GB</td>
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<td>None</td>
<td>6 yrs</td>
<td></td>
<td>3-years/1-yr battery - depot repair service / service upgrades available</td>
<td>Lenovo</td>
<td>Lenovo System Toolbox</td>
</tr>
</tbody>
</table>

### Additional Information
- **Display**: WXGA (1280x800) color, anti-glare, 16:10 aspect ratio, 300:1 contrast ratio
- **Processor**: Intel AMT
- **Ethernet**: None
- **Modem**: None
- **Battery**: 65-watt (GMA graphics) AC adapter
- **Internal Storage**: SATA DVD±RW Ultrabay Slim
- **Operating System**: Windows Vista Business 32
- **Warranty**: 3-years / 1-yr battery - depot repair service / service upgrades available
- **Preloaded operating system**: - Genuine Windows® Vista® Business 32
- **Preloaded applications**: - Rescue and Recovery™

### Footnotes
- Footnotes for important warranty information
- Intel Centri® 2 with vPro™ technology
- © Lenovo
- Lenovo
- ThinkPlus™
- ENERGY STAR® 5.0-compliant
- Client Security Solution
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

### Additional Features
- **Security**: Intel Active Management Technology (AMT)
- **Audio**: Intel 5100 WWAN upg
- **Wireless**: Intel 5100 WWAN upg
- **Graphics**: Mobile Intel GM45 Express Chipset
- **Battery**: 65-watt (GMA graphics) AC adapter
- **Internal Storage**: SATA DVD±RW Ultrabay Slim
- **Operating System**: Windows Vista Business 32
- **Warranty**: 3-years / 1-yr battery - depot repair service / service upgrades available
- **Preloaded operating system**: - Genuine Windows® Vista® Business 32
- **Preloaded applications**: - Rescue and Recovery™

### Additional Links
- [ThinkPlus™](http://www.lenovo.com/thinkplus/warranty) 3-year LOR 9x5 NBD
- [ThinkPlus 4-year LOR 9x5 NBD](http://www.lenovo.com/thinkplus/warranty) 45K6021
- [ThinkPlus 5-year LOR 9x5 NBD](http://www.lenovo.com/thinkplus/warranty) 45K6022
- [ThinkPlus 4-year P&B P/U Depot](http://www.lenovo.com/thinkplus/warranty) 45K6023
- [ThinkPlus 5-year P&B P/U Depot](http://www.lenovo.com/thinkplus/warranty) 45K6025
ThinkPad® T400 2767 (Switchable) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Mem-</th>
<th>Switchable</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Battery</th>
<th>Whose (W)</th>
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<td>Intel 5100</td>
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</table>

**UsGov (TAA)®**

**Processor**

2GU/2HU: US Government model (Trade Act Agreement-compliant)

- Intel® Core™ TM 2 Duo processor P6600, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P8600: 3MB L2 cache; T9400/T9600: 6MB L2 cache

**Memory**

1GB or 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- Secure: standard memory in both sockets; no sockets available;
- Non-secure: standard memory in one socket; one socket available

**SATA Combo**

Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable device

Some: DVD burner, SATA 1.5Gb/s

Some: DVD burner, UltraBay Slim, removable device

**Ultrabay Slim**

One modular bay for interchangeable devices (right side), 9.5mm high, flat bezel

**SATA disk**

Some: 64GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high;

Some: 80GB (5400 rpm), 160GB (5400 or 7200 rpm), or 250GB (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

All: removable, upgradable, supports 2nd disk, shock mounted storage

**Widescreen display**

Some: 14.1" (356.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (356.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (356.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

Some: camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**

Switches between discrete and integrated graphics (Vista only)

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**ExpressCard slot**

One ExpressCard/34 or ExpressCard/54

**PC Card Slot**

Some: One Type I or Type II slot, CardBus 32-bit

**Smart Card Reader**

Some: Smart Card Reader

**Multicard Reader**

Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**USB**

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCIe Express slots**

Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3

Some: WiMax Wireless WWAN (43R9151) or ATI1 (43R9152)

Some: Wireless WAN, Qualcomm Gobi 1000 chipset, Mini PCIe adapter, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, service contract required with Verizon

**2G Turbo**

Some: Intel Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator

**Modem**

56K V.92 modem

**Bluetooth**

Some: Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (AMT)

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Intel® Active Protection System™, integrated inICH9M, TCG 1.1 compliant

**Fingerprint reader**

Some: Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years / 1-year battery - EasyServ™ or depot repair service / service upgrades available

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*See footnotes for important warranty information*

Intel® Centrino® with vPro™ technology

US models withdrawn effective August 2009, February 2010, or August 2010

Preloaded operating system:
- Some: Windows® XP Professional preinstalled through dealer or online purchase

Preloaded applications:
- Some: Genuine Windows Vista® Business

- Some: Genuine Windows Vista® Business 32

- Some: Genuine Windows Vista® Business 64

- Vista models: Vista Premium logo

Supports ThinkVantage® technologies

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
</table>
| 90-watt (ATI graphics) AC adapter | ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) Climate Savers® certified EPEAT® Gold rating (LED model) EPEAT Silver rating (other models) ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 22 3-year L0R® 9x5 BDS

ThinkPlus® 4-year L0R® 9x5 BDS

ThinkPlus® 5-year P&L P/U Depot

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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US models withdrawn August 5 or September 2, 2008

US models withdrawn effective August 2009, February 2010, or August 2010
### ThinkPad T400 2767 (Switchable) - October 2008 - withdrawn

**Type-model** | **Processor** | **Mem-ory display** | **Cam-era era** | **Switchable graphics** | **Disk** | **Mini PCIe** | **Mini PCIe** | **Battery or Turbo/Fingels slot** | **Whorse (W)** | **Pre-load (Gbl) (Avail-ate date)**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2767-31U | P6600 2.40 2GB WXGA | Cam GMA, 3470 1600x720 DVD+RW | Intel 5300™ WWAN upg | Yes | 7-in-1 | Bus32 WW Oct 08
2767-R1U | T9400 2.53 2GB WXGA | Cam GMA, 3470 1600x720 DVD+RW | Intel 5100™ WWAN upg | Yes | 7-in-1 | Bus32 Oct 08
2767-R3U | T9400 2.53 2GB WXGA | Cam GMA, 3470 1600x720 DVD+RW | Intel 5300™ WWAN upg | Yes | 7-in-1 | Bus32 W Oct 08
2767-T1U | P8600 2.40 2GB WXGA | GMA, 3470 1600x720 Combo | 1280x800 GMA, 3470 | 1280x800 DVD | Yes | 7-in-1 | Bus32 Oct 08
2767-T2U | P8600 2.40 2GB WXGA | GMA, 3470 1600x720 Combo | 1280x800 DVD | Yes | 7-in-1 | Bus32 Oct 08
2767-4AU | T9400 2.53 3GB WXGA | Cam GMA, 3470 1600x720 DVD+RW | Intel 5100™ WWAN upg | Yes | 7-in-1 | Bus32 WW Oct 08
2767-P8U | P8600 2.40 2GB WXGA | GMA, 3470 1600x720 Combo | 1280x800 DVD | Yes | 7-in-1 | Bus32 WW Dec 08
2767-P9U | P8600 2.40 2GB WXGA | GMA, 3470 1600x720 Combo | 1280x800 DVD | Yes | 7-in-1 | Bus32 WW Dec 08
2767-H7U | P8700 2.53 3GB WXGA | GMA, 3470 1600x720 DVD+RW | Intel 5300™ WWAN upg | Yes | 7-in-1 | Bus32 June 09
2767-H8U | P8700 2.53 3GB WXGA | LED Cam, GMA, 3470 1280x800 DVD+RW | Intel 5100™ WWAN upg | Yes | 7-in-1 | Bus32 June 09

**US Govt (TAA)™ Processor**

T1U/T2U: US Government model (Trade Act Agreement-compliant) Intel® Core™ 2 Duo processor P8600, P8700, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8600/P8700: 3MB L2 cache; T9400: 6MB L2

**Memory**

1GB, 2GB, or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, 204-pin SO-DIMM sockets;

**Non-italics:** standard memory in both sockets; no sockets available;

**Italics:** standard memory in one socket; one socket available

**SATA Combo**

SATA DVD+RW

**SATA HDD**

Some: CD-RW/DVD-ROM, SATA 1.5GB/s, 9.5mm Ultrabay Slim, removable

**SATA disk**

Some: DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)

One modular bay for interchangeable devices (right side). 9.5mm high bay, flat bezel

Some: 80GB or 160GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high

Some: 160GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high.

Active Protection System™

**All:** removable, upgradable, supports 2nd disk, Shock Mounded Hard Drive

**Widescreen display**

Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 1280x800, 16.9 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16.10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 200 nits, 16.10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16.10 aspect ratio, 300:1 contrast ratio

**Camera**

Some: camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**

Switches between discrete and integrated graphics (Vista only)

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3470, PCIe X16, 256MB memory, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCIe 2.0, security chip, ethernet MAC), LPC bus (WPCN35S Super I/O)

**ExpressCard/54**

One slot (ExpressCard/34, ExpressCard/54)

**PC Card**

Some: One slot (Type I, Type II), CardBus 32-bit

**Smart Card read**

Some: Smart Card reader

**Multicard reader**

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 4 (4-pin connector, 1394A-2000 standard)

**Mini PCI Express**

Intel 5100™ WWAN upg

**2G Turbo**

USB

**Modem**

56K V.92 modem

**Bluetooth™**

Some: Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

**Fingerprint reader**

Some: Finger print reader on palm rest, supports the security chip

**Limited warranty**

3-years / 1-year battery - EasyServ™, depot repair service / service upgrades available

**Other accessories on T400 sheet**

See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

US models announced October 7, November 4, or December 2, 2008 or June 2, 2009

US models withdrawn effective August 2009 or August 2010

Preloaded operating system

- Genuine Windows® Vista Business
- Vista Premium logo

Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center and Presentation Director
- Adobe Reader™
- Windows Live™ Toolbar
- Microsoft Office 2007 Trial (60-day)
- Roxio Creator® Business Edition (combo, DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel WinDVD® (combo, DVD+RW)

Supports ThinkVantage™ technologies

- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- EPEAT Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service

24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus™ 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P & L U Depot

ThinkPlus 5-year P & L U Depot

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

© Lenovo
**ThinkPad T400 2767 (Switchable) - July 2009 - withdrawn**

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UBW</th>
<th>Battery</th>
<th>Case material</th>
<th>Dimensions</th>
<th>Chipset</th>
<th>Preloaded applications</th>
<th>Preloaded operating system</th>
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<tbody>
<tr>
<td>2767-HAU P8400</td>
<td>Intel Core™ 2 Duo processor P8400, or T9400 with dual-core Intel HD Boost, 1066MHz system bus; P8400/P8700: 3MB L2 cache; T9400: 6MB L2</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available</td>
<td>14.1&quot; (358.1mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
<td>Switches between discrete and integrated graphics (Vista only), Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI Mobility Radeon HD 3470, PCI Express x16, 256MB memory</td>
<td>6-cell 14.1W (WxDxH): 13.2&quot; x 10.6&quot; x 1.1–1.3&quot;, 335.5 x 270mm x 28–32mm</td>
<td>6-cell: starting at 5.0 lb (2.3kg); 9-cell: starting at 5.4 lb (2.4kg)</td>
<td>Black</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
<td>6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub,ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O), PCI Express x16, Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub, ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)), One slot (ExpressCard/34, ExpressCard/94), Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)</td>
<td>Supports ThinkVantage® technologies</td>
<td></td>
<td></td>
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<tr>
<td>2767-HBU P8700</td>
<td>None</td>
<td>3-years / 1-yr battery - depot repair service / service upgrades available</td>
<td>None</td>
<td>Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)</td>
<td>6-cell plus Ultrabay battery: up to 8.0 hr</td>
<td>9-cell: up to 9.8 hr</td>
<td>None</td>
<td>Three 2GB, or TurboFing cells slot</td>
<td></td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub, ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O), PCI Express x16, Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub, ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)), One slot (ExpressCard/34, ExpressCard/94), Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)</td>
<td>90-watt (ATI graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) Climate Savers-certified EPEAT® Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day toll-free support during the warranty period18 via 800-426-7378</td>
<td>ThinkPlus™ 3-year LOR™ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6023 ThinkPlus 4-year P&amp;L P/U Depot 45K6023 ThinkPlus 5-year P&amp;L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty</td>
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</tbody>
</table>

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*These models have a depot repair service 3-year limited warranty*
ThinkPad® T400 6475 (GMA) - Onsite - withdrawn

See footnotes for important warranty information • Lenovo

Intel® Core® 2 Duo processor P8400 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400: 3MB L2 cache; T9400: 6MB L2 cache

Memory
1GB, 2GB, or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

SATA Combo
Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable

Widescreen display
Some: 14.1" (358.1mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 185 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera
Some: camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) in GM45, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint
TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass
Touch pad
UltraNav, wide touch pad below keyboard, Tap Zones, scrolling regions label

Dimensions
6-cell 14.1" (WxDxH): 13.2" x 10.6" x 1.1-1.3", 335.5 x 270mm x 28-32mm

Weight
Black

Battery - type
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
Battery - life
up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Media Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
Some: one slot (Type I, Type II), CardBus 32-bit

Smart Card read
None

Multicard reader
Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports
Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector: 1394a-2000 standard)

Mini PCI Express
Three Mini PCI Express slots

Intel 5100/5110
11a/b/g/n wireless, Mini PCI adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

WWAN upg
Some: Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)

2G Turbo
Some: Intel Turbo Memory, Half-Mini PCI adapter, 2GB flash, disk-cache accelerator

UWB
None

Modem
56K V.92 modem

Bluetooth
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security keyhole
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

Preloaded operating system®
• Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
• Some: Genuine Windows Vista Business 32

Preloaded applications® (all OSes, only some listed)
• Rescue and Recovery®
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• ThinkVantage System Update
• Finger print Software (fingerprint models)
• McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
• Lenovo System Toolbox
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader®
• Microsoft® Office 2007 Trial (60-day)
• Roxio® Creator® Business Edition (combo, DVD±RW)
• Roxio® MyDVD® (DVD±RW)
• Corel® WinDVD® (combo, DVD±RW)

See footnotes for important warranty information • Intel Centrino® 2 with vPro™ technology

US models announced August 5, September 2, November 4, or December 2, 2008

US models withdrawn effective March or August 2010

Lenovo (M3-L5) August 2010
ThinkPad T400 2768 (Switchable) - Onsite - withdrawn

- These models are part of the Global Models Plus program with limited onsite service, 3-year limited warranty.

Positioning
Processor
Intel® Core™ 2 Duo processor P8600 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8600: 53MB L2 cache; T9400: 6MB L2 cache

Memory
1GB, 2GB, or 3GB std / 8GB max / PC3-8500 1066MHz system bus; 3MB L2 cache; P8600: 53MB L2 cache; T9400: 6MB L2 cache

SATA Combo
Some: CD-RW/DVD-ROM, SATA 1.5GB/s, 9.5mm UltraBay Slim, removable

SATA DVD:RW
Some: DVD burner, SATA 1.5GB/s, UltraBay Slim, removable (43N3214)

SATA DVD:RW Ultrabay Slim
One modular bay for interchangeable devices (right side), or 2GB (5400 rpm), or SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

SATA disk
Some: CD-RW/DVD-ROM, SATA 1.5GB/s, 9.5mm UltraBay Slim, removable
Some: DVD burner, SATA 1.5GB/s, UltraBay Slim, removable (43N3214)

SATA bus
One modular bay for interchangeable devices (right side), or 2GB (5400 rpm), or SATA 1.5GB/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

Keyboard
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

Touch pad
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

ThinkLight™
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

ThinkPad Roll Cage and Top Cover

Dimensions
6-cell 14.1" WxHxD: 13.2" x 10.6" x 1.1-1.3", 335.5 x 270mm x 28-32mm

Weight
6-cell: starting at 5.0 lb (2.3kg); 9-cell: starting at 5.4 lb (2.4kg)

Battery - life (h)

Battery - life (h)
6-cell 14.1" WxHxD: 13.2" x 10.6" x 1.1-1.3", 335.5 x 270mm x 28-32mm

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
One slot (Type I, Type II), CardBus 32-bit

Multicard reader
None

Ports
Some: 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

Mini PCI Express
Three Mini PCI Express slots

Mini PCI Express adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Mini PCI Express adapter, Intel Ultimate N WiFi Link 5300, 3x3

Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)

Intel Turbo Memory, Half-Mini PCI Express adapter, 2GB flash, disk-cach accelerator

Modem
65K V.92 modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intellink 82567LM Gigabit Network Connection (Boazman), PHY, PCI-e x1

Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up/down, mute buttons / digital microphone, mic input jack, headphone jack

Power-on password, hard disk password, supervisor password

Security
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Security chip
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Fingerprint reader

Limited warranty
3-years /1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

Preloaded operating system
Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
Some: Genuine Windows Vista Business 32

Some: Vista logo (one-piece logo)

Preloaded applications (all OSeS, only some listed)

• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center
• ThinkVantage System Update
• FingerPrint Software (finger print models)
• McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
• Lenovo System Toolbox
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader®
• Windows Live™ Toolbar
• Microsoft® Office 2007 Trial (60-day)
• Roxio® Creator® Business Edition (combo, DVD:RW)
• Roxio MyDVD® (DVD:RW)
• Corel® WinDVD® (combo, DVD:RW)

Supports ThinkVantage™ technologies

90-watt (ATI graphics) AC adapter
ThinkPad Roll Cage and Top Cover
Roll Cage (one-piece magnesium)
Climate Savers® certified
EPET® Silver rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 4-year LOR 9x5 NBD
Industry Quality Service
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

© Lenovo

US models withdrawn August 5, 2008, October 7, November 4, or December 2, 2008
US models withdrawn effective August 2010

(M3-L6) August 2010

Lenovo

ThinkPad® T400 2768 (Switchable) - Onsite - withdrawn

Personal Systems Reference (PSREF)
### ThinkPad® T400 6474 (GMA) - Education - withdrawn

#### System specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Hard Disk</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe U/WB</th>
<th>Workhorse (W)</th>
</tr>
</thead>
</table>
| T400-1G0 | Intel® Core™ 2 Duo processor P8400, P8700, T9400, or T9600 with dual-core. | 1066MHz system bus; P8400/P8700: 3MB L2 cache; T9400/T9600: 6MB L2 cache | 1GB, 2GB, or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; | Intel 5100 WWAN upgradable | 2G Turbo 6-8GB, 2G Turbo 9-16GB | - Genuine Windows Vista® Business 32

#### These models have a depot repair service 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

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### Additional Features

- **Positioning**: ThinkPad Roll Cage and Top Cover
- **Mobile Intel GM45 Express Chipset** (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express™ 2.0)
- **Battery - life**
- **Chipset**: Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express™ 2.0, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O), Three USB 2.0, external monitor (VGA DB-15), modern (RJ-11, ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)
- **Battery - life**
- **Mini PCI Express**: Three Mini PCI Express slots
- **UWB**: None
- **Modem**: 56K V.92 modem
- **Bluetooth™**: Bluetooth 2.1 wireless, Bluetooth LE
- **Intelligent Mobile**: Intel® Core™ 2 Duo processor P8400, P8700, T9400, or T9600 with dual-core.
- **Display**: 14.1" WXGA+ (1440x900) color
- **Camera**: Camera on top of screen, 1.3-megapixel, fixed focus
- **Audio Support**: Audio support
- **Security Chip**: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- **Fingerprint Reader**: FingerPrint reader on palm rest, swipe sensor, supports the security chip
- **Limited Warranty**: 3-years/1-year battery - depot repair service / service upgrades available

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See footnotes for important warranty information © Intel Centrino® 2 with vPro™ technology

US models announced August 5, 2008 or March 24, 2009

US models withdrawn effective August 2009 or August 2010

© Lenovo (ML3-7) August 2010
- **ThinkPad T400 2767** (Switchable) - Education - withdrawn

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, and 6MB L2 cache</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Intel® Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator</td>
</tr>
<tr>
<td>ATA DVD/CD-RW</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N2114)</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
</tr>
<tr>
<td>SATA disk</td>
<td>160GB® (5400 or 7200rpm) / SATA 1.5Gb/s, 5.25ide wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System®</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>14.1&quot; (358.1mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Switchable graphics</td>
<td>Switches between discrete and integrated graphics (Vista only), Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI® Mobility Radeon™ HD 3470, PCI Express x16, 256MB memory, DVI pass-through support to optional Advanced Mini Dock or Advanced Dock; Maximum external resolution: 2048x1536@75Hz</td>
</tr>
<tr>
<td>Dimensions</td>
<td>6-cell 14.1&quot;W (WxDxH): 335.5 x 270mm x 28–32mm</td>
</tr>
<tr>
<td>Weight</td>
<td>9-cell: starting at 5.4 lb (2.4kg)</td>
</tr>
<tr>
<td>Case material</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr; 6-cell plus Ultrabay battery: up to 11.3 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), PCI bus (WPCN385 Super I/O)</td>
</tr>
<tr>
<td>ExpressCard slot</td>
<td>One ExpressCard/34 or ExpressCard/54</td>
</tr>
<tr>
<td>PC Card Std slot</td>
<td>None</td>
</tr>
<tr>
<td>Smart Card Reader</td>
<td>None</td>
</tr>
<tr>
<td>Multicard Reader Ports</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)</td>
</tr>
<tr>
<td>USB ports</td>
<td>Three USB 2.0, external monitor (VGA DB-15), modem (RA-11), ethernet (RA-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
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<td>Mini PCI Express</td>
<td>Intel 5100® Wireless WAN upgradable, requires Verizon® (43R9151) or AT&amp;T® (43R9152)</td>
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<td>Mini PCI Express</td>
<td>Some: Intel Turbo Memory, Half-Mini PCI Express adapter, 2GB flash, disk-cache accelerator</td>
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<td>Modem</td>
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<td>Bluetooth™</td>
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<td>Ethernet</td>
<td>Intel 82576LM Gigabit Network Connection (Boazman), PHY, PCIe x1</td>
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<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (IAMT)</td>
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<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
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<td>Fingerprint reader</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-year battery - depot repair service / service upgrades® available</td>
</tr>
</tbody>
</table>

### Additional Features

- **Preloaded operating system**:
  - Some: Genuine Windows Vista® Business 32
  - Some: Genuine Windows Vista Ultimate 32
  - Some: Vista Premium logo

- **Preloaded applications**: (all OSes, only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (finger print models)
  - McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Windows Live™ Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD:RW)
  - Corel® WinDVD® (DVD:RW)

- Supports ThinkVantage® technologies

- **90-watt (ATI graphics) AC adapter**
- **ThinkPad Roll Cage and Top Cover**
- **Roll Cage (one-piece magnesium)**
- **Climate Savers® certified (EPEAT® Silver rating)**
- **ENERGY STAR® 5.0-compliant**
- **RoHS-compliant**
- **International Warranty Service**

- **ThinkPlus® 3-year LOR 24x7 x 365**
- **ThinkPlus® 4-year LOR 24x7 x 365**
- **ThinkPlus® 5-year LOR 24x7 x 365**
- **ThinkPlus® 4-year P&L P/U Depot**
- **ThinkPlus® 5-year P&L P/U Depot**
- **Post-warranty annual maintenance agreements at Lenovo.com/thinkplus/warranty**

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© Lenovo (ML3-8) August 2010

See footnotes for important warranty information.

*CentriC™* 2 with vPro® technology

US models announced August 5, 2008, February 17, 2009, or March 24, 2009

US models withdrawn effective February or August 2010
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<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets, Non-Italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD:RW</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214) ULTRA BAY SSD</td>
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<tr>
<td>Ultrabay Slim</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
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<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass WideScreen Ultravu®, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
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<tr>
<td>ThinkPad</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions§</td>
<td>6-cell 14.1Wx(DxH): 13.2&quot; x 10.6&quot; x 1.1--1.3&quot;, 335.5 x 270mm x 28--32mm</td>
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<td>Weight§</td>
<td>6-cell: starting at 5.0 lb (2.3kg), 9-cell: starting at 5.4 lb (2.4kg)</td>
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<tr>
<td>Case material</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
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<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
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<td>Battery - life</td>
<td>6-cell: up to 6.5 hr; 6-cell plus Ultrabay battery: up to 8.0 hr; 9-cell: up to 9.8 hr; 9-cell plus Ultrabay battery: up to 11.3 hr</td>
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<td>Chipset</td>
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<td>Mini PCI Express</td>
<td>Intel 5100® 64-bit, Intel 5300® 64-bit, WWAN upgradable, requires Verizon® (43R9151) or AT&amp;T® (43R9152)</td>
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<td>UWB</td>
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<td>Bluetooth 2.1 wireless, LED indicator</td>
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<td>Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCI x1</td>
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<td>FingerPrint</td>
<td>FingerPrint reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available</td>
</tr>
<tr>
<td>1GB PC3-8500 DDR3 L-H SODIMM</td>
<td>ThinkPad Battery 33 (4-cell) 41U3196</td>
</tr>
<tr>
<td>2GB PC3-8500 DDR3 L-H SODIMM</td>
<td>ThinkPad Battery 33+ (6-cell) 41U3198</td>
</tr>
<tr>
<td>4GB PC3-8500 DDR3 L-H SODIMM</td>
<td>ThinkPad Battery 33+ (9-cell) 43R2499</td>
</tr>
<tr>
<td>ThinkPad Advanced Mini Dock</td>
<td>ThinkPad Battery 43 (4-cell) 57Y4536</td>
</tr>
<tr>
<td>Other accessories on T400 sheet</td>
<td>Other accessories at lenovo.com/accessories</td>
</tr>
</tbody>
</table>

*This model has a limited onsite service* - 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Preloaded operating system: Genuine Windows® Vista Ultimate 32-bit or Vista® Premium logo

Preloaded applications: Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center, ThinkVantage System Update, FingerPrint Software (fingerprint models), McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions), Lenovo System Toolbox, ThinkPad Utilities (Power Manager and Presentation Director), Adobe® Reader®, Windows Live™ Toolbar, Microsoft® Office 2007 Trial (60-day), Roxio® Creator® Business Edition (DVD:RW), Roxio MyDVD® (DVD:RW), Corel® WinDVD® (DVD:RW)

90-watt (ATI graphics) AC adapter, thinkPad Roll Cage and Top Cover, Roll Cage (one-piece magnesium), Climate Savers® certified EPEAT® Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service²⁷ 24 hour x 7 day²⁷ toll-free support during warranty period²⁷ via 800-426-7378

Supports ThinkVantage® technologies

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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(©ML-311) February 2010
## Memory
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
- 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
- 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386
- 4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708

## Ultrabay Slim 9.5mm
- Serial ATA Hard Drive Bay Adapter III 43N3412

## Storage and removable storage
- 160GB Disk SATA 3.0Gb/s (7200 rpm): 41N5737
- 250GB Disk SATA 3.0Gb/s (5400 rpm): 43R8152
- 500GB Disk SATA 3.0Gb/s (7200 rpm): 43N3412

## Wireless WAN (Mini PCI Express)
- Only WWAN upgradeable

## ThinkPad Expansion
- Lenovo Essential Notebook Stand 45J9292
- USB Port Replicator with Digital Video 45K1610

## ThinkPad Battery
- ThinkPad Battery 33 (4-cell): 41U3196
- ThinkPad Battery 33+ (6-cell): 41U3198
- ThinkPad Battery 33++ (9-cell): 43R2499
- ThinkPad Battery 42 (3-cell, bay): 57Y4536

## Batteries
- ThinkPad External Battery Charger*: 40Y7625

## Multimedia
- ThinkPad In-Ear Headphones 57Y4488

## Security
- Kensington® MicroSaver® Cable Lock
- Kensington Twin Head Cable Lock 45K1620

## Lenovo USB-to-DVI Monitor Adapter
- Lenovo USB-to-DVI Monitor Adapter 45K5296

## Carrying Cases
- ThinkPad 14W Case Sleeve 57Y4294
- ThinkPad 15W Case Sleeve 51J0477
- Lenovo Business Messenger Case 41U5253
- Lenovo Performance Backpack 41U5246
- Checkpoint Friendly Business Topload Case 51J0418
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business Backpack 43R2482
- ThinkPad Deluxe Expander Case 43R2478
- ThinkPad Executive Leather Case 43R2480

## Monitors
- Lenovo L2230x Wide 21.5" Monitor 5453HB1
- ThinkVision® L171p 17" Monitor 5047HB2
- ThinkVision L1951p Wide 19" Monitor 2448HB6
- ThinkVision L2250p Wide 22" Monitor 2572HB6
- ThinkVision L2251p Wide 22" Monitor 2572HD6
- ThinkVision L2251x Wide 22" Monitor 2576HB6
- ThinkVision L2321x Wide 23" Monitor 4014HB6
- ThinkVision L2440p Wide 24" Monitor 4420HB2

## Monitor Accessories
- Lenovo USB-to-DVI Monitor Adapter 45K5296
- ThinkVision USB Soundbar 40Y7616
- ThinkVision Soundbar 4EK263
- Kensington MicroSaver Cable Lock 73P2582
- Kensington Twin Head Cable Lock 45K1620
- Lenovo Easy Reach Monitor Stand 55Y9258
- Radial Arm 19K4464

* Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

**Note:** More information at www.lenovo.com/aldadaycomputing.
### ThinkPad T400s (GMA) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
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<td>2GB 14.1” WXGA+</td>
<td>GMA 12GB 5400 DVD±RW 4-Intel 5100/WWAN upg</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</tr>
<tr>
<td>2808-C5U SP9600 2.53</td>
<td>2GB 14.1” WXGA+</td>
<td>Cam GMA 128GB SSD DVD±RW 4-Intel 5100 AT&amp;T</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
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<tr>
<td>2808-CZU SP9400 2.40</td>
<td>2GB 14.1” WXGA+</td>
<td>Cam GMA 80G SSD DVD±RW 4-Intel 5100</td>
<td>None</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program

### Positioning

- Processor: **Premiere performance and upgradability; two spindles**
  - **Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core**, Intel HD Boost 1066MHz system bus, and 6MB L2 cache

### Memory

- 2GB std / 8GB max¹ / PC3-8500 DDR3 L-H SODIMM
- Non-italics: standard memory in one socket; one socket available

### SATA DVD±RW

- UltraBay Slim SATA disk
- DVD burner, SATA 1.5GB/s, 9.5mm UltraBay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high
- Some: **80GB** or **128GB** Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high
- Some: **120GB** (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 8mm high
- Active Protection System™
- All: removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive

### Widescreen display

- 14.1” (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); **Maximum external resolution**: 2560x1600 (DisplayPort)@60Hz 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar¹³, magnifying glass UltraNav™
- Some: touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

### Dimensions³

- Weight: 6-cell: 14"Wx9.5”Dx0.79”H; 362 x 241 x 20.1mm
- Case material: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

### Battery

- 6-cell: up to 5.5 hr; 6-cell: up to 8.5 hr
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

### Chipset

- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub
- Two USB 2.0, one eSATA/USB combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### ExpressCard/34

- None

### Preloaded operating system²⁰

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32

### Preloaded applications¹⁴ (all OSe; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

### Other accessories on O-T400-S sheet

- 4GB PC3-8500 DDR3 L-H SODIMM 55Y3706
- 2GB PC3-8500 DDR3 L-H SODIMM 55Y3707
- Advanced UltraBay Battery III 57Y4536
- ThinkPad Mini Dock Plus Series 3 433810U

### Limited warranty³ 3-years 1-year battery - EasyServ™¹⁹ depot repair service / service upgrades available

- 1-year battery
- EasyServ™¹⁹ depot repair service / service upgrades available

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*Footnotes for important warranty information*

US models announced June 23 or July 7, 2009

US models withdrawn effective December 2009

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(SN1-1) January 2010
### Positioning Processor

Premiere performance and ultraportability; two spindles

Intel® Core™ 2 Duo processor SP9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory

2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- Non-italsics: standard memory in one socket; one socket available

### SATA DVD±RW

- 6-cell plus Ultrabay Slim DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

Some: 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
Some: 250GB (5400 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 1.8" wide, 8mm high, Active Protection System™

- All: removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive

### Display

14.1" WXGA+ (358.1mm) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9159);

- supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort® @60Hz: 2048x1536 (VGA)® @75Hz: 1920x1200 @60Hz (single-link DVI-D via cable 45J9159)

### Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

UltraNav™ wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

14.1"W (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241 mm x 21.1–25.9 mm

### Weight

6-cell: starting at 3.9 lb (1.77kg)

### Case material

Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls);

Base: Magnesium alloy

### Battery - type

Lithium ION 6-cell, supports unique 2nd battery in Ultrabay Slim

### Battery - life

6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 8.5 hr

### Chipset

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);

ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

### ExpressCard/34

None

### Smart Card Read

None

### Multicard Reader

Ports

Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### Mini PCI Express

Intel 5100® WWAN upg

2G Turbo UWB

None

### Modern

None

### Bluetooth™

Some: Bluetooth 2.1 wireless, LED indicator

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel Active Management Technology (iAMT)

High Definition (HD) Audio, Conexant CX20585 codec / stereo speakers, 1 watt / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

3-years/1-yr battery - depot repair service / service upgrades available

---

*These small and medium business (SMB) models are part of the US TopSeller™ Program

Preloaded operating system

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (D/D-RW)
- Roxio MyDVD® (D/D-RW)
- Corel® WinDVD® (D/D-RW)

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service®

24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378

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See footnotes for important warranty information

Intel Centrino® with vPro™ technology

Lenovo

(2010) July 2010
**ThinkPad T400s 2808 (GMA) - TopSeller (Windows 7) - withdrawn**

<table>
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<th>Type-model</th>
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<th>Cam-eras</th>
<th>Integrated graphics</th>
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<th>Frame</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Card slot</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2808-DLU SP9600 2.53</td>
<td>Intel® Core™ 2 Duo processor SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>4GB</td>
<td>14.1&quot; WXGA+</td>
<td>Cam GMA 128GB SSD DVD±RW</td>
<td>None</td>
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<td>None</td>
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<td>None</td>
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<td>None</td>
<td>Nov 09</td>
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</tbody>
</table>

*This small and medium business (SMB) model is part of the US TopSeller™ Program*

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**Positioning Processor**

- Intel® Core™ 2 Duo processor SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**

- 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available

**SATA DVD±RW Ultrabay Slim SATA disk**

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

**Wide-screen display Camera**

- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Integrated graphics**

- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display

**Keyboard TrackPoint® 128GB® Solid State Drive (SSD) / PC3-8500 1066MHz system bus, and 6MB L2 cache

**Video**

- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Audio support**

- High Definition (HD) Audio, Conexant CX20585 codec / stereo speakers, 1 watt / speaker volume up, down and mute buttons / dual mini PCIE microphone, mic mute button, combo audio/mic jack

**Security**

- Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

- FingerPrint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Battery - life**

- 6-cell: 6-cell plus Ultrabay battery: up to 5.5 hr; 6-cell plus Ultrabay Slim battery: up to 8.5 hr

**Battery - type**

- Lithium ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Dimensions**

- 11.14" (282.4mm) x 8.5" (215.9mm) x 0.83–1.02"; 284 x 217 x 21.1–25.9mm

**Weight**

- 6-cell: starting at 3.9 lb (1.77kg)

**Widescreen display**

- Integrated graphics

**TrackPoint® 128GB® Solid State Drive (SSD) / PC3-8500 1066MHz system bus, and 6MB L2 cache

**Software**

- Windows 7 Professional 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009
- (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio® MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

**Chipset**

- Mobile Intel GS45 Express Chipset
- Intel® GS45 Express Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® x1, 6-cell)
- 14.5x1536 (VGA) @ 75Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 64 AT&T
- Mobile Intel GS45 Express Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® x1, 6-cell)
- 14.5x1536 (VGA) @ 75Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 64 AT&T
- Mobile Intel GS45 Express Chipset

**Supported technologies**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service™
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

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See footnotes for important warranty information

- Intel Centrino® 2 with vPro™ technology
- Lenovo (SN1-6) July 2010

US model announced November 3, 2009
US model withdrawn effective July 2010

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**Type-model** | **Processor** | **Gigahertz** | **Memory** | **Display** | **Graphics** | **Hard Disk** | **Operating System** | **Weight** | **Warranty**
---|---|---|---|---|---|---|---|---|---
2815-22U SP9400 2.40 | 2GB 14.1" WXGA+ | GMA 120G 5400 | DVD±RW | Intel 5100™ | WWAN upg | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-23U SP9600 2.53 | 3GB 14.1" WXGA+ | Cam GMA 250G 5400 | DVD±RW | Intel 5100™ | WWAN upg | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-24U SP9600 2.53 | 4GB 14.1" WXGA+ | Cam GMA 128G SSD | DVD±RW | Intel 5300™ | WWAN upg | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-25U SP9600 2.53 | 2GB 14.1" WXGA+ | Cam GMA 80G SSD | DVD±RW | None | None | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-2YU SP9400 2.40 | 3GB 14.1" WXGA+ | Cam GMA 120G 5400 | DVD±RW | None | None | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-3YU SP9400 2.40 | 3GB 14.1" WXGA+ | Cam GMA 120G 5400 | DVD±RW | None | None | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-30U SP9600 2.53 | 2GB 14.1" WXGA+ | Cam GMA 128G SSD | DVD±RW | None | None | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR
2815-2ZU SP9400 2.40 | 2GB 14.1" WXGA+ | Cam GMA 80G SSD | DVD±RW | None | None | None | 2 yr/1 yr battery - depot repair service | 3.9 lb (1.77kg) | 3-year LOR

**Memory**
- 2GB, 3GB, or 4GB std / 8GB max | 80GB to 250GB 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.

**SATA DVD±RW Ultrabay Slim**
- DVD burner, SATa 1.5GB/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side). 9.5mm high, bottom access

**Widescreen display**
- 14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight. 300 nits, 16:10 aspect ratio, 300:1 contrast ratio.

**Integrated graphics**
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display: Maximum external resolution: 2560x1600 (DisplayPort) @60Hz: 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Dimensions**
- 14.1" (WxDxH): 13.3" x 9.5" x 0.83–1.02; 337 x 241mm x 21.1–25.9mm

**Supports ThinkVantage technologies**
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Corel® WinDVD® (DVD±RW)
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame) EPEAT® Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service
- 24 hour x 7 day toll free support (within warranty period)

**Fingerprint Software (fingerprint reader)**
- Lenovo Fingerprint Software (fingerprint reader) on palm rest, swipe sensor, LED indicator, Power On Authentication
- Supports the security chip

**Limited warranty**
- 3-years/1-yr battery - depot repair service | 2 yr/1 yr battery - depot repair service | 2 yr/1 yr battery - depot repair service

See footnotes for important warranty information

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US models announced June 23, 2009

US models withdrawn effective July 2010
**ThinkPad T400s 2815 (GMA) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor SP9400 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB or 4GB std / 8GB max† / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD±RW</td>
<td>DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high, bottom access; Supports Dual Hard Drive (SSD)</td>
</tr>
<tr>
<td>SATA disk</td>
<td>Some: 128GBB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high; Some: 128GB (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 8mm high, Active Protection System™</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>14.1” (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio, MultiTouch (touchscreen support two-finger touch)</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGO DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys; TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™; wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>TrackPoint™</td>
<td>Wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Touch pad</td>
<td>ThinkLight™, wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions³</td>
<td>14.1”Wx(D)xH): 13.3” x 9.5” x 0.95<del>1.14”; 337 x 241.5mm x 24.2mm</del>29.0mm</td>
</tr>
<tr>
<td>Weight³</td>
<td>6-cell: starting at 4.51 lb (2.05kg)</td>
</tr>
<tr>
<td>Case material</td>
<td>Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
</tr>
<tr>
<td>Battery - life¹⁰</td>
<td>6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 8.5 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)</td>
</tr>
<tr>
<td>ExpressCard/34</td>
<td>One slot (ExpressCard/34)</td>
</tr>
<tr>
<td>Smart Card Read</td>
<td>None</td>
</tr>
<tr>
<td>Multicard Reader</td>
<td>None</td>
</tr>
<tr>
<td>Ports</td>
<td>Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots 11a/b/g/n wireless; Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) Wireless WAN upgradable, requires Verizon® (43R9151) or AT&amp;T® (43R9152)</td>
</tr>
<tr>
<td>WWAN upg 2G</td>
<td>None</td>
</tr>
<tr>
<td>Turbo UWB</td>
<td>None</td>
</tr>
<tr>
<td>Modem</td>
<td>None</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>Bluetooth 2.1 wireless, LED indicator</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (AMT)</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant CX20585 codec / stereo speakers, 1 watt / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack</td>
</tr>
<tr>
<td>Security</td>
<td>Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-yr battery - depot repair service / service upgrades² available</td>
</tr>
</tbody>
</table>

---

*These models have a depot repair service 3-year limited warranty*

**Preloaded operating system²⁰**
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications¹⁴** (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Supports ThinkVantage technologies**
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

**International Warranty Service¹⁷**
- 24 hour x 7 day²² toll-free support during the warranty period²³ via 800-426-7378

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See footnotes for important warranty information

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US models announced December 1, 2009

US models withdrawn effective July 2010

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nsn-7) July 2010

See footnotes for important warranty information

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US models announced December 1, 2009

US models withdrawn effective July 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen</th>
<th>Display</th>
<th>Cam</th>
<th>Integrated</th>
<th>Graphics</th>
<th>SATAD</th>
<th>Sata optical</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PcleFinger</th>
<th>Blue-</th>
<th>Card</th>
<th>Whorse (W)</th>
<th>Pre-GMP (P)</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>2823-22U SP9400 2.40</td>
<td>2GB 14.1&quot; WXGA+</td>
<td>GMA 120G 5400 DVD+RW</td>
<td>Intel® 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue Express XP</td>
<td>G P Jun 09</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2823-23U SP9600 2.53</td>
<td>3GB 14.1&quot; VXGA+ Cam</td>
<td>GMA 250G 5400 DVD+RW</td>
<td>Intel® 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue Express B32</td>
<td>G P Jun 09</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2823-24U SP9600 2.53</td>
<td>4GB 14.1&quot; WXGA+ Cam</td>
<td>GMA 128G SSD</td>
<td>DVD+RW</td>
<td>Intel® 5300® WWAN upg</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue Express B32</td>
<td>G P Jun 09</td>
<td></td>
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</tr>
<tr>
<td>2823-25U SP9600 2.53</td>
<td>2GB 14.1&quot; WXGA+ Cam</td>
<td>GMA 80G SSD</td>
<td>DVD+RW</td>
<td>Intel® 5100® WWAN upg</td>
<td>None</td>
<td>Fingerprint</td>
<td>Blue Express B32</td>
<td>G P Jul 09</td>
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</tr>
</tbody>
</table>

**These models are part of the Global Models Plus program with limited onsite service‡ 3-year limited warranty**

Positioning

Processor
Premiere performance and ultraportability; two spindles Intel® Core™ 2 Duo processor SP9400 or SP9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory
2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- *Italics:* standard memory in both sockets; no sockets available;
- *Non-italics:* standard memory in one socket; one socket available

SATA DVD±RW

- Ultrabay Slim
- SATA disk

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

Some:
- 80GB® or 128GB Solid State Drive (SSD) (/ SAD 3.0Gb/s, 1.8" wide, 5mm high
- 120GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 8mm high, Active Protection System™

- All:
  - removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display Camera

14.1" (358.1mm) WXGA+ (1440x900) color, anti-glare, LED backlight,
300 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45, external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J915); supports dual independent display

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J915)

Keyboard

- Trackpoint”
  - pointing device, "Press-to-Select," Internet Scroll Bar”
  - magnifying glass

ThinkLight™

- UltrNav™
  - wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions" Weight8

- Case material

- Battery - type

- Battery - life9

- Chipset

- ExpressCard/34

- Smart Card Read

- Multicard Reader

- Ports

- Mini PCI Express

- Intel 5100® WWAN upg

- Intel 5300® WWAN upg

- 2G Turbo UWB

- Modem

- Bluetooth”

- Ethernet

- Intel AMT

- Audio support

- Security

- Security chip

- Fingerprint reader

- Limited warranty10

**Preloaded operating system20**

- Some: Windows® XP Professional preinstalled through Downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

**Preloaded applications14** (all OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service17
  - 24 hour x 7 day® toll-free support during the warranty period12 via 800-426-7378

ThinkPlus™ zn 4-year LOR 9x5 NBD 4X56038

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

- © Lenovo

- SN1-2) July 2010

- (SN1-2) July 2010

- US models announced June 23, 2009

- US models withdrawn effective July 2010

- Intel Centrino® 2 with vPro™ technology
These models have a depot repair service 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Preloaded operating system
- Genuine Windows® Vista® Business 32
  • Vista Premium logo

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Manager)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- ROHS-compliant
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- International Warranty Service

See footnotes for important warranty information
ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology

ThinkPad Mini Dock Series 3 - 90W 433710U
**ThinkPad T410 2516 (TopSeller) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo frequency (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Blue-tooth capability</th>
<th>Intel Turbo Boost Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2516-ADU</td>
<td>i5-480M</td>
<td>2.40</td>
<td>2GBx1</td>
<td>1066 MHz</td>
<td>2.0M</td>
<td>250G</td>
<td>4GB (11b/g/n)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Jan 10</td>
</tr>
<tr>
<td>2516-DGU</td>
<td>i5-560M</td>
<td>2.66</td>
<td>2GBx1</td>
<td>1066 MHz</td>
<td>2.0M</td>
<td>320G</td>
<td>4GB (11b/g/n)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Jan 10</td>
</tr>
<tr>
<td>2516-F9U</td>
<td>i5-480M</td>
<td>2.66</td>
<td>4GBx1</td>
<td>1333 MHz</td>
<td>2.0M</td>
<td>320G</td>
<td>4GB (11b/g/n)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Jan 11</td>
</tr>
</tbody>
</table>

**Positioning**

- **Processor**: Intel Core i5 processor i5-480M, i5-520M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache

**Memory**

- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD RW Ultrabay Slim SATA disk**

- DVD burner, SATA 1.5Gb/s, 9.5mm UltraBay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Wide-screen display**

- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**ThinkPad Ultrabase Slim**

- Black

**Dimensions**

- 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Weight**

- Black

**Battery - type**

- Lithium Ion 6-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 4-cell: up to 22 hr; 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 2-cell plus Slice battery: up to 22 hr

**Chipset**

- Mobile Intel QM57 Express Chipset

**Preloaded operating system**

- Some: Genuine Windows® 7 Professional 64
- Some: Genuine Windows 7 Professional 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Ports**

- Two PCI Express Mini Card slots

**Preloaded hardware**

- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

See footnotes for important warranty information

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US models announced January 7 or September 28, 2010, or January 11, 2011

US models withdrawn effective June 2011

(NDZ-1) June 2011
| Type-model | Processor | Base turbo (GHz) | Max turbo (GHz) | Memory | Wide-screen display | CCFL or LED | Camera | Disk SATA GB rpm | PCIe Mini Card 802.11 | PCIe Mini Card WWAN | Finger print reader | Battery - type | Blue- tooth vPro | Intel AMT | Ethernet | Bluetooth® | WWAN upg | Intel 6200® | Intel Turbo Boost, Hyper-Threading technology; Dual Core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache |
|------------|-----------|-----------------|----------------|--------|---------------------|-------------|--------|-----------------|-----------------------|---------------------|---------------------|-----------------|--------------|-------------|---------|-----------|-----------|---------|-------------|---------------|------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| 2518-C3U  | i5-540M   | 2.53            | 3.06           | 2GB    | LED                 | 14.1” WXGA  | 0.8”     | 320G 7200      | 11b/g/h               | WWAN upg            | Finger Blue       | 6-cell         |             |           |           |          |             |               | Intel 6200®               |
| 2518-F4U  | i5-540M   | 2.53            | 3.06           | 3GB    | LED                 | 14.1” WXGA+| 1.3”     | 320G 7200      | Intel 6200®          | WWAN upg            | Finger Blue       | 6-cell         |             |           |           |          |             |               | Intel 6200®               |

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty

See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective October 2010

Preloaded operating system: Windows XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications: (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVR-DMV™) / Dvd+Rw™ / Roxio MyDvd™ (Dvd+Rw™) / Corel® WinDvd™ (Dvd+Rw™)

Supports ThinkVantage® technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant RoHS-compliant
International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7736

ThinkPlus™ 3-year LOR™ 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L P/U Depot 45K6023
ThinkPlus 5-year P&L P/U Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Disk</th>
<th>SATA GB</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Battery: Intel vPro</th>
<th>Preloaded operating system</th>
</tr>
</thead>
<tbody>
<tr>
<td>2518-C2U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>11b/g/n</td>
<td>Gobi 2000</td>
<td>AT&amp;T</td>
<td></td>
<td></td>
<td>Blue, 6</td>
<td>VPro Pro</td>
<td>32 Jan, 10</td>
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<tr>
<td>2518-F3U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
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<td>11b/g/n</td>
<td>WWAN upg</td>
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<td></td>
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<td>Blue, 6</td>
<td>VPro Pro</td>
<td>32 Jan, 10</td>
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<tr>
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<td>i5-520M</td>
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<td>Blue, 6</td>
<td>VPro Pro</td>
<td>32 Mar, 10</td>
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<tr>
<td>2518-QBU</td>
<td>i5-540M</td>
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<td>3.06</td>
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<td>Blue, 6</td>
<td>VPro Pro</td>
<td>64 Jul, 10</td>
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<td>2518-AHU</td>
<td>i5-560M</td>
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<td>3.20</td>
<td>2GB</td>
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<td>WWAN upg</td>
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<td></td>
<td></td>
<td>Blue, 6</td>
<td>VPro Pro</td>
<td>64 Sep, 10</td>
</tr>
</tbody>
</table>

• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These models have a depot repair service 3-year limited warranty
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning Processor:
- **Premiere performance: two spindles**
  - **Intel** Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache

### Memory
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Italics:** standard memory in both sockets; no sockets available;
- **Non-italics:** standard memory in one socket; one socket available

### SATADVD:
- **DVD burner**, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- **Some:** 80GB SATA Solid State Drive (SSD) / SATA 3.0GB/s, 1.8” wide, 8mm high
- **Some:** 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0GB/s, 2.5” wide, 9.5mm high, Active Protection System™
- **All:** removable, upgradeable, 2nd disk, Shock Mounted Hard Drive

### Display
- Some: 14.1” (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated Graphics
- **Intel HD Graphics** in processor,
- **external analog monitor support** via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- supports dual independent display;
- **Maximum external resolution:** 2560x1600 (DisplayPort)@60Hz, 2048x1536 (VGA)@75Hz, 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- TrackPoint®:
  - 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- **TrackPoint® pointing device**, “Press-to-Select,” Internet Scroll Bar™, magnifying glass
- **UltraNav™**, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Weight
- **Top:** High Elasticity PolyCarbonate (HEPC);
- **Bottom:** Carbon-Fiber Reinforced Plastic

### Batteries
- Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
- 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 8-cell plus Slice battery: up to 22 hr

### Chipset
- **Mobile Intel QM57 Express Chipset**
- One slot (ExpressCard/34)

### Smart Card reader
- None

### Multicard reader
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire (4-pin port-connector; 1394a-2000 standard)

### PCle Mini Card
- Two PCI Express Mini Card slots
- **Some:** 11b/g/n wireless4, ThinkPad 11b/g/n, PCle Half Mini Card
- **Some:** 11a/b/g/n wireless, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- **Some:** Wireless WAN upgradable
- **Some:** Wireless WAN, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A, GPS, MW/CDMA/HSIP, GPS, contract required with service provider
- **Some:** AT&T®, contract required with service provider
- 56K v.92® modem

### Carrier Modem
- **Some:** Bluetooth 2.1 wireless, LED indicator
- **Non-vPro model:** Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1
- **Intel Active Management Technology (IATM)**
- **High Definition (HD) Audio**, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, microphone mute button, combo audio/mic jack
- **Power-on password**, hard disk password, supervisor password, security keyhole

### Security
- **Security chip**
- **Fingerprint reader**
- **Power On Authentication**, supports the security chip

### Limited warranty
- **3-years**/1-year battery - depot repair service / service upgrades available

---

**Preloaded operating system**
- **Some:** Genuine Windows® 7 Professional 32
- **Some:** Genuine Windows® 7 Professional 64

**Preloaded applications**
- **Rescue and Recovery™**
- **Access Connections™**
- **Password Manager**
- **Fingerprint Software** (fingerprint models)
- **ThinkVantage System Update**
- **ThinkVantage Power Manager**
- **ThinkVantage Toolbox**
- **Norton™ Internet Security 2011** (30 days of virus definitions)
- **Adobe® Reader**
- **Adobe Flash® Player**
- **Windows Live® Toolbar**
- **Sky™ for Windows**
- **Microsoft Office 2010 preloaded; purchase product key to activate**
- **Microsoft Research AutoCollage Touch**
- **Roxio MyDVD® (DVR/RW)**
- **Corel® WinDVD® (DVR/RW)**

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**Supports ThinkVantage® technologies**
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information

US models announced January 7, March 2, July 6, or September 28, 2010

US models withdrawn effective February or June 2011

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ThinkPlus® 3-year LOR® 9x5 NBD
45K6023
ThinkPlus® 4-year LOR 9x5 NBD
45K6022
ThinkPlus® 5-year LOR 9x5 NBD
45K6020
ThinkPlus® 4-year P&P 9x5 NBD
45K6025
ThinkPlus® 5-year P&P 9x5 NBD
45K6026
Post-warranty annual maintenance agreements available at lenovo.com/thinkplus/warranty
**ThinkPad T410 (TopSeller) - Windows 7 (January 2011) - withdrawn**  
Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>SATA/WWAN</th>
<th>Battery</th>
<th>Power</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2518-BGU</td>
<td>i7-620M</td>
<td>4GBx1</td>
<td>14.1&quot; WXGA+</td>
<td>500G 7200</td>
<td>Intel 1000 WWAN upg</td>
<td>9</td>
<td>90W</td>
<td>Pro 64</td>
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<tr>
<td>2518-BJU</td>
<td>i5-560M</td>
<td>2GBx1</td>
<td>14.1&quot; WXGA+</td>
<td>320G 7200</td>
<td>Gobi 2000</td>
<td>6</td>
<td>65W vPro</td>
<td>Pro 64</td>
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</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

**Positioning Processor**
Premiere performance; two spindles  
- Intel® Core™ i5 processor i5-560M with dual-core, or Intel® Core i7 processor i7-620M with dual-core,  
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology;  
- i5-650M 3MB cache: i7-620M:4MB cache

**Memory**  
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD:RW**  
- DVD burner, SATA 1.5GB/s; 9.5mm Ultrabay slim, removable  
- DVD burners, SATA 1.5GB/s; 9.5mm Ultrabay slim, removable  
- Top: High Elasticity PolyCarbonate (HEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Widescreen display Camera**  
- 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight  
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**  
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;  
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;  
2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard Touchpad**  
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys  
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass  
- UltraNav™, wide touchpad below keybd, Tap Zones, scrolling region labels, multi-touch

**Dimensions**  
14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm

**Weight**  
- 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

**Battery - type**  
Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

**Battery - life**  
6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 2-cell plus Slice battery: up to 22 hr

**Chipset**  
- Mobile Intel QM57 Express Chipset  
- One slot (ExpressCard/34)

**Multicard reader Ports**  
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**PCle Mini Card**  
Two PCI Express Mini Card slots  
- Intel 1000 WIMAX  
- Some: 11a/b/g/n wireless², PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2  
- Some: 11a/b/g/n and WIMAX wireless, PCIe Half Mini Card, Intel Centrino Advanced-N + WIMAX 6250, 2x2 AGN + 1x2 WIMAX

**WWAN Gobi™ 2000**  
Some: Wireless WAN upgraded  
- Some: Wireless WAN, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

**Carrier**  
Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider

**Modem**  
56K V.92 modem

**Bluetooth™**  
Bluetooth 2.1 wireless, LED indicator

**Ethernet**  
- Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT**  
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**  
Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**  
Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**  
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator

**Limited warranty**  
- 3-years/1-yr battery - depot repair service / service upgrades²² available

**Preloaded operating system**²⁰  
- Genuine Windows® 7 Professional 64

**Preloaded applications**¹⁴ (only some listed)  
- Rescue and Recovery™  
- Access Connections™  
- Password Manager  
- Fingerprint Software (fingerprint models)

**Carriers**  
- Gobi 895 Traveler, 1900MHz, contract required with service provider
- Gobi 2000 selectable 6 65W vPro Pro 64 Jan 11

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See footnotes for important warranty information  
US models announced January 11, 2011  
US models withdrawn effective June 2011

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(NZ1-19) June 2011

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²² Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad T410 2518 (Optimus) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Max</th>
<th>Widescreen</th>
<th>Camera</th>
<th>Disk</th>
<th>PCIe</th>
<th>PCIe</th>
<th>Finger</th>
<th>Bluetooth</th>
<th>Intel</th>
<th>Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2518-AJU</td>
<td>i5-560M</td>
<td>2.66</td>
<td>3.20</td>
<td>2GB</td>
<td>14.1” WXGA+</td>
<td>2.0M</td>
<td>320G</td>
<td>WWAN upg</td>
<td>None</td>
<td>Blue</td>
<td>Pro 64</td>
<td>Sep 10</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor
Intel® Core™ i5 processor i5-560M with dual-core, DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available

SATA DVD±RW
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

SATA disk
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB™ (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.

Camera
220 nits, 16:10 aspect ratio, 300:1 contrast ratio; Camera on top of screen, 2.0-megapixel, fixed focus

Optimus graphics
NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA NVS® 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

Dimensions
14.1”W (WXDxH): 13.2” x 9.4” x 1.1–1.3”; 335.5 x 239mm x 27.6–31.9mm

Weight
Top: 5.0 lb (2.27kg); Bottom: 4.0 lb (1.81kg)

Battery - life
Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.5 hr; 9-cell: up to 10.9 hr; 9-cell plus Slice battery: up to 21.9 hr

Chipset
Mobile Intel GM57 Express Chipset

Smart card reader
One slot (ExpressCard/34)

Multicard reader
None

Ports
Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCIe Mini Card
Two PCI Express Mini Card slots

Modem
56K V.92® modem

Bluetooth
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, microphone button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Limited warranty
3-years/1-yr battery - depot repair service / service upgrades available
### ThinkPad T410 2516 (Discrete) - TopSeller (Windows 7) - withdrawn

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

<table>
<thead>
<tr>
<th>Processor</th>
<th>Premiere performance; two spindles</th>
<th>Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-ittalics: standard memory in one socket; one socket available</td>
<td></td>
</tr>
<tr>
<td>SATA DVD±RW Ultraday Slim</td>
<td>DVD burner, SATA 1.5gb/s, 9.5mm Ultrabay slim, removable</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB (7200 rpm) / SATA 3.0Gbps, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>14.1&quot; (358mm) WXGA (1280x800) color, anti-glare, LED backlight</td>
<td>220 nits, 16:10 aspect ratio; 300:1 contrast ratio</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel® GM57 Express Chipset</td>
<td>Supports ThinkVantage® technologies</td>
</tr>
<tr>
<td>PCIe Mini Card WWAN upg</td>
<td>Two PCI Express Mini Card slots 11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card None</td>
<td>90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT® Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service™ 24 hour x 7 day* toll-free support during the warranty period via 800-426-7378</td>
</tr>
</tbody>
</table>
## ThinkPad T410 2518 (Discrete) - TS (XP with Win 7 License) - withdrawn

### Personal Systems Reference (PSREF)

#### Note

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty

### Description

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo dGHz (GHz)</th>
<th>Memory</th>
<th>Video</th>
<th>Display</th>
<th>Special features</th>
</tr>
</thead>
<tbody>
<tr>
<td>2518-C5U</td>
<td>i5-540M</td>
<td>2.53/3.06</td>
<td>2GB</td>
<td>14.1&quot; WXGA+ LED</td>
<td>300:1 contrast ratio, 300 nit</td>
<td></td>
</tr>
<tr>
<td>2518-4JU</td>
<td>i5-540M</td>
<td>2.40/2.93</td>
<td>2GB</td>
<td>14.1&quot; WXGA+ LED</td>
<td>300:1 contrast ratio, 300 nit</td>
<td></td>
</tr>
</tbody>
</table>

### Preloaded operating system

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader® 8
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### 90-watt AC adapter

Supports ThinkVantage® technologies

- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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**Limited warranty**

3-years/1-yr battery - depot repair service / service upgrades available

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### See footnotes for important warranty information

US models announced January 7 or March 2, 2010

US models withdrawn effective October 2010

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Finger print carrier</th>
<th>Blue- tooth</th>
<th>Preload</th>
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<tbody>
<tr>
<td>2518-C4U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>4GB</td>
<td>2GB</td>
<td>11b/g/n</td>
<td>Gobi 2000</td>
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<td>WWAN upg</td>
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<td>vPro</td>
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<td>vPro</td>
<td>Blue</td>
<td>Pro</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning**
- Processor: Intel® Core™ i5 processor i5-520M or i5-540M with dual-core DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, High-Threading technology; 3MB cache

**Memory**
- 2GB or 4GB std / 8GB max
- Non-italics: standard memory in both sockets; no sockets available; Italicics: standard memory in one socket; one socket available

**SATA DVD±RW Ultraslim SATA disk**
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultraslim slim, removable
- One module bay for interchangeable devices (right side), 9.5mm high, bottom access
- Some: SDGB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 8mm high
- Some: 320GB (7200 rpm) or 500GB (7200 rpm)
- SATA 3.0Gb/s, 2.5” wide, 9.5mm high, Active Protection System™
- All: removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**
- Camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**
- NVIDIA® NVS™ 3100M, PCI Express® x16, 256MB memory, external analog monitor support, support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display, Maximum external resolution: 2560x1600 (DisplayPort), supports dual independent display

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

**Dimensions**
- 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Display**
- Camera: 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Chipset**
- Mobile Intel QM57 Express Chipset
- Supports ThinkVantage® technologies

**Battery - type**
- Lithium ion 9-cell, supports optional SL battery (57Y4545) as 2nd battery at bottom
- 6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr, 9-cell plus SlimCell battery: up to 16.6 hr

**Preloaded operating system**
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications**
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Windows Research AutoCollage Touch
- Roxio® Creator Business Edition

**Chipset**
- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)
- Supports ThinkVantage® technologies

**Smart Card read**
- None

**Multicard reader Ports**
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**Pcie Mini Card**
- Two PCI Express Mini Card slots
- Supports: ThinkPad 11b/g/n wireless, ThinkPad 11b/g/n, PCle Half Mini Card

**Carrier**
- Some: 1Gb/gn wireless, thinkPad 11b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- Some: 11a/b/g wireless, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- Some: 11a/b/g and WiMAX wireless, PCle Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX
- Some: 11a/b/g/n and WiMAX wireless, PCle Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX
- Some: 11a/b/g and WiMAX wireless, PCle Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX
- Some: Wireless, Wireless WAN, upgradable, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A
- Some: Wireless, Wireless WAN, upgradable, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A
- GPRS/CDMA/HSPA, GPS, contract required with service provider
- Some: Verizon®, contract required with service provider

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip: Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader: Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-yr battery - depot repair service / service upgrades available
- Lenovo.com/thinkplus/warranty
ThinkPad® T410 2519 (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Warranty</th>
<th>Warranty</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2519-8AU</td>
<td>i5-520M</td>
<td>2GB</td>
<td>14.1&quot; WXGA</td>
<td>LED</td>
<td>DVD±RW</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Jan 10</td>
</tr>
</tbody>
</table>

*This system is Microsoft® Office 2010 Product Key Ready (O10PKR)*

- **Preloaded operating system**: Genuine Windows® 7 Professional 32
- **Preloaded applications**: Rescue and Recovery™, Access Connections™, Password Manager, ThinkVantage System Update, ThinkVantage Power Manager, ThinkVantage Toolbox, Adobe® Reader®, Adobe Flash® Player, Skype™ for Windows, Microsoft Office 2010 preloaded; purchase product key to activate Microsoft Research AutoCollage Touch™, Roxio® Creator™ Business Edition (DVD±RW), Roxio MyDVD® (DVD±RW), Corel® WinDVD® (DVD±RW)

**Positioning Processor**

- **Premiere performance: two spindles**
- **Intel® Core™ i5 processor i5-520M with dual-core**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

- **2GB std / 8GB max**
- **Base screen display**: 14.1" WXGA LED, 2.0M
- **Camera**: 250G 5400
- **Processor**: Intel 6200
- **SATA optical**: 802.11

**SATA DVD±RW Ultrabay Slim SATA disk**

- **DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable**
- **One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB (5400 rpm)**
- **SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™**

**Widescreen display Camera**

- **14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight**, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- **Camera on top of screen, 2.0-megapixel, fixed focus**

**Integrated graphics**

- **Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display,
- **Maximum external resolution**: 2560x1600 (DisplayPort)@60Hz; supports dual independent display;
- **External analog monitor support via VGA DB-15 connector and Intel HD Graphics in processor,**
- **External HD Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack**

**Keyboard TrackPoint®**

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys**
- **TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®3, magnifying glass**
- **UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions**

**Dimensions®**

- **14.1" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm**
- **6-cell: up to 11 hr; 9-cell: up to 22 hr**

**Battery & type**

- **Lithium Ion 6-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice battery: up to 22 hr**

**Chipset ExpressCard/34**

- **Mobile Intel QM57 Express Chipset**
- **One slot (ExpressCard/34)**

**Smart Card reader**

- **None**

**MultiCard reader**

- **5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)**

**Ports**

- **Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)**

**PCIe Mini Card**

- **Two PCI Express Mini Card slots**
- **Intel 6200® WWAN upg**
- **Modem**: 65K V92™ modem

**Bluetooth™**

- **Bluetooth 2.1 wireless, LED indicator**

**Ethernet**

- **Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1**

**Audio support**

- **High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack**

**Security**

- **Power-on password, hard disk password, supervisor password, security keyhole**

**Security chip**

- **Trusted Platform Module, TCG 1.2-compliant**

**Fingerprint reader**

- **None**

**Limited warranty**

- **1-year - depot repair service / service upgrades22 available**

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See footnotes for important warranty information

US model announced January 7, 2010
US model withdrawn effective June 2011

(NZ1-7) June 2011

© Lenovo
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor Base speed (GHz)</th>
<th>Memory</th>
<th>Sata Disk</th>
<th>WWAN upg (Carrier)</th>
<th>Finger print reader</th>
<th>Battery- type (Workhorse)</th>
<th>USA availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2522-60U i5-540M</td>
<td>2.53 3.06 2GBx1 1066</td>
<td>14.1&quot; WXGA+ 2.0M</td>
<td>320GB 7200</td>
<td>Intel 6200™ Gobi AT&amp;T™</td>
<td>Fingerprint</td>
<td>Blue vPro Pro 32 24 X 7</td>
<td>5-yr P&amp;L P/U Depot</td>
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<tr>
<td>2522-61U i5-540M</td>
<td>2.40 2.93 2GBx1 1066</td>
<td>14.1&quot; WXGA 2.0M</td>
<td>320GB 7200</td>
<td>Intel 6300™ upg</td>
<td>Fingerprint</td>
<td>Blue vPro Pro 32 24 X 7</td>
<td>5-yr P&amp;L P/U Depot</td>
</tr>
<tr>
<td>2522-50U i5-540M</td>
<td>2.53 3.06 2GBx1 1066</td>
<td>14.1&quot; WXGA 2.0M</td>
<td>320GB 7200</td>
<td>Intel 6300™ upg</td>
<td>Fingerprint</td>
<td>Blue vPro Pro 32 24 X 7</td>
<td>5-yr P&amp;L P/U Depot</td>
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<tr>
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<td>Fingerprint</td>
<td>Blue vPro Pro 32 24 X 7</td>
<td>5-yr P&amp;L P/U Depot</td>
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<tr>
<td>2522-22U i5-540M</td>
<td>2.40 2.93 2GBx1 1066</td>
<td>14.1&quot; WXGA 2.0M</td>
<td>320GB 7200</td>
<td>Intel 6300™ upg</td>
<td>Fingerprint</td>
<td>Blue vPro Pro 32 24 X 7</td>
<td>5-yr P&amp;L P/U Depot</td>
</tr>
</tbody>
</table>

Limited warranty ™ 3-years/1yr battery - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced January 7, March 2, or April 6, 2010
US models withdrawn effective June 2011

Lenovo

*Lenovo 2011

T410 2522 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)
### ThinkPad T410 2522 (Windows 7) - July 2010 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PClie Mini Card WWAN</th>
<th>PClie Mini Card WWAN</th>
<th>Finger print</th>
<th>Battery Blue-</th>
<th>Intel Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2522-KGU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GBx2</td>
<td>1066</td>
<td>2.0M</td>
<td>160G</td>
<td>7200</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Blue vPro</td>
<td>Pro 64</td>
<td>Jul 10</td>
</tr>
<tr>
<td>2522-KHU</td>
<td>i5-540M</td>
<td>2.53</td>
<td>3.06</td>
<td>2GBx2</td>
<td>1066</td>
<td>2.0M</td>
<td>160G</td>
<td>7200</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
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<tr>
<td>2522-57U</td>
<td>i5-560M</td>
<td>2.66</td>
<td>3.20</td>
<td>2GBx2</td>
<td>1066</td>
<td>2.0M</td>
<td>320G</td>
<td>7200</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Blue vPro</td>
<td>Pro 64</td>
<td>Jan 11</td>
</tr>
</tbody>
</table>

* These models have a depot repair service 3-year limited warranty

* These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

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**Positioning**

- Processor: Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core,DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

- 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW Ultrabay Slim SATA disk**

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
  - Some: 160GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
  - Some: 160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System®
- All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**

- 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®; magnifying glass
- Touchpad
- ThinkLight™ UltraNav®, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 14.1"W (WXxHxD): 13.2" x 9.4" x 1.1–1.3; 335.5 x 239mm x 27.6–31.9mm
- 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

**Battery - type**

- Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
- 6-cell: up to 11 hr; 9-cell: plus Slice battery: up to 22 hr

**Chipset**

- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)
- Smart card reader: None
- Multicard reader: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Ports: Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DV/DV+R)
- Roxio MyDVD® (DV/DV+)
- Corel® WinDVD® (DV+R)

* Supports ThinkVantage® technologies

---

**Preloaded operating system**

- Genuine Windows® 7
- Professional 64

**Battery - life**

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**Limited warranty**

- 3-years/1-yr battery - depot repair service / service upgrades available

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See footnotes for important warranty information.

US models announced July 6, 2010 or January 11, 2011

US models withdrawn effective February or June 2011
**ThinkPad T410 2522 (Optimus) - Windows 7 - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB rpm</th>
<th>PClie Mini Card WWAN</th>
<th>PClie Mini Card WWAN upg</th>
<th>Finger print reader</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2522-88U</td>
<td>i5-560M</td>
<td>2.66</td>
<td>3.20</td>
<td>2GBx1</td>
<td>1066</td>
<td>14.1” WXGA</td>
<td>512MB</td>
<td>320G 7200</td>
<td>Intel 6200</td>
<td>None</td>
<td>None</td>
<td>Pro 64</td>
<td>Sep 10</td>
</tr>
</tbody>
</table>

- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft Office 2010 Product Key Ready (O10PKR)**

Positioning Processor

- Premier performance; two spindles
- Intel® Core™ i5 processor i5-560M with dual-core
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 9MB cache

Memory

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3
- non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

SATA DVD±RW

- SATA burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System®

Widescreen display

- Camera on top of screen, 2.0-megapixel, fixed focus

Optimus graphics

- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics
- Intel HD Graphics in processor, and
- NVIDIA NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touchpad

- TrackPoint® module, below keyboard, Tap Zones, scrolling regions label, multi-touch

Dimensions

- 14.1” (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

Optimus graphics

- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics
- Intel HD Graphics in processor, and
- NVIDIA NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

Chipset

- Mobile Intel GM57 Express Chipset
- One slot (ExpressCard/34)
- None

Multicard reader

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modern (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

PCle Mini Card

- Two PCI Express Mini Card slots
- Intel 6200 WWAN upg

Modem

- 56K V.92 modem
- Bluetooth 2.1 wireless, LED indicator
- Ethernet
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (IAMT)
- Audio support
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphones, mic mute button, combo audio/mic jack
- Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader
- None

Limited warranty

- 3-years/1-yr battery - depot repair service / service upgrades available

Preloaded operating system

- Genuine Windows® 7 Professional 64

Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch™
- Roxio® Creator® Business Edition (DVDS/RW)
- Roxio MyDVD® (DVDS/RW)
- Corel® WinDVD® (DVDS/RW)

Supports ThinkVantage® technologies

- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced September 28, 2010
US model withdrawn effective June 2011
ThinkPad® T410 2519 (Discrete) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen Display</th>
<th>CCFL or LED Camera</th>
<th>Disk</th>
<th>Sata optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card Blue/Gray</th>
<th>Battery</th>
<th>Intel WWAN</th>
<th>Fingerprint</th>
<th>Fingerprint Software</th>
<th>Power On Authentication</th>
<th>Support services</th>
</tr>
</thead>
<tbody>
<tr>
<td>2519-8BU</td>
<td>i5-520M</td>
<td>2GB</td>
<td>14.1&quot; WXGA+</td>
<td>LED</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>DVD±RW</td>
<td>Intel 6200</td>
<td>None</td>
<td>Yes</td>
<td>vPro</td>
<td>Pro 32</td>
<td>Jan 10</td>
<td></td>
</tr>
</tbody>
</table>

- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

**Processor**

Premiere performance; two spindles.

Intel® Core™ i5 processor i5-520M with dual-core.

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

Non-italics: standard memory in one socket; one socket available

**SATA DVD±RW**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.

220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**

NVIDIA® NVS™ 3100M, PCI Express x16, 256MB memory;

external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);

supports dual independent display;

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;

2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1"W (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm

**Weight**

6-cell: starting at 5.0 lb (2.27kg); 6-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom

**Chipset**

Mobile Intel GM57 Express Chipset

One slot (ExpressCard/34)

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Power**

90-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service® 24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378

- Preloaded operating system®
  - Genuine Windows® 7 Professional 32

- Preloaded applications® (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - Fingerprint Software
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox
  - Adobe® Reader®
  - Adobe Flash® Player
  - Skype™ for Windows
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Microsoft Research AutoCollage Touch
  - Roxio® Creator® Business Edition (DVD±RW)
  - Roxio MyDVD® (DVD±RW)
  - Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

See footnotes for important warranty information

US model announced January 7, 2010

US model withdrawn effective June 2011

© Lenovo (N21-9) June 2011
ThinkPad T410 2522 (Discrete) - Windows 7 - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
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<th>Carrier</th>
<th>Finger print</th>
<th>Battery</th>
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<th>Global (G)</th>
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</table>

• These models have a depot repair service 3-year limited warranty
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

Premiere performance; two spindles
Intel® Core™ i5 processor i5-520M or i5-540M with dual-core
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

**SATA DVD+RW UltraBay Slim SATA disk**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

Some: 80GB®, 128GB®, or 160GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
Some: 160GB® (7200 rpm), 250GB® (5400 rpm), or 320GB® (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System®
All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**

Some: 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
Some: 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

Some: camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**

NVIDIA® NVS™ 3100M, PXE Express x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715); supports dual independent display;

**Maximum external resolution:** 2560x1600 (DisplayPort) @60Hz;
2048x1536 (VGA) / 85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)

**Keyboard TrackPoint® Touchpad ThinkLight™**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Dimensions² Weight³ Case color Case material**

14.1W" (WXxD:H): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm
Blacks
Black
Top: High Elasticity Polycarbonate (HEPC);
Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type Battery - life ⁵**

Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery 6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Slice battery: up to 16.6 hr

**Chipset ExpressCard/34 Smart Card read Multicard reader Ports**

Mobile Intel QM75 Express Chipset
One slot (ExpressCard34)
None
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**PCle Mini Card WWAN upg Gobi™ 2000**

Two PCI Express Mini Card slots
11a/b/g/n wireless®, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
Some: Wireless WAN upgradable
Some: Wireless NIC, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

**Carrier Modern Modem Bluetooth® Ethernet Intel AMT Audio support**

Some: AT&T or Verizon®, contract required with service provider
56K V .92 modem
Bluetooth 2.1 wireless, LED indicator
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Security Security chip Fingerprint reader**

Power-on password, hard disk password, supervisor password, security keyhole
Trusted Platform Module, TCG 1.2-compliant
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty³ 3-years/1-year battery - depot repair service / service upgrades²² available

See footnotes for important warranty information
US models announced January 7, March 2, April 6, or July 6, 2010
US models withdrawn effective February or June 2011

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(NZ1-10) June 2011

Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant

International Warranty Service¹⁷ 24 hour x 7 days x 24 day toll-free support during the warranty period¹² via 800-426-7378

ThinkPlus™ ³ 2-year LOR⁴ 05x NBD
ThinkPlus™ 3-year LOR⁴ 05x NBD
ThinkPlus™ 4-year LOR⁴ 05x NBD
ThinkPlus™ 4-year P&L P/U Depot
ThinkPlus™ 5-year P&L P/U Depot
ThinkPlus™ 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**ThinkPad® T410 2522 (Discrete) - Windows 7 (May 2010) - withdrawn**

**Personal Systems Reference (PSREF)**

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<thead>
<tr>
<th>Type-model Processor</th>
<th>Base turbo frequency (GHz)</th>
<th>Display memory (MHz)</th>
<th>Wide-screen display</th>
<th>Graphics controller memory</th>
<th>Disk SATA GB/ rpm</th>
<th>PCIe Mini Card WWAN</th>
<th>PCIe Mini Card WWAN</th>
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<th>Workhorse (W) Global (G) Availability</th>
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</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning Processor**

Premiere performance; two spindles

Intel® i5 processor i5-520M or i5-540M with dual-core, or

Intel Core i7 processor i7-620M with dual-core,

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),

Intel Turbo Boost, Hyper-Threading technology;

i5-520M / i5-540M: 3MB cache; i7-620M: 4MB cache

**Memory**

2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3,

non-pair, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW UltraBay Slim SATA disk**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

Optical Active Bay for interchangeable devices (right side), 9.5mm high, bottom access

160GB (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk,

ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

Some: 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight,

220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight,

220 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

Camera on top of screen, 2.0-megapixel, fixed focus

**Discrete graphics**

NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory,

external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);

supports dual independent display;

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;

2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard TrackPoint®**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, "Press-to-Select," Intel Spectra Scroll Bar™, magnifying glass

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

14.1W" (358mm) WXGA (1280x800) color, anti-glare, LED backlight;

220 nits, 16:10 aspect ratio, 300:1 contrast ratio

14.1W" ( WXxDxH): 13.2" x 9.4" x 1.1–1.3; 335.5 x 239mm x 27.6–31.9mm

**Weight**

220 nits, 16:10 aspect ratio, 300:1 contrast ratio

6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

Black

**Battery - type**

Top: High Elasticity PolyCarbonate (HEPC);

Bottom: Carbon-Fiber Reinforced Plastic

**Battery - life**

Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Slice battery: up to 16.6 hr

**Chipset ExpressCard/34 Smart Card read Multicard reader Ports**

Mobile Intel GM975 Express Chipset

One slot (ExpressCard/34)

None

Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort),

modem (RJ-11), ethernet (RJ-45),

IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**PCle Mini Card Intel 6200® WWAN upg**

Two PCI Express Mini Card slots

11a/b/g/n wireless, PCIe Hall Mini Card, Intel Centrino® Advanced-N 6200, 2x2

Wireless WAN upgradable

Modem 56K V.92® modem

Bluetooth™ Bluetooth 2.1 wireless, LED indicator

Intellink Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (AMT)

Audio support High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security Security chip Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information

US models announced May 4, 2010

US models withdrawn effective June 2011

**Preloaded operating system**

- Genuine Windows® 7 Professional 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio® MyDVD® (DVD:RW)

**Supports ThinkVantage® technologies**

90-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

24 hour x 7 1/2-day toll-free support during the warranty period

via 800-426-7378

ThinkPlus™ 3-year LOR® 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 4-year P&L P/U Depot

ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

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(NZ1-15) June 2011
ThinkPad® T410 2537 (Onsite) - Windows 7 - withdrawn

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These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

• These systems are Microsoft® Office 2010 Product Ready (O10PKR)

Positioning

Processor Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

SATA DVD:RW UltraBay Slim DVD burner, SATA 1.5GB/s, 9.5mm Ubay slim, removable

SATA disk One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

160GB® (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 250GB (7200 rpm) Full Disk Encryption (FDE) / SATA 3.0GB/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System®

Widescreen display Some: 14.1" (35mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1" (35mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera Some: camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

Touchpad ThinkLight™ UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions³ Weight² 14.1W" (WXDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

Case color Black

Case material Top: High Elasticity PolyCarbonate (HEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - type Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

Battery - life¹² 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice battery: up to 22 hr

Chipset Mobile Intel QM57 Express Chipset

ExpressCard/34 One slot (ExpressCard/34)

Smart Card reader None

Multicard reader 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro. SD, SDHC)

USB ports Four USB 2.0 (one powered); eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCle Mini Card Two PCIe Express Mini Card slots; 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable

Modem 56K V.92U modem

Bluetooth™ Bluetooth 2.1 wireless, LED indicator

Ethernet Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT Intel Active Management Technology (AMT)

Audio support High Definition (HD) Audio, Conexant 2058S codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty® 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

Preloaded operating system²⁵ - Some: Genuine Windows® 7 Professional 32

Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™

- Access Connections™

- Password Manager

- FingerPrint Software (fingerprint models)

- ThinkVantage System Update

- ThinkVantage Power Manager

- ThinkVantage Toolbox

- Norton® Internet Security 2011 (30 days of virus definitions)

- Adobe® Reader®

- Adobe Flash® Player

- Windows Live™ Toolbar

- Skype® for Windows

- Microsoft Office 2010 preloaded; purchase product key to activate

- Microsoft Research AutoCollage Touch

- Roxio® Creator® Business Edition (DVD+RW)

- Roxio MyDVD® (DVD+RW)

- Corel® WinDVD® (DVD+RW)

See footnotes for important warranty information

© Lenovo (NZ1-11) June 2011

US models announced January 7, March 2, or April 6, 2010

US models withdrawn effective June 2011

Lenovo.com
ThinkPad® T410 2537 (Discrete) - Onsite (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo Base</th>
</tr>
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<tbody>
<tr>
<td>2537-23U</td>
<td>i5-520M</td>
<td>2.40 2.93</td>
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<td>2537-24U</td>
<td>i5-540M</td>
<td>2.53 3.06</td>
</tr>
<tr>
<td>2537-26U</td>
<td>i5-520M</td>
<td>2.40 2.93</td>
</tr>
</tbody>
</table>

| Memory | 2GB std / 8GB max/* / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available |

| SATA DVD±R/RW Ultrabay Slim SATA disk | DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removeable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access Some: 80GB* or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high Some: 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ All: removeable, upgradable, supports 2nd disk, Shock Mounted Hard Drive |

| Widescreen display | Some: 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio |

| Case | Top: Carbon-Fiber Reinforced Plastic Bottom: lithium Ion-6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery 6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell+ Slice battery: up to 16.6 hr |

| Chipset | Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None |

| Multicard reader Ports | 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC), Four USB 2.0 (one powered), eSATA Port, external monitor (VGA DB-15, DisplayPort), modem (RU-11, ethernet (RU-45), IEEE 1394 FireWire 4 (4-pin connector; 1394a-2000 standard) |

| PCle Mini Card | Two PCI Express Mini Card slots 11a/b/g/n wireless, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable |

| Intel 6200™ | 56K V.92 modem Bluetooth™ | Bluetooth 2.1 wireless, LED indicator Intel 62577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (AMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2 capability Power On Authentication, supports the security chip |

| Limited warranty | 3-years/1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades** available |

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See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective June 2011

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(NZ1-12) June 2011

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- These models are part of the Global Models Plus program with limited onsite service* 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

---

Preloaded operating system*40
- Genuine Windows® 7 Professional 32

Preloaded applications*14 (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

---

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service**
- 24 hour x 7 day** toll-free support during the warranty period via 800-426-7378

ThinkPlus™** 4-year LOR** 5x5 NBD
- 45K6038
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective June 2011

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(NZ1-12) June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card 8x11</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Battery type</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
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<tbody>
<tr>
<td>2522-52U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
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<td>14.1” WXGA</td>
<td>LED 2.0M</td>
<td>250G 5400</td>
<td>Intel 620028</td>
<td>Finger Blue</td>
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<td>Jan 10</td>
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<td>2.93</td>
<td>2GB</td>
<td>14.1” WXGA</td>
<td>LED 2.0M</td>
<td>320G 5400</td>
<td>Intel 6200</td>
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<td>2522-54U</td>
<td>i5-520M</td>
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<td>2.93</td>
<td>3GB</td>
<td>14.1” WXGA+</td>
<td>LED 2.0M</td>
<td>320G 7200</td>
<td>Intel 6200</td>
<td>Finger Blue</td>
<td>6 vPro Pro 32</td>
<td>Jan 10</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)
- Educational models are only available at participating K-12 or higher accredited schools and are operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning Processor

Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3Mb cache

Memory

2GB or 3GB std / 8GB max/² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; \textit{Italics:} standard memory in both sockets; no sockets available; \textit{Non-italics:} standard memory in one socket; one socket available

SATA DVD/HDD

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB (5400 rpm) or 320GB (5400 or 7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System²

Widescreen display

Some: 14.1” (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Some: 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera

Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint² Touchpad

ThinkLight™ Touchpad pointung device, “Press-to-Select,” Internet Scroll Bar², magnifying glass UltraNav², wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions³ Weight³

14.1” (WXDH): 13.2” x 9.4” x 1-1/16”, 335.5 x 239mm x 27.6-31.9mm

6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

Case color

Black

Case material

High Elasticity PolyCarbonate (HEPC); Bottom: Carbon-Fiber Reinforced Plastic

Battery - type

Lithium Ion 6-cell, supports optional Slicce battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slicce battery: up to 22 hr

Battery - life²²

Some: 220 nits, 16:10 aspect ratio, 300:1 contrast ratio

ThinkPlus 4-year P&L P/U Depot

65-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service¹⁷ 24 hour x 7 day²² toll-free support during the warranty period²² via 800-426-7378

PCle Mini Card

Two 2PCi Express Mini Card slots

Intel 6200²² WWAN upg

Modem

56K V.92 modem

Ethernet

Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (iAMT)

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Security chip

Fingerprint reader

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty²² 3-years/1-yr battery - depot repair service / service upgrades²² available

Preloaded operating system²⁰

- Genuine Windows²⁰ 7
- Professional 32

Preloaded applications¹⁴ (only some listed)

• 54U model: Education software
- Microsoft Office Ultimate 2007 Academic Edition (and CD)
- Education software
- Microsoft Office OneNote²⁰ (and CD)
- Adobe Digital School Collection
- Premier Elements 7 (DVD)
- Premiere Elements 7 (and DVD)
- Acrobat 9 Professional (DVD)
- Contribute CS4 (and DVD)
- Soundbooth CS4 (and DVD)
- Rescue and Recovery²⁰
- Access Connections²⁰
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Skype²⁰ for Windows
- Microsoft Office 2010 preloaded: purchase product key to activate
- Roxio® Creator® Business Edition (DVR/ RW)
- Roxio MyDVD²⁰ (DVR/ RW)
- Corel® WinDVD²⁰ (DVR/ RW)

Supports ThinkVantage² technologies
### Remark

- **These models have an depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Professional Key Ready (O10PRK)**
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

### Table: Hardware Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Battery type</th>
<th>Battery size</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2522-55U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2GB</td>
<td>14.1'' WXGA</td>
<td>320GB</td>
<td>Intel 6200a</td>
<td>Finger</td>
<td>Blue 6 vPro</td>
<td>9-cell</td>
<td>6-cell</td>
<td>5.0 lb</td>
</tr>
<tr>
<td>2522-56U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>3GB</td>
<td>14.1'' WXGA</td>
<td>320GB</td>
<td>Intel 6200a</td>
<td>Finger</td>
<td>Blue 9 vPro</td>
<td>9-cell</td>
<td>6-cell</td>
<td>5.35 lb</td>
</tr>
</tbody>
</table>

### Preloaded software

- **Preloaded operating system**: Genuine Windows® 7 Professional 32
- **Preloaded applications**: 14 (only some listed)
  - 56U model: Education software
  - Microsoft® Office Ultimate 2007 Academic Edition (and CD)
  - Education software:
    - Adobe Creative Suite 4 (DVD)
    - Photoshop Elements 7 (DVD)
    - Premiere Elements 7 (DVD)
    - Acrobat 9 Professional (DVD)
    - Windows Media Player 11 (DVD)
    - Soundbooth CS4 (and DVD)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - Fingerprint Software (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox
  - Skype™ for Windows
  - Microsoft Office 2010 preloaded
  - Roxio Creator™ Business Edition (DVD+RW)
  - Roxio MyDVD™ (DVD+RW)
  - Corel® WinDVD™ (DVD+RW)

### Additional Features

- Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

---

**Limited warranty**

- 3-years/1-yr battery - depot repair service / service upgrades available

---

See footnotes for important warranty information.

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(NZ1-14) June 2011
**ThinkPad® T410i 2516 (TopSeller) - XP with Win 7 License - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED Camera</th>
<th>Disk SATA RPM</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Battery- type</th>
<th>Intell Pro</th>
<th>Intel Preload</th>
<th>Aval date</th>
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</thead>
<tbody>
<tr>
<td>2516-APU</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>4GB (single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 14.1”WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio; Camera on top of screen, 2.0-megapixel, fixed focus</td>
<td>Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort</td>
<td>2560x1600 (DisplayPort)@60Hz</td>
<td>Intel 1000</td>
<td>AT&amp;T&lt;sup&gt;13&lt;/sup&gt;</td>
<td>Finger Blue</td>
<td>9-cell</td>
<td>AT&amp;T&lt;sup&gt;13&lt;/sup&gt;</td>
<td>6 No XP Pro Feb 10</td>
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</tr>
<tr>
<td>2516-ARU</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>4GB (single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 14.1”WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio; Camera on top of screen, 2.0-megapixel, fixed focus</td>
<td>Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort</td>
<td>2560x1600 (DisplayPort)@60Hz</td>
<td>Intel 1000</td>
<td>AT&amp;T&lt;sup&gt;13&lt;/sup&gt;</td>
<td>Finger Blue</td>
<td>9-cell</td>
<td>AT&amp;T&lt;sup&gt;13&lt;/sup&gt;</td>
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<td>2516-BQU</td>
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<td>2GB</td>
<td>4GB (single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 14.1”WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio; Camera on top of screen, 2.0-megapixel, fixed focus</td>
<td>Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort</td>
<td>2560x1600 (DisplayPort)@60Hz</td>
<td>Intel 1000</td>
<td>AT&amp;T&lt;sup&gt;13&lt;/sup&gt;</td>
<td>Finger Blue</td>
<td>9-cell</td>
<td>AT&amp;T&lt;sup&gt;13&lt;/sup&gt;</td>
<td>6 No XP Pro Apr 10</td>
<td></td>
</tr>
</tbody>
</table>

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- These small and medium business (SMB) models are part of the US TopSeller™ Program

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**Positioning**

- Premiere performance; two spindles
- Intel® Core™ i3 processor i3-330M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

**Memory**

- 2GB std / 8GB max / PC3-8500 1066MHz, Hyper-Threading technology; 3MB cache

**SATA DVD±RW UltraBay Slim SATA disk**

- DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- 250GB<sup>10</sup> (5400 rpm) or 320GB<sup>10</sup> (7200 rpm) / SATA 3.0GB/s, 2.5” wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- 14.1” (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio; Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort
- Supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 14.1”WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio; Camera on top of screen, 2.0-megapixel, fixed focus

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

- TrackPoint<sup>4</sup> pointing device, "Press-to-Select," Internet Scroll Bar<sup>13</sup>, magnifying glass

**Dimensions**

- Weight: 14.1W” (WxDxH): 13.2” x 9.4” x 1.1–1.3”; 335.5 x 239mm x 27.6–31.9mm
- 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

**Battery - type**

- Lithium Ion 6-cell, supports optional S marine battery (5Y74545) as 2nd battery at bottom
- 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus S marine battery: up to 22 hr

**Chipset**

- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)

**Smart Card reader**

- None

**Ports**

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modern (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Pcie Mini Card Intel 1000 Gobi™ 2000**

- Two PCI Express Mini Card slots
- 11b/g/n wireless<sup>10</sup>, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
- Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider
- Some: AT&T<sup>13</sup>, contract required with service provider

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

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See footnotes for important warranty information

US models announced February 2 or April 6, 2010
US models withdrawn effective July 31, 2010

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Preloaded operating system<sup>30</sup>
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications<sup>14</sup> (only some listed)
- Rescue and Recovery™
- Access Connections<sup>9</sup>
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD®<sup>30</sup> (DVD+RW)
- Corel® WinDVD®<sup>30</sup> (DVD+RW)

SUPPORTS THINKVANTAGE® TECHNOLOGIES

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT<sup>®</sup> Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service<sup>17</sup>
- 24 hour x 7 day<sup>12</sup> toll-free support during the warranty period<sup>12</sup> via 800-426-7378

ThinkPlus™<sup>22</sup> 1-year LOR<sup>24</sup> 9x5 NBD
ThinkPlus 2-year LOR<sup>24</sup> 9x5 NBD
ThinkPlus 3-year LOR<sup>9x5 NBD</sup>
ThinkPlus 4-year LOR<sup>9x5 NBD</sup>
ThinkPlus 5-year LOR<sup>9x5 NBD</sup>
ThinkPlus 2-year P&L P/U Depot
ThinkPlus 3-year P&L P/U Depot
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad T410i 2516 (TopSeller) - Windows 7 - withdrawn

### Personal Systems Reference (PSREF)

**Preload**

- Lenovo

**US models withdrawn effective July 2010 or June 2011**

See footnotes for important warranty information

US models announced February 2 or July 6, 2010, or January 11, 2011

US models withdrawn effective July 2010 or June 2011

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### Type-model Processor GHz Memory Wide-screen display Camera Disk SATA GB rpm PCIe Mini Card PCIe Mini Card WWAN Carrier Finger print reader Bluetooth cells vPro Preload Avail date

<table>
<thead>
<tr>
<th>Type-model</th>
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<th>Memory</th>
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<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
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<th>Finger print reader</th>
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<td>6</td>
<td>No</td>
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### Positioning Processor

- Premier performance; two spindles
- Intel® Core™ i3 processor i3-330M, i3-370M, or i3-390M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

### Memory

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in one socket; one socket available

### SATA DVD±RW

- Ultrabay Slim
- Ultrabay DVD burner, SATA 1.5Gbps, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

### SATA disk

- 250GB (5400 rpm) or 320GB (7200 rpm)
- Sata 3.0Gbps, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- 14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight, 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera: Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual-independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) at 60Hz; 2048x1536 (VGA) at 75Hz; 1920x1200 at 60Hz (single-link DVI-D via cable 45J7915)

### Keyboard

- 89-key, ThinkVantage button, spill-resistant multimedia Fn keys

### TrackPoint

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass UltraNav®

### Touchpad

- Wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- Weight: 14.1" (WXxDXH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm
- Screen: 2560x1600 (DisplayPort) at 60Hz; supports dual independent display; digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915)

### Battery

- Lithium Ion 6-cell, supports optional Siyte battery (57Y4545) as 2nd battery at bottom: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Siyte battery: up to 22 hr

### Chipset

- Mobile Intel GM57 Express Chipset
- One slot (ExpressCard/34)

### Smart Card read

- Multicard reader
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### PCIe Mini Card

- Intel 1000
- WWAN upg
- Gobi™ 2000
- Carrier
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSIA, GPS
- Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider

### Modern

- Bluetooth™ None
- Ethernet
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (iAMT)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Fingerprint reader

- Trusted Platform Module, TCG 1.2-compliant

---

### Limited warranty

- 1-year - depot repair service / service upgrades available

---

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

*These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

---

**Preloaded operating system**

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Preloaded applications** (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

---

**Supports ThinkVantage® technologies**

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period
during the warranty period

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**Lenovo**

ThinkPad® T410i 2516 (TopSeller) - Windows 7 - withdrawn

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June 2011

NZ1i-2

Lenovo.com/thinkplus/warranty
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Intel</th>
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<td>Pro 64</td>
<td>Jul 10</td>
</tr>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor

Premiere performance; two spindles

Intel® Core™ i3 processor i3-370M with dual-core,
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Hyper-Threading technology; 3MB cache

Memory

2GB std / 8GB max / PC-3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-italics: standard memory in one socket; one socket available

SATA DVD±RW (±R DL) /±RW UltraBay Slim Sata disk

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
250GB² (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk,
ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display

14.1" (358mm) WXGA (1280x800) color, anti-glare, LED backlight,
220 nits, 16:10 aspect ratio, 300:1 contrast ratio,
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics

Intel HD Graphics in processor,
eternal analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard

8-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar², magnifying glass

ThinkLight™ pointing device, UltraNav™, wide touchpad below keybord, Tap Zones, scrolling regions label, multi-touch
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions³

14.1"W (358mm) DHxH: 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 28–31.9mm
6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)

Weight

Top: High Elasticity PolyCarbonate (HEPC);
Bottom: Carbon-Fiber Reinforced Plastic

Battery - type

Lithium Ion 9-cell, supports optional Slicе battery (57Y4545) as 2nd battery
6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slicе battery: up to 22 hr

Chipset

Mobile Intel GM57 Express Chipset

ExpressCard/34 Smart Card read

None

Multicard reader

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports

Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort),
modem (RU-11), ethernet (RU-45),
IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

PCIe Mini Card

Two PCIe Express Mini Card slots

Intel 1000 WWAN upg Gobi™ 2000

Some: Wireless WAN upgradeable

Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A,
GPRS/WCDMA/HSPA, GPS

Carrier

Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®,
contract required with service provider

Modem

56K V.92 modem

Some: Bluetooth 2.1 wireless, LED indicator

Ethernet

Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel Active Management Technology (IAMT)

High Definition (HD) Audio, Conexant 2058S codec / speaker, 1 watt x 2 /
speaker volume up, down and mute buttons / dual array microphone, mic mute button,
combo audio/mic jack

Audio support

Power-on password, hard disk password, supervisor password, security keyhole

Security

Trusted Platform Module, TCG 1.2-compliant

Security chip

Fingerprint reader

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
Power On Authentication, supports the security chip

Limited warranty²  3-years/1-yr battery - depot repair service / service upgrades²² available

Preloaded operating system³

- Genuine Windows® 7 Professional 64

Preloaded applications¹ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
  (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded;
purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

65-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service (available at)
24 hour x 7 day toll-free support

during the warranty period 12

Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information
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US models announced July 6, 2010
US models withdrawn effective June 2011
### ThinkPad T410i 2518 (Discrete) - TopSeller (Windows 7) - withdrawn

<table>
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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>PCIe Mini Card</th>
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<th>Intel vPro</th>
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<td>No</td>
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<td>Jul 10</td>
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</table>

- **This small and medium business (SMB) model** is part of the US TopSeller™ Program
- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Positioning

**Processor:**
- Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

### Memory

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; 
- Non-italics: standard memory in one socket; one socket available

### SATA DVD±RW

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB® (7200 rpm) /
- SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- **14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.**
- 220 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

### Desktop graphics

- NVIDIA® NVS™ 3100M, PCI Express® x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent resolution;
- **Maximum external resolution:** 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard

- 9-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

### Touchpad

- UltraNav™, wide touchpad below keybord, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- **14.1"W (WXDxH): 13.2" x 9.4" x 1.3"; 335.5 x 239mm x 27.6–31.9mm**
- 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.5 lb (2.43kg)

### Weight

- 890 watts AC adapter

### Multicard reader

- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)
- None
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### PCl e Mini Card

- Two PCI Express Mini Card slots
- 11a/b/g/n wireless®, PCle Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- Wireless WAN upgradable

### Modem

- 56K V.92 modem
- Bluetooth® 2.1 wireless, LED indicator

### Ethernet

- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (iAMT)

### Audio support

- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

### Security

- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant
- FingerPrint reader UPEK FingerPrint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

- 3-years 1-yr battery - depot repair service / service upgrades available

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See footnotes for important warranty information

US model announced July 6, 2010

US model withdrawn effective June 2011
### Memory
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM (55Y3706 ann 06/23/09)
- 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) (57Y4385 ann 06/23/09)
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM (55Y3707 ann 06/23/09)
- 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) (57Y4386 ann 06/23/09)
- 4GB PC3-8500 DDR3 Low-Halogen SODIMM (55Y3708 ann 06/23/09)

### Ultrabay Slim 9.5mm
- Serial ATA Hard Drive Bay Adapter III (43N3412 ann 06/23/09)
- DVD-ROM Ultrabay Slim Drive II SATA 1.5g/s (43N3292 ann 08/03/10)
- DVD Burner Ultrabay Slim Drive II SATA 1.5g/s (43N3229 ann 06/23/09)

### Storage and removable storage
- 500GB Disk SATA 3.0Gb/s (7200 rpm) (43N3423 ann 01/07/10)
- 256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover) (43N3417 ann 06/23/09)
- 256GB SSD SATA 3Gb/s 1.8" (2.5" cover) (43N3417 ann 06/23/09)
- USB 2.0 Portable 320GB Hard Disk (45K1689 ann 03/17/09)
- USB 2.0 Portable 500GB Hard Disk (45K1690 ann 05/26/09)
- USB 2.0 Portable Secure 320GB Hard Disk (43R2019 ann 11/18/08)
- eSATA/USB 2.0 Secure 500GB Hard Drive (57Y4400 ann 01/07/10)
- USB 2.0 Portable DVD Burner (43N3264 ann 01/05/10)
- Lenovo Slim USB Portable DVD Burner (0A39888 ann 06/14/11)

### Wireless WAN (Mini PCI Express)
- Only WWAN upgradable models:
  - ThinkPad Gobi™ 2000 Broadband Option (78Y1398 ann 03/22/11)
  - ThinkPad AT&T™ 2000 Broadband Option (78Y1399 ann 01/07/10)

### ThinkPad Expansion
- Lenovo Essential Notebook Stand (45J9292 ann 05/12/09)
- ThinkPad Port Replicator Series 3 - 90W (433710U ann 06/23/09)
- ThinkPad Mini Dock Plus Series 3 - 90W (433810U ann 06/23/09)
- ThinkPad Mini Dock Plus Series 3 - 135W (433820U ann 01/07/10)

### Keyboard
- TrackPoint Keypad (73P2698 ann 12/16/03)
- Preferred Pro USB Keyboard (73P5220 ann 06/21/05)
- Enhanced Performance USB Keyboard (73P6260 ann 03/23/04)
- Ultrasmall Wireless Keyboard and Mouse (57Y4700 ann 09/15/09)
- ThinkPad USB Keyboard with TrackPoint (55Y9003 ann 08/18/09)
- Lenovo USB Fingerprint Keyboard (73P4730 ann 02/22/05)
- Lenovo USB Smartcard Keyboard (51J0155 ann 03/24/09)

### Mouse
- Lenovo Optical Mouse (USB) (06P0469 ann 05/21/03)
- Lenovo Laser Mouse USB (41U3074 ann 01/23/07)
- ThinkPad USB Laser Mouse (57Y4635 ann 12/15/09)
- Lenovo ScrollPoint® Mouse (USB, Optical) (31P7405 ann 08/27/02)
- ThinkPad Travel Mouse (USB, Optical) (31P7410 ann 06/04/02)
- ThinkPad Bluetooth Laser Mouse (41U5008 ann 01/22/08)

### Multimedia
- ThinkPad In-Ear Headphones with mic (57Y4488 ann 01/07/10)

### Security
- Kensington® MicroSaver® Cable Lock (73P2582 ann 12/29/03)
- Kensington Twin Head Cable Lock (45K1620 ann 09/30/08)
- Lenovo Security Cable Lock (57Y4303 ann 08/24/10)
- USB Gemplus GemPC Smart Card Reader (41N3040 ann 02/21/06)

### Batteries
- ThinkPad Battery 55+ (6-cell) (57Y4185 ann 03/30/10)
- ThinkPad Battery 55++ (9-cell) (57Y4186 ann 03/30/10)
- ThinkPad Battery 27++ (9-cell, slice) (57Y4545 ann 01/07/10)
- To be used along with system battery for all-day computing; attatches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).
- ThinkPad External Battery Charger (40Y7625 ann 09/20/05)
- Requires the ThinkPad 90W AC Adapter.
- 40Y7659 or the adapter provided with the system.

More information at [www.lenovo.com/aldaycomputing](http://www.lenovo.com/aldaycomputing)

ThinkPad 65W AC Adapter (40Y7696 ann 01/05/06)
- Only compatible with the integrated graphics models.
- ThinkPad 90W AC Adapter (40Y7659 ann 09/20/05)
- ThinkPad 65W AC Adapter with USB Hub (57Y4400 ann 09/07/10)
- 90W Ultrasilin AC/DC Combo Adapter (41R4493 ann 09/22/09)

More info at [www.lenovo.com/support/poweradapters](http://www.lenovo.com/support/poweradapters)

### Carrying Cases
- Up to 14" widescreen models:
  - ThinkPad 14W Case Sleeve (57Y4294 ann 03/16/10)

More information at [www.lenovo.com/accessories/cases](http://www.lenovo.com/accessories/cases)

### Monitors
- ThinkVision™ L1711p 17" Monitor (5047HB2 ann 10/20/09)
- ThinkVision L1900p 19" Monitor (4431HE1 ann 11/11/08)
- ThinkVision L1951p Wide 19" Monitor (2448HB ann 10/20/09)
- ThinkVision L2250p Wide 22" Monitor (2572HB ann 10/20/09)
- ThinkVision L2251p Wide 22" Monitor (2572HB ann 10/20/09)
- ThinkVision L2321x Wide 23" Monitor (4014HB ann 06/10/10)

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

### Monitor Accessories
- Lenovo USB-to-DVI Monitor Adapter (45K5296 ann 05/12/09)
- DisplayPort to Single-link DVI-D Cable (45J915 ann 08/05/08)
- ThinkVision USB Soundbar (40Y7616 ann 08/23/05)
- ThinkVision Soundbar (45K1263 ann 09/16/08)
- Kensington MicroSaver Cable Lock (73P2582 ann 12/29/03)
- Kensington Twin Head Cable Lock (45K1620 ann 09/30/08)
- Lenovo Security Cable Lock (57Y4303 ann 08/24/10)
- Lenovo Easy Reach Monitor Stand (55Y9258 ann 09/29/09)
- Generic Micro USB charge tip (L18)

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:
- [www.lenovo.com/accessories](http://www.lenovo.com/accessories)
- [www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)
- [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)
- [www.lenovopowerhints.com](http://www.lenovopowerhints.com)

More information at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

More information at [www.lenovo.com/psref](http://www.lenovo.com/psref)

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(O-T410) June 2011
Positioning Processor
Preime performance: two spindles
Intel® Core™ i5-2410M processor (dual-core, 2.5GHz, 3MB Cache).

Memory
8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

Optical Ultrabay
DVD burner, 12.7mm Ultrabay Enhanced, removable

SATA disk
One bay for removable devices. Ultrabay-Slim-compatible. 12.7mm high, bottom access

Battery
Some: Solid State Drive (SSD) / SATA 3.0Gbps, 2.5" wide, 7mm high
Some: Hard Disk Drive / SATA 3.0Gbps, 2.5" wide, 9.5mm high, Active Protection System™
All: removable, upgradeable, supports the second disk, Shock Mounted Hard Drive

Widescreen display
Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera
HD720p resolution, wider view angle, low light sensitive, fixed focus

Graphics
Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

Keyboard
7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Trackpoint®
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

Touchpad
UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch multi-touch 3-finger gestures can improve visibility in low-light conditions

Dimensions
14.0W (WxHxD): 13.4" x 9.17" x 1.18~1.20" 340.5mm x 233.0mm x 30.1~30.5mm

Weight
4-cell: from 4.60 lb (2.09kg); 6-cell: from 4.79 to 2.17kg; 9-cell: from 5.17 to 2.35kg

Battery - type
Limited 4-cell, 6-cell, 9-cell, supports optional Spare battery (0A36304) as 2nd battery

Battery - life
6-cell (57Whr): up to 9.0 hr; 9-cell (94Whr): up to 15.0 hr; 9-cell plus Spare battery: up to 30 hr

Chipset
Mobile Intel GM67 Express Chipset

ExpressCard
One slot (ExpressCard/34)

Smart Card read
Some: Smart Card reader

Multicard reader
4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card

WLAN
Two PCI Express Mini Card slots

Some: 11b/g/n, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3

WWAN
Wireless WAN upgradable

Modem
None

IEEE 1394
Some: IEEE 1394a-2000 standard

Bluetooth®
Some: Bluetooth 3.0 wireless, LED indicator

Ethernet
Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

Intel AMT
Some: Intel Active Management Technology (IAMT)

Audio support
Some: High Definition (HD) audio, Centravox 2067 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mix mut button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty
1-year - depot repair service / service upgrades available

Preloaded operating system
Some: Genuine Windows 7 Home Premium 64
Some: Genuine Windows Professional 64

Ready to install applications (only some listed)
Norton™ Internet Security 2011 (30 days of virus definitions)
Adobe® Reader®
Corel® WinDVD® (DVD:RW)
Corel Burn:Now™ Lenovo Edition (DVD:RW)
Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Preloaded applications (only some listed)
Microsoft Office 2010 preloaded; purchase product key to activate
Lenovo SimpleTap

For compatible accessories, please go to O-T420 sheet;
For Lenovo service upgrade options, please go to S-TA sheet;

See footnotes for more detailed information
© Lenovo
US model(s) announced February 22, April 5, May 3, or October 4, 2011, or January 17, 2012
US model(s) withdrawn effective December 2012
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Modem</th>
<th>IEEE</th>
<th>Finger</th>
<th>Battery</th>
<th>Intel</th>
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<th>Preload</th>
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<tbody>
<tr>
<td>4178-6UU</td>
<td>i5-2520M</td>
<td>4GBx1</td>
<td>14.0&quot; HD</td>
<td>720p</td>
<td>500G</td>
<td>7200</td>
<td>Intel 6205®</td>
<td>WWAN upg</td>
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<td>Finger</td>
<td>6</td>
<td>I AMT</td>
<td>vPro</td>
<td>Pro 64</td>
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<td>Intel 6205</td>
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<td>Finger</td>
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<td>Intel 6205</td>
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<td>Finger</td>
<td>6</td>
<td>I AMT</td>
<td>vPro</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>

**Preloaded operating system**
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

**Ready to install applications**
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

**Preloaded applications**
- Norton™ Internet Security 2011
- Adobe® Reader
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded
- purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

**Dimensions**

<table>
<thead>
<tr>
<th>Weight</th>
<th>Case material</th>
<th>Battery</th>
<th>life</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.0W</td>
<td>Carbon-Fiber Reinforced Plastic</td>
<td>Lithium Ion</td>
<td>4-cell; 6-cell, or 9-cell, supports optional Slic battery (0A36304) as 2nd battery</td>
</tr>
<tr>
<td>(WxDxH): 13.4&quot; x 9.17&quot; x 1.18–1.20&quot;</td>
<td>340.5 x 233.0mm x 30.1–30.5mm</td>
<td>6-cell: 9.00 Whr, 15200 mAh; 9-cell plus Slice battery: up to 30 hr</td>
<td></td>
</tr>
</tbody>
</table>

**Chipset**

- Mobile Intel GM67 Express Chipset

**Ports**

- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**Preloaded applications**

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service® 24 hour 7 x 7 toll-free support during the warranty period

**For compatible accessories, please go to O-T420 sheet;**

**For Lenovo service upgrade options,** go to O-T420 sheet;
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>GB Pcie Mini Card</th>
<th>Pcie Mini Card WWAN/SATA</th>
<th>Modem</th>
<th>IEEE 1394</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Intel vPro</th>
<th>Pre- load</th>
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<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>1394</td>
<td>Finger Blue</td>
<td>Blue Yes No</td>
<td>Pro 64 10/11</td>
<td></td>
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<tr>
<td>4178-CSU</td>
<td>i7-2640M</td>
<td>4GBx1</td>
<td>14.0” HD+</td>
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<td>500G</td>
<td>7200</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>1394</td>
<td>Finger Blue</td>
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<tr>
<td>4178-CU2</td>
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<td>14.0” HD</td>
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<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
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<td>Finger Blue</td>
<td>Blue Yes No</td>
<td>Pro 64 01/12</td>
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</tbody>
</table>

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system30
- Genuine Windows® 7 Professional 64

### Ready to install applications14 (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

### Preloaded applications14 (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

### Chipset
- Mobile Intel QM67 Express Chipset

### ExpressCard
- One slot (ExpressCard/34)

### Smart Card reader
- No

### Multicard reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

### Ports
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PCIe Mini Card WLAn™ WWAN
- Two PCI Express Mini Card slots 11b/g/n, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WLAN upgradable

### Modem
- None

### IEEE 1394
- Some: IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Bluetooth™
- Bluetooth 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, Pcle x1

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Fingerprint reader
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty31
- 3-years/1-yr battery - depot repair service / service upgrades22 available

---

See footnotes for more detailed information © Lenovo
US model(s) announced October 4 or October 11, 2011, or January 17, 2012
US model(s) withdrawn effective December 2012

(N23-8) February 2013
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<tr>
<th>Processor</th>
<th>Memory</th>
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<th>Finger</th>
<th>Battery</th>
<th>Intel</th>
<th>Preload</th>
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</thead>
<tbody>
<tr>
<td>Intel® Core™ i5-2520M</td>
<td>4GBx1</td>
<td>720p</td>
<td>500G</td>
<td>7200</td>
<td>None</td>
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<td>Blue</td>
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<tr>
<td>Intel® Core™ i5-2520M</td>
<td>4GBx1</td>
<td>720p</td>
<td>500G</td>
<td>7200</td>
<td>None</td>
<td>1394</td>
<td>Blue</td>
<td>9</td>
</tr>
<tr>
<td>Intel® Core™ i5-2520M</td>
<td>2GBx2</td>
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<td>320G</td>
<td>7200</td>
<td>None</td>
<td>1394</td>
<td>Blue</td>
<td>9</td>
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<tr>
<td>Intel® Core™ i7-2620M</td>
<td>4GBx1</td>
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<td>7200</td>
<td>None</td>
<td>1394</td>
<td>Blue</td>
<td>9</td>
</tr>
</tbody>
</table>

Positioning
- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system
- Genuine Windows® 7 Professional 64

Ready to install applications
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded: purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

See footnotes for more detailed information

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(NZ3-2) February 2013

US model(s) announced February 22 or October 11, 2011

US model(s) withdrawn effective January or December 2012
**ThinkPad® T420 4180 - withdrawn**

### Type-model Processor Memory Wide-screen display Memory Screen Disk SATA Blueooth Battery Intel Global (G) vPro Educ Preload

| 4180-MNU | i5-2520M | 4GBx1 | 14.0” HD | 128GB SSD | WWAN upg | Modem | 1394 | Fingerprint Reader | Blue | 6 | Intel AMT | vPro | G | Pro 64 |
| 4180-MBU | i5-2540M | 4GBx1 | 14.0” HD | 320GB | WWAN upg | Modem | 1394 | Fingerprint Reader | Blue | 6 | Intel AMT | vPro | G | Pro 64 |
| 4180-62U | i5-2540M | 4GBx1 | 14.0” HD | 320GB | WWAN upg | Modem | 1394 | Fingerprint Reader | Blue | 6 | Intel AMT | vPro | G | Pro 64 |
| 4180-KHU | i5-2540M | 4GBx1 | 14.0” HD | 320GB | WWAN upg | Modem | 1394 | Fingerprint Reader | Blue | 6 | Intel AMT | vPro | G | Pro 64 |
| 4180-PAU | i5-2520M | 4GBx1 | 14.0” HD | 128GB SSD | WWAN upg | Modem | 1394 | Fingerprint Reader | Blue | 6 | Intel AMT | vPro | G | Pro 64 |

- **These models have a depot repair service 3-year limited warranty**
- **These are Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Preloaded operating system
- Some: Genuine Windows® 7
- Some: Genuine Windows® 7 Professional 64

### Ready to install applications
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

### Preloaded applications
- Norton™ Internet Security 2011
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Lenovo MovieFactory® Lenovo Edition (DVD:RW)

### Sees footnotes for more detailed information

### USB model(s) announced February 22, March 1, April 5, or May 3, 2011
US model(s) withdrawn effective January or December 2012

### US model(s) withdrawn January or December 2012

- **Intel Core™ i5-2410M processor (dual-core, 2.90GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology**
- **Intel Core i5-2540M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology**
- **Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology**

### Processor

<table>
<thead>
<tr>
<th>Processor</th>
<th>8GB max//PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 20-pin SO-DIMM sockets</th>
<th>8GB max//PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 20-pin SO-DIMM sockets</th>
<th>8GB max//PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 20-pin SO-DIMM sockets</th>
</tr>
</thead>
<tbody>
<tr>
<td>i5-2410M</td>
<td>2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
<td>2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
<td>2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
</tr>
<tr>
<td>i5-2540M</td>
<td>2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
<td>2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
<td>2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
</tr>
</tbody>
</table>

### Model (s) have a depot repair service 3-year limited warranty

### Footnotes

- Footnote 1: 3-year limited warranty
- Footnote 2: 1-yr battery - depot repair service / service upgrades available
- Footnote 3: These models have a depot repair service 3-year limited warranty
- Footnote 4: These are Microsoft® Office 2010 Product Key Ready (O10PKR)
- Footnote 5: Preloaded with Microsoft® Office 2010 Home Premium
- Footnote 6: These are Microsoft® Office 2010 Professional

### See footnotes for more detailed information

### Lenovo Windows Embedded Systems Reference (PSREF)

### Lenovo US models withdrawn effective January and December 2012

- US model(s) withdrawn January or December 2012
- US model(s) withdrawn effective January or December 2012
### ThinkPad® T420 4180 (November 2011) - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN mSATA</th>
<th>Modem</th>
<th>Smart Card Reader</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Global (G) MPP (P)</th>
<th>Pre-load</th>
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<tbody>
<tr>
<td>4180-Q3U</td>
<td>i7-2640M</td>
<td>4GBx1</td>
<td>14.0&quot; HD+</td>
<td>720p</td>
<td>500G</td>
<td>7200</td>
<td>Intel 6205²⁸</td>
<td>WWAN upg</td>
<td>Modem</td>
<td>Smart</td>
<td>Finger 6</td>
<td>vPro</td>
<td>Pro 64</td>
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<td>i5-2520M</td>
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<td>14.0&quot; HD</td>
<td>720p</td>
<td>500G</td>
<td>5400</td>
<td>Intel 6205</td>
<td>WWAN upg</td>
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<td>Finger 6</td>
<td>vPro</td>
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<td>01/12</td>
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<td>4180-QFU4</td>
<td>i5-2520M</td>
<td>4GBx1</td>
<td>14.0&quot; HD</td>
<td>720p</td>
<td>160G SSD</td>
<td>5400</td>
<td>Intel 6205</td>
<td>WWAN upg</td>
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<td>Finger 6</td>
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</table>

#### Positioning

- **Processor**: Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache).
- **Memory**: 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- **Optical Ultrabay**: DVD burner, 12.7mm Ultrabay Enhanced, removable.
- **SATA disk**: One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access.
- **mSATA™ SSD**: None.
- **Wide-screen display**: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio.
- **Camera**: HD720p resolution, wide view angle, low light sensitive, fixed focus.

#### Graphics

- **Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.
- **Display cover**: Carbon-fiber / Glass-fiber hybrid.
- **Battery - life**: up to 10 hours.

#### Chipset

- **Mobile Intel QM67 Express Chipset**: Supports ThinkVantage™ technologies.

#### Ports

- **PCle Mini Card WLAN**: Two PCI Express Mini Card slots
- **USB 2.0**: one powered, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

#### Preloaded operating system

- Genuine Windows® 7 Professional 64

#### Ready to install applications

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded;
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

#### Preloaded applications

- Microsoft® Office 2010 Product Key Ready (O10PKR)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

#### See footnotes for more detailed information

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US model(s) announced November 1, 2011 or January 3, 2012

US model(s) withdrawn effective December 2012

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Footnotes:

1. 3-years 1-yr battery - depot repair service / service upgrades available
2. WWAN upgradable
3. 3-years service depot repair
4. Microsoft Office 2010 Product Key Ready
5. ENERGY STAR® 5.0-compliant
6. **- 3-years 1-yr battery - depot repair service / service upgrades available
7. **Intel Centrino® Advanced-N 6205, 2x2
8. **Lenovo ThinkPad Roll Cage (one-piece magnesium frame)
9. **EPEAT™ Gold rating
10. **ENERGY STAR® 5.0-compliant
11. **RoHS-compliant
12. **International Warranty Service
13. **24 hour x 7 day toll-free support during the warranty period
14. **For compatible accessories, please go to O-T420 sheet
15. **For Lenovo service upgrade options, please go to S-TA sheet
**ThinkPad® T420 4180 (Optimus) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
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<th>PCIe Mini Card</th>
<th>WWAN/mSATA</th>
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<th>IEEE 1394</th>
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</table>

- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning**

**Processor**

Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

Intel Core i5-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (4.00GHz), HT technology

Intel Core i7-2640M processor (dual-core, 2.80GHz, 8MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (5.00GHz), HT technology

**Memory**

8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay SADA disk**

DVD burner, 12.7mm Ultrabay Enhanced, removable

One bay for ultrabay devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

Some: Solid State Drive (SSD) / SATA 3.0Gbs, 2.5" wide, 7mm high

Some: Hard Disk Drive / SATA 3.0Gbs, 2.5" wide, 9.5mm high, Active Protection System™

All: removable, upgradeable, supports the second disk, Shock Mounted Hard Drive

**mSATA™ SSD**

**Widescreen display**

Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio

**Camera**

Some: HD720p resolution, wider view angle, low light sensitive, fixed focus

**Graphics**

NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M, PCI Express® x16, 1GB memory, external analog monitor via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports three independent displays,

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz, 2048x1536 (VGA)@75Hz, 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Dimensions**

14.0W" (WXDH): 13.4" x 9.17" x 1.18–2.00"; 340.5 x 233.0mm x 30.1–50.5mm

4-cell: from 4.65 lb (2.11kg); 6-cell: from 4.84 lb (2.20kg); 9-cell: from 5.22 lb (2.37kg)

**Weight**

**Case material**

Display cover: Carbon-fiber / Glass-fiber hybrid

Bottom: Carbon-fiber Reinforced Plastic

**Battery - type**

Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (0A36304) as 2nd battery

6-cell (57Whr): up to 11 hr; 9-cell (94Whr): up to 14.7 hr

**Battery - life**

Mobile Intel QM67 Express Chipset

**Chipset**

ExpressCard

One slot (ExpressCard/34)

Some: Smart Card reader

Multicard reader 4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort, ethernet (PJ-45)

**PCIe Mini Card**

Two PCI Express Mini Card slots

11a/b/g/n, PCIE Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradeable

**WWAN**

Modern None

IEEE 1394

IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Bluetooth**

Some: Bluetooth 3.0 wireless, LED indicator

**Ethernet**

Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (AMT)

**Audio support**

High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

3-years/1-year battery - depot repair service / service upgrades available

**Preloaded operating system**

- Genuine Windows® 7 Professional 64

**Ready to install applications**

- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

**Preloaded applications**

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

See footnotes for more detailed information

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US model(s) announced February 22 or November 1, 2011
US model(s) withdrawn effective January or December 2012
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</table>

**Positioing**

- **Premiere performance; two spindles**
  - **Intel Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)**
  - DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
  - **Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)**

**Memory**

- 8GB max / PCC-103600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical**

- DVD burner, 12.7mm UltraBay Enhanced, removable
  - One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access
  - **Some:** Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
  - **Some:** Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
  - All removable, upgrades the second disk, Shock Mounted Hard Drive

**mSATA™ SSD**

- None

**Widescreen display**

- **Some:** 14.0" (355mm) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
  - **Some:** 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
  - HD720p resolution, wider view angle, low light sensitive, fixed focus

**Graphics**

- **Intel HD Graphics 3000** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J79157); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
  - 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint®**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**ThinkLight™**

- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

**Dimensions²**

- 14.0W (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm

**Weight³**

- 4-cell: from 4.60 lb (2.09kg); 14.0" x 9.17" x 0.95"; 355mm

**Case material**

- Carbon-Fiber Reinforced Plastic; 1.4lb; 614g

**Battery - type**

- Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (GA36304) as 2nd battery

**Battery - life**

- 6-cell (57Whr): up to 9.0 hr; 9-cell (94Whr): up to 15.0 hr; 9-cell plus Slice battery: up to 30 hr

**Chipset**

- Mobile Intel QM67 Express Chipset

**ExpressCard**

- One slot (ExpressCard/34)

**Smart Card read**

- None

**Multicard reader**

- 4-in-1 reader (MMC, SD, SDHC, SDXC)

**Ports**

- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**

- Two PCI Express Mini Cards slots

**WLAN**

- 11a/b/g/n, PCie Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2

**WWAN**

- Wireless WAN upgradeable

**Modem**

- Some: 56K V.92™ modem

**IEEE 1394**

- Some: IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Bluetooth™**

- BlueTooth 3.0 wireless, LED indicator

**Ethernet**

- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1

**Audio support**

- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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See footnotes for more detailed information

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US model(s) announced February 22 or April 5, 2011, or January 3, 2012
US model(s) withdrawn effective March or December 2012
ThinkPad® T420 4236 (Optimus) - Onsite - withdrawn

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- Partial of the Global Models Plus program with limited onsite service™ 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning

Processor

Premiere performance; two spindles

Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology

Intel Core i5-2520M processor (dual-core, 2.70GHz, 4MB Cache)

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology

Intel Core i7-2620M processor (dual-core, 2.80GHz, 4MB Cache)

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

Memory

8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

Optical Ultrabay Sata disk

DVD burner, 12.7mm Ultrabay Enhanced, removable

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high

Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

All: removable, upgradeable, supports the second disk, Shock Mounted Hard Drive

mSATA™ SSD

Wide-screen display

Some: 14.0" (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

Some: 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera

HD720p resolution, wider view angle, low light sensitive, fixed focus

Graphics

NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel® Graphics 3000 in processor, and NVIDIA® NVS™ 4200M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector, and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;

Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard

7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

14.0W" (355mm) x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm

Weight

4-cell: from 4.65 lb (2.11kg); 14.0" x 9.17" x 0.70"; 355mm x 233mm x 18mm

6-cell: from 6.00 lb (2.73kg); 14.0" x 9.17" x 0.70"; 355mm x 233mm x 18mm

9-cell: from 7.60 lb (3.45kg); 14.0" x 9.17" x 0.70"; 355mm x 233mm x 18mm

Case material

Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (0A36304) as 2nd battery

Battery - life

6-cell: up to 8.8 hr; 9-cell: up to 14.7 hr

Battery - type

UltraNav

Mobile Intel GM67 Express Chipset

ExpressCard slot (ExpressCard/34)

Smart Card read

None

Multicard reader

4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports

Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Supports ThinkVantage® technologies

90-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

PEP™ Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

For compatible accessories, please go to O-T420 sheet;

For Lenovo service upgrade options, please go to S-TA sheet

Preloaded operating system

- Genuine Windows® 7 Professional 64

Ready to install applications (only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded;

purchase product key to activate

- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Preloaded applications (only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded;

purchase product key to activate

- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

See footnotes for more detailed information

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US model(s) announced February 22 or November 1, 2011

US model(s) withdrawn effective January or December 2012

(NZ3-6) February 2013
Preloaded applications\(^7\) (only some listed)
- Norton\textsuperscript{™} Internet Security 2011 (30 days of virus definitions)
- Adobe\textsuperscript{®} Reader
- Skype\textsuperscript{™} for Windows
- Windows Live\textsuperscript{™} Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel\textsuperscript{®} WinDVD\textsuperscript{(Dx:RW)}
- Corel Burn.Now\textsuperscript{™} Lenovo Edition (DVD:RW)
- Corel DVD MovieFactory\textsuperscript{™} Lenovo Edition (DVD:RW)

Preloaded operating system\(^8\)
- Genuine Windows\textsuperscript{®} 7 Professional 64

Ready to install applications\(^14\) (only some listed)
- Rescue and Recovery\textsuperscript{™}
- Access Connections\textsuperscript{15}
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Positioning
- Small and medium business (SMB) model(s), part of the US TopSeller\textsuperscript{™} Program
- Microsoft\textsuperscript{®} Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN/imsATA</th>
<th>Modem</th>
<th>IEEE 1394</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
</tr>
</thead>
<tbody>
<tr>
<td>4177-QGU</td>
<td>Intel Core i3-2310M</td>
<td>4GBx1</td>
<td>14.0” HD</td>
<td>720p</td>
<td>320G 7200</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>19</td>
<td>None</td>
<td>Blue</td>
<td>6</td>
<td>None</td>
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<tr>
<td>4177-R2U</td>
<td>Intel Core i3-2350M</td>
<td>4GBx1</td>
<td>14.0” HD</td>
<td>720p</td>
<td>320G 7200</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>19</td>
<td>None</td>
<td>Blue</td>
<td>6</td>
<td>None</td>
</tr>
</tbody>
</table>

## Graphics
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

## Keyboard
- TrackPoint\textsuperscript{™} pointing device, "Press-to-Select," Internet Scroll Bar\textsuperscript{13}, magnifying glass
- UltraNav\textsuperscript{™}, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

## Drive sizes
- 14.0” (355mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

## Display
- 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
- Digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- External analog monitor support via VGA DB-15 connector
- Supports ThinkVantage\textsuperscript{™} technologies

## Chipset
- Mobile Intel GM67 Express Chipset
- Supports ThinkVantage\textsuperscript{™} technologies

## Ports
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
- Two PCI Express Mini Card slots
- 11b/g/n, PCIe Half Mini Card, Intel Centrino\textsuperscript{®} Wireless-N 1000, 1x2
- Wireless WAN upgradable
- Supports 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT\textsuperscript{™} Gold rating
- ENERGY STAR\textsuperscript{®} 5.0-compliant
- RoHS-compliant
- International Warranty Service\(^17\) 24 hour x 7 days\(^18\) toll-free support during the warranty period\(^18\)
- For compatible accessories, please go to O-T420 sheet!
- For Lenovo service\(^2\) upgrade options, please go to S-TA sheet!
Lenovo® ThinkPad T410s

ThinkPad Battery 42 (3-cell, bay)
57Y4536

ThinkPad Battery 59+ (6-cell)
51J0497

ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology

Lenovo ThinkPad T410s
**Preloaded operating system**
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD®

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| Type-model | Processor | Base turbo frequency (GHz) | Memory | Display | Camera | Hard disk | Optical drive | Wireless | Mini Card | Mini Card | fing/Blue | Card slot | Intel vPro | Preload | Avail date |
|------------|-----------|---------------------------|--------|---------|--------|-----------|--------------|---------|-----------|-----------|-----------|-----------|-----------|----------|--------|-----------|
| 2901-A3U  | i5-520M   | 2.4 - 2.93                | 2GB    | WXGA+   | 14.1”  | 250G      | HDD          | WWAN     | 11b/g/n   | WWAN upg  | Yes       | Express   | XP Pro    | Feb 10   |
| 2901-A4U  | i5-520M   | 2.4 - 2.93                | 2GB    | WXGA+   | 14.1”  | 6200      | HDD          | WWAN upg  | Intel      | WWAN upg  | Yes       | Express   | XP Pro    | Feb 10   |

*These small and medium business (SMB) models are part of the US TopSeller™ Program*
**ThinkPad T410s 2901 (TopSeller) - Windows 7 - withdrawn**

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Processor Speed (GHz)</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2901-ATU</td>
<td>i5-560M</td>
<td>2.66</td>
<td>2GB</td>
<td>WXGA+</td>
<td>14.1&quot;</td>
<td>2.0M</td>
<td>250G</td>
<td>WWAN upg</td>
<td>None</td>
<td>Blue</td>
<td>Express</td>
<td>No</td>
<td>Pro 64</td>
<td>Sep 10</td>
</tr>
</tbody>
</table>

**Positioning Processor**
Premiere performance and ultraportability; two spindles

**Intel® Core™ i5 processor i5-560M with dual-core.**
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

**SATA DVD:RW Ultrabay Slim SATA disk**
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive, Active Protection System™

**Widescreen display Camera**
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16.10 aspect ratio, 300:1 contrast ratio
Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
Intel® HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

**Keyboard**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® Touchpad**
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Dimensions³**
14.1"W (WXxDxH): 13.3" x 9.5" x 1.0"—1.2"; 337 x 241.5mm x 21.1–25.9mm
6-cell: starting at 3.94 lb (1.79kg)

**Case material**
Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

**Battery - type Battery - life²**
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim 6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**
Mobile Intel® Q57 Express Chipset

**PCle Mini Card**
Two PCI Express Mini Card slots 11b/g/n wireless usa, ThinkPad 11b/g/n, PCle Half Mini Card Wireless WAN upgradable

**Network**
Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Audio support**
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**
None

**Limited warranty²**
1-year - depot repair service / service upgrades² available

---

*This small and medium business (SMB) model is part of the US TopSeller™ Program*

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**Preloaded operating system²⁵**
- Genuine Windows® 7 Professional 64

**Preloaded applications¹⁴ (only some listed)**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant RoHS-compliant
International Warranty Service¹⁷ 24 hour x 7 day¹⁷ toll-free support during the warranty period¹² via 800-426-7378

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**Lenovo product numbers**

<table>
<thead>
<tr>
<th>Program</th>
<th>Lenovo part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkPlus™ 22 1-year LOR ²⁴ 9x5 NBD</td>
<td>45K5968</td>
</tr>
<tr>
<td>ThinkPlus 2-year LOR 9x5 NBD</td>
<td>45K5969</td>
</tr>
<tr>
<td>ThinkPlus 3-year LOR 9x5 NBD</td>
<td>45K5970</td>
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<tr>
<td>ThinkPlus 4-year LOR 9x5 NBD</td>
<td>45K5973</td>
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<td>ThinkPlus 5-year LOR 9x5 NBD</td>
<td>45K5975</td>
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<td>ThinkPlus 2-year P&amp;L P/U Depot</td>
<td>45K5971</td>
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<td>ThinkPlus 3-year P&amp;L P/U Depot</td>
<td>45K5972</td>
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<td>ThinkPlus 4-year P&amp;L P/U Depot</td>
<td>45K5974</td>
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<tr>
<td>ThinkPlus 5-year P&amp;L P/U Depot</td>
<td>45K5976</td>
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</tbody>
</table>

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information
US model announced September 28, 2010
US model withdrawn effective June 2011

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(SN2-11) June 2011
### Positioning

<table>
<thead>
<tr>
<th>Processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkPad T410s 2904 (TopSeller) - XP with Win 7 License - withdrawn</td>
</tr>
<tr>
<td>Personal Systems Reference (PSREF)</td>
</tr>
</tbody>
</table>

#### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

### Security

- Trusted Platform Module, TCG 1.2-compliant
- Intel Active Management Technology (AMT)

### Graphics

- Intel® 6200 28 Gobi 2000 AT&T

### Memory

- 2GB or 4GB std; 8GB max
- PC3-8500 DDR3 non-parity dual-channel capable

### Display

- WXGA+ 358mm color, anti-glare, LED backlight
- 14.1" WXGA+ 2.0M 128G SSD

### Dimensions

- 14.1WxDxH: 13.3" x 9.5" x 0.83~1.02"
- 337 x 241.5mm x 21.1~25.9mm

### Battery - life

- 6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

### Chipset

- Mobile Intel Q57 Express Chipset
- One slot (ExpressCard/34)

### Ports

- Two USB 2.0 (powered), one USB 2.0/eSATa combo port, external monitor (VGA DB-15, DisplayPort, ethernet (RJ-45)

### Card reader

- Two POI EXPRESS Mini Card slots

### Carrier

- None

### Bluetooth™

- None

### Intel AMT

- Non-vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1
- vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1

### Audio

- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

### Security

- Trusted Platform Module, TCG 1.2-compliant
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

- 3-years/1-yr battery - depot repair service / service upgrades available

---

### See footnotes for important warranty information

US models announced January 7 or February 2, 2010
US models withdrawn effective October 2010

© Lenovo (SN2-2) October 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Max turbo Processor</th>
<th>Wide-screen display</th>
<th>Disk SATA</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Finger print reader</th>
<th>Card slot</th>
<th>Power Adapter</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2904-FZU</td>
<td>i5-520M</td>
<td>2.40 2.93 4GB</td>
<td>14.1&quot; WXGA+</td>
<td>128G SSD</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Express</td>
<td>65W</td>
<td>vPro</td>
<td>64</td>
<td>June 10</td>
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<tr>
<td>2904-GGU</td>
<td>i5-550M</td>
<td>2.40 2.93 2GB</td>
<td>14.1&quot; WXGA+</td>
<td>250G 5400</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Express</td>
<td>90W</td>
<td>vPro</td>
<td>64</td>
<td>May 10</td>
<td></td>
</tr>
<tr>
<td>2904-HCU</td>
<td>i5-560M</td>
<td>2.66 3.20 4GB</td>
<td>14.1&quot; WXGA+</td>
<td>128G SSD</td>
<td>Intel 6200</td>
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<td>Express</td>
<td>65W</td>
<td>vPro</td>
<td>64</td>
<td>Sep 10</td>
<td></td>
</tr>
</tbody>
</table>

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

**These models have a depot repair service 3-year limited warranty**

**These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

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**Positioning Processor**

Premiere performance and ultra-portability; two spindles Intel® Core™ i5 processor or Intel® Core™ i7 processor with dual-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

**Non-italics:** standard memory in both sockets; no sockets available;

**Italics:** standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

Some: 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high

Some: 5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 9.5mm high, Active Protection System™

All: removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**

14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.

**300 nits, 16.10 aspect ratio, 300:1 contrast ratio**

**Camera**

Camera on top of screen, 2.0-megapixel, fixed focus

**Preloaded operating system**

- Genuine Windows® 7 Professional 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash Player®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate Microsoft Research AutoCollage Touch
- Roxio® Creator™ Business Edition (DvD±RW)
- Roxio MyDVD® (DvD±RW)
- Corel® WinDVD® (DvD±RW)

Supports ThinkVantage® technologies

- 65-watt or 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

**Chipset**

Mobile Intel Q57 Express Chipset

**ExpressCard/34**

One slot (ExpressCard/34)

**Multicard Reader**

None

**Ports**

Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**

Two PCIe Express Mini Card slots

Intel 6200® WWAN upg

**Modem**

None

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (AMT)

**Audio support**

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TC1.2-compliant

**Fingerprint reader**

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

3-years/1-yr battery - depot repair service / service upgrades available

---

See footnotes for important warranty information

US models announced March 2, May 4, or September 28, 2010

US models withdrawn effective June 2011

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### ThinkPad T410s 2904 (Switchable) - TopSeller (Windows 7) - withdrawn

**Type-model** Processor | Base | Max | Wide-screen | Camera | Disk | PN | PN | Finger | Bluetooth | Card | Intel | Preload | Avail date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
2904-G2U i5-520M | 2.40 | 2.93 | 4GB | 14.1” WXGA+ | 2.0M | 128GB SSD Intel 6200™ | WWAN upg | Finger | Blue | 3-in-1 | vPro | Pro 64 | Mar 10
2904-G2U i5-540M | 2.40 | 2.93 | 4GB | 14.1” WXGA+ | 2.0M | 250G 5400 Intel 6200 | WWAN upg | Blue | 3-in-1 | vPro | Pro 64 | May 10
2904-GFU i5-520M | 2.53 | 3.06 | 2GB | 14.1” WXGA+ | 2.0M | 128GB SSD Intel 6200 | WWAN upg | Blue | 3-in-1 | vPro | Pro 64 | May 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

**Processor**
Premiere performance and ultra-portability; two spindles Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; **Italics:** standard memory in both sockets; no sockets available; **Non-italics:** standard memory in one socket; one socket available

**SATA DVD±RW**
- 1GB/s DVD burner, SATA 1.5GB/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

**Some:**

- 128GB Solid State drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high
- Some:
- 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 9.5mm high, Active Protection System™
- All:
- removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**
14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**
- Camera on top of screen, 2.0-megapixel, fixed focus

**Switchable graphics**
Dynamic switching between discrete and integrated graphics (selectable), Intel HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCT Express x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2048x1536 (VGA)@75Hz(integrated) or 85Hz(discrete); 1920x1200@60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP)@60Hz

**Keyboard**
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint**
80-point, TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

**Touchpad**
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
14.1” (WxDxH): 13.3” x 9.5” x 0.83–1.02”
337 x 241.5mm x 21.1–25.9mm

**Weight**
6-cell: starting at 3.94 lb (1.79kg)

**Case material**
Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

**Battery**
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

**Chipset**
Mobile Intel Q57 Express Chipset

**ExpressCard/34 MultiCard Reader Ports**
None
3-in-1 reader (MMC, SD, SDHC)
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**
Two PCI Express Mini Card slots

**WWAN upg**
None

**Modem**
Bluetooth 2.1 wireless, LED indicator

**Intel**
82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT**
Intel Active Management Technology (iAMT)

**Audio support**
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
Some:
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
- 3-in-1 vPro
- 2GB
- Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Limited warranty**
3-years/1-yr battery - depot repair service / service upgrades available

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See footnotes for important warranty information

US models announced March 30 or May 4, 2010

US models withdrawn effective June 2011

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(SN2-8) June 2011

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Preloaded operating system
- Genuine Windows® 7 Professional 64

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash™ Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service® 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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ThinkPlus® 3-year LOR™ 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year & P/L Depot 45K6023
ThinkPlus 5-year & P/L Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® T410s 2904 (Optimus) - TopSeller (Windows 7) - withdrawn

### Type-model Processor

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<th>Disk Drive</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
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<td>i5-560M</td>
<td>2.66</td>
<td>4GB</td>
<td>14.1&quot; WXGA+</td>
<td>2.0M</td>
<td>Finger</td>
<td>Blue</td>
<td>3-in-1</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
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</tbody>
</table>

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Memory

- **4GB std / 8GB max** / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **standard memory in both sockets**; no sockets available

### SATA DVD+RW

- **DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable**
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
  - **128GB** Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

### Widescreen display

- **14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight**, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

### Optimus graphics

- **NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics** in processor, and
- **NVIDIA® NVS™ 3100M, PCIe Express x16, 512MB memory**, external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J915); supports three independent displays;
- **Maximum external resolution**; 2048x1536 (VGA) @ 75Hz;
  - 1320x1200@60Hz (single-link DVI-D via cable 45J915);
  - 2560x1600 (DP) @ 60Hz

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Touchpad

- **ThinkPad® UltraNav™**, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- **14.1" (Wx Dx H): 13.3" x 9.5" x 0.83–1.02"**; 337 x 241.5mm x 21.1–25.9mm
- **6-cell: starting at 3.94 lb (1.79kg)**

### Battery - type

- **Lithium Ion 6-cell**, supports unique 2nd battery in Ultrabay Slim
- **6-cell: up to 4.7 hr; 6-cell plus Ultrabay battery: up to 7.8 hr**

### Chipset

- **Intel® QS57 Express Chipset**
- **3-in-1 reader (MMC, SD, SDHC)**
- **Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, 3-in-1 reader (MMC, SD, SDHC)**
- **Supports ThinkVantage® technologies**
- **90-watt AC adapter**
- **ThinkPad Roll Cage (one-piece magnesium frame)**
- **EPEAT® Gold rating**
- **ENERGY STAR® 5.0-compliant**
- **RoHS-compliant**
- **International Warranty Service**
- **24 hour x 7 day toll-free support during the warranty period**

### Preloaded operating system

- **Genuine Windows® 7 Professional 64**

### Preloaded applications

- **Rescue and Recovery™**
- **Access Connections™**
- **Password Manager**
- **Fingerprint Software (fingerprint models)**
- **ThinkVantage System Update**
- **ThinkVantage Power Manager**
- **ThinkVantage Toolbox**
- **Adobe® Reader®**
- **Adobe Flash® Player**
- **Skype™ for Windows**
- **Microsoft Office 2010 preloaded; purchase product key to activate**
- **Microsoft Research AutoCollage Touch**
- **Roxio® Creator® Business Edition**
- **Roxio MyDVD® (DVD+R/W)**
- **Corel® WinDVD® (DVD+R/W)**

### Limited warranty

- **3-years/1-yr battery - depot repair service / service upgrades available**

See footnotes for important warranty information

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(SN2-12) June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2912-2AU</td>
<td>i5-520M</td>
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<td>2.93</td>
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<td>14.1&quot; WXGA+</td>
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<td>120G 5400</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Express</td>
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<td>XP Pro</td>
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<tr>
<td>2912-2BU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>3GB</td>
<td>14.1&quot; WXGA+</td>
<td>2.0M</td>
<td>250G 5400</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Blue</td>
<td>Express</td>
<td>No</td>
<td>XP Pro</td>
<td>Feb 10</td>
</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty

Positioning Processor
Premiere performance and ultra-portability; two spindles
Intel® Core™ i5 processor i5-520M with dual-core.

Memory
3GB std / 8GB max/² PC-38500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
ifalics: standard memory in both sockets; no sockets available

SATA DVD±RW
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
120GB² (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gbps, 1.8" wide, 9.5mm high, removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive, Active Protection System™

Widescreen display
14.1" (358mm) WXGA+ (1440x900) color, anti-glide, LED backlight, 300 nits, 16:10 aspect ratio, 600:1 contrast ratio

Integrated graphics
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Dimensions³
14.1"W x 9.5"D x 0.83"H; 337 x 241.5mm x 21.1-25.9mm

Weight³
6.7 lb (3.1kg)

Battery - type
Lithium ion 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life²²
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

Chipset
Mobile Intel GS57 Express Chipset

Preloaded operating system²⁵
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)

Supports ThinkVantage technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant

International Warranty Service17
24 hour x 7 day²² toll-free support during the warranty period12 via 800-426-7378

ThinkPlus²² 3-year LOR²² 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced January 7, 2010
US models withdrawn effective August or October 2010

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(SN2-3) October 2010

"Bullet points" indicate important features/characteristics.
ThinkPad T410s 2912 (Windows 7) - withdrawn

Positioning
Premiere performance and upgradability; two spindles

Processor
Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

SATA/DVD RW
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable

Ultrabay Slim
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

SATA disk
Some: 80GB©, 128GB©, or 160GB© Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high

(80GB©, 120GB©, or 250GB© (5400 rpm) / 250GB© (5400 rpm) / SATA 3.0Gb/s, 1.8” wide, 9.5mm high, Active Protection System©)

All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display
14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio,

Camera
Some: MultiTouch (touchscreen supports two-finger touch)

Integrated graphics
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint© pointing device, "Press-to-Select," Internet Scroll Bar©, magnifying glass

ThinkLight™
UltraNav® pointing device, "Press-to-Select," Internet Scroll Bar©, magnifying glass

Dimensions²
14.1”W (WXDH): 13.3” x 9.5” x 0.83–1.02”; 337 x 241.5mm x 24.2mm–29.0mm

Weight*¹
6-cell: starting at 3.94 lb (1.79kg);

Battery - type
Lithium ion 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery - life*¹
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

Chipset
Mobile Intel Q57 Express Chipset

ExpressCard/34
Some: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Multicard Reader
Some: USB 2.0 (powered), USB 2.0/eSATA combo port

Ports
Two USB 2.0 (powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card
Two PCIe Mini Express Card slots

PCle Mini Card
11b/g/n, ThinkPad 11b/g/n, PCIe Half Mini Card

Intel 2600®
Some: 11b/g/n wireless, PCIe Half Mini Card

Intel 6200®
Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centro Advanced-N 6200, 2x2

WIMAX
Some: 11a/b/g/n and WIMAX wireless, PCIe Half Mini Card, Intel Centro Advanced-N + WIMAX 6250, 2x2 AGN + 1x2 WIMAX

WWAN upg
Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev.A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

Carrier Mode
21U/2DU models: Verizon®, contract required with service provider

Bluetooth™
None

Ethernet
Some: Bluetooth 2.1 wireless, LED indicator

Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

AMT
Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security
Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty²² 3-years/1-yr battery - depot repair service / service upgrades²² available

Preloaded operating system²⁰
- Some: Genuine Windows® 7 Professional
- Some: Genuine Windows 7 Professional 64

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint readers)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creative® Business Edition (DVD+R)
- Roxio® Professional (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day²⁴ toll-free support during the warranty period¹³ via 800-426-7378

Lenovo
ThinkPlus® 3-year LOR© 5x5 NBD
ThinkPlus 4-year LOR 5x5 NBD
ThinkPlus 5-year LOR 5x5 NBD
ThinkPlus 4-year P&L Depot
ThinkPlus 5-year P&L Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced January 7, March 2, March 30, May 4, or August 3, 2010

US models withdrawn effective August 2010 or June 2011

Lenovo (SN2-4) June 2011
This model has a depot repair service 3-year limited warranty
This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor
Premiere performance and ultraportability; two spinides
Intel® Core™ i5 processor i5-660M with dual-core,
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory
4GB std / 8GB max / PC3-10600 1333MHz DDR3
non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

SATA DVD:±RW
DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
128GB1 Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high,
removable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display
14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight,
300 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector
and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®3, magnifying glass

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
illuminates the keyboard to improve visibility in low-light conditions

Dimensions
14.1"W (WXDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm
MultiTouch models: 13.3" x 9.5" x 0.95–1.14"; 337 x 241.5mm x 24.2mm–29.0mm
6-cell: starting at 3.94 lb (1.79kg);
MultiTouch models: 13.3" x 9.5" x 0.95–1.14"; 337 x 241.5mm x 24.2mm–29.0mm
6-cell: starting at 4.51lb (2.05kg)

Battery - life
Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr

Chipset
Mobile Intel QS57 Express Chipset
One slot (ExpressCard/34)

Multicard Reader
None

Ports
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port,
external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card
Two PCI Express Mini Card slots
Intel 6200® WWAN upg

Modem
None

Bluetooth®
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT
Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 /
speaker volume up, down and mute buttons / dual array microphone, mic mute button,
combo audio/mic jack

Security
Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password,
hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Biometric fingerprint reader, supports the security chip

Limited warranty
3-years/1-yr battery - depot repair service / service upgrades available

Preloaded operating system
- Genuine Windows® 7
Professional 64

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
(30 days of virus definitions)
- Adobe® Reader
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded;
purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition
(DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
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US model announced January 11, 2011
US model withdrawn effective June 2011

Lenovo.com/thinkplus/warranty

T410s 2912 (Windows 7) - January 2011 - withdrawn
Personal Systems Reference (PSREF)
### ThinkPad T410s 2912 (Switchable) - Windows 7 - withdrawn

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<th>Max turbo Memory (MHz)</th>
<th>Base Display</th>
<th>Multi-touch Screen</th>
<th>Disk</th>
<th>Multi Card</th>
<th>Mini Card</th>
<th>Finger reader</th>
<th>Workhorse (W)</th>
<th>Availability</th>
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<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2+1GB</td>
<td>14.1&quot; WXGA+</td>
<td>250G</td>
<td>5400</td>
<td>Intel 6200</td>
<td>upg</td>
<td>vPro Pro 32</td>
<td>G Mar 10</td>
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<td>i5-540M</td>
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<td>vPro Pro 32</td>
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<td>vPro Pro 32</td>
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</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These models are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning Processor
Premiere performance and ultraportability; two spindles Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory
2GB, 3GB, or 4GB std / 8GB max2/3
- non-partly, dual-channel capable, two 204-pin SO-DIMM sockets

### SATA DVD:RW
- Ultrabay Slim
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- Some: 80GB or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
- Some: 250GB (5400 rpm)
- SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™
- All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

### Widescreen display
- 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 330 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: MultiTouch (touchscreen supports two-finger touch)

### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

### Switchable graphics
Dynamic switching between discrete and integrated graphics (user selectable), Intel® HD Graphics in processor, and NVIDIA® NVS™ 3100M, PCI Express® x16, 12MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display,
- Maximum external resolution: 2048x1536 (VGA) @75Hz(integrated) or 85Hz(discrete);
- 1920x1200@60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP) @60Hz

### Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

### Touchpad
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 24.2mm–29.0mm

### Weight
- 6-cell: starting at 3.94 lb (1.79kg); 6-cell (MultiTouch): starting at 4.51lb (2.05kg)

### Battery
direct monitor support via DisplayPort, ethernet (RJ-45)
- Two USB 2.0 (one powered), one USB 2.0/eSATA combo port,
- Two PCI Express Mini Card slots
- Some: Intel Centrino Advanced-N + WiMAX, 2x2 AGN + 1x2 WiMAX
- All: 24 hour x 7 day toll-free support via 800-426-7378 during the warranty period

### Chipset
Mobile Intel Q57 Express Chipset

### Preloaded operating system25
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

### Preloaded applications14 (only some listed)
- Rescue and Recovery™, Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Supports ThinkVantage® technologies
90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service®
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### Security Software
Hardware Password Manager (HPM), Intel AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Limited warranty22
- 3-years/1-yr battery - depot repair service / service upgrades22 available

---

See footnotes for important warranty information

US models announced March 30 or May 4, 2010

US models withdrawn effective June 2011

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(SN2-9) June 2011
## ThinkPad T410s 2912 (Optimus) - Windows 7 - withdrawn

### Preloaded operating system
- Genuine Windows 7
- Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator™ Business Edition
- Roxio MyDVD®
- Corel® WinDVD®

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service17
- 24 hour x 7 day18 toll-free support during the warranty period18

### Lenovo agreements at lenovo.com/thinkplus/warranty
- ThinkPlus™ 20 3-year LOR24 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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### Specifications

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<th>Max turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<td>3.20</td>
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<td>1066</td>
<td>128G SSD</td>
<td>Intel 6200®</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>Blue</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
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</tbody>
</table>

- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

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### Positioning

- Processor: **Premiere performance and ultra-portability; two spindles**
- Intel® Core™ i5 processor i5-560M with dual-core.
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3
- non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### SATA DVD±RW

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- 128GB® Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high, removable, upgradable, supports 2nd disk, Shock Mounted Hard Disk

### Ultrabay Slim

- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

### Widescreen display

- 14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

### Optimus graphics

- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics,
- Intel HD Graphics
- NVIDIA NVS® 3100M, POI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;
- Maximum external resolution: 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP)@60Hz

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- 14.1W” (WxDxH): 13.3” x 9.5” x 0.83–1.02”; 337 x 241.5mm x 21.1–25.9mm
- 6-cell: up to 4.7 hr; 6-cell plus Ultrabay battery: up to 7.8 hr

### Battery - life

- 8 Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8” wide, 5mm high

### Chipset

- Mobile Intel QS57 Express Chipset
- 3-in-1 reader (MMC, SD, SDHC)
- Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PCle Mini Card

- Two POI Express Mini Card slots
- Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradeable

### Security

- Hardwire Password Manager (HPM), AntiTheft (AT), Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

- Trusted Platform Module, TCG 1.2-compliant

### Fingerprint reader

- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

- 3-years/1-yr battery - depot repair service / service upgrades available

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See notes for important warranty information

US model announced September 28, 2010

US model withdrawn effective June 2011
ThinkPad® T410s 2924 (Onsite) - Windows 7 - withdrawn

See footnotes for important warranty information © Lenovo
US models announced January 7 or May 4, 2010, or January 11, 2011
US models withdrawn effective August 2010 or June 2011

+ These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty
+ These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo frequency (GHz)</th>
<th>Max turbo frequency (GHz)</th>
<th>Display</th>
<th>Memory</th>
<th>Disk</th>
<th>PCIe</th>
<th>Finger reader</th>
<th>Card slot</th>
<th>Intel vPro</th>
<th>Workhorse (W)</th>
<th>Availability</th>
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<tr>
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<td>i5-520M</td>
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<td>2.93</td>
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<td>128G SSD</td>
<td>Intel 6200®</td>
<td>Finger</td>
<td>Exp</td>
<td>Pro</td>
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<td>Exp</td>
<td>Pro</td>
<td>Feb 10</td>
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</table>

US models withdrawn effective August 2010 or June 2011

Preloaded operating system®
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications® (only some listed)
- Rescue and Recovery™
- Access Connections®
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Chipset
Mobile Intel QS57 Express Chipset

ExpressCard/34 or Multicard Reader
One slot (ExpressCard/34)

Ports
Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Pci© Mini Card
Two PCi Express Mini Card slots
Some: 11b/g/n wireless®, ThinkPad 11b/g/n, PCiE Half Mini Card
Some: 11a/b/g/n wireless, PCiE Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable
None

Modem
Bluetooth®
Ethernet

Intel AMT
Audio support

Security
Security chip
Fingerprint reader

Limited warranty® 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

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SN2-5 June 2011

See footnotes for important warranty information© Lenovo

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service© 24 hour x 7 days® toll-free support during the warranty period via 800-426-7378

ThinkPlus® 4-year LOR® 9x5 NBD 45K6038 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
### ThinkPad T410s 2924 (Switchable) - Onsite (Windows 7) - withdrawn

#### Type-model | Processor | Base turbo | Max turbo | Processor (GHz) | Memory | Wide-screen display | Disk | PCIe Mini Card | PCIe Mini Card | Finger print reader | Workhorse (W) | GB (G) | Availability date
---|---|---|---|---|---|---|---|---|---|---|---|---|---
2924-24U | i5-520M | 2.40 | 2.93 | GB | 3GB | WXGA+ | 2.0M | 250G | WWAN upg | None | Blue | 3-in-1 | vPro | 2010
2924-SWU | i5-540M | 2.53 | 3.06 | GB | 2GB | WXGA+ | 2.0M | 250G | WWAN upg | None | Blue | 3-in-1 | vPro | 2010

- **These models are part of the Global Models Plus program with limited onsite service**
- **These systems are Microsoft** Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

### Preloaded applications (only some listed)
- Rescue and Recovery
- Access Connections
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton Internet Security 2011
- Adobe Reader
- Adobe Flash Player
- Windows Live Toolbar
- Skype for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio Creator Business Edition (DVD+RW)
- Roxio MyDVD (DVD+RW)
- Corel WinDVD (DVD+RW)

### Limited warranty
- 3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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See footnotes for important warranty information.

US models announced March 30 or May 4, 2010
US models withdrawn effective June 2011

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(SN2-10) June 2011
<table>
<thead>
<tr>
<th>Type-model</th>
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<th>Ram</th>
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<th>Hard Disk</th>
<th>O.S.</th>
<th>DVD</th>
<th>Bluetooth</th>
<th>Ethernet</th>
<th>Audio</th>
<th>Security</th>
<th>Finger Print Reader</th>
<th>Preloaded operating system</th>
<th>Preloaded applications</th>
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<td>i5-520M</td>
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<td>500G</td>
<td>WWAN</td>
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<td>Intel</td>
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<td>Finger reader</td>
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<td>- Professional 32</td>
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<td>- Windows 7</td>
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.
**ThinkPad T410si 2901 (TopSeller) - Windows 7 - withdrawn**

<table>
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<th>Ghz Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>SATa optical</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Blue-tooth Card slot</th>
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<td>Blue</td>
<td>Express</td>
<td>No</td>
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</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor
- Premiere performance and ultra portability; two spindles
  - **Intel® Core™ i3 processor i3-330M with dual-core.**
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - **Non-italics:** standard memory in one socket; one socket available

SATA DVD:±RW UltraBay Slim SATA disk
- DVD burner, SATA 1.5Gb/s, 9.5mm UltraBay slim, removable
  - One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
  - 250GB+ (9400 rpm) / SATA 3.0Gb/s, 1.8” wide, 9.5mm high, removable, upgradable, supports 2nd disk
  - Shock Mounted Hard Drive, Active Protection System™

Widescreen display
- **14.1” (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.**
  - 300 nits, 16:10 aspect ratio, 300:1 contrast ratio
  - Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
- Intel HD Graphics in processor;
  - external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
  - supports dual independent display;
  - **MDM (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache**

Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- **TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions**

Dimensions
- 14.1W” (WxDxH): 13.3” x 9.5” x 0.83~1.02”;
  - 337 x 241.5mm x 21.1~25.9mm
- **6-cell:** starting at 3.94 lb (1.79kg)

Weight
- **Display cover:** Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls);
  - **Base:** Magnesium alloy

Battery - type
- **Battery - life**
  - 6-cell: up to 4.8 hr;
  - 6-cell plus UltraBay battery: up to 7.9 hr

Chipset
- Mobile Intel QS57 Express Chipset
  - One slot (ExpressCard/34)
  - None

PCIe Mini Card
- Two PCI Express Mini Card slots
  - 11b/g/n wireless®, **PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable**

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Limited warranty 1-year - depot repair service / service upgrades available

Preloaded operating system
- Genuine Windows® 7 Professional 32

Preloaded applications
- **Rescue and Recovery™**
  - Access Connections™
  - **Password Manager**
  - **ThinkVantage System Update**
  - **ThinkVantage Power Manager**
  - **ThinkVantage Toolbox**
  - **Adobe® Reader®**
  - **Adobe Flash® Player**
  - **Sky™ for Windows**
  - Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
  - 24 hour x 7 day toll-free support during the warranty period
  - 1800-426-7378

Post-warranty annual maintenance agreements at Lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced March 2, 2010
US model withdrawn effective July 31, 2010
<table>
<thead>
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<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Screen</th>
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<th>Mini Card</th>
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<th>Card slot</th>
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<td>Aug 10</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These system are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software
- ThinkVantage Productivity Center
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

**Supports ThinkVantage® technologies**
65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information
US models announced August 3, 2010
US models withdrawn effective June 2011

© Lenovo (SN2i-3) June 2011

Lenovo

ThinkPad T410si 2901 (TopSeller) - Windows 7 (August 2010) - withdrawn

Personal Systems Reference (PSREF)
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
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<th>Finger print reader</th>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

**Processor**
- Premiere performance and ultra-portability; two spindles
- Intel® Core™ i3 processor i3-370M with dual-core.
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

**Memory**
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-Italic: standard memory in one socket; one socket available

**SATA DVD:±RW**
- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
  - Some: 160GBG Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high
  - Some: 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™
  - All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**
- 14.1" (358mm) WXGA+ (1440x900) color, anti-glare, LED backlight.
- 300 nits, 16:10 aspect ratio, 300:1 contrast ratio.
- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics
- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports dual independent display;
  - Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
  - 2048x1536 (VGA)@75Hz, 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm

### Preloaded applications
- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - FingerPrint Software (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox
  - Norton™ Internet Security 2011 (30 days of virus definitions)
  - Adobe® Reader®
  - Adobe Flash® Player
  - Windows Live™ Toolbar
  - Skype™ for Windows
  - Microsoft Office 2010 preloaded: purchase product key to activate
  - Microsoft Research AutoCollage
  - Roxio® Creator® Business Edition (DVD:±RW)
  - Roxio® MyDVD® (DVD:±RW)
  - Corel® WinDVD® (DVD:±RW)

### Limited warranty
- 3-years/1-yr battery - depot repair service / service upgrades available
ThinkPad® T410s Accessories - withdrawn

**Memory**
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
- 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
- 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09
- 4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09

**Ultrabay Slim 9.5mm**
- Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09
- DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 ann 08/03/10
- DVD Burner Ultrabay Slim Drive II SATA 43N3229 ann 06/23/09

**Storage and removable storage**
- 1.8" 250GB Disk SATA 3.0Gb/s (5400 rpm) 43N3418 ann 06/23/09
- 500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 ann 01/07/10
  - Can be used with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay
- 256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover) 43N3417 ann 06/23/09
  - Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in Ultrabay via the removable adaptative cover provided with the drive

**USB 2.0 Port Replicator with Digital Video**
- Lenovo DisplayPort to Single-link DVI-D Cable 45J7915
- Lenovo USB-to-DVI Monitor Adapter 45K5296
- Lenovo Security Cable Lock 51J0497
- Lenovo External Battery Charger 40Y7625 ann 09/20/05
- Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/aldidaycomputing

**ThinkPad 65W AC Adapter** 40Y7696 ann 01/05/06
- Only compatible with the integrated graphics models
- ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
- ThinkPad 65W AC Adapter with USB Hub 57Y4600 ann 09/22/09
- 90W Ultraslim AC/DC Combo Adapter 41R4493

More info at www.lenovo.com/support/poweradapters

**Charging tips** for 90W Ultraslim AC/DC Combo Adapter 41R4493

- iPod and iPhone Charge Tip (L10a) 41R4481 ann 12/18/07
- Generic Micro USB charge tip (L18) 41R4490 ann 01/06/09

More information at www.lenovopowertips.com

**Carrying Cases**
- **Up to 14" widescreen models:**
  - ThinkPad 14W Case Sleeve 57Y4294 ann 03/16/10
- **Up to 15.6" widescreen models:**
  - ThinkPad 15S Case Sleeve 51J0475 ann 08/18/09
  - Lenovo Business Messenger Case 51J0475 ann 08/18/09
  - Lenovo Messenger Max 41U5253 ann 05/01/07
  - Lenovo Performance Backpack 41J2554 ann 05/01/07
  - ThinkPad Business Topload Case 43R2476 ann 05/13/08
  - ThinkPad Business Backpack 43R2482 ann 05/13/08
  - ThinkPad Deluxe Expander Case 43R2487 ann 05/13/08
  - ThinkPad Executive Leather Case 43R2480 ann 05/13/08
  - Wenger Backpack for Lenovo 57Y4271 ann 01/07/10
  - Wenger Slim Case for Lenovo 57Y4273 ann 01/07/10
  - Wenger Deluxe Slim Case for Lenovo 57Y4272 ann 01/07/10

More information at www.lenovo.com/support/cases

**Batteries**
- ThinkPad Battery 59+ (6-cell) 51J0497 ann 06/23/09
- ThinkPad Battery 42 (3-cell, bay) 57Y4536 ann 08/25/09
- Used in Ultrabay Slim bay.
- ThinkPad External Battery Charger 40Y7625 ann 09/20/05
- Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

**Monitors**
- ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
- ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
- ThinkVision L1951p Wide 19" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2251p Wide 22" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2251x Wide 22" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10

More information at www.lenovo.com/support/monitors

**Cartridge**
- Thinkvision® L1711p 17" Monitor 5047HB2 ann 10/20/09
- ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
- ThinkVision L1951p Wide 19" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2251p Wide 22" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2251x Wide 22" Monitor 257H8E6 ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10

More information at www.lenovo.com/support/monitors

**Monitor Accessories**
- Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
- Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
- DisplayPort to Single-link DVI-D Cable 45J7915 ann 05/13/08
- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- ThinkVision Soundbar 45K1253 ann 09/16/08
- Kensington MicroSaver Cable Lock 73P5282 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

**More for information on accessories:**
- www.lenovo.com/Accessories
- Purchase Lenovo accessories
- www.lenovo.com/support/Accessories
- Product specifications on Lenovo Support
- www.lenovo.com/accessoriesguide
- Option Compatibility Matrix (OCM) and accessory brochures
- www.lenovopickup.com
- An Options Compatibility Configurator for Lenovo systems

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(O-T410-S) July 2011
Lenovo® ThinkPad T420s

ThinkPad Battery 43 (3-cell, bay)
0A36310

ThinkPad Battery 81+ (6-cell)
0A36309

ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology
ThinkPad® T420s 4170 (TopSeller) - withdrawn

Positioning and footprint: Premium performance and ultra portability; two spindles

Processor: Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache).

Memory: DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

Memory: 8GB max / PC3-10600 1333MHz DDR3, non-parity, DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0, HT technology

Chipset: Mobile Intel QM67 Express Chipset

Preloaded operating system: - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows® 7 Professional 64

Ready to install applications: (all OSes; only some listed)
- Rescue and Recovery®
- Access Connections™
- FingerPrint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications: (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD: RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD: RW)

Preloaded applications: (all OSes; only some listed)
- Corel® WinDVD® (DVD: RW) - Supports ThinkVantage™ technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service (all OSes; only some listed)
- For compatible accessories, please go to O-T420-S sheet; for Lenovo service upgrade options, please go to S-TA sheet

Type-model Processor Memory Wide-screen display Camera Disk SatakGB Form factor Opticalorbattery PCleMiniCard PCleMiniCard SmartCard FingerPrint FingerBlue- touch Gold rating EPEAT® Preload

4170-33U i5-2540M 4GBx1 14.0” HD+ 720p 128GB SSD DelliRW Intel 6205™ WAN upg Blue IAMT vPro Pro 64

4170-32U i5-2520M 4GBx1 14.0” HD+ 720p 320GB 7200 DelliRW Intel 6205™ WAN upg Blue IAMT vPro Pro 64

4170-27U i5-2520M 4GBx1 14.0” HD+ 720p 320GB 7200 DelliRW Intel 6205™ WAN upg Blue IAMT vPro Pro 64

4170-3DU i5-2540M 2GBx2 14.0” HD+ 720p 160G SSD DelliRW Intel 6205™ WAN upg Smart Blue IAMT vPro Pro 32

4170-3BU i5-2520M 4GBx1 14.0” HD+ 720p 128GB SSD Bay battery Intel 6205™ WAN upg Smart Blue IAMT vPro Pro 64

• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
<table>
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<tr>
<th>Type-model</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA (GB/ rpm)</th>
<th>PCIe Mini Card WLan</th>
<th>PCIe Mini Card WWAN/SATA</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Intel AMT</th>
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<td>vPro</td>
<td>Pro 64</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
- Premier performance and ultra-portability; two spindles
- Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology

Memory
- 8GB max / PC3-10600 DDR3, non-parity
- i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)

Optical device
- DVD burner, 9.5mm Ultrabay slim, removable

Bay battery
- None

Battery
- Ultrabay: One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5” wide, 7mm high, Active Protection System™

Battery - life
- up to 6.1 hr; 6-cell (43.2Whr): Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
- 10.3 hr: 6-cell plus Ultrabay battery: up to 10.3 hr

Widescreen display
- 14.0” (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16.9 aspect ratio, 300:1 contrast ratio

Camera
- HD720p resolution, wide view angle, low light sensitive, fixed focus

Graphics
- Intel HD Graphics 3000 in processor
- External analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display:
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

Chipset
- Mobile Intel GM67 Express Chipset

Preloaded operating system
- Genuine Windows® 7 Professional 64

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Chipsetports
- 2048x1536 (VGA) @ 75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Preloaded applications
- Windows Live™ Essentials
- Windows® Defender
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Preloaded applications
- Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Intel® Active Management Technology (iAMT)

Security
- Trusted Platform Module, TCG 1.2-compliant
- Power On Authentication, supports the security chip

Fingerprint reader
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Fingerprint Software (fingerprint models)

Security chip
- Personal Access Module (PAM)
- Trusted Platform Module, TCG 1.2-compliant

Security
- Power On Authentication, supports the security chip

Supports ThinkVantage technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service (IWS) 7x24 hour support for 1 year
- 24 hour x 7 day 10-hour free support during the warranty period

Limited warranty
- 3-years/1-year battery - depot repair service / service upgrades available

See footnotes for more detailed information
© Lenovo
US model(s) announced February 22, May 3, May 31, or August 2, 2011
US model(s) withdrawn effective December 2012
## ThinkPad T420s 4171 (Optimus) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>rpm</th>
<th>Optical or battery</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>WANN</th>
<th>mSATA</th>
<th>Carrier</th>
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<th>Bluetooth</th>
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</table>

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

### Positioning
- Processor: Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology
- Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache)

### Memory
- 8GB max/6 PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical Bay battery
- DVD burner, 9.5mm Ultrablam slim, removable

### Ultrabay Sata disk
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System

### Widescreen display Camera
- 14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio
- HD720p resolution, wider view angle, low light sensitive, fixed focus

### Graphics
- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS® 4200M, PCI Express x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard TrackPoint®
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

### Touchpad TrackPoint®
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- 14.0W (WxDxH): 13.5" x 9.1" x 0.83–1.02";
- Maximum: 22.1cm x 22.9cm x 2.1–2.5cm

### Weight
- 6-cell: starting at 3.68 lb (1.67kg)

### Case material
- Display cover: Hybrid Carbon-fiber reinforced plastic;
- Bottom: Magnesium alloy

### Battery
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
- 6-cell (43.2Whr): up to 6.1 hr;
- 6-cell plus Ultrabay battery: up to 10.3 hr

### Chipset ExpressCard ExpressCard
- Mobile Intel GM67 Express Chipset

### Smart Card Reader Smart Card Reader
- None

### MultiCard Reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

### Ports
- Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PCle Mini Card
- Two PCI Express Mini Card slots
  - 11a/b/g/n, PCIE Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable
  - 2032-0148 WWAN

### Modern
- None

### Bluetooth®
- Bluetooth 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Finger print reader
- UPEX Finger print reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- 3-years/1-yr battery - depot repair service / service upgrades available

---

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Ready to install applications**
- Adobe Reader®
- Skype® for Windows
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

**Preloaded applications**
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype® for Windows
- Windows Live® Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)

**Preload features**
- A depot repair service 3-year limited warranty
- Rescue and Recovery®
- Access Connections®
- A depot repair service 3-year limited warranty
- Rescue and Recovery®
- Access Connections®
- A depot repair service 3-year limited warranty
- Rescue and Recovery®
- Access Connections®

---

See footnotes for more detailed information

US model(s) announced May 31 or October 11, 2011
US model(s) withdrawn effective January or December 2012

© Lenovo (SN3-7) February 2013
Preloaded operating system\textsuperscript{10} - Genuine Windows\textsuperscript{\textregistered} 7 Professional 64

Ready to install applications\textsuperscript{14} (only some listed)

- Rescue and Recovery\textsuperscript{\textregistered}
- Access Connections\textsuperscript{\textregistered}
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Preloaded applications\textsuperscript{14} (only some listed)

- Norton\textsuperscript{\textregistered} Internet Security 2011 (30 days of virus definitions)
- Adobe Reader\textsuperscript{\textregistered}
- Skype\textsuperscript{\textregistered} for Windows
- Windows Live\textsuperscript{\textregistered} Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel\textsuperscript{\textregistered} WinDVD\textsuperscript{\textregt}(DVD\textsuperscript{\textregt}+RW)
- Corel Burn\textsuperscript{\textregt}Now\textsuperscript{\textregt} Lenovo Edition (DVD\textsuperscript{\textregt}+RW)
- Corel DVD MovieFactory\textsuperscript{\textregt} Lenovo Edition (DVD\textsuperscript{\textregt}+RW)

See footnotes for more detailed information

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US model(s) announced February 22, March 1, April 5, or May 3, 2011, or January 3, 2012

(SN3-3) February 2013

US model(s) withdrawn effective December 2012
ThinkPad® T420s 4173 (Optimus) - withdrawn

Personal Systems Reference (PSREF)

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<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>Optical or battery</th>
<th>PCle Mini Card WLAN</th>
<th>PCle Mini Card WWAN/mSATA</th>
<th>Smart Card Reader</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
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<td>Blue</td>
<td>vPro</td>
<td>G</td>
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</table>

- A depot repair service 3-year limited warranty
- Windows 7 Professional 64

Preloaded applications (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD RW)

Preloaded operating system
- Genuine Windows 7 Professional 64

Ready to install applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

Positioning
Processor: Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache). DDR3 memory controller (up to 1333MHz), HT technology

Memory: 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

Optical Drive: DVD burner, 9.5mm Ultrabay slim, removable

Bay Battery: None

Ultrabay: One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

SATA disk: Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high. Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5” wide, 7mm high, Active Protection System™

mSATA™ SSD: None

Widescreen display: 14.0” (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera: HD720p resolution, wider view angle, low light sensitive, fixed focus

Graphics: NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
2048x1536 (VGA)@75Hz;
1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard: Trackpoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touchpad: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

TrackPoint: Illuminates the keyboard to improve visibility in low-light conditions

Dimensions²: 14.0W” (WxDxH): 13.5” x 9.1” x 0.83-1.02”; 343 x 230.1mm x 21.2–26.0mm

Weight²: 6-cell: starting at 3.68 lb (1.67kg)

Battery: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

Battery life: up to 6.1 hr;
6-cell plus Ultrabay battery: up to 10.3 hr

Chipset: Mobile Intel QM67 Express chipset

ExpressCard: One slot (ExpressCard/34)

Smart Card Reader: None

Multicard Reader: 4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports: Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card ports: Two PCI Express Mini Card slots

WLAN: 11a/b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2

WWAN: Wireless WAN upgradable

Modern: None

Bluetooth: Bluetooth 3.0 wireless, LED indicator

Intel AMT: Intel Active Management Technology (IAMT)

Audio support: High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

Security: Power-on password, hard disk password, supervisor password, security keyhole

Security chip: Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader: None

Limited warranty: 3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for more detailed information
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US model(s) announced March 15 or November 1, 2011
US model(s) withdrawn effective January or December 2012

(SN3-5) February 2013
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<td>vPro G P Pro 64</td>
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- A limited onsite service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning
Processor: Premiere performance and ultra portability; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
Memory: 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

Optical Bay battery
- DVD burner, 9.5mm Ultrabay slim, removable
- None

SATA disk
- One modular bay for interchangeable devices (right side), 9.5mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System
- All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive
- None

 widescreen display

Camera
Some: HD720p resolution, wider view angle, low light sensitive, fixed focus

Graphics
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
- 14.0W" (355mm): 13.35" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm
- 6-cell: starting at 3.68 lb (1.67kg)

Battery
- Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim
- 6-cell (43.2Whr): up to 6.1 hr; 6-cell plus Ultrabay battery: up to 10.3 hr

Chipset
- Mobile Intel QM67 Express Chipset

ExpressCard
- One slot (ExpressCard/34)

Multicard Reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports
- Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

PCle Mini Card
- Two PCI Express Mini Card slots 11a/b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable

Modem
- None

Bluetooth™
- Bluetooth 3.0 wireless, LED indicator

Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Security chip
- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Preloaded applications
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

Preloaded operating system
- Genuine Windows® 7 Professional 64

Ready to install applications
- • Rescue and Recovery™
- • Access Connections™
- • Fingerprint Software (fingerprint models)
- • Password Manager (fingerprint models)
- • ThinkVantage System Update
- • ThinkVantage Power Manager
- • ThinkVantage Toolbox

For compatible accessories, please go to O-T420-S sheet; For Lenovo service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
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US model(s) announced February 22 or May 3, 2011, or January 3, 2012
US model(s) withdrawn effective December 2012
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**Positioning**

**Processor**

Premiere performance and ultra-portability; two spinners Intel Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache). DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache). DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

**Memory**

8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Bay battery**

DVD burner, 9.5mm Ultrabay slim, removable

**Ultrabay SATA disk**

One modular bay for interchangeable devices (right side), 9.5mm high, bottom access

**mSATA SSD**

None

**Wide-screen display**

14.0" (355mm) HD+ (1600x900) color, anti-glare, LED backlight, 250 nits, 16.9 aspect ratio, 300:1 contrast ratio

**Graphics**

NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA NVS™ 4200M, PCI Express™ x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

TrackPoint®, pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass, UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch pointing device

**Dimensions**

14.0W* (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm

**Weight**

6-cell: starting at 3.68 lb (1.67kg)

**Battery - type**

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life**

6-cell (43.2Whr): up to 6.1 hr; 6-cell plus Ultrabay battery: up to 10.3 hr

**Chipset**

Mobile Intel QM67 Express Chipset

**ExpressCard**

One slot (ExpressCard/34)

**Smart Card Read**

None

**Multicard Reader**

4-in-1 reader (MMC, SD, SDHC, SDXC)

**Ports**

Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

**PCle Mini Card**

Two PCI Express Mini Card slots

**WWAN**

Wireless WAN upgradable

**Modern**

None

**Bluetooth™**

Bluetooth 3.0 wireless, LED indicator

**Intel AMT**

Intel Active Management Technology (IAMT)

**Audio support**

High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

None

**Limited warranty**

3-years/1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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* Some models are part of the Global Models Plus program with limited onsite service, 3-year limited warranty

* Microsoft® Office 2010 Product Key Ready (O10PKR)

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Preloaded operating system

- Genuine Windows® 7 Professional 64

Preloaded applications

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

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Supports ThinkVantage® technologies

See footnotes for more detailed information

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US model(s) announced March 15 or November 1, 2011

US model(s) withdrawn effective January or December 2012

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<th>Type-number</th>
<th>Processor MHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
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<th>Disk</th>
<th>SATA</th>
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<th>Blue-tooth</th>
<th>Preload</th>
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<td>2242-22U</td>
<td>P8400 2.26 2GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD+RW</td>
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<td>Fingerprint 9382</td>
<td>Blue XP Pro 08 Aug</td>
<td>3-4 year P&amp;L P/U Depot</td>
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<td>Lenovo 19 depots</td>
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<td>Cam GMA 160G 7200 DVD+RW</td>
<td>@ Intel 5100® 802.11b/g</td>
<td>AT&amp;T²</td>
<td>Fingerprint 9382</td>
<td>Blue XP Pro 08 Aug</td>
<td>4-year LOR 9x5 NBD</td>
<td>45K5968</td>
<td>Lenovo 19 depots</td>
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<td>2242-33U</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA</td>
<td>Cam GMA 160G 7200 DVD+RW</td>
<td>@ Intel 5100® 802.11b/g</td>
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<td>Fingerprint 9382</td>
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<td>4-year LOR 9x5 NBD</td>
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<td>Cam GMA 160G 7200 DVD+RW</td>
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<td>AT&amp;T²</td>
<td>Fingerprint 9382</td>
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<td>4-year LOR 9x5 NBD</td>
<td>45K5968</td>
<td>Lenovo 19 depots</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- *These small and medium business (SMB) models are part of the US TopSeller Program*

**Preloaded operating system**
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo

**Preloaded applications**
- All OsEs; only some listed:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD+RW)
  - Corel® WinDVD® (DVD+RW)

**Supports ThinkVantage technologies**
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT™ Gold rating (LED models)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**See footnotes for important warranty information**

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(CRS5-1) January 2010


US models withdrawn effective September 2008 or June, August, or December 2009

思とパッド・デプロイメントサービスを提供する

Lenovo thinkplus/warranty
<table>
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<th>Frequency (GHz)</th>
<th>Memory</th>
<th>Graphics</th>
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</table>

**Processor**

- **Intel® Core™ 2 Duo processor P8400, P8600, P8700 or T9400 with dual-core, Intel HD Boost, 1066MHz system bus, P8400/P8600/P8700: 3MB L2 cache, T9400: 6MB L2

**Memory**

- 1GB, 2GB, or 3GB std / 8GB max

**SATA DVD±RW Ultrabay Slim Sata disk**

- DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable (43N3214)

**Integrated graphics**

- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, maximum resolution: 2048x1536@75Hz

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar¹², magnifying glass

**Dimensions³ Weight⁴**

- 6-cell: 15.4" WXGA LED, 14.1" x 10.1" x 1.2-1.3", 357.5mm x 255mm x 30-34mm

**Chipset**

- Mobile Intel GM45 Express Chipset

**Mini PCI Express**

- Three Mini PCI Express slots

**WWAN upg**

- 3G (HSDPA, HSDPA 2100 MHz, HSUPA, HSPA+ 2100 MHz)

**Audio**

- High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

- Power-on password, hard-on password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

- ThinkPad fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 1-year - EasyServ™, depot repair service / service upgrades available

**Other accessories**

- 1GB PC3-8500 DDR3 L-H SODIMM
- 2GB PC3-8500 DDR3 L-H SODIMM
- 4GB PC3-8500 DDR3 L-H SODIMM

---

*IBM Institute for Advanced Business© 2009*
### ThinkPad T500 2242 (GMA) - TopS (XP with Win 7 License) - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Wide-screen display</th>
<th>CCLFL or LED</th>
<th>Camera Integrated Graphics</th>
<th>Disk</th>
<th>Sata</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini Pcie Finger print reader</th>
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<td>5400</td>
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</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 1-year limited warranty**

**Processor**

Intel® Core™ 2 Duo processor P8600 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

**Memory**

2GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-Italics: standard memory in one socket; one socket available

**SATA DVD±RW Ultrabay Slim SATA disk**

DVD burner, SATA 1.5Gbps, 9.5mm Ultrabay slim, removable (43N3214)
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
250GB7 (5400 rpm) or 320GB (5400 rpm) / SATA 1.5Gbps, 2.5" wide, 9.5mm high, removable, upgradeable disk, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

15.4" (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio

**Camera**

Some: camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), Maximum external resolution: 2048x1536 @ 75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

**Dimensions**

6-cell 15.4" (WxDxH): 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm

**Weight**

6-cell: starting at 5.9 lb (2.7kg)

**Case material**

Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic

**Battery - type**

Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim

**Battery - life**

6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 7.8 hr; 9-cell: up to 9.4 hr

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPNC385 Super I/O)

**ExpressCard/54 PC Card**

One slot (ExpressCard/34, ExpressCard/54)

**Smart Card read**

One slot (Type I, Type II), CardBus 32-bit

**Multicard reader**

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Ports**

Three USB 2.0, external monitor11 (VGA DB-15, DisplayPort), modem (RJ-45), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express WWAN upg**

Three Mini PCI Express slots

**2G Turbo UWB**

None

**Modem**

56K V.92 modem

**Bluetooth™**

Some: Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio support**

High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

1-year - depot repair service / service upgrades available

See footnotes for important warranty information

† Intel Centrino® 2 processor technology

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(CR5-15) September 2010

**Preloaded operating system**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Fingerprint Software
- Lenovo System Toolbox
- Roxio Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies

65-watt (GMA graphics) AG adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

Climate Savers® certified

EPET™ Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service17

24 hour x 7 day toll-free support during the warranty period22 via 800-426-7378

ThinkPlus™ 1-year LOR9 9x5 NBD

ThinkPlus 2-year LOR 9x5 NBD

ThinkPlus 3-year LOR 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD

ThinkPlus 5-year LOR 9x5 NBD

ThinkPlus 2-year P&L P/U Depot 45K5972

ThinkPlus 3-year P&L P/U Depot 45K5970

ThinkPlus 4-year P&L P/U Depot 45K5973

ThinkPlus 5-year P&L P/U Depot 45K5975

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® T500 2242 (GMA) - TopSeller (Windows 7) - withdrawn

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Cam-integrated graphics</th>
<th>Disk</th>
<th>SATA</th>
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<td>2GB</td>
<td>15.4&quot; WXGA LED</td>
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<td>GMA 320G5400 DVD±RW</td>
<td>✤ Intel 5100®</td>
<td>None</td>
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<td>None</td>
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<td>Pro 32</td>
<td>Oct 09</td>
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</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

Processor

Intel® Core™ 2 Duo processor P8600 with dual-core.
Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

Memory

2GB std / 8GB max™ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
Non-Italics: standard memory in one socket; one socket available

SATA DVD±RW

Ultrad bay Slim

SATA disk

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrad bay slim, removable (43N3214)
One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display

Camera

Integrated graphics

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45,
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
Maximum external resolution: 2048x1536@75Hz

Keyboard

Touch pad

ThinkLight™

Dimensions

Weight

Case color

Battery - type

Battery - life

Chipset

ExpressCard/54

PC Card

Smart Card read

Multicard reader

Ports

Mini PCI Express WWAN upg

2G Turbo

UWB

modem

Bluetooth™

Ethernet

Intel AMT

Audio support

Security

Security chip

Fingerprint reader

Limited warranty

1-year - depot repair service / service upgrades™ available

See footnotes for important warranty information

Intel Centrino® 2 processor technology

US model announced October 22, 2009

US model withdrawn effective September 2010

Preloaded operating system

- Genuine Windows® 7 Professional 32

Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software
- ThinkVantage Toolbox
- Skype™ for Windows
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies

65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
Climate Savers® certified
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service®
24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378

ThinkPlus™ 1-year LOR® 9x5 NBD
45K9698
ThinkPlus 2-year LOR 9x5 NBD
45K9699
ThinkPlus 3-year LOR 9x5 NBD
45K9570
ThinkPlus 4-year LOR 9x5 NBD
45K9573
ThinkPlus 5-year LOR 9x5 NBD
45K9574
ThinkPlus 2-year P&L P/U Depot
45K971
ThinkPlus 3-year P&L P/U Depot
45K9572
ThinkPlus 4-year P&L P/U Depot
45K9574
ThinkPlus 5-year P&L P/U Depot
45K9576
Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

Personal Systems Reference (PSREF)
**ThinkPad® T500 2243 (GMA) - TopSeller - withdrawn**

**Type-model**

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<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Sata</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Finger print reader</th>
<th>Blue-tooth</th>
<th>Preload</th>
<th>Avail date</th>
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<td>None</td>
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<td>Jul 09</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program

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**Processor**

Intel® Core™ 2 Duo processor P8400 or P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache

**Memory**

2GB std / 8GB max1 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in one socket; one socket available

**SATA DVD:RW, Ultrabiy Slim, SATA disk**

DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabiy slim, removable (43N3214) One modular bay for interchangeables (right side), 9.5mm high bay, flat bezel

**Widescreen display**

Some: 15.4” (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

Some: camera on top of screen, 1.3-megapixel, fixed focus

**Integrated graphics**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

**Mini PCI Express**

Three Mini PCI Express slots 11a/b/g/n wireless1, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

**Biometric features**

Fingerprint reader Fingerprint reader on palm rest, swipe sensor, supports the security chip

---

**Processor**

- Intel® Core™ 2 processor technology

**Memory**

- 2GB std / 8GB max1

**Display**

- GMA 16G 5400

**Disk**

- DVD:RW

**SATA**

- ✱ Intel 5100

**Mini PCIe 802.11**

- None

**Mini PCIe WWAN**

- None

**Mini PCIe Finger print reader**

- None

**Blue-tooth**

- None

**Preload operating system20**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business

**Preloaded applications14** (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

**Supports ThinkVantage® technologies**

- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- ENERGY STAR® 5.0-compliant
- RoHS-compliant International Warranty Service17
- 24 hour x 7 day18 toll-free support during the warranty period12 via 800-426-7378

**Certifications**

- ThinkPlus®22 3-year LOR®4 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot

**Post-warranty annual maintenance agreements**

at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

© Lenovo (CRS-11) January 2010
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™2 Duo processor P8700 with dual-core.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Illiacs: standard memory in one socket; one socket available</td>
</tr>
<tr>
<td>SATA DVD RW Ultrabay Slim</td>
<td>DVD burner, SATA 1.5Gb/s, 9.5mm Ulitabay slim, removable (43N3214)</td>
</tr>
<tr>
<td>SATA disk</td>
<td>One modular bay for interchangeable cards (right side), 9.5mm high bay, flat bezel</td>
</tr>
<tr>
<td>Widescreen display Camera</td>
<td>15.4&quot; (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz</td>
</tr>
<tr>
<td>Keyboard Trackpad</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
</tr>
<tr>
<td>Touchpad ThinkLight™</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
</tr>
<tr>
<td>Case color</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
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<tr>
<td>Case material</td>
<td>Black</td>
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<tr>
<td>Battery - type Battery - lite</td>
<td>6-cell 15.4W (WxDxH): 14.1&quot; x 10&quot; x 1.2–1.3&quot;, 357.5mm x 255mm x 30–34mm</td>
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<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub)</td>
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<tr>
<td>Preloaded operating system</td>
<td>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32</td>
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<tr>
<td>Preloaded applications (only some listed)</td>
<td>- Rescue and Recovery®</td>
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<tr>
<td></td>
<td>- Access Connections®</td>
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<td>- Client Security Solution®</td>
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<td>- ThinkVantage Productivity Center</td>
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<td>- ThinkVantage System Update</td>
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<td>- FingerPrint Software (fingerprint models)</td>
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<td>- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)</td>
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<td>- Lenovo System Toolbox</td>
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<tr>
<td></td>
<td>- ThinkPad Utilities (Power Manager and Presentation Director)</td>
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<td>- Adobe® Reader</td>
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<td>- Windows Live™ Toolbar</td>
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<td>- Roxio® Creator® Business Edition (DVD+RW)</td>
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<td>- Roxio MyDVD® (DVD+RW)</td>
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<td>- Corel® WinDVD® (DVD+RW)</td>
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<td></td>
<td>Supports ThinkVantage® technologies</td>
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<td>65-watt (GMA graphics) AC adapter</td>
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<td>ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)</td>
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<td>Climate Savers® certified</td>
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<td></td>
<td>PEPEAT® Gold rating</td>
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<td>ENERGY STAR® 5.0-compliant RoHS-compliant</td>
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<tr>
<td></td>
<td>International Warranty Service17</td>
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<td>24-hour 7 day toll-free support during the warranty period13 via 800-426-7378</td>
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<tr>
<td></td>
<td>ThinkPlus® 3-year LOR® 9x5 NBD</td>
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<td>ThinkPlus 4-year LOR 9x5 NBD</td>
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<td>ThinkPlus 5-year LOR 9x5 NBD</td>
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<td>ThinkPlus 4-year P&amp;L P/U Depot</td>
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<td>Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty</td>
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See footnotes for important warranty information

- Intel® Centrino® 2 processor technology

© Lenovo (CR5-17) September 2010
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor P8700 with dual-core. Intel HD Boost, 1066MHz system bus, and 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max*/ PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Non-italics: standard memory in one socket; one socket available</td>
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<td>DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay drive, removable (43N3214)</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
</tr>
<tr>
<td>SATA disk</td>
<td>Some: 128GB² Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8&quot; wide, 8mm high</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>15.4&quot; (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Integrated graphics</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536 @ 75 Hz</td>
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<td>Dimenssions²</td>
<td>6-cell 15.4W (WxDxH): 14.1&quot; x 10&quot; x 1.2–1.3&quot;; 357.5mm x 255mm x 30–34mm</td>
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<tr>
<td>Weight³</td>
<td>6-cell: starting at 5.9 lb (2.7kg)</td>
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<tr>
<td>Case color</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
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<tr>
<td>Battery - type</td>
<td>6-cell: up to 6.3 hr; 6-cell plus Ultrabay: up to 7.8 hr; 9-cell: up to 9.4 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPNC385 Super I/O) ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPNC385 Super I/O)</td>
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<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard/54)</td>
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<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit 2-slot</td>
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<tr>
<td>Smart Card read</td>
<td>None</td>
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<tr>
<td>Multicard reader ports</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0, external monitor¹¹ (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
</tr>
<tr>
<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots</td>
</tr>
<tr>
<td>Professional Preloaded operating system:⁹</td>
<td>Genuine Windows® 7 Professional 32</td>
</tr>
<tr>
<td>Professional Preloaded applications:¹⁴</td>
<td>Only some listed</td>
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<tr>
<td>65-watt (GMA graphics) AC adapter</td>
<td>ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)</td>
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<td>RoHS-compliant</td>
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<tr>
<td>24 hour x 7 day toll-free support</td>
<td>International Warranty Service¹⁷ during the warranty period ¹²</td>
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</table>

See footnotes for important warranty information © Lenovo (CRS-18) September 2010

US models announced October 22, 2009 or November 3, 2009
US models withdrawn effective September 2010
### ThinkPad T500 2082 (Switchable) - TopSeller - withdrawn

#### Preloaded operating system
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business
- Vista Business, Vista Premium logo

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

#### Suppliers and services
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Screen display</th>
<th>Camera</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>SATA</th>
<th>Mini PCI Express</th>
<th>Mini PCI Express</th>
<th>WWAN or Turbo cells Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2082-26U</td>
<td>P8400</td>
<td>2.26 15.4” WSXGA+</td>
<td>GMA, HD 3650 160G 7200</td>
<td>DVD</td>
<td>Intel 5100™</td>
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<td>GMA, HD 3650 160G 7200</td>
<td>DVD</td>
<td>Intel 5100</td>
<td>AT&amp;T</td>
<td>+9 Bus 32 Aug 08</td>
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<td>2082-3HU</td>
<td>P8400</td>
<td>2.26 15.4” WSXGA+</td>
<td>GMA, HD 3650 160G 7200</td>
<td>DVD</td>
<td>Intel 5100</td>
<td>AT&amp;T</td>
<td>+9 XP Pro Aug 08</td>
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</tbody>
</table>

#### Additional Notes
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have an EasyServ™ depot repair service 3-year limited warranty

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**Personal Systems Reference (PSREF)**

See footnotes for important warranty information

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(CR5-2) January 2010

US models announced August 5, September 23, 2008, January 6, 2009 or March 24, 2009

US models withdrawn effective September 2008, June 2009, or December 2009
**ThinkPad® T500 2082 (Switch) - TS (XP with Win 7 License) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>WWAN</th>
<th>UWB or Turbo cells Preload</th>
<th>Availability</th>
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<td>2082-BKU P8700</td>
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<td>3GB</td>
<td>15.4” WXGA+</td>
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<td>GMA, HD 3650</td>
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<td>XP Pro Oct 09</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have an EasyServ™ M5 depot repair service 3-year limited warranty

**Positioning**

Processor: Intel® Core™ 2 Duo processor P8700 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P8700: 3MB L2 cache; T9600: 6MB L2 cache

**Memory**

3GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; if needed: standard memory in both sockets; no sockets available

**SATA DVD±RW Ultrabay Slim SATA disk**

DVD burner, SATA 1.5GB/s, Ultrabay Slim, removable (43N3214) / SATA 1.5GB/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

15.4” (391mm) WXGA+ (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

**Camera**

Camera on top of screen, 1.3-megapixel, fixed focus

**Switchable graphics**

Switches between discrete and integrated graphics (Windows 7 only), Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI Mobility Radeon™ HD 3650, PCI Express x16, 256MB memory, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touch pad**

TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

6-cell 15.4”W (14.1” x 10” x 1.2-1.3”); 357.5mm x 255mm x 30–34mm 9-cell: starting at 6.2 lb (2.8kg)

**Weight**

CPU: Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic Lithium Ion 9-cell, supports unique 2nd battery in Ultrabay Slim 9-cell: up to 9.4 hr; 9-cell plus Ultrabay battery: up to 10.9 hr

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, 2 security chip, ethernet MAC), LPC bus (PN385 Super I/O)

**ExpressCard/54**

One slot (ExpressCard/34 or ExpressCard/54)

**PC Card**

One slot (Type I, Type II), CardBus 32-bit

**Smart Card read**

None

**Multicard Reader Ports**

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCIe Express**

Three Mini PCI Express slots 11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

**2G Turbo UWB**

None

**Modem**

56K V.92 modem

**Bluetooth®**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82576FL Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio support**

High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security chip**

Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Battery**

- 1-year battery - EasyServ™ M5 depot repair service / service upgrades available

**System**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded operating system**

- Windows® XP Professional
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)

**Preloaded applications**

- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- EPEAT® certified
- ENERGY STAR® 5.0-compliant RoHS-compliant

**Certifications**

International Warranty Service17 24 hour x 7 day toll-free support during the warranty period12 via 800-426-7378

**Supports ThinkVantage® technologies**

90-watt (ATI graphics) AC adapter ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

**Warranty Services**

- ThinkPlus™
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced: October 22, 2009

US models withdrawn effective September 2010

© Lenovo (CRS-14) September 2010
ThinkPad T500 2089 (GMA) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe Battery</th>
<th>Whose (W) Gbl (G) Avail date</th>
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<tbody>
<tr>
<td>2089-2JU</td>
<td>P8400 2.26 1GB 15.4&quot; WXGA</td>
<td>GMA80G 5400 Combo</td>
<td>Intel 5100™ WWAN upg</td>
<td>6</td>
<td>PC B32 G Aug 08</td>
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<tr>
<td>2089-2KU</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 W Aug 08</td>
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<td>2089-2LU</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 Verizon®</td>
<td>2G Turbo</td>
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<td>2089-3HU</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
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<tr>
<td>2089-3JU</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA</td>
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<td>2G Turbo</td>
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<td>2089-4XU</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA LED Cam</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
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<tr>
<td>2089-58U</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 W Aug 08</td>
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<td>P8400 2.26 1GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 G Aug 08</td>
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<td>2089-52U</td>
<td>T9400 2.53 2GB 15.4&quot; WXGA LED</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 W Aug 08</td>
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<tr>
<td>2089-7QU</td>
<td>P8400 2.26 1GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 G Aug 08</td>
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<tr>
<td>2089-7QJ</td>
<td>P8400 2.26 1GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 G Aug 08</td>
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<tr>
<td>2089-83U</td>
<td>P8400 2.26 1GB 15.4&quot; WXGA</td>
<td>GMA 160G 5400 DVD:RW</td>
<td>Intel 5100 WWAN upg</td>
<td>2G Turbo</td>
<td>PC B32 G Aug 08</td>
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</tbody>
</table>

Preloaded operating system:
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32

Vista models: Vista Premium logo

Preloaded applications (all OSes, only listed):
- Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Management and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (combo, DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

Official language(s)
- Japanese
- English
- Chinese

Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC adapter
- ThinkPad Roll Cage and Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus® 3-year LOR® 9x5 BD 45K6021
ThinkPlus 4-year LOR 9x5 BD 45K6022
ThinkPlus 5-year LOR 9x5 BD 45K6024
ThinkPlus 4-year P/L P/U Depot 45K6023
ThinkPlus 5-year P/L P/U Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Limited warranty: 3-years 1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information © Lenovo

ThinkPlus® 2 3-year LOR® 9x5 BD 45K6021
ThinkPlus 4-year LOR 9x5 BD 45K6022
ThinkPlus 5-year LOR 9x5 BD 45K6024
ThinkPlus 4-year P/L P/U Depot 45K6023
ThinkPlus 5-year P/L P/U Depot 45K6025
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Personal Systems Reference (PSREF)

US models announced Aug 5 to July 23, 2009
US models withdrawn effective August 2009, March 2010 or September 2010

Intel Centrino® 2 with vPro™ technology

RoHS-compliant
### Type-model Proc/essor Proc/essor Memory Memory CCFL or LED Camera Switchable display Disk SATA optical Mini PCIe WWAN Mini PCIe Mini PCIe Mini PCIe Card Workhorse (W) Workhorse (W) Turbo slot cells Fingerprint

| Type-model | Proc/essor | Memory | CCFL or LED Camera | Switchable display | Disk | SATA optical | Mini PCIe 802.11 | Mini PCIe WWAN | Card workhorse | Workhorse (W) | Turbo slot cells | Fingerprint
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<tbody>
<tr>
<td>2055-2BU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 80G 5400 Combo</td>
<td>Intel 5100/2WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
<td>G Aug 08</td>
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<tr>
<td>2055-2CU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
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<td>Yes</td>
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<tr>
<td>2055-2EU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
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<td>Yes</td>
<td>B32</td>
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<tr>
<td>2055-3AU T9600</td>
<td>2.80 GHz 4GB15.4&quot; WXSGA+</td>
<td>CamGMA, 3650 166G7200 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
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<td>Yes</td>
<td>B32</td>
<td>W Aug 08</td>
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<tr>
<td>2055-4SU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
<td>W Aug 08</td>
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<td>2055-5TU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
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<tr>
<td>2055-63U T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
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<tr>
<td>2055-7GU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
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<td>2055-77U T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
<td>Sep 08</td>
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<tr>
<td>2055-8LU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
<td>Sep 08</td>
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<td>2055-8TU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
<td>Sep 08</td>
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<td>2055-9TU T9400</td>
<td>2.53 GHz 2GB15.4&quot; WXSGA+</td>
<td>GMA, 3650 166G5400 DVDx2</td>
<td>Intel 5100 WWAN upg</td>
<td>PC</td>
<td>6</td>
<td>Yes</td>
<td>B32</td>
<td>Sep 08</td>
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</tbody>
</table>

### Preloaded operating system:
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business

### Preloaded applications:
- All OSes; only some listed:
  - Rescue and Recovery
  - Access Connections
  - Client Security Support
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software
  - McAfee VirusScan Plus with SiteAdvisor
  - 30 days of virus definitions

### Security:
- Intel AMT
- Ethernet
- UWB

### Battery - life:
- 3-years
- 10 hours

### Display:
- Widescreen
- Switchable graphics:
  - Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and Intel Mobility Radeon HD 3650, PCI Express 1.1a, x16, dual-channel capable, two 204-pin SO-DIMM sockets; no sockets available;
  - Intel graphics, Half-Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3 MIMO wireless USB based on Ultra-Wideband (UWB), Half-Mini PCIe adapter

### Keyboard:
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Touch pad:
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

### ThinkLight™:
- UltraNav

### Chipset:
- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, Ethernet MAC, LPC bus (W8CPN385 Super I/O))

### ExpressCard/54
- One slot (ExpressCard/34, ExpressCard/54)

### PC Card:
- One slot (Type I, Type II), CardBus 32-bit

### Smart Card read:
- Three Card reader

### Ports:
- 7-in-1 reader (MMC Stick, Mem Stick Pro® SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Limited warranty:
- 3-years/1-year battery - EasyServ®1,2,3 depot repair service / service upgrades2 available
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor P8400, P8700, or T9400 with dual-core</th>
<th>Preloaded operating system&lt;sup&gt;20&lt;/sup&gt;</th>
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<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max&lt;sup&gt;1&lt;/sup&gt; / PC3-8500 1066MHz DDR3, non-parity,</td>
<td>- Genuine Windows® Vista&lt;sup&gt;®&lt;/sup&gt; Business 32</td>
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<tr>
<td>SATA DVD:&lt;sup&gt;±&lt;/sup&gt;</td>
<td>DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)</td>
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<td>SSD disk</td>
<td>One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel</td>
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<tr>
<td>Processor</td>
<td>Intel HD Boost, 1066MHz system bus; P8400/P8700: 3MB L2 cache; T9400: 6MB L2</td>
<td>- Vista Premium logo</td>
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<tr>
<td>Switchable graphics</td>
<td>Switches between discrete and integrated graphics (Vista only)</td>
<td>Preloaded applications&lt;sup&gt;14&lt;/sup&gt; (only some listed)</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
<td>- Rescue and Recovery™</td>
</tr>
<tr>
<td>TrackPoint&lt;sup&gt;®&lt;/sup&gt;</td>
<td>TrackPoint&lt;sup&gt;®&lt;/sup&gt; pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar&lt;sup&gt;®&lt;/sup&gt;, magnifying glass</td>
<td>Access Connections™</td>
</tr>
<tr>
<td>Touchpad</td>
<td>UltraNav&lt;sup&gt;™&lt;/sup&gt;, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
<td></td>
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<tr>
<td>Display</td>
<td>Maximum external resolution: 2048x1536@75Hz (VGA, DisplayPort)</td>
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<tr>
<td>Case material</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>Client Security Solution™</td>
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<tr>
<td>Battery</td>
<td>6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 9.4 hr</td>
<td>ThinkVantage Productivity Center</td>
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<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express&lt;sup&gt;®&lt;/sup&gt; 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)</td>
<td>ThinkVantage System Update</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard&lt;sup&gt;®&lt;/sup&gt;/54)</td>
<td>Fingerprint Software (fingerprint models)</td>
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<tr>
<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
<td>McAfee VirusScan&lt;sup&gt;®&lt;/sup&gt; Plus with SiteAdvisor&lt;sup&gt;®&lt;/sup&gt; (30 days of virus definitions)</td>
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<tr>
<td>Smart Card reader</td>
<td>None</td>
<td>Lenovo System Toolbox</td>
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<tr>
<td>Multicard reader</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick PRO&lt;sup&gt;™&lt;/sup&gt;, SD, SDHC, XD, XD Type H)</td>
<td>ThinkPad Utilities (Power Manager and Presentation Director)</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Bottom: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
<td>Adobe® Reader&lt;sup&gt;®&lt;/sup&gt;</td>
</tr>
<tr>
<td>Battery - life</td>
<td>6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 9.4 hr</td>
<td>Windows Live™ Toolbar</td>
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<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express&lt;sup&gt;®&lt;/sup&gt; 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)</td>
<td>Microsoft® Office 2007 Trial (60-day)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard&lt;sup&gt;®&lt;/sup&gt;/54)</td>
<td>Roxio&lt;sup&gt;®&lt;/sup&gt; Creator&lt;sup&gt;®&lt;/sup&gt; Business Edition (DVD&lt;sup&gt;®&lt;/sup&gt;/RW)</td>
</tr>
<tr>
<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
<td>Roxio MyDVD&lt;sup&gt;®&lt;/sup&gt; (DVD&lt;sup&gt;®&lt;/sup&gt;/RW)</td>
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<tr>
<td>Smart Card reader</td>
<td>None</td>
<td>Supports ThinkVantage&lt;sup&gt;®&lt;/sup&gt; technologies</td>
</tr>
<tr>
<td>Multicard reader</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>90-watt (ATI graphics) AC adapter</td>
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<tr>
<td>Battery - type</td>
<td>Bottom: Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim</td>
<td>ThinkPad Roll Cage and Top Cover (Roll Cage (one-piece magnesium)</td>
</tr>
<tr>
<td>Battery - life</td>
<td>6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 9.4 hr</td>
<td>Climate Savers&lt;sup&gt;®&lt;/sup&gt; certified</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express&lt;sup&gt;®&lt;/sup&gt; 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)</td>
<td>EPEAT&lt;sup&gt;®&lt;/sup&gt; Gold rating (LED models)</td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One slot (ExpressCard/34, ExpressCard&lt;sup&gt;®&lt;/sup&gt;/54)</td>
<td>EPEAT Silver rating (other models)</td>
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<td>PC Card</td>
<td>One slot (Type I, Type II), CardBus 32-bit</td>
<td>ENERGY STAR&lt;sup&gt;®&lt;/sup&gt; 5.0-compliant</td>
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<td>Multicard reader</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick PRO&lt;sup&gt;™&lt;/sup&gt;, SD, SDHC, XD, XD Type H)</td>
<td>RoHS-compliant</td>
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<td>Ports</td>
<td>Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic</td>
<td>International Warranty Service&lt;sup&gt;17&lt;/sup&gt;</td>
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<td>Mini PCI Express</td>
<td>Three Mini PCI Express slots</td>
<td>24 hour x 7 day&lt;sup&gt;®&lt;/sup&gt; toll-free support during the warranty period&lt;sup&gt;22&lt;/sup&gt; via 800-426-7378</td>
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<tr>
<td>Intel 5100&lt;sup&gt;®&lt;/sup&gt;</td>
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<td>11m&lt;sup&gt;®&lt;/sup&gt;</td>
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<td>WWAN upg</td>
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<td>2G Turbo UWB</td>
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<td>Audio support</td>
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<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
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<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
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<tr>
<td>Fingerprint reader</td>
<td>Fingerprint reader on palm rest, swipe sensor, supports security key function</td>
<td></td>
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<tr>
<td>Limited warranty&lt;sup&gt;16&lt;/sup&gt;</td>
<td>3-years/1-yr battery - depot repair service / service upgrades&lt;sup&gt;23&lt;/sup&gt; available</td>
<td></td>
</tr>
</tbody>
</table>

See footnotes for important warranty information © Lenovo
US models announced July 7, 2009
US models withdrawn effective March or September 2010

© Lenovo
(CR5-13) September 2010
### ThinkPad® T500 2241 (GMA) - Onsite - withdrawn

**Personal Systems Reference (PSREF)**

**Type-model** | Processor GHz | Memory | Wide-screen display | Disk | Mini PCIe | Mini PCIe Battery | Whose (W) | GM (P) | Avail.
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2241-3WU P8400 2.26 1GB 15.4" WXGA | GMA 80G 5400 Combo | 6 Blue Bus 32 GP Aug08
2241-3XU T9400 2.53 2GB 15.4" WXGA | GMA 160G 5400 DVD:RW | 6 Blue Bus 32 GP Aug08
2241-3YU T9400 2.53 2GB 15.4" WXGA | Cam GMA 160G 5400 DVD:RW | 6 Blue Bus 32 GP Aug08
2241-4XU T9400 2.53 2GB 15.4" WXGA | Cam GMA 160G 5400 DVD:RW | 6 Blue Bus 32 GP Aug08
2241-58U T9400 2.53 2GB 15.4" WXGA | Cam GMA 160G 5400 DVD:RW | 6 Blue Bus 32 GP Aug08
2241-5ZU P8600 2.40 15.4" WXGA | GMA 160G 5400 DVD:RW | 6 Blue Bus 32 GP Aug08

#### These models are part of the Global Models Plus program with limited onsite service

- **3-year limited warranty**

### Positioning Processor

- **Intel® Core™ 2 Duo processor P8400, P8600, or T9400 with dual-core.** Intel HD Boost, 1066MHz system bus; P8400/P8600: 3MB L2 cache; T9400: 6MB L2 cache

### Memory

- 1GB or 2GB std / 8GB max / PC3-8500 Dual Channel DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Italics:** standard memory in both sockets; no sockets available;
- **Non-italics:** standard memory in one socket; one socket available

### SATA Combo

- Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable Ultrabay II DVD burner, SATA 1.5Gb/s, removable (43N3214)
- One module bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- SATA 1.5Gb/s, 2.5" wide, 5.9mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Ultrabay Slim

- SATA disk
- Some: 15.4" (391mm) WXGA (1280x800) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
- Some: 15.4" (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio

### Widescreen display

- Some: camera on top of screen, 3-megapixel fixed focus

### Camera

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort
- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort

### Integrated graphics

- Intel GM45 Express Chipset
- Mobile Intel GM45 Express Chipset

### Chipset

- Mobile Intel GM45 Express Chipset
- Mobile Intel GM45 Express Chipset

### Preloaded operating system

- **Some:** Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- **Some:** Genuine Windows Vista Business 32
- **Vista models:** Vista Premium logo

### Preloaded applications

- **All OSes, only some listed:**
  - Rescue and Recovery™
  - Remote Configuration (some)
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - ThinkVantage technologies

### Battery

- Lithium Ion 6-cell: up to 9.4 hr; 9-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 7.8 hr; 9-cell: up to 9.4 hr

### Dimensions

- 6-cell 15.4" (391mm) WXGA (1280x800) color, anti-glare, 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm
- 6-cell 15.4" (391mm) WXGA (1280x800) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

### Touchpad

- UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

### Pointing device

- UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

### Power-on password, hard disk password, supervisor password, security keyhole

- Power-on password, hard disk password, supervisor password, security keyhole
- Power-on password, hard disk password, supervisor password, security keyhole

### Fingerprint reader

- FingerPrint reader
- Illuminates the keyboard to improve visibility in low-light conditions

### Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45JF7915)

### Maximum external resolution

- 2048x1536@75Hz

### See footnotes for important warranty information

- FineCentrino® 2 with vPro™ technology
- US models announced August 5, September 23, 2008, or December 2, 2008
- US models withdrawn effective March 2010

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(CR5-5) September 2010
ThinkPad® T500 2056 (Switchable) - Onsite - withdrawn

See footnotes for important warranty information

Processor: Intel® Core™ 2 Duo processor P8600, T9400, or T9600 with dual-core, Intel HD Boost, 1066MHz system bus; P8600: 5MB L2 cache; T9400/T9600: 6MB L2 cache

Memory: 2GB or 4GB std / 8GB max7 / PC3-8500 1066MHz system bus; P8600: 4MB L2 cache; T9400/T9600: 5MB L2 cache

SATA Combo: Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, 9.5mm Ultrabay Slim, removable

USB 2.0: Turbo, WWAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)

Battery - life: 6-cell: up to 7.8 hr; 9-cell: up to 8.9 hr; includes unique 2nd battery in Ultrabay Slim

Dimensions: 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm

Weight: Black: 6-cell: starting at 5.9 lb (2.7kg); 9-cell: starting at 6.0 lb (2.7kg)

Chipset: Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

Ports: Three USB 2.0, external monitor17 (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 4 (4-pin connector; 1394a-2000 standard)

Battery: 6-cell: ThinkPad Shock Mounted Hard Drive, Active Protection System

SSD: 3-cell: 5400 rpm; 6-cell: 7200 rpm

Battery: 3-cell: Lithium Ion, 6-cell: Lithium Polymer

Limited warranty: 3-years/1-year battery, limited onsite service18; 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades19 available

Supports ThinkVantage® technologies

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

• These models are part of the Global Models Plus program with limited onsite service18 3-year limited warranty

• Preloaded operating system20
  - Some: Windows® XP Professional preinstalled through downgrades rights in Genuine Windows Vista® Business
  - Some: Genuine Windows Vista Business

  • Vista models: Vista Premium logo

  • Preloaded applications14 (all OSes, only some listed)
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center
    - ThinkVantage System Update
    - Fingerprint Software (fingerprint models)
    - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
    - Lenovo System Toolbox
    - ThinkPad Utilities (Power Manager and Presentation Director)
    - Adobe® Reader®
    - Windows Live™ Toolbar
    - Microsoft® Office 2007 Trial (60-day)
    - Roxio® Creator® Business Edition (combo, DVD:RW)
    - Roxio MyDVD® (DVD:RW)
    - Corel® WinDVD® (combo, DVD:RW)

  • Supports ThinkVantage® technologies

  • 90-watt (ATI graphics) AC adapter
  • 90-watt (ATI graphics) AC adapter

  • ThinkPad Roll Cage and Top Cover

  • Roll Cage (one-piece magnesium)

  • 4-year LOR 9x5 NBD

  • 24 hour x 7 day toll-free support during the warranty period12 via 800-426-7378

  • ThinkPlus® 22

  • Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

US model announced August 5, September 23, or December 2, 2008

US models withdrawn effective August 2009 or September 2010

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(CRS-6) September 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Disk</th>
<th>SATA</th>
<th>Sata optical</th>
<th>Mini PCI Express</th>
<th>Mini PCI Express</th>
<th>Workhorse (W)</th>
<th>Availability</th>
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<tr>
<td>2089-E1U</td>
<td>P8400 2.26Ghz</td>
<td>2GB</td>
<td>DVD:RW</td>
<td>Intel 5100&lt;sup&gt;TH&lt;/sup&gt;</td>
<td>WWAN upg</td>
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<td>6 Blue Bus 32</td>
<td>No Aug 08</td>
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<tr>
<td>2089-E2U</td>
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<td>4GB</td>
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<td>Intel 5100&lt;sup&gt;TH&lt;/sup&gt;</td>
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<td>No Aug 08</td>
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<tr>
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<td>4GB</td>
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<tr>
<td>2089-E5U</td>
<td>P8700 2.53Ghz</td>
<td>4GB</td>
<td>DVD:RW</td>
<td>Intel 5100&lt;sup&gt;TH&lt;/sup&gt;</td>
<td>WWAN upg</td>
<td>None</td>
<td>6 Blue Bus 32</td>
<td>No Mar 09</td>
<td></td>
</tr>
</tbody>
</table>

These models have a depot repair service 3-year limited warranty. These educational models are available exclusively to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Preloaded operating system<sup>20</sup>:
- Genuine Windows<sup>Vista</sup> Business 32
- Vista Premium logo

Preloaded applications<sup>14</sup>(only some listed):
- Rescue and Recovery<sup>TM</sup>
- Access Connections<sup>TM</sup>
- Client Security Solution<sup>TM</sup>
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan<sup>Plus</sup> with SiteAdvisor<sup>TM</sup> (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe<sup>Reader</sup>
- Windows Live<sup>™</sup> Toolbar
- Microsoft<sup>®</sup> Office 2007 Trial (60-day)
- Roxio<sup>©</sup> Creator<sup>®</sup> Business Edition (DVD+RW)
- Roxio<sup>©</sup> MyDVD<sup>®</sup> (DVD+RW)
- Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD+RW)

Supports ThinkVantage<sup>®</sup> technologies

65-watt (GMA graphics) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium) Climate Savers<sup>®</sup> certified

EPEAT<sup>®</sup> Gold rating (LED models) EPEAT Silver rating (other models) ENERGY STAR<sup>®</sup> 5.0-compliant RoHS-compliant

International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>TM</sup> toll-free support during the warranty period<sup>17</sup> via 800-426-7378

ThinkPlus<sup>®</sup>, 3-year LOR<sup>23</sup> 9x5 NBD

ThinkPlus 4-year LOR 9x5 NBD 45K6021

ThinkPlus 5-year LOR 9x5 NBD 45K6024

ThinkPlus 4-year P&LU Depot 45K6023

ThinkPlus 5-year P&LU Depot 45K6025

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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**Notes:**
- See footnotes for important warranty information
- Intel Centrino<sup>®</sup> 2 with vPro<sup>™</sup> technology
- © Lenovo

**US models announced August 5, December 2, 2008, or March 24, 2009**

**US models withdrawn effective March or September 2010**

(CRS-7) September 2010
## ThinkPad T500 2055 (Switchable) - Education - withdrawn

### Overview

- **Type-model**: Processor GHz
- **Memory**: 2GB or 3GB std / 8GB max
- **Wide-screen display**: 15.4" WXGA+ color
- **Camera**: 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- **Switchable graphics**: Intel HD Boost
- **Processor**: Intel Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache
- **Display**: 15.4" (391mm) WXGA+ (1680x1050) color, anti-glare, (391mm) WXGA+ color
- **Video**: High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume control
- **Graphics**: Mobile Intel GM45 Express Chipset
- **Base**: ThinkPad Shock Mounted Hard Drive, Active Protection System
- **Battery**: Lithium Ion, Top: Carbon-Fiber Reinforced Plastic, Super-Elastic PolyCarbonate (SEPC); Bottom: Fiber Reinforced Plastic
- **Case material**: Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
- **Weight**: 1.69 lbs to 2.8 lbs
- **Dimensions**: 15.4" x 10.5" x 0.9" (391mm x 267mm x 23mm)
- **Memory**: 2GB or 3GB std / 8GB max
- **Bus**: 1066MHz system bus, and 6MB L2 cache
- **Processor**: Intel Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost
- **Display**: 15.4" WXGA+ color
- **Camera**: 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- **Switchable graphics**: Intel HD Boost
- **Processor**: Intel Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost

### Technical Specifications

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<tr>
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<th>Specification</th>
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<tr>
<td>Type-model</td>
<td>2055-E1U T9400 2.53 GHz 2GB 15.4&quot; WXGA+ Cam GMA, HD 3650 160G 7200 DVD+RW</td>
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<tr>
<td>Memory</td>
<td>2GB or 3GB std / 8GB max</td>
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<tr>
<td>Wide-screen display</td>
<td>15.4&quot; WXGA+ color</td>
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<tr>
<td>Camera</td>
<td>200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
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<tr>
<td>Switchable graphics</td>
<td>Intel® HD Boost</td>
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<tr>
<td>Display</td>
<td>15.4&quot; WXGA+ color</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB or 3GB std / 8GB max</td>
</tr>
<tr>
<td>Processor</td>
<td>Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost</td>
</tr>
<tr>
<td>Display</td>
<td>15.4&quot; WXGA+ color</td>
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<tr>
<td>Camera</td>
<td>200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
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<td>Switchable graphics</td>
<td>Intel® HD Boost</td>
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<tr>
<td>Display</td>
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</tr>
<tr>
<td>Camera</td>
<td>200 nits, 16:10 aspect ratio, 500:1 contrast ratio</td>
</tr>
</tbody>
</table>

### Education Features

- **Preloaded applications**:
  - Genuine Windows® Vista® Business 32
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - ThinkPlus® 5-year LOR 9x5 NBD

- **Security Features**:
  - Power-on password, hard disk password, supervisor password, security keyhole
  - Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

- **Supported Technologies**:
  - Client Management Technology (AMT)
  - Enhanced Intel SpeedStep Technology (EIST)

### Additional Information

- **Limited warranty**: 3-years

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See footnotes for important warranty information © Lenovo

US models announced August 5, 2008 or March 24, 2009

US models withdrawn effective September 2010

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*These models have a depot repair service 3-year limited warranty*

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

---

**Preloaded operating system**
- Genuine Windows® Vista® Business 32
- Vista Premium logo

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- ThinkPlus® 5-year LOR 9x5 NBD
  - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader^®
  - Windows Live® Toolbar
  - Microsoft® Office 2007 Trial (60-day)
  - Roxio® Creator® Business Edition (DVD:RW)
  - Roxio MyDVD® (DVD:RW)
  - Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies

- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Climate Savers® certified
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus™, 3-year LOR, 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® T500 2241 (GMA) - Education (Onsite) - withdrawn

Personal Systems Reference (PSREF)

Type-model Processor GHz Memory Wide-screen display CCFL or LED Cam-Integrated Swap Chip Disk SATA rpm SATA optical Mini PCIe WWAN Mini PCIe UWB Mini PCIe Battery Blue- or Turbo cells Preload Workhorse (W) Global (G) Available date
2241-E1U P8400 2.26 2GB 15.4” WXGA Cam GMA 160G 5400 DVD±RW Intel 5100 32 WWAN upg None 6 Blue Bus 32 No Aug 08
2241-E2U T9400 2.53 2GB 15.4” WXGA Cam GMA 250G 5400 DVD±RW Intel 5100 WWAN upg None 6 Blue Bus 32 No Aug 08
2241-E3U T9400 2.53 2GB 15.4” WXGA Cam GMA 160G 7200 DVD±RW Intel 5100 WWAN upg None 9 Blue Bus 32 No Dec 08
2241-E4U P8600 2.40 2GB 15.4” WXGA LED Cam GMA 160G 7200 DVD±RW Intel 1000 WWAN upg None 6 Blue Bus 32 No Dec 08
2241-E5U P8700 2.53 2GB 15.4” WXGA LED Cam GMA 160G 5400 DVD±RW Intel 1000 WWAN upg None 6 Blue Bus 32 No Mar 09

- These models have a limited onsite service* 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor
Premiere performance; two spindles
Intel® Core® 2 Duo processor P8400, P8600, P8700, or T9400 with dual-core, Intel HD Boost, 1066MHz system bus; P8400/P8600/P8700: 3MB L2 cache; T9400: 6MB L2 cache

Memory
2GB std / 8GB max7 PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket; one socket available

SATA DVD±RW Ultrabay Slim SATA disk
DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214) One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel 160GB* (5400 or 7200 rpm) or 250GB (5400 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display
Some: 15.4" (391mm) WXGA (1280x800) color, anti-glide, CCFL backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio
Some: 15.4" (391mm) WXGA (1280x800) color, anti-glide, LED backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio

Camera
Camera on top of screen, 1.3-megapixel, fixed focus

Integrated graphics
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar\textsuperscript{13}, magnifying glass UltraNav\textsuperscript{14}, wide touch pad below keyboard, Tap Zones, scrolling regions label Illuminates the keyboard to improve visibility in low-light conditions

Dimensions\textsuperscript{5}
Weight\textsuperscript{5}
Case color
Top: Super-Elastic PolyCarbonate (SEPC); Bottom: Carbon-Fiber Reinforced Plastic
Battery type
Lithium Ion 6-cell or 9-cell, supports unique 2nd battery in Ultrabay Slim
Battery life \textsuperscript{6}6-cell: up to 6.3 hr; 6-cell plus Ultrabay battery: up to 7.8 hr; 9-cell: up to 9.4 hr

Chipset
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express\textsuperscript{8, 11} 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCC385 Super I/O)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

PC Card
One slot (Type I, Type II), CardBus 32-bit

Multicard reader Ports
7-in-1 reader (MMC, Memory Stick, Mem Stick PRO\textsuperscript{15}, SD, SDHC, XD, XD Type H) Three USB 2.0, external monitor11 (VGA DB-15, Displayport), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

Mini PCI Express Intel 5100\textsuperscript{6} WWAN upg 2G Turbo UWB
Three Mini PCI Express slots

Modem
56K V.92\textsuperscript{7} modem

Bluetooth\textsuperscript{16}
Bluetooth 2.1 wireless, LED indicator

Ethernet Intel AMT
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support
Intel Active Management Technology (AMT)

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty \textsuperscript{8}3-years/1-year battery, limited onsite service\textsuperscript{9}, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades\textsuperscript{22} available

Preloaded applications\textsuperscript{14} (only some listed)
- Rescue and Recovery\textsuperscript{16}
- Access Connections\textsuperscript{16}
- Client Security Solution\textsuperscript{16}
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan\textsuperscript{20} Plus with SiteAdvisor\textsuperscript{20} (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe\textsuperscript{21} Reader\textsuperscript{7}
- Windows Live\textsuperscript{21} Toolbar
- Microsoft\textsuperscript{22} Office 2007 Trial (60-day)
- Roxio\textsuperscript{23} Creator\textsuperscript{23} Business Edition (DVD±RW)
- Roxio MyDVD\textsuperscript{23} (DVD±RW)
- Corel\textsuperscript{24} WinDVD\textsuperscript{24}

Supports ThinkVantage\textsuperscript{25} technologies
65-watt (GMA graphics) AC adapter
ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
Climate Savers\textsuperscript{26} certified
EPEAT\textsuperscript{27} Silver rating
ENERGY STAR\textsuperscript{28} 5.0-compliant
ROHS-compliant
International Warranty Service\textsuperscript{17} 24 hour x 7 day\textsuperscript{17} toll-free support during the warranty period\textsuperscript{17} via 800-426-7378

ThinkPlus\textsuperscript{22} 4-year LOR 9x5 NBD 45K6038
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Intel Centrino® 2 with vPro\textsuperscript{TM} technology

US models announced August 5, December 2, 2008, or March 24, 2009
US models withdrawn effective March or September 2010

(CRS-9) September 2010

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**ThinkPad® T500 2056 (Switchable) - Education (Onsite) - withdrawn**

### System Configuration

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Storage</th>
<th>Display</th>
<th>Camera</th>
<th>Graphics</th>
<th>OS</th>
<th>Preloaded Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>2056-E1U T9400 2.53</td>
<td>Intel® Core™ 2 Duo processor T9400</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <em>Italics:</em> standard memory in both sockets; no sockets available; <em>Non-italics:</em> standard memory in one socket; one socket available</td>
<td>160GB 7200 GB DRW + Intel 5100®</td>
<td>15.4&quot; WSXGA+ Cam GMA, HD 3650</td>
<td>2056-E2U T9400 2.53</td>
<td>Intel 5100®</td>
<td>Windows 7®</td>
<td>None</td>
</tr>
<tr>
<td>2056-E3U T9600 2.80</td>
<td>Intel® Core™ 2 Duo processor T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <em>Italics:</em> standard memory in both sockets; no sockets available; <em>Non-italics:</em> standard memory in one socket; one socket available</td>
<td>160GB 7200 GB DRW + Intel 5100®</td>
<td>15.4&quot; WSXGA+ Cam GMA, HD 3650</td>
<td>2056-E2U T9400 2.53</td>
<td>Intel 5100®</td>
<td>Windows 7®</td>
<td>None</td>
</tr>
<tr>
<td>2056-E3U T9600 2.80</td>
<td>Intel® Core™ 2 Duo processor T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <em>Italics:</em> standard memory in both sockets; no sockets available; <em>Non-italics:</em> standard memory in one socket; one socket available</td>
<td>160GB 7200 GB DRW + Intel 5100®</td>
<td>15.4&quot; WSXGA+ Cam GMA, HD 3650</td>
<td>2056-E2U T9400 2.53</td>
<td>Intel 5100®</td>
<td>Windows 7®</td>
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</tr>
<tr>
<td>2056-E3U T9600 2.80</td>
<td>Intel® Core™ 2 Duo processor T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <em>Italics:</em> standard memory in both sockets; no sockets available; <em>Non-italics:</em> standard memory in one socket; one socket available</td>
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<td>15.4&quot; WSXGA+ Cam GMA, HD 3650</td>
<td>2056-E2U T9400 2.53</td>
<td>Intel 5100®</td>
<td>Windows 7®</td>
<td>None</td>
</tr>
</tbody>
</table>

*These models have a limited onsite service* 3-year limited warranty

Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- Processor: **Intel® Core™ 2 Duo processor T9400** or **T9600** with dual-core
- Memory: 2GB or 3GBstd / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; more information available in footnotes.
- Storage: 160GB 7200 GB DRW + Intel 5100®
- Display: 15.4" WSXGA+ Cam GMA, HD 3650
- Camera: 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- Graphics: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3650
- OS: Microsoft® Windows® 7®
- Preloaded Software: None

### Diagnostic Information

- Processor: Intel® Core™ 2 Duo processor T9400
- Memory: 2GB or 3GBstd / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; more information available in footnotes.
- Storage: 160GB 7200 GB DRW + Intel 5100®
- Display: 15.4" WSXGA+ Cam GMA, HD 3650
- Camera: 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- Graphics: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3650
- OS: Microsoft® Windows® 7®
- Preloaded Software: None

### Software Information

- Processor: Intel® Core™ 2 Duo processor T9400
- Memory: 2GB or 3GBstd / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; more information available in footnotes.
- Storage: 160GB 7200 GB DRW + Intel 5100®
- Display: 15.4" WSXGA+ Cam GMA, HD 3650
- Camera: 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- Graphics: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility Radeon™ HD 3650
- OS: Microsoft® Windows® 7®
- Preloaded Software: None
ThinkPad® T500, W500 Accessories - withdrawn

Personal Systems Reference (PSREF)

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708

Storage and removable storage
160GB Disk SATA 3.0Gb/s (7200 rpm)³¹
250GB Disk SATA 3.0Gb/s (5400 rpm)³¹
250GB Disk FDE SATA 3.0Gb/s (7200 rpm)³¹
320GB Disk SATA 3.0Gb/s (5400 rpm)³¹
320GB Disk FDE SATA 3.0Gb/s (7200 rpm)³¹
500GB Disk SATA 3.0Gb/s (7200 rpm)³¹
500GB Disk FDE SATA 3.0Gb/s (7200 rpm)³¹
128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)
256GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)
USB 2.0 Portable 320GB Hard Disk
USB 2.0 Portable 500GB Hard Disk
USB 2.0 Secure 160GB Hard Disk
USB 2.0 Secure 320GB Hard Disk
eSATA/USB 2.0 Secure 500GB Hard Drive
USB 2.0 Portable DVD Burner

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
Verizon® WWAN UNDP Broadband Mini PCIe
AT&T® WWAN HSPA Broadband Mini PCIe

ThinkPad Expansion
Lenovo® Essential Notebook Stand
USB Port Replicator with Digital Video

Keyboard
TrackPoint Cap Collection
USB Numeric Keypad
Preferred Pro USB Keyboard
Enhanced Performance USB Keyboard
Ultrasilm Wireless Keyboard and Mouse
ThinkPad USB Keyboard with TrackPoint
Lenovo® USB Fingerprint Keyboard
Lenovo USB CardReader Keyboard

Mouse
Lenovo Optical Mouse (USB)
Lenovo Laser Mouse (USB)
ThinkPad USB Laser Mouse
Lenovo ScrollPoint® Mouse (USB, Optical)
ThinkPad Travel Mouse (USB, Optical)
ThinkPad Bluetooth Laser Mouse

Multimedia
ThinkPad In-Ear Headphones

Security
Kensington® MicroSaver® Cable Lock
Kensington Twin Head Cable Lock
Lenovo Security Cable Lock

Batteries
ThinkPad Battery 41+ (6-cell)
ThinkPad Battery 41++ (9-cell)
ThinkPad Battery 42 (3-cell, bay)⁴³

Charging tips for 90W Ultrasilm AC/DC Combo Adapter 41R4943
• Palm device charge tip (L7)
• BlackBerry charge tip (L8a)
• Pod and iPhone Charge Tip (L10a)
• Generic Micro USB charge tip (L18)

Carrying Cases
ThinkPad 15W Case Sleeve
Lenovo Business Messenger Case
Lenovo Messenger Max
ThinkPad Business BackPack
ThinkPad Business Topload Case
ThinkPad Business Backpack
ThinkPad Deluxe Expander Case
ThinkPad Executive Leather Case

Monitors
Lenovo L2230x Wide 21.5" Monitor
ThinkVision L1711p 17" Monitor
ThinkVision L1951p Wide 19" Monitor
ThinkVision L2250p Wide 22" Monitor
ThinkVision L2321x Wide 23" Monitor
ThinkVision L2440p Wide 24" Monitor

Monitor Accessories⁴⁶
Lenovo USB-to-DVI Monitor Adapter
Lenovo DisplayPort to VGA Monitor Cable
DisplayPort to Single-link DVI-D Cable
ThinkVision USB Soundbar
ThinkVision Soundbar
Kensington MicroSaver Cable Lock
Kensington Twin Head Cable Lock
Lenovo Security Cable Lock
Lenovo Easy Reach Monitor Stand

Power supplies
ThinkPad 65W AC Adapter
ThinkPad 90W AC Adapter
90W Ultrasilm AC/DC Combo Adapter

Carry-on battery use
Approved for carry-on use on all flights

More information at www.lenovo.com/support/security

More info at www.lenovo.com/support/accessories

More info on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security
www.lenovo.com/accessories

More information at www.lenovopowertips.com
www.lenovocomputing

More information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories

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www.lenovo.com/accessories

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(0-T500) September 2010
Lenovo® ThinkPad T510

ThinkPad Mini Dock Plus Series 3 - 90W
433810U

ThinkPad Battery 27++ (9-cell, slice)
57Y4545

ThinkPad triple external monitor configuration using NVIDIA’s Optimus technology

Lenovo ThinkPad T510
### ThinkPad T510 4313 (TopSeller) - Windows 7 - withdrawn

#### Personal Systems Reference (PSREF)

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

| Type-model | Processor | Base turbo (GHz) | Max turbo (GHz) | Memory | Wide-screen display | Camera | Disk | SATA GB rpm | SATA optical | PCle Mini Card WWAN | PCle Mini Card WWAN | Finger print reader | Bluetooth cells vPro Preload | Avail date |
|------------|-----------|-----------------|----------------|--------|---------------------|--------|------|-------------|-------------|---------------------|---------------------|-------------------|----------------------|----------------------|-----------|
| 4313-28U i5-520M 64-bit | i5-520M 2.40 | 2.93 | 2GB | 15.6" HD | 2.0M | 250G | 5400 | DVD-RW | 11b/g/n | None | None | None | 6 No Pro 32 Jan 10 |
| 4313-CTU i5-560M 64-bit | i5-560M 2.66 | 3.20 | 2GB | 15.6" HD | 2.0M | 320G | 7200 | DVD-RW | 11b/g/n | None | None | None | 6 No Pro 64 Sep 10 |

#### Preloaded operating system
- **Some**: Genuine Windows® 7 Professional 32
- **Some**: Genuine Windows® 7 Professional 64

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio Creator® Business Edition
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

#### Integrated graphics
- Intel® HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

#### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

#### TrackPoint
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

#### Touchpad
- Wide touchpad below keybord, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions
- 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

#### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

#### Chipset
- Mobile Intel® GM57 Express Chipset

#### ExpressCard/34 Smart Card reader MultiCard reader Ports
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RU-11), ethernet (RU-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

#### PCle Mini Card
- 11b/g/n wireless®, ThinkPad 11b/g/n, PCle Half Mini Card
- None

#### Bluetooth
- None

#### Ethernet
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCI Express x1

#### Intel AMT
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip
- Trusted Platform Module, TCG 1.2-compliant

#### Limited warranty
- 1-year - depot repair service / service upgrades available

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See footnotes for important warranty information.

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US models announced January 7 or September 28, 2010

US models withdrawn effective June 2011
**ThinkPad** T510 4313 (TopSeller) - Windows 7 (January 2011) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo frequency (GHz)</th>
<th>Memory (MHz)</th>
<th>Max turbo frequency (GHz)</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATAs</th>
<th>PCIe Mini Card</th>
<th>Battery cells</th>
<th>Intel Turbo Boost Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4313-J6U</td>
<td>i5-480M</td>
<td>2.66</td>
<td>2GBx1</td>
<td>1066</td>
<td>15.6” HD</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>DVD±RW</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>6</td>
<td>No Pro 64</td>
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<tr>
<td>4313-J8U</td>
<td>i5-480M</td>
<td>2.66</td>
<td>2GBx1</td>
<td>1066</td>
<td>15.6” HD</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>DVD±RW</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>6</td>
<td>No Home P 64</td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models** are part of the US TopSeller™ Program
- **These systems** are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Some: Genuine Windows® 7 Home Premium 64
- Some: Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service™ 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

### Additional Features
- **ThinkPlus**™ 1-year LOR24 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 2-year P&L P/U Depot
- ThinkPlus 3-year P&L P/U Depot
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot

See footnotes for important warranty information

US models announced January 11, 2011
US models withdrawn effective June 2011

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(KN1-16) June 2011
**ThinkPad T510 4314 (TopSeller) - XP with Win 7 License - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Disk</th>
<th>Processor</th>
<th>Pcie Mini Card (GB)</th>
<th>Pcie Mini Card (WWAN)</th>
<th>Finger print reader</th>
<th>Battery cells</th>
<th>Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4314-2LU</td>
<td>i5-540M</td>
<td>2.53</td>
<td>3.06</td>
<td>3GB</td>
<td>32GB</td>
<td>Intel 6200</td>
<td>802.11</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>6 vPro</td>
<td>XP Pro</td>
<td>Jan 10</td>
</tr>
<tr>
<td>4314-2KU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>32GB</td>
<td>Intel 6200</td>
<td>802.11</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>6 vPro</td>
<td>XP Pro</td>
<td>Jan 10</td>
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<tr>
<td>4314-7NU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>32GB</td>
<td>Intel 6200</td>
<td>802.11</td>
<td>WWAN upg</td>
<td>Finger Blue</td>
<td>6 vPro</td>
<td>XP Pro</td>
<td>Mar 10</td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**

**Positioning**

- **Intel® Core™ i5 processor i5-520M or i5-540M with dual-core.**
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

- 2GB or 3GB std / 8GB max
- Non-parity, DDR3, non-parity, DDR2
- 32GB max (7200 rpm)
- 3GB or 2GB std / 8GB max / PC3-8500 1066MHz DDR3

**SATA DVD:RW Ultrabay Enhanced SATA disk**

- DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- Sata 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display Camera**

- 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- 15.6W (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm
- 6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slim battery: up to 20.8 hr

**ExpressCard/Smart Card reader**

- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)
- None

**Ports**

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 40-pin (connector; 1394a-2000 standard)

**PCle Mini Card**

- Intel 1000 WWAN upg Gobi™ 2000
- Two PCI Express Mini Card slots
- Some: 11a/b/g wireless, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
- Some: 56K V.92 modem
- Carrier: AT&T, contract required with service provider

**Software**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32-bit

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- FingerPrint Software (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (D/D;RW)
- Roxio MyDVD® (D/D;RW)
- Corel® WinDVD® (D/D;RW)

**Preloaded operating system**

- Windows® XP Professional
- Windows® Vista Business Premium (D/D;RW)
- Windows® 7 Professional 32-bit

**Integrated security**

- Finger Print reader
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, some: Trusted Platform Module, TCG 1.2-compliant

**Limited warranty**

- 3-years/1-yr - battery depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo (KN1-2) October 2010

US models announced January 7 or March 2, 2010

US models withdrawn effective October 2010
### ThinkPad® T510 4314 (TopSeller) - Windows 7 - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Turbo (GHz)</th>
<th>Max Turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Disk (GB)</th>
<th>PCiE Mini Card</th>
<th>PCiE Mini Card</th>
<th>Finger</th>
<th>Battery</th>
<th>Power Adapter</th>
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<tr>
<td>4314-36U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GBx1 1066</td>
<td>15.6&quot; HD</td>
<td>320G 7200</td>
<td>WWAN up</td>
<td>WWAN up</td>
<td>Finger</td>
<td>6</td>
<td>65W vPro</td>
<td>Pro 32</td>
<td>Jan 10</td>
</tr>
<tr>
<td>4314-2JJ</td>
<td>i5-520M</td>
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<td>2.93</td>
<td>2GBx1 1066</td>
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<td>Pro 32</td>
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<tr>
<td>4314-9BU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GBx1 1066</td>
<td>15.6&quot; HD</td>
<td>160G 7200</td>
<td>Intel 62000</td>
<td>WWAN up</td>
<td>Finger</td>
<td>6</td>
<td>90W vPro</td>
<td>Pro 64</td>
<td>May 10</td>
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<tr>
<td>4314-C5U</td>
<td>i5-540M</td>
<td>2.53</td>
<td>3.06</td>
<td>2GBx1 1066</td>
<td>15.6&quot; HD</td>
<td>160G 7200</td>
<td>Intel 62000</td>
<td>WWAN up</td>
<td>Finger</td>
<td>6</td>
<td>65W vPro</td>
<td>Pro 64</td>
<td>Jul 10</td>
</tr>
<tr>
<td>4314-DPU</td>
<td>i5-560M</td>
<td>2.66</td>
<td>3.20</td>
<td>2GBx1 1066</td>
<td>15.6&quot; HD</td>
<td>320G 7200</td>
<td>Intel 62000</td>
<td>WWAN up</td>
<td>Finger</td>
<td>6</td>
<td>65W vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
</tr>
<tr>
<td>4314-DPU</td>
<td>i7-620M</td>
<td>2.66</td>
<td>3.33</td>
<td>4GBx1 1333</td>
<td>15.6&quot; HD+</td>
<td>500G 7200</td>
<td>Intel 1000</td>
<td>WWAN up</td>
<td>Finger</td>
<td>6</td>
<td>65W vPro</td>
<td>Pro 64</td>
<td>Jan 11</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

**Processor**

- Premier performance: two spindles
- Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core, or Intel® Core i7 processor i7-620M with dual-core, or
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, i5-520M/i5-540M/i5-560M: 3MB cache; i7-620M: 4MB cache

**Memory**

- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD:RW UltraBay Enhanced SATA disk**

- DVD burner, SATA 1.5Gb/s, 12.7mm UltraBay Enhanced, removable
- One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access
- Some: 160GB / Solid State Drive (SSD) / SATA 3Gb/s, 1.8" wide, 8mm high
- Some: 160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm)
- SATA 3Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
- All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive

**Widescreen display**

- Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Camera**

- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

**Intel HD Graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.

- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard

**TrackPoint®**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

- TrackPoint® pointing device, *Press-to-Select*, Internet Scroll Bar®
- Magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch technology

### Dimensions

- 15.6\(^{\text{th}}\) (WxDxH): 14.86\(\times\)1.26-1.41\(\times\)32.58 mm
- Display cover: Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic

### Weight

- Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery
- 6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slice battery: up to 20.8 hr

### Chipset

**Mobile Intel QM57 Express Chipset**

- One slot (ExpressCard/34)

### Ports

- Multicard reader
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### PCiE Mini Card

- 2PCi Express Mini Card slots
- Some: 11b/g/n wireless, PCiE Half Mini Card, Intel Centrino Wireless-N 1000, 1x2
- Some: 11a/b/g/n wireless, PCiE Half Mini Card, Intel Centrino Advanced-N 6200, 2x2

### WWAN upg Modem

- Wireless WAN upgradable 56K V.92 modem
- Bluetooth® wireless technology 2.1 wireless, LED indicator

### Ethernet

- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCiE x1 vPro model
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCiE x1 vPro model
- Intel Active Management Technology (iAMT)

### Audio support

- High Definition (HD) Audio, Conexant 20585 codec / booster speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

### Security

- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, TCG 1.2 compliant

### Fingerpint reader

- Some: UPEK Fingerpint reader on palm rest, swipe sensor, LED indicator, Windows Biometric Authentication, supports the security chip

### Limited warranty**

- 3-years/1-yr battery depot repair service / service upgrades available

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See footnotes for important warranty information

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US models announced January 7, May 4, July 6, September 28, 2010, or January 11, 2011

US models withdrawn effective June 2011

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**Preloaded operating system**

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

---

Supports ThinkVantage® technologies

- 65-watt or 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPET® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service7
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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**ThinkPlus**

- 3-year LOR® 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 4-year P&L P/U Depot
- 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**ThinkPad T510 4314 (Optimus) - TopSeller (Windows 7) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PClie Mini Card</th>
<th>PClie Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Intel vPro</th>
<th>Predload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4314-DEU</td>
<td>i5-560M</td>
<td>2.66</td>
<td>3.20</td>
<td>2GB</td>
<td>15.6&quot; HD+</td>
<td>2.0M</td>
<td>320G</td>
<td>7200</td>
<td>Intel 6200</td>
<td>None</td>
<td>Blue</td>
<td>9</td>
<td>vPro</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a depot repair service 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning**
- Premier performance: two spindles
  - Intel® Core™ i5 processor i5-560M with dual-core,
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italsic: standard memory in one socket; one socket available

**Optimus graphics**
- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- supports three independent displays;
  - Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
  - 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

**Dimensions**
- 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Keyboard**
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications**
- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage System Update
  - ThinkVantage Toolbox
  - Norton™ Internet Security 2011 (30 days of virus definitions)
  - Adobe® Reader®
  - Adobe Flash® Player
  - Windows Live™ Toolbar
  - Skype™ for Windows
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Microsoft Research AutoCollage
  - Roxio® Creator® Business Edition (DVD:RW)
  - Roxio MyDVD® (DVD:RW)
  - Corel® WinDVD® (DVD:RW)

**Chipset**
- Mobile IntelQM 57 Express Chipset

**Details**
- Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

**Post-warranty annual maintenance**
- ThinkPlus™ 3-year LOR® 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 4-year P&A P/U Depot
- ThinkPlus 5-year P&A P/U Depot

See footnotes for important warranty information
US model announced September 28, 2010
US model withdrawn effective June 2011

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(SK1-14) June 2011
### ThinkPad T510 4313 (Discrete) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Sata</th>
<th>SATa Optical</th>
<th>Pcie Mini Card</th>
<th>Pcie Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>vPro Preload</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4313-29U</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>15.6&quot; HD</td>
<td>2.0M</td>
<td>320G</td>
<td>7200</td>
<td>DVD±RW</td>
<td>11b/g/n</td>
<td>None</td>
<td>None</td>
<td>Blue</td>
<td>9</td>
<td>No</td>
<td>Pro 32</td>
</tr>
</tbody>
</table>

*This small and medium business (SMB) model is part of the US TopSeller™ Program*  
*This system is Microsoft® Office 2010 Product Key Ready (O10PKR)*

**Positioning**
- **Processor**: Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache  
- **Memory**: 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in one socket; one socket available  
- **SATA DVD±RW UltraBay Enhanced**: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access  
- **SATA disk**: 320GB® (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™  
- **Widescreen display**: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio  
- **Camera**: Camera on top of screen, 2.0-megapixel, fixed focus  
- **Discrete graphics**: NVIDIA® NVS™ 3100M, PCI Express x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)  
- **Keyboard**: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys  
- **TrackPoint®**: pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass  
- **Touchpad**: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions  
- **Dimensions**: 15.6W" (WxDxH): 14.68" x 9.85" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm  
- **Battery**: 6-cell: up to 4.7 hr; 9-cell: up to 7.8 hr; 9-cell plus Slice battery: up to 15.6 hr

**Preloaded operating system**
- Genuine Windows® 7 Professional 32

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator™ Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service™ 24 hour x 7 day™ toll-free support during the warranty period via 800-426-7378

**Chipset**
- Mobile Intel QM57 Express Chipset
  - One slot (ExpressCard/34)
  - Smart Card reader
  - Multicard reader
  - Ports

**PCle Mini Card**
- 11b/g/n Wireless, ThinkPad 11b/g/n, Pcle Half Mini Card
- None

**Bluetooth™**
- Bluetooth 2.1 wireless, LED indicator
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (iAMT)

**Audio support**
- High Definition (HD) Audio, Conexant 22585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
- None

**Limited warranty**
- 1-year - depot repair service / service upgrades available at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US model announced July 7, 2010
US model withdrawn effective June 2011
**ThinkPad T510 4314 (Discrete) - TS (XP with Win 7 License) - withdrawn**

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Turbo (GHz)</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Blue- tooth</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
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</thead>
<tbody>
<tr>
<td>4314-2NU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>15.6&quot; HD</td>
<td>2.0M</td>
<td>320G</td>
<td>Intel 6200</td>
<td>Gobi 2000</td>
<td>Verizon15</td>
<td>Finger</td>
<td>Blue</td>
<td>vPro</td>
<td>XP Pro</td>
<td>Feb 10</td>
</tr>
<tr>
<td>4314-7PU</td>
<td>i5-520M</td>
<td>2.40</td>
<td>2.93</td>
<td>2GB</td>
<td>15.6&quot; HD+</td>
<td>2.0M</td>
<td>320G</td>
<td>Intel 6200</td>
<td>WWAN upg</td>
<td>Gobi 2000</td>
<td>Finger</td>
<td>Blue</td>
<td>vPro</td>
<td>XP Pro</td>
<td>Mar 10</td>
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</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

*These models have a depot repair service 3-year limited warranty*

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Premier performance: two spindles</th>
<th>Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 8GB max / PC3-8500 1066MHz DR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-itals: standard memory in one socket; one socket available</td>
<td></td>
</tr>
<tr>
<td>SATA DVD:RW UltraBay Enhanced SRA disk</td>
<td>DVD burner, SATA 1.5Gbps, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim compatible, 12.7mm high, bottom access 320GB7 (7200rpm) / SATA 3.0Gbps, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™</td>
<td></td>
</tr>
<tr>
<td>Widescreen display</td>
<td>Some: 15.6&quot; (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio</td>
<td>Some: 15.6&quot; (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 2.0-megapixel, fixed focus</td>
<td></td>
</tr>
<tr>
<td>Discrete graphics</td>
<td>NVIDIA® Quadro® NVS3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</td>
<td></td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys</td>
<td></td>
</tr>
<tr>
<td>Touchpad</td>
<td>TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar®, magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions</td>
<td></td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>15.6&quot;W (WXxHxD): 14.68&quot; x 9.65&quot; x 1.26-1.41&quot;, 372.8mm x 245.1mm x 32-35.8mm 6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg) Display cover: Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic Lithium Ion 9-cell, supports optional Slic battery (57V4545) as 2nd battery at bottom 6-cell: up to 4.7 hr; 9-cell: up to 7.8 hr; 9-cell plus Slic battery: up to 15.6 hr</td>
<td></td>
</tr>
<tr>
<td>Dimensions³ Weight⁴ Case material Battery - type Battery - life⁵</td>
<td>Supports ThinkVantage® technologies</td>
<td></td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel QM57 Express Chipset One slot (ExpressCard/34)</td>
<td></td>
</tr>
<tr>
<td>Smart Card read MultiCard reader Ports</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
<td></td>
</tr>
<tr>
<td>PCIe Mini Card WWAN upg</td>
<td>Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm chipset, PCI Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider Some: VeroZ™, contract required with service provider 56K V.92® modem Bluetooth™ Audio support</td>
<td>Bluetooth 2.1 wireless, LED indicator Intel 6257LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password; hard disk password, supervisor password, security keyhole Security chip</td>
<td>Trusted Platform Module, TCG 1.2-compliant Fingerprint reader</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-yr - battery depot repair service / service upgrades²² available</td>
<td></td>
</tr>
</tbody>
</table>

Preloaded operating system²⁰
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections¹⁴
- Client Security Solution™
- ThinkPad Security Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Lenovo System Toolbox
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPAT™ Gold rating
ENERGY STAR® 5.0-compliant RoHS-compliant
International Warranty Service¹⁷ 24 hour x 7 day¹⁷ toll-free support during the warranty period¹⁷ via 800-426-7378

†levo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced January 7 or March 2, 2010
US models withdrawn effective October 2010

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ThinkPad® T510 4314 (Discrete) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model | Processor | Base turbo (GHz) | Max turbo (GHz) | Memory | Wide-screen display | Camera | Disk | SATA GB rpm | PCle Mini Card WWAN | PCle Mini Card WWAN | Finger print reader | Battery | Bluetooth option | Intel vPro | Preload | Avail date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
4314-2MU | i5-520M | 2.40 | 2.93 | 2GB | 15.6" HD | 2.0M | 250G | 5400 | Intel 1000 | WWAN upg | Finger | 9 | Pro 32 | Feb 10
4314-2PU | i5-540M | 2.53 | 3.06 | 4GB | 15.6" HD+ | 2.0M | 500G | 7200 | Intel 6200® | WWAN upg | Finger | Blue | vPro | 32 | Feb 10
4314-7OU | i5-540M | 2.53 | 3.06 | 4GB | 15.6" HD+ | 2.0M | 320G | 7200 | Intel 6200® | WWAN upg | Finger | Blue | vPro | 64 | Mar 10
4314-7RU | i5-540M | 2.53 | 3.06 | 4GB | 15.6" HD+ | 2.0M | 128G SSD | Intel 6200® | WWAN upg | Finger | Blue | vPro | 64 | Mar 10
4314-9CU | i5-540M | 2.53 | 3.06 | 2GB | 15.6" HD+ | 2.0M | 160G SSD | Intel 6200® | WWAN upg | Finger | Blue | vPro | 64 | May 10
4314-9DU | i5-540M | 2.53 | 3.06 | 2GB | 15.6" HD+ | 2.0M | 160G SSD | Intel 6200® | WWAN upg | Finger | Blue | vPro | 64 | May 10
4314-C4U | i5-540M | 2.53 | 3.06 | 2GB | 15.6" HD+ | 2.0M | 160G SSD | Intel 6200® | WWAN upg | Finger | Blue | vPro | 64 | Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor: Intel® Core™ i5 processor i5-520M or i5-540M with dual-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Memory: 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Italics: standard memory in both sockets; no sockets available
Non-italics: standard memory in one socket; one socket available

SATA DVD±RW UltraBay Enhanced SATA disk
DVD burner, SATA 1.5Gb/s, 12.7mm.UltraBay Enhanced, removable
One bay for removable devices, UltraBaySlim-compatible, 12.7mm high, bottom access
Some: 128GB or 160GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
Some: 160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
All: removable, upgradeable, supports 2nd disk, Shock Mounted Hard Drive

Widescreen display
Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715); supports dual independent display.

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions2
15.6"W (396mm) × 10.6"D (271mm) × 0.7"H (17.9mm)

Weight2
3.60 lbs / 1.63 kg

Battery - type
9-cell, non-italics: standard memory in one socket; one socket available
9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom

Battery - life
9-cell: up to 7.8 hr; 9-cell plus Slice battery: up to 9.3 hr

Chipset
Mobile Intel QM57 Express Chipset

ExpressCard/34
None (ExpressCard/34)

Multi card reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

USB 2.0, one powered, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCle Mini Card WWAN upg

Two PCle Express Mini Card slots
Some: 11b/g/n wireless*, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
Some: 11a/b/g/n wireless, PCle Half Mini Card, Intel Centrino Advanced-N 6200, 2x2 Wireless WAN upgradable

Modem
56K V.92 modem

Bluetooth®
Some: Bluetooth 2.1 wireless, LED indicator

Ethernet
Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCle x1
vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1

Intel AMT
Intel Active Management Technology (iAMT)

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader
Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty3
3-years /1-yr battery depot repair service / service upgrades® available

See footnotes for important warranty information
US models announced January 7, March 2, May 4, or July 6, 2010
US models withdrawn effective June 2011

Preloaded operating system25
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications24 (only some listed)
- Rescue and Recovery™
- Access Connections™
- ThinkVantage Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVB+R)
- Roxio MyDVD® (DVB+R)
- Corel® WinDVD® (DVB+R)

Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service17
- 24 hour x 7 days toll-free support during the warranty period12 via 800-426-7378

ThinkPlus® 3-year LOR24 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L Depot
ThinkPlus 5-year P&L Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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null
| Type-model  | Processor | Base turbo | Max turbo | Display | Memory (MHz) | Camera | Disk | Mini Card WWAN | Mini Card WWAN | Finger reader | Blue- tooth | Intel vPro | Preload | Avail date |
|-------------|-----------|------------|-----------|---------|--------------|--------|------|---------------|---------------|--------------|------------|-----------|-----------|----------|-----------|
| 4349-G3U   | i5-540M   | 2.53       | 3.06      | 2GBx2   | 1066        | 160G SSD | Intel 6200 | WWAN upg     | Finger Blue   | 90%         | 20%        | 20%       | Pro 64   | Jul 10    |
| 4349-GJU   | i5-560M   | 2.66       | 3.20      | 4GBx1   | 1333        | 320G 7200| Intel 6200 | WWAN upg     | Finger Blue   | 90%         | 20%        | 20%       | Pro 64   | Jan 11    |

* These models have a depot repair service 3-year limited warranty
* These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- Microsoft Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

56-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant

International Warranty Service
- 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
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US models announced on July 6, 2010 or January 11, 2011
US models withdrawn effective June 2011
### ThinkPad® T510 4349 (Optimus) - Windows 7 - withdrawn

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<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Intel vPro</th>
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<td>2GBx1 1066</td>
<td>15.6&quot; HD+</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 6200™ WWAN upg</td>
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<td>Intel 6200™ WWAN upg</td>
<td>None</td>
<td>Blue</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Sep 10</td>
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</table>

- This model has a depot repair service 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Positioning

- Processor: **Intel® Core™ i5 processor i5-560M with dual-core, 3.20 GHz**, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

#### Memory

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3
- Non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

#### UltraBay Enhanced SATA disk

- One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access
- SATA 3.0Gbps, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

#### Widescreen display

- 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

#### Optimus graphics

- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA NVS™ 3100M, PCI Express x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@75Hz;
- 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

#### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

#### TrackPoint Touchpad

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions

- 15.6"W (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm
- 6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)

#### Battery

- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

#### Preloaded operating system

- Genuine Windows® 7 Professional 64

#### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Preload Support

- Supports ThinkVantage® technologies
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 days toll-free support during the warranty period via 800-426-7378

### Chipset

- Mobile Intel GM57 Express Chipset
- One slot (ExpressCard/34)
- None
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

### PCIe Mini Card

- Two PCI Express Mini Card slots
- 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradeable
- 58K V.92® modem
- Bluetooth 2.1 wireless, LED indicator
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCI-e x1
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant

### Limited warranty

- 3-years/1-yr battery depot repair service / service upgrades available
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced September 28, 2010

US model withdrawn effective June 2011

Lenovo

KN1-15 June 2011
### Model Specifications

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<th>Memory</th>
<th>Display</th>
<th>Battery</th>
<th>Storage</th>
<th>Graphics</th>
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</table>

### Additional Features

- **ThinkPad T510 4349 (Discrete)**
- **Windows 7 - withdrawn**
- **Personal Systems Reference (PSREF)**
- **Limited warranty**: 3-years/1-yr battery depot repair service
- **Preloaded operating system**: - Some: Genuine Windows 7 64-bit
- **Preloaded applications**: - Some: Microsoft Office 2010 Professional 64-bit
- **Security**: - Fingerprint Software (fingerprint readers)
- **Audio support**: - Digital monitor support via DisplayPort
- **Ethernet**: - Intel 82577LM Gigabit Network Connection
- **Ports**: - Three USB 2.0 (one powered), one USB 2.0/eSATA combo port,
- **Battery**: - 9-cell Lithium Ion, supports optional Slice battery (57Y4545) as 2nd battery
- **Processor**: - Intel Core i5 or i7 with core or dual-core
- **Processor**: - Intel Core i7-620M or i7-540M with dual-core

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See footnotes for important warranty information.

US models announced January 7, March 2, April 6, May 4, or July 6, 2010

US models withdrawn effective June 2011

(KN1-8) June 2011
### ThinkPad® T510 4349 (Education) - Windows 7 - withdrawn

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<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
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<th>Camera</th>
<th>Disk SATA</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use by qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

### Positioning

- Processor: Premier performance; two spindles
- Intel® Core™ i5 processor i5-520M or i5-540M with dual-core.
- Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory

- 2GB or 3GB std / 8GB max
- i5-520M / PC3-8500 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- i5-540M / standard memory in both sockets; no sockets available;
- Non-Italics: standard memory in one socket; one socket available

### SATA DVD/HD

- DVD burner, SAT. 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

### Ultrabay Enhanced

- SATA DVD: 250GB (5400 rpm) or 320GB (5400 or 7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio
- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

### Camera

- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics

- Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715); supports dual independent display.
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz: 2048x1536 (VGA) @75Hz: 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Touchpad

- ThinkLight™

### Dimensions

- 15.6"W (396mm) x 12.7"D (322mm) x 0.8"H (20.3mm)

### Weight

- 2.9kg (6.41 lbs)

### Case material

- Plastic

### Battery - type

- 65-watt AC adapter

### Chipset

- Mobile Intel QM57 Express Chipset
- One slot (ExpressCard/34)

### Smart Card reader

- None

### Multicard reader

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

### PClie Mini Card

- 11b/g/n, wireless
- Advanced-N 6200, 2x2

### Carrier

- 11b/g/n wireless, PCle Half Mini Card, Intel Centrino Advanced-N 6200, 2x2

### Bluetooth

- 2.1 wireless, LED indicator

### Ethernet

- Non-PM profile: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (iAMT) vPro model:
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

### Intel AMT

- Intel’s Active Management Technology

### Audio support

- Microsoft Offi ce Ultimate 2007: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.
- Microsoft Office OneNote 2007 (and CD)
- Adobe Digital School Collection
- Instructor Resources (and DVD)
- Learning Creative Suite 4 (DVD)
- Photoshop Elements 7 (DVD)
- Premiere Elements 7 (and DVD)
- Acrobat 9 Professional (DVD)
- Contribute CS4 (and DVD)
- Soundbooth CS4 (and DVD)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)

### Software

- ThinkVantage System Update
- ThinkVantage Power Manager
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD+ (DVD+RW)
- Corel® WinDVD+ (DVD+RW)

### Preloaded operating system

- Genuine Windows® 7
- ThinkVantage Toolbox

### Preloaded applications

- E33/E44 models: Education software
- Microsoft® Office Ultimate 2007 Academic Edition (and CD)
- Education software
- Microsoft® Office OneNote® 2007 (and CD)
- Advanced-N 6200, 2x2

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

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ThinkPad T510 4349 (Discrete) - Education (Windows 7) - withdrawn

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<th>Type-model</th>
<th>Processor</th>
<th>Base turbo clock (GHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Disk</th>
<th>PClé Mini Card WWAN</th>
<th>PClé Mini Card</th>
<th>Carrier</th>
<th>Bluetooth</th>
<th>Finger print reader</th>
<th>Intel reader cells</th>
<th>Intel Preload</th>
<th>Avail date</th>
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<td>4349-E5U</td>
<td>i5-520M</td>
<td>2.40</td>
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<td>2GB</td>
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<td>2.0M</td>
<td>250G 5400</td>
<td>Intel 6200</td>
<td>AT&amp;T</td>
<td>Blue</td>
<td>6 vPro</td>
<td>Pro 32</td>
<td>Feb 10</td>
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<td>2.93</td>
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<td>15.6&quot; HD</td>
<td>2.0M</td>
<td>320G 7200</td>
<td>Intel 6200</td>
<td>AT&amp;T</td>
<td>Blue</td>
<td>9 vPro</td>
<td>Pro 32</td>
<td>Feb 10</td>
</tr>
</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning
Processor
Intel® Core™ i5 processor with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 3MB cache

Memory
2GB or 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.

SATA DVD:RW
3-years / 1-yr - battery depot repair service / service upgrades available

SATA disk
DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable

Widescreen display
Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia F keys

TrackPoint
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touchpad
Ultrabay Enhanced, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions
15.6W (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm

Weight
6-cell: up to 15.6 hr; 6-cell: up to 7.8 hr; 6-cell: up to 4.7 hr; 6-cell: up to 3.8 hr; 6-cell: up to 3.8 hr; 6-cell: up to 3.8 hr; 6-cell: up to 3.8 hr; 6-cell: up to 3.8 hr

Battery type
Glass-fiber reinforced plastic; Display cover:

Battery - type
Starting at 6.01 lb (2.72kg)

Battery - life
Starting at 5.66 lb (2.57kg)

Battery size
14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm

ThinkLight
Wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

Chipset
Mobile Intel QM57 Express Chipset

Port
One slot (ExpressCard/34)

Smart Card reader
None

Multicard reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports
Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15), DisplayPort, modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

PClé Mini Card
Two PClé Mini Card slots

Carrier
AT&T®, contract required with service provider

Modem
90-watt AC adapter

Bluetooth
ThinkPad Roll Cage (one-piece magnesium frame)

Ethernet
EPEAT® Gold rating

Intel AMT
ENERGY STAR® 5.0-compliant

Audio support
RoHS-compliant

Security
International Warranty Service17

Security chip
24 hour x 7 day18 toll-free support during the warranty period12 via 800-426-7378

Fingerprint reader
20

Limited warranty
3-years / 1-yr - battery depot repair service / service upgrades available

See footnotes for important warranty information

US models announced January 7, 2010
US models withdrawn effective April 2011

Lenovo (KN1-2) April 2011

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Preloaded operating system20
- Genuine Windows® 7 Professional 32

Preloaded applications14 (only some listed)
- Education software - Microsoft® Office OneNote® 2007 (and CD)
- Adobe Digital School Collection
- Instructor Resources (and DVD)
- Learning Creative Suite 4 (DVD)
- Photoshop Elements 7 (DVD)
- Premiere Elements 7 (and DVD)
- Acrobat 9 Professional (DVD)
- Contribute CS4 (and DVD)
- Soundbooth CS4 (and DVD)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Roxio® Creator® Business Edition (DVB:RW)
- Roxio MyDVD® (DVB:RW)
- Corel® WinDVD® (DVB:RW)

Supports ThinkVantage® technologies
Some models are part of the Global Models Plus program with limited onsite service\(^2\) 3-year limited warranty

These systems are Microsoft® Office 2010 Product Key Ready (010PKR)
### ThinkPad T510 4384 (Discrete) - Onsite (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo speed</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>PCIe Mini Card</th>
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<th>Finger reader</th>
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<th>Workhorse (W)</th>
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<td>i7-620M</td>
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<td>Blue</td>
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<td>Blue</td>
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</tbody>
</table>

- **Some models** are part of the Global Models Plus program with limited onsite service\(^2\) 3-year limited warranty
- **These systems** are Microsoft® Office 2010 Product Key Ready (O10PKR)

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**Positioning Processor**

Premiere performance; two spindles

- **Intel® Core™ i5 processor i5-520M or i5-540M with dual-core,** or
- **Intel Core i7 processor i7-620M with dual-core,**

- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Intel Turbo Boost, Hyper-Threading technology;
- i5-520M/i5-540M: 3MB cache; i7-620M: 4MB cache

**Memory**

- 2GB, 3GB, or 4GB std / 8GB max7 / PC3-8500 1066MHz
- 4GB non-parity, DDR3

**Discrete graphics**

- NVIDIA® NVS™ 3100M, PCI Express® x16, 512MB memory,
- external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Dimensions**

- 15.6” HD+ (1366x768) color, anti-glare, LED backlight,
- 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

**Battery - life**

- up to 7.8 hr;
- up to 15.6 hr

**Chipset**

- Mobile Intel GM965 Express Chipset
- One slot (ExpressCard/34)
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Supports ThinkVantage technologies

**Port**

- Three USB 2.0 (one powered), one USB 2.0/eSATA combo port,
- External monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45),
- IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

See footnotes for important warranty information

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US models announced January 7, May 4, or July 6, 2010

US models withdrawn effective June 2011

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**Preloaded operating system**

- **Some:** Genuine Windows® 7 Professional 32
- **Some:** Genuine Windows® 7 Professional 64

**Preloaded applications**

- Rescue and Recovery™
- Access Connections™
- ThinkVantage™ System Update
- ThinkVantage™ Power Manager
- ThinkVantage™ Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash Player®
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

**Power**

- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service17 24 hour x 7 day8 toll-free support during the warranty period13 via 800-426-7378
- ThinkPlus™ 4-year LOR24 9x5 NBD 45K6038 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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\(^1\) HighDef (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

\(^2\) 3-year limited warranty, 1-year battery, limited onsite service®

\(^3\) Some:

- 800-426-7378

\(^4\) 90-watt AC adapter

\(^5\) ThinkPad Roll Cage (one-piece magnesium frame)

\(^6\) ENERGY STAR® 5.0-compliant RoHS-compliant

\(^7\) 24 hour x 7 day8 toll-free support during the warranty period13 via 800-426-7378

\(^8\) HighDef (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

\(^9\) Support on Authentication, supports the security chip

\(^10\) Certified by Corel®

\(^11\) 506 V.92® modem

\(^12\) 90-watt AC adapter

\(^13\) HighDef (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

\(^14\) Support on Authentication, supports the security chip

\(^15\) Certified by Corel®

\(^16\) 9-way, ThinkVantage button, spill-resistant, multimedia Fn keys

\(^17\) Mobile Intel GM965 Express Chipset

\(^18\) Supports ThinkVantage technologies

\(^19\) 90-watt AC adapter

\(^20\) ThinkPad Roll Cage (one-piece magnesium frame)

\(^21\) ENERGY STAR® 5.0-compliant RoHS-compliant

\(^22\) International Warranty Service17 24 hour x 7 day8 toll-free support during the warranty period13

\(^23\) 3-year limited warranty, 1-year battery

\(^24\) 4-year LOR24 9x5 NBD 45K6038 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
These small and medium business (SMB) models are part of the US TopSeller™ Program

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA optical</th>
<th>PCle Mini Card WWAN</th>
<th>PCle Mini Card GB rpm</th>
<th>SATADisc</th>
<th>Sata</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery cells</th>
<th>Preload</th>
<th>Avail date</th>
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<tr>
<td>4313-7DU</td>
<td>i3-330M</td>
<td>2.13</td>
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<td>6 XP Pro</td>
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<td>7200</td>
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<td>DVD±RW</td>
<td>None</td>
<td>Finger</td>
<td>6</td>
<td>6 XP Pro</td>
<td>Feb 10</td>
<td></td>
</tr>
</tbody>
</table>

Preloaded operating system:
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications (only some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Presentation Director
- ThinkVantage Productivity Center
- Roxio® Creator® Business Edition (DVD±RW)

Supports ThinkVantage® technologies
- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- Next Generation ThinkPad Roll Cage (in display cover)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 17
- 24 hour x 7 day toll-free support during the warranty period 12 via 800-426-7378

Chipset:
- Mobile Intel QM57 Express Chipset
  - One slot (ExpressCard/34)
  - Smart Card read
  - 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
  - Four USB 2.0, external monitor (VGA DB-15, DisplayPort),
  - modem (RJ-11), ethernet (RJ-45),
  - IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

PCle Mini Card WWAN upg
- Two PCle Express Mini Card slots
- 11b/g/n wireless, 2PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
- None

Bluetooth®
- Some: Bluetooth 2.1 wireless, LED indicator

Ethernet
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1

Intel AMT
- Intel Active Management Technology (AMT)

Audio support
- High Definition (HD) Audio, Conexant 20865 codec / stereo speakers, 1 watt x 2 /
  speaker volume up, down and mute buttons / dual array microphone, mic mute button,
  combo audio/mic jack

Security chip
- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
  Power On Authentication, supports the security chip

Limited warranty 1-year - depot repair service / service upgrades available

See footnotes for important warranty information
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US models announced February 2, 2010
US models withdrawn effective March 2010

(KN1-1) March 2010
ThinkPad ® T510i 4313 (TopSeller) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

#### Type-model

<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>SATa optical</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
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<td>DVD±RW</td>
<td>Intel 1000</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>6 Pro</td>
<td>Feb 10</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program

#### Positioning Processor

Premiere performance: two spindles

Intel® Core™ i3 processor i3-330M with dual-core,

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),

Hyper-Threading technology; 3MB cache

#### Memory

2GB std / 8GB max / 204-pin SO-DIMM sockets

Non-italics: standard memory in one socket; one socket available

#### SATA DVD±RW

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

250GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

#### Widescreen display

15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight,

220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Cameras on top of screen, 2.0-megapixel, fixed focus

#### Integrated graphics

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;

Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

#### Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®

Magnifying glass

#### Touchpad

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

#### Dimensions

15.6W (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm

6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.73kg)

6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slice battery: up to 20.8 hr

#### Chipset

Mobile Intel QM57 Express Chipset

One slot (ExpressCard/34)

Smart Card read

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Four USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45),

IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

#### PCle Mini Card

Two PCI Express Mini Card slots

11b/g/n wireless, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2

#### Bluetooth

None

#### Ethernet

Intel 8257LM Gigabit Network Connection (Hanksville), PHY, PCle x1

Intel Active Management Technology (AMT)

High Definition (HD) Audio, Conexant 2038 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

#### Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

None

Preloaded operating system

- Genuine Windows® 7 Professional 32

Preloaded applications (only some listed)

- Rescue and Recovery®
- Access Connections®
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Skype™ for Windows
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

65-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

Next Generation ThinkPad Roll Cage (in display cover)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced February 2, 2010

US model withdrawn effective March 2010
### ThinkPad T510i 4313 (TopSeller) - Windows 7 (July 2010) - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATAGB rpm</th>
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<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
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<td>i3-370M</td>
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<td>Blue</td>
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<td>No</td>
<td>Pro 64</td>
<td>Jul 10</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Positioning

**Processor**

Premiere performance: two spindles

- Intel® Core™ i3 processor i3-370M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Hyper-Threading technology; 3MB cache

**Memory**

2GB std / 8GB max²

- 8GB max² with integrated DDR3 memory controller
- Non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- Non-italsics: standard memory in one socket; one socket available

**SATA DVD±RW**

DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable

One bay for removable drives, Ultrabay Slim-compatible, 12.7mm high, bottom access

- 250GB² (5400 rpm) or 320GB² (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk
- ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio

Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);

- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

**Keyboard**

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® Touchpad**

ThinkVantage button, spill-resistant, multimedia Fn keys

**ThinkLight™**

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions²**

15.6"W (WxHxD): 14.68" x 9.65" x 1.26-1.41", 327.8mm x 245.1mm x 32-35.8mm

**Weight³**

Carbon-fiber reinforced plastic

**Battery**

- Type: Lithium ion 6-cell, supports optional Slice battery (574545) as 2nd battery at bottom
- Capacity: 6-cell up to 10.4 hr; 9-cell up to 6.2 hr; 9-cell plus Slice battery: up to 20.8 hr

**Chipset**

Mobile Intel GM57 Express Chipset

- One slot (ExpressCard/34)
- Smart Card read

**Multicard reader Ports**

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- Four USB 2.0, external monitor (VGA DB-15, DisplayPort), microphone (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**PCle Mini Card**

- Two PCI Express Mini Card slots
- 11b/g/n wireless®, PCl-e Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2

**Modem**

56K V.92 modem

**Bluetooth®**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (AMT)

**Audio support**

- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

**Security**

- Power-on password, hard disk password, supervisor password, security key, security chip

**Security chip**

- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**³ 1-year - depot repair service / service upgrades² available

---

**Preloaded operating system**²⁰

- Genuine Windows® 7 Professional 64

**Preloaded applications**¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Microsoft Office 2010 preloaded: purchase product key to activate
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day²⁸ toll-free support during the warranty period¹² via 800-426-7378

See footnotes for important warranty information

© Lenovo

US models announced July 6, 2010

US models withdrawn effective June 2011

(KN11-3) June 2011
Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM  55Y3706
1GB PC3-8500 DDR3 L-H SODIMM (25Pack)  57Y4385
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
2GB PC3-8500 DDR3 L-H SODIMM (25Pack)  57Y4386
4GB PC3-8500 DDR3 Low-Halogen SODIMM  55Y3708
1GB PC3-10600 DDR3 L-H SODIMM  55Y3709
1GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4415
1GB PC3-10600 DDR3 L-H SODIMM (25Pack) 41U5253
2GB PC3-10600 DDR3 L-H SODIMM  55Y3710
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416
4GB PC3-10600 DDR3 L-H SODIMM  55Y3711

UltraBay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III  43N3412

UltraBay Enhanced 12.7mm
DVD Burner UltraBay Enhanced II SATA  43N3294
Blu-ray Reader / DVD Burner UltraBay Enh  43N3295

Storage and removable storage
500GB Disk SATA 3.0Gb/s (7200 rpm)  43N3423
Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the UltraBay
256GB FDE SSD SATA 3Gb/s  43N3417

USB 2.0 Portable 320GB Hard Disk  45K1689
USB 2.0 Portable 500GB Hard Disk  45K1690
USB 2.0 Portable Secure 320GB Hard Disk 43P2019
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400
USB 2.0 Portable DVD Burner  43N3264
Lenovo Slim USB Portable DVD Burner 0A39988

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi® 2000 Broadband Option  78Y1399
ThinkPad AT&T® Gobi 2000 Broadband Option 78Y1398

ThinkPad Expansion
T510:
ThinkPad Port Replicator Series 3  433610W
ThinkPad Mini Dock Series 3 - 90W  433710U
ThinkPad Mini Dock Plus Series 3 - 90W 433810U
W510:
ThinkPad Mini Dock Plus Series 3 - 170W 438380U

All:
Lenovo® Essential Notebook Stand  45J9292
USB 2.0 Port Replicator with Digital Video 0A39942

Keyboard
TrackPoint Cap Collection  73P2698
USB Numeric Keypad  33L3225
Preferred Pro USB Keyboard  73P5220
Enhanced Performance USB Keyboard  73P5260
Ultralight Wireless Keyboard and Mouse®  57Y4700
ThinkPad USB Keyboard with TrackPoint 55Y9003
Lenovo® USB Fingerprint Keyboard  73P4730
Lenovo USB Smartcard Keyboard 51J0155

Mouse
Lenovo Optical Mouse (USB)  06P4069
Lenovo Laser Mouse (USB)  41U0374
ThinkPad USB Laser Mouse  57Y4635
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7450
ThinkPad Travel Mouse (USB, Optical) 31P7410
ThinkPad Bluetooth Laser Mouse  41U5008

Multimedia
ThinkPad In-Ear Headphones with mic  57Y4488

Security
 Kensington® MicroSaver® Cable Lock  73P2582
 Kensington Twin Head Cable Lock  45K1620
 Lenovo Security Cable Lock  57Y4703
 USB Gemplus GemPC Smart Card Reader 41N3040

W510:
3M 15.6W Privacy Filter from Lenovo  0A61771

Batteries
ThinkPad Battery 55+ (6-cell)  57Y4185
ThinkPad Battery 55++ (9-cell, slice)  57Y4186
ThinkPad Battery 27++ (9-cell, slice)  57Y4545

To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger®

Requires the ThinkPad 90W AC Adapter -40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

T510:
ThinkPad 65W AC Adapter® 40Y7696

Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter 40Y7659
ThinkPad 65W AC Adapter with USB Hub  57Y4600
90W Ultralas AC/DC Combo Adapter 41R4493

Charging tips for 90W Ultralas AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)  41R4481
• Generic Micro USB charge tip (L18)  41R4490

More information at www.lenovopowertips.com

W510:
ThinkPad 135W AC Adapter  55Y9317

More info at www.lenovo.com/support/poweradapters

Carrying Cases
Up to 15.6" widescreen models:
ThinkPad 15W Case Sleeve  51J0477
Lenovo Business Messenger Case 51J0475
Lenovo Business Messenger Max 41U3074
Lenovo Business Backpack  43R2482

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17" Monitor 5047HB2
ThinkVision L1900p 19" Monitor  4431HE1
ThinkVision L1951p Wide 19" Monitor 2448HB6
ThinkVision L2250p Wide 22" Monitor  5755HB6
ThinkVision L2251x Wide 22" Monitor  5755HB6
ThinkVision L2321x Wide 23" Monitor 4041HB6

More information at www.lenovo.com/alldaycomputing

Monitor Accessories®
Lenovo USB-to-DVI Monitor Adapter  45K5296
Lenovo DisplayPort to VGA Monitor Cable 57Y4393
DisplayPort to Single-link DVI-D Cable 45J7915
ThinkVision USB Soundbar  40Y7616
ThinkVision Soundbar  45K1263
Kensington MicroSaver Cable Lock  73P2582
Kensington Twin Head Cable Lock  45K1620
Lenovo Security Cable Lock  57Y4303
Lenovo Easy Reach Monitor Stand  55Y9258

Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitors

For more information on accessories: www.lenovo.com/accessories
Purchase Lenovo accessories www.lenovo.com/support/accessories
Product specifications on Lenovo Support www.lenovo.com/accessorysguide
Option Compatibility Matrix (OCM) and accessory brochures www.lenovopoweraccessories
An Options Compatibility Configurator for Lenovo systems

© Lenovo (O-T510) June 2011
ThinkPad Mini Dock Plus Series 3 with USB 3.0 - 90W
433815U

ThinkPad Battery 28++ (9-cell, slice)
0A36304

ThinkPad triple external monitor configuration
using NVIDIA’s Optimus technology

Lenovo® ThinkPad T520

Lenovo ThinkPad T520
### ThinkPad® T520 4239 (TopSeller) - withdrawn

#### Type-model | Processor | Memory | Wide-screen display | Camera | Disk | SATA Gb²/ rpm | PCle Mini Card WLAN | PCle Mini Card WWAN | Modem | Smart Card Reader | Finger print reader | Battery cells | Intel vPro | Global (G) Educ | Preload
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
4239-46U | i5-2520M | 4GBx1 | 15.6” HD | 720p | 320G | 7200 | Intel 6205™ | WWAN upg | None | None | None | Blue | 6 | AMT | vPro | Pro 64
4239-4CU | i5-2410M | 4GBx1 | 15.6” HD | 720p | 320G | 7200 | Intel 6205™ | WWAN upg | None | None | None | Blue | 6 | Edu | Prem 64
4239-4DU | i5-2410M | 4GBx1 | 15.6” HD | 720p | 320G | 7200 | Intel 6205™ | WWAN upg | None | None | None | Blue | 6 | Prem 64
4239-4EU | i5-2540M | 4GBx1 | 15.6” HD | 720p | 320G | 7200 | Intel 6205™ | WWAN upg | None | None | None | Blue | 6 | Prem 32
4239-4MU | i5-2430M | 4GBx1 | 15.6” HD | 720p | 320G | 7200 | Intel 6205™ | WWAN upg | None | None | None | Blue | 6 | Pro 64
4239-5CU | i5-2450M | 4GBx1 | 15.6” HD | 720p | 320G | 7200 | Intel 6205™ | WWAN upg | None | None | None | Blue | 6 | Pro 64

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**

- **Microsoft® Office 2010 Product Key Ready (010PKR)**

#### Positioning
Premiere performance; two spindles

#### Processor
- **Intel® Core™ i5-2410M processor (dual-core, 2.90GHz, 3MB Cache).**
- **DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology.**
- **Intel Core i5-2430M processor (dual-core, 2.90GHz, 3MB Cache).**
- **DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology.**
- **Intel Core i5-2450M processor (dual-core, 2.90GHz, 3MB Cache).**
- **DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology.**
- **Intel Core i5-2520M processor (dual-core, 2.90GHz, 3MB Cache).**
- **DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology.**
- **Intel Core i5-2540M processor (dual-core, 2.90GHz, 3MB Cache).**
- **DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology.**

#### Memory
- **8GB max² / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.**

#### Optical Ultrabay
- **DVD burner, 12.7mm Ultrabay Enhanced, removable.**
- **One bay for removable devices, Ultrabay Slim-compatible, 2.5” wide, 7mm high.**
- **Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high.**
- **Some: SSD / SATA 3.0Gb/s, 2.5” wide, 7mm high, Active Protection System™ All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive mSATA™ SSD None**

#### Widescreen display
- **15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 50%:1 contrast ratio, 60% Gamut.**

#### Graphics
- **Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.**

#### Keyboard
- **7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys.**

#### TrackPoint® Touchpad
- **UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions.**

#### Dimensions (WxDxH)³
- **HD & HD+: 14.68” x 9.65” x 1.25-1.40”; 372.8mm x 245.1mm x 31.8-35.6mm.**
- **FHD: 14.68” x 9.65” x 1.29-1.44”; 372.8mm x 245.1mm x 32.8-36.6mm.**

#### Weight² Case material
- **6-cell: starting at 5.54 lb (2.51kg); 9-cell: starting at 5.89 lb (2.67kg).**
- **Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Glass-fiber reinforced plastic without paint.**
- **Battery - type Battery - life¹⁰**

#### Chipset
- **Mobile Intel QM67 Express Chipset.**
- **ExpressCard**
- **Some: Smart card reader.**
- **Multicard Reader**
- **4-in-1 reader (MMC, SD, SDHC, SDXC).**
- **Integrated model: Four USB 2.0 (one powered).**
- **Optimus model: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15), DisplayPort (only some listed), Intel Centrino® 2 Wireless-N 2000, 1x1.**

#### PCIe Mini Card WLAN⁴
- **Two PCI Express Mini Card slots.**
- **Some: 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2.**
- **Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2.**

#### WWAN
- **Intel® AMT**
- **High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack.**

#### Security
- **Power-on password, hard disk password, supervisor password, security keyhole**

- **Trusted Platform Module, TCG 1.2-compliant**

#### Finger print reader
- **None**

#### Limited warranty¹¹ 1-year - depot repair service / service upgrades²² available

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See footnotes for more detailed information © Lenovo

US model(s) announced February 22, March 1, April 5, June 21, or October 4, 2011, or January 17, 2012

US model(s) withdrawn effective January or December 2012

(KN3-1) February 2013

Preloaded operating system¹³ - Some: Genuine Windows 7 Home Premium 64 - Some: Genuine Windows 7 Professional 32 - Some: Genuine Windows 7 Professional 64

Ready to install applications¹⁴ - only some listed
- **Rescue and Recovery™**
- **Access Connections¹⁵**
- **Fingerprint Software (fingerprint models)**
- **Password Manager (fingerprint models)**
- **ThinkVantage System Update**
- **ThinkVantage Power Manager**
- **ThinkVantage Toolbox**
- **Lenovo SimpleTap**

Preloaded applications¹³ - only some listed
- **Norton™ Internet Security 2011 (30 days of virus definitions)**
- **Adobe® Reader®**
- **Skype® for Windows**
- **Windows Live™ Essentials**
- **Microsoft Office 2010 preloaded; purchase product key to activate**
- **Corel® WinDVD® (Dvd:rw) Corel Burn:Now™ Lenovo Edition (Dvd:rw)**
- **Corel DVD MovieFactory® Lenovo Edition (Dvd:rw)**

Supports ThinkVantage® technologies

- 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day 10-hour toll-free support during the warranty period ¹⁸

For compatible accessories, please go to O-T520 sheet;

For Lenovo service²² upgrade options, please go to S-TA sheet;
**ThinkPad® T520 4240 (TopSeller) - withdrawn**

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<td>Finger Blue</td>
<td>Blue</td>
<td>6</td>
<td>vPro</td>
</tr>
</tbody>
</table>

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning**

Premiere performance: two spindles

Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache).

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache).

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache).

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology

Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache).

DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

**Memory**

8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay**

- DVD burner, 12.7mm Ultrabay Enhanced, removable

- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

- Some: Solid State Drive (SSD) / SATA 3.0GB/s, 2.5" wide, 7mm high

- Some: HDD / SATA 3.0GB/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™

- All: removable, upgradeable, supports the second disk, Shock Mounted Hard Drive

**mSATA™ SSD**

None

**Widescreen display**

- Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

- Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

**Camera**

Some: HD720p resolution, wider view angle, low light sensitive, fixed focus

**Graphics**

Intel HD Graphics 3000 in processor,

external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915),

supports dual independent display,

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz,

2048x1536 (VGA)@75Hz,

1920x1200@60Hz (single-link DVI-D via 45J7915)

**Keyboard TrackPoint®**

7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, "Press-to-Select", Internet Scroll Bar™, magnifying glass

UltrNav™, wide touchpad below keyboard, Tap regions, scrolling regions label, multi-touch

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions (WxOxH)™**

HD & HD+:

14.68" x 9.65" x 1.25-1.40";
327.8mm x 245.1mm x 31.8-35.6mm

HD:

14.68" x 9.65" x 1.29-1.44";
327.8mm x 245.1mm x 32.8-35.6mm

**Weight**

- 6-cell: starting at 5.54 lb (2.51kg), 9-cell: starting at 5.89 lb (2.67kg)

**Case material**

Display cover:

Carbon-fiber / Glass-fiber hybrid;

Bottom:

Glass-fiber reinforced plastic without paint

**Battery type**

Lithium Ion 6-cell or 9-cell, support optional Slice battery (0A36304) as 2nd battery at bottom

6-cell (57Whr):

up to 7.7 hr;

9-cell (94Whr):

up to 12.8 hr;

9-cell plus slice battery: up to 25.6 hr

**Chipset Mobile Intel QM67 Express Chipset**

One slot (ExpressCard/34)

**Smart Card Reader**

None

**Multicard Reader**

4-in-1 reader (MMC, SD, SDHC, SDXC)

**Ports**

Integrated model: Four USB 2.0 (one powered), Optimus model: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45),

IEEE 1394 FireWire 400 (pin connector; 1394a-2000 standard)

**PCle Mini Card**

Two PCle Express Mini Card slots

**WWAN**

Some: 11b/g/n, PCle Half Mini Card, Intel Centrino Wireless-N 1000, 1x2

Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Advanced-N 6205, 2x2

**Modem**

None

**Bluetooth™**

Some: Bluetooth 3.0 wireless, LED indicator

**Ethernet**

Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1

**Intel AMT**

Some: Intel Active Management Technology (IAMT)

**Audio support**

High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo auraljack

**Security Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the secure chip

Some: Lenovo TouchPad, TCG 2.0-compliant, supports the secure chip

**Limited warranty**

3-years / 1-yr battery - depot repair service / service upgrades available

Preloaded operating system™

- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications™ (only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD/BD)
- Corel® WordPerfect® (DVD:BD)
- Corel® DVD MovieFactory® Lenovo Edition (DVD:BD)

Preloaded applications™ (only some listed)

Some:

- IBM® Media Explorer
- Corel® WinDVD® (DVD/BD)
- Adobe® Reader®
- ThinkVantage Tools
- Lenovo International Warranty Service

See footnotes for more detailed information

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US model(s) announced February 22, March 1, April 5, May 31, or October 11, 2011

US model(s) withdrawn effective January or December 2012

Preloaded operating system™

65-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

24 hour x 7 day toll-free support during the warranty period

For compatible accessories, please go to O-T520 sheet;

For Lenovo service® upgrade options, please go to S-TA sheet
ThinkPad® T520 4239 (Optimus) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>rpm</th>
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<th>Battery</th>
<th>Intel vPro</th>
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<td>WWAN upg</td>
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</table>

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Ready to install applications**
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

**Preloaded applications**
- Norton™ Internet Security 2011
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded;
- purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

**See footnotes for more detailed information**

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US model(s) announced February 22 or November 29, 2011

US model(s) withdrawn effective January or December 2012
### ThinkPad T520 4240 (Optimus) - TopSeller - withdrawn

**Personal Systems Reference (PSREF)**

#### Type-model and Processor

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA</th>
<th>GB</th>
<th>PCIe Mini Card</th>
<th>WLC</th>
<th>PCIe Mini Card</th>
<th>WWAN/SATA</th>
<th>Modem</th>
<th>Finger print reader</th>
<th>Battery (cells, watt)</th>
<th>Power Adapter (watt)</th>
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<th>Intel vPro Preload</th>
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<td>Blue 9</td>
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<td>WWAN upg</td>
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<td>Blue 9</td>
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<td>IAMT vPro Preload</td>
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</tr>
</tbody>
</table>

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

#### Preloaded Operating System
- Genuine Windows® 7 Professional 64

#### Ready to Install Applications
- Some listed
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

#### Preloaded Applications
- Some listed
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

#### Accessories
- Support for compatible accessories, please go to S-TA sheet

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**See footnotes for more detailed information**

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US model(s) announced February 22, May 31, or November 29, 2011

US model(s) withdrawn effective November 2011, January 2012, or December 2012

(KN3-4) February 2013
### ThinkPad T520 4241 - withdrawn

<table>
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB rpm</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN/sSATA Modem</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Battery cells</th>
<th>Intel vPro</th>
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<td>4241-26U</td>
<td>i5-2520M</td>
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<td>6</td>
<td>vPro</td>
<td>Pro 64</td>
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</tbody>
</table>

- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

### Positioning
- Premiere performance: two spindles
- Preloaded operating system
  - Genuine Windows 7

### Processor
- Intel® Core™ i5-2520M processor (dual-core, 2.5GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

### Memory
- 8GB max™ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical
- DVD burner, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

### Ultrabat Sata disk
- Some: Solid State Drive (SSD) / SATA 3.0Gbs/s, 2.5'' wide, 7mm high
- Some: HDD / SATA 3.0Gbs/s, 2.5'' wide, 7mm or 9.5mm high, Active Protection System™
- All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive

### mSATA™ SSD
- None

### Widescreen display
- 15.6'' (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio, 60% Gamut

### Camera
- HD720p resolution, wider view angle, low light sensitive, fixed focus

### Graphics
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz, 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint™
- TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

### Touchpad
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- HD & HD+: 14.68'' x 9.65'' x 1.25-1.40''; 372.8mm x 245.1mm x 31.8-35.6mm
- FHD: 14.68'' x 9.65'' x 1.29-1.44''; 372.8mm x 245.1mm x 32.8-36.6mm

### Weight
- 6-cell: starting at 5.54 lb (2.51kg); 9-cell: starting at 5.89 lb (2.67kg)

### Case material
- Display cover: Carbon-fiber / Glass-fiber hybrid;
- Bottom: Glass-fiber reinforced plastic without paint

### Battery - type
- Lithium Ion 6-cell or 9-cell, support optional Slic Battery (0A36304) as 2nd battery at bottom

### Battery - life
- 6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus slice battery: up to 25.6 hr

### Chipset
- Mobile Intel QM67 Express Chipset

### ExpressCard
- One slot (ExpressCard/34)

### Smart Card Read
- None

### Multicard Reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

### Ports
- Integrated model: Four USB 2.0 (one powered), Optimus model: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
- IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### PCIe Mini Card WLAN
- Two PCI Express Mini Card slots
- 11a/b/g/n, PCIe Half Mini Card, Intel Centrino™ Advanced-N 6205, 2x2
- Wireless WAN upgradable

### Wwan Modem
- None

### Bluetooth™
- Bluetooth 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

### Intel AMT
- Intel Active Management Technology (AMT)

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Fingerprint reader
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- 1-year - depot repair service / service upgrades available

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**Preloaded applications**
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory™ Lenovo Edition (DVD+RW)

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**See footnotes for more detailed information**

US model announced February 22, 2011

US model(s) withdrawn effective December 2012

© Lenovo

(KN3-5) February 2013
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
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<th>PClE Mini Card</th>
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- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system®:
- Genuine Windows® 7 Professional 64

Ready to install applications® (only some listed):
- Rescue and Recovery™
- Access Connections™
- FingerPrint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications® (only some listed):
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

See footnotes for more detailed information
© Lenovo
US model(s) announced February 22, or April 5, 2011, or January 3, 2012
US model(s) withdrawn effective December 2012
(KN3-6) February 2013
## ThinkPad® T520 4242 (Optimus) - withdrawn

### Positioning
- **Processor**
  - Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache).
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- Intel® Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache).
- Intel® Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache).
- Intel® Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache).
- Intel® Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache).
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

### Memory
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical Ultrabay
- SATA disk
- DVD burner, 12.7mm Ultrabay Enhanced, removable

### Graphics
- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics
- Intel® HD Graphics 3000 in processor, and
- NVIDIA® NVS 4200M, PCI Express® x16, 1GB memory,
- external analog monitor support via VGA DB-15 connector and
digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- TrackPoint®
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- Touchpad
- ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

### Chipset
- Mobile Intel QM67 Express Chipset
- ExpressCard
  - One slot (ExpressCard/34)
  - Smart Card Reader
  - 4-in-1 reader (MMC, SD, SDHC, SDXC)

### Ports
- Two PCI Express Mini Card slots
- Two PCI Express Mini Card slots
- 11a/b/g/n, PCiE Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
- Wireless WAN upgradable
- Some: 56K V.92™ modem
- Some: Bluetooth 3.0 wireless, LED indicator
- Some: Bluetooth 3.0 wireless, LED indicator
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
- Intel Active Management Technology (IATM)
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Batteries
- 6-cell (57Whr): Lithium Ion 6-cell or 9-cell, support optional Slice battery (0A36304) as 2nd battery at bottom
- Bottom:
  - Display cover:
  - 6-cell:
  - FHD:

### Dimensions
- 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm

### Weight
- 6-cell: starting at 5.67 lb (2.57kg); 9-cell: starting at 6.02 lb (2.73kg)

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Ready to install applications
- Norton™ Security 2011
- Adobe® Reader
- Skype® for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVDxRW)
- Corel™ BurnNow™ Lenovo Edition (DVDxRW)
- Corel® DVD MovieFactory® Lenovo Edition (DVDxRW)

### Additional Features
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 17
- 24 hour x 7 day 18 toll-free support during the warranty period 19

### Additional Notes
- For compatible accessories, please go to O-T520 sheet;
- For Lenovo service upgrade options, please go to S-Tab sheet

### Additional Details
- See footnotes for more detailed information
- © Lenovo
- US model(s) announced February 22, April 5, or October 11, 2011
- US model(s) withdrawn effective January or December 2012

(KN3-3) February 2013
**ThinkPad T520 4243 (Onsite) - withdrawn**

Personal Systems Reference (PSREF)

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<th>Processor</th>
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<th>Display</th>
<th>Camera</th>
<th>Disk Controller</th>
<th>Sata Controller</th>
<th>Finger Reader</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Global Warranty</th>
<th>Preload</th>
<th>Ann Date</th>
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<td>Intel Core i5-2520M</td>
<td>8GBx2</td>
<td>15.6&quot; HD</td>
<td>7200p</td>
<td>Intel 6205™</td>
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<td>Pro 64</td>
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<td>Blue</td>
<td>6</td>
<td>Pro 64</td>
<td>01/12</td>
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</tr>
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</table>

- **Part of the Global Models Plus program with limited onsite service**
- **ThinkPad Office 2010 Product Key Ready (010PKR)**

**Positioning**
- **Premiere performance: two spindles**

**Processor**
- Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

**Memory**
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical**
- DVD burner, 12.7mm Ultrabay Enhanced, removable

**Ultrabay**
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

**SATA disk**
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System
- All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive

**Battery - life**
- 3-years

**Battery - type**
- Lithium Ion 6-cell or 9-cell, support optional Slice battery (0A36304) as 2nd battery at bottom

**Chipset**
- Mobile Intel QM67 Express Chipset

**ExpressCard**
- One slot (ExpressCard/34)

**Smart Card Read**
- None

**Multicard Reader**
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

**Ports**
- Integrated model: Four USB 2.0 (one powered), Optimus model: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
- IEEE 1394 FireWire 400 (4-pin connector), 1394a/2000 standard

**PCle Mini Card**
- Two PCI Express Mini Card slots
- 11a/b/g/n, PCIe Half Mini Card, Intel Centrioon Advanced-N 6205, 2x2
- Wireless WAN upgradeable

**Modem**
- Some: 56K V.92 modem

**Bluetooth**
- Bluetooth 3.0 wireless, LED indicator

**Ethernet**
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

**Intel AMT**
- Intel Active Management Technology (iAMT)

**Audio support**
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator
- Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

See footnotes for more detailed information © Lenovo

US model(s) announced February 22, 2011 or January 3, 2012

US model(s) withdrawn effective December 2012
**ThinkPad® T520 4243 (Optimus) - Onsite - withdrawn**

### Part of the Global Models Plus program with limited onsite service™ 3-year limited warranty
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Preloaded operating system®
- Genuine Windows® 7 Professional 64

### Ready to install applications™ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

### Preloaded applications™ (only some listed)
- Norton™ Internet Security 2011
- Adobe® Reader
- Skype® for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel® Burn:Now™ Lenovo Edition (DVD:RW)
- Corel® DVD MovieFactory™ Lenovo Edition (DVD:RW)

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
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<td>vPro G P Pro 64</td>
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</table>

**Positioning Processor**
- **Premiere performance; two spindles**
- Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
- Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology
- Intel® Core™ i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

**Memory**
- 8GB max/ PC3-10600 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay**
- DVD burner, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high
- Some: HDD / SATA 3.0Gb/s, 2.5” wide, 7mm or 9.5mm high, Active Protection System™
- All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive

**mSATA™ SSD**
- None

**Widescreen display**
- Some: 15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60 Hz
- Some: 15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60 Hz

**Graphics**
- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA® NVS™ 4200M, PCI Express x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- Supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard TrackPoint®**
- Touchpad
- ThinkVantage™

**Dimenisons (WxDxH)™**
- HD & HD+:
- FHD:
- Weight

**Case material**
- Display cover: Carbon-fiber / Glass-fiber hybrid;
- Bottom: Glass-fiber reinforced plastic without paint

**Battery**
- Lithium Ion 6-cell or 9-cell, support optional Slice battery (0A36304) as 2nd battery at bottom
- 6-cell (57Whr): up to 7.6 hr; 9-cell (94Whr): up to 12.6 hr; 9-cell plus Slice battery: up to 23.3 hr

**Chipset**
- Mobile Intel QM67 Express Chipset
- Some:

**PCle Mini Card**
- Two PCI Express Mini Card slots 11a/g/b, PCiE Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
- Wireless WAN upgradable
- Some: 56K V.92™ modem

**Ethernet**
- Some: Bluetooth 3.0 wireless, LED indicator
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
- Intel Active Management Technology (IAMT)
- Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
- Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Supported ThinkVantage® technologies**
- 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service™
- 24 hour x 7 day® toll-free support during the warranty period^17

**Limited warranty™**
- 3-years/1-year battery, limited onsite service™, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades^2 available

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See footnotes for more detailed information.

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US model(s) announced February 22 or October 11, 2011

US model(s) withdrawn effective January or December 2012

(KN3-9) February 2013
## ThinkPad T520i 4239 (TopSeller) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB' rpm</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card WWAN</th>
<th>mSATA SSD</th>
<th>Finger print reader</th>
<th>Bluetooth</th>
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<td>Pro 64</td>
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- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

## Preloaded operating system10
- Genuine Windows® 7 Professional 64

### Preloaded applications14 (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn® Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)

## Dimensions (WxDxH) [mm]
- **HD & HD+:** 14.68 x 9.65 x 1.25-1.40; 372.8mm x 245.1mm x 31.8-35.6mm
- **FHD:** 14.68 x 9.65 x 1.29-1.44; 372.8mm x 245.1mm x 32.8-36.6mm

## Battery - type (some listed)
- Lithium Ion 6-cell or 9-cell, support optional Slicy battery (0A36304) as 2nd battery at bottom
- 6-cell (57Whr): up to 7.7 hr; 9-cell (94Whr): up to 12.8 hr; 9-cell plus Slicy battery: up to 23.6 hr

## Chipset
- Mobile Intel QM67 Express Chipset

## Ports
- Integrated model: Four USB 2.0 (one powered), Optimus model: Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

## PCle Mini Card
- Two PCle Express Mini Card slots
- WWAN: Wireless WAN upgradable

## Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, TCG 1.2-compliant

## Limited warranty12
- 1-year - depot repair service / service upgrades8 available

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*See footnotes for more detailed information © Lenovo*  
US model(s) announced March 1 or October 4, 2011  
US model(s) withdrawn effective January or December 2012  
(©) Lenovo (2014) February 2013
ThinkPad® T520 Accessories - withdrawn

Memory
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

UltraBay Enhanced 12.7mm
Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 ann 06/23/09
Serial ATA Hard Drive 12.7mm Bay Adapter III 0A65623 ann 02/28/12
DVDR Burner UltraBay Enhanced Drive III 0A65625 ann 06/05/12

Storage and removable storage
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD 0A65631 ann 06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD 0A65632 ann 06/05/12
1TB 5400rpm SATA 3.0Gb/s 9.5mm 4K HDD 0A65633 ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD 0A65635 ann 06/05/12
128GB SATA 6.0Gb/s 7mm Solid State Drive 0A65630 ann 06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD 0A65620 ann 05/15/12
250GB 7200rpm SATA 3.0Gb/s OPAL-capable FDE HDD II 0A33985 ann 02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II 0A33987 ann 02/22/11

44 Can be used as the main HDD or with
Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 or
Serial ATA Hard Drive 12.7mm Bay Adapter III 0A65623 in the UltraBay.

USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11
USB 3.0 Secure 1TB Hard Drive 0A66621 ann 08/28/12
Lenovo Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi™ Mobile Broadband Option 0A36185 ann 04/12/11

ThinkPad Expansion
ThinkPad Port Replicator Series 3 with USB 3.0 433615W ann 06/05/12
ThinkPad Mini Dock Series 3 - 90W 433710U ann 06/23/09
ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W 433715U ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 90W 433815U ann 06/05/12
TP Mini Dock Plus Series 3 w/ USB 3.0 - 170W 433835U ann 06/05/12
Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09

52 Compatible only with dual core models.

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
Ultralisk Plus Wireless Keyboard and Mouse 4A34032 ann 04/05/11
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Slim keyboard 45J9292 ann 05/12/09

Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse
Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint™ Module (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 0A36407 ann 06/26/12
Lenovo Wireless Laser Mouse 0A36188 ann 12/20/11

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Security
3M 15.6W Privacy Filter from Lenovo 0A61771 ann 04/05/11
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

Batteries
ThinkPad Battery 70+ (6-cell) 0A36302 ann 06/05/12
ThinkPad Battery 70++ (9-cell) 0A36303 ann 06/05/12
ThinkPad Battery 28++ (9 cell, slice) 0A36304 ann 06/05/12

To be used along with system battery for all-day computing;
attaches under ThinkPad using docking connector
(not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger 40Y7625 ann 09/20/05

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter 45 40Y7696 ann 01/05/06
ThinkPad 90W AC Adapter 45 40Y7659 ann 09/20/05
ThinkPad 135W AC Adapter 55Y9317 ann 01/07/10
90W Ultralisk AC/DC Combo Adapter 41R4493 ann 09/22/09

More at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultralisk AC/DC Combo Adapter 41R4493

Monitors
ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D) 4341HE1 ann 11/18/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) 2448MB6 ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) 2578HB6 ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DVI-D) 2572MB6 ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DVI-D) 4420MB2 ann 09/13/11

DisplayPort cable is not included; use optional
DisplayPort to DisplayPort Monitor Cable 0A36537.
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)

More information at www.lenovo.com/support/cases

Monitors Compatibility
Lenovo DisplayPort to VGA Monitor Adapter 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-D Cable Adapter 45J9715 ann 08/05/08
DisplayPort to DisplayPort Monitor Cable 0A36537 ann 09/13/11
Lenovo USB Soundbar 0A36190 ann 05/01/12
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Lenovo Security Cable Lock 57Y4303 ann 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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(O-T520) February 2013
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Audio support</th>
<th>Security</th>
<th>Fingerprint reader</th>
<th>Limited warranty</th>
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<td>4062-4HU</td>
<td>T9600</td>
<td>2.80</td>
<td>4GB 15.4” WUXGA</td>
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<td>None</td>
<td>3-years</td>
</tr>
</tbody>
</table>

Preloaded operating system:
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 64
- Vista models: Vista Premium logo

Preloaded applications:
- McAfee VirusScan Plus with SiteAdvisor (30 days of virus definitions)
- Access Connections
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)

Supports ThinkVantage technologies:
- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)
- Climate Savers® certified
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
### ThinkPad W500 4062 (Switch) - TS (XP with Win 7 License) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Switchable graphics</th>
<th>Disk</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB</th>
<th>Mini PCIe Battery or Turbo cells Preload</th>
<th>Avail date</th>
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<tr>
<td>4062-5DU</td>
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<td>3GB</td>
<td>WUXGA</td>
<td>GMA, V5700</td>
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<td>DVD±RW</td>
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<td>320G</td>
<td>DVD±RW</td>
<td>None</td>
<td>9 XP Pro Oct 09</td>
<td></td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Power-packed engineering with Open GL graphics and ISV certifications

### Positioning Processor
- Mobile workstation; two spindles
- **Intel® Core™ 2 Duo processor** T9600 or T9900 with dual-core
- Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory
- 3GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- **Italics**: standard memory in both sockets; no sockets available;
- SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)
- One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel
- 320GB² (7200 rpm) / SATA 1.5Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Widescreen display
- **Some**: 15.4” (391mm) WSXGA+ (1680x1050) color, anti-glare, CCL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio
- **Some**: 15.4” (391mm) WUXGA (1920x1200) color, anti-glare, CCL backlight, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio
- Camera on top of screen, 1.3-megapixel, fixed focus

### Switchable graphics
- Switches between discrete and integrated graphics (Windows 7 only)
- **Intel Graphics Media Accelerator 4500MHD** (GMA 4500MHD), in GM45, and **ATI® Mobility FireGL™ V5700**, PCI Express x16, 512MB memory, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); **Maximum external resolution**: 2048x1536@75Hz

### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar® magnifying glass
- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions²
- Weight²
- **Battery - type Battery - life**: 6-cell 15.4W (WxDxH): 14.1” x 10” x 1.2–1.3”; 357.5mm x 255mm x 30–34mm
- 9-cell: up to 9.4 hr; 9-cell plus Ultrabay battery: up to 10.9 hr
- Supports ThinkVantage® technologies

### Chipset
- **Mobile Intel GM45 Express Chipset** (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3Gb/s, USB 2.0, PCI Express® x 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)
- One slot (ExpressCard/34, ExpressCard/54)
- One (Type I, Type II), CardBus 32-bit
- None
- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire (4-pin connector; 1394a-2000 standard)
- Three Mini PCI Express slots
- Intel 5100™ WWAN upg
- 2G Turbo
- None
- None
- None
- None
- None
- None
- None
- High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Finger print reader Finger print reader on palm rest, swipe sensor, supports the security chip
- Lithium Ion 9-cell plus Ultrabay battery: up to 9.4 hr; 9-cell: up to 10.9 hr

### Preloaded operating system²
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications¹ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Finger print software (finger print models)
- McAfee VirusScan® Plus with Site Advisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

### See footnotes for important warranty information

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US models announced October 22, 2009

US models withdrawn effective September 2010

CRSW-4 September 2010
## ThinkPad W500 4062 (Switchable) - TopSeller (Windows 7) - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Switchable graphics</th>
<th>Disk SATA 6Gb/s rpm</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo battery Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>4062-5FU</td>
<td>T9900</td>
<td>3.06</td>
<td>4GB</td>
<td>15.4&quot; WUXGA</td>
<td>GMA, V5700</td>
<td>320G 7200</td>
<td>DVD±RW</td>
<td>None</td>
<td>9</td>
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<tr>
<td>4062-5GU</td>
<td>T9900</td>
<td>3.06</td>
<td>4GB</td>
<td>15.4&quot; WUXGA</td>
<td>GMA, V5700</td>
<td>250G FDE</td>
<td>DVD±RW</td>
<td>None</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Power-packed engineering with Open GL graphics and ISV certifications**

### Positioning

**Processor** Mobile workstation; two spindles

Intel® Core™ 2 Duo processor T9900 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory

- **4GB std / 8GB max** / PC3-8500 1066MHz DDR3, non-parity, channel capable, two 204-pin SO-DIMM sockets; *Italics:* standard memory in both sockets; no sockets available;

### SATA DVD±RW

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

- **320GB²** (7200 rpm) or **250GB** (7200 rpm) **Full Disk Encryption** [FDE] / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System™

### Widescreen display

- **15.4"** (391mm) **WUXGA (1920x1200) color,** anti-glare, CCFL backlight, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio

### Camera

Camera on top of screen, 1.3-megapixel, fixed focus

### Switchable graphics

Switches between discrete and integrated graphics (Windows 7 only)

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI™ Mobility FireGL™ V5700, PCIe Express x16, 512MB memory, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); Maximum external resolution: 2048x1536@75Hz

### Keyboard

- **89-key,** ThinkVantage button, spill-resistant, multimedia Fn keys

### Touchpad

- **ThinkNav™** pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

### ThinkLight™

- **6-cell 15.4W(9Wx6H):** 14.1" x 10" x 1.2–1.3"; 357.5mm x 255mm x 30–34mm
- **9-cell:** starting at 6.2 lb (2.8kg)

### Dimensions²

- **Weight²**
- **Battery - type**
- **Battery - life**

### Chipset

- **Mobile Intel GM45 Express Chipset** (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus (WPCN385 Super I/O)

### ExpressCard/54

- One slot (ExpressCard34, ExpressCard/54)

### PC Card

- One (Type I, Type II), CardBus 32-bit

### Smart Card Read

None

### Multicard Reader Ports

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- Three USB 2.0, external monitor¹¹ (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Mini PCI Express

- Three Mini PCI Express slots
- Intel 5100® WWAN upg

### AT&T²³

- Some: Wireless WAN upgradegradable, requires Verizon® (43R9151) or AT&T® (43R9152)

### 2G Turbo

- None

### UWB

- None

### Modem

- 56K V.92 modem

### Bluetooth™

- Bluetooth 2.1 wireless, LED indicator

### Ethernet

- Intel 82567FL Gigabit Network Connection (Boazman), PHY, PCle x1

### Intel AMT

None

### Audio support

High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

### Power-on password, hard disk password, supervisor password, security keyhole

### Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

### Security chip

Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty²⁰ ³-years / 1-year battery - EasyServ™ depot repair service / service upgrades²² available

### Preloaded operating system²⁵

- Genuine Windows® 7 Professional 64

### Preloaded applications²⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Norton® Internet Security 2009
- Microsoft® Office 2007 Trial (60-day)
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

### Supports ThinkVantage technologies

- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage and Top Cover
- Roll Cage (one-piece magnesium)
- Climate Savers® certified
- Energy Star® Silver rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷
- 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378

### ThinkPlus™

- 3-year LOR® 9x5 NBD
- 3-year LOR® 9x5 NBD
- 5-year LOR® 9x5 NBD
- 5-year P&L P/U Depot
- 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information

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US models announced October 2009

US models withdrawn effective September 2010
The page contains detailed specifications of ThinkPad W500 4061 (Switchable) - withdrawn, including processor, memory, storage, display, camera, switchable graphics, power, warranty, and other features. The page also mentions ThinkPlus, a service for managing business assets.

### Key Specifications
- **Processor:** Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache.
- **Memory:** 2GB, 3GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- **Storage:** SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214).
- **Display:** One module bay for interchangeable devices (right side), 9.5mm high bay, flat bezel.
- **SATA DVD RW Ultrabay Slim SATA disk:** Optional:
  - DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214).
  - One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel.
- **Dimensions:**
  - Some: 15.4" (391mm) WXGA+ (1680x1050) color, anti-glace, CCFL backlight, 7.8" x 11" aspect ratio, 500:1 contrast ratio.
  - Some: 15.4" (391mm) WXGA+ (1280x800) color, anti-glace, CCFL backlight, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio.
- **Chipset:** Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.1, security chip, ethernet MAC, LPC bus (WPCN385 Super I/O), Supports ThinkVantage technologies.
  - Chipset:
    - Some: Chipset:
      - Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.1, security chip, ethernet MAC, LPC bus (WPCN385 Super I/O), Supports ThinkVantage technologies.

### Preloaded operating system
- Some: Genuine Windows Vista Business 64.
- Vista models: Vista Premium logo.

### Preloaded applications
- All OSes; some listed:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader®
  - Windows Live™ Toolbar
  - Roxio® Creator® Business Edition (DvD+Rw)
  - Roxio MyDVD® (Dvd+Rw)
  - Corel® WinDVD® (Dvd+Rw)

### Additional Features
- **Power-packed engineering with Open GL graphics and ISV certifications**
- **Limited warranty**
  - 3-years - 1-year battery - depot repair service / service upgrades available

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See footnotes for important warranty information: 
- Intel® Centrino® 2 with vPro™ technology
- US models announced August 5, September 23, 2008 or June 2, 2009
- US models withdrawn effective August 2009, February 2010 or September 2010

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(CR5W-2) September 2010
ThinkPad® W500 4063 (Switchable) - Onsite - withdrawn

Personal Systems Reference (PSREF)

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<th>Processor</th>
<th>Memory</th>
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<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Battery</th>
<th>Whose (W)</th>
<th>Preloaded operating system</th>
<th>Preloaded applications</th>
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</thead>
<tbody>
<tr>
<td>Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>GMA, V5700</td>
<td>820.11</td>
<td>WWAN</td>
<td>or Turbo</td>
<td>GMP(P)</td>
<td>Avail</td>
<td>- Some: Genuine Windows® Vista® Business 32</td>
<td>- Some: Genuine Windows Vista Business 64</td>
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<tr>
<td>Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>GMA, V5700</td>
<td>820.11</td>
<td>WWAN</td>
<td>or Turbo</td>
<td>GMP(P)</td>
<td>Avail</td>
<td>- Some: Vista Premium logo</td>
<td>- All OSes (fixed):</td>
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<tr>
<td>Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>GMA, V5700</td>
<td>820.11</td>
<td>WWAN</td>
<td>or Turbo</td>
<td>GMP(P)</td>
<td>Avail</td>
<td>- Rescue and Recovery™</td>
<td>- Access Connections™</td>
</tr>
</tbody>
</table>

Some models are part of the Global Models Plus program with limited onsite service$^\dagger$ 3-year limited warranty

Some models are power-packed with Open GL graphics and ISV certifications

Positioning

Processor

Mobile workstation: two spindles

Memory

2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

Non-italics: standard memory in both sockets; no sockets available

SATA DVD±RW

DVD burner, SATA 1.5Gb/s, Ultrabay Slim, removable (43N3214)

One modular bay for interchangeable devices (right side), 9.5mm high bay, flat bezel

160GB$^\dagger$ (7200 rpm)

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System$^\dagger$

Widescreen display

Some: 15.4" (391mm) WXSGA+ (1680x1050) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio

Some: 15.4" (391mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight, 175 nits, 16:10 aspect ratio, 500:1 contrast ratio

Camera

Some: camera on top of screen, 1.3-megapixel, fixed focus

Switchable graphics

Switches between discrete and integrated graphics (Vista only).

Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, and ATI$^\dagger$ Mobility FireGL$^\dagger$ V5700, PCI Express x16, 512MB memory, digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915),

Maximum external resolution: 2048x1536@75Hz

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint$^\dagger$ pointing device, "Press-to-Select," Internet Scroll Bar$^\dagger$, magnifying glass

UltraNav$^\dagger$, wide touch pad below keyboard, Tap Zones, scrolling regions label

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions$^\dagger$

Weight$^\dagger$

Case material

Battery - type

Battery - life$^\dagger$

Chipset

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express$^\dagger$, 1.1, PCI 2.3, security chip, ethernet MAC, LPC bus (WPCN385 Super I/O)

ExpressCard slot

One ExpressCard/34 or ExpressCard/54

PC Card Std slot

One Type I or Type II slot, CardBus 32-bit

Smart Card Read

None

Multicard Reader

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Ports

Three USB 2.0, external monitor$^\dagger$ (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a/2000 standard)

Mini PCI Express

Three Mini PCI Express slots

Some: 11a/b/g/n wireless$^\dagger$, Mini PCIE adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

Some: 11a/b/g/n wireless, Mini PCIE adapter, Intel WiFi Link N WiFi Link 5300, 3x3 Wireless WAN upgradeable, requires Verizon$^\dagger$ (43R9151) or AT&T$^\dagger$ (43R9152)

Some: Intel Turbo Memory, Half-Mini PCIE adapter, 2GB flash, disk-cache accelerator

None

Modem

56K V.92$^\dagger$ modem

BluetoothTM

Bluetooth 2.1 wireless, LED indicator

Ethernet

Intel 82576LM Gigabit Network Connection (Boazan), PHY, PCIE x1

Intel Active Management Technology (IAMT)

Audio support

High Definition (HD) Audio, Conexant 20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty

3-years/1-year battery, limited onsite service$^\dagger$, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades$^\dagger$ available

See footnotes for important warranty information

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US models announced September 23, 2008

US models withdrawn effective February or September 2010

1990-watt (ATI graphics) AC adapter

ThinkPad Roll Cage and Top Cover Roll Cage (one-piece magnesium)

Climate Savers$^\dagger$ certified

PEPEAT Silver rating

ENERGY STAR$^\dagger$ 5.0-compliant

RoHS-compliant

International Warranty Service$^\dagger$

24 hour x 7 day$^\dagger$ toll-free support during the warranty period$^\dagger$

via 800-426-7378

ThinkPlus$^\dagger$, 4-year LOR 9xS NBD

12X5630

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

CRSW-3) September 2010
<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Mobile workstation: two spindle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets</td>
</tr>
<tr>
<td>SATA DVD RW Ultrabay Enhancer</td>
<td>DVD burner; SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
</tr>
<tr>
<td>Disk SAtA GB rpm RAID</td>
<td>320G 7200 None</td>
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<tr>
<td>PCIe Mini Card WWAN</td>
<td>Intel 6300m WWAN upg None</td>
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<tr>
<td>Color calibration</td>
<td>Intel vPro XP Pro Feb 10</td>
</tr>
</tbody>
</table>

This small and medium business (SMB) model is part of the US TopSeller™ Program
Power-packed engineering with Open GL graphics and ISV certifications

Positioning Processor
ThinkPad® W510 4319 (TopSeller) - XP with Win 7 License - withdrawn

See footnotes for important warranty information
US model announced February 2, 2010
US model withdrawn effective October 2010

Positioning Processor
Mobile workstation: two spindle
Intel® Core™ i7 processor i7-270QM with quad-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 6MB cache

Memory
2GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

SATA DVD RW Ultrabay Enhancer
DVD burner; SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5” wide, 9.5mm high, removable, upgradeable, supports second disk, Shock Mounted Hard Drive, Active Protection System

Widescreen display Color calibration
15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent displays;
Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
TrackPoint®
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
Touchpad
ThinkLight™
ThinkPad® Touchpoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions
15.6”W (WxDxH): 14.68” x 9.65” x 1.26-1.41”; 372.8mm x 245.1mm x 32-35.8mm
Cell: at 5.66 lb (2.57kg); 9-cell: at 6.01 lb (2.72kg)

Battery
Battery - type
9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom
Battery - life - hours
6-cell: up to 6.0 hrs; 9-cell: up to 9.0 hrs; 9-cell plus slice battery: 9.5 hrs

Chipset
Mobile Intel QM57 Express Chipset

Multicard Reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports
Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

PCle Mini Card slots
Two PCI Express Mini Card slots

Modern
56K V.92® modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Audio support
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty
3-years/1-yr battery - depot repair service / service upgrades available

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2009
- Windows® Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage technologies
- 135-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US model announced February 2, 2010
US model withdrawn effective October 2010

Lenovo

Preload 2010 Lenovo
Lenovo Personal Systems Reference (PSREF)
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Hard Drive</th>
<th>Card Reader</th>
<th>OS</th>
<th>Color Calibration</th>
<th>Security Features</th>
<th>Color</th>
<th>Battery Life</th>
<th>Weight (g)</th>
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</thead>
<tbody>
<tr>
<td>ThinkPad W510 4319 (TopSeller) - Windows 7 - withdrawn</td>
<td></td>
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<tr>
<td>4319-2NU</td>
<td>i7-720QM</td>
<td>2GB or 4GB</td>
<td>15.6&quot; HD+</td>
<td>None</td>
<td></td>
<td>Windows 7</td>
<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
</tr>
<tr>
<td>4319-2PU</td>
<td>i7-720QM</td>
<td>2GB or 4GB</td>
<td>15.6&quot; FHD</td>
<td>None</td>
<td></td>
<td></td>
<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
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<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
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<tr>
<td>4319-2RU</td>
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<td>15.6&quot; FHD</td>
<td>None</td>
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<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
</tr>
<tr>
<td>4319-4BU</td>
<td>i7-720QM</td>
<td>2GB or 4GB</td>
<td>15.6&quot; FHD</td>
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<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
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<td>15.6&quot; FHD</td>
<td>None</td>
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<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
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<tr>
<td>4319-64U</td>
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<td>15.6&quot; FHD</td>
<td>None</td>
<td></td>
<td></td>
<td>cyan</td>
<td>Intel vPro</td>
<td>cyan</td>
<td>up to 3.0 hr</td>
<td>242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, Multi-Touch, fingerprint reader, power-on password, hard disk password, supervisor password, security keyhole, shock-mounted hard drive, active protection system, Intel Active Management Technology (iAMT), Bluetooth 2.1 wireless, LED indicator, ENERGY STAR® Gold rating, 135-watt AC adapter</td>
</tr>
</tbody>
</table>

**Positioning** Mobile workstation; two spinners

**Processor** Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core, 12.7mm Ultrabak Enhanced, removable DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology

**Memory** 2GB or 4GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

**SATA DVD:RW UltraBay Enhanced SATA disk** DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabak Enhanced, removable DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology

**Widescreen display** Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio, 60% Gamut

**Wide screen display** Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16.9 aspect ratio, 500:1 contrast ratio, 95% Gamut

**Color calibration** Camera Some: huey™ PRO Colorimeter by X-Rite™ color calibration sensor in palm rest

**Discrete graphics** NVIDIA® Quadro FX880M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display, Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard** TrackPoint® 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad** ThinkPad® UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

**Dimensions (WxDxH) [mm]** HD+: 14.68 x 9.65 x 1.26-1.41; 372.8mm x 245.1mm x 32-35.8mm

**Weight [g]** FHD: 14.68 x 9.65 x 1.29-1.44; 372.8mm x 245.1mm x 32-36.8mm

**Battery - type** Lithium-Ion 9-cell, supports optional Slick battery (574545S) as 2nd battery at bottom 6-cell; up to 3.0 hr; 9-cell plus slice battery; up to 10.5 hr

**Chipset** Mobile Intel QM57 Express Chipset

**Smart Card Read** None

**Multicard Reader** 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**Ports** Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11, ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Supported Operating System**

- Some: Genuine Windows® 7 Professional
- Some: Genuine Windows® 7 Professional 64

**Supported applications**

- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader™
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded: purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)
- huey™ PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

**Notes**

- All ThinkPad® products are covered by the International Warranty Service during the warranty period.

- The battery used in this computer is rechargeable and designed to be compatible with your computer; however, it is not fail-safe and may in rare circumstances overheat.

- For the latest product information, go to lenovo.com/thinkplus/warranty.
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory (MHz)</th>
<th>Disk</th>
<th>SATA GB</th>
<th>RAID</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
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<td>4319-5RU</td>
<td>i5-520M</td>
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<td>Pro 64</td>
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<td>4319-5SU</td>
<td>i7-620M</td>
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<td>3.33</td>
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<td>1066</td>
<td>15.6” FHD</td>
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<td>vPro</td>
<td>Pro 64</td>
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<td>i5-560M</td>
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<td>None</td>
<td>None</td>
<td>None</td>
<td>9</td>
<td>vPro</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Power-packed engineering with Open GL graphics and ISV certifications
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

**Preloaded operating system**
- Genuine Windows 7 Professional 64

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe Reader
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies
- 135-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support within the warranty period

**Limited warranty** 3-years/1-yr battery - depot repair service / service upgrades available as of June 2011

See footnotes for important warranty information.

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US models announced July 13 or September 28, 2010

US models withdrawn effective February or June 2011

(KNIW-5) June 2011
ThinkPad® W510 4389 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

ThinkPad®
Type-model
Max
screen
Multi-
Touch
Camera
Disk
SATA
Pcie
Mini
Card
Blue/
Color
Battery
Pre-
GMP (M)
Workhorse
(W)

4389-22U
I7-720QM 1.60 2.80
4GBx1 1066 15.6” HD
250G 5400
DVD±RW Intel 6200
Yes 6 vPro Pro 32 G Jan 10

4389-23U
I7-820QM 1.73 3.06
4GBx2 1066 15.6” HD+ 2.0M 320G 7200 DVD
320G 7200
DVD±RW Intel 6200
Yes 9 vPro Pro 32 G Jan 10

4389-24U
I7-820QM 1.73 3.06
4GBx1 1333 15.6” HD+ 2.0M 320G 5400 DVD
2.0M 500G 7200 1 Intel 6300
Yes 9 vPro Pro 64 Jan 10

4389-25U
I7-820QM 2.00 3.20
4GBx1 1333 15.6” HD+ 2.0M 320G 7200 DVD
2.0M 500G 7200 1 Intel 6300
Yes 9 vPro Pro 64 Jan 10

4389-27U
I7-820QM 1.60 2.80
2GBx2 1066 15.6” HD Multi
2.0M 500G 7200 DVD
2.0M 500G 7200 DVD
Intel 6200
Yes 9 X-Rite 32 Jan 10

4389-N9U
I7-820QM 1.73 3.06
4GBx1 1333 15.6” FHD
2.0M 500G 7200 DVD
2.0M 500G 7200 DVD
Intel 6200
Yes X-Rite 6 X-Rite 32 Jan 10

Limited warranty 3-years/1-yr battery - depot repair service / service upgrades available

\* Power-packed engineering with Open GL graphics and ISV certifications

\* These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor
Mobile workstation; two spindles
Intel® Core™ i7 processor i7-720QM, i7-820QM, or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-720QM: 6MB cache; i7-820QM/i7-920XM: 6MB cache

Memory
2GB or 4GB std / 1GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

SATA DVD±RW
SATA DVD burner; SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0GB/s, 2.5” wide, 9.5mm high, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System

Widescreen display
Some: 15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

Some: 15.6” (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

Some: 15.6” (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

Some: 15.6” (396mm) FHD+ (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

Some: 15.6” (396mm) WUXGA (1920x1200) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

Some: 15.6” (396mm) WUXGA+ (1920x1200) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

Color calibration
Some: hue®/PRO Colorimeter by X-Rite color calibration sensor on palm rest
Some: camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics
NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass

Touchpad
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions (WxDxH)\(^3\)
HD & HD+:
14.68” x 9.65” x 1.26-1.41”;
372.8mm x 245.1mm x 32-35.8mm

FHD:
14.68” x 9.65” x 1.29-1.44”;
372.8mm x 245.1mm x 32-38.6mm

FHD Multi: 14.68” x 9.65” x 1.35-1.57”;
372.8mm x 245.1mm x 34.3-39.8mm

Battery life:
6-cell: starting at 6.1 lb (2.7kg);
9-cell: starting at 6.01 lb (2.7kg)

Display cover:
Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic

Lithium ion 6-cell or 9-cell, supports optional Slicebattery (57Y4545) as 2nd battery
6-cell: up to 3.0 hr;
9-cell: up to 5.1 hr;
9-cell plus slice battery: up to 10.5 hr

Chipset
Mobile Intel GM57 Express Chipset

Smart Card Reader
None

Multicard Reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports
Two USB 3.0, one Powered USB 2.0, one USB 2.0/sATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

PCie Mini Card
Two PCI Express Mini Card slots

Intel® Core™ i7 processor i7-720QM, i7-820QM, or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-720QM: 6MB cache; i7-820QM/i7-920XM: 6MB cache

Intel® Core™ i7 processor i7-720QM, i7-820QM, or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-720QM: 6MB cache; i7-820QM/i7-920XM: 6MB cache

Power-packed engineering with Open GL graphics and ISV certifications

These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system\(^22\)
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications\(^14\) (only some listed)
- Rescue and Recovery™
- Access Connections\(^5\)
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
- (30 days of virus definitions)
- Adobe® Reader\(^6\)
- Adobe Flash Player\(^8\)
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD/RW)
- Roxio MYDVD® (DVD/RW)
- Corel® WinDVD™ (DVD/RW)
- huey®/PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies
- 135-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPET® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day x 7 toll-free support during the warranty period via 800-426-7378

Lenovo.com
Post-warranty annual maintenance agreements at

See footnotes for important warranty information
US models announced January 7 or August 3, 2010
US models withdrawn effective February or June 2011

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(KN1W-2) June 2011
### ThinkPad W510 4389 (Windows 7) - July 2010 - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base Turbo Clock (GHz)</th>
<th>Max Turbo Clock (GHz)</th>
<th>Memory (MHz)</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Mini Card</th>
<th>Smart Card Reader</th>
<th>Finger print reader</th>
<th>Blue-tooth reader</th>
<th>Preloaded operating system</th>
<th>Workhorse (W)</th>
<th>GMP (P)</th>
<th>Available date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4389-P2U</td>
<td>i7-620M</td>
<td>2.66 3.33 4GBx2 1066</td>
<td>15.6” HD+</td>
<td>1066</td>
<td>15.6” HD+</td>
<td>500G</td>
<td>2.0M</td>
<td>602.11</td>
<td>No Intel 6200s</td>
<td>Finger Blue</td>
<td>No</td>
<td>Pro 64</td>
<td>G Jul 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4389-P3U</td>
<td>i7-620M</td>
<td>2.66 3.33 2GBx2 1066</td>
<td>15.6” HD+</td>
<td>1066</td>
<td>15.6” HD+</td>
<td>160G</td>
<td>2.0M</td>
<td>602.11</td>
<td>No Intel 6200s</td>
<td>Finger Blue</td>
<td>No</td>
<td>Pro 64</td>
<td>G Jul 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4389-P9U</td>
<td>i5-520M</td>
<td>2.40 2.93 2GBx1 1066</td>
<td>15.6” HD+</td>
<td>1066</td>
<td>15.6” HD+</td>
<td>250G</td>
<td>2.0M</td>
<td>602.11</td>
<td>No Intel 6200</td>
<td>No</td>
<td>Pro 32</td>
<td>G Jul 10</td>
<td>G Jul 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4389-PAU</td>
<td>i7-620M</td>
<td>2.66 3.33 2GBx2 1066</td>
<td>15.6” HD+</td>
<td>1066</td>
<td>15.6” HD+</td>
<td>320G</td>
<td>2.0M</td>
<td>602.11</td>
<td>No Intel 6200</td>
<td>Finger Blue</td>
<td>No</td>
<td>Pro 32</td>
<td>G Jul 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Power-packed engineering with Open GL graphics and ISV certifications**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Positioning

- Processor: Mobile workstation; two spindles
- Memory: DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 32-bit/64-bit, up to 1066MHz, supports second disk, removable, upgradeable
- Display: ThinkPad Roll Cage (one-piece magnesium frame)
- Touchpad: UltraNav, wide touchpad below keybd, Tap Zones, scrolling regions label, multi-touch illumination
- Dimensions: 2560x1600 (DisplayPort)@60Hz; digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); external analog monitor support via VGA DB-15 connector and
- Weight: 15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut
- Camera: 2.0-megapixel, fixed focus
- Battery: Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery

### Preloaded software

- Microsoft® Windows® 7 Professional 64
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live® Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RD)
- Corel® WinDVD® (DVD:RW)

### Security

- Trusted Platform Module, TCG 1.2-compliant
- Power-on password, hard disk password, supervisor password, security keyhole
- Power On Authentication, supports the security chip

### Limited warranty

3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo

US models announced July 13, 2010

US models withdrawn effective February or June 2011
ThinkPad W510 4391 (Onsite) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model | Processor | Base max turbo frequency (GHz) | Memory (MHz) | Wide-screen display | Camera | Disk | SATA GB | RAID | PCle Mini Card type | Blue/Fin | Color | Battery technology | Workhorse (W) | GMP (P) | Availability date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
4391-22U | i7-720QM | 1.60 | 2.80 | 2GBx1 | 1066 | 15.6" HD | 5400 | None | Intel 6200™ | 6 | VPro | Pro 32 | 6G P Jan 10
4391-23U | i7-820QM | 1.73 | 3.06 | 2GBx2 | 1066 | 15.6" HD+ | 7200 | None | Intel 6200 | Yes | 9 | VPro | Pro 32 | 6G P Jan 10
4391-N9U | i7-820QM | 1.73 | 3.06 | 4GBx1 | 1333 | 15.6" FHD | 3200 | None | Intel 6300™ | Yes | X-Rite | 6 | VPro | Pro 64 | 6G P Aug 10

*These models are part of the Global Models Plus program with limited onsite service*¹ 3-year limited warranty

*Power-packaged engineering with Open GL graphics and ISV certifications

*These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning: Mobile workstation; two spindles

Processor: Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-820QM: 2.80 GHz

Memory: 2GB or 4GB std / 16GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

SATA DVD±RW Ultrabay Enhanced SATA disk: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 25GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System™

Widescreen display: Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 600:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 600:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 600:1 contrast ratio, 95% Gamut

Color calibration: Some: huey®PRO Colorimeter by X-Rite® color calibration sensor in palm rest

Some: camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics: NVIDIA® Quadro® FX880M, PCI Express® x16, 1GB memory, external analog monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display, Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@65Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard: 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® Touchpad: TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions (WxDxH)³: HD & HD+: 14.68 x 9.65 x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm

FHD: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)

Weight³: Display cover: glass reinforced plastic; Base: Carbon-fiber reinforced plastic Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery 6-cell: up to 3.0 hr; 9-cell: up to 5.1 hr; 9-cell plus slice battery: up to 10.5 hr

Battery - life:³

Battery - type: 6-cell: up to 3.0 hr; 9-cell: up to 5.1 hr; 9-cell plus slice battery: up to 10.5 hr

Chipset: Mobile Intel GM57 Express Chipset

ExpressCard/34: One slot (ExpressCard/34)

Smart Card Reader: None

Multicard Reader: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

Ports: Two USB 3.0, one USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15), DisplayPort (supports single-link DVI-D via cable 45J7915), ExpressCard/34

PCle Mini Card: Two PCI Express Mini Card slots

Intel 6200™ Intel 6300™ WWAN upg Modem: Some: 11a/b/g/n wireless, PCle Half Mini Card Mini, Intel Centrino® Advanced-N 6200, 2x2

Some: 11a/b/g/n wireless, PCle Half Mini Card Mini, Intel Centrino Ultimate-N 6300, 3x3

Wireless WAN upgradable: 802.11a/b/g/n/m (only some listed)

Bluetooth™: Some: Bluetooth 2.1 wireless, LED indicator

Some: Bluetooth 2.1 wireless, LED indicator

Intel AMT: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Audio support: Intel Active Management Technology (AMT)

High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2, speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security: Power-on password, hard disk password, supervisor password, security keyhole

Fingerprint reader: Trusted Platform Management, TCIC 1.2 compliant

FingerPrint Reader: Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty:³ 3-years/1-year battery, limited onsite service⁴, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades⁵ available

Preloaded operating system²:

*Some: Genuine Windows® 7 Professional 32

Some: Genuine Windows® 7 Professional 64

Preloaded applications¹⁴ (only some listed)

*Rescue and Recovery™

Access Connections™

Password Manager

Fingerprint Software (fingerprint models)

ThinkVantage System Update

ThinkVantage Power Manager

ThinkVantage Toolbox

Norton™ Internet Security 2011 (30 days of virus definitions)

Adobe® Reader®

Adobe Flash® Player

Windows Live® Toolbar

Skype® for Windows

Microsoft Office 2010 preloaded; purchase product key to activate

Microsoft Research AutoCollage Touch

Roxio® Creator® Business Edition (DVD+RW)

Roxio MyDVD® (DVD+RW)

Corel® WinDVD® (DVD+RW)

Features: Supports ThinkVantage technologies

- 135-watt AC adapter

- ThinkPad Roll Cage (one-piece magnesium frame)

- EPEAT® Gold rating

- ENERGY STAR® 5.0-compliant

- RoHS-compliant

- International Warranty Service¹⁷

- 24 hour x 7 day¹² toll-free support during the warranty period¹² via 800-426-7375

- ThinkPlus™ 4-year LOR 9x5 NBD

- 12X5630

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced on January 7 or August 3, 2010

US models withdrawn effective June 2011

© Lenovo

(KN1W-3) June 2011
Positioning

Processor: Mobile workstation; two spindles.

Memory: 2GB, 4GB, or 8GB std / 8GB max*, PC3-8500 1066MHz or PC3-10600 1333MHz DDR3.

SATA DVD:RW

SSD: Ultrabay Enhanced SATA disk

Display:

Wide-screen display:

Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

Some: 15.6" (396mm) HD+ (1920x1080) color, anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

Color calibration: None

Camera: Camera on top of screen, 2.0-megapixel, fixed focus

Discrete graphics:

NVIDIA® Quadro® FX880M, PCI Express x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports dual independent display.

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2560x1440 (VGA)@60Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard:

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint:

Touchpad:

ThinkLight™:

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions (WXDxH)™:

Weight:

Case material:

Battery - type:

Battery - life:

Chipsset:

ExpressCard/34:

Smart Card Read:

Multicard Reader:

Ports:

PCle Mini Card:

Intel 6200™ WWAN upg:

Modem:

Bluetooth™:

Ethernet:

Intel AMT:

Audio support:

Security:

Security chip:

Fingerprint reader:

Preloaded operating system:

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications (only some listed):

- Rescue and Recovery™
- Access Connections™
- Password Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Preloaded software:

- Roxio MyDVD® (DVD:RW) / WinDVD® (DVD:RW)
- Adobe® Reader® / Adobe Flash® Player
- Norton Internet Security 2011 (30 days of virus definitions)
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

- Supports ThinkVantage™ technologies

- 3-year limited warranty

- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades®

See footnotes for important warranty information

US models withdrawn effective February or June 2011

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US models announced July 13, 2010

KN1W-7 June 2011

ThinkPlus® 22 4-year LOR 9x5 NBD

135-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service®

24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378

ThinkPlus® 22 4-year LOR 9x5 NBD

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® T510, W510 Accessories - withdrawn

Personal Systems Reference (PSREF)

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
amm 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25Pack) 57Y4385
amm 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25Pack) 57Y4386
amm 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708
amm 06/23/09
1GB PC3-10600 DDR3 L-H SODIMM 55Y3709
amm 03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4415
amm 02/21/08
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710
amm 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416
amm 02/21/08
4GB PC3-10600 DDR3 L-H SODIMM 55Y3711
amm 02/21/08

Ultrabay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III® 43N3412
amm 06/23/09

Ultrabay Enhanced 12.7mm
DVD Burner Ultrabay Enhanced II SATA 43N3294
amm 01/07/10
Blu-ray Reader / DVD Burner Ultrabay Enh 43N3295
amm 01/07/10

Storage and removable storage
500GB Disk SATA 3.0Gb/s (7200 rpm)™ 43N3423
amm 01/07/10
Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay

256GB FDE SSD SATA 3Gb/s 1.8”(2.5”) cover 43N3417
amm 06/23/09

USB 2.0 Portable 32GB Hard Disk 45K1689
amm 03/17/09
USB 2.0 Portable 50GB Hard Disk 45K1690
amm 06/26/09
USB 2.0 Portable Secure 32GB Hard Disk 43P2019
amm 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400
amm 01/07/10
USB 2.0 Portable DVD Burner 43N3264
amm 01/05/10
Lenovo Slim USB Portable DVD Burner 0A33988
amm 06/14/11

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi® 2000 Broadband Option 78Y1399
amm 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option 78Y1398
amm 01/07/10

ThinkPad Expansion
T510:
ThinkPad Port Replicator Series 3 433610W
amm 06/23/09
ThinkPad Mini Dock Series 3 - 90W 433710U
amm 06/23/09
ThinkPad Mini Dock Plus Series 3 - 90W 433810U
amm 06/23/09

W510:
ThinkPad Mini Dock Plus Series 3 - 170W 433830U
amm 02/22/11

All:
Lenovo® Essential Notebook Stand 45J9292
amm 05/12/09
USB 2.0 Port Replicator with Digital Video 0A33942
amm 03/22/11

Keyboard
TrackPoint Cap Collection 73P2698
amm 12/16/03
USB Numeric Keypad 33L3225
amm 05/01/00
Preferred Pro USB Keyboard 73P5220
amm 06/21/05
Enhanced Performance USB Keyboard 73P6260
amm 03/23/04
UltraThin Wireless Keyboard and Mouse® 57Y4700
amm 09/15/09
Wireless via 2.4GHz technology using a micro-size USB receiver.
ThinkPad USB Keyboard with TrackPoint 55Y9003
amm 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730
amm 02/22/05
Lenovo USB Smartcard Keyboard 51J0155
amm 03/24/09

Mouse
Lenovo Optical Mouse (USB) 06P4069
amm 05/21/03
Lenovo Laser Mouse (USB) 41U3074
amm 01/23/07
ThinkPad USB Laser Mouse 57Y4635
amm 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405
amm 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410
amm 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008
amm 01/22/08

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488
amm 01/07/10

Security
Kensington® MicroSaver® Cable Lock 73P2582
amm 12/29/03
Kensington Twin Head Cable Lock 45K1620
amm 03/02/08
Lenovo Security Cable Lock 57Y4905
amm 03/04/10
USB Gemplus GemPC Smart Card Reader 41N3040
amm 02/21/06

W510:
3M 15.6W Privacy Filter from Lenovo 0A61771
amm 04/05/11

Batteries
ThinkPad Battery 55+ (6-cell) 57Y4185
amm 03/30/10
ThinkPad Battery 55++ (9-cell) 57Y4186
amm 03/30/10
ThinkPad Battery 27++ (9-cell, slice)™ 57Y4545
amm 01/07/10
To be used along with system battery for all-day computing;
attaches under ThinkPad using docking connector
(not supported when using Series 3 Port Replicator or Docks).
ThinkPad External Battery Charger® 40Y7625
amm 09/20/05
Requires the ThinkPad 90W AC Adapter -40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter® 40Y7696
amm 01/05/06
Only compatible with the integrated graphics models.
ThinkPad 90W AC Adapter 40Y7659
amm 09/20/05
ThinkPad 65W AC Adapter with USB Hub 57Y4600
amm 08/07/10
90W Ultrasilic AC/DC Combo Adapter 41R4493
amm 09/22/09

Charging tips for 90W Ultrasilic AC/DC Combo Adapter 41R4493

To support the following: iPod and iPhone Charge Tip (L10a) 41R4481
amm 12/18/07
Generic Micro USB charge tip (L18) 41R4490
amm 01/06/09

More information at www.lenovopowertips.com

More information on accessories:
www.lenovoquickpick.com
Option Compatibility Matrix (OCM) and accessory brochures

www.lenovomonitoradapters.com
46 Compatible on selected Lenovo and ThinkVision monitors.

Carrying Cases
Up to 15.6” widescreen models:
ThinkPad 15W Case Sleeve 51J0477
amm 08/18/09
Lenovo Business Messenger Case 51J0475
amm 08/18/09
Lenovo Messenger Max 41U5254
amm 05/01/07
ThinkPad Business Backpack 43R2482
amm 05/13/08

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17” Monitor 5047HB2
amm 10/20/09
ThinkVision L1900p 19” Monitor 4431HE1
amm 11/11/08
ThinkVision L1951p Wide 19” Monitor 2488HB6
amm 10/20/09
ThinkVision L2250p Wide 22” Monitor 2572HB6
amm 10/20/09
ThinkVision L2251p Wide 22” Monitor 2578HB6
amm 10/20/09
ThinkVision L2321x Wide 23” Monitor 4014HB6
amm 06/10/10

More information at www.lenovo.com/support/monitors

Monitor Accessories®
Lenovo USB-to-DVI Monitor Adapter 45K5296
amm 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393
amm 08/04/09
DisplayPort to Single-link DVI-D Cable 45J7915
amm 08/05/08
ThinkVision USB Soundbar 40Y7616
amm 08/23/05
ThinkVision Soundbar 45K1263
amm 09/16/08
Kensington MicroSaver Cable Lock 73P2582
amm 12/29/03
Lenovo Security Cable Lock 57Y4303
amm 08/24/10
Lenovo Easy Reach Monitor Stand 55Y9258
amm 09/22/09
Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
Purchase Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoryguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovopickup.com
An Options Compatibility Configurator for Lenovo systems

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(O-T510) June 2011
ThinkPad® W520 4270 (Optimus) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model | Processor | Memory | Wide-screen display | Discrete graphics | Camera | Disk | SATA GB | rpm | PCIe Mini Card | PCIe Mini Card | Finger print reader | Bluetooth | Color calibration | Battery cells | Intel vPro | Preload
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
4270-26U | i7-2620M | 4GBx1 | 15.6” HD | 1000M | 720p | 5000 | 7200 | Intel 6205a/ WWAN upg | None | Blue | None | 9 | vPro | Pro 64

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- Power-packed engineering with Open GL graphics and ISV certifications
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning
Processor
Mobile workstation; two spindle

Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology

Memory
dual-core model: 16GB max*, two 204-pin SO-DIMM sockets
quad-core model: 32GB max, four 204-pin SO-DIMM sockets
All: PC3-10600 1333MHz DDR3, non-parity, dual-channel capable

Optical

SATA disk
One bay for removable devices. Ultrabay Slim-compatible. 12.7mm high, bottom access

Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high

Some: HDD / SATA 3.0Gb/s, 2.5” wide, 7mm or 9.5mm high, Active Protection System™

mSATA™ SSD
None

Widescreen display
15.6” (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

Color calibration
None

Camera
HD720p resolution, wider view angle, low light sensitive, fixed focus

Graphics
NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M, PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

Keyboard
7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint®
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions (WxDxH)³
14.68" x 9.65” x 1.25-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm

Weight⁶
6-cell: starting at 5.40 lb (2.45kg), 9-cell: starting at 7.57 lb (2.61kg)

Case material
Display cover: Carbon-fiber / Glass-fiber hybrid;
Bottom: Glass-fiber reinforced plastic without paint

Battery - type
Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom

Battery - life ¹⁵
6-cell (57Whr): up to 6.6 hr; 9-cell (94Whr): up to 10.9 hr; 9-cell plus slice battery: up to 21.9 hr

Chipset
ExpressCard
Mobile Intel GM67 Express Chipset

Smart Card Read
None

Multicard Reader
4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports
Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

IEEE 1394 FireWire 400 (4-pin connector; 1394a/2000 standard)

PCle Mini Card
WLAN⁴

Two PCI Express Mini Card slots

WWAN
Wireless WAN upgradable

Modem
56K V92 modem

Bluetooth™
Bluetooth 3.0 wireless, LED indicator

Ethernet
Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

Intel AMT
Intel Active Management Technology (IAMT)

Audio support
High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Preloaded operating system²⁰
- Genuine Windows® 7 Professional 64

Preloaded applications¹⁴ (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype™ for Windows
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel BurnNow™ Lenovo Edition (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)
- Skype™
- ThinkPad Roll Cage (one-piece magnesium frame)
- PEPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period¹⁸ via 800-426-7378

For compatible accessories, please go to O-W520 sheet;
For ThinkPlus® service upgrade options, please go to S-TA sheet

Limited warranty¹²
1-year - depot repair service / service upgrades²² available

See footnotes for more detailed information
© Lenovo
US model announced February 22, 2011
US model withdrawn effective January 2012

KN3W-1 January 2012
### Type-model Processor Memory Wide-screen display Discrete graphics Camera Disk SATA WWAN PCI Mini Card WWANmSATA Smart Card Reader Finger print reader Battery cells Intel vPro Preload

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Discrete graphics</th>
<th>Camera</th>
<th>Disk SATA</th>
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<th>PCI Mini Card WWANmSATA</th>
<th>Smart Card Reader</th>
<th>Finger print reader</th>
<th>Battery cells Intel vPro Preload</th>
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<tbody>
<tr>
<td>4276-2OU</td>
<td>i7-2720QM</td>
<td>4GBx1</td>
<td>15.6&quot; FHD (1920x1080) color</td>
<td>Quadro K1000M</td>
<td>720p</td>
<td>500G 7200</td>
<td>Intel 6205™ WWAN upg</td>
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<td>9 IAMT vPro Pro 64</td>
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<td>i7-2620M</td>
<td>4GBx1</td>
<td>15.6&quot; FHD (1920x1080) color</td>
<td>Quadro K1000M</td>
<td>720p</td>
<td>500G 7200</td>
<td>Intel 6205™ WWAN upg</td>
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<tr>
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<td>i7-2920XM</td>
<td>4GBx4</td>
<td>15.6&quot; FHD (1920x1080) color</td>
<td>Quadro K1000M</td>
<td>720p</td>
<td>500G 7200</td>
<td>Intel 6205™ WWAN upg</td>
<td>Smart</td>
<td>X-Rite</td>
<td>9 IAMT vPro Pro 64</td>
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<tr>
<td>4276-39U</td>
<td>i7-2820QM</td>
<td>4GBx2</td>
<td>15.6&quot; FHD (1920x1080) color</td>
<td>Quadro K1000M</td>
<td>720p</td>
<td>500G 7200</td>
<td>Intel 6205™ WWAN upg</td>
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<td>X-Rite</td>
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<td>i7-2720QM</td>
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<td>720p</td>
<td>500G 7200</td>
<td>Intel 6205™ WWAN upg</td>
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<td>4GBx2</td>
<td>15.6&quot; FHD (1920x1080) color</td>
<td>Quadro K1000M</td>
<td>720p</td>
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<td>Intel 6205™ WWAN upg</td>
<td></td>
<td></td>
<td>9 IAMT vPro Pro 64</td>
<td></td>
</tr>
</tbody>
</table>

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Ready to install applications (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

### Preloaded applications (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype® for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVDs/RW)
- Corel® BurnNow™ Lenovo Edition (DVDs/RW)
- Corel® DVD MovieFactory Lenovo Edition (DVDs/RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

### Limited warranty
- 3-years/1-yr battery - depot repair service / service upgrades available
<table>
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<th>Processor</th>
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<th>Discrete graphics</th>
<th>Camera</th>
<th>Disk SATA GB spin</th>
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<th>Battery cells</th>
<th>Intel AMT</th>
<th>Intel vPro Preload</th>
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<tr>
<td>4276-3LU</td>
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<td>4GBx2</td>
<td>15.6&quot; FHD 2000M</td>
<td>720p</td>
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<td>9 IAMT vPro Pre 64</td>
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<td>15.6&quot; FHD 2000M</td>
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</tr>
</tbody>
</table>

**Positioning**
- Mobile workstation: two spinndles
- Intel® Core™ i7-2860QM processor (quad-core, 2.20GHz, 8MB Cache),
- DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
- Intel Core™ i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache),
- DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology
- Intel Core™ i7-2860QM processor (quad-core, 2.70GHz, 8MB Cache),
- DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.70GHz), HT technology

**Memory**
- Dual-core model: 16GB max², two 204-pin SO-DIMM sockets
- Quad-core model: 32GB max, four 204-pin SO-DIMM sockets
- 2x16GB DDR3 1333MHz DDR3 (204-pin)
- 32GB max, four 204-pin SO-DIMM sockets

**Optical Ultrabay SATA disk**
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™

**mSATA™ SSD**
- Non-removable, upgradable, supports the second drive, Shock socket
- Hard Drive

**Widescreen display**
- Some: 15.6" (396mm) color, anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 50:1 contrast ratio, 60% Gamut
- Some: 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 270 nits, 16.9 aspect ratio, 50:1 contrast ratio, 95% Gamut

**Color calibration Camera**
- Some: huey™/PRO Colorimeter by X-Rite® color calibration sensor in palm rest
- HD720p resolution, wider view angle, low light sensitive, fixed focus

**Graphics**
- NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics,
- NVIDIA Quadro® 1000M or 2000M, PCI Express® x16, 2GB memory,
- external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

**Keyboard Trackpad**
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- Trackpoint® pointing device, "Press-to-Select," Internet Scroll Bar¹³, magnifying glass

**Touchpad ThinkLight™**
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions (WXxDxH)¹⁴**
- 14.68" x 9.65" x 1.29-1.44"; 362.8mm x 245.1mm x 32.8-36.6mm
- 14.68" x 9.65" x 1.29-1.44"; 362.8mm x 245.1mm x 32.8-36.6mm

**Weight¹⁵**
- 6-cell: starting at 5.40 lb (2.45kg); 9-cell: starting at 5.75 lb (2.61kg)
- Display cover: Carbon-fiber / Glass-fiber hybrid;
- Bottom: Glass-fiber reinforced plastic without paint

**Battery**
- Type: Lithium Ion 6-cell or 9-cell, supports optional Slice battery (OA36304) as 2nd battery at bottom
- Life: 57Whr; up to 6.6 hr; 9-cell (94Whr); up to 10.9 hr; 9-cell plus slice battery; up to 21.9 hr

**Chipset Mobile Intel QM67 Express Chipset**
- Supports ThinkVantage® technologies
- 170-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service¹⁷ 24 hour x 7 day²⁷ toll-free support during the warranty period¹⁰

**For compatible accessories, please go to O-W520 sheet;**
- For Lenovo service²² upgrade options, go to O-W520 sheet;
- For ISV certifications, please visit www.lenovo.com/support/ISV

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²² For Lenovo service²² upgrade options, go to O-W520 sheet;
ThinkPad® W520 4282 (Optimus) - withdrawn

**Type-model** | Processor | Memory | Wide-screen display | Discrete graphics | Camera | Disk SATA | Zone rpm | PCle Mini Card WLAN | Smart Card Reader | Finger print | Battery cells | Global (G) | Pre-load
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
4282-3SU | i7-2720QM | 4GBx1 | 15.6" FHD | 1000M | 720p | 500G | 7200 | Intel 6205a/8 | WWAN upg | Fing | 9 | vPro | Pro 64
4282-3RU | i7-2620M | 4GBx1 | 15.6" FHD | 1000M | 720p | 500G | 7200 | Intel 6205 | WWAN upg | Fing | 9 | vPro | Pro 64
4282-26U | i7-2620M | 4GBx1 | 15.6" FHD | 1000M | 720p | 500G | 7200 | Intel 6205 | WWAN upg | Fing | 9 | vPro | Pro 64
4282-23U | i7-2820QM | 4GBx2 | 15.6" FHD | 2000M | 720p | 1000G | 7200 | Intel 6300a/8 | WWAN upg | Fing | 9 | vPro | Pro 64
4282-24U | i7-2720QM | 4GBx1 | 15.6" FHD | 1000M | 720p | 500G | 7200 | Intel 6300 | WWAN upg | Fing | 9 | vPro | Pro 64
4282-25U 4282-26U | i5-2450M | 2GBx2 | 15.6" HD+ | 720p | 520G | 7200 | Intel 6205 | WWAN upg | Fing | 9 | vPro | G Pro 64
4282-4CU 4282-4DU | i7-2720QM | 4GBx1 | 15.6" FHD | 1000M | 720p | 500G | 7200 | Intel 6205 | WWAN upg Smart | Fing | 9 | vPro | G Pro 64
4282-4BU | i7-2620M | 4GBx1 | 15.6" FHD | 1000M | 720p | 500G | 7200 | Intel 6205 | WWAN upg Smart | | | | |

- **Power-packed engineering with Open GL graphics and ISV certifications**

**Positioning**
- Mobile workstation; two spindle

**Processor**
- Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache)
  - DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
  - Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)
  - DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology

**Memory**
- dual-core model: 16GB max, two 204-pin SO-DIMM sockets
- quad-core model: 32GB max, four 204-pin SO-DIMM sockets
- All: PC3-10600 1333MHz DDR3, non-parity, dual-channel capable

**Optical Ultrabay**
- DVD burner, 12.7mm Ultrabay Enhanced, removable

**SATA disk**
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
  - Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
  - Some: SSD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™
- All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive

**Battery - life**
- 9-cell: 100Whr: up to 6.6 hr;
- 9-cell (94Whr): starting at 5.75 lb (2.61kg)

**Processor**
- Intel® Core™ i7-2620M processor (dual-core, 2.60GHz, 3MB Cache)
  - Intel Turbo Boost 2.0 (3.30GHz), HT technology
  - Intel Core i7-2720QM processor (dual-core, 2.70GHz, 4MB Cache)
  - Intel Turbo Boost 2.0 (3.40GHz), HT technology

**Memory**
- dual-core model: 16GB max, two 204-pin SO-DIMM sockets
- quad-core model: 32GB max, four 204-pin SO-DIMM sockets
- All: PC3-10600 1333MHz DDR3, non-parity, dual-channel capable

**Optical Ultrabay**
- DVD burner, 12.7mm Ultrabay Enhanced, removable

**SATA disk**
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access
  - Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
  - Some: SSD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™
- All: removable, upgradable, supports the second disk, Shock Mounted Hard Drive

**Battery - life**
- 9-cell: 100Whr: up to 6.6 hr;
- 9-cell (94Whr): starting at 5.75 lb (2.61kg)

**Battery - type**
- Lithium Ion 6-cell or 9-cell, supports optional Slice battery (0A63E04) as 2nd battery at bottom
  - 6-cell (57Whr): up to 6.6 hr; 9-cell (94Whr): up to 10.9 hr; 9-cell plus slice battery: up to 21.9 hr

**Chipset**
- Mobile Intel GM69 Express Chipset

**ExpressCard**
- One slot (ExpressCard/34)

**Smart Card Reader**
- Some: Smart Card reader

**Multicard Reader**
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

**PCle Mini Card WLAN**
- Two PCI Express Mini Card slots
  - Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
  - Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3

**WWAN**
- Wireless WAN upgradeable

**Modem**
- 56K V92 modem

**Bluetooth™**
- Bluetooth 3.0 wireless, LED indicator

**Ethernet**
- Intel 82579LM Gigabit Network Connection (Lewisville, PH, PCle x1

**Audio support**
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
- Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-yr battery - depot repair service / service upgrades available

Preloaded applications (all OSes, only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe Reader
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVDs:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVDs:RW)
- huey®PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

For Lenovo service upgrade options, please go to S-TA sheet;
For ISV certifications, please visit www.lenovo.com/support/ISV

See footnotes for more detailed information

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US model(s) announced February 22 or March 1, 2011
US model(s) withdrawn effective November 2011, January 2012, or December 2012
ThinkPad® W520 4282 (Optimus) - April 2011 - withdrawn

Personal Systems Reference (PSREF)

Limited warranty® 3-years/1-yr battery - depot repair service / service upgrades® available

Preloaded operating system® - Genuine Windows® 7 Professional 64

Ready to install applications® (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype® for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD-ROM)
- Corel® burn.now™ Lenovo Edition (DVD-ROM)
- Corel® MovieFactory™ Lenovo Edition (DVD-ROM)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

For Lenovo service® upgrade options, please go to O-W520 sheet;
For compatible accessories, please go to S-TA sheet;
For ISV certifications, please visit www.lenovo.com/support/ISV

See footnotes for more detailed information

US model(s) announced April 5, June 21, or November 1, 2011, or May 1, 2012
US model(s) withdrawn effective November 2011, January 2012, or December 2012

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Positoning
Processor
Mobile workstation; two spindles
Intel® Core™ i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel® Core™ i7-2762QM processor (quad-core, 2.40GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology
DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

Memory
dual-core model: 16GB max, two 204-pin SO-DIMM sockets quad-core model: 32GB max, four 204-pin SO-DIMM sockets
All:
- PC3-10600 1333MHz DDR3, non-parity, dual-channel capable

Optical
Some:
- DVD burner, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access

SATA disk
- Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- HD SATA 3.0Gb/s, 2.5" wide, 7mm high

Some:
- Active Protection System™
- removable, upgradable, supports the second disk, Shock Mounted Hard Drive

mSATA™ SSD
None

Widescreen display
15.6.0 (3996mm) FHD (1920x1080) color, anti-glare, LED backlight,
270 nits, 16:9 aspect ratio, 50:1 contrast ratio, 95% Gamut

Color calibration
HD720p resolution, wider view angle, low light sensitive, fixed focus

Illuminates the keyboard to improve visibility in low-light conditions

TrackPoint®
7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch

ThinkLight™
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®; magnifying glass

Chipset
Mobile Intel QM67 Express Chipset

ExpressCard
One slot (ExpressCard/34)

Smart Card Read
Some:
- Smart Card reader

Multicard Reader
4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports
Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a/2000 standard)

PCle Mini Card
Two PCI Express Mini Card slots

WWAN
Modern
56K V.92 modem

Bluetooth®
Bluetooth® 3.0 wireless, LED indicator

Ethernet
Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

Intel AMT
Some:
- Intel Active Management Technology (IAMT)

Audio
High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume, up down, mute buttons / dual button, combo array mic, jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader
Some:
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Supports ThinkVantage® technologies
- 170-watt ac adapter
- ThinkPad® Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service® 24-hour x 7 days toll-free support during the warranty period®

For compatible accessories, please go to O-W520 sheet;
For Lenovo service® upgrade options, please go to S-TA sheet;
For ISV certifications, please visit www.lenovo.com/support/ISV

See footnotes for more detailed information

US model(s) announced April 5, June 21, or November 1, 2011, or May 1, 2012
US model(s) withdrawn effective November 2011, January 2012, or December 2012

© Lenovo
### ThinkPad® W520 4284 (Optimus) - Onsite - withdrawn

| Type-model | Processor | Memory | Widescreen display | Discrete graphics | Camera | Disk | PCle Mini Card WLAN† | PCle Mini Card WWAN/mSATA | Smart Card Reader | Finger print reader | Battery cells | Global (G) | Preload |
|------------|-----------|--------|--------------------|-------------------|--------|------|----------------------|--------------------------|------------------------|------------------|--------------|------------|---------|---------|
| 4284-26U  | i7-2620M  | 4GBx1  | 15.6" FHD 1000M 720p | 500G 7200 | Intel 6205™ WWAN upg | Finger X-Rite | 9 | vPro G P Pro 64 |
| 4284-23U  | i7-2620M  | 4GBx1  | 15.6" FHD 2000M 720p | 500G 7200 | Intel 6300™ WWAN upg | 9 | vPro G P Pro 64 |
| 4284-24U  | i5-2540M  | 2GBx2  | 256GB 7200 | 320G 7200 | Intel 6205 WWAN upg | 9 | vPro G P Pro 64 |
| 4284-4CU  | i7-2540M  | 15.6" HD+ 1000M 720p | 500G 7200 | Intel 6205 WWAN upg | Smart Finger | 9 | vPro G P Pro 64 |
| 4284-4BU  | i7-2620M  | 15.6" HD+ 1000M 720p | 500G 7200 | Intel 6205 WWAN upg | Smart Finger | 9 | vPro G P Pro 64 |

- These models are part of the Global Models Plus program with limited onsite service⁴ 3-year limited warranty
- Power-packaged engineering with Open GL graphics and ISV certifications

### Positioning

**Processor**: Intel Core™ i5-2540M processor (dual-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1600Mhz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

**Memory**: dual-core model: 16GB max.†, four 204-pin SO-DIMM sockets

**Widescreen display**: 15.6" (396mm)™ HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut

**Color calibration**: Camera: huey™PRO Colorimeter by X-Rite™ color calibration sensor in palm rest

**Graphics**: NVIDIA Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro™ 1000M or 2000M, PCI Express™ x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays;

**KeyBoard**: 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Display**: 2560x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915); supports three independent displays;

**Power**: 9-cell (94Whr): up to 6.6 hr; 6-cell (57Whr): 9-hour battery, 24, 8 am - 5 pm, Mon - Fri coverage

**Chipsset**: Mobile Intel GM67 Express Chipset

**ExpressCard**: One slot (ExpressCard/34)

**Smart Card Reader**: Supports ThinkVantage™ technologies

**Ports**: Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

**WLAN**: Two PCI Express Mini Card slots

**Modem**: Wired/WWAN/mSATA

**Network**: Bluetooth™ wireless, LED indicator

**Ethernet**: Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCI Express™ x1

**Audio Support**: High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

**Security**: Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**: Trusted Platform Module, TCG 1.2-compliant

**Limited warranty**: 3-years/1-year battery, limited onsite service™, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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US model(s) announced February 22 or March 1, 2011

US model(s) withdrawn effective November 2011, January 2012, or December 2012

See footnotes for more detailed information

(K3NW4-F) February 2013
### ThinkPad® W520 4284 (Optimus) - Onsite (April 2011) - withdrawn

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<td>1x500G 7200</td>
<td>0</td>
<td>Intel E6300 24</td>
<td>Finger</td>
<td>X-Rite 9</td>
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</table>

### Preloaded operating system
- Genuine Windows 7 Professional 64

### Ready to install applications
- Norton Internet Security 2011 (30 days of virus definitions)
- Adobe Reader
- Skype for Windows
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory™ Lenovo Edition (DVD:RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

### Chipset
- Mobile Intel QM67 Express Chipset
- 170-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day 24 toll-free support during the warranty period

### Ports
- Two USB 3.0 (blue), one Powered USB 2.0 (black), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Preload applications
- For ISV certifications, please visit www.lenovo.com/support/ISV

### Part of the Global Models Plus program with limited onsite service
- 3-years limited warranty
- Power-packed engineering with Open GL graphics and ISV certifications
- Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning
- Mobile workstation; two spindles

### Processor
- Intel® Core™ i7-2630QM processor (quad-core, 2.00GHz, 6MB Cache), DDR3 memory controller (up to 1333MHz, Intel Turbo Boost 2.0 (2.90GHz), HT technology
- Intel Core i7-2760QM processor (quad-core, 2.40GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz, Intel Turbo Boost 2.0 (3.50GHz), HT technology
- Intel Core i7-2860QM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz, Intel Turbo Boost 2.0 (3.60GHz), HT technology

### Memory
- dual-core model: 16GB max, two 204-pin SO-DIMM sockets
- quad-core model: 32GB max, four 204-pin SO-DIMM sockets

### Optical
- DVD burner, 12.7mm UltraBay Enhanced, removable

### Ultrabay
- One bay for removable devices, UltraBay Slim-compatible, 12.7mm high, bottom access
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: HDD / SATA 3.0Gb/s, 2.5" wide, 7mm high

### SATA disk
- All: removable, upgradeable, supports the second disk, Shock Mounted Hard Drive
- mSATA™ SSD None

### Widescreen display
- 15.6" (396mm) FHD (1920x1080) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut

### Color calibration
- Camera: HD720p resolution, wider view angle, low light sensitive, fixed focus
- Color calibration sensor in palm rest

### Graphics
- NVIDIA® OptiMUI™ technology, auto-switch between discrete and integrated graphics, NVIDIA HD Graphics 3000 in processor, and NVIDIA Quadro™ in 2000M, PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915), supports three independent displays
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar13, magnifying glass

### Trackpad
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions (WxDxH) (mm)
- HD & HD+: 14.68 x 9.65 x 1.25-1.40; 372.8mm x 245.1mm x 32.8-36.5mm
- FHD: 14.68 x 9.65 x 1.29-1.44; 372.8mm x 245.1mm x 32.8-36.6mm

### Weight
- 6-cell: starting at 5.40 lb (2.45kg);
- 9-cell: starting at 5.75 lb (2.61kg)

### Case material
- Display cover: Carbon-fiber / Glass-fiber hybrid,
- Bottom: Glass-fiber reinforced plastic without paint

### Battery - type
- Lithium Ion 6-cell or 9-cell, supports optional Slice battery (0A36304) as 2nd battery at bottom
- 6-cell (57Whr): up to 6.6 hr; 9-cell (94Whr): up to 10.9 hr; 9-cell plus slice battery: up to 21.9 hr

### Chipset
- Mobile Intel QM67 Express Chipset
- 170-watt AC adapter

### Smart Card Read
- None

### Multicard Reader
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

### WWAN
- Two USB 3.0 (blue), one Powered USB 2.0 (black), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### Bluetooth™
- 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville, PHY, PCI) x1

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Some: UPEK® fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Finger print reader
- Some: UPEK® fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- 3-years/1-year battery, limited onsite service<sup>14</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades<sup>22</sup> available
### ThinkPad® W520 Accessories - withdrawn

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<td>More information at <a href="http://www.lenovo.com/suppiort">www.lenovo.com/suppiort</a></td>
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<td>Lenovo DisplayPort to VGA Monitor Cable</td>
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<td>DisplayPort to Single-link DVI-D Cable</td>
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<td>Lenovo Easy Reach Monitor Stand</td>
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For more information on accessories: [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)


More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

© Lenovo (O-W520) February 2013
ThinkPad W700 2758 (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model          Processor GHz Memory    Wide-screen Cam-    Discrete graphics Cam-    Disk(s)         Mini PCIe        Mini PCIe        Card slot        Color Calib     Digitizer  Preload  Avail date
2758-28U           T9400       2.53 1GB     17" WXGA+ Cam 1GB  2x160G 7200 0 DVD±RW  Intel 5300        Smart X-Rite Wacom Bus64 Sep 08
2758-4SU           T9600       2.80 4GB     17" WXGA Cam 512MB 2x160G 7200 DVD±RW Intel 5300 2G Turbo Smart X-Rite Wacom Bus64 Sep 08
2758-29U           X9100       3.06 4GB     17" WXGA Cam 1GB  2x250G 5400 1 DVD±RW Intel 5300 /54 XP Pro Oct 09
2758-MPQU8700       2.00 4GB     17" WXGA Cam 1GB  1x80G SSD DVD±RW Intel 5300 6/6 Bus64 Jun 09
2758-MWXU9700       2.53 3GB     17" WXGA Cam 512MB 1x320G DVD±RW Intel 5300 6/6 Bus64 Oct 08
2758-28U           T9400       2.53 1GB     17" WXGA Cam 1GB  2x160G 7200 DVD±RW Intel 5300 2G Turbo Smart X-Rite Wacom Bus64 Sep 08
2758-MWU8700       2.53 3GB     17" WXGA Cam 512MB 1x320G DVD±RW Intel 5300 6/6 Bus64 Oct 08
2758-29U           X9100       3.06 4GB     17" WXGA Cam 1GB  2x250G 5400 1 DVD±RW Intel 5300 /54 XP Pro Oct 09
2758-MWXU9700       2.53 3GB     17" WXGA Cam 512MB 1x320G DVD±RW Intel 5300 6/6 Bus64 Oct 08

These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor Mobile workstation: three spindles Intel Core™ 2 Duo processor P8700 with dual-core, Intel HD Boost,1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo processor T9400, T9600 or T9900 with dual-core, Intel HD Boost,1066MHz system bus, and 6MB L2 cache or Intel Core 2 Quad processor Q9000 with quad-core, Intel HD boost,1066MHz system bus, and 6MB L2 cache or Intel Core 2 Extreme processor X9100 with dual-core, Intel HD boost,1066MHz system bus, and 6MB L2 cache

Memory 1GB, 3GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, double-channel capable, two 204-pin SODIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available

SATA DVD±RW Ultrabay Enhanced SATA disks DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)

Some: One disk, 80GB® Solid State Drive (SSD) / SATA 3.0 Gb/s, 1.8" wide, 8mm high Some: One disk, 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ Some: Two disks, 160GB (7200 rpm), 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ All: removable, upgradeable, supports three disks max, Shock Mounted Hard Drive

Widescreen display Some: 17.0" (431.8mm) WXGA+ (1440x900) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 400:1 contrast ratio, 45% color gamut
Some: 17.0" (431.8mm) WXGA+ (1920x1200) color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut

Camera Some: Camera on top of screen, 1.3-megapixel, fixed focus

Discrete graphics Some: NVIDIA® Quadro® FX2700M, PCI Express® x16, 512MB memory
Some: NVIDIA® Quadro® FX3700M, PCI Express® x16, 1GB memory

Typical: 1000GB (7200 rpm) / SATA 3.0 Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

Some: One disk, 320GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

Color calibration Camera Some: huey®/PRO Colorimeter by X-Rite® color calibration sensor in palm rest Camera on top of screen, 1.3-megapixel, fixed focus

Weight & Case material 9-cell: 17.1" (WxHxD): 16.1" x 12.2" x 1.6"; 410mm x 310mm x 41mm
9-cell: starting at 6.4 lb (3.8kg)

Battery - type & - life Lithium Ion 9-cell
9-cell: up to 2.3 hr

Chipset Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0 Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, 2.3 security chip, ethernet MAC), LPC bus

ExpressCard/34 ExpressCard/54 Compact Flash None
Some: Smart Card Reader
Multicard Reader Ports 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
Some: One ExpressCard/34
Some: One ExpressCard/54
Some: One ExpressCard/34 or ExpressCard/54

Mini PCIe Express 2G Turbo UWB

Intel 5300™
Some: Intel Turbo Memory, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3

Intel 5100™
Some: Intel Turbo Memory, Mini PCIe adapter, 2GB flash, disk-cache accelerator

Modem Some: Half-Mini PCIe slot

Supported by GTV-5.0-compliant VoiceOver

Modem 56K V.92™ modem in Communications Daughter card socket

Bluetooth™ Audio support

Supports ThinkVantage technologies

Audio support

Backlighting

Supports ThinkVantage technologies

Manufacturer, U.S.A.

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

Intel Centrino® 2 with vPro™ technology

Intel 5400 2G Turbo Smart X-Rite Wacom Bus64 Sep 08

Preloading system

• Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
• Some: Genuine Windows Vista Business 64

• Vista models: Vista Premium logo

Preloaded applications (only some listed)

• Rescue and Recovery™
• Access Connections™
• Client Security Solution™

ThinkVantage Productivity Center

Fingerprint Software

Lenovo System Toolbox

ThinkPad Utilities (Power Manager and Presentation Director)

Adobe® Reader®

Roxio® Creator® Business Edition (DVD+RW)

Roxio MyDVD® (DVD+RW)

Corel® WinDVD® (DVD+RW)

huy® PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

ISV software certifications

Supports ThinkVantage® technologies

ThinkPad W700 Mini Dock 2.0

Provides desktop expansion and cable management for W700 Series

Features:

• Security key lock
• Security cable lock slot

External expansion options

• Analog VGA DB-15 - dual-link DVI-D - DisplayPort

• Four USB 2.0 ports
• eSATA port
• Gigabit ethernet port
• Microphone in and headphone out
• S/PDIF (RCA coaxial digital output)
• Requires 170 watt AC adapter

170-watt AC adapter

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service17

24 hour x 7 day® toll-free support during the warranty period17 via 800-426-7378

ThinkPlus® 2-year LOR 9x5 NBD

ThinkPlus® 3-year LOR 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

US models announced on August 12, 2008, June 2, 2009, or October 22, 2009


Lenovo T510 (NIC-1) June 2010

lenovo.com/thinkplus/warranty

lensy
Positioning

Processor

Mobile workstation; three spindles

Intel® Core™ 2 Duo processor T9600 with dual-core,
Intel HD boost, 1066MHz system bus, and 6MB L2 cache or
Intel Core 2 Quad processor Q9000 with quad-core,
Intel HD boost, 1066MHz system bus, and 6MB L2 cache

Memory

2GB, 3GB or 4GB std / max / PC3-8500 DDR3 L-H SODIMM, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;

SATA[3/4] 1.5Gb/s, 2.5" wide, 9.5mm high, Advanced Power Management System™

SATA Ultrabay Enhanced

One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

Some: One disk, 80GB² Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
One disk, 160GB² (7200 rpm) / 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

Some: Two disks, 250GB (5400 rpm), 320GB (5400 rpm), or
200GB Full Disk Encryption [FDE] (7200 rpm),

SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System™

One removable, upgradeable, supports up to 6 disks max, Shock Mounted Hard Drive

Widescreen display

Some: 17.0" (431.8mm) WXGA+, (1440x900) color, anti-glare, CCFL backlight,
200 nits, 16:10 aspect ratio, 400:1 contrast ratio, 45% color gamut

Some: 17.0" (431.8mm) WXGA+ (1920x1200) color, anti-glare, CCFL backlight,
400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut

Color calibration

Some: hueyPRO Colorimeter by X-Rite® color calibration sensor in palm rest

Camera

Camera on top of screen, 1.3-megapixel, fixed focus

Discrete graphics

Some: NVIDIA® Quadro® FX2700M, PCI Express® x16, 512MB memory
Some: NVIDIA FX3700M, PCI Express x16, 1GB memory

Max external resolution: 2048x1536@85Hz (VGA DB-15 port);
2048x1536 (DisplayPort)

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

Touchpad

10-key numeric keypad on right side of keyboard

Digitizer

Some: Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side

ThinkLight™

ThinkLight™ illuminates the keyboard to optimize reading conditions

Dimensions

9-cell (WxDxH): 16.1" x 12.2" x 1.6", 410mm x 310mm x 41mm

9-cell: up to 6.4 lb (3.8kg)

Weight

17" (43.2cm) wide, 2.5" thick, 1.5kg

Top: magnesium alloy

Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - type

Lithium Ion 9-cell

Battery - life

9-cell: up to 2.3 hr

Chipset

Mobile Intel PM45 Express Chipset

ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus

ExpressCard/34

One ExpressCard/34

ExpressCard/54

Some: [5/4] One ExpressCard/34 or ExpressCard/54

Compact Flash

Some: [CF] One Type I slot

Smart Card Reader

None

Multicard Reader

7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

Mini PCIe Express slots

Three Mini PCIe Express slots

Intel 5300® 2GB Turbo

USB

None

Modem

56K V.92 modem in Communications Daughter Card socket

Bluetooth™

Bluetooth 2.1, wireless, LED indicator

Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1

Audio support

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Power-on password, hard disk password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Security reader

Fingerprint reader

Fingerprint reader on palm rest, swivel sensor, supports the security chip

Limited warranty

3-year - EasyServ™® depot repair service / service upgrades available

ThinkPad® W700 Mini Dock 2.0

Provides desktop expansion and cable management for W700 Series

Features:

Security key lock

Security cable lock slot

External monitor ports

– Analog VGA DB-15
– Dual-link DVI-D
– DisplayPort

Four USB 2.0 ports

eSATA port

Gigabit ethernet port

Microphone in and headphone out

S/PDIF (RCA coaxial digital out)

Requires 170 watt AC adapter

170-watt AC adapter

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

24 hour x 7 day toll-free support during the warranty period¹² via 800-426-7378

ThinkPlus® ³³ 3-year LOR⁴⁰ 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

ISV software certifications

Supports ThinkVantage® technologies

ThinkPad® W700 Mini Dock 2.0

Personal Systems Reference (PSREF)

Preloaded operating system²⁶

– Some: Genuine Windows® Vista®
– Business 32
– Business 64
– Vista Premium logo

Preloaded applications¹⁴ (all OSes; only some listed)

– Rescue and Recovery™
– Access Connections™
– Client Security Solution™
– ThinkVantage Productivity Center
– ThinkVantage System Update
– FingerPrint Software (fingerprint models)
– McAfee VirusScan® Plus with SiteAdvisor™
– Adobe Reader®
– Windows Live® Toolbar
– Microsoft® Office 2007 Trial (60-day)
– Roxio Creator® Business Edition (DVD+RW)
– Roxio MyDVD® (DVD+RW)
– Corel® WinDVD® (DVD+RW)

Preloaded system software²⁸

– Some: Adobe Reader®
– Microsoft FrontPage 2003
– Adobe Acrobat Reader®
– Roxio Creator®

Desktop Software

– Some: Roxio Creator®
– Adobe Acrobat Reader®
– Corel® WinDVD®
– Roxio Creator®
– McAfee VirusScan®

Preloaded applications²⁶ (all OSes; only some listed)

– Adobe Reader®
– Adobe Acrobat Reader®
– CompuServe® Internet Explorer Portable Edition
– Adobe Acrobat Reader®
– Roxio Creator®

Post-warranty annual maintenance agreements at

lenovo.com/thinkplus/warranty

See footnotes for important warranty information

1. Intel Centrino 2 with vPro™ technology

US models announced on August 12, 2008 or June 2, 2009

US models withdrawn effective August 2009, February 2010 or June 2010

Lenovo (N1C-1) June 2010

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen memory</th>
<th>Discrete graphics</th>
<th>Disk(s)</th>
<th>SATA</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>2752-6SU X9100</td>
<td>Intel Core™ 2 Extreme processor</td>
<td>3.06</td>
<td>4GB</td>
<td>17&quot; WUXGA Cam</td>
<td>1GB</td>
<td>2x160G 7200</td>
<td>DVD±RW</td>
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<td>/54</td>
<td>Yes</td>
<td>Bus/W G</td>
<td>Sep 08</td>
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<tr>
<td>2752-6TU X9100</td>
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- First 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks
- Select models include digitizer on palm rest and dual-link DVI-D and DisplayPort ports

**Positioning**

- Mobile workstation; three spindle drives
- Intel® Core™ 2 Extreme processor X9100 with dual-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache

**Memory**

- 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- *Italics:* standard memory in both sockets; no sockets available

**SATA DVD±RW**

- Some: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9149)
- *Other:* Blu-ray™ burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9150)

**SATA BD burner**

- UltraBay Enhanced: One bay for removable devices, UltraBay Slim-compatible, 13.2mm wide

**SATA disk**

- Two disks, 160GB (7200 rpm) or 200GB Full Disk Encryption [FDE] (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, upgradable, supports 3rd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

**Widescreen display**

- 17.0" (431.8mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight, 200 cd/m2, 16:10 aspect ratio, 72% color gamut

**Color calibration**

- hueyPRO Colorimeter by X-Rite® color calibration sensor in palm rest

**Camera**

- Camera on top of screen, 1.3-megapixel, fixed focus

**Discrete graphics**

- NVIDIA® Quadro® FX3700M, PCI Express x16, 1GB memory

**Keyboard**

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**TrackPoint® pointing device**

- "Press-to-Select," Internet Scroll Bar™

**Touchpad**

- UltraNav™, wide touch pad below keyboard, Tap Zoning, scrolling regions label

**Numerical keypad**

- 10-key numeric keypad on right side of keyboard

**Digitizer**

- Some: Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side of keyboard

**Dimensions**

- Weight:
  - 9-cell: 17"Wx(16.1"x2.2"x1.6")
  - 410mm x 310mm x 41mm
  - 9-cell: starting at 8.4 lb (3.8kg)

**Battery - type**

- Lithium Ion 9-cell

**Battery - life**

- up to 2.3 hr

**Chipset**

- Mobile Intel PM45 Express Chipset (Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, ethernet MAC), LPC bus

**ExpressCard/34**

- Some: [CF] One ExpressCard/34 or ExpressCard/54

**ExpressCard/54**

- Some: [CF] One Type I slot

**CompactFlash**

- None

**Smart Card Reader**

- 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)

**Multicard Reader**

- USB 2.0, external monitor port (VGA DB-15, dual-link DVI-I, DisplayPort), modem (RJ-11), (RJ-45), IEEE 1394 Firewire 400 (4-pin connector; 1394a-2000 standard)

**Mini PCI Express**

- Three Mini PCI Express slots
  - Intel 5300 2G Turbo UWB
  - None (uses Half-Mini PCI Express slot)

**Modem**

- 56K V.92 modem in Communications Daughter Card socket

**Bluetooth™**

- Bluetooth 2.1 wireless, LED indicator

**Ethernet**

- Intel 82567YL Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio**

- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt

**Security**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, integrated in ICH9M, TCO 1.2-compliant

**Fingerprint reader**

- FingerPrint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-year - depot repair service / service upgrades™ available

| 1GB PC3-8500 DDR3 L-H SODIMM | 55S7306 | ThinkPad Battery 37+ (9-cell) | 45J7914 |
| 2GB PC3-8500 DDR3 L-H SODIMM | 55S7307 | ThinkPad 170W AC Adapter | 41R4241 |
| 4GB PC3-8500 DDR3 L-H SODIMM | 55S7308 | ThinkPad W700 Mini Dock 2.0 | 57Y4345 |

For more information on ThinkPad® W700 Mini Dock 2.0, supports ThinkVantage® technologies

**Preloaded operating system**

- Some: Windows® XP Professional preinstalled through downgraide rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business
- Some: Genuine Windows Vista Ultimate

**Preloaded applications**

- Rescue and Recovery®
- Access Connections®
- Client Security Solutions®
- ThinkVantage Productivity Center
- ThinkVantage System Update
- ThinkVantage Utilities (Power Manager and Presentation Director)
- Roxio® Creator® Business Edition (DVD-/RW)
- Corel® WinDVD® (DVD-/RW)
- huey®PRO Monitor Color Correction by Pantone®/X-Rite®

**ISV software certifications**

- Supports ThinkVantage® technologies

- Provides desktop expansion and cable management for W700 Series
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-I
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day® toll-free support during the warranty period

- ThinkPlus™ 3-year LOR 29.5x NBD 41C9176
- ThinkPlus 4-year LOR 9x5 NBD 41C9177

- Lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced August 12, 2008
US models withdrawn effective August 2009, February 2010, or June 2010

© Lenovo

(NIC-1-3) June 2010
First 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks
Select models include digitizer on palm rest and dual-link DVI-D and DisplayPort ports

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Mobile workstation; three spindles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Core™ 2 Extreme processor QX9300 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Memory</th>
<th>4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-Italics: standard memory in one socket; one socket available</th>
</tr>
</thead>
<tbody>
<tr>
<td>SATA HD burner Ultrabay Enhanced SATA disk</td>
<td>Blu-ray™ burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable (43R9150) One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high Two disks, 320GB³ (5400 rpm) / SATA 1.5Gb/s, 2.5&quot; wide, 9.5mm high, removable, upgradeable, supports 3rd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System²⁰</td>
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<tr>
<th>Display Widescreen display</th>
<th>17.0&quot; (431.8mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut</th>
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</thead>
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<tr>
<td>Color calibration Camera</td>
<td>huey™PRO Colorimeter by X-Rite color calibration sensor in palm rest Camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discrete graphics</th>
<th>NVIDIA® Quadro® FX3700M, PCI Express x16, 1GB memory; Max external resolution: 2048x1536@60Hz (VGA DB-15 port); 2048x1536 (DisplayPort)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar³, magnifying glass UltraNav³, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
</tr>
<tr>
<td>Touch pad</td>
<td>10-key numeric keypad on right side of keyboard</td>
</tr>
<tr>
<td>Numeric keypad</td>
<td>Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side</td>
</tr>
<tr>
<td>Digitizer</td>
<td>Two LEDs illuminate the keyboard to improve visibility in low-light conditions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions³</th>
<th>Weight²</th>
<th>Case material</th>
</tr>
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<tr>
<td>9-cell: 17W (WxDxH): 16.1&quot; x 12.2&quot; x 1.6&quot;; 410mm x 310mm x 41mm</td>
<td>9-cell: starting at 8.4 lb (3.8kg)</td>
<td>Top: magnesium alloy; Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic</td>
</tr>
</tbody>
</table>

| Battery - type Battery - life¹⁵ | 5-cell: 17W (WxDxH): 16.1" x 12.2" x 1.6"; 410mm x 310mm x 41mm | 9-cell: up to 2.3 hr |

<table>
<thead>
<tr>
<th>Chipset</th>
<th>Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCI 2.3, security chip, Ethernet MAC), LPC bus ExpressCard/34</th>
<th>ExpressCard/54</th>
<th>Compact Flash</th>
<th>Smart Card Read</th>
<th>MultiCard Reader</th>
<th>Ports</th>
</tr>
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<tbody>
<tr>
<td>ExpressCard/34</td>
<td>One ExpressCard/34</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)</td>
<td></td>
</tr>
<tr>
<td>ExpressCard/54</td>
<td>One ExpressCard/34 or ExpressCard/54</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Five USB 2.0, external monitor¹¹ (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
<td></td>
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</tbody>
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<tr>
<th>Mini PCI Express</th>
<th>Three Mini PCI Express slots</th>
<th>11a/b/g/n wireless², Mini PCIe adapter, Intel WiFi Link 5300, 3x3 (Shirley Peak)</th>
<th>Some: Intel Turbo Memory, Mini PCIe adapter, 2GB flash, disk-cache accelerator None (uses Half-Mini PCIe slot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel 5306h 2G Turbo UWB</td>
<td>56K V.92 modem in Communications Daughter Card socket</td>
<td>Bluetooth² wireless 2.1, LED indicator</td>
<td>Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1</td>
</tr>
<tr>
<td>Modem</td>
<td>Intel Active Management Technology (AMT)</td>
<td>Audio support</td>
<td>High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack</td>
</tr>
<tr>
<td>Bluetooth™</td>
<td>Security</td>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Security chip</td>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Security chip</td>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Audio support</td>
<td>Security chip</td>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
<tr>
<td>High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack</td>
<td>Security chip</td>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant</td>
</tr>
</tbody>
</table>

| Limited warranty³ 3-year - EasyServ⁹,¹ Cloud repair service / service upgrades¹² available | 1GB PC3-8500 DDR3 L-H SODIMM 553706 | ThinkPad Battery 37++ (9-cell) 45J7914 | ThinkPad 170W AC Adapter 41R4421 | ThinkPad W700 Mini Dock 2.0 57Y4345 |
|-------------------|-----------------------------|--------------------------------------|-------------------------------------------------|
| See footnotes for important warranty information | Other accessories on O-W7000 sheet | Other accessories at lenovo.com/accessories | Other accessories at lenovo.com/accessories | 2048x1536@85Hz (VGA DB-15 port); 2048x1536 (DisplayPort) |

<table>
<thead>
<tr>
<th>Preloaded operating system²⁰</th>
<th>Genuine Windows Vista® Business 64</th>
<th>Vista Premium logo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preloaded applications¹⁴ (only some listed)</td>
<td>- Rescue and Recovery™</td>
<td>- Client Security Solution™</td>
</tr>
<tr>
<td>- ThinkVantage Productivity Center</td>
<td>- ThinkVantage System Update</td>
<td>- Fingerprint Software</td>
</tr>
<tr>
<td>- Lenovo System Toolbox</td>
<td>- ThinkPad Utilities (Power Manager and Presentation Director)</td>
<td>- Roxio® Creator® Business Edition (DVD+RW)</td>
</tr>
<tr>
<td>- Intel Turbo Memory, Mini PCIe adapter, 2GB flash, disk-cache accelerator</td>
<td>- Roxio MyDVD® (DVD+RW)</td>
<td>- Corel® WinDVD® (DVD+RW)</td>
</tr>
<tr>
<td>- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)</td>
<td>- huey™PRO Monitor Color Calibration by Pantone®/X-Rite®</td>
<td>- ISV software certifications</td>
</tr>
<tr>
<td>- Five USB 2.0, external monitor¹¹ (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)</td>
<td>- ThinkPad W700i Mini Dock</td>
<td>Supports ThinkVantage® technologies</td>
</tr>
</tbody>
</table>

ThinkPad W700 Mini Dock
Provides desktop expansion and cable management for W700 Series Features:
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA (NIC1-4) January 2010
- Gigabit ethernet port
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

170-watt AC adapter
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹³
ThinkPlus™ 3-year LOR 24 9x5 NBD 41C9176
ThinkPlus 4-year LOR 9x5 NBD 41C9177
ThinkPlus 5-year LOR 9x5 NBD 41C9178
ThinkPlus 4-year P/L P/U Depot 41C9179
ThinkPlus 5-year P/L P/U Depot 41C9180
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
ThinkPad® W700 2753 (Onsite) - withdrawn

Processor
Intel® Core™ 2 Duo processor T9400 or T9600 with dual-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache or Intel Core 2 Extreme processor X9100 with dual-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache

Memory
1GB or 4GB std / 8GB max7 / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available

SATA Combo
Some: DVD-ROM/CD-RW, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9148)
Some: DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enh, removable (43R9149)

Ultrabay Enhanced
One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

SATA disk
Two disks, 160GB(7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 3rd disk, ThinkPad Shock Mounted Drive, Active Protection System

Widescreen display
17.0" (431.8mm) WUXGA (1920x1200) color, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut hueyPRO Colorimeter by X-Rite color calibration sensor in palm rest

Camera
Some: camera on top of screen, 1.3-megapixel, fixed focus

Discrete graphics
Some: NVIDIA Quadro FX7700M, PCI Express x16, 1GB memory
Some: NVIDIA Quadro FX3700M, PCI Express x16, 1GB memory
Max external resolution: 2048x1536@85Hz (VGA DB-15 port); 2048x1536 (DisplayPort)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

Touchpad
UltraNav™, wide touch pad below keyboard, Taps, scrolling regions label

ThinkLight™
Two LEDs illuminate the keyboard to improve visibility in low-light conditions

Dimensions
9-cell 17W (WxDxH): 16.1" x 12.2" x 1.6"; 410mm x 310mm x 41mm

Weight
9-cell: starting at 6.4 lb (3.8kg)

Battery - type
Lithium Ion 9-cell

Battery - life 6
9-cell: up to 2.3 hr

Chipset
Mobile Intel PM45 Express Chipset (Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (Memory Controller Hub) (NIC1-5) June 2010

Mini PCI Express slots
Three Mini PCI Express slots

Mini PCI Express slots

Intel 5300®
2 2G Turbo

UWB
None

Modem
56K V.92 modem in Communications Daughter Card socket

Bluetooth™
Bluetooth 2.1 wireless, LED indicator

Ethernet
Non-vPro model: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCle x1 vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCle x1

Intel AMT
Intel Active Management Technology (AMT)

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years/1-year battery, limited onsite service 6, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available 12

See footnotes for important warranty information © Lenovo

US models announced August 12, 2008 or March 24, 2009
US models withdrawn effective February or June 2010

ThinkPad W700 Mini Dock 2.0
Provides desktop expansion and cable management for W700 Series
Features:
- Base unit: key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15 - Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

170-watt AC adapter
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service 17 24 hour x 7 day® toll-free support during the warranty period 12 via 800-426-7378

ThinkPlus® 24 year LOR® 6x5 NBD
12X5630
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

Lenovo
© 2008 Lenovo
(NIC1-5) June 2010
First 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks
This model has an EasyServ™ depot repair service 3-year limited warranty
Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
Microsoft® Office Ultimate 2007 Academic Edition; only valid for sale to students, faculty and staff of accredited educational institutions in the United States.
Preloaded operating system²⁰
- Genuine Windows® Vista Business 32
- Vista Premium logo
Preloaded applications¹⁴ (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software
- ThinkPad Utilities (Power Manager and Presentation Director)
- Roxio® Creator® Business Edition (DVDS/RW)
- Roxio MyDVD® (DVDS/RW)
- huey®PRO Monitor Color Correction by Pantone®/X-Rite®
ISV software certifications
Supports ThinkVantage® technologies

ThinkPad W700 Mini Dock 2.0
Provides desktop expansion and cable management for W700 Series
Features:
- Security key lock
- Security cable lock slot
- External monitor ports – Analog VGA DB-15 – Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

170-watt AC adapter
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day toll-free support during the warranty period²¹
ThinkPlus™ 3-2 3-year LOR 24 9x5 NBD
ThinkPlus 4-year LOR 9x5 NBD
ThinkPlus 5-year LOR 9x5 NBD
ThinkPlus 4-year P&L P/U Depot
ThinkPlus 5-year P&L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
Lenovo (NIC1-6) February 2010
© Lenovo

Intel® Core™ 2 Duo processor T9600 with dual-core.
Intel HD boost, 1066MHz system bus, and 6MB L2 cache
### ThinkPad W700ds 2758 (TopSeller) - withdrawn

#### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Primary display</th>
<th>Secondary display</th>
<th>Camera</th>
<th>Disk(s)</th>
<th>SATA GB</th>
<th>RAID optical</th>
<th>Mini PCIe UWB</th>
<th>Card Blue/Fing.</th>
<th>Digitizer</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Avail. date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2758-MMU Q9000</td>
<td>Intel Core™ 2 Quad processor Q9000 with quad-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2.00</td>
<td>4GB</td>
<td>17&quot; WUXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut; ††捏 calibrator (7200 rpm)</td>
<td>SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
<td>DVD±RW † Intel 5300</td>
<td>None</td>
<td>5/4</td>
<td>Yes</td>
<td>Wacom</td>
<td>Bus64</td>
<td>No</td>
<td>Mar 09</td>
<td></td>
</tr>
<tr>
<td>2758-MYU Q9000</td>
<td>Intel Core™ 2 Quad processor Q9000 with quad-core, Intel HD boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2.00</td>
<td>4GB</td>
<td>17&quot; WUXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut; ††捏 calibrator (7200 rpm)</td>
<td>SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable</td>
<td>DVD±RW † Intel 5300</td>
<td>None</td>
<td>5/4</td>
<td>Yes</td>
<td>Wacom</td>
<td>Bus64</td>
<td>No</td>
<td>Oct 09</td>
<td></td>
</tr>
</tbody>
</table>

- ds = dual screen
- 17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks
- Select models include digitizer on palm rest

#### Preloaded operating system
- Genuine Windows® Vista® Business 64
- Vista Premium logo

#### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint module)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live® Toolbar
- Microsoft® Office 2007 (Trial day)
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)
- huey®PRO Monitor Color Correction by Pantone®/X-Rite™

#### ISV software certifications
- Supports ThinkVantage® technologies

### ThinkPad W700 Mini Dock 2.0

Provides desktop expansion and cable management for W700 Series

#### Features:
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

#### Post-warranty annual maintenance agreements
- 3-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD

#### Post-warranty service
- 24 hour x 7 day toll-free support during the warranty period

- Lenovo.com/thinkplus/warranty
### ThinkPad W700ds 2752 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Primary display</th>
<th>Secondary display</th>
<th>Camera</th>
<th>Disk(s)</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Workhorse</th>
<th>Global (G)</th>
<th>Aval date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2752-EPUQ9100</td>
<td>2.26 GHz Intel Core i5-2410M</td>
<td>4GB</td>
<td>WUXGA (1920x1080)</td>
<td>10.6&quot; WXGA Cam</td>
<td>2x160GB</td>
<td>None</td>
<td>DVD:RW</td>
<td>Intel 5300</td>
<td>Bus4</td>
<td>Jan 09</td>
<td></td>
</tr>
<tr>
<td>2752-E7U QX9300</td>
<td>2.53 GHz Intel Core i7-2640M</td>
<td>4GB</td>
<td>WUXGA (1920x1080)</td>
<td>10.6&quot; WXGA Cam</td>
<td>2x160GB</td>
<td>None</td>
<td>DVD:RW</td>
<td>Intel 5300</td>
<td>Bus4</td>
<td>Jan 09</td>
<td></td>
</tr>
</tbody>
</table>

- **ds = dual screen**
- **17" widescreen ThinkPad workstation with integrated color calibration and two RAID-capable disks**
- **Select models include digitizer on palm rest**

### Positioning

- **Processor:** Intel Core™ 2 Quad processor Q9100 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache or Intel Core 2 Extreme processor QX9300 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache.

### Memory

- **4GB std / 8GB max** / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italic*: standard memory in both sockets; no sockets available; *Non-italic*: standard memory in one socket; one socket available.

### SATA DVD:RW

- **One bay for removable devices,** Ultrabay Slim-compatible, 12.7mm high.
- **Two disks,** 160GB (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports third disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™.

### Displays

- **Primary:** 17.0" (431.8mm) WUXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut.
- **Secondary:** 10.6" (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 9:15 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size.

### Color calibration

- **Camera:**uey®PRO Colorimeter by X-Rite® color calibration sensor in palm rest.

### Discrete graphics

- **NVIDIA® Quadro FX3700M,** PCI Express x16, 1GB memory, Max external resolution: 2048x1536 at 86Hz (VGA DB-15 port); 2048x1536 (DisplayPort).

### Keyboard

- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys**
- **TrackPoint® pointing device,** "Press-to-Select," Internet Scroll Bar™, magnifying glass.
- **UltraNav™**, wide touch pad below keyboard, Tap Zones, scrolling regions label.

### Numeric keypad

- **10-key numeric keypad on right side of keyboard**
- **Digitizer:** Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side.
- **ThinkLight™** Two LEDs illuminate the keyboard to improve visibility in low-light conditions.

### Dimensions

- **Weight:** 9-cell: 17.7W (WxHxD): 16.1" x 12.2" x 2.1", 410mm x 310mm x 52.2mm
- **Battery:** 9-cell: starting at 10.9 lb (4.96kg)
- **Battery life:** 9-cell: up to 2.1 hr

### Chipset

- **Mobile Intel PM45 Express Chipset** (Memory Controller Hub), ICHOM-Enhanced I/O Controller Hub (SAO 3.0, RAID 0 or support, USB 2.0, PCI Express 1.x, PCI 2.3, security chip, ethernet MAC), LPC bus.

### ExpressCard/34

- **One slot (ExpressCard/34)**
- **Some:** One slot (ExpressCard/34, ExpressCard/54)

### Smart Card read

- **None**

### Multicard reader

- **7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) / 5 USB 2.0, external monitor (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RI-11), ethernet (RI-45), IEEE 1394 FireWire 400 (4-pin conn, 1394a/2000 standard)**

### Mini PCI Express

- **Three Mini PCI Express slots**
  - **Intel 5300™ 2G Turbo**
  - **Intel WiFi Link 5300, 3x3 (Shirley Peak)**
  - **None**
  - **USB WUB**
  - **56K V.92 modem in Communications Daughter Card socket**
  - **Bluetooth™**
  - **Intel AMT**
  - **Audio support**
  - **Security chip**
  - **Fingerprint reader**
  - **Limited warranty 3-year EasyServ™ depot repair service / service upgrades available**

See footnotes for important warranty information © Lenovo

**US models announced January 6, 2009**

**US models withdrawn effective November 2009 or June 2010**
## ThinkPad W700ds 2753 (Onsite) - withdrawn

### Positioning
- **Processor:** Intel® Core™ 2 Extreme processor QX9300 with quad-core, Intel HD boost, 1066MHz system bus, and 12MB L2 cache
- **Memory:** 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-latch: standard memory in one socket; one socket available
- **SATA DVD±RW Ultrabay Enhanced:** One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- **SATA disk:** Two disks, **160GB** (7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, supports third disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

### Displays
- **Primary:** 17.0" (431.8mm) WXGA (1920x1200) color, widescreen, anti-glare, CCFL backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 72% color gamut;
- **Secondary:** 10.6" (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230nits, 9:15 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size

### Color calibration
- **Camera:** hueyPRO Colorimeter by X-Rite color calibration sensor in palm rest
- **Camera:** Camera on top of screen, 1.3-megapixel, fixed focus

### Discrete graphics
- **NVIDIA® Quadro® FX3700M, PCI Express® x16, 1GB memory:** Max external resolution: 2048x1536@85Hz (VGA DB-15 port); 2048x1536 (DisplayPort)
- **Keyboard:** 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys, TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- **Touchpad:** UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label
- **Numeric keypad:** 10-key numeric keypad on right side of keyboard
- **Digitizer:** Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side
- **ThinkLight™**

### Dimensions
- **Weight:** 9-cell 17W" (WxDxH): 16.1" x 12.2" x 2.1"; 410mm x 310mm x 52.2mm
- **Battery:** 9-cell: starting at 10.9 lb (4.96kg)

### Chipset
- **Chipset:** Mobile Intel PM45 Express Chipset (Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, RAID 0 or 1 support, USB 2.0, PCI Express 1.1, PCi 2.3, security chip, ethernet ACPI, LPC bus
- **ExpressCard/34** One slot (ExpressCard/34)
- **Compaq Flash** None
- **Smart Card read** None
- **Multicard reader** 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)
- **Ports:** Five USB 2.0, external monitor11 (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), IEEE 1394 Firewire 400 (4-pin conn; 1394a-2000 standard)

### Limited warranty
- **Warranty:** 3-years/1-year battery, limited onsite service, 8 - 5 am, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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**Preloaded operating system**
- Windows Vista™ Business 64
- Windows Vista™ Premium logo

**Preloaded applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)
- hueyPRO Monitor Color Correction by Pantone®/X-Rite™

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**ThinkPad W700 Mini Dock 2.0**
Provides desktop expansion and cable management for W700 Series

**Features:**
- Security key lock
- Security cable slot lock
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 watt AC adapter

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**ISV software certifications**
Supports ThinkVantage™ technologies

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**Lenovo.com**
ThinkPlus™ 4-year LOR 9x5 NBD: 12X5630
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

© Lenovo (NIC-15-2) June 2010

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**Note:** For more information, visit lenovo.com/accessories
ThinkPad® W700, W700ds Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706  ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385  ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707  ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386  ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708  ann 06/23/09

UltraBay Slim 9.5mm
Serial ATA Hard Drive Bay Adapter III 43N3412  ann 06/23/09
DVD-ROM UltraBay Slim SATA 1.5Gb/s 43N3212  ann 08/05/08
DVD Burner UltraBay Slim SATA 1.5Gb/s 43N3214  ann 08/05/08

UltraBay Enhanced 12.7mm
DVD-ROM UltraBay Enhanced SATA 1.5Gb/s 43R9147  ann 08/05/08
Blu-ray™ Burner UltraBay Enh SATA 1.5Gb/s 43R9150  ann 08/05/08
Blu-ray Reader / DVD Burner UltraBay Enh 43N3295  ann 01/07/10

Storage and removable storage
160GB Disk SATA 1.5Gb/s (5400 rpm) 41N5692  ann 03/20/07
160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5737  ann 10/16/07
250GB Disk SATA 1.5Gb/s (5400 rpm) 43R8152  ann 01/15/08
250GB Disk SATA 1.5Gb/s (7200 rpm) 43N3410  ann 01/20/09
320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403  ann 08/05/08
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411  ann 01/20/09
500GB Disk SATA 1.5Gb/s (5400 rpm) 43N3420  ann 06/23/09
500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423  ann 01/07/10

Security
Kensington® MicroSaver® Cable Lock 73P2582  ann 12/29/03
Kensington Twin Head Cable Lock 45K1620  ann 09/30/08
USB Gemplus GemPC Smart Card Reader 41N3040  ann 02/21/06
ExpressCard Gemplus Smart Card Reader 41N3043  ann 06/27/06

Multimedia
ThinkPad In-Ear Headphones 57Y4488  ann 01/07/10

Batteries
ThinkPad Battery 37++ (9-cell) 45J7914  ann 08/12/08
ThinkPad 170W AC Adapter 41R4421  ann 08/12/08
ThinkPad 230W AC Adapter 55Y9333  ann 02/23/10

More information at www.lenovo.com/alldaycomputing

Carrying Cases
Up to 17.0" widescreen models:
ThinkPad 17W Business Topload Case 43R9117  ann 08/12/08

Monitors
ThinkVision™ L1711p 17" Monitor 5047HB2  ann 10/20/09
ThinkVision L1900p 19" Monitor 4311HE1  ann 11/11/08
ThinkVision L1951p Wide 19" Monitor 2448HBW  ann 10/20/09
ThinkVision L2250p Wide 22" Monitor 2572HBW  ann 10/20/09
ThinkVision L2251p Wide 22" Monitor 2572HDB  ann 10/20/09
ThinkVision L2251x Wide 22" Monitor 2578HBW  ann 10/20/09
ThinkVision L2440p Wide 24" Monitor 4420HBB  ann 09/17/08

Monitor Accessories
Lenovo USB-to-DVI Monitor Adapter 45K5296  ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393  ann 08/04/09
ThinkVision USB Soundbar 40Y7616  ann 08/23/05
ThinkVision Soundbar 45K1263  ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582  ann 12/29/03
Lenovo Easy Reach Monitor Stand 55Y9258  ann 09/22/09
Radial Arm 19K4464  ann 05/05/00

More information at www.lenovo.com/support/monitoraccessories

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292  ann 05/12/09
USB Port Replicator with Digital Video 45K1610  ann 07/28/09
ThinkPad W700 Mini Dock 2.0 57Y4345  ann 09/29/09

More information at www.lenovo.com/support/W700minidock

Keyboard
TrackPoint Cap Collection 73P2698  ann 12/16/03
USB Numeric Keypad 33L3225  ann 05/01/00
Preferred Pro USB Keyboard 73P5220  ann 06/21/05
Enhanced Performance USB Keyboard 73P2620  ann 03/23/04
Ultraslim Wireless Keyboard and Mouse32 57Y4700  ann 09/15/09

32 Wireless via 2.4GHz technology using a micro-size USB receiver.

ThinkPad USB Keyboard with TrackPoint 55Y9003  ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730  ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155  ann 03/24/09

Mouse
Lenovo Mini Optical Mouse - Black (USB) 55Y9308  ann 05/19/09
Lenovo Mini Optical Mouse - White (USB) 55Y9309  ann 05/19/09
Lenovo Optical Mouse (USB) 06P4069  ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074  ann 01/23/07
ThinkPad PC3-8500 DDR3 Low-Halogen SODIMM 57Y4635  ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405  ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410  ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008  ann 01/22/08

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

© Lenovo (O-W700) June 2010
ThinkPad W701 2500 (TopSeller) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory (MHz)</th>
<th>Widescreen display</th>
<th>Discrete graphics</th>
<th>Disk(s)</th>
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<td>i7-720QM</td>
<td>2GBx1 1066</td>
<td>17&quot; WXGA+</td>
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<td>Intel 6300</td>
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<td>Smart</td>
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</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor | Mobile workstation; three spindles Intel® Core™ i7 processor 17-720QM or i7-820QM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-720QM: 1.60GHz, 6MB cache; i7-820QM: 1.73GHz, 8MB cache

Memory 2GB or 4GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

SATA DVD+RW DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable

Ultrabay Enhanced SATA disk(s) One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high

One disk, 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 3rd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™

Widescreen display Some: 17.0" (433.0mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 300:1 contrast ratio, 45% color gamut

Some: 17.0" (433.0mm) WUXGA (1920x1200) color, anti-glare, LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut

Widescreen display

Color calibration

Camera

Discrete graphics NVIDIA® Quadro® FX2800M, PCI Express® x16, 1GB memory supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D)@60Hz; 2048x1536 (VGA)@85Hz

Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® 89-key, pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

Touch pad UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

Numic keypad 10-key numeric keypad on right side of keyboard

Digitizer Some: Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side

ThinkLight™ Two LEDs illuminate the keyboard to improve visibility in low-light conditions

Dimensions 9-cell 17" (WxHxD): 16.1" x 12.2" x 1.60-1.63"; 410mm x 310mm x 40.6-41.4mm

Weight 9-cell: starting at 8.97 lb (4.07kg)

Battery - type Lithium Ion 9-cell

Battery - life up to 2.0 hr

Chipset Mobile Intel QM57 Express Chipset

ExpressCard/34 One ExpressCard/34

ExpressCard/54 Some: /54 One ExpressCard/34 or ExpressCard/54

Compact Flash None

Smart Card Reader Some: Smart Card Reader

Multicard Reader Ports 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

PCle Mini Card One PCI Express Half Mini Card slot

Intel 6300A™ Modem 11a/b/g/n wireless, PCle Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3

Bluetooth 802.11a/b/g/n wireless, Bluetooth 2.1 wireless, LED indicator

Ethernet Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCie x1

Intel Active Management Technology (AMT)

Audio support High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty 3-year - depot repair service / service upgrades available

Preloaded operating system

- Genuine Windows 7 Professional 64

Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- Fingerprint Software
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVI+RW)

ISV software certifications

Supports ThinkVantage® technologies

ThinkPad W701 Mini Dock 2.0

Provides desktop expansion and cable mgnt for W700 and W701 Series

Features:

- Security key lock
- Security cable lock slot
- External monitor ports
  - Analog VGA DB-15
  - Dual-link DVI-D
  - DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adptr

230-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Lenovo support:

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

© Lenovo

US models announced February 23, 2010

US models withdrawn effective February 2011

(NIC3-1) February 2011
### ThinkPad W701 2541 (Windows 7) - withdrawn

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<th>RAID</th>
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</table>

#### Positioning and Processor
- Mobile workstation; three spindles
- Intel® Core™ i7 processor i7-720QM, i7-820QM, or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Hyper-Threading technology
- i7-720QM: 1.60GHz, 6MB cache; i7-820QM/ i7-920XM: 1.73GHz/2.0GHz, 8MB cache

#### Memory
- 3GB, 4GB, or 8GB std / 16GB max / PC3-8500 1066MHz or PC3-10600 1333MHz
- DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

#### SATA DVD±RW
- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- Some: One disk, 320GB (5400 or 7200 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ (APS)
- Some: Two same disks, 320GB (5400 or 7200 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS
- Some: Two disks, 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high and 320GB (5400 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS

#### Widescreen display
- Some: 17.0" (433.0mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 45% color gamut
- Some: 17.0" (433.0mm) WXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut

#### Color calibration
- Camera: huey®/PRO Colorimeter by X-Rite® color calibration sensor in palm rest
- Camera: camera on top of screen, 2.0-megapixel, fixed focus

#### Discrete graphics
- NVIDIA® Quadro® FX2800M, PCI Express® x16, 1GB memory
- NVIDIA® Quadro® FX3800M, PCI Express x16, 1GB memory
  - Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D) @ 60Hz; 2048x1536 (VGA) @ 85Hz

#### Keyboard
- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

#### Touchpad
- Ultrabook® technology, wide touch pad below keyboard, Tap Zones, scrolling regions label
- 10-key numeric keypad on right side of keyboard

#### Digitizer
- Some: 128x80mm digitizer on palm rest, digitizer pen, pen holder in right side
- Two LEDs illuminate the keyboard to improve visibility in low-light conditions

#### Dimensions
- 9-cell (WxDxH): 16.1" x 12.2" x 1.60-1.63"; 410mm x 310mm x 40.6-41.4mm
- 9-cell: starting at 8.97 lb (4.07kg)

#### Weight
- Top: magnesium alloy
- Bottom: magnesium/Aluminum/Biutrolite-Styrene (PC/ABS) plastic

#### Battery
- Lithium Ion 9-cell
- Battery - type 9-cell: up to 2.0 hr

#### Chipset
- Mobile Intel QM57 Express Chipset
  - One ExpressCard/34
  - One ExpressCard/54

#### ExpressCard/34
- Some: [54] One ExpressCard/34 or ExpressCard/54

#### ExpressCard/54
- Some: [CF] One Type I slot

#### Compact Flash
- Some: Smart Card Reader

#### Multicard Reader
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

#### Ports
- One 320GB (5400 or 7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ (APS)
- Some: external monitor ports (Analog VGA DB-15, Dual-link DVI-D, DisplayPort)
- Battery - type: up to 2.0 hr
- Battery - life: up to 2.0 hr

### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Adobe® Reader
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded;
- purchase product key to activate
- Corel® WinDVD™ (D/V/D:RW)
- Corel Burn.Now™ Lenovo Edition (D/V/RW)

### ISV software certifications
- Supports ThinkVantage® technologies

### ThinkPad W700 Mini Dock 2.0
- Provides desktop expansion and cable management for W700 and W701 Series

#### Features:
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone output
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adapter

### PCEi Mini Card
- One PCI Express Half Mini Card slot
- Intel 6300/82577LC Gigabit Network Connection (Hanskville), PHY, PCIe x1

### ExpressCard/34
- Some: 10/100/1000 (40-pin connector)

### ExpressCard�54
- Some: 10/100/1000 (40-pin connector)

### Bluetooth™
- 2.1 wireless, LED indicator

### Ethernet
- Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanskville), PHY
- vPro model: Intel 82577LM Gigabit Network Connection (Hanskville), PHY

### Intel AMT
- Intel Active Management Technology (iAMT)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Fingerprint reader
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- 3-year - depot repair service / service upgrades available

See footnotes for important warranty information

US models announced February 23, 2010

US models withdrawn effective August 2010 or February 2011
### ThinkPad W701 2542 (Onsite) - Windows 7 - withdrawn

#### Type-model Processor Memory (MHz) Widescreen display Camera Discrete graphics Disk(s) SATA RAID Color Callib/ Digitiz Power Adapter Watt Workhorse (W) Global (G) P/U Date
2542-5BU i7-720QM 2x1GB 1066 17" WXGA+ FX2800M 320G 7200 None None 170W vPro Pro 64 W G P Mar 10
2542-59U i7-820QM 2GBx2 1066 17" WXGA+ 2.0M FX2800M 500G 7200 x 2 None None 230W vPro Pro 64 W G P Mar 10
2542-5BU i7-820QM 2GBx2 1066 17" WXGA+ 2.0M FX3800M 128G SSD + 500G 7200 None None 230W vPro Pro 64 W G P Mar 10

- These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning Processor

- Mobile workstation; three spindles
- Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology, i7-720QM: 1.60GHz, 6MB cache; i7-820QM: 1.73GHz, 8MB cache

### Memory

- 3GB or 4GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets

### SATA DVD:RW Ultrabay Enhanced SATA disk(s)

- DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable
- One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
- Some: One disk, 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ (APS)
- Some: Two same disks, 500GB (7200 rpm)
- Some: Two disks, 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high and 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, APS
- All: removable, upgradeable, supports three max, Shock Mounted Hard Drive

### Widescreen display

- 17.0" (433.0mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 301.0 contrast ratio, 45% color gamut
- 17.0" (433.0mm) WXGA+ (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut

### Color calibration Camera

- None: camera on top of screen, 2.0-megapixel, fixed focus

### Discrete graphics

- NVIDIA® Quadro® FX2800M, PCI Express x16, 1GB memory
- Some: NVIDIA Quadro FX3800M, PCI Express x16, 1GB memory
- Supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D)@60Hz; 2048x1536 (VGA) @85Hz

### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- UltraNav™, magnifying glass
- 10-key numeric keypad on right side of keyboard

### Touchpad

- Two LEDS illuminate the keyboard to improve visibility in low-light conditions

### Dimensions

- 9-cell 17W (WxDxH): 16.1" x 12.2" x 1.60-1.63"; 410mm x 310mm x 40.6-41.4mm
- 9-cell: starting at 8.97 lb (4.07kg)

### Weight

- Top: magnesium alloy;
- Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Lithium Ion-9 cell: up to 2.0 hr

### Battery - type

- Lithium Ion

### Battery - life

- 8hr

### Chipset

- Mobile Intel QM57 Express Chipset
- One ExpressCard/34
- [54] One ExpressCard/34 or ExpressCard/54

### Smart Card Reader

- None

### Multicard Reader Ports

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One USB 3.0, Three USB 2.0 (powered), one USB 2.0/eSATA combo port, external monitor® (VGA DB-15, dual-link DVI-D, DisplayPort), modem (RJ-11), Ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)

### PCl Mini Card

- One PCI Express Half Mini Card slot
- Intel 6300™ Modem
- Bluetooth™ Ethereal
- Intel AMT Audio support Security Security chip Fingerprint reader

### PCl6 Mini Card

- Intel 6300™ Modem
- Bluetooth™ Ethereal
- Intel AMT Audio support Security Security chip Fingerprint reader

### Power Adapter

- 170W vPro

### Workhorse (W) Global (G) P/U Date

- 3-year limited warranty
- 3-years/1-year - battery, limited onsite service® 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

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**Preloaded operating system**
- Genuine Windows® 7 Professional 64

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Adobe® Reader
- Adobe Flash® Player
- Skype™ for Windows
- Microsoft Office 2010 preloaded;
- purchase product key to activate
- Core® WinDVD® (DVD:RW)
- Core® Burn.Now® Lenovo Edition (DVR:RW)

**ISV software certifications**
- Supports ThinkVantage® technologies
  - ThinkPad W700 Mini Dock 2.0
- Provides desktop expansion and cable mgmt for W700 and W701 Series

**Features**
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15 – Dual-link DVI-D
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adapter

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ThinkPlus® 25-year LOR® 9x5 NBD
ThinkPlus® 4-year LOR 9x5 NBD
ThinkPlus® 5-year LOR 9x5 NBD
ThinkPlus® 4-year P/L P/U Depot
ThinkPlus® 5-year P/L P/U Depot
Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective August 2010 or February 2011
(NIC3-3) February 2011
### ThinkPad W701ds 2500 (TopSeller) - Windows 7 - withdrawn

**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory (MHz)</th>
<th>Primary display</th>
<th>Secondary display</th>
<th>Camera</th>
<th>Discrete graphics</th>
<th>Disk(s)</th>
<th>Color callib/RAID Digitizer</th>
<th>Power Adapter</th>
<th>Intel vPro Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>2500-2XU</td>
<td>i7-820QM</td>
<td>4GBx2 1333</td>
<td>17&quot; WUXGA 10.6&quot; WXGA</td>
<td>FX3800M 128G SSD + 320G 5400</td>
<td>None</td>
<td>Yes</td>
<td>230W vPro Pro 64</td>
<td>Mar 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2500-3CU</td>
<td>i7-820QM</td>
<td>2GBx2 1066</td>
<td>17&quot; WUXGA 10.6&quot; WXGA</td>
<td>FX3800M 500G 7200</td>
<td>None</td>
<td>Yes</td>
<td>230W vPro Pro 64</td>
<td>Mar 10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **ds** = dual screen
- 17" widescreen ThinkPad workstation with two RAID-capable disks
- Select models include integrated color calibration and digitizer on palm rest
- These systems are Microsoft® Office 2010 Product Key Ready (010PKR)

### Positioning/Processor

- **Mobile workstation; three spindles**
- **Intel® Core™ i7 processor i7-820QM with quad-core.**
- **DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 1.7GHz, 8MB cache**

### Memory

- **4GB or 8GB std / 16GB max** / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-partly, dual-channel capable, four 204-pin SO-DIMM sockets
- **SATA DVD:RW Ultrabay Enhanced SATA disk**
  - DVD burner, SATA 1.5Gbps, 12.7mm Ultrabay Enhanced, removable
  - One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high
  - **Some:** One disk, 500GB (7200 rpm) / SATA 3.0Gbps, 2.5" wide, 9.5mm high, Active Protection System™ (APS)
  - **Some:** Two disks, 128GB Solid State Drive (SSD) / SATA 3.0Gbps, 1.8" wide, 8mm high and 320GB (5400 rpm) / SATA 3.0Gbps, 2.5" wide, 9.5mm high, APS
- **All:** removable, upgradable, supports three disks max. Shock Mounted Hard Drive

### Displays

- **Primary:** 17.0" (433.0mm) WUXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut;
- **Secondary:** 10.6" (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 9:16 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size

### Color calibration

- **Camera:** huey®PRO Colorimeter by X-Rite® color calibration sensor in palm rest
- **Keyboard:** 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- **TrackPoint® Touchpad:** TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
- **Numercal keypad Digitizer:** Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side
- **ThinkLight™:** Two LEDS illuminate the keyboard to improve visibility in low-light conditions

### Discrete graphics

- **NVIDIA® Quadro FX3800M, PCI Express® x16, 1GB memory, supports dual independent display:**
- **Maximum external resolution:** 2560x1600 (DisplayPort or dual-link DVI-D) @ 60Hz; 2048x1536 (VGA) @ 85Hz

### Battery - type

- **Lithium Ion 9-cell**
- **Battery - life:**
  - 9-cell: up to 2.0 hr

###Chipset

- **Mobile Intel QM57 Express Chipset**
  - **ExpressCard/34**
    - None
  - **ExpressCard/54**
    - None
  - **Compact Flash**
    - [CF] One Type I slot
  - **Smart Card read**
  - **Multicard reader Ports**
    - 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

###PCle Mini Card

- **Intel 6300AGW Express Card slot**
- **11a/b/g/n wireless, PCIE Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3**
- 56K V.92 modem

###Modem

- **Bluetooth™ Ethernet**
  - **Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIE x1**
  - **Intel Active Management Technology (iAMT) Audio support**
    - High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

###Security

- **Power-on password, hard disk password, supervisor password, security keyhole Security chip**
- **Trusted Platform Module, TCG 1.2-compliant**
- **Fingerprint reader**
  - UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

###Limited warranty

- **3-year** - depot repair service / service upgrades® available

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See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective August 2010 or February 2011

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(NIC3D-1) February 2011
## ThinkPad® W701ds 2541 (Windows 7) - withdrawn

### Personal Systems Reference (PSREF)

**Preloaded operating system**
- Genuine Windows 7 Professional 64

**Preloaded applications**
- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - FingerPrint Software
  - ThinkVantage Toolbox
  - Adobe® Reader®
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Corel® WinDVD® (DVD+RW)

**ISV software certifications**
- Supports ThinkVantage™ technologies

### ThinkPad W700 Mini Dock 2.0

Provides desktop expansion and cable mgmt for W700 and W701 Series

**Features:**
- Security key lock
- Security cable lock slot
- External monitor ports
- Analog VGA DB-15
- Dual-link DVI-D
- DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 200 watt AC adptr

230-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT™ Gold rating

ENERGY STAR® 5.0-compliant

RoHS-compliant

International Warranty Service

24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

### Type Model Processor Base memory Max memory Base Turbo Frequency Memory (MHz) Primary Display Secondary Display Camera Disk(s) SATA RAID Card slot Power Adapter World Workhorse (W) Global (G) (watt) Intel vPro Preload GNP (P) Date

| 2541-4JU | i7-920XM | 2.00 | 3.20 | 4GBx1 1333 | 17" WUXGA | 10.6" WXGA | 2.0M | 320G 7200 x 2 | 0 | Exp 54 | Smart | 230W | vPro | 64 W | Mar 10 | 41C9176 |
| 2541-5AU | i7-820QM | 1.73 | 3.06 | 2GBx2 1066 | 17" WUXGA | 10.6" WXGA | 2.0M | 500G 7200 | | | | 230W | vPro | 64 W | G | Mar 10 | 41C9176 |

- ds = dual screen
- 17" widescreen ThinkPad workstation with two RAID-capable disks
- Select models include integrated color calibration and digitizer on palm rest
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

**Processor**

| Mobile workstation; three spindles |
| Intel® Core™ i7 processor 820QM or i7-920XM with quad-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading Technology; 8MB cache |

**Memory**

| 4GB std / 16GB max / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets |

**SATA DVD/iRW Ultrabay Enhanced SATA disk**

| DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high |
| Some: One disk, 500GB® (7200 rpm) / SATA 3.0GB/s, 2.5" wide, 9.5mm high, Active Protection System™ (APS) |
| Some: Two same disks, 320GB (7200 rpm) / SATA 3.0GB/s, 2.5" wide, 9.5mm high, APS |
| All: removable, upgradable, supports three disks max, Shock Mounted Hard Drive |

**Displays**

| Primary: 17.0" (433.0mm) WUXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut; Secondary: 10.6" (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 15 aspect ratio, 190.1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size |

**Color calibration**

| Camera huey®PRO Colorimeter by X-Rite® color calibration sensor in palm rest |
| Camera on top of screen, 2.0-megapixel, fixed focus |

### Discrete graphics

| NVIDIA® Quadro® FX2800M, PCI Express® x16, 1GB memory, supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort or dual-link DVI-D)@60Hz; 2048x1536 (VGA) @85Hz |

### Keyboard

| 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys |

### TrackPoint

| TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass UltraNav®, wide touch pad below keyboard, Tap Zones, scrolling regions label 10-key numeric keypad on right side of keyboard |

### Digitizer

| Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side Two LEDs illuminate the keyboard to improve visibility in low-light conditions |

### Dimensions

| 9-cell 17W (WxDxH): 16.1" x 12.2" x 2.1"; 410mm x 310mm x 52.2mm |
| 9-cell (starting at 11.43 lb (5.23kg)) |
| 9-cell: up to 2.0 hr |

### Chipset

| Mobile Intel QM57 Express Chipset |
| One ExpressCard/34 or ExpressCard/54 |

### ExpressCard/34 ExpressCard/54

| One ExpressCard/34 or ExpressCard/54 |

### Compact Flash

| None |

### Smart Card read

| Some: Smart Card Reader |

### Multicard reader Ports

| 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) |
| One USB 3.0, Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor17 (VGA DB-15, dual-link DVI-D, DisplayPort), (modem, RJ-45), ethernet (RF-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) |

### PCiE Mini Card

| One PCI Express Half Mini Card slot |
| 11a/b/g/n wireless, PCiE Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3 |

### Intel Modem

| 56K V.92 modem |

### Bluetooth

| Bluetooth® 2.1 wireless, LED indicator |

### Ethernet

| Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCie x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCie x1 Intel Active Management Technology (AMT) |

### Audio support

| High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant |

### Fingerprint reader

| UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip |

### Limited warranty

- 3-year - depot repair service / service upgrades available

See footnotes for important warranty information

US models announced February 23, 2010

US models withdrawn effective February 2011

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(NICD3-2) February 2011
**ThinkPad W701ds 2542 (Onsite) - Windows 7 - withdrawn**

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type-model</strong></td>
<td>2542-5AU i7-820QM</td>
</tr>
<tr>
<td><strong>Positioning Processor</strong></td>
<td>Mobile workstation; three spindles Intel® Core™ i7 processor i7-820QM with quad-core. DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; 8MB cache</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>4GB std / 16GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 204-pin SO-DIMM sockets</td>
</tr>
<tr>
<td><strong>SATA DVD:RW UltraBay Enhanced SATA disk</strong></td>
<td>DVD burner, SATA 1.5GB/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high One disk: 500GB (7200 rpm) / SATA 3.0GB/s, 2.5&quot; wide, 9.5mm high, removable, upgradable, supports three disks max, Shock Mounted Hard Drive Protection System™ (APS)</td>
</tr>
<tr>
<td><strong>Displays</strong></td>
<td>Primary: 17.0&quot; (433.0mm) WXGA (1920x1200) color, anti-glare, RGB LED backlight, 280 nits, 16:10 aspect ratio, 600:1 contrast ratio, 100% color gamut; Secondary: 10.6&quot; (268.7mm) WXGA (768x1280) color, portrait, anti-glare, LED backlight, 230 nits, 9:15 aspect ratio, 190:1 contrast ratio, 45% color gamut, slides out of right side of top cover, 30° tilt, 40% of primary screen size size Color calibration hueyPRO Colorimeter by X-Rite® color calibration sensor in palm rest Camera Camera on top of screen, 2.0-megapixel, fixed focus</td>
</tr>
<tr>
<td><strong>Keyboard</strong></td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint™ pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass Touch pad UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label 10-key numeric keypad on right side of keyboard Digitizer Wacom® digitizer (128x80mm) on palm rest, digitizer pen, pen holder in right side ThinkLight™ Two LEDs illuminate the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>9-cell 17&quot;W (Wx Dx H): 16.1&quot; x 12.2&quot; x 2.1&quot;; 410mm x 310mm x 52.2mm Weight1 Width: 9-cell: starting at 11.43 lb (5.23kg) Case material Bottom: Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic Battery - type Lithium Ion 9-cell Battery - life15 9-cell: up to 2.0 hr</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>Mobile Intel QM57 Express Chipset ExpressCard/34 One ExpressCard/34 ExpressCard/54 None Compact Flash None Smart Card reader Smart Card Reader Multicard reader Ports 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) PClE Mini Card One PCl Express Half Mini Card slot Intel 6300i® Modem 11a/b/g/n wireless, PClE Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3 Modem 56K V.92® modem Bluetooth™ Wireless 2.1 wireless, LED indicator Ethernet Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) Audio support High Definition (HD) Audio, Conexant 2058S codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Trusted Platform Module, TCG 1.2-compliant Fingerprint reader UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip Limited warranty16 3-years/1-year - battery, limited onsite service®® 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades®® available</td>
</tr>
</tbody>
</table>

**Preloaded operating system20**
- Genuine Windows® 7 Professional 64

**Preloaded applications14 (only some listed)**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- Fingerprint Software
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel Burn.Now™ (DVD:RW) ISV software certifications Supports ThinkVantage® technologies

**ThinkPad W700 Mini Dock 2.0**

Provides desktop expansion and cable mgmt for W700 and W701 Series Features:
- Security key lock
- Security cable lock slot
- External monitor ports – Analog VGA DB-15 – Dual-link DVI-D – DisplayPort
- Four USB 2.0 ports
- eSATA port
- Gigabit ethernet port
- Microphone in and headphone out
- S/PDIF (RCA coaxial digital out)
- Requires 170 or 230 watt AC adptr

230-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPcAT™ Gold rating
ENERGY STAR® 5.0-compliant RoHS-compliant
International Warranty Service17 24 hour x 7 day toll-free support during the warranty period19 via 800-426-7378

**Power**
- 2011 Lenovo Mobile Technology (Lenovo MT) S/P3 3.5GHz 8MB cache DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Hyper-Threading technology; 8MB cache

**Warranty**
- Limited warranty12
- Fingerprint reader
- Security chip
- Security keyhole
- Power On Authentication
- Corel® WinDVD® (DVD:RW)
- Corel Burn.Now™ (DVD:RW)
- 2011 Lenovo Mobile Technology (Lenovo MT) S/P3 3.5GHz 8MB cache

See footnotes for important warranty information
US model announced February 23, 2010
US model withdrawn effective February 2011

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(NIC3D-3) February 2011
ThinkPad® W701, W701ds Accessories

Personal Systems Reference (PSREF)

Memory
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
- 1GB PC3-8500 DDR3 L-H SODIMM (25Pack) 57Y4385 ann 06/23/09
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
- 2GB PC3-8500 DDR3 L-H SODIMM (25Pack) 57Y4386 ann 06/23/09
- 4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708 ann 06/23/09
- 1GB PC3-10600 DDR3 L-H SODIMM 55Y3709 ann 03/02/10
- 1GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4415 ann 03/02/10
- 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
- 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

Ultrapay Slim 9.5mm
- Serial ATA Hard Drive Bay Adapter III 43N3412 ann 06/23/09
- USB Fingerprint Keyboard 73P4730 ann 06/23/09

Ultrapay Enhanced 12.7mm
- Blu-ray Reader / DVD Burner Ultrabay Enh 43N3295 ann 01/07/10

Storage and removable storage
- 160GB Disk SATA 3.0Gb/s (7200 rpm) 41N5737 ann 10/16/07
- 250GB Disk SATA 3.0Gb/s (5400 rpm) 43R8152 ann 01/20/09
- 250GB Disk FDE SATA 3.0Gb/s (7200 rpm) 43N3410 ann 01/20/09
- 320GB Disk SATA 3.0Gb/s (5400 rpm) 43N3403 ann 08/25/08
- 320GB Disk SATA 3.0Gb/s (7200 rpm) 43N3411 ann 01/20/09
- 500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 ann 01/07/10
- 500GB Disk SATA 3.0Gb/s (5400 rpm) 43N3423 ann 01/07/10
- 128GB SSD SATA 3.0Gb/s 1.8"(2.5" cover) 43N3406 ann 08/26/08
- 256GB FDE SSD SATA 3Gb/s 1.8"(2.5" cover) 43N3417 ann 06/23/09
- ThinkPad 160GB Intel X25-M SSD 43N3435 ann 06/22/10
- USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09
- USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
- USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08
- eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4406 ann 01/07/10
- USB 2.0 Portable DVD Burner 43N3264 ann 01/05/10

ThinkPad Expansion
- Lenovo® Essential Notebook Stand 45J9292 ann 05/12/09
- USB Port Replicator with Digital Video 45K1610 ann 07/28/09
- ThinkPad W700 Mini Dock 2.0 57Y4345 ann 09/29/09

More information at www.lenovo.com/support/W700minidock

Keyboard
- TrackPoint Cap Collection 73P2698 ann 12/16/03
- USB Numeric Keypad 33L3225 ann 05/01/00
- Preferred Pro USB Keyboard 73P5220 ann 06/21/05
- Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
- Ultrasonic Wireless Keyboard and Mouse 57Y4700 ann 09/15/09
- “Wireless via 2.4GHz technology using a micro-size USB receiver.
- ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
- Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
- Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
- Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
- Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
- ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
- Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
- ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
- ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
- Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
- ExpressCard Gemplus Smart Card Reader® 41N3043 ann 06/27/06

Multimedia
- ThinkPad In-Ear Headphones with mic 57Y4488 ann 01/07/10

Batteries
- ThinkPad Battery 37++ (9-cell) 45J7914 ann 08/12/08
- ThinkPad 230W AC Adapter 55Y9333 ann 02/23/10

More information at www.lenovo.com/alldaycomputing

Carrying Cases
- Up to 17.0" widescreen models:
  - ThinkPad 17W Business Topload Case 43R9117 ann 08/12/08

More information at www.lenovo.com/support/cases

Monitors
- Lenovo L2230x Wide 21.5" Monitor 5453HB1 ann 06/10/10
- ThinkVision® L1711p 17" Monitor 5047HB2 ann 10/20/09
- ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08
- ThinkVision L1951p Wide 19" Monitor 2448HB6 ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor 2572HB6 ann 10/20/09
- ThinkVision L2251p Wide 22" Monitor 2572HD6 ann 10/20/09
- ThinkVision L2251x Wide 22" Monitor 2578HB6 ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor 4014HB6 ann 06/10/10
- ThinkVision L2446p Wide 24" Monitor 4420HB2 ann 09/17/08

Monitor Accessories®
- Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
- Lenovo DisplayPort to VGA Monitor Cable 57Y4383 ann 08/04/09
- DisplayPort to Single-link DVI-D Cable 45J7915 ann 08/05/08
- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- ThinkVision Soundbar 45K1263 ann 08/16/08
- Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 08/22/09

46 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:
www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

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(O-W701) February 2011
ThinkPad X31 (2672) - October 2003 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Optical in UltraBase</th>
<th>X3 UltraBase™</th>
<th>Mini PCI</th>
<th>Wireless</th>
<th>Bluetooh™</th>
<th>CDC: modem/</th>
<th>Ethernet</th>
<th>Planar Preload Entry (E) TAA Date (G)</th>
<th>WH (W) Gbl</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2672-27U</td>
<td>Pentium® M</td>
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<td>Yes 10/100 XP Pro W G</td>
<td>Oct 03</td>
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ThinkPad X3 UltraBase™

Right bay of X3 UltraBase supports most Ultrabay 2000 options:

- Optional battery, CD-ROM, CD-R, DVD-ROM, Zip 250MB, Combo
- Optional HDD adapter for 2nd disk
- Ultrabay Plus-compatible

Ultrabay 2000 accessories:

- CD-R/DVD Combo IV Ultrabay 2000
- 22P6991
- Second HDD Adapter for Ultrabay 2000
- 08K6668
- Ultrabay 2000 Li-ion battery 02F446
- ThinkPad Multi-Burner Ultrabay 2000 Drive
- 22P7015
- Enhanced Driver Adapter for Ultrabay 2000
- 73P3268

X3 UltraBase bottom contains:

- Bay for X30 battery (same as X31)
- Other features:
  - Second battery support (for Ultrabay battery or second 6-cell battery)
  - Stereo speakers (1 watt)
  - Security keyhole, UltraBase lock
  - Serial and parallel ports
  - PS/2 mouse port
  - Analog DB-15 monitor port
  - One USB port (Ver 2.0 only on X31)
  - Ethernet port and modem port
  - Retractable feet; 1.41 lb; 638g

Limited warranty: 3 years/1 yr battery - EasyServ™ onsite pickup and delivery / service upgrades available

Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-to-Drive Recovery (in hidden protected area)

Preloaded

- Access IBM
- Access Connections™
- Adobe Reader
- Rapid Restore™ Ultra
- Norton AntiVirus (OEM edition)
- PC-Doctor
- ThinkPad Utilities
- Update Connector™

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)

- Lotus® SmartSuite Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information

© Lenovo

US models announced on October 7, 2003

US models withdrawn effective April 2004, January 2005, or December 2005

Lenovo

IBM Personal Systems Reference (PSREF)

Personal Systems Reference (PSREF)
<table>
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<th>Type-model</th>
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<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Optical in UltraBase</th>
<th>ThinThink X3 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/Security Ethernet chip</th>
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<td>Feb 2004</td>
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<td>Modem</td>
<td>Yes</td>
<td>10/100 XP Pro</td>
<td>Feb 2004</td>
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**Positioning Processor**
- Ultimate mobility in a versatile ultraportable; one spindle
- Intel® Pentium® M processor (1.3 or 1.7 GHz)
- Enhanced Intel SpeedStep™ technology and 400MHz system bus
- L2 cache: 1MB / on die (at processor speed) / ECC
- Memory: 256MB or 512MB std / 2GB max / PC2700 333MHz DDR1 (memory controller limits speed to 266MHz) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

**Diskette drive**
- None standard / use optional UltraBay™-based (inX3) or USB-based diskette drive
- DVD: DVD-ROM / 8X-3.3X speed / single-layer / removable from Ultrabay 2000 X31
- Some: DVD-ROM / CD-RW / 16X/10X24X/8X speed / removable from Ultrabay 2000 X31
- Disk: 256MB devices in std or non-optical drive / (or opt ThinkPad Dock II)
- X3 UltraBase - 20GB (4200 rpm), 30GB (4200 rpm or 40GB, 32GB (3050 rpm), 80GB (5400 rpm)
- DVD: DVD-ROM / CD-RW / 16X/10X24X/8X speed / removable from Ultrabay 2000 X31
- Ultrabay™/2000
- 2884-6LU: 12.1" XGA 40GB
- 2884-4LU: 12.1" XGA 40GB
- 2884-4KU: 12.1" XGA 40GB
- Some: DVD-ROM/CD-RW / 16X/10X24X/8X speed / removable from Ultrabay 2000 X31

**Display**
- 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

**Graphics controller**
- ATI® MOBILITY™ RAGEON™ / AGP 4X / 16MB DDR1 (DDR-SDRAM)

**Hard disk**
- 80GB HS Hard Disk 9.5mm (5400 rpm)

**Keyboard**
- Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch: 25mm stoke
- Access IBM button / palm rest / TrackPoint® / "Press-to-Select," Internet Scroll Bar 13 / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- without X3 UltraBase: 10.7" x 8.8" x .91-1.69; 273mm x 223mm x 24.9-33.0mm
- with X3 UltraBase and optical: 10.8" x 8.9" x 2.0-2.3; 273mm x 227mm x 51-58.5mm

**Travel weight**
- 2884-6BU: 6.76 lbs / 3.06 kg
- Some: 6.76 lbs / 3.06 kg
- 2884-6KU: 6.76 lbs / 3.06 kg
- Some: 6.76 lbs / 3.06 kg
- 2884-6LU: 6.76 lbs / 3.06 kg
- Some: 6.76 lbs / 3.06 kg
- 2884-4LU: 6.76 lbs / 3.06 kg
- Some: 6.76 lbs / 3.06 kg
- 2884-4KU: 6.76 lbs / 3.06 kg
- Some: 6.76 lbs / 3.06 kg

**Battery**
- Up to 5.5 hrs / with std battery and optional Extended Life Battery: up to 10.1 hrs

**Architecture**
- Intel® 855PM chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M
- Some: Intel® 82956PT ICH5-M / 82802AC Firmware Hub / PCI bus 2.2-32-bit, 33MHz

**Media slice**
- Docking Station: Optional ThinkPad Dock or Dock II (includes Ultrabay 2000 and half-size PCI slot)
- Compact Flash slot: Compact Flash slot / 1 CF+ / Type II / supports optional MicroDrive™

**IEEE 1394**
- IEEE 1394 (Firewire) port / (4-pin)

**Wireless antenna**
- Mini PCI: ThinkConnect™ antenna built into the display cover for optional wireless signal reception
- Some: wireless upgradable with wireless PCI options
- 11b-Wi-Fi®

**Audio support**
- Smart audio / ICH AC97 controller / DirectSound
- Modem: Ethernet MAC, Low Pin Count (LPC) interface, USB [Bluetooth] / Intel® 82802AC Firmware Hub / PCI bus 2.2-32-bit, 33MHz

**Security chip**
- Embedded Security Subsystem 2.0™ / Intel® Active Management Technology

**Limited warranty**
- 1 year

See footnotes for important warranty information. Powered by Intel Centrino™ mobile technology.
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### Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

### Preloaded
- Rescue and Recovery™
- Access Program
- Access Connections™
- Norton Antivirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

### Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

### License
(CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### ThinkPad X3 UltraBase

- Right bay of X3 UltraBase supports most UltraBay 2000 options
- Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo
- Optional HDD adapter for 2nd disk
- UltraBay Plus-compatible
  - 22P6991
- Second HDD Adapter for UltraBay 2000
  - 08K6608
- Ultrabay 2000 Li-ion battery29
  - 02K6646
  - ThinkPad Multi-Burner UltraBay 2000 Drive
  - 22P7015
- Enhanced Drive Adapter for UltraBay 2000
  - 73P3268
  - X3 UltraBase bottom contains:
    - Bay for X30 battery (same as X31)

### Security Features
- Second battery support (for Ultrabay battery or second 6-cell battery)
- Stereo Speakers (1 watt)
- Security keyhole, UltraBase lock
- Serial and parallel ports
- PS/2 mouse port
- Analog DB-15 monitor port
- One USB port (Ver 2.0 only on X30)
- Ethernet port and modem port
- Retractable feet: 1.41 lb; 63g

56 watt AC Adapter

Asset ID™ (system-specific info in BIOS after accessed over network)

PC 2001-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR® compliant

International Warranty Service17

24 hour x 7 day 10-far warranty support during the warranty12
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<td>Gigabit XP Pro 1 year Apr 05</td>
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- These small and medium business (SMB) models are part of the US Think Express Program
- The 2884 has a 1 year warranty

Positioning
Processor
Ultimate mobility in a versatile ultraportable: one spindle
L2 cache
2MB / on die (processor speed) / ECC
Memory
256 or 512MB std / 2GB max / PC 2700 333MHz DDR1 (memory controller limits memory speed to 266MHz) / non-parity / CL5 / 250-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive
Combo drive
None standard / use optional Ultrabay™-based (in X3) or USB-based diskette drive
Some: DVD-ROM/CD-RW / 16x/10x24x/8x speed / removable from Ultrabay 2000 in X3 UltraBase

Ultrabay™2000
Supports Ultrabay 2000 devices in std or optional X3 UltraBase (or optional Dock II)

40GB® (HS 5400 rpm) or 60GB® (HS 5400 rpm), 9.5mm, ATA-100 - removable and upgradable - 9.5mm high bay

Display
12.1” (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Graphics controller
ATI Mobility Radeon™ / AGP / 4x / 1MB D51 (DDR-SRAM)

Graphics card - external monitor support
ATI Radeon® 9250 / PCI bus 2.2/3.3-v (33MHz) / Ricoh® R554 CardBus/1394 combo controller, Mini PCI, ext expansion / LPC bus 33MHz (PC7392 Super I/O)

Keyboard
Sun brand-size keys / 97% size of T Series / 87-key / 18.5mm pitch / 2.5mm stroke / Access IBM button / palm rest / TrackPoint™ / "Press-to-Select,” Internet Scroll Bar / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
10.7” x 8.8” x 0.98” - 1.19”; 273 x 223 x 24.9-30.2mm

Travel weight
without X3 UltraBase: 3.6 lb (1.65kg); with X3 UltraBase and optical: 5.6 lb (2.54kg)

Battery - type
Battery - life
Up to 5.7 hr; with std battery and optional Extended Battery: Up to 10.5 hr

Architecture
Intel® 855PM chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBMICH4-M I/O Controller Hub (ATA-100 IDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB / Bluetooth®) / Intel® 82802AC Firmware Hub / PCI bus 2.2/3.3-v (33MHz) (Ricon® R554 CardBus/1394 combo controller, Mini PCI, ext expansion / LPC bus 33MHz (PC7392 Super I/O)

Media slice
Some: X3 UltraBase media slice (see right side)

Compact Flash slot
Compact Flash slot / 1 CF+ / Type II / supports optional Microdrive™

PC Card Std slot
One Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door

IEEE 1394
IEEE 1394 (FireWire) port (4-pin)

Ports
Two USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-45 (10/100/1000Base-T) / IEEE 1394 (4-pin) / no serial, keyboard, or mouse ports

Wireless antenna
UltraConnect™ antenna built into the display cover for optimal wireless signal reception

Mini PCI
One Mini PCI type II (400MHz) / 11b/g/wireless, * DMA1000 (see right side)

Intel 11b/g/wireless
Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

Intel 11a/b/g
Mini PCI, Intel PRO/Wireless 2915ABG, Intel 82353 chipset

CDC
One Communications Daughter Card (CDC) / customer accessible

Modem
56K V.90 (V.92-designed29) modem in CDC / Agere

Bluetooth™
Bluetooth wireless technology / in (with modem)

Ethernet
Gigabit Ethernet on systemboard / Intel 82540EP chipset (MAC/PHY) / PXE

Audio support
Soft audio / ICH AC97 controller / DirectSound® support / AD1981 AC97 codec / mono speaker / 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (pink) / headphone jack (green) / mic in (blue) [all 3.5mm]

Security chip
Power-on password / dual hard disk password / supervisor password / security keyhole

Security keyhole
Embedded Security Subsystem 2.0™ / Atmel chip / TC/TG-compliant

Limited warranty
1 year - EasyServ™-onsite pickup and delivery / service upgrades™ available

SOFTWARE

Windows XP Professional
Microsoft® Windows® XP Professional™ (Service Pack 2) / Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access IBM
- Access Connections™
- Norton AntiVirus
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License
(CD not included)

Services
- Lenovo® ThinkVantage® and Lotus Notes® Stand-alone Client
- Lenovo Training Solutions
- Lenovo® Client Secure Storage
- Lenovo® EasyServ™ and SmartCenter

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ThinkPad X3 UltraBase™
Right bay of X3 UltraBase supports most UltraBase 2000 options

- Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo
- Optional HDD adapter for 2nd disk
- UltraBase Plus-compatible

UltraBase 2000 accessories:
- CD-ROM/DVD Combo IV UltraBase 2000
- Second HDD Adapter for UltraBase 2000
- UltraBase 2000 Li-Ion battery02K6646
- ThinkPad Multi-Burner UltraBase 2000 Drive
- Enhanced Drive Adapter for UltraBase 2000

X3 UltraBase bottom contains:
- Bay for X3 battery (same as X31)

Other features:
- Second battery support (for Ultrabay battery or second 6-cell battery)
- Stereo speakers (1 watt)
- Security keyhole, UltraBase lock
- Serial and parallel ports
- PS/2 mouse port
- Analog DB-15 monitor port
- One USB port (Ver 2.0 only on X31)
- Ethernet port and modem port
- Retractable feet; 1.41 lb; 638g

ENERGY STAR®
CIM and DMI 2.0-compliant
PC 2001-compliant

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- Stands 2001
- Onsite pickup and delivery
- Service upgrades

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- lenovo.com
- Other options at lenovo.com
- lenovo.com
- ServicesPac
- 3yr P&L P/U Depot 30L9192
- 5yr IOR 9x5 NBD 30L9196
### ThinkPad X32 (2885) - Express - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
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<th>ThinkPad X3 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth™</th>
<th>Sec chip</th>
<th>Ethernet planar</th>
<th>Preload warranty</th>
<th>Limited Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2885-M2U</td>
<td>Pentium™ M745 1.8</td>
<td>256MB</td>
<td>12.1” XGA 40HS</td>
<td>Combo X3 UltraBase</td>
<td>Intel®11b/g</td>
<td>Modem</td>
<td>Yes</td>
<td>Gigabit XP Pro 3 Year Apr 05</td>
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<tr>
<td>2885-K4U</td>
<td>Pentium M755 2.0</td>
<td>512MB</td>
<td>12.1” XGA 60HS</td>
<td>Combo X3 UltraBase</td>
<td>Intel®11a/b/g</td>
<td>ModBlue</td>
<td>Yes</td>
<td>Gigabit XP Pro 3 Year Apr 05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US Think Express Program

* The ThinkPad X32 has a 3 year limited warranty

### Positioning

**Processor**
- **ThinkPad®**
- **Ultimate mobility in a versatile ultraportable: one spindle**
- **Intel® Pentium™ Processor 745 (1.80GHz) or 755 (2.00GHz)**
- **with enhanced Intel SpeedStep™ technology**
- **and 400MHz system bus**

**L2 cache**
- **2MB** (on die at processor speed) / **ECC**

**Memory**
- **256** or **512MB std** / **2GB max** / **PC 2700 333MHz DDR1** (memory controller limits memory speed to 266MHz) / **non-parity** / **CL2.5** / **two 200-pin SODIMM sockets** / **standard memory in one socket** / **one socket available**

**Diskette drive**
- **Combo**
- **None standard** / **use optional Ultrabay™-based (in X3)** or **USB-based diskette drive**
- **DVD-ROM/CD-RW / 16X/10X/24X/8X speed** / **removable** from **UltraBay 2000 in X3 UltraBase**

**UltrasBay™ 2000**
- Supports **UltraBay 2000 devices in std or optional X3 UltraBase (or optional Dock II)**
- **40GBb** (HS 5400 rpm) or **60GBb** (HS 5400 rpm), 9.5mm, **ATA-100** - **removable and upgradable / 9.5mm high bay**

**Display**
- **12.1” (308mm) XGA (1024x768) TFT color / Active Matrix / 115 nits**

**Keyboard controller**
- **ATI® MOBILITY™ RADEON® AGP 4X / 16MB DDR1 (DDRM-SRAM)**

**Graphics**
- **External monitor connector / up to 1280x1024x16.7M at 85Hz**

**ThinkLight™**
- **Standard-size™ keys** / **97% size of T Series** / **87-key** / **18.5mm pitch** / **2.5mm stroke** / **Access IBM icon / palm rest / TrackPoint™ / Press-to-Select, Internet Scroll Bar 1/b / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap**

**Thumbnails**
- **Illuminates the keyboard to improve visibility in low-light conditions**

**Dimensions**
- **without X3 UltraBase: 10.7” x 8.8” x .98-1.19; 273mm x 223mm x 24.9-30.2mm**
- **with X3 UltraBase and optical: 10.8” x 8.9” x 2.0-2.3; 273 x 227 x 51-58mm**
- **with battery: 3.6 lb (1.65kg); with X3 UltraBase and optical / 6-cell battery on base (for two batteries)**
- **Up to 5.7 hr; with std battery and optional Extended Life Battery; up to 10.0 hr**

**Media:**
- **X3 UltraBase media slice (see right side)**

**Compact Flash slot**
- **Compact Flash slot / ICF+ Type II / supports optional Microdrive™**

**PC Card slot**
- **One Type II / CardBus 32-bit / PCMCIa 2.1 / integrated door**

**IEEE 1394**
- **Two USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-45 (modem) / RJ-45 (external) / parallel / IEEE 1394 (4-pin) / no serial, keyboard, or mouse ports**

**Wireless antenna**
- **UltraConnect™ antenna built into the display cover**
- **for optimal wireless signal reception**
- **Mini PCI - Type III slot**

**CD:**
- **CD-ROM/CD-R / 52X/24X/8X speed** / **removable in X3 UltraBase**

**CDC:**
- **Max 90L (LPC) interface, USB [Bluetooth] / **IBM 82820AC Firmware Hub** / **PC bus 2.22-bit, 33MHz** / **Ricon® R5C554 CardBus1/434b combo controller, Mini PCI, ext expansion** / **LPC bus 33MHz (PC87392 Super I/O)**

**ECC**
- **Some: 11b/g wireless / Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset**
- **Some: 11a/b/g wireless / Ricon® R5C554 CardBus1/343b combo controller, Mini PCI, ext expansion** / **LPC bus 33MHz (PC87392 Super I/O)**

**Ethernet**
- **Gigabit Ethernet on systemboard / Intel 82540EP/EP chipset (MAC/PHY) / PXE**

**Audio support**
- **Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec** / **mono speaker / 0.5 watt / volume up/down, mute buttons / internal mic / microphone input jack (pink) / headphone jack (green) / mic in (blue) / [all .5mm]**

**Security chip**
- **Power-on password / dual hard disk password / supervisor password / security keyhole**

**Embedded Security Subsystem 2.0™**
- **Atmel™ chip / TCG-compliant**

**Limited warranty**
- **3 years / 1 yr battery - EasyServ™ / onsite pickup and delivery / service upgrades™ avail**

**See footnotes for important warranty information**

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(X323) October 2005

### SOFTWARE

**Windows XP Professional**
- **Microsoft Windows XP Professional** (Service Pack 2)
- **Disk-to-Disk Recovery** (in hidden protected area)

**Preloaded**
- **Rescue and Recovery™**
- **Access IBM**
- **Access Connections™**
- **Norton AntiVirus**
- **PC-Doctor™**
- **ThinkPad Utilities**
- **Adobe Reader**
- **Update Connector™**

**Downloadable**
- **IBM Director Agent**
- **Software Deployment Assistant**
- **System Migration Assistant**
- **Client Security Software (for security chip)**

**License**
- **(CD not included)**
- **Lenovo® SmartStart® Millennium and Lenovo Notes™ Stand-alone Client**

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

#### ThinkPad X3 UltraBase™

- **Right bay of X3 UltraBase supports most UltraBay 2000 options**
- **Optional battery, CD-ROM, CD-RW, DVD-ROM, Zip 250MB, Combo**
- **Optional HDD adapter for 2nd disk**
- **UltraBay Plus-compatible**
- **UltraBay 2000 accessories:**
  - **CD-RW/DVD Combo IV UltraBay 2000**
  - **Second HDD Adapter for UltraBay 2000**
  - **UltraBay 2000 Li-ion battery29K6646**
  - **ThinkPad Multi-Burner UltraBay 2000 Drive**
  - **Enhanced Drive Adapter for UltraBay 2000**
  - **X3 UltraBase bottom contains:**
    - **Bay for X30 battery (same as X31)**
  - **Other features:**
    - **Second battery support (for Ultrabay battery or second 6-cell battery)**
    - **Stereo speakers (1 watt)**
    - **Security keyhole, UltraBase lock**
    - **Serial and parallel ports**
    - **PS/2 mouse port**
    - **Analog DB-15 monitor port**
    - **One USB port (Ver 2.0 only on X31)**
    - **Ethernet port and modem port**
    - **Retractable feet; 1.41 lb; 638g**

#### ThinkPad® X32 (2885)

- **65 watt AC Adapter**
- **Asset ID™-based (system-specific info in Ultra Bay accessed over network)**
- **PC 2001-compliant**
- **ACPI 1.0b and 2.0-compliant**
- **CIM and DMI 2.0-compliant**
- **ENERGY STAR®-compliant**
- **International Warranty Service17**

- **24 hour x 7 day18 toll-free warranty support during the warranty12**

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

US models announced April 5, 2005

US models withdrawn effective November 2005
Type-model | Processor | GHz | Memory | Screen | Optical in | ThinkPad | Mini PCI | CDC: modem/Sec | Battery - life10 | Limited WH Gbl | Avail date
---|---|---|---|---|---|---|---|---|---|---|---
2371-9FU | Pentium® M 1.2 | 256MB | 12.1" XGA | 40GB | None | Optional | Open; wireless upgradable | Modem | Yes | 8 | XP Pro | 3-year TAA | May 2004
2371-6DU | Pentium M 1.3 | 256MB | 12.1" XGA | 40GB | None | Optional | Intel 11b Wi-Fi® | Modem | Yes | 8 | XP Pro | 3-year May 2004
2371-97U | Pentium® M 1.3 | 512MB | 12.1" XGA | 40GB | None | Optional | Intel 11b/g | Modem | Yes | 4 | XP Pro | 3-year May 2004

Positioning
- Ultimate mobility in a versatile ultraportable; one spindle
- US Govt (TAA)

Processor
- Intel® Pentium® M Processor Low Voltage 1.2 or 1.3GHz

With Enhanced Intel SpeedStep™ technology and 400MHz system bus

L2 cache
- 1MB or on die (at processor speed) / ECC

Memory
- 256 or 512MB std / 1.28 to 1.53GB max / PC2700 333MHz DDR1 (DDR-SDRAM) or non-parity / CL2.5 / 87U/6DU/6FU: std memory soldered to systemboard; one 200-pin SO-DIMM slot available / 7FU with 512MB 200-pin soldered to board; one 256MB SO-DIMM in 200-pin socket

Diskette drive
- None standard / use optional USB-based diskette drive

UltraBay™ Slim
- Supports Ultrabay Slim devices in optional or standard X4 UltraBase

Disk
- 40GB G (4200 rpm), 9.5mm, ATA-100 / 1.8" portable; removable and upgradable / 9.5mm high bay / 1MB or on die (at processor speed) / ECC

ThinkPad X4 UltraBase™
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: Ultrabay Slim Li-Polymer Battery (3-cell)

License
- CD not included
- Lenovo® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

ThinkPad X4 UltraBase™

- 60-watt AC Adapter
- Auto ID™ (system-specific info in chip accessed over network)
- ACPI 1.0b and 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service
- 24 hour / 7 day toll-free warranty support during the warranty via 800-IBM-SEVR (426-7378)

See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

† Software

† Disk-to-Disk Recovery

In hidden protected area

Preloaded
- Access Program
- Access Connections™
- Adobe Reader
- Rescue and Recovery™
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Update Connector™

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security policy conditions)

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Secure Digital Card

5-year P&L P/U Depot

5-year LOR 9x5 NBD

2-year LOR 9x5 NBD

24 hour x 7 day18 toll-free warranty

Internally validated / optional

Microsoft Windows XP Professional
- Microsoft® Windows® XP Professional
- Disk-to-Disk Recovery

Opted-out: 2-year LOR 9x5 NBD

Limited warranty12 via

24 hour x 7 day toll-free warranty

International Warranty Service

Visit lenovo.com/options

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Personal Systems Reference (PSREF)
<table>
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<tr>
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<th>GHz</th>
<th>Cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Bluetooth™</th>
<th>LCD</th>
<th>Sec/Battery</th>
<th>Limited Warranty</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2371-E8U</td>
<td>Pentium M</td>
<td>1.4</td>
<td>256MB</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
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<td>Open</td>
<td>IBM 8 1.5</td>
<td>3 years</td>
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<td>Oct 04</td>
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<td>Open</td>
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<td>IBM 8 1.5</td>
<td>3 years</td>
<td>W G</td>
<td>Oct 04</td>
</tr>
</tbody>
</table>

**Positioning**

Ultimate mobility in a versatile portable laptop; one spindle

**Processor**

Intel® Pentium® M Processor Ultra Low Voltage 713 (1.1GHz) or Low Voltage 738 (1.4GHz) with enhanced Intel SpeedStep™ technology and 400MHz system bus

**Memory**

L2 cache

256 or 512MB std / 1.28 to 1.53GB max / PC2700 333MHz DDR1 (DDR-SRAM) - non-parity / CL2.5 / std memory soldered to system board / one 200-pin SODIMM socket available

**Diskette drive**

None standard / use optional USB-based diskette drive

**Disk**

Supports Ultrabay Slim devices in optional or standard X4 UltraBase

**Display**

Integrated Intel Extreme™ Graphics 2 / in 855GMG GMCH / uses main memory (up to 64MB) / 266MHz

**Audio support**

Monitors: 150 nits

**SoftAudio**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

4-cell without X4 UltraBase: 10.5” x 8.3” x .81-1.06”. 268mm x 211mm x 20.6-26.5mm

8-cell with X4 UltraBase: 10.5” x 9.3” x .81-1.06”. 268mm x 237mm x 20.6-26.5mm

**Travel weight**

4-cell battery models: 2.7 lb (1.23kg); 8-cell battery models: 3.2 lb (1.44kg), with 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.62kg)

**Battery - life**

Li-Ion 4-8 cell / intelligence supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase (for two batteries) / with 4-cell: up to 3.25 hr; with 8-cell: up to 7.0 hr; with 8-cell and optional Extended Life Battery: up to 10 hr

**Architecture**

Intel 855GMG chipset / 82852GME Memory Controller Hub (MCH-M) / 82860DBMICH-I O Controller Hub (ATA-100 EIDE, PCI bus, Low Pin Count (LPC) interface, USB [Bluetight] / Intel 82802AC Firewall Hub / PCI bus 2.2-32-bit, 33MHz (ethernet, Ricoh® R55511 CardBus controller, mini PCI) / LPC bus 33MHz (PC87392 Super I/O for infrared [dock-based ports])

**Preload**

- Rescue and Recovery™
- IBM Direct Agent
- Software Delivery Assistant
- System Management Assistant
- Client Security Software (for optional Extended Life Battery)

**License**

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS-2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Refractive feet: 1.3 lb; 580g

**Limited warranty**

- 3-years/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

**See footnotes for important warranty information**

* Powered by Intel Centrino™ mobile technology

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(XAT) October 2005

**Lenovo**

- Asset ID™ (system-specific info in chip accessed over network)
- ACPI 1.0b and 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service 1775: 24 x 7 x 365 toll-free warranty support during the warranty period
- AC/DC adapter: 56 watt AC Adapter

**Windows XP Professional**

- Microsoft® Windows® XP Professional™ (Service Pack 2)
- Disk-to-Disk Recovery

- Preload
- Access Program
- Access Connections™
- Norton AntiVirus® (OEM edition)
- PC Doctor
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

**Downloadable**

- IBM Direct Agent
- Software Delivery Assistant
- System Management Assistant
- Client Security Software (for optional Extended Life Battery)

**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:
  - Ultrabay Slim Li-Polymer Battery 3-cell
  - CD-RW/DVD Combo II Ultrabay Drive 73P3288
  - Multi-Boot Plus Ultrabay Slim Drive 73P3342
  - Second HDD Adapter for Ultrabay Slim Drive 62P4554

**Other options:**

- CD-RW/DVD Combo II Ultrabay Drive 73P3288
- Multi-Boot Plus Ultrabay Slim Drive 73P3342
- Second HDD Adapter for Ultrabay Slim Drive 62P4554
- Modern port
- Refractive feet: 1.3 lb; 580g

**Other options:**

- CD-RW/DVD Combo II Ultrabay Drive 73P3288
- Multi-Boot Plus Ultrabay Slim Drive 73P3342
- Second HDD Adapter for Ultrabay Slim Drive 62P4554
- Modern port
- Refractive feet: 1.3 lb; 580g

**Limited warranty**

- 3-years/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

See footnotes for important warranty information

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US models announced May 18, 2004

US models withdrawn effective March or November 2005
<table>
<thead>
<tr>
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<th>Processor</th>
<th>GHz</th>
<th>Cache Memory</th>
<th>Screen</th>
<th>Optical in Disk UltraBase</th>
<th>ThinkPad UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/Sec Battery Limited WH Gbl</th>
<th>Entry</th>
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</thead>
<tbody>
<tr>
<td>2371-BMU</td>
<td>Pentium® M™ 733 1.2 2MB 256MB 12.1&quot; XGA 30GB None Optional = Intel® 11b/g/c</td>
<td>256MB/11b/g/c (at processor speed)</td>
<td>ECC</td>
<td>256 MB or die (at processor speed)</td>
<td>256MB 11b/g/c</td>
<td>Optional 64MB 11b/g/c</td>
<td>None</td>
<td>None</td>
<td>4</td>
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<tr>
<td>2371-JSU</td>
<td>Pentium M 758 1.5 2MB 256MB 12.1&quot; XGA 40GB None Optional Open: wireless upg</td>
<td>256MB/11b/g/c (at processor speed)</td>
<td>ECC</td>
<td>256 MB or die (at processor speed)</td>
<td>256MB 11b/g/c</td>
<td>Optional 64MB 11b/g/c</td>
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<td>2371-KSU</td>
<td>Pentium M 758 1.5 2MB 512MB 12.1&quot; XGA 40GB None Optional = Intel® 11b/g</td>
<td>256MB/11b/g/c (at processor speed)</td>
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<td>Optional 64MB 11b/g/c</td>
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<td>Pentium M 758 1.5 2MB 512MB 12.1&quot; XGA 40GB None Optional = Intel® 11b/g</td>
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<td>ECC</td>
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<td>Optional 64MB 11b/g/c</td>
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<tr>
<td>2371-LBU</td>
<td>Pentium M 758 1.5 2MB 512MB 12.1&quot; XGA 40GB None Optional 11a/b/g/i6</td>
<td>256MB/11b/g/c (at processor speed)</td>
<td>ECC</td>
<td>256 MB or die (at processor speed)</td>
<td>256MB 11b/g/c</td>
<td>Optional 64MB 11b/g/c</td>
<td>None</td>
<td>None</td>
<td>3</td>
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<tr>
<td>2371-K5U</td>
<td>Pentium M 758 1.5 2MB 512MB 12.1&quot; XGA 40GB None Optional = Intel® 11b/g</td>
<td>256MB/11b/g/c (at processor speed)</td>
<td>ECC</td>
<td>256 MB or die (at processor speed)</td>
<td>256MB 11b/g/c</td>
<td>Optional 64MB 11b/g/c</td>
<td>None</td>
<td>None</td>
<td>4</td>
</tr>
</tbody>
</table>

**Software**

- Windows XP Professional
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery

*Preloaded:
- Rescue and Recovery
- Access Program
- Access Connections™
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™

**Downloadable**

- IBM Direct Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License** (CD not included)

- Lenovo SmartStart Millennium and Lenovo Notes™ stand-alone Client

**Supports** ThinkVantage™ technologies

**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:
  - Ultrabay Slim Li-Polymer Battery 3-cell
  - HD-RW/DVD Combo II Ultrabay Slim Drive 73P3288
  - Multi- Burner Ultrabay Slim Drive (combo bezel) 40Y6622
  - Second HDD Adapter for Ultrabay Slim 62P4554
  - Disks supported:
    - 40GB HS Hard Disk 08K8186
    - 60GB HS Hard Disk 73P3357
    - 80GB HS Hard Disk 09N4273
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock; security keyhole, and optical security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Ethernet port (Gigabit Ethernet)
- Modern port
- Refractile feet; 1.3 lb; 580g

**Limited warranty**

- 3-year: 1-year battery - EasyServ™ onsite pickup and delivery / service upgrade(s) available
- 5-year: 1-year limited warranty - EasyServ™ onsite pickup and delivery / service upgrade(s) available

**See footnotes for important warranty information.**

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US models announced February 15 or March 22, 2005
US models withdrawn effective July 2005 or April 2006

(X4F) April 2006
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Optical in Disk</th>
<th>ThinkPad X4 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/Sec</th>
<th>Battery - life10</th>
<th>Battery - type</th>
<th>Case material</th>
<th>Dimensions3</th>
<th>ThinkLight®</th>
</tr>
</thead>
<tbody>
<tr>
<td>2371-M6U</td>
<td>Pentium M 7531.2 2MB 256MB 12.1&quot; XGA 30GB</td>
<td>None</td>
<td>Optional</td>
<td>Intel 11b/g12</td>
<td>Modem Yes 4</td>
<td>3-yr Entry</td>
<td>Oct 05</td>
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<tr>
<td>2371-N1U</td>
<td>Pentium M 778 1.6 2MB 256MB 12.1&quot; XGA 40GB</td>
<td>Optional</td>
<td>Open</td>
<td>wireless upg4</td>
<td>Modem Yes 8</td>
<td>3-yr Global</td>
<td>Oct 05</td>
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</tr>
<tr>
<td>2371-QEU</td>
<td>Pentium M 778 1.6 512MB 12.1&quot; XGA 60GB</td>
<td>Optional</td>
<td>11a/b/g i3</td>
<td>Modem Yes 8</td>
<td>Intel 11b/g</td>
<td>3-yr Entry</td>
<td>Oct 05</td>
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<tr>
<td>2371-Q1U</td>
<td>Pentium M 778 1.6 512MB 12.1&quot; XGA 60GB</td>
<td>Optional</td>
<td>Intel 11b/g</td>
<td>Modem Yes 8</td>
<td>3-yr Entry</td>
<td>Oct 05</td>
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<tr>
<td>2371-R1U</td>
<td>Pentium M 778 1.6 512MB 12.1&quot; XGA 40GB</td>
<td>Optional</td>
<td>11a/b/g i3</td>
<td>Modem Blue/Yes</td>
<td>3-yr Entry</td>
<td>Oct 05</td>
<td></td>
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<tr>
<td>2371-N2U</td>
<td>Pentium M 778 1.6 256MB 12.1&quot; XGA 10GB</td>
<td>Optional</td>
<td>11a/b/g i3</td>
<td>Modem Yes 8</td>
<td>3-yr Entry</td>
<td>Oct 05</td>
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</tr>
</tbody>
</table>

**Positioning**

**US Govt. (TAA)5**

**Processor**

**Intel® Pentium M Processor Ultra Low Voltage 753 (1.2GHz) or Low Voltage 778 (1.6GHz) with Enhanced Intel SpeedStep™ technology, XD bit, and 400MHz bus frequency**

**L2 cache**

2MB on-chip (for processor speed) or 2MB on/off-chip memory

**Memory**

256 or 512MB std / 1.8 to 1.53GB max / **PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2/5 / standard memory soldered to system board / one 200-pin SO-DIMM socket available**

**Diskette drive**

None standard / use optional USB-based diskette drive

**UltraBay Slim Disk**

Supports Intel UltraBay Slim devices in optional X4 UltraBase / 30GB, 40GB, or 60GB (4200 rpm), 9.5mm, ATA-100 1.8" platter / removable and upgradable / 9.5mm high bay / **Active Protection System™ (shock protection)**

**Display**

**12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits**

**Graphics**

**Integrated Intel Extreme™ Graphics 2 / in 855GMX GEMCH / uses main memory (up to 64MB) / 266MHz**

**Graphics external**

External monitor support via analog DB-15 connector / up to 1600x1200x16.7MHz at 85Hz

**Keyboard**

Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch / 2.5mm stroke / Access IBM button / PAR / TrackPoint / "Press-to-Select," Internet Scroll Bar® / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions3**

4-cell without X4 UltraBase: 10.5" x 8.3" x .81-.06"; 268mm x 211mm x 20.6-26.5mm

8-cell without X4 UltraBase: 10.5" x 9.3" x .81-.06"; 268mm x 237mm x 20.6-26.5mm

**Travel weight2**

4-cell battery (standard) / 3.2 lb (1.44kg); with 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.6kg)

**Case material**

Color: black; All: magnesium alloy

**Battery - type**

Li-ion 4- or 8-cell / intelligent / supports optional Extended Life Battery on base (for two batteries) / supports optional battery in X4 UltraBase (for two batteries) / with 4-cell: up to 3.25 hr; with 8-cell: up to 7.0 hr;

**Battery - life10**

with 8-cell and optional Extended Life Battery: up to 10 hr

**Architecture**

**Intel 855GME chipset / 8852GMX GEM Memory Controller Hub (MCH-M) / 82801DM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus)**

**Low Pin Count (LPC) interface, USB (Bluetoooth) / Intel 82801AC Firmware Hub / PCI bus 2.2-32bit, 33MHz (ethernet, Richoh® R5511 CardBus controller, Mini PCI) / LPC bus 33MHz (PC87392 Super I/O for infrared / dock-based ports)**

**Mobile media base**

Supports optional X4 UltraBase (see right side) and X4 Dock

**Secure Digital slot**

One Secure Digital Card slot / supports SD memory cards used in consumer devices

**PC Card Std slot**

One Type I or one Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door

**Ports**

Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard, or mouse / TB-150 port / 1394 port

**Wireless antenna**

UltraConnect™ antenna built into the display cover for optional wireless signal reception

**Mini PCI**

One Mini PCI type III slot (Communications Bay) / customer upgradable

**Wireless upg4**

Some: wireless upgradable with wireless Mini PCI options

**Intel 11b/g12**

Some: 11b/g wireless®. Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset

**Intel 11a/b/g i3**

Some: 11a/b/g wireless. ThinkPad™ i3 500UX AR5004X

**CDC**

One Communications Daughter Card (CDC) socket / customer accessible

**Modem2**

56K V.90 (V.92-designed®) modem in CDC / Conexant® modem

**Bluetooth™**

Some: Bluetooth wireless technology / in [with modem] / Ethernet

**Intel PRO/1000 Gigabit Ethernet / on system board / Intel 82541GI chipset (MAC/PHY) / Wake on LAN™**

**Audio support**

Soft audio / ICH AC97 controller / DirectSound® support / AD1918IB AC97 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Security**

Power-on password / dual hard disk password / supervisor password / security keyhole / Security chip

**Embedded Security Subsystem 2.0®**

Atmel® chip / TCG-compliant

**Windows XP Professional**

- Microsoft Windows® Professional (Service Pack 2)

- Disk-to-Disk Recovery

**License (CD not included)**

Lotus® SmartSuite® Millennium and Lotus Note® Stand-alone Client

**Software**

Supports ThinkVantage™ technologies

ThinkPad X4 UltraBase™

- Provides desktop expansion and cable management for the X40/X41

- Easily connects to the bottom of the X40/X41 for traveling

- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side

- Ultrabay Slim Li-Polymer Battery 3-cell

- CD/DVD/CD Combo II Ultrabay Slim Drive

- Super Multi-Burner Ultrabay Slim Drive (curved bezel)

- Second HAD Adapter for Ultrabay Slim

**Other features:**

- Power button (front)

- Stereo speakers (1 watt)

- Security key lock, security keyhole, and optical security screw

- Serial and parallel ports

- PS/2 port for keyboard or mouse

- Analog-15 monitor / USB-15 port / P-15 monitor

- Three USB 2.0 ports (via USB hub)

- Ethernet port (Gigabit Ethernet)

- Modem port

- Refractile feet: 1.3 lb; 580g

- 56 watt AC Adapter

- Asset ID™ (system-specific info in chip accessed over network)

- ACPI 1.0b and 2.0-compliant

- ENERGY STAR®-compliant

- International Warranty Service17

- 24 hour x 7 day18 toll-free warranty

- IBM Director Agent

- ThinkVantage Productivity Center

- Adobe Reader®

- IBM Director Agent

- System Setup...
**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Converts the X40 to a two-spindle system by supporting optional UltraBase Slim accessories in left side
  - UltraBase Slim Li-Polymer Battery 3-cell 08K8190
  - CD-RW/DVD Combo II UltraBase Slim Drive 04Y6622
  - Second HDD Adapter for UltraBase Slim 62P4594
- Supports ThinkVantage™ technologies
  - ThinkVantage System Update
  - Access Connections™
  - ThinkVantage Client Security

**65 watt AC Adapter**

- Asset ID**”1”**"™" system-specific info in chip associated with this adapter
- ACPI 1.0b and 2.0-compliant
- ENERGY STAR® compliant
- International Warranty Service**”17”**

---

**ThinkPad X40 (2382) - TopSeller (October 2005) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>cache/memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X4 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>Battery cells</th>
<th>Limited warranty</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2382-QDU Pentium® M 7781.6 2MB</td>
<td>512MB 12.1&quot; XGA 40GB</td>
<td>Combo</td>
<td>X4 UltraBase</td>
<td>Intel 11b/g2</td>
<td>8-cell</td>
<td>3-year Oct 05</td>
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<tr>
<td>2382-RFU Pentium® M 7781.6 2MB</td>
<td>512MB 12.1&quot; XGA 60GB</td>
<td>DVD:RW X4 UltraBase</td>
<td>Intel 11b/g</td>
<td>Mod/Blue</td>
<td>8-cell</td>
<td>3-year Oct 05</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The X428 has a 3-year limited warranty

**Positioning Processor**

- Ultimate mobility in a versatile ultraportable; one spindle
- Intel Pentium M Processor Low Voltage 771 (1.3GHz) with Enhanced Intel SpeedStep™ technology, XD bit, and 400MHz bus

**L2 cache Memory**

- 2MB / on die (at processor speed) / ECC
- 512MB std. 28…1.53G max / PC2700 333MHz DDR1 (DDR-SRAM) / parity support / CL 2.5 / std memory soldered to system board / one 200-pin SO-DIMM socket available

**Diskette drive**

- None standard / optional USB-based diskette drive

**Video**

- **Some:** DVD-ROM/CD-RW / 24x/24x/24x/8x1 speed / removable from X4 UltraBase
- **Some:** DVD and CD burner / Multi-Burner Plus / removable from X4 UltraBase
- Supports UltraBase Slim devices in standard X4 UltraBase
- **40GB** or **60GB** (4200 rpm), 9.5mm, ATA-100 / 1.18 platter / removable and upgradable / 9.5mm high bay / **Active Protection System™** (shock protection)

**Display**

- 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

**Graphics**

- Integrated Intel Extreme™ Graphics 2 / in 855GME GMCH / uses main memory (up to 64MB) / 266MHz
- Graphics external: 8MB shared by 8MB using stubborn / via analog DB20-monitor / up to 1600x1200x16.7M at 85Hz

**Keyboard**

- Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch / 2.5mm stroke / Access IBM button / palm rest / TrackPoint / "Press-to-Select," "Fingerprint," soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap
- Illuminates the keyboard to improve visibility in low-light conditions

**ThinkLight™**

- 4-cell without X4 UltraBase: 1.05 X 3.8 X .31-1.06 / 268mm x 211mm x 20.6-26.9mm
- 8-cell without X4 UltraBase: 1.05 X .93 X .81-1.06 / 268mm x 237mm x 20.6-26.5mm
- 8-cell with X4 UltraBase and optical: 10.7 X 9.3 X 1.5-2.0 / 272 x 237 x 38.2-50.4mm
- 4-cell battery models: 2.7 lb (1.23kg) / 8-cell battery models: 3.2 lb (1.44kg)
- With 8-cell battery and X4 UltraBase with combo: 5.0 lb (2.26kg)

**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Converts the X40 to a two-spindle system by supporting optional UltraBase Slim accessories in left side

**Additional features:**

- Retractable feet; 1.3 lb; 580g
- Analog DB-15 monitor port
- Serial and parallel ports
- Two USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet: 1.3 lb; 580g

See footnotes for important warranty information

**Lenovo**

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Lenovo Training Solutions

Personal Systems Reference (PSREF)
### Type-model | Processor | GHz cache | Memory | Screen | Disk | Optical in UltraBase | ThinkPad X4 UltraBase** | Mini PCI wireless | CDC: modem/ Bluetooth** | Sec chip | Battery | Limited warranty** | Avail date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
2386-A4U | Pentium® M 713 | 1.1MB | 256MB | 12.1" XGA 20GB | None | Optional | *Intel 11b/g** | Modern | Yes | 1 year | Oct 04
2386-GCU | Pentium M 738 | 1.4 | 2MB | 512MB | 12.1" XGA 40GB | Combo | X4 UltraBase | *Intel 11b/g | Modern | Yes | 1 year | Oct 04
2386-EBU | Pentium M 738 | 1.4 | 2MB | 512MB | 12.1" XGA 40GB | Combo | X4 UltraBase | *Intel 11b/g | Modern | Yes | 1 year | Oct 04
2386-ECU | Pentium M 738 | 1.4 | 2MB | 512MB | 12.1" XGA 40GB | Combo | X4 UltraBase | *Intel 11b/g | Modern | Yes | 1 year | Oct 04
2386-HCU | Pentium M 738 | 1.4 | 2MB | 512MB | 12.1" XGA 40GB | Combo | X4 UltraBase | *Intel 11b/g | Modern | Yes | 1 year | Oct 04

* These small and medium business (SMB) models are part of the US Think Express Program

** The 2386 has a 1 year limited warranty

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### Processor
- **ThinkPad™ Ultrabay™ Combo**
- **ThinkLight® Keyboard**
- **Graphics**
- **Security chip**
- **Audio support**
- **Mini PCI**
- **Ports**
- **Secure Digital slot**
- **Battery - life**
- **Battery - type**
- **Case material**
- **Weight**
- **Dimensions**
- **Display**
- **Graphics**
- **Keyboard**
- **ThinkLight™**
- **Dimensions**
- **Weight**
- **Case material**
- **Battery - type**
- **Battery - life**
- **Architecture**
- **Mobile media base**
- **Secure Digital slot**
- **PC Card Std slot**
- **Ports**
- **Wireless antenna**
- **Mini PCI**
- **CDC**
- **Modem**
- **Bluetooth™**
- **Ethernet**
- **Audio support**
- **Security chip**
- **Limited warranty**
- **Software**
- **Preloaded**
- **Downloadable**
- **License**
- **ThinkPad notebooks implement Business Mobility with ThinkVantage™ technologies**

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**NOTE:**
- **Windows XP Professional**
  - Microsoft® Windows® XP Professional** (Service Pack 2)
- **Disk-to-Disk Recovery** (in customer protected area)
- **Preloaded**
  - Rescue and Recovery™
  - Access IBM
  - Access Connections
  - Norton AntiVirus (OEM edition)
  - PC-Doctor™
  - Adobe Reader
  - Update Connector**
  - Intel/Intel LAN (combo models)
  - RecordNow and DLA (combo)
- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Management Assistant
  - Client Security Software (for security chips)
- **License** (CD not included)
  - Lotus® SmartSuite® Millennium
  - Lotus Notes® Stand-alone Client
- **ThinkPad notebooks implement Business Mobility with ThinkVantage™ technologies**

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**See footnotes for important warranty information**
* Powered by Intel Centrino™ mobile technology

**US models announced October 5, 2004**
**US models withdrawn effective January or July 2005**

---

**ThinkPad X4 UltraBase™ Dock**
- **(standard with GCU/ECU/HCU)**
- Provides desktop expansion and cable management for the X40
- Easily connects to the bottom of the X40 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:
  - Ultrabay Slim Li-Polymer Battery 3-cell
  - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3268
- **Multi-Formatter Plus Ultrabay Slim Drive** 73P3242
- **Second HDD Adapter for Ultrabay Slim** 62P4554
- **Disks supported:**
  - 40GB HS Hard Disk 08K9816
  - 60GB HS Hard Disk 73P3357
  - 80GB HS Hard Disk 09N4273
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optical security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Ethernet port (Gigabit Ethernet)
  - Modem port
  - Retractable feet; 1.3 lb; 580g

**Intel® Pentium® M Processor Ultra Low Voltage 713 (1.1GHz) or Low Voltage 738 (1.4GHz)** with enhanced Intel SpeedStep™ technology and 400MHz system bus
**US models withdrawn effective January or July 2005**
**US models announced October 5, 2004**

---

**ThinkPad X40**
- **(standard with GCU/ECU/HCU)**
- Provides desktop expansion and cable management for the X40
- Easily connects to the bottom of the X40 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side:
  - Ultrabay Slim Li-Polymer Battery 3-cell
  - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3268
- **Multi-Formatter Plus Ultrabay Slim Drive** 73P3242
- **Second HDD Adapter for Ultrabay Slim** 62P4554
- **Disks supported:**
  - 40GB HS Hard Disk 08K9816
  - 60GB HS Hard Disk 73P3357
  - 80GB HS Hard Disk 09N4273
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optical security screw
  - Serial and parallel ports
  - PS/2 port for keyboard or mouse
  - Analog DB-15 monitor port
  - Three USB 2.0 ports (via USB hub)
  - Ethernet port (Gigabit Ethernet)
  - Modem port
  - Retractable feet; 1.3 lb; 580g

---

**Windows XP Professional**
- Microsoft® Windows® XP Professional** (Service Pack 2)
- **Disk-to-Disk Recovery** (in customer protected area)
- **Preloaded**
  - Rescue and Recovery™
  - Access IBM
  - Access Connections
  - Norton AntiVirus (OEM edition)
  - PC-Doctor™
  - Adobe Reader
  - Update Connector**
  - Intel/Intel LAN (combo models)
  - RecordNow and DLA (combo)
- **Downloadable**
  - IBM Director Agent
  - Software Delivery Assistant
  - System Management Assistant
  - Client Security Software (for security chips)
- **License** (CD not included)
  - Lotus® SmartSuite® Millennium
  - Lotus Notes® Stand-alone Client
- **ThinkPad notebooks implement Business Mobility with ThinkVantage™ technologies**

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**See footnotes for important warranty information**
* Powered by Intel Centrino™ mobile technology

**US models announced October 5, 2004**
**US models withdrawn effective January or July 2005**

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**ThinkPad X40**
- **(standard with GCU/ECU/HCU)**
- Provides desktop expansion and cable management for the X40
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  - Ultrabay Slim Li-Polymer Battery 3-cell
  - CD-RW/DVD Combo II Ultrabay Slim Drive 73P3268
- **Multi-Formatter Plus Ultrabay Slim Drive** 73P3242
- **Second HDD Adapter for Ultrabay Slim** 62P4554
- **Disks supported:**
  - 40GB HS Hard Disk 08K9816
  - 60GB HS Hard Disk 73P3357
  - 80GB HS Hard Disk 09N4273
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optical security screw
  - Serial and parallel ports
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**Windows XP Professional**
- Microsoft® Windows® XP Professional** (Service Pack 2)
- **Disk-to-Disk Recovery** (in customer protected area)
- **Preloaded**
  - Rescue and Recovery™
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  - Norton AntiVirus (OEM edition)
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  - Intel/Intel LAN (combo models)
  - RecordNow and DLA (combo)
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  - Client Security Software (for security chips)
- **License** (CD not included)
  - Lotus® SmartSuite® Millennium
  - Lotus Notes® Stand-alone Client
- **ThinkPad notebooks implement Business Mobility with ThinkVantage™ technologies**

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**See footnotes for important warranty information**
* Powered by Intel Centrino™ mobile technology

**US models announced October 5, 2004**
**US models withdrawn effective January or July 2005**
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
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<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
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<th>ThinkPad X4 UltraBase™</th>
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<th>Limited warranty</th>
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<td>Yes</td>
<td>1-year</td>
<td>Mar 05</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The 2386 has a 2-year limited warranty

**Positioning**
- Ultimate mobility in a versatile ultraportable; one spindle

**Processor**
- Intel® Pentium® M Processor Ultra Low Voltage 733 (1.1GHz) or
  Low Voltage 756 (1.5GHz)

**L2 cache**
- 2MB / 3MB / 4MB on (at processor speed) / ECC

**Memory**
- 256 or 512MB std. / 1.82 to 1.53GB max. / PC2700 333MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / std memory soldered to systemboard / one 200-pin SO-DIMM socket available

**Diskette drive**
- None standard / use optional USB-based diskette drive

**Discrete wireless**
- Supports Ultrabay Slim devices in optional or standard X4 UltraBase

**Graphics**
- Integrated Intel Extreme™ Graphics 2 / in 855GM6G MMCG / uses main memory (up to 64MB) / 266MHz

**Keyboard**
- Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch / 2.5mm stroke / Access IBM button / palm rest / TrackPoint® / "Press-to-Select," Internet Scroll Bar®

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- 4-cell without X4 UltraBase: 10.5" x 8.3" x 1.15-1.25"; 259mm x 211mm x 31.8-33.3mm
- 6-cell without X4 UltraBase: 10.5" x 8.3" x 1.15-1.25"; 259mm x 211mm x 31.8-33.3mm

**Weight**
- 4-cell with battery: 2.7 lb (1.23kg); 4-cell with battery: 3.2 lb (1.44kg); 6-cell with battery: 3.7 lb (1.7kg)

**Battery**
- Weight: 1.5-2.0 lb (0.7-0.9kg)

**Display**
- 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

**Software**
- Microsoft® Windows XP Professional (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Program
- Access Connections™
- Modern Age AntiVirus (OEM edition)
- PC-Doctor™
- Adobe Reader
- Update Connector™v.15
- Intel® and Intel®InVid (combo models)
- RecordNow and DLA (combo)

**Downloadable**
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

**License**
- (CD not included)
  - Lotus® SmartSuite® Millennium
  - Lotus® Notes® Stand-alone Client

**ThinkPad notebooks implement**
- ThinkVantage® technologies

**ThinkPad X4 UltraBase™**
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Supports a two-spindle system by supporting optional Ultrabay Slim accessories in left side:
  - Slim Drive Li-Polymer Battery 3-cell
  - CD-ROM/DVD Combo II Ultrabay Slim Drive (combo bezel)
  - Second HDD Adapter for Ultrabay Slim Drive in optional or standard X4 UltraBase

**Limited warranty**
- 1-year / EasyServ™ on-site pickup and delivery / service upgrades available

<table>
<thead>
<tr>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program
- The 2386 has a 2-year limited warranty
## ThinkPad X40 (2386) - TopSeller (October 2005) - withdrawn

### Type-model | Processor | GHz cache Memory | Screen | Optical in UltraBase | ThinkPad X4 UltraBase | Mini PCI wireless | CDC: modem/ Bluetooth | Sec chip | Battery cells | Limited warranty | Avail date
---|---|---|---|---|---|---|---|---|---|---|---|---
2386-MCU Pentium M 7531.2 2MB 256MB 12.1" XGA 40GB None Optional * Intel 11b/g Modem Yes 4-cell 1-year Oct 05
2386-NBU Pentium M 778 1.6 2MB 256MB 12.1" XGA 40GB Optional * Intel 11b/g Modem Yes 8-cell 1-year Oct 05
2386-QAU Pentium M 778 1.6 2MB 512MB 12.1" XGA 40GB Optional * Intel 11b/g Modem Yes 8-cell 1-year Oct 05
2386-QBU Pentium M 778 1.6 2MB 512MB 12.1" XGA 40GB Combo X4 UltraBase * Intel 11b/g Modem Yes 8-cell 1-year Oct 05
2386-REU Pentium M 778 1.6 2MB 512MB 12.1" XGA 60GB Combo X4 UltraBase * Intel 11b/g Mod/Blue Yes 8-cell 1-year Oct 05

- These small and medium business (SMB) models are part of the US TopSeller® Program
- The 2386 has a 1-year limited warranty

### Software

#### Windows XP Professional
- **Microsoft** Windows® XP Professional (Service Pack 2)
- **Disk-to-Drive Recovery** (in hidden protected area)

#### Preloaded
- **Recovery and Rescue™**
- **Access Connections™**
- **ThinkVantage Productivity Center**
- **ThinkVantage System Update**
- **Symantec Client Security**
- **PC-Doctor™**

#### Downloadable
- **IBM Director Agent**
- **Software Delivery Assistant**
- **System Migration Assistant**

#### License
- **CD not included**
- **Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client**

Supports ThinkVantage™ technologies

#### ThinkPad X4 UltraBase™
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side
  - Ultrabay Slim Li-Polymer Battery
  - 3-cell: 08K1900
  - CD-RW/DVD Combo II Ultrabay
  - Slim Drive: 73P3288
  - Super Multi-Burner Ultrabay Slim Drive (curved bezel): 40Y6982
  - Second HDD Adapter for Ultrabay Slim: 24P5456
- Disks supported:
  - 40GB Hard Disk 08K9816
  - 80GB Hard Disk 09N4273
  - 80GB Hard Disk 09N4273

Other features:
- **Power button (front)**
- **Stereo speakers (1 watt)**
- **Security key lock, security keyhole, and optical security screw**
- **Serial and parallel ports**
- **PS/2 port for keyboard or mouse**
- **Analog DB-15 monitor port**
- **Stand-alone Client Security**

#### Limited warranty** 1-year
- EasyServ® onsite pickup and delivery, service upgrades available** 2005

#### Limited warranty** 3-year
- ThinkPad X4 UltraBase
- ThinkPad X4 UltraBase
- ThinkPad X4 UltraBase
- ThinkPad X4 UltraBase
- ThinkPad X4 UltraBase

- EasyServ® onsite pickup and delivery, service upgrades available** 2005

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**See footnotes for important warranty information

* Powered by Intel Centrino® mobile technology

© Lenovo

US models announced October 4, 2005
US models withdrawn effective May 2006
Type-model | Processor | GHz cache | Memory | Screen | Disk | Optical in UltraBase | ThinkPad UltraBase™ | Mini PCI wireless | CDC: modem/Bluetooth™ | Sec chip | Limited warranty | Education warranty | Availability
---|---|---|---|---|---|---|---|---|---|---|---|---|---
2371-Q8U | Pentium M 778 | 1.6 | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Oct 2005
2371-KJU | Pentium M 758 | 1.5 | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Oct 2005
2371-9EU | Pentium M 738 | 1.4 | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Mar 2005
2371-Q8U | Intel® Pentium M Processor 778 (1.6GHz) with Enhanced Intel SpeedStep Technology and 400MHz system bus | 1.6GHz | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Oct 2005
2371-Q8U | Intel® Pentium M Processor 758 (1.5GHz) with Enhanced Intel SpeedStep Technology and 400MHz system bus | 1.5GHz | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Oct 2005
2371-Q8U | Intel® Pentium M Processor 738 (1.4GHz) with Enhanced Intel SpeedStep Technology and 400MHz system bus | 1.4GHz | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Oct 2005
2371-Q8U | Intel® Pentium M Processor 719 (1.3GHz) with Enhanced Intel SpeedStep Technology and 400MHz system bus | 1.3GHz | 2MB | 512MB | 12.1" XGA | 40GB | None | Optional | 11b/g | Modem | Yes | EasyServ Yes | Oct 2005

**The 2371 has an EasyServ™ onsite pickup and delivery 3-year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
## ThinkPad X40 (2372) - Education - withdrawn

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>L2 Cache</th>
<th>GHz</th>
<th>Memory</th>
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<th>ThinkPad X4 UltraBase</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/Bluetooth</th>
<th>Sec chip</th>
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</table>

*The ThinkPad X40 has a limited onsite service* - 3-year limited warranty.

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### SOFTWARE

- Windows XP Professional
  - Microsoft Windows XP Professional
  - G4U/KKU/Q9U only: Service Pack 2
  - Disk-to-Disk Recovery
  - In hidden protected area

*Preloaded*

- G4U/KKU/Q9U only: Education software from Vital Source Technologies: vitalsource KEY and Personal Portable library
- Rescue and Recovery™
- Access Connections™
- ThinkVantage Productivity Center technologies
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- Client Security Software (for security chip)

*Downloadable*

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

*License (CD not included)*

- Lenovo™'s Stand-alone Client

### OTHER FEATURES

- Power button (front)
- Speaker stereo (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- USB 2.0 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modem port
- Retractable feet; 1.3 lb; 580g

*56 watt AC Adapter*

*Asset ID™ (system-specific info in chip accessed over network)*

*International Warranty Service*

*Premium warrantee support during the warranty period*

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**Notes:**

- **Power button:** The power button is located on the front of the computer. It is a dual-button design that provides both power on/off and power management functions.
- **Security key lock:** A security key lock is provided to prevent unauthorized access to the computer. It is a small metal key that can be inserted into a keyhole located on the side of the computer.
- **Keyboard:** The keyboard is full-size and offers standard QWERTY layout, with separate number pad on the right side. It supports Microsoft Windows and is designed for left-hand or right-hand typing.
- **Touchpad:** The touchpad is a multi-touch-enabled trackpad located below the keyboard. It supports gestures such as swiping, pinching, and dragging.
- **Operating System (OS):** The OS pre-installed on this computer is Windows XP Professional.
- **Memory & Storage:** The computer comes with 1GB of memory (2x512MB) and a 40GB hard disk drive. There is one 200-pin SO-DIMM socket available for memory expansion.
- **Graphics:** The computer is equipped with Intel® Graphics Media Accelerator 950 graphics processor, which supports DirectX and OpenGL features.
- **Networking:** The computer supports Ethernet via Intel PRO/1000 Gigabit Ethernet controller, and wireless options via Intel® ProSet/Wireless 2915ABG Mini PCI Bluetooth adapter.
- **Ports & Connectors:** It has a 1394 port, USB 2.0 ports, two serial ports, and a headphone jack.
- **Battery Life:** The computer has a 3-cell 4000mAh lithium-ion battery with up to 9 hours of battery life on a single charge.
- **Warranty:** The computer comes with a 3-year limited warranty on parts and labor.
### ThinkPad X4 UltraBase (Dock)

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X40 to a two-spindle system by supporting optional UltraBay Slim accessories in left side:
  - Slim Li-Polymer Battery: 3-cell
  - CD-RW/DVD-ROM Ultrabay Slim Drive: 73P3288
  - ThinkPad DVD-ROM Ultrabay Slim Drive: 73P3270
  - Super Multi-Burner Slim Drive (curved bezel): 40Y6622
  - Second HDB Adapter for UltraBay Slim: 62P4554
  - Disks supported:
    - 40GB HS Hard Disk: 09N4273
    - 80GB HS Hard Disk: 09N4273

### Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 port
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Refractech2s: 1.3 lb; 580g
- 56 watt AC Adapter

### Asset ID (system-specific info in chip accessed over network)
- ACPI 1.0b and 2.0-compliant
- ENERGY STAR®-compliant
- International Warranty Service

### International Warranty Service
- 2-year for X40/X41
- 1-year for X405

### Software
- Lenovo ThinkVantage Tools
- Lenovo ThinkPlus
- Lenovo ThinkPad Utilities
- Lenovo Rescue and Recovery™
- Lenovo ThinkVantage Rescue Center
- Lenovo ThinkPad Multiple Battery Charger II
- Lenovo ThinkPad X40 Series Extended Life Battery
- Lenovo ThinkPad X4 Dock
- Lenovo ThinkPad X40 Series Li-Ion Battery (8-cell)
ThinkPad® X41 (2525) - October 2005 - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

SOFTWARE
Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disco Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Connections™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec™ Client Security
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- Client Security Solution™ (for security options)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License
(CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Supports ThinkVantage technologies

ThinkPad X4 UltraBase™
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the ThinkPad X40/X41
- Converts the X41 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side
  - Ultrabay Slim Li-Polymer Battery 3-cell
  - CD-ROM/DVD Combo II Ultrabay

ThinkPad X4 UltraBase
- Supports ThinkVantage technologies

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog D-sub, 15-pin monitor
- Three USB 2.0 ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet; 1.3 lb; 580g

56-watt AC Adapter

Asset ID™ (system-specific info in card accessed over network)
ACPI 1.0b and 2.0-compliant
ENERGY STAR®-compliant
International Warranty Service17

See footnotes for important warranty information
* Powered by Intel Centrino™ mobile technology

Lenovo

US models announced October 4, 2005
US models withdrawn effective May or November 2006

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<td>2525-FGU</td>
<td>Pentium® M 7781 1.6 MB</td>
<td>512MB 12.1&quot; XGA 60GB Combo UltraBase</td>
<td>Optional</td>
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<td>3-yr W G</td>
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<td>Intel 11a/b/g</td>
<td>No</td>
<td>3-yr W G</td>
<td>Oct 05</td>
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</tbody>
</table>

Positioning

US Govt (TAA) Processor

ThinkPad Convertible Monitor Stand 40Y7620

Carrying Case - Backpack 73P3599

ThinkPad® Ulitmate mobility in a versatile ultraportable; one spindle

Processor

Intel® Pentium® Processor Low Voltage 778 1.66GHz with Enhanced Intel SpeedStep™ technology

Execute Disable Bit, and 400MHz system bus 2MB / on die (at processor speed) / ECC

Diskette drive

None / standard use optional USB-based diskette drive

Disk drive

256MB or 512MB UltraBase / 1.8GB max / PC2-4200 533MHz DDR2 (limited to 400MHz because of low voltage processor) / non-parity / CL4 / dual channel capable / std memory soldered to systemboard / one 200-pin SO-DIMM socket available

Display

12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Graphics

Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM

GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz

Keyboard

Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / Access IBM button / palm rest / TrackPoint, "Press-to-Select," Internet Scroll Bar™ / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap

ThinkLight

8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06"; 268mm x 237mm x 20.6-26.9mm

Weight

8-cell battery models: 3.3 lb (1.49kg) / with 8-cell battery and X4 UltraBase with combo: 5.1 lb (2.31kg)

Battery - type

Li-ion / black / Al: magnesium alloy

Battery - life

with 8-cell: up to 7.5 hr / with 8-cell and optional Extended Life Battery: up to 8.1 hr

Architecture

Mobile Intel® 915GM Express Chipset / 82959GPM Graph Mem Cont Hub (GMCH-M) / 82801FPM ICH6-M I/O Controller Hub (SATATA, ATAPI-100 EIDE, PCI Express x1 / PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus [Ricochet® R5811 CardBus Plus controller, Mini PCI, external expansion] / LPC bus [PC97392 Super I/O for infrared (dock-based ports), Atmel® security chip]

CD Drive

One Communications Daughter Card (CDC) / system / customer accessible

Modem

56K V.92 (V.92-designed® modem in CDC / Conexant® chipset

Bluetooth

Some: Bluetooth wireless technology / in CDC (with modem)

Ethernet

Gigabit ethernet on systemboard / Broadcom BCM5715M (MAC/PHY) / PCIe x1 / PXE

Audio support

Soft audio / ICH AC97 controller / DirectSound™ support / AudioPC97 / ACPI 1.0b

Wireless antenna

UltraConnect™ wireless antenna built into the display cover for optimal wireless signal reception

Mini PCI

One Mini PCI type III slot (Communications bay) / bay / cover upgradeable

Wireless upg

One 11b/g wireless®, Mini PCI, PRO/Wireless 2200BG, Intel 82532 chipset

One 11a/b/g wireless®, Mini PCI, PRO/Wireless 2915AGB, Intel 82533 chipset

One 11a/b/g wireless®, ThinkPad 11a/b/g Mini PCI Adapter II, Atheros AR5004X chip

One Communications Daughter Card (CDC) / system / customer accessible

Security

Power-on password / dual hard disk password / supervisor password / security keyhole

Security chip

Embedded Security Subsystem 2.0™ / Atmel® chip / TCG-compliant

Fingerprint reader

Some: FingerPrint reader on palm rest / swipe sensor / integrated with security chip

Limited warranty

3-year / 1-year battery - EasyServ™ / onsite pickup and delivery / service upgrade™ / available

56-watt AC Adapter

Asset ID™ (system-specific info in card accessed over network)
ACPI 1.0b and 2.0-compliant
ENERGY STAR®-compliant
International Warranty Service17

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

Lenovo

US models announced October 4, 2005
US models withdrawn effective May or November 2006
ThinkPad X41 (2527) - Express - withdrawn

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology © Lenovo

US models announced April 5, 2005
US models withdrawn effective November 2005

Type-model Processor GHz L2 cache Memory Screen Disk Optical in UltraBase ThinkPad X4 UltraBase™ Mini PCI wireless CDC: modem/ Fingerprint reader Limited Availability

2527-55U Pentium® M 758 1.5 2MB 512MB 12.1" XGA 40GB None Optional Intel 11a/b/g✓ Modem Finger Yes 1 year Apr 05

2527-6NU Pentium M 758 1.5 2MB 512MB 12.1" XGA 60GB None Optional Intel 11a/b/g✓ Modem Finger Yes 1 year Apr 05

2527-5FU Pentium® M 758 1.5 2MB 512MB 12.1" XGA 60GB None Optional Intel 11a/b/g✓ Modem Finger Yes 1 year Apr 05

* These small and medium business (SMB) models are part of the US Think Express Program

* The 2527 has a 1 year limited warranty

SOFTWARE

Windows XP Professional

- Microsoft Windows® XP Professional2
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Rescue and Recovery™
- Access Program
- Stand-alone Client

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)

- Lotus® Smartsuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

ThinkPad X4 UltraBase™

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41 to a two-spindle system by supporting optional Ultrabay Slim accessories in left-side:
- Ultrabay Slim Li-Polymer Battery 3-cell
- DC-RW/DVD Combo II Ultrabay Slim Drive 73P3288
- ThinkPad DVD-ROM Ultrabay Slim Drive 73P3270
- Multi-Burner Plus Ultrabay Slim Drive 73P3342
- Second HDD Adapter for Ultrabay Slim 62P4354

Disks supported:

- 40GB HS Hard Disk 08K9816
- 60GB HS Hard Disk 73P3537
- 80GB HS Hard Disk 09N4273

Other features:

- Power button (front)
- Speaker/Headset (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB 15 monitor port
- Three USB 2.0 (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet; 1.3 lb; 580g

56 watt AC Adapter

Asset ID™ (system-specific info in chip identified over network)

ACPI 1.0b and 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service17

24 hour x 7 day toll-free warranty support during the warranty12 via 800-IBM-SERV (426-7378)

See footnotes for important warranty information

* Copyright Lenovo

(X2) October 2005
**ThinkPad X41 (2527) - TopSeller (October 2005) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Optical drive</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Bluetooth</th>
<th>Fingerprint reader</th>
<th>Security</th>
<th>Limited warranty</th>
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<td>Pentium M 778 1.6</td>
<td>2MB</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>None</td>
<td>Optional</td>
<td>Intel 11a/b/g</td>
<td>Modem</td>
<td>Finger</td>
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<td>Modem</td>
<td>Finger</td>
<td>Yes</td>
<td>1-year Oct 05</td>
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</tbody>
</table>

**These small and medium business (SMB) models are part of the US TopSeller Program**

**The X41 is a 1-year limited warranty model.**

**Positioning**
- **ThinkPad:** Ultimate mobility in a versatile ultraportable; one spindle
- **US Govt (TAA):** None
- **Processor:** Intel® Pentium® M Processor Low Voltage 778 (1.6GHz) with Enhanced Intel SpeedStep™ technology; Execute Disable Bit, and 400MHz system bus
- **L2 cache:** 2MB / on die (at processor speed) / EDC
- **Memory:** 512MB std / 1.28 to 1.53GB max / PC2-4200 533MHz DDR2 (limited to 400MHz)

**Diskette drive**
- None / standard / use optional USB-based diskette drive
- **Combi:** Some: DVD-ROM/CD-RW / 24X/24X/24X/8X(1i) speed / removable / from X4 UltraBase

**UltraBay™ Slim**
- **Disk:** Supports UltraBay Slim devices in optional or standard X4 UltraBase
- **Memory:** 40GB / or 60GB (4200 rpm), 9.5mm, ATA-100 / 1.8" / platter / removable / upgradeable / 9.5mm high / **Active Protection System™** (shock protection)

**Display**
- **Dimensions:** 12.1" (308mm) / XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Graphics:** Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM
- **Keyboard:** Standard-size keys / 97% size of T Series / 87-key / 18.5mm pitch / 2.5mm stroke
- **Battery - life:** 1-year / 11a/b/g Wireless Mini PCI Adapter II

**ThinkLight™**
- **Dimensions:** 8-cell without X4 UltraBase: 10.5" x 9.3" x .81-1.06" / 268mm x 237mm x 20.6-26.9mm
- **Battery - type:** 8-cell battery models: 3.3 lb (1.49kg); with 8-cell battery and X4 UltraBase with combo: 5.1 lb (2.31kg)
- **Battery:** Colored: black / Al / magnesium alloy
- **Battery - life:** Ion-Lithium 8-cell / intelligent / supports optional Extended Battery on base (for two batteries)
- **Battery - life:** 8-cell: up to 5.7 hr / with 8-cell and optional Extended Battery: up to 8.1 hr

**Architecture**
- **Mobile Intel 915GM Express Chipset:** 82801FBM CH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCIe Express x1)
- **PC Card Std slot:** Two USB (version 2.0), plus one powered USB port for select options / CardBus Plus Secure Digital Card / slot / supports SD memory cards used in consumer devices
- **Ports:** Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse/ports (use X4 UltraBase) / no IEEE 1394 port
- **USB 2.0 Memory Stick Reader (black):** 73P4076
- **USB 2.0 Memory Stick Reader (white):** 73P3538
- **USB 2.0 Multi-Brand Burner Drive:** 3-cell 08K8190, Ultrabay Slim 62P4554
- **USB 2.0 Memory Stick Reader:** 73P3538
- **60GB Mini Hard Disk 9.5mm:** 02K6880
- **USB 2.0 Memory Stick Reader:** 73P3538

**ThinkPad Computer Security**
- **Security:** Power-on password / dual hard disk password / supervisor password / security keyhole
- **Security chip:** Embedded Security Subsystem 2.0 / Atmel® chip / TCG-compliant

**Fingerprint reader**
- **Fingerprint reader:** Fingerprint reader on palm rest / swipe sensor / integrated with security chip

**Limited warranty**
- **1-year:** EasyServ™ onsite pickup and delivery / service upgrades available

**SOFTWARE**
- **Windows XP Professional:**
  - Microsoft® Windows® XP Professional (Service Pack 2)
- **Dock:** Disk-to-Dock (located in hidden protected area)

**Preloaded**
- **Programs:**
  - Rescue and Recovery™
  - Access Connections™
  - ThinkVantage Productivity Center
  - Symantec Client Security
  - PC-Doctor™
  - ThinkPad Utilities
  - Adobe Reader
  - Update Connector™
  - Client Security Solution™ (for security keyhole)

**License**
- **CD (not included):**
  - Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client

**Other features:**
- **Power button (front):**
- **Stereo speakers (1 watt):**
  - Security key lock, security keyhole, security keyhole, and optical security screw
- **Serial and parallel ports:**
  - PS2 port for keyboard or mouse
- **Ethernet port:**
  - Analog DB-15 monitor port
- **USB 2.0 ports:**
  - Three USB 2.0 ports (via USB hub)
  - Ethernet port (Gigabit Ethernet)
- **Modem port:**
  - Rechargeable feet: 1.3 lb; 580g

**56 watt AC Adapter**
- **Acid™** (system-specific info in chip accessed over network)
  - ACPI 1.0b and 2.0-compliant
  - ENERGY STAR®-compliant
  - International Warranty Service

- **24 hour / 7 day:** toll-free customer support during the warranty via 800-IBM-SEVR (426-7378)

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See footnotes for important warranty information

*Powered by Intel Centrino mobile technology © Lenovo (SP35A2) April 2006

US models announced October 4, 2005

US models withdrawn effective May 2006
ThinkPad X41 (2528) - Express - withdrawn

See footnotes for important warranty information © Lenovo

US models announced April 5, 2005
US models withdrawn effective November 2005

Type-model  Processor GHz Memory Screen Disk ThinkPad X4 UltraBase™ Mini PCI wireless CDC: modem/ Bluetooth™ Fingerprinm Sec reader Limited warranty2 AVAIL
2528-5SU Pentium® M 751B 1.5 2MB 12.1" XGA 60GB None Optional Intel 11a/b/g✓ Modem Finger Yes 3 years Apr 05
2528-6NU Pentium M 751B 1.5 2MB 12.1" XGA 60GB Optional Intel 11a/b/g✓ Mod/Blue Finger Yes 3 years Apr 05
2528-8FU Pentium M 751B 1.5 2MB 12.1" XGA 60GB Optional Intel 11a/b/g✓ Modem Finger Yes 3 years Apr 05

* These small and medium business (SMB) models are part of the US Think Express Program.
* The 2528 has a 3 year limited warranty

Positioning
US Govt (TAA)3
None

Processor
Intel® Pentium® M Processor Low Voltage 751B (1.5GHz) with enhanced Intel SpeedStep™ technology3. Execute Disable Bit, and 400MHz system bus 2MB / on die at processor speed / ECC

L2 cache
512MB std / 128MB max / PC-2-4200 533MHz DDR2 (limited to 400MHz because of low voltage processor) / non-parity / CL4 / dual channel capable / std memory soldered to system board / one 200-pin SO-DIMM socket available

Memory
Diskette drive
None standard / use optional USB-based diskette drive

Security Subsystem
Embedded Security Subsystem 2.0

Power button
Front

Audio support
- Microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

Ethernet
Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE

Wireless antenna
- Embedded Security Subsystem 2.0
- Microphone input jack
- 3 year limited warranty

SOFTWARE

Windows XP Professional
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-To-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access Program
- ThinkPad Utilities
- Acrobat Reader
- Update Connector™
- Client Security Software (for security chip)

Downloadable
- IBM Direct Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad X4 UltraBase™
- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: -- Ultrabay Slim Li-Polymer Battery 3-cell -- CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 (for X41) -- ThinkPad DVD-ROM Ultrabay Slim Drive 73P3270 -- Multi-Burner Plus Ultrabay Slim Drive 73P3342 -- Second HDD Adapter for Ultrabay Slim 62P4534

Disks supported:
- 40GB HS Hard Disk 08KB180
- 80GB HS Hard Disk 73P3357
- 80GB HS Hard Disk 09N4273

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB 15 monitor port
- Three USB 2.0 (up to USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet; 1.3 lb; 580g

65 watt AC Adapter
Asset ID (system-specific info in chip and connected over network)
ACPI 1.0b and 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service
24 hour 7 day toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)

ThinkPad X41 (2528)

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41 to a two-spindle system by supporting optional Ultrabay Slim accessories in left side: -- Ultrabay Slim Li-Polymer Battery 3-cell -- CD-RW/DVD Combo II Ultrabay Slim Drive 73P3288 (for X41) -- ThinkPad DVD-ROM Ultrabay Slim Drive 73P3270 -- Multi-Burner Plus Ultrabay Slim Drive 73P3342 -- Second HDD Adapter for Ultrabay Slim 62P4534

Disks supported:
- 40GB HS Hard Disk 08KB180
- 80GB HS Hard Disk 73P3357
- 80GB HS Hard Disk 09N4273

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optical security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB 15 monitor port
- Three USB 2.0 (up to USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet; 1.3 lb; 580g

65 watt AC Adapter
Asset ID (system-specific info in chip and connected over network)
ACPI 1.0b and 2.0-compliant

ENERGY STAR®-compliant

International Warranty Service
24 hour 7 day toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X4 UltraBase™</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/ Bluetooth™</th>
<th>FingerPrint Sec reader</th>
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<td>60GB</td>
<td>DVD/JW UltraBase</td>
<td>Intel 11a/b/g/n</td>
<td>Mod/Blue</td>
<td>Finger Yes</td>
<td>3-year Oct 05</td>
<td></td>
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</tr>
</tbody>
</table>

- **These small and medium business (SMB) models** are part of the US TopSeller™ Program
- **The 2528 has a 3-year limited warranty**

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**Software**

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Desk (in hidden protected area)

- **Preloaded**
  - Rescue and Recovery™
  - Access Connections™
  - Converts the X41c to a two-spindle system by supporting optional UltraBase Slim accessories in left side - UltraBase Slim Li-Polymer Battery

- **License**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and services; visit thinkpad.com/thinkvantage

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**ThinkPad X4 UltraBase™**

- Provides desktop expansion and cable management for the X40/X41
- Easily connects to the bottom of the X40/X41 for traveling
- Converts the X41c to a two-spindle system by supporting optional UltraBase Slim accessories in left side - UltraBase Slim Li-Polymer Battery

- **ThinkPad Ultrasound**
  - 60GB HS Hard Disk 08K9816
  - 80GB HS Hard Disk 73P3357

- **ThinkPad Utilities**
  - Adobe Reader
  - Update Connector™
  - Client Security Solution™ (for security of personal data)

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**ThinkPad X41 (2528)**

- **TopSeller (October 2005) - withdrawn**

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**Other features**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, non-parity optical screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB ports (via USB hub)
- Ethernet port (Gigabit Ethernet)
- Modern port
- Retractable feet: 1.3 lb; 580g

---

65 watt AC Adapter

**Asset ID**: (system-specific info in chip accessed over network)

- ACPI 1.0b and 2.0-compliant

**ENERGY STAR®-compliant**

- International Warranty Service

- 24 hour x 7 day x 7 day toll-free warranty support during the warranty period via 800-IBM-SERV (426-7378)
ThinkPad X41 Tablet - withdrawn
## ThinkPad X41 Tablet (March 2006) - withdrawn

### Type-model

| Processor | GHz | Memory | Screen | Disk | L2 cache | Mini PCI wireless | Battery - type | Case material | Weight | 3-years warranty | Limited warranty | Ultrabay™ Slim | Secure Digital Card | Mini PCI Express CardBus Plus | One Communications Daughter Card (CDC) socket | Customer accessible | Internal microphone | Embedded Security Subsystem 2.0 | Security Key | FingerPrint Reader |
|-----------|-----|--------|--------|------|----------|------------------|----------------|---------------|--------|-----------------|-----------------|----------------|--------------------|----------------|----------------------|-------------------------------|-----------------|---------------------|----------------------|----------------|------------------------|
| 1866-9MU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 60GB | = Intel 11b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-9GU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 40GB | = Intel 11b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-BGU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 60GB | = Intel 11b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-9HU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 40GB | = Intel 11b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-9HU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 40GB | = Intel 11b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-CRU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 60GB | = Intel 11a/b/g | Mod/Blue | Finger | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11a/b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-AEU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 40GB | = Intel 11a/b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11a/b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-ADU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 60GB | = Intel 11a/b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11a/b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-CGU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 60GB | = Intel 11a/b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11a/b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |
| 1866-BFU Pentium® M 778 1.6 | 2MB | 512MB | 12.1” XGA 40GB | = Intel 11a/b/g | Modern | No | Yes | 4-cell | 3-yr | WH Gbl | Mar 06 | 4GB0 | 512MB | = Intel 11a/b/g | 11a/b/g | Modern | No | Yes | 8-cell | 3-yr | WH Gbl | Mar 06 |

### Features

- **Positoning**
  - Limited warranty
- **Security**
  - Fingerprint reader
- **Mini PCI**
  - PC Card Std slot
  - Secure Digital slot
- **Display**
  - 12.1” (307mm) Super Wide Angle FFS XGA (1024x768) TFT color
  - Anti-reflective and anti-glare protective coatings
  - 180 nits
- **Battery**
  - 11a/b/g Wireless Mini PCI Adapter II
  - 11a/b/g Modem
  - Intel 11a/b/g Modem
  - Intel 11a/b/g Modem
  - Intel 11a/b/g Modem
  - Intel 11a/b/g Modem

### Software

- **Windows XP Tablet**
- Microsoft Windows® XP
- Tablet PC Edition 2005
- Disk-to-Disk Recovery
- 24 hour x 7 day toll-free warranty

### Preload

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskette
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- FingerPrint Software (fingerprint models)
- InterVideo VirtualDrive CD/CD DVD Emulator

### Free trial

- Alias Sketchbook Pro
- Zino Reader
- FranklinCovey TabletPanner

### Support

- ThinkVantage technologies
- Provides desktop expansion and cable mgmt for X40/X41 Tablet
- Connects to the bottom of notebook
- Supports optional Ultrabay Slim accessory (See X4 Dock)

### Other features:

- 56-watt AC adapter
- Power button
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and Ultrabay Slim security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Gigabit Ethernet (RJ-45)
- Modem port (RJ-11)
- 2.4 lb; 1.1kg

### Limited warranty

- **3-years**
  - 1-year battery
  - EasyServ™ onsite pickup and delivery / service upgrades available

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*Footnotes for important warranty information*  
*Powered by Intel Centrino® mobile technology*  
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**US models withdrawn effective February 2007**
ThinkPad X41 Tablet (1866) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz cache</th>
<th>Memory</th>
<th>Screen</th>
<th>Mini PCI wireless</th>
<th>CDC: modem/Fingerprint reader</th>
<th>Sec chip</th>
<th>Limited warranty</th>
<th>OneNote Education software</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1866-1GU Pentium® M 753 1.2</td>
<td>2MB</td>
<td>256MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>Intel 11b/g</td>
<td>Modern</td>
<td>No</td>
<td>Yes</td>
<td>EasyServ 3-yr</td>
<td>No</td>
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<tr>
<td>1866-4GU Pentium M 758 1.5</td>
<td>2MB</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>Intel 11b/g</td>
<td>Mod/Blue</td>
<td>Yes</td>
<td>Yes</td>
<td>EasyServ 3-yr</td>
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<td>2MB</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
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<td>Blue</td>
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<td>Yes</td>
<td>EasyServ 3-yr</td>
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<tr>
<td>1866-CXU Pentium M 776 1.6</td>
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<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>Intel 11b/g</td>
<td>Blue/Finger</td>
<td>Yes</td>
<td>Yes</td>
<td>EasyServ 3-yr</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- **Limited warranty**: 3-years EasyServ
- **OneNote**: Education software
- **Availability**: No

**Positioning**

- Convertible tablet; ultimate mobility in a versatile ultraportable: one spindle Intel® Pentium® M Processor Ultra Low Voltage 753 (1.2GHz) or Low Voltage 758 (1.5GHz) or Low Voltage 778 (1.6GHz) with Enhanced Intel SpeedStep™ technology,
- Execute Disable Bit, and 400MHz system bus

**L2 cache**

- 256 or 512MB std / 1.28 to 1.53GB max / PC2-4200 533MHz DDR2 (limited to 400MHz because of low voltage processor) / non-parity / CL4 dual channel capable / std memory soldered to systemboard

**Ultrabay™ Slim Disk**

- Supports Ultrabay™ Slim devices in optional ThinkPad X4 Dock

**Display**

- 12.1" (307mm) Super Wide Angle FFS XGA (1024x768) TFT color
- anti-reflection and anti-glare protective coatings / 180 nits
- write on screen digitizer with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / 8 buttons on display bottom (power, reboot, rotation, utility, Esc, enter, page up, down)

**Graphics**

- Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses memory 533MHz DDR2 (up to 128MB)

**Keyboard**

- Standard-size26 keys / 97% size of T Series / 87-key / 18.5mm pitch; 2.5mm stroke / Access IBM button / palm rest / TrackPoint®, "Press-to-Select," Internet Scroll Bar®

**Dimensions**

- 8-cell: 10.8" x 10.5" x 1.14-1.26"; 274mm x 266mm x 29-32mm

**Weight**

- 40GB or 40GB (4200 rpm), 9.5mm, ATA-100 / 1.8" platter / removable and upgradeable / 9.5mm high bay / Active Protection System™ (shock protection)

**Architecture**

- Mobile Intel 915GM Express Chipset / 82801FBM ICICH6-M / Controller Hub (SATA150, 10-100 E IDE, PCI Express x1, PCI bus, Ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (Riconh® RSC551 CardBus Plus controller, Micro PCI, external expansion) / LPC bus (PC87392 Super I/O for infrared (docking-based ports), Atmel® security chip)

**Docking station**

- Optional ThinkPad X4 Dock (see right side)

**Secure Digital slot**

- One Secure Digital Card slot / supports SD memory cards used in consumer devices

**PC Card Std slot**

- One Type I or one Type II / CardBus Plus 32-bit / PCMCIA 2.1 / integrated door

**Ports**

- Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / integrated (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard / X4 Dock / no IEEE 1394 ports

**Wireless antenna**

- UltraConnect™ antenna built into the display cover for optional wireless signal reception

**Mini PCI**

- One Mini PCI Type Ii slot (Communications Bay) / customer upgradable

**CDC**

- Intel 11b/g or Intel 11a/b/g wireless / Intel PRO/Wireless 2200BG, Intel 82532 chipset

**Modem**

- 56K6 V.90 (V.92-designed) modem in CDC / Conexant®

**Audio support**

- Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCI x1 / PCIe Audio / Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono / microphone / volume up, down, mute buttons / internal mic / Soft audio

**Security**

- Power-on password / dual hard disk password / supervisor password / security keyhole / Active Protection System (shock protection)

**Security key**

- Power-on hard disk password / supervisor password / security keyhole

**Security key software**

- Embedded Security Subsystem 2.0™ / Atmel® chip / TCG-compliant

**Fingerprint reader**

- Some: Fingerprint reader on right base of display / 2-way swipe sensor

- Limited warranty: 3-years / 1-year battery - EasyServ™ / onsite pickup and delivery / service upgrades available

- **Limited warranty**: 3-years EasyServ
- **OneNote**: Education software
- **Availability**: No

**Software**

- Microsoft® Windows® XP Tablet PC Edition 2005®
- Disk-to-Disco Recovery

**Preloaded**

- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery®
- Model A7U/CXU: Microsoft Office OneNote 2003
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security™
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Fingerprint Software (fingerprint)
- Intel Video InteractiveDrive CD/DVD Emulator

**CD included**

- Model 4GU/A7U/CXU: Microsoft Office OneNote 2003
- Adobe Photoshop Elements plus Adobe Premiere Elements

**Free trial**

- Alias Sketchbook Pro
- Zinio Reader
- FranklinCovey TabletPlanner

**Supports ThinkVantage® technologies**

- Provides desktop expansion and cable mgmt for X40/X41/X41 Tablet
- Connects to the bottom of notebook
- Supports optional Ultrabay™ Slim accessories
- CD-ROM/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
- ThinkPad DVD Ultrabay Slim
- Second HDD Adapter for Ultrabay Slim 41U3148
- Disks supported (some listed): 80GB HS Hard Disk 09N4273

**ThinkPad X4 Dock**

- Secure Digital card
- CD-RW/DVD Combo II Ultrabay Slim security screw
- Supports Ultrabay Slim security screw
- CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel)
- ThinkPad DVD Ultrabay Slim
- Second HDD Adapter for Ultrabay Slim
- Disks supported (some listed) 80GB HS Hard Disk 09N4273

**Other features**

- 56-watt AC adapter
- Powerbutton
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and Ultrabay Slim security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Gigabit Ethernet port (RJ-45)
- Mosron (RJ-11)
- 2.4 lb. 1.1kg

**65-watt AC Adapter**

- 3-years EasyServ
- 100-240V, 50-60Hz
- 22" power cord
- System boards supported (some listed) 80GB HS Hard Disk 09N4273

See footnotes for important warranty information

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US models announced on June 7, 2005 or March 14, 2006
US models withdrawn effective August 2006 or August 2007

(PH3) August 2007

Lenovo
ThinkPad® X41 Tablet (1867) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>CDC: modem/ Fingerprint</th>
<th>Sec Chip</th>
<th>Limited warranty</th>
<th>OneNote® Education software</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1867-1GU Pentium® M 753 1.2</td>
<td>2MB</td>
<td>256MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>Intel® 11b/g</td>
<td>Modern</td>
<td>No</td>
<td>Yes</td>
<td>3-5 yrs</td>
<td>Yes</td>
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<td>1867-4GU Pentium M 758 1.5</td>
<td>2MB</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>Intel® 11b/g</td>
<td>Mod/Blue</td>
<td>No</td>
<td>Yes</td>
<td>3-5 yrs</td>
<td>Yes</td>
<td>June 05</td>
</tr>
<tr>
<td>1867-AGU Pentium M 778 1.2</td>
<td>2MB</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>40GB</td>
<td>Intel® 11b/g</td>
<td>Mod/Blue</td>
<td>No</td>
<td>Yes</td>
<td>3-5 yrs</td>
<td>Yes</td>
<td>March 06</td>
</tr>
</tbody>
</table>

* The 1867 has a limited onsite warranty up to 3 years.

These models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning

Processor: Convertible tablet, ultimate mobility in a versatile ultraportable: one spindled Intel® Pentium® M Processor Ultra Low Voltage 753 (1.2GHz) or Low Voltage 778 (1.5GHz) or Low Voltage 778 (1.6GHz) with Enhanced Intel® SpeedStep™ technology, Execute Disable Bit, and 400MHz system bus.

L2 cache: 2MB / on die (at processor speed) / ECC

Memory: 256 or 512MB std / 1.28 to 1.53GB max / PC2-4200 533MHz DDR2 (limited to 400MHz because of low voltage processor) / non-parity / CL4 / dual channel capable / std memory soldered to systemboard / one 200-pin SO-DIMM socket available

Ultrabay™ Slim Disk: Supports Ultrabay™ Slim devices in optional ThinkPad X4 Dock

Display: 12.1" (307mm) Super Wide Angle FFF XGA (1024x768) TFT color / anti-reflactive and anti-glare protective coatings / 180 nits / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / 8 buttons on display bottom (power, reboot, rotation, utility, Esc, enter, page up/down)

Graphics

Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / uses main memory (up to 128MB with 256MB+ / 200MHz

Architecture

Mobile Intel 915GM Express Chipset / 82915GM Graph Mem Cont Hub (GMCH-M) / 82801FB ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE, PCI Express x1, PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint]) / PCI bus (Ricon® R5C811 CardBus Plus controller, Mini PCI, external expansion) / LPC bus (PC87392 Super I/O for infrared (dock-based ports), Atmel® security chip)

Security

Security key lock, security keyhole, Power button, 56-watt AC adapter

Security chip

Embedded Security Subsystem 2.0™ / Atmel® chip / TCG-compliant

Limited warranty

3-years / 1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

SOFTWARE®

Windows XP Tablet - Microsoft® Windows® XP Tablet PC Edition 2005®

Disks-to-Disk Recovery

Preloaded

- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Model AGU: Microsoft Office OneNote 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage ThinkVantage Tools
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities Power Manager and Presentation Director
- InterVideo VirtualDrive CD/DVD Emulator

CD included

- Model 4GU/AGU: Microsoft Office OneNote 2003
- Adobe Photoshop Elements plus Adobe Premiere Elements

Free trial

- Alias Sketchbook Pro
- Zino Reader
- FranklinCovey TabletPlanner

Supports ThinkVantage® technologies

ThinkPad X4 Dock

- Provides desktop expansion and cable mgmt for X40/X41/X4 Tablet
- Connects to the bottom of notebook
- Supports optional Ultrabay™ Slim accessories in left side:
  - ThinkPad DVD-ROM UltraBay
  - ThinkPad UltraBay Slim Drive (flat bezel) 40Y8621
  - ThinkPad UltraBay Slim Drive (sticker bezel) 41N5643
  - ThinkPad UltraBay Slim - Secure BHD Adapter for UltraBay 41N1348
- Disks supported (some listed):
  - 800GB HS Hard Disk 09N4273

Other features

- 56-watt AC adapter
- Power button
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and Ultrabay Slim security screw
- Serial and parallel ports
- PS/2 port for keyboard or mouse
- Analog DB-15 monitor port
- Three USB 2.0 ports (via USB hub)
- Gigabit Ethernet port (RT-J45)
- ThinkPad Power Manager (RT-J11) (for two batteries)
- Limited onsite warranty

See footnotes for important warranty information. Powered by Intel Centrino® mobile technology. Lenovo US models announced on June 7, 2005 or March 14, 2006

Lenovo US models withdrawn effective January 2006 or August 2007

© Lenovo (PH4) August 2007

Lenovo

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Personal Systems Reference (PSREF)
**ThinkPad X41 Tablet (1869) - TopSeller - withdrawn**

**Type-model** Processor GHz Memory Screen Disk 
1869-SCU Pentium M 758 1.5 2MB 512MB 12.1” XGA 40GB • Intel11b/g18 Mod-Blue Finger Yes 4-cell 3-years TopSeller Jun 05 
1869-BCU Pentium M 778 1.6 2MB 512MB 12.1” XGA 40GB • Intel11b/g18 Modern Finger Yes 4-cell 3-years TopSeller Mar 06 
1869-CSU Pentium M 778 1.6 2MB 512MB 12.1” XGA 40GB • Intel11b/g18 Modern Finger Yes 8-cell 3-years TopSeller Mar 06 

* These small and medium business (SMB) models are part of the US TopSeller™ Program

**The 1869 has a 3-year limited warranty**

**Positioning Processor** Convertible tablet: ultimate mobility in a versatile ultraportable; one spindle Intel® Pentium® Processor Low Voltage TPU-™
Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 400MHz system bus

**L2 cache Memory** 2MB / on die (at processor speed) / ECC
512MB std / 1.53GB max / PC2-400 533MHz DDR2 (limited to 400MHz because of lower voltage usage processor) / non-parity / CL4 / 2.5ms / 9.5mm high bay / **Active Protection System™** (shock protection)

**Ultrabay™ Slim Disk** Supports Ultrabay™ Slim devices in optional ThinkPad X4 Dock
40GB or 60GB (4200 rpm), 9.5mm, ATA-100 / 1.8” platter / removable and upgradable / 9.5mm high bay / **Active Protection System™** (shock protection)

**Display** 12.1” (307mm) Super Wide Angle FFS XGA (1024x768) TFT color / anti-reflective and anti-glare protective coatings / 180 nits / write on screen with standard digitizer pen / pen holder in front base / **rotate and swivel hinge** in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / 8 buttons on display bottom (power, reboot, rotation, utility, Esc, enter, page up/down)

**Graphics CPU** Intel® Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM GMCH / 1.2GHz memory (upper to 128MB) with 256MB DDR 400MHz / **Active Protection System™** (shock protection)

**Dimensions** 4-cell: 10.8” x 9.5” x 1.14-1.26” / 274mm x 242mm x 29-32mm
8-cell: 10.8” x 10.5” x 1.14-1.26” / 274mm x 266mm x 29-32mm

**Weight** 1.5-1.88kg

**Battery - type** Li-Ion 4-cell or 8-cell / supports opt Extended Life Battery on for (two batteries) with 4-cell: 2.5hr / with 8-cell: up to 6.3hr / with 8-cell and optional Extended LIfe Battery: up to 8.5 hr

**Architectural Features** Mobile Intel 915GM Express Chipset / 82815GM Graph Mem Cont Hub (GMCH-M) / 82815FB ICH6 M/H PC9/Plichannel Controller (SAT10A, ATA-100 EIDE, PCI Express x1) / PCI bus, ethernet MAC, USB, Low Pin Count [LPC] interface, [Bluetooth], [fingerprint], [Quick Path] / PCI bus (Ricoch R5851 CardBus Plus controller, Mini PCI, external expansion) / LPC bus (PC87392 Super I/O for infrared (docked-based ports), Atmel™ security chip)

**Docking station** ThinkPad X4 Dock (see right side)

**Secure Digital slot** One Secure Digital Card slot / supports SD memory cards used in consumers PC

**PC Card Std slot** One Type I or One Type II / CardBus Plus 32-bit / PCMCIA 2.1 / integrated door

**Ports** Two USB (version 2.0), plus one powered USB port for select options / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no serial, parallel, keyboard/mouse/ports uses (X4 Dock) / no IEEE 1394 port

**Wireless antenna** UltraConnect™ antenna built into the display cover for optional wireless signal reception

**Mini PCI** One Mini PCI type Iii slot (Communications Bay) / customer upgradable

**Some: 11b/g wireless, Mini PCI, Intel PRO/Wireless 2200BG, Intel 82532 chipset**

**Some: 11a/b/g wireless, Mini PCI, Intel PRO/Wireless 802.11a/b/g, Intel 82533 chipset**

**CDC** One Communications Daughter Card (CDC) (socket) / customer accessible

**Modern Business Ethernet** 56K V.90 (V.92-designed) modem in CDC / Conexant chipset

**Bluetooth** Some: Bluetooth wireless technology / in CDC with modem

**Ethernet** Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE

**Audio support** Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speaker, 0.5 watt / volume up/down, mut buttons / internal mic / microphone input jack (3.5 mm; pink) / headphone jack (3.5 mm; green)

**Security chip** Power-on password / dual hard disk password / supervisor password / security keyhole

**Security chip** Embedded Security Subsystem 2.0 / Atmel™ chip / TCG-compliant

**Fingerprint reader** Fingerprint reader on right base of display / use in tablet or notebook mode / 2-way swipe sensor / integrated with security chip

**Licensed warranty** 3-years / 1-year battery / EasyServ™ onsite pickup and delivery / service upgrades avail

256MBPC2-4200 DDR2 NP CL4 SOD
512MBPC2-4200 DDR2 NP CL4 SOD
USB Port 2.0 80GB Hard Disk
USB 2.0 Memory Card Slot
USB 2.0 Multi-Channel Drive
60GB Mini Hard Disk 9.5mm (4200 rpm)
Kensington® MicroSaver® Security Cable
11a/b/g Wireless Mini PCI Adapter I
11a/b/g Wireless Mini PCI Adapter II
Intel PRO/Wireless 2915ABG Mini PCI
ThinkPad X4 Tablet Sleeve
ThinkPad Case - BackPack
Carrying Case - Leather Ultrathin
ThinkVision® L17 1” Monitor (black)

See footnotes for important warranty information

* Powered by Intel Centrino™ mobile technology

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US models announced June 7, 2005 or March 14, 2006
US models withdrawn effective December 2006

**SOFTWARE**

Windows XP Tablet - Microsoft® Windows® XP Tablet PC Edition 2005®
Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center with Away Manager
• ThinkVantage System Update
• Symantec® Client Security™
• Diskeeper Lite
• PC-Doctor™ (diagnostics)
• ThinkPad Utilities (Power Manager and Presentation Director)
• Adobe® Reader
• FingerPrint Software (fingerprint models)
• InteVideo VirtualDrive CD/DVD Emulator

**Free trial**
• Alias Sketchbook Pro
• Zino Reader
• FranklinCovey TabletPlanner

**License** (CD not included)
• Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Supports ThinkVantage technologies**

**ThinkPad X4 Dock**
• Provides desktop expansion and cable mgmt for X40/X41/X41 Tablet
• Connects to the bottom of notebook
• Supports optional Ultrabay™ Slim devices in optional ThinkPad X4 Dock

**Limited warranty** 3-years / - Microsoft® Windows® XP Tablet PC Edition 2005®

**ENERGY STAR** compliant

**International Warranty Service** 24 day / 7 day toll-free warranty support during the warranty via 800-IBM-SERV (426-7378)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>WWAN</th>
<th>Blue-</th>
<th>Fingerpr</th>
<th>Workhorse</th>
<th>Preload</th>
<th>Global</th>
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<tbody>
<tr>
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<td>Core Duo T2400</td>
<td>1.83</td>
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<td>Intel 11a/b/g</td>
<td>8-cell</td>
<td>XP Pro</td>
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<td>Optional</td>
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<td>8-cell</td>
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<td>Intel 11a/b/g</td>
<td>8-cell</td>
<td>XP Pro</td>
<td>May 06</td>
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**SOFTWARE**

- Windows XP Professional
  - Microsoft® Windows® XP Professional(2) (Service Pack 2)

**Preloaded** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Maintenance Manager
- ThinkVantage System Update
- System Migration Assistant
- Symantec® Client Security™
- Diskeeper® Life
- Lenovo®/Symantec® (diagnostics)
- ThinkPad® utilities
- Picasa from Google
- ThinkPad® Software (finger print recognition)
- Multimedia Center for Think
- Sonic RecordNow® and Drive Offerings
- InterVideo® WinDVD (combo model)

**License** - CD not included (all)
- Lenovo® SmartSuite® Millennium and Lenovo® Notes® Stand-alone Client

**Other features**
- Power button (front)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog Line In monitor port
- Two USB 2.0 ports
- Gigabit ethernet port
- Modern port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Retractable feet: 1.48 lb; 670g

**65-watt AC Adapter**

**ROHS-compliant**

**International Warranty Service**
- 24 hour x 7 day toll-free warranty support during the warranty

See footnotes for important warranty information

*Powered by Intel® Centrino® Duo mobile technology* © Lenovo

US models announced Jan 5, Jan 31, Feb 28, or May 30, 2007

(SM1-1) October 2007

© Lenovo


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(SM1-1) October 2007
Personal Systems Reference (PSREF)

ThinkPad® X60 (1706) - October 2006 - withdrawn

**Type-model** | **Processor** | **GHz** | **Memory** | **Screen** | **Optical in UltraBase** | **ThinPad X6 UltraBase** | **802.11 wireless** | **WWAN wireless** | **Blue-tooth** | **Fingerprint reader** | **Battery** | **Battery cells** | **EW 9-month warranty** | **Global** | **Availability**
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
1706-BSU Core Duo T2500 | 2.00 | 1.67 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-CSU Core Duo T2500 | 2.00 | 1.67 GB | 12.1" XGA 80GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-CEU Core Duo T2500 | 2.00 | 2.00 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-BBU Core Duo T2500 | 2.00 | 2.00 GB | 12.1" XGA 80GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-AU Core Duo T2500E | 1.66 | 1.67 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-SVU Core Duo T2400 | 1.83 | 1.67 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-ESU Core Duo T2500 | 2.00 | 2.00 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-KEU Core 2 Duo T5500/1.66 | 1.66 | 2.00 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06
1706-MBU Core 2 Duo T5600/1.83 | 1.83 | 2.00 GB | 12.1" XGA 60GB | None | Optional | Intel 11a/b/g | Blue | Finger 4-cell | EW Gbi | Oct 06

**Positioning**

ThinkPad®

**Processor**

Intel® Core™ Duo processor T2300E, T2400, or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache or Intel Core 2 Duo processor T5500 or T5600 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

512MB, 1GB, or 2GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / C9U/B9U/BAU/SU/SVU: std mem in both sockets (512MB each socket); no sockets avail; Others: standard memory in 1 socket; 1 socket available

**Diskette drive**

None standard / use optional USB-based diskette drive

**UltraBay™ Slim**

Supports UltraBay Slim devices in optional or standard X6 UltraBase

**Secure ATA disk** (SATA150)

60, 80, 100 or 120GB (5400 rpm) / 9.5mm high bay / removable, upgradable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System™ / supports 2nd disk in optional X6 UltraBase

**Display**

12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare

**Graphics controller**

Intel® Graphics Controller

**Graphics - external**

ThinkLight™ / Touch pad / TrackPoint™ / ThinkPad External Battery Charger / ThinkPad X60 Extended Life Battery / X60 Enhanced Capacity Battery / ThinkPad Advanced Ultrabay / thinkPad DVD Ultrabay Slim / thinkPad portable Battery Pack

**License**

- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Support during the warranty

**SOFTWARE**

- Windows XP Professional
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Preloaded (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Maintenance Manager
  - ThinkVantage System Update
  - System Migration Assistant
  - SystemOS™ Client Security™
  - Diskeeper® Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad utilities
  - Picasa from Google
  - Fingerprint Software (fingerprint models)
  - Multimedia Center for Think

**Additional features**

- ThinkPlus
- 5-year P&L P/U Depot
- ROHS-compliant
- Catalyst Wireless LAN
- Enhanced 4-cell: up to 8.2 hr; 8-cell: up to 4.1 hr; 8-cell: up to 10.2 hr; 8-cell: up to 5.1 hr
- Supports Ultrabay Slim battery in optional X6 UltraBase

**Media slice**

One Secure Digital Card slot / supports SD memory cards used in consumer devices

**PC Card slot**

IEEE 1394

**IEEE 1394 (FireWire) port** (4-pin)

**Ports**

Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / IEEE 1394 (4-pin) / microphone / headphone jack

**Audio support**

Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

ThinkPad Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**

ThinkPad Finger reader on palm rest / supports the security chip

**Limited warranty**

- 3-years / 1-year battery / EasyServ™ on-site pickup and delivery / service upgrades™ available

**Type**

512MB PC2-5300 DDR2 CL5 SODIMM
1GB PC2-5300 DDR2 CL5 SODIMM
2GB PC2-5300 DDR2 CL5 SODIMM
160GB Disk 9.5mm SATA150 (7200 rpm)
USB 2.0 Lenovo Multimedia Headset
USB 2.0 Security Memory Key 4GB
USB 1 Super 101 Dual Media Burner Drive
11a/b/g Wireless Mini PCI Express Adapter
ThinkPad Adjustable Notebook Stand
ThinkPad Convertible Monitor Stand
ThinkPad X6 UltraBase
Lenovo M50 Projector
Other accessories on O-X60 sheet

See footnotes for important warranty information

© Lenovo

US models announced October 17, 2006

US models withdrawn effective July, September, or October 2007

Windows XP Professional

- Microsoft® Windows® XP Professional® (Service Pack 2)
- Preloaded (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Maintenance Manager
  - ThinkVantage System Update
  - System Migration Assistant
  - SystemOS™ Client Security™
  - Diskeeper® Lite
  - PC-Doctor® (diagnostics)
  - ThinkPad utilities
  - Picasa from Google
  - Fingerprint Software (fingerprint models)
  - Multimedia Center for Think

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Support during the warranty

**ThinkPad X6 UltraBase™**

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y7689
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y7625
- Disks supported (only some listed):
  - 120GB Disk 5400 rpm 41N5691
  - 160GB Disk 5400 rpm 41N5692
  - 160GB Disk 7200 rpm 41N5737
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optional security screen
  - Serial and parallel ports
  - Analog DB-15 monitor port
  - Four USB 2.0 ports
  - Gigabit ethernet port
  - Modem port
  - Microphone in and headphone out
  - Requires 65 or 90 watt AC adapter
  - Retractable feet; 1.48 lb; 670g
- 65-watt AC Adapter
- ROHS-compliant
- International Warranty Service17
- 24 hour x 7 day18 toll-free warranty support during the warranty12

SM2 (1-2) October 2007

- Lenovo
- Intel Centrino® Duo mobile technology
- Powered by Intel Centrino® Duo mobile technology
- Intel Centrino® Duo mobile technology
### ThinkPad X60 (1708) - TopSeller - withdrawn

#### Type-model
- Processor: Core Duo T2400 (1.83 GHz)
- Memory: 512MB SDRAM 200MHz
- Display: 12.1" (308mm) XGA (1024x768)

#### Limited warranty
- This small and medium business (SMB) model is part of the US TopSeller Program
- This X60 model has a 3-year limited warranty

#### Positioning
- Thinnest and lightest; one spindle
- Processor: Intel® Core™ Duo processor T2400 (1.83GHz)
- Memory: 512MB std / 4GB max
- Diskette drive: None standard / use optional USB-based diskette drive
- EIDE Combo: None
- Ultrabay Slim: Includes Ultrabay slim devices in optional or standard X6 UltraBase
- Serial ATA disk (SATA150): 60GB
- Display: 12.1" (308mm) XGA (1024x768)
- Battery: - life 10 years

#### Software
- Windows XP Professional
- - Disk-to-Disk Recovery
- - Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Maintenance Manager
  - ThinkPlus™
  - Symantec Client Security™
  - Diskeeper Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad utilities
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picture Archiver
  - FingerPrint Software
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive
  - Letter Access (combo module)
  - InterVideo WinDVD (combo module)

#### License
- CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Battery 3-cell (flat bezel) 40Y6799
- X60 Enhanced Capacity Battery 4-cell 40Y7003
- X60 Extended Battery 4-cell 40Y6799
- X60 Extended Capacity Battery 4-cell 40Y7001

#### Fingerprint reader
- FingerPrint reader on palm rest / swipe sensor / supports the security chip

#### Limited warranty
- 3-years - battery 1-year - EasyServ™ onsite pickup and delivery / service upgrades available

### Graphics controller
- Intel® Graphics Media Accelerator 950 (GM965)
- Intel® GMA 950

### Audio support
- High Definition (HD) Audio / AD1981HD codec / mono speaker 0.5 watt / volume down,
- None

### Security chip
- Power-on password / hard disk password / supervisor password / security keyhole

### Software
- ThinkPad utilities
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picture Archiver
- FingerPrint Software
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo module)
- InterVideo WinDVD (combo module)

### License
- CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Additional features:
- Power button (front)
- Stereo speakers (1 watt)
- Security keylock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Retractable feet; 1.48 lb; 670g

### Disks supported:
- 80GB Disk 5400 rpm 41N5681
- 100GB Disk 7200 rpm 41N3013
- 120GB Disk 5400 rpm 41N5681
- 160GB Disk 5400 rpm 41N5692

### Other features:
- Provides desktop expansion and cable management for X60 Series
- Easily connect to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6861
  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8752

### Features:
- Disks supported:
  - 80GB Disk 5400 rpm 41N5681
  - 100GB Disk 7200 rpm 41N3013
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  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8752
ThinkPad X60 (1709) - TopSeller - withdrawn

**Personal Systems Reference (PSREF)**

**Type-model**  
1709-24U Core Solo T1300 1.66GHz 512MB 12.1" XGA 40GB Optional  
1709-7HU Core Duo T2400 1.83GHz 512MB 12.1" XGA 60GB Combo Optional  
1709-87U Core Duo T2400 1.83GHz 512MB 12.1" XGA 40GB Combo  
1709-96U Core Duo T2400 1.83GHz 512MB 12.1" XGA 60GB Combo  
1709-97U Core Duo T2300e 1.66GHz 512MB 12.1" XGA 100GB DVD+RW UltraBase  
1709-A7U Core Duo T2300e 1.66GHz 512MB 12.1" XGA 60GB Optional

**Processor**  
Intel Core Solo processor T1300 (1.66GHz) with single-core, Enhanced Intel SpeedStep technology. Execute Disable Bit, 667MHz bus, and 2MB L2 cache or Intel Core Duo processor T2300, T2300E, or T2400 with dual-core, Enhanced Intel SpeedStep technology. Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache.

**Memory**  
512MB or 1GB (std) 4GB max11 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual channel capable / two 200-pin SO-DIMM sockets / one socket available

**Display**  
12.1" (908mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare

**Hard Disk Drive**  
None / use optional USB-based diskette drive

**Graphics controller**  
Intel® Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 250MHz

**Windows**  
Windows XP Professional / - Disk-to-Disk Recovery

**Preloaded**  
• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• ThinkVantage Productivity Center with Maintenance Manager
• ThinkVantage System Update
• Symantec Client Security™
• Diskeeper Lite
• PC-Doctor (diagnostics)
• ThinkPad utilities
• Adobe® Reader
• Google Toolbar
• Google Desktop
• Picasa from Google
• FingerPrint Software
• Multimedia Center for Think
• Sonic RecordNow and Drive Letters Access (combo model)

**License**  
- CD not included (all)  
- Lenovo SmartSuite™ Millennium and Lenovo Notes™ Stand-alone Client

**Supported ThinkVantage technologies**

- Provides desktop expansion and cable management for X60 Series  
- Easily connects to the bottom of the X60 Series for traveling  
- Converts ThinkPad to a two-spindle system with optional flat bezel Ultrabay options in left side:  
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789  
  - ThinkPad DVD Ultrabay Slim  
  - ThinkPad X6 UltraBase™  
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y7875

**Ports**  
Four USB 2.0 ports / Serial and parallel ports / Modem port / Gigabit ethernet port / IEEE 1394 (4-pin) / no serial, parallel, keyboard, or mouse ports

**Security**  
Power-on password / hard disk password / supervisor password / security keyhole / Security chip

**Audio**  
USB 2.0 stereo audio jack / microphone in and headphone out / microphone in and headphone jack (green)

**Keyboard**  
89-key / ThinkVantage button / spell-resistant / multimedia Fn keys / Windows, Apk keys standard-size26 keys / 97% size of T Series / 18.5mm pitch; 2.5mm stroke / TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar1, magnifying glass

**TrackPoint**  
None

**ThinkLight™**  
Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**  
Thinnest and lightest; one spindle / 15 cm / 1.3 kg

**Weight**  
10.5" x 8.3" x 0.195" / 2.7 kg / 5.9 lbs / 267mm x 211mm x 420mm

**Media slice**  
Some: X6 UltraBase media slice (see right side) / Secure Digital card slot / supports SD memory cards used in consumer devices

**PC Card slot**  
One Type I or one Type II / CardBus Plus (34mm ExpressCard via adapter) / door IEEE 1394 (FireWire) port (4-pin)

**Ports**  
Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ether) / IEEE 1394 (4-pin) / no serial, parallel, keyboard, or mouse ports

**Wireless**  
UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Mini PCI Express**  
Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Modem**  
Some: 11a/b/g wireless, Mini PCI Express adapter, Intel PRO/Wireless 5300BG 11a/b/g wireless 5300BG, Mini PCI Express adapter, Intel PRO/Wireless 5300AGN 11a/b/g wireless 5300AGN B, Mini PCI Express adapter, Intel PRO/Wireless 5300AGN 11a/b/g wireless 5300AGN B 2G, Mini PCI Express adapter, Intel PRO/Wireless 5300AGN 11a/b/g wireless 5300AGN B 2G

**Video**  
65-watt AC Adapter

**Limited warranty**  
1-year - EasyServ™ onsite pickup and delivery / service upgrades available

**See footnotes for important warranty information**

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* Powered by Intel® Centrino™ Duo mobile technology

**US models withdrawn effective 2006, Aug 2007, or Oct 2007**

**SM1-3) October 2007**
<table>
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<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>UltraBase</th>
<th>X6 UltraBase</th>
<th>Limited Avail</th>
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<tr>
<td>1709-H6U</td>
<td>Core™ 2 Duo T7200</td>
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<td>12.1&quot;</td>
<td>XGA</td>
<td>120GB</td>
<td>DVD±RW</td>
<td>Finger 8-cell XP Pro 1yr Oct 06</td>
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- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This 1709 model has a 1-year limited warranty

### Positioning Processor

- **Intel® Core™ 2 Duo processor T7200** with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology. Execute Disable Bit, 667 MHz system bus, and 4MB shared L2 cache.

### Memory

- **1GB std** / **4GB max** / **PC2-5300 667MHz DDR2** / non-parity / **CL5** / dual channel capable / two 200-pin SO-DIMM sockets / one socket available

### Display

- **12.1" (308mm)** XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare

### Graphics controller

- **Intel® Graphics Media Accelerator 950 (GMA 950)** / integrated in 945GM / 250MHz

### Key Features

- UltraBase
- X6 UltraBase
- ThinkPad X6 UltraBase
- Supports UltraBase Slim models in optional or standard X6 UltraBase
- Supports 2nd disk in optional X6 UltraBase

### Software

- Windows XP Professional
  - **Microsoft® Windows® XP Professional** (Service Pack 2)
  - Disk-To-Disk Recovery

### Preloaded

- **only some listed**
  - Microsoft Office OneNote® 2003
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Maintenance Manager
  - ThinkVantage System Update
  - Symantec Client Security™
  - Diskeeper Lite
  - PC-Doctor™ (diagnostics)
  - ThinkPad utilities
  - FingerPrint Software (fingerprint models)
  - Multimedia Center for Think Offerings
  - Sonic RecordNow! and Drive
  - Citrix Access (DVD:RX)
  - InterVideo WinDVD (DVD:RX)
  - InterVideo WinDVD Creator (DVD:RX models)

### CD included

- **Microsoft Office OneNote 2003**
  - License - cd included
  - "Lotus® SmartSuite® Millennium and Lenovo Notes® Stand-alone Client

### Other Features

- Provides desktop expansion and cable management for X60 Series
- Easy connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with a physical flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 100GB Disk 7200 rpm 41N3013
  - ThinkPad X6 UltraBase
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 100GB Disk 7200 rpm 41N5691

### Other

- 80GB Disk 5400 rpm 41N5662
- 100GB Disk 7200 rpm 41N3013
- 120GB Disk 5400 rpm 41N5691
- 120GB Disk 7200 rpm 41N5692

### International Warranty Service

- 1-year EasyServ®/19 on-site pickup and delivery / service upgrades® available
- 5-year LOR 9x5 NBD 41C9173
- 2-year LOR 9x5 NBD 41C9167
- 5-year LOR 9x5 NBD 41C9163
- 5-year LOR 9x5 NBD 41C9162

### Other services

- FingerPrint reader on palm rest / swipe sensor / supports the security chip

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[SM2-2] August 2007

See footnotes for important warranty information

US model announced October 17, 2006

US model withdrawn effective August 2007
### ThinkPad X60s (1702) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Optical in UltraBase</th>
<th>ThinkPad UltraBase</th>
<th>802.11 wireless</th>
<th>WWAN wireless</th>
<th>Blue-Fingerprint reader</th>
<th>Battery</th>
<th>Workhorse Available</th>
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</thead>
<tbody>
<tr>
<td>1702-3U</td>
<td>Core Duo L2400 1.66</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>60GB</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 11a/b/g</td>
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<td>W</td>
<td>Feb 06</td>
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<td>Optional</td>
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<td>W</td>
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<tr>
<td>1702-2U</td>
<td>Core Duo L2300 1.50</td>
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<td>Optional</td>
<td>Intel 11a/b/g</td>
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<td>W</td>
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<td>1702-5HU</td>
<td>Core Duo L2400 1.66</td>
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<td>12.1&quot; XGA</td>
<td>60GB</td>
<td>Optional</td>
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<td>Intel 11a/b/g</td>
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<td>Optional</td>
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<td>Intel 11a/b/g</td>
<td>None</td>
<td>8-cell</td>
<td>W</td>
<td>Feb 06</td>
</tr>
</tbody>
</table>

### SOFTWARE

- **Windows XP Professional**
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

**Preloaded (only some listed)**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- System Migration Assistant
- Symantec™ Personal Security
- Diskeeper™ Lite
- PC-Doctor™ (diagnostics)
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Multimedia Center for Think
- ThinkPad System 7.0

**Supports ThinkVantage™ technologies**

- ThinkPad X6 UltraBase™
  - Provides desktop expansion and cable management for X60 Series
  - Easily connects to the base of the X60 Series for traveling
  - Converts ThinkPad to a two-spindle system with optional flat bezel
  - Supports ThinkVantage technologies

### Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- CD-ROM/DVD Drive (combo, DVD/CD-RW)
- Supports ThinkPad UltraBase (flat bezel)
- Supports ThinkPad X600 Series for traveling

**Disks supported (some listed):**
- 160GB Disk 7200 rpm 41N5737

**Note:** Lenovo 24 hour x 7 day toll-free warranty to tooth

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**See footnotes for important warranty information.**

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US models announced January 5, January 31, or February 26, 2006

US models withdrawn effective November 2006, August 2007, or October 2007

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Lenovo (KB1-1) October 2007

See PSREF for detailed specifications.
### ThinkPad X60s (1702) - October 2006 - withdrawn

**Type-model** | **Processor** | **Ghz** | **Memory** | **Screen** | **Optical in DiskUltraBase** | **ThinkPad Ultrabase 802.11 wireless** | **WWAN wireless tooth reader** | **Battery cells** | **EW 9-month Avail date**
---|---|---|---|---|---|---|---|---|---
1702-DSU Core Duo L2500 | 1.83 | 512MB 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Enh 4-cell EW | Oct 06
1702-DEU Core Duo L2500 | 1.83 | 512MB 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | 8-cell | EW Gbl Oct 06
1702-3WU Core Duo L2400 | 1.66 | 128MB 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Gbl Oct 06
1702-DBU Core Duo L2500 | 1.83 | 128MB 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Gbl Oct 06
1702-7EU Core Duo L2500 | 1.83 | 128MB 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Gbl Oct 06
1702-F6U Core Duo L2500 | 1.83 | 128MB 12.1" XGA | 100GB | Optional | *Intel 11a/b/g | Verizon Blue Finger 8-cell | EW Oct 06
1702-7CU Core Duo L2400 | 1.66 | 512MB 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Micro 8-cell | EW Oct 06
1702-H7U Core Duo L2500 | 1.83 | 128MB 12.1" UL XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Oct 06
1702-LG2 Core Duo L7400 1.50 | 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Gbl Mar 07
1702-LB2 Core Duo L7400 1.50 | 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Gbl Mar 07
1702-LT2 Core Duo L7400 1.50 | 12.1" XGA | 60GB | Optional | *Intel 11a/b/g | Finger 8-cell | EW Gbl Mar 07

**Positioning**

- Thinnest and lightest, one spindle
- Enhanced Intel SpeedStep technology, Execute Disable Bit, 667MHz system bus

**Processor**

- Intel Core Duo processor L2400 or L2500 with low voltage, dual-core
- Enhanced Intel SpeedStep technology
- Execute Disable Bit, 667MHz system bus
- 4MB shared L2 cache

**Memory**

- 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5
- 2 200-pin SO-DIMM sockets
- 512MB models: standard memory in 1 socket; 1 socket available
- 1GB models (taillas): std mem in both sockets (512MB each socket); no sockets avail

**Diskette drive**

- None standard / use optional USB-based diskette drive

**Ultrabay Slim**

- Supports Ultrabay Slim devices in optional or standard X6 Ultrabase

**Serial ATA disk (SATA150)**

- 6.3, 9.5, 100GB (5400 rpm) / 9.5mm high / upgradable
- 9.5mm high bay / ThinkPad Shock Mounted Hard Drive
- Active Protection System

**Display**

- Some: 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare
- Some: [UL] 12.1" (308mm) UltraLight XGA (1024x768) TFT color / 180 nits / anti-glare

**Graphics controller**

- intel Graphics Media Accelerator 950 (GMA 950) / integrated in 9545GM / 200MHz

**Graphics**

- External-External monitor support via analog D-SUB connector / no DVI-out support

**Keyboard**

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys std / 7% size of T Series / 5.5mm thick stroke

**Trackpoint**

- ThinkVantage TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

**Touchpad**

- None

**ThinkLight**

- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- without X6 UltraBase: 10.5" x 8.9" x 0.8-1.1"
- 268mm x 211mm x 20-28mm
- Models: 7CU/17U with UltraLight display and 8-cell beginning at 3.33 lb (1.51kg)
- Enhanced 4-cell: 3.04 lb (1.38kg); 8-cell: 3.53 lb (1.60kg)

**Weight**

- Case material: Color: black; All: magnesium alloy
- Battery type: Li-Ion Enhanced Cap Battery 4-cell or Li-Ion 8-cell supports optional Li-Ion Slim Line Battery 4-cell, supports optional Extended Life Battery on base (for two batteries); supports optional Ultrabay Slim battery in optional X6 UltraBase (for two batteries)
- Slim 4-cell: up to 3.2 hr; Enh 4-cell: up to 4.2 hr; 8-cell: up to 8.4 hr

**Battery**

- Lithium-ion battery

**Architecture**

- Mobile Intel 945GM Express Chipset / 82801GB ICH7-M I/O Controller Hub / Sata300, ATA-133 IDE, PCI Express x1, PCI bus, USB 2.0, IEEE 1394 (Firewire) port (4-pin)
- WXGA (1280x800) / 3.53 lb (1.60kg)
- 3.04 lb (1.38kg); 8-cell: 3.53 lb (1.60kg)
- Power-saving key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog D-SUB 15-pin or 4 USB 2.0 ports
- Gigabit ethernet port
- Gigabit ethernet port
- Modem: power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Slide or parallel ports
- Analog D-SUB 15-pin
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Retractable feet: 1.48 lb; 670g

**Software**

- Windows XP Professional

**Preloaded**

- Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Symantec Client Security
- Diskeeper Lite
- PC-Doctor (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think offerings

**License**

- CD not included
- Lotus SmartSuite Millennium and Lotus Notes Stand-alone Client

**ThinkPad X6 UltraBase**

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay expansion and travel system with optional flat bezel
- Supports ThinkVantage technologies

**Limited warranty**

- 3 years / 1-year battery - EasyServ

**See notes for important warranty information**

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**US models announced October 17, 2006 or April 3, 2007

**US models withdrawn effective July or October 2007

**Lenovo**

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[17] International Warranty Service

[18] 24 hour x 7 day toll-free warranty support during the warranty

[19] Lenovo Personal Systems Reference (PSREF)
### ThinkPad X6 UltraBase™

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel

### ThinkPad X6 UltraBase

- Supports ThinkVantage™ technologies
- Available options:
  - Batteries: 3-cell or 4-cell, OneNote 2007
  - Optical drives: DVD drive, USB ports

### Type-model Processor GHz Memory Screen Disk Ultrabay™ Wireless Finger-to-Palm Battery tooth Blue-tooth FingerPrint reader cells OneNote avail date

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Ultrabay™</th>
<th>Wireless</th>
<th>FingerTooth</th>
<th>FingerPrint reader</th>
</tr>
</thead>
<tbody>
<tr>
<td>1704-3TU</td>
<td>Core Duo L2400</td>
<td>1.66</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
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<td>Combo</td>
<td>UltraBase</td>
<td>Intel 11a/b/g</td>
<td>Finger 8-cell</td>
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<td>Intel 11a/b/g</td>
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<td>120GB</td>
<td>DVD-RW</td>
<td>UltraBase</td>
<td>Intel 11n28</td>
<td>Finger 8-cell</td>
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</tbody>
</table>

**Positioning**: Thinnest and lightest; one spindle

**Memory**: Intel® Core™ Duo processor L2400 or L2500 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology. Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

**Display**: 12.1" (308mm) XGA (1024x768) TFT color / Active Matrix / 150 nits / anti-glare

**Graphics controller**: Intel Graphics Media Accelerator 9500 (GMA 9500) / integrated in 945GM / 250MHz GMCH

**Graphics - external monitors**: UltraBase™, ThinLight™, Touch pad, Security key lock, security

**Security key lock**: Security chip

**Audio support**: High Definition (HD) Audio / AD1981HD codec / mono speaker 0.5 watt / volume down, stereo speakers (1 watt)

**Ethernet**: Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCIe x1 / PXE

**WLAN**: 802.11a/b/g wireless or 802.11n28 wireless

**Security**: Client Security Solution

**Software**: Windows XP Professional

**Preloaded (only some listed)**: Model G3U: Microsoft Office OneNote 2003

**License - CD not included**: Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**CD included (Model G3U only)**: Microsoft Office OneNote 2003

**Other features**:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw

**Limited warranty**: 3-years/1-yr battery - EasyServ™ on-site pickup and delivery / service upgrades® available

**Disks supported (some listed)**:
- 160GB Disk 7200 rpm 41N5737
- OneNote 2007

**512MB PC2-5300 DDR2 CL5 SODIMM**

<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
<th>Disk</th>
<th>Ultrabay™</th>
<th>Wireless</th>
<th>FingerTooth</th>
<th>FingerPrint reader</th>
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<tbody>
<tr>
<td>Intel® Core™ Duo processor L2400</td>
<td>1.66</td>
<td>512MB</td>
<td>12.1&quot; XGA</td>
<td>60GB</td>
<td>Combo</td>
<td>UltraBase</td>
<td>Intel 11a/b/g</td>
<td>Finger 8-cell</td>
</tr>
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</table>

See footnotes for important warranty information.

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[US models announced January 31, February 28, or October 17, 2006](#)

[US models withdrawn effective May or October 2007](#)

[Software](#)

[Preloaded](#)

[License](#)

[CD included](#)

[Other features](#)

[Limited warranty](#)

[Disks supported](#)
ThinkPad X60s (1705) - TopSeller - withdrawn

**Type-model**
- 1705-24U Core Duo L2300 1.50
- 512MB 12.1" XGA 40GB Optional
- 1280x800 wireless
- 802.11 wireless
- Blue-Fingerprint reader cells

**Positioning**
- Thinnest and lightest; one spindle
- Supports Ultrabay Slim devices in optional X6 UltraBase
- None

**Memory**
- 512MB std / 4GB max
- PCI2-5300 667MHz DDR2 / 200-pin SO-DIMM sockets / std memory in one socket
- One 1GB CL5 SODIMM

**Diskette drive**
- None standard / use optional USB-based diskette drive

**Graphics controller**
- Intel® Graphics Media Accelerator 9500 / 9500
- Integrated in 945GM

**Media**
- Optional X6 UltraBase media card
- None

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- Two Mini PCI Express slots / only 802.11 wireless, Mini PCI Express adapter, Intel PRO/Wireless 3945ABGN

**Bluetooth™**
- None

**Audio support**
- High Definition (Audio) / AD1981HD codec / mono speaker 0.5 watt / volume down, up, mute buttons / internal microphone / mic input jack (pink) / headphone jack (green)

**Security Chip**
- None

**Limited warranty**
- 1-year - EasyServ™ on-site pickup and delivery / service upgrades available

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**Software**
- Windows XP Professional
  - Microsoft Windows® XP Professional (Service Pack 2)

**Preinstalled**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Symantec™ Client Security
- Diskeeper® Lite
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offers

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

---

**Other features**
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Retractable feet; 1.48 lb; 670g

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**65-watt AC Adapter**
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

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**See footnotes for important warranty information**

*Powered by Intel Centrino® Duo mobile technology*
ThinkPad® X61 (7675) - TopSeller - withdrawn

See notes for important warranty information © Lenovo

US models announced May 31 or September 4, 2007; or January 8 or March 25, 2008

US models withdrawn effective August or December 2007, or May 2009

Preloaded operating system®
- Some: Microsoft® Windows® XP Professional with Vista® COA
- 7FU/7KU/8P/92U: Vista Basic logo
- Other Vista models: Vista Premium logo

Preloaded applications® (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Diskkeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities
- Microsoft Office 2007 Trial (60-day)
- Sonic Recording and Drive Letter Access (combo, DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

Supports ThinkVantage® technologies

ThinkPad X6 UltraBase™
- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series system
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery II-3 cell (flat) 43R9250
  - ThinkPad DVD Ultrabay Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

Disks supported:
- 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Refractile feet: 1.48 lb; 670g

65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant
RoHS-compliant
International Warranty Service® 24x7 hour x 7 day toll-free support during the warranty period® via 800-426-7378

Type-model  Processor  GHZ  Memory  Display  Disk SATA GB rpm  Optical in UltraBase  ThinkPad X6 UltraBase  Mini PCIe 802.11 wireless  Mini PCIe WWAN or Turbo  Bluetooth  Finger print reader  Battery cells  Preload  Avail date

7675-7FU  T7300  2.00  1GB  12.1" XGA 160GB 5400  > Intel 11n®  * Intel 11a/b/g®  Blue  Finger 8-cell  Home Basic Jun 07
7675-55U  T7600  2.00  2GB  12.1" XGA 160GB 5400  > Intel 11a/b/g®  Blue  Finger 4-cell  Business 32 Jun 07
7675-4KU  T7600  2.00  1GB  12.1" XGA 128GB 4000  * Intel 11a/b/g  Blue  Finger 8-cell  Business 32 Jun 07
7675-7KU  T7600  2.00  1GB  12.1" XGA 128GB 4000  * Intel 11a/b/g  Blue  Finger 8-cell  Business 32 Jun 07
7675-59U  T7600  2.00  2GB  12.1" XGA 160GB 5400  > Intel 11a/b/g®  Blue  Finger 8-cell  Business 32 Jun 07
7675-8PU  T7250  1.00  1GB  12.1" XGA 128GB 4000  * Intel 11a/b/g  Blue  Finger 8-cell  Business 32 Sep 07
7675-92U  T7500  2.20  2GB  12.1" XGA 128GB 5400 DVD:RW UltraBase  * Intel 11n  1G Turbo  Blue  Finger 8-cell  Business 32 Sep 07
7675-93U  T7500  2.20  2GB  12.1" XGA 128GB 5400 DVD:RW UltraBase  * Intel 11n  1G Turbo  Blue  Finger 8-cell  Business 32 Sep 07
7675-H7U  T8100  2.10  1GB  12.1" XGA 128GB 5400 DVD:RW UltraBase  * Intel 11n  1G Turbo  Blue  Finger 8-cell  Business 32 Sep 07
7675-HMT8U  T8100  2.10  2GB  12.1" XGA 128GB 5400 DVD:RW UltraBase  * Intel 11n  1G Turbo  Blue  Finger 8-cell  Business 32 Sep 07
7675-K2U  T8300  2.40  1GB  12.1" XGA 128GB 5400 DVD:RW UltraBase  * Intel 11n  1G Turbo  Blue  Finger 8-cell  XP Pro Feb 08
7675-K3U  T8300  2.40  2GB  12.1" XGA 128GB 5400 DVD:RW UltraBase  * Intel 11n  1G Turbo  Blue  Finger 8-cell  Business 32 Mar 08

* These small and medium business (SMB) models are part of the US TopSeller™ Program

Preloaded applications® (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Diskkeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities
- Microsoft Office 2007 Trial (60-day)
- Sonic Recording and Drive Letter Access (combo, DVD:RW)
- Corel® WinDVD® (combo, DVD:RW)

Supports ThinkVantage® technologies

ThinkPad X6 UltraBase™
- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series system
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced Ultrabay Battery II-3 cell (flat) 43R9250
  - ThinkPad DVD Ultrabay Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

Disks supported:
- 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Refractile feet: 1.48 lb; 670g

65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant
RoHS-compliant
International Warranty Service® 24x7 hour x 7 day toll-free support during the warranty period® via 800-426-7378
## ThinkPad X6 UltraBase™ Features

**Processor**
- Dual processor
- Intel® Core™ 2 Duo processor
- 12.1" XGA TFT color

**Memory**
- 1GB or 2GB std / 4GB max
- 5400 rpm (308mm)

**Graphics Controller**
- Intel Graphics Media Accelerator X3100 (GMA X3100)

**Diskette drive**
- Optional external:
  - 2GB PC2-5300 DDR2 SODIMM

**Ports**
- Two Mini PCI Express slots
- Three USB 2.0
- CardBus Plus Slot
- Serial and parallel ports
- Gigabit ethernet port

**Audio**
- Dolby®* Virtualizer 2.1 Surround
- Internal microphone, mic input jack
- High Definition (HD) Audio

**Power**
- 65-watt (GMA graphics) AC Adapter
- 250GB FDE 7200 rpm
- 320GB Disk

---

## Workhorse (W)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Optical in UltraBase</th>
<th>Mini PCIE 802.11 wireless</th>
<th>Mini PCIE WWAN or Turbo</th>
<th>Finger print Battery</th>
<th>Preload ED 9-month Global (G)</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7673-74U</td>
<td>Intel® Core™ 2 Duo processor T7250, T7300, T7500, T8100, or T8300</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA 5400</td>
<td>* Intel 4965AG®</td>
<td>* Intel 4965AG®</td>
<td>Blue Fing 8-cell</td>
<td>* XP Pro W G</td>
<td>June 07</td>
</tr>
<tr>
<td>7673-66U</td>
<td>Intel® Core™ 2 Duo processor T7250, T7300, T7500, T8100, or T8300</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA 5400</td>
<td>* Intel 4965AG®</td>
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<td>Blue Fing 8-cell</td>
<td>* XP W G</td>
<td>June 07</td>
</tr>
<tr>
<td>7673-5EU</td>
<td>Intel® Core™ 2 Duo processor T7250, T7300, T7500, T8100, or T8300</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA 5400</td>
<td>* Intel 4965AG®</td>
<td>* Intel 4965AG®</td>
<td>Blue Fing 8-cell</td>
<td>* XP W G</td>
<td>June 07</td>
</tr>
</tbody>
</table>

---

**Other accessories**
- ThinkPad X6 High Capacity 8-cell
- ThinkPad X6 UltraBase
- ThinkPad Ultrabay Slim 9-cell
- ThinkPad Advanced Ultrabay
- ThinkPlus
- Rescue and Recovery
- Client Security Solution
- Lenovo Client Security Solution
- Microsoft Office 2007 (60-day)

---

**Preload operating system**
- Microsoft Windows Vista™

---

**Preload applications**
- Microsoft Word, Microsoft Excel, Microsoft PowerPoint
- Norton Internet Security™
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™

---

**ThinkPad X6 UltraBase™**
- Provides desktop expansion and cable management for X60 Series
- Easy to connect to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel
- ThinkPad UltraSlim options in left side:
  - ThinkPad Advanced Ultrabay Battery II 3-cell (flat)
  - ThinkPad DVD UltraBase Slim Burner (flat bezel)
  - Serial Hard Drive UltraBase Slim Adapter (flat bezel)

---

**Other features**
- Speaker stereo (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Refractile feet: 1.48 lb; 670g

---

**65-watt (GMA graphics) AC Adapter**
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service™

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**Lenovo**

See footnotes for important warranty information

US models announced May 31 or October 30, 2007; or January 8 or February 19, 2008;

US models withdrawn effective June 1 May 2008, or May 2009

* Intel Centrino® processor technology
* Intel Centrino with vPro™ technology

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(SM3-2) May 2009
### ThinkPad X6 UltraBase

#### Description

**ThinkPad X6 UltraBase** is a convertible ThinkPad model that supports the X61 series. It is designed to be easy to use and offers connectivity and management features. This model is perfect for business professionals and users who need a reliable and powerful laptop that can be used in various environments.

#### Key Features

- **Convertible Design**: The X6 UltraBase is a convertible design that allows for more flexibility and ease of use.
- **Connectivity**: It supports Ultrabay Slim options in left side, system with optional flat bezel, Convert to flat bezel, X60 Series for traveling.
- **Preload**: Operating system supports Windows Vista® Professional and includes ThinkPlus® Software preloaded.
- **Security**: Includes security key lock, security keyhole, and anti-glare, 150 nits, 4:3 aspect ratio.
- **Preload**: Applications includes Rescue and Recovery™, Norton Internet Security® (90 days of virus definitions), Diskeeper® Home, and Microsoft Office 2007 Trial (60-day).

#### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Ghz</th>
<th>Memory</th>
<th>Display</th>
<th>Ultrabay™ Slim</th>
<th>Case material</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>7674-65U</td>
<td>Intel® Core™ i3-2 Duo processor T7300 with dual-core. Intel® 64 Technology, Enhanced Intel SpeedStep® technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA (1024x768) TFT color, anti-glare, 150 nits, 4:3 aspect ratio, and 800:1 contrast ratio</td>
<td>None</td>
<td>None</td>
<td>2.6 lbs; 1.19kg</td>
<td>10.6&quot; x 8.5&quot; x .80-1.39&quot;; 268mm x 211mm x 20-35mm</td>
</tr>
<tr>
<td>7674-74U</td>
<td>Intel® Core™ i3-2 Duo processor T7300 with dual-core. Intel® 64 Technology, Enhanced Intel SpeedStep® technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA (1024x768) TFT color, anti-glare, 150 nits, 4:3 aspect ratio, and 800:1 contrast ratio</td>
<td>None</td>
<td>None</td>
<td>2.6 lbs; 1.19kg</td>
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<td>7674-66U</td>
<td>Intel® Core™ i3-2 Duo processor T7300 with dual-core. Intel® 64 Technology, Enhanced Intel SpeedStep® technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA (1024x768) TFT color, anti-glare, 150 nits, 4:3 aspect ratio, and 800:1 contrast ratio</td>
<td>None</td>
<td>None</td>
<td>2.6 lbs; 1.19kg</td>
<td>10.6&quot; x 8.5&quot; x .80-1.39&quot;; 268mm x 211mm x 20-35mm</td>
</tr>
<tr>
<td>7674-4NU</td>
<td>Intel® Core™ i3-2 Duo processor T7300 with dual-core. Intel® 64 Technology, Enhanced Intel SpeedStep® technology¹, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz bus, and 4MB shared L2 cache</td>
<td>2.00</td>
<td>1GB</td>
<td>12.1&quot; XGA (1024x768) TFT color, anti-glare, 150 nits, 4:3 aspect ratio, and 800:1 contrast ratio</td>
<td>None</td>
<td>None</td>
<td>2.6 lbs; 1.19kg</td>
<td>10.6&quot; x 8.5&quot; x .80-1.39&quot;; 268mm x 211mm x 20-35mm</td>
</tr>
</tbody>
</table>

#### Additional Features

- **Ports**: Three USB 2.0, DB-15 (external VGA monitor), (34mm ExpressCard via adapter), door (see right side).
- **Serial and Parallel Ports**: One Secure Digital slot port, Polaroid print, Blackandwhite, Antennas black, with Enhanced 4-cell battery.
- **Power Supply**: Options: 250GB Disk 5400 rpm 43R8152, 320GB Disk 5400 rpm 43N3403.

### Preload Operating System

- **Some**: Microsoft® Windows® XP Professional
- **Some**: Microsoft® Windows® Vista® Business Edition (32-bit)

### Preload Applications

- **Some**: Rescue and Recovery™
- **Some**: Access Connections™
- **Some**: Client Security Solution™
- **Some**: ThinkVantage Productivity Center
- **Some**: ThinkVantage System Update
- **Some**: Norton Internet Security®
- **Some**: Diskeeper® Home
- **Some**: PC-Doctor® (diagnostics)
- **Some**: ThinkPad Utilities (Power Manager and Preprint Director)
- **Some**: Adobe® Reader
- **Some**: Microsoft Office 2007 Trial (60-day)

### Other Features

- **Some**: Stereo speakers (1 watt)
- **Some**: Security key lock, security keyhole, and optional security screw
- **Some**: Serial and parallel ports
- **Some**: Analog VGA monitor port (no DVI)
- **Some**: Four USB 2.0 ports
- **Some**: Gigabit ethernet port
- **Some**: Modem port
- **Some**: Microphone in and headphone out
- **Some**: Requires 65 or 90 watt AC adapter
- **Some**: Retractable feet: 1.48 lb; 670g

### Limited Warranty

- **3-years/1-year battery, limited onsite service**: 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available
- **65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant and RoHS-compliant
d
- **International Warranty Service**: 24 hour x 7 day 18 toll-free support during the warranty period via 800-426-7378.
# ThinkPad X61s (7669) - TopSeller - withdrawn

## Specifications

### Processor
- **Type:** Intel® Core™ 2 Duo Processor L7300 or L7500
- **Low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology,** Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800 MHz system bus, and 9.5 mm shared L2 cache

### Memory
- **1GB or 2GB standard memory in one socket**, one socket available
- **8-cell:** up to 3.5 hr; **enhanced 4-cell:** up to 12.5 hr

### Display
- **Some:** XGA (1024x768) TFT color, anti-glare, 150 nits
- **Some:** [UL] XGA (308mm) UltraLight XGA (1024x768) TFT color, anti-glare, 180 nits
  - **All:** 4:3 aspect ratio, 300:1 contrast ratio

### Graphics
- **Intel® Graphics Media Accelerator X3100 (GMA X3100)**
  - 100GB (5400), or 120GB (7200)
- **Intel® Centrino® 2 Duo Processor L7300 or L7500 with low voltage, dual-core,** Intel 64 Technology, Enhanced Intel SpeedStep® technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800 MHz system bus, and 9.5 mm shared L2 cache

### Keyboard
- **89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/App keys, standard-size™ keys**
- **97% size of T Series, 18.5mm pitch, 2.5mm stroke**

### TrackPoint®
- **Pointing device, "Press-to-Select," Internet Scroll Bar,** magnifying glass

### Touchpad
- **No pad**

### Dimensions
- **without X6 UltraBase:** Slim: 4-cell: 10.5" x 8.3" x 0.8-1.1"; 268mm x 211mm x 20-28mm
- **without X6 UltraBase:** Enh 4-cell: 10.5" x 8.3" x 0.8-1.1"; 268mm x 211mm x 20-28mm
- **without X6 UltraBase:** 8-cell: 10.5" x 9.4" x 0.8-1.4"; 268mm x 238mm x 20-35mm
- **Slim 4-cell:** from 2.73 lb (1.24kg); **Enh 4-cell:** from 2.38 lb (1.05kg); **8-cell:** 3.10 lb (1.50kg)

### Battery - type
- **Lithium Ion Slim Line Battery 4-cell (prismatic)** or **Lithium Ion 8-cell**, supports optional Extended Life Battery on base (for two batteries)
- **supports optional Extended Ultrabay Slim battery in optional X6 UltraBase** (for two batteries)

### Battery - life
- **Slim 4-cell:** up to 3.5 hr; **8-cell:** up to 9.0 hr; **8-cell and Extended Life Battery:** up to 12.5 hr

### Chipset
- **Mobile Intel GM965 Express Chipset** (Graphics Memory Controller Hub);
- **ICH8M-Enhanced I/O Controller Hub (SATA 3 Gb/s, ATA-100 IDE), PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint] / PCI bus (Ricoh® R8C87 Cardbus/1394/Multicard) / LPC bus (PC87385 Super I/O, Atmel® 97SC3203 TPM)

### Media slice
- **One X6 UltraBase media slice (see right side)**
- **No SD card support**
  - **One Slot** (Type I, Type II), **CardBus Plus** (34mm ExpressCard via adapter, door)

### Ports
- **USB 2.0, DB-15 (external VGA monitor), RJ-11 (modem), RJ-45 (ethernet), and 3.5mm FireWire 400 (4-pin connector)**

### Wireless antenna
- **Mini PCI Express**
  - **11a/b/g/n** Intel 11n
  - **Intel 11a/b/g/n** Intel 11n

### Fingerprint reader
- **Fingerprint reader on palm rest**, swipe sensor, supports the security chip

### Limited warranty
- **3-years**
  - **1-year battery - EasyServ® depot repair service / service upgrades**
  - **3-years 1-year battery - EasyServ® depot repair service / service upgrades**

### RoHS-compliant
- **Personal Systems Reference (PSREF)**

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**See footnotes for important warranty information**

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Personal Systems Reference (PSREF)

US models announced May 31 or September 4, 2007

US models withdrawn effective August 2007 or May 2009

(KB3-1) May 2009

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### Service Features
- **Access Connections**
- **Client Security Solution**
- **ThinkVantage Productivity Center**
- **System Management**
- **Norton Internet Security**
- **Diskeeper® Home**
- **PC-Doctor**

### Other features:
- **Stereo speakers (1 watt)**
- **Power-on password, hard disk password, supervisor password, optional security key**
- **Infrared port**
- **Retractable feet: 1.48 lb; 670g**

### Preloaded applications
- **Microsoft Windows® Vista® Ultimate Edition (32-bit)**
- **Microsoft Windows® Vista® Business Edition (64-bit)**
- **Microsoft Windows® Vista® Home Basic Edition (32-bit)**
- **Microsoft Windows® Vista® Home Basic Edition (32-bit)**
- **Microsoft Windows® Vista® Home Basic Edition (32-bit)**

### Disks supported:
- **Sonic RecordNow and Drive Letter**
- **Fingerprint Software**
- **Microsot Office 2007 Trial (60-day)**
- **Sonic RecordNow and Drive Letter Access (DVD: RW)**
- **Corel**
  - **DVD: DVD (RW)**

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**These small and medium business (SMB) models are part of the US TopSeller Program**

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**Preloaded operating system**
- **Some:** Microsoft® Windows® Vista®
- **Some:** Microsoft® Windows® Vista®
- **Some:** Microsoft® Windows® Vista®
- **Some:** Microsoft® Windows® Vista®
  - **7DU/85U/3HU: Vista Basic logo**
  - **45U/88U/3GU: Vista Premium logo**

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**Preloaded applications**: (all OSes; only some listed)
- **Rescue and Recovery™**
- **Access Connections**
- **Client Security Solution**
- **ThinkVantage Productivity Center**
- **System Management**
- **Norton Internet Security**
- **Diskeeper® Home**
- **PC-Doctor**

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**ThinkPad X6 UltraBase**
- **Provides desktop expansion and cable management for X60 Series**
- **Easily connects to the bottom of the X60 Series for traveling**
- **Converts ThinkPad to a two-spindle system with optional flat bezel**
  - **UltraBase options in left side:**
  - **ThinkPad Advanced Ultrabay Battery II (3-cell)**
  - **ThinkPad DVD Ultrabay Slim**

**ThinkPad X6 UltraBase**
- **ThinkPad X6 UltraBase Battery II (3-cell)**
- **ThinkPad DVD Ultrabay Slim**
- **ThinkPad X6 UltraBase Support**
- **ThinkPad Advanced Ultrabay II (3-cell)**

---

**Other features:**
- **Stereo speakers (1 watt)**
- **Security key lock, security keyhole, and optional security screw**
- **Serial and parallel ports**
- **Analog VGA monitor port (no DVI)**
- **Four USB 2.0 ports**
- **Gigabit ethernet port**
- **Modem port**
- **Microphone in and headphone out**
- **Requires 65 or 90 watt AC adapter**
- **Retractable feet: 1.48 lb; 670g**

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**65-watt (GMA graphics) AC Adapter**
- **ENERGY STAR® 4.0-compliant RoHS-compliant**

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**International Warranty Service**
- **24 hour x 7 day toll-free support during the warranty period**
ThinkPad X61s (7666) - withdrawn

Personal Systems Reference (PSREF)  Lenovo

ThinkPad

Fingerprint reader

Modem

WWAN upg

Weight

ThinkLight

Keyboard

Graphics - external

Display

Chipset

Port

Security chip

Fingerprint reader

Limited warranty

3-years/1-yr battery - EasyServ™ depot repair service / service upgrades™ available

PSType-model Low Voltage processor GHz Memory Display Disk SATA GB rpm Optical in UltraBase X6 UltraBase Mini PCIe 802.11 wireless Mini PCIe WWAN or UltraBase Finger Battery-workprint reader cells Workhorse (W) Preload Global (G) Avail date

7666-34U L7500 1.60 1GB 12.1" XGA 80GB 5400 *Intel 965AG

7666-36U L7500 1.60 1GB 12.1" XGA 1240 *Intel 4965AG

7666-47U L7500 1.60 1GB 12.1" XGA 160G 5400 *Intel 11a/b/g/z2 Verizon

7666-76U L7300 1.40 512M 12.1" UL XGA 80G 5400 *Intel 11a/b

7666-54U L7500 1.60 1GB 12.1" XGA 80G 5400 *Intel 11a/b

7666-43U L7500 1.60 1GB 12.1" XGA 1240 5400 DVD±RW UltraBase *Intel 11a/b/g AT&T

7666-3FU L7500 1.60 1GB 12.1" XGA 80G 5400 *Intel 4965AG

7666-3E6U L7500 1.60 1GB 12.1" XGA 1240 *Intel 4965AG

7666-B7U L7500 1.60 1GB 12.1" XGA 1240 *Intel 4965AG

7666-BLU L7500 1.60 2GB 12.1" XGA 160G 7200 *Intel 4965AG 1G Turbo

7666-48U L7500 1.60 1GB 12.1" XGA 1240 5400 *Intel 4965AG

Processor

Intel® Core™ 2 Duo processor L7300, L7500, or L7700 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

Memory

512MB, 1GB, or 2GB std / 4GB max

Diskette drive

None (use optional USB-based diskette drive)

EIDE DVD±RW

UltraBay™ Slim

Serial ATA disk

80GB (5400 rpm), 100GB (7200 rpm), 120GB (5400, or 160G) (5400 or 7200 rpm) / SATA 1.5Gbit/s, 9.5mm, upgradeable, supports 2nd disk and optional X6 UltraBase, ThinkPad Shock Mounted Hard Drive, Active Protection System

Display

Some: 12.1" (308mm) XGA (1024x768) TFT color, anti-glare, 150 nits

Some: [UL] 12.1" (308mm) Ultralight X6 (1024x768) TFT color, anti-glare, 180 nits

Printable aspect ratio, 300:1 contrast ratio

Graphics controller

Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

Graphics - external

External VGA monitor support via analog DB-15 connector / no DVI-out support

Keyboard

89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows/Apps keys, standard-size™ keys 97% size of T Series, 19.5mm pitch, 2.5mm height

TrackPoint®

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touchpad

None

ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

without X6 UltraBase: Slim 4-cell: 10.5" x 8.3" x 0.8-1.1"; 268mm x 211mm x 20-28mm without X6 UltraBase: En viron 4-cell: 10.5" x 8.3" x 0.8-1.1"; 268mm x 211mm x 20-25mm

Weight

Slim 4-cell: from 2.73 lb (1.24kg); Environ 4-cell: from 2.83 (1.28kg); 8-cell: 3.30 lb (1.50kg)

Battery - type

Lithium Ion Slim Line Battery 4-cell (prismatic) or Lithium Ion 8-cell; supports optional Extended Life Battery on base (for two batteries); supports optional UltraBay Slim battery in optional X6 UltraBase (for two batteries)

Battery - life

Slim 4-cell: up to 5.5 hr; 8-cell: up to 9.0 hr; 8-cell and Extended Life Battery: up to 12.5 hr

Chipset

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH6M-Enhanced I/O Control Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint], / PCI bus (Ricoh® R8C847 Cardbus/1394/Multicard) / LPC bus (PC87385 Super I/O, Atmel® 97SC3203 TPM)

Media slice

Some: X6 UltraBase media slice (see right side)

Secure Digital slot

Some: Secure Digital slot, supports SD memory cards used in consumer devices

PC Card slot

One Secure Digital Card slot, supports SD memory cards used in consumer devices

Ports

Some: Two Mini PCI Express slots

Some: Two Mini PCI Express slots

Mini PCI Express

Intel 11a/b/g/z2

Intel 4965AG

Intel 11a/b/g/z2

Intel 4965AG

None

Some: Wireless WAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI adapter, EV-DO Rev. A, rod antenna, service contract req'd with Verizon

Some: Wireless WAN, GPRS/EDGE/UMTS/HSDPA support, Mini PCI adapter and SIM, rod antenna, service contract req'd with AT&T

1G Turbo

Some: Intel Turbo Memory, Mini PCI adapter, 1GB flash, disc-cache accelerator

Modem

56k V.92™ modem in Communications Daughter Card

Bluetooth™

Bluetooth 2.0 wireless, USB 2.0 interface SDIO, Flash, LED indicator

Ethernet

Gigabit ethernet, Intel 82566MEM Nineveh (PHY), PCIe x1, PXE

Audio support

Intel Active Management Technology (IATM)

High Definition (HD) Audio, AD1984 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal microphone, mic input jack (black), headphone jack (green)

Power-on password, hard disk password, supervisor password, security keyhole

Some: FingerPrint Software

Fingerprint reader

Some: FingerPrint reader on palm rest

24 hour x 7 day toll-free support

US models announced May 31, October 30, 2007 or February 19, 2008

US models withdrawn effective Sept 2007, Jan, May 2008 or May 2009

* Intel Centrino® processor technology

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Preloaded operating system

- Some: Microsoft® Windows® XP Professional
- Some: Microsoft Windows Vista Business Edition (64-bit)

- 2GB models: Vista Premium logo
- Other Vista models: Vista Basic logo

Preloaded applications (all OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Norton Internet Security™
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- Some: FingerPrint Software
- Microsoft Office 2007 Trial (30-day)
- Sonic RecordNow and Drive Letter Access (DVD±RW)
- Corel® WinDVD™ (DVD±RW)

Supports ThinkVantage™ technologies

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel
- Ultrabay Slim options in left side:
  - ThinkPad Advanced UltraBay Battery II (4392950)
  - ThinkPad DVD UltraBay Slim Burner (flat bezel) 41NS5643
  - Serial Hard Drive UltraBay Slim Adapter (flat bezel) 40Y8725

Disks supported:

- 250GB FDE 7200 rpm 43NS410
- 320GB Disk 7200 rpm 43NS411

Other features:

- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog Voice modem (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modern port
- Microphone and headphone output
- Requires 65 or 90 watt AC adapter
- Retractable feet; 1.48 lb; 670g

65-watt (GMA graphics) AC Adapter ENERGY STAR® 4.0-compliant

RoHS-compliant

International Warranty Service17 24 hour x 7 day toll-free support during the warranty period18 via 800-426-7378

See footnotes for important warranty information

® Trademarks or registered trademarks of Lenovo or its subsidiaries

TM Trademarks of Lenovo or other companies

TM Registered trademark of Microsoft Corporation

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Copyright (K3B-3) May 2009
**ThinkPad® X61s (7667) - Onsite - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>7667-34U</td>
<td>L7500 1.60 1GB 12.1&quot; XGA 80GB 5400 Optional # Intel 4965AG® None</td>
</tr>
<tr>
<td>7667-36U</td>
<td>L7500 1.60 1GB 12.1&quot; XGA 80GB 5400 Optional # Intel 4965AG® None</td>
</tr>
<tr>
<td>7667-3FU</td>
<td>L7500 1.60 1GB 12.1&quot; XGA 80GB 5400 Optional # Intel 4965AG® None</td>
</tr>
</tbody>
</table>

*These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

**Processor**

Intel® Core™ 2 Duo processor L7500 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

**Memory**

1 GB std / 4 GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, 200-pin SO-DIMM sockets

**Diskette drive**

None (use optional USB-based diskette drive)

**UltraBay™ Slim Serial ATA disk**

Supports UltraBay Slim devices in optional X6 UltraBase

**Weight**

10.5" x 8.3" x 0.8-1.1"; 268mm x 211mm x 20-35mm

**Chipset**

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub);ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE PCI Express® x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricochet® RSC847 Cardbus/1394/Multicard) / LPC bus (PC87385 Super I/O, Amel® 97SC3203 TPM)

**Battery - life**

Slim 4-cell: up to 3.5 hr; 8-cell: up to 9.0 hr; 8-cell and Extended Life Battery: up to 12.5 hr

**Limited warranty**

3-years/1-year battery, limited onsite service® 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

**ThinkPlus® 4-year LOR® 9x5 NBD 12X560 43R2162 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

**Workhorse (W) Global (G) GMP (P) Availability**

- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07
- Finger 8 Business 32 W G P Jun 07

Preloaded operating system®

- Some: Microsoft® Windows® XP Professional

Preloaded applications® (all OSeS; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security™
- ThinkVantage Productivity Center
- Norton Internet Security™
- DiskKey
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Some: Fingerprint Software

**ThinkPad X6 UltraBase™**

- Provides desktop expansion and cable management for X60 Series
- Easily connects to the bottom of the X60 Series for traveling
- Converts ThinkPad to a two-spindle system with optional flat bezel

**Other features:**

- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port
- Modem port
- Microphone in and headphone out
- Requires 65 or 90 watt AC adapter
- Retractable feet: 1.48 lb; 670g

- 65-watt (GMA graphics) AC Adapter
- ENERGY STAR®
- ROHS-compliant
- International Warranty Service®

See footnotes for important warranty information © Lenovo

US models announced May 31, 2007

US models withdrawn effective May 2008 or May 2009

(KB3-3) May 2009

© Lenovo
### X60 and X61 Series Accessories

#### Partial list of accessories supported:
- **ThinkPad X60 originally announced January 5, 2006**
- **ThinkPad X60s originally announced January 5, 2006**
- **ThinkPad X61 originally announced May 31, 2006**
- **ThinkPad X61s originally announced May 31, 2007**

#### Memory
- 512MB PC2-5300 DDR2 SODIMM 40Y7733
- 1GB PC2-5300 DDR2 SODIMM (TopSeller) 43R1999
- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM (TopSeller) 43R2000
- 2GB PC2-5300 DDR2 SODIMM 40Y7735

#### Ultrabay Slim 9.5mm
- (best to use flat bezel options)
- Most Ultrabay Slim options supported in X6 Ultrabase

#### Ultrabay Enhanced 12.7mm
- None

#### Storage and removable storage
- 160GB Disk SATA 1.5GB/s (5400 rpm) 41N6992
- 160GB Disk SATA 1.5GB/s (7200 rpm) 41N6737
- 250GB Disk SATA 1.5GB/s (5400 rpm) 43R6819
- 250GB Disk FDE SATA 1.5GB/s (7200 rpm) 43N3410
- 320GB Disk SATA 1.5GB/s (5400 rpm) 43N3403
- 320GB Disk SATA 1.5GB/s (7200 rpm) 43N3411

#### Partial list of accessories supported on:
- **USB 2.0 Lenovo Webcam 40Y8519**
- **Multimedia**
- **PC Card Gemplus Smart Card Reader 41N3040**
- **USB Gemplus GemPC Smart Card Reader 41N3040**
- **Security**
- **Kensington® Cable Lock from Lenovo 73P2582**
- **Kensington Twin Head Cable Lock 45K1620**
- **USB Gemplus GemPC Smart Card Reader 41N3040**
- **PC Card Gemplus Smart Card Reader 41N3040**
- **Multimedia**
- **USB 2.0 Lenovo Multimedia Headset 40Y8518**
- **USB 2.0 Lenovo Webcam 40Y8519**

#### Batteries
- **X60s only:** X60 Slim Line Battery 4-cell (prismatic) 40Y6999

#### All models:
- X60 Enhanced Cap Battery 4-cell (cylindrical) 40Y7001
- X60 High Capacity 8-cell (cylindrical) 40Y7002
- X60 Extended Life Battery 40Y7005

#### ThinkPad External Battery Charger
- Requires the ThinkPad 90W AC Adapter 40Y7659

#### ThinkPad 65W AC Adapter 40Y7696
- **ThinkPad 90W AC Adapter 40Y7659**
- **ThinkPad 90W Slim AC/DC Combo Adapter 41N8460**

#### Belkin 1 Outlet Notebook Surge 31P7658
- **Belkin Universal Notebook Travel Surge 22P7127**
- **Belkin Surge Protector 31P7659**

#### Carrying Cases
- **Up to 13.3" widescreen models:** ThinkPad Ultraportable Case 41U5062
- **Up to 14.1" widescreen models:**
  - ThinkPad Expander Case 43R9118
  - ThinkPad Women's Microfiber Tote 22P8855
  - ThinkPad Convertible Carrying Case 22P8860
  - ThinkPad Women's Executive Leather Tote 22P8857
  - Women's Executive Red Leather Tote 22P8858

#### Up to 15.4" widescreen models:
- Lenovo Carrying Case - Messenger Max 41U5253
- Lenovo Case - Performance BackPack 41U5254
- Lenovo Standard Case 45K1697
- Lenovo Standard Backpack 45K1698
- Checkpoint Friendly Business Topload Case 51J0418
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business Backpack 43R2482
- ThinkPad Deluxe Expander Case 43R2478
- ThinkPad Executive Leather Case 43R2480

#### Up to 17.0" widescreen models:
- ThinkPad 17W Business Topload Case 43R9117

#### Monitors
- ThinkVision® L174 17" Monitor 9227AE1
- ThinkVision L1700p 17" Monitor 9417HE2
- ThinkVision L1900p 19" Monitor 4431HE1
- ThinkVision L1940p Wide 19" Monitor 4434HB6
- ThinkVision L200p Wide 20.1" Monitor 4434HB5
- ThinkVision L2240p Wide 22" Monitor 4422HB6
- ThinkVision L2440p Wide 24" Monitor 4420HB2
- ThinkVision L2440x Wide 24" Monitor 4421HB2

#### Monitor Accessories
- ThinkVision USB Soundbar 40Y7616
- ThinkVision Soundbar 45K1263
- ThinkPad Convertible Monitor Stand 40Y7620
- **Radial Arm 19K4464**

- **Compatible on selected Lenovo and ThinkVision monitors.**

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

**ThinkPad X6 Tablet (6363) - withdrawn**

**Type-model** | Processor | GHz | Memory | Screen | Ultrabay Disk | SSD | Wwan wireless | WWAN Blue-tooth | Finger Print Reader | Battery | WH Gbl | TAA | Date
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
6363-46U | Core Duo L2400 1.66 GHz | 1GB | 80GB | XGA | None | None | None | None | None | None | Dec 06
6363-54U | Core Duo L2500 1.83 GHz | 1GB | 60GB | XGA | None | None | None | None | None | None | Dec 06
6363-64U | Core Duo L2500 1.83 GHz | 1GB | 60GB | XGA | None | None | None | None | None | None | Dec 06
6363-A7U | Core Duo L2500 1.83 GHz | 1GB | SXGA+ | 80GB | None | None | None | None | None | None | Jun 06
6363-85U | Core Duo L2500 1.83 GHz | 1GB | XGA Touch | 80GB | None | None | None | None | None | None | Jun 06
6363-34U | Core Duo L2400 1.66 GHz | 512MB | 60GB | XGA | None | None | None | None | None | None | Feb 07
6363-A8U | Core Duo L2500 1.83 GHz | 1GB | SXGA+ | 80GB | None | None | None | None | None | None | Feb 07
6363-28U | Core Duo L2600 2.00 GHz | 1GB | SXGA+ | 80GB | None | None | None | None | None | None | Feb 07
6363-65U | Core Duo L2500 1.83 GHz | 1GB | XGA | 80GB | Combo UltraBase | None | None | None | None | None | Dec 06
6363-4GU | Core Duo L2500 1.83 GHz | 1GB | XGA | 80GB | None | None | None | None | None | None | Dec 06

**Positioning**

4GU: US Government model (Trade Act Agreement-compliant)

**Memory**

512MB or 1GB std / 4GB max / PCC-5300 665MHz DDR2 / non-parity / CLS / dual-channel capable / 200-pin SO-DIMM sockets / (italics) standard memory in both sockets; no sockets available; some: standard memory in 1 socket; 1 socket available

**Ultrabay™ Slim**

Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

**Display**

Some: 12.1" (307mm) XGA (1024x768) TFT color / 4.3 / 185 nits / 170° viewing

**Battery**

Li-ion 4-cell or 8-cell / supports optional Extended Life Battery for two batteries / supported optional Ultrabay Slim battery in optional X6 Tablet UltraBase

**Chipset**

Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GB ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint]) / PCI bus (Ricoh® R8543 / CardBus/1394/SD controller) / LPC bus (PC87382 Super I/O, Atmel® 9753C302TP)

**Media slice**

Neon: ThinkPad X6 Tablet UltraBase (see right side)

**Ports**

Three USB (version 2.0) / external DB-15 monitor port / infrared (4Mbps) / RJ-11 (modem) / Ethernet (IEEE 802.3)/ IEEE 1394 port (4-pin) / no serial, parallel, keyboard/mouse ports

**Wireless antenna**

UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios

**Software**

Supports ThinkVantage™ technologies

- Provides desktop expansion and cable management for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel Ultrabay Slim options in right side:
  - ThinkPad Advanced Ultrabay Batteries (3-cell flat bezel) 40Y6789
  - CD-ROM/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6621
  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y6725
  - SATA disks supported (some):
    - 100GB Disk 7200 rpm 41N3013
    - 160GB Disk 7200 rpm 41N373
    - 250GB Disk 5400 rpm 43R8152

Supports Windows XP Tablet

- Microsoft Windows® XP Tablet PC Edition 2005
- Disk-to-Disk Recovery

Preloaded

- Model 34U: Microsoft Office OneNote 2003
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec Client Security™
- PC-Doctor™ (diagnostics)
- Some: Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

Free trial

- Zino Reader

CD included

- Model 34U: Microsoft Office OneNote 2003

See footnotes for important warranty information

* Intel Centrino® processor technology

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US models announced November 14, 2006 or February 22, 2007

US models withdrawn effective July 2007, Nov 2007, or April 2008

[1] Lenovo
## ThinkPad X6 Tablet (6363) - February 2007 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>6363-38U</td>
<td>Core Duo L2400</td>
<td>1.66</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
</tr>
<tr>
<td>6363-4JU</td>
<td>Core Duo L2400</td>
<td>1.66</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
</tr>
<tr>
<td>6363-5AU</td>
<td>Core Duo L2400</td>
<td>1.66</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
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<tr>
<td>6363-9CU</td>
<td>Core Duo L7400</td>
<td>1.50</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
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<td>6363-2AU</td>
<td>Core Duo L2400</td>
<td>1.66</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
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<tr>
<td>6363-J3U</td>
<td>Core 2 Duo L7400</td>
<td>1.50</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
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<tr>
<td>6363-5JU</td>
<td>Core Duo L7400</td>
<td>1.50</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
</tr>
<tr>
<td>6363-4JU</td>
<td>Core 2 Duo L7400</td>
<td>1.50</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
</tr>
</tbody>
</table>

- **Windows XP Tablet**
  - Microsoft Windows XP Tablet PC Edition 2005®
  - Preloaded
    - Microsoft Education Pack
    - Microsoft Experience Pack
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center with Away Manager
    - ThinkVantage System Update
    - Symantec® Client Security™
    - Diskeeper® Lite
    - PC Doctor® (diagnostics)
    - ThinkPad Utilities (Power Manager and Presentation Guide)
    - Adobe® Reader
    - Windows Live™ Toolbar
    - Windows Live Search
    - Picasa from Google
    - Some: Fingerprint Software
    - InterVideo VirtualDrive CD/DVD Emulator
  - Free trial
    - Zinio Reader

- **Lenovo License**
  - CD (not included)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Limited warranty

- 3-years/1-year battery - EasyServ® onsite pickup and delivery - service upgrades available

### baptized limitations

- 2-way swipe sensor / supports the security chip
- 6- or 90-watt AC adapter
- 1.48 lb: 670g

---

**Note:**

- *Powered by Intel® Centrino® Mobile technology*
- Lenovo

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**See footnotes for important warranty information**

- Lenovo

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**US models announced February 27 or April 3, 2007**

**US models withdrawn effective July or November 2007**

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**Personal Systems Reference (PSREF)**

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**SOFTWARE**

- Windows XP Tablet
  - Microsoft® Windows® XP Tablet PC Edition 2005®
  - Preloaded
    - Microsoft Education Pack
    - Microsoft Experience Pack
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center with Away Manager
    - ThinkVantage System Update
    - Symantec® Client Security™
    - Diskeeper® Lite
    - PC Doctor® (diagnostics)
    - ThinkPad Utilities (Power Manager and Presentation Guide)
    - Adobe® Reader
    - Windows Live™ Toolbar
    - Windows Live Search
    - Picasa from Google
    - Some: Fingerprint Software
    - InterVideo VirtualDrive CD/DVD Emulator
  - Free trial
    - Zinio Reader

---

**Lenovo License**

- CD (not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

---

**Supports ThinkVantage® technologies**

- Provides desktop expansion and cable mgmt for X60 Tablet
- Connects to the bottom of the tablet
- Converts tablet to a two-piece system with optional flat bezel
- Ultrabase Slim options in right side:
  - ThinkPad Advanced Ultrabase
  - Battery 3-cell (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabase
  - ThinkPad DVD Ultrabase
  - ThinkPad DVD Ultrabase
  - ThinkPad Dual Battery Slim Drive (flat bezel) 40Y8621
  - ThinkPad DVD Ultrabase
  - ThinkPad DVD Ultrabase
  - ThinkPad Dual Battery Slim Drive (flat bezel) 40Y8725

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**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Two USB 2.0 ports
- Ethernet (IEEE 802.11b/g)
- Gigabit Ethernet port (RJ-45)
- Modem port (RJ-11)
- Microphone and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb: 670g

---

**Lenovo (D1-8) October 2007**
ThinkPad X6 Tablet (6363) - Education - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Type-model | Processor | GHz | Memory | Screen | SATAs | Optical in X6 Tablet | UltraBase | UltraBase | 802.11 | WWAN | Blue- | Finger- | Limited | Gb | Avail date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | warranty | date
6363-R3U | Core Duo L2400 | 1.66 | 1GB | 12.1" TN XGA | Touch | Optional | Optional | Intel 11a/b/g | None | Blue | Finger | EasyServ WH Apr 07
6363-G4U | Core Duo L2400 | 1.66 | 1GB | 12.1" TN XGA | Touch | Optional | Optional | Intel 11a/b/g | None | Blue | Finger | EasyServ WH Apr 07
6363-ADU | Core Duo L2500 | 1.83 | 1GB | 12.1" XGA | Touch | Optional | Optional | Intel 11a/b/g | None | Blue | Finger | EasyServ Dec 06
6363-8DU | Core Duo L2500 | 1.83 | 1GB | 12.1" XGA | Optional | Optional | Intel 11a/b/g | None | Blue | Finger | EasyServ WH Dec 06
6363-6DU | Core Duo L2500 | 1.83 | 1GB | 12.1" XGA | Optional | Optional | Intel 11a/b/g | None | Blue | Finger | EasyServ WH Dec 06

*These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty
These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor Convertible tablet: one spindle
   Intel® Core™ Duo processor L2400 or L2500 with low voltage, dual-core,
   Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus,
   and 2MB shared L2 cache

Memory
   1GB std | 4GB max | PC2-5300 667MHz DDR2 | non-parity | CL5 | dual-channel capable | two 200-pin SO-DIMM sockets

Ultrabay™ Slim
   Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase
   80GB (5400 rpm) | 9.5mm high | removable and upgradeable | 9.5mm high bay | Touch
   Top: 12.1" (307mm) XGA (1024x768) | 12.1" (307mm) SXGA+ (1400x1050) | Touch: 12.1" (307mm) T"XGA (1024x768) | Touch: 12.1" (307mm) T"XGA (1024x768) | MultiView (touchscreen via finger and pen)

Display
   Some: 12.1" (307mm) T"XGA (1024x768) T"FT color | 4.3 / 190 nits / 100° viewing
   Some: 12.1" (307mm) SXGA+ (1400x1050) T"FT color | 4.3 / 185 nits / 170° viewing
   Some: 12.1" (307mm) T"XGA (1024x768) T"FT color | 4.3 / 170 nits / 170° viewing
   Touch: 12.1" (307mm) T"XGA (1024x768) T"FT color | 4.3 / 155 nits / 100° viewing
   MultiView (touchscreen via finger and pen)

Ultrabay™ Slim
   Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase
   Supports 2nd disk in optional X6 Tablet UltraBase

SATA disk | Optical in X6 Tablet | UltraBase | UltraBase | 802.11 | WWAN | Blue- | Finger- | Limited | Gb | Avail date
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | warranty | date
6363-R3U | ThinkPad X6 Tablet UltraBase | 41U3120
6363-G4U | ThinkPad X6 Tablet UltraBase | 41U3120
6363-ADU | ThinkPad X6 Tablet UltraBase | 41U3120
6363-8DU | ThinkPad X6 Tablet UltraBase | 41U3120
6363-6DU | ThinkPad X6 Tablet UltraBase | 41U3120

Wireless antenna
   8-cell: 802.11a/b/g
   4-cell: Bluetooth
   USB 2.0: Lenovo Multimedia Headset
   3G: Lenovo Mobile (CD not included)
   License: Adobe Premiere Elements
   Adobe Photoshop Elements plus
   Preloaded: Lotus® Sm@rtSuite, Lotus® Notes® Stand-alone Client

Software
   Windows XP Tablet
      - Microsoft® Windows® XP Tablet PC Edition 2005
      - Microsoft Office OneNote® 2003
      - ThinkPlus 3-year LOR 9x5 NBD 41C9176
      - ThinkVantage System Update
      - Symantec Client Security
      - Access Connections
      - Preloaded: Lotus® Sm@rtSuite, Lotus® Notes® Stand-alone Client
      - Docking station
      - Lenovo DVD Ultrabay Slim Burner (flat bezel)
      - Lenovo DVD Ultrabay Slim Adapter (flat bezel)

Audio
   8-cell: ThinkPad External Battery
   ThinkPad External Battery
   Power-on password / hard disk password / supervisor password / security keyhole
   Power button (front)

Security
   Security chip: Trusted Platform Module
   Finger print reader: fingerprint reader right base of device / use in tablet or notebook mode / 2-way swipe sensor / supports the security chip

Limited warranty: 3-years/1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

See footnotes for important warranty information

* Powered by Intel® Centrino® Duo mobile technology
© Lenovo

US models withdrawn effective July 2007

(DL1-5) August 2007
ThinkPad® X6 Tablet (6363) - Education (Vista™) - withdrawn

Type-model | Processor | GHz | Memory | Screen | SATA disk | Optical in X6 Tablet UltraBase | 802.11 wireless | WWAN wireless | Blue-tooth | Fingerprint reader | Limited warranty | Educ | Avail | Preload date
---|---|---|---|---|---|---|---|---|---|---|---|---|---
6363-R5U Core Duo L2400 | 1.66 | 1GB | 12.1" TN XGA Touch | 80GB | Optional | Optional | 11a/b/g | None | Blue | FingerServ HE | Apr 07 | Blue | FingerServ HE Apr 07
6363-G5U Core Duo L2400 | 1.66 | 1GB | 12.1" TN XGA Touch | 80GB | Optional | Optional | 11a/b/g | None | Blue | FingerServ K12 Apr 07
6363-R6U Core Duo L2400 | 1.66 | 1GB | 12.1" TN XGA Touch | 80GB | Optional | Optional | 11a/b/g | None | Blue | FingerServ HE Apr 07
6363-G6U Core Duo L2400 | 1.66 | 1GB | 12.1" TN XGA Touch | 80GB | Optional | Optional | 11a/b/g | None | Blue | FingerServ HE Apr 07

• These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty.
These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor | Convertible tablet: one spindle Intel® Core™ Duo processor L2400 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology1, Execute Disable Bit, 667MHz system bus, and 52Mb shared L2 cache

Memory | 1GB std / 4GB max2 / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / std mem in both sockets (512MB each socket); no sockets available

Ultrabay™ Slim Serial ATA disk (SATA150) | Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

Display | 8-cell: 12.1" (307mm) TN XGA (1024x768) TFT color / 430 / 190 nits / 100 viewing angle
Touch: 12.1" (307mm) TN XGA (1024x768) TFT color / 435 / 155 nits / 100 viewing angle

All: Twisted Nematic (TN) anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) / picture frame mode (keyboard faces away from user) / buttons on display bottom / power, lock, reboot, utility, Esc, Del, Enter

Battery - life | up to 6.5 hr; (for two batteries)

Graphics | Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

License | - CD not included
- Lotus® Notes® Stand-alone Client

Other accessories at ThinkPlus
- 3-year LOR 9x5 NBD 41C9175
- 22 2-year LOR 9x5 NBD 41C9176

Preloaded applications14 (only some listed)
- Some (K12): K-12 educ software
- VitalSource Library School Edition
- Adobe® Instructor Resource Center
- Adobe Digital School Collection
- - Photoshop Elements 5 (and CD)
- - Photoshop Elements 5 (and CD)
- - Premier Elements 3 (and DVD)
- - Acrobat 8 Professional (and CD)
- - Contributs 4 (and CD)
- Some (HE): Higher education software
- VitalSource Library College Edition
- Adobe® Instructor Resource Center
- Adobe Elements 5 (and CD)
- Adobe Premier Elements 3 (and CD)
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections3
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Lenovo Multimedia Center
- Norton Internet Security
- Discokey™ Home
- PC-Doctor™ (diagnostics)
- InteVideo VirtualDrive CD/DVD Emulator

Preloaded operating system10

Notes
- CD not included

Other features:
- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog 15-pin monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb; 670g

65-watt AC Adapter

See footnotes for important warranty information
US models announced April 10, 2007
US models withdrawn effective July 2007

Lenovo
(DL1-11) August 2007

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)
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<td>Verizon Blue Finger Yes WH Dec 06</td>
<td>6363-7BU Core L2400 1.66</td>
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**Software**

- Windows XP Tablet
  - Disk-to-Disco Recovery

**Preloaded**

- Some: Microsoft Office OneNote 2003
- Some: Microsoft Education Pack
- Some: Microsoft Experience Pack
- Some: Rescue and Recovery
- Access Connections
- Client Security Solution
- ThinkVantage Productivity Center
- *ThinkVantage System Update*
- System Migration Assistant
- *Symantec Client Security*
- *Diskeeper* Lite
- *PC-Doctor* (diagnostics)
- *Microsoft* Office OneNote 2003

**Free trial**

- *Zino Reader*

**CD included**

- *Microsoft Office OneNote 2003*

**Benefits**

- Provides desktop expansion and cable mgmt for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel
- Ultrabay Slim options in right side:
  - ThinkPad X6 Tablet
  - Battery 3-cell (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6821
  - DVD-ROM Ultrabay Slim Drive (curved bezel) 73P3270
  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5643
  - Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

**SATA disks supported**

- 100GB Disk 7200 rpm 41N3013
- 160GB Disk 7200 rpm 4IN73T
- 250GB Disk 5400 rpm 43R8152

**Other features**

- Power button (front)
- Stereo speakers (1 watt)
- Security keyhole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- 3-pin power port
- Gigabit ethernet port (RJ-45)
- Modem port (RJ-11)
- Microphone in and headphone out
- 65-watt AC Adapter

For more information, visit [Lenovo's official site](https://www.lenovo.com).
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- These models have a limited onsite service; a 3-year limited warranty

**Positioning Processor**

Convertible tablet: one spindle

Intel® Core™ Duo processor L2400 with low voltage, dual-core, Enhanced Intel SpeedStep™ technology¹, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

**Memory**

1GB std / 4GB max² / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

**Ultrabay™ Slim Serial ATA disk (SATA150)**

Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

**Display**

Some: 12.1” (307mm) XGA (1024X768) TFT color / 4.3 / 185 nits / 170° viewing
Some: 12.1” (307mm) SXGA+ (1400x1050) TFT color / 4.3 / 180 nits / 170° viewing
Touch: 12.1” (307mm) XGA (1024X768) TFT color / 4.3 / 150 nits / 170° viewing / MultiView (indoor/outdoor), MultiTouch (touchscreen via finger and pen)
All: Super Wide Angle FFS / anti-reflective and glare-protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and slide bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, NavDial/enter)

**Graphics**

Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

**Keyboard TrackPoint**

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**Dimensions**

8-cell: 10.8” x 10.5” x 1.1-1.3”; 274mm x 267mm x 27.4-33.1mm
8-cell: 4.2 to 4.6lb (1.9 to 2.1kg)

**Battery - type**

Color: black; All: magnesium alloy

**Battery - life**

8-cell: up to 7.5 hr; with 8-cell and Ultrabay Slim: up to 8.5 hr; with 8-cell and optional Extended Life Battery: up to 9.5 hr

**Architecture**

Mobile Intel® 945GM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATAPI-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint]) / PCI bus (Ricon® R5849 / CardBus/1394/SD controller) / LPC bus (PC87362 Super I/O, Atmel® 9753C3203 TPM)

**Media slice**

Optional ThinkPad X6 Tablet UltraBase (see right side)

**Security**

ThinkPad Security Manager (TPM)

**Wireless antenna**

UltraConnect² antenna built into the display cover / on-off switch for all wireless radios

**Windows XP Tablet**

- Provides desktop expansion and cable mgmt for X6 Tablet
- Connects to the bottom of tablet

**Connects to a two-stage system with optional flat bezel Ultrabay Slim options in right side:**

- ThinkPad Advanced Ultrabay
  - Battery 3-cell (flat bezel) 40Y6789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y6821
- ThinkPad DVD Ultrabay Slim
  - Burner (flat bezel) 41N5643
- Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
  - SATA disks supported (some):
- Analog DB-15 monitor port (no DVI)
- Analog DB-15 monitor port (no DVI)
  - 60GB Disk 7200 rpm 41N3012
  - 80GB Disk 5400 rpm 41N5662
  - 100GB Disk 7200 rpm 41N3013

**Software**

Microsoft® Windows® XP Tablet PC Edition 2005³

☑ Disk-to-Disk Recovery

**Preloaded**

- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symanter® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Lenovo Desktop
- Picasa from Google
- Some: Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

**Fingerprint reader**

- Zino Reader

**License**

- Lenovo® ThinkVantage® Millennium and Lotus Notes® Stand-alone Client

**Other features:**

- Power button (front)
- Security key lock, security hole, and optional security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modern port (RJ-11)
- Mikrophone In and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb; 670g

**Limited warranty**

- 3-year / 1-year battery, limited onsite service; 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

* Powered by Intel Centrino® Duo mobile technology
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(DL1-9) October 2007

See footnotes for important warranty information

US models announced February 27, 2007

US models withdrawn effective November 2007

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<td>Optional</td>
<td>None</td>
<td>Fingerprt</td>
<td>None</td>
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</tr>
</tbody>
</table>

These models have a limited onsite service® 3-year limited warranty

This educational model is available only to private or public K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning Processor
- Convertible tablet: one spindle
- Enhanced Intel SpeedStep™ technology®
- Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory
- 1GB std / 4GB max® / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in 1 socket / 1 socket available

### Ultrabay™ Slim Serial ATA disk (SATA150)
- Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase
- 80GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive / Active Protection System® / supports optional X6 Tablet UltraBase

### Display
- Some: 12.1" (307mm) TN XGA (1024x768)
- Some: 12.1" (307mm) XGA (1024x768) TFT color / 4.3 / 190 nits / 100° viewing
- Some: 12.1" (307mm) SXGA (1400x1050) TFT color / 4.3 / 180 nits / 170° viewing
- Touch: 12.1" (307mm) TN XGA (1024x768) TFT color / 4.3 / 155 nits / 100° viewing / MultiView (touchscreen via finger and pen)
- Touch: 12.1" (307mm) SXGA (1400x1050) TFT color / 4.3 / 150 nits / 170° viewing / MultiView (touchscreen via finger and pen)
- All: Super Wide Angle FFS or Twisted Nematic (TN) / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) / picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, NavDial/enter)

### Graphics
- Intel Graphics Media Accelerator 950® / integrated in ThinkRay 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

### Keyboard
- 98-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys
- TrackPoint® pointing device, "Press-to-Select," Intel Scroll Bar®

### Dimensions
- Weight: 8.8" x 10.5" x 1.1-1.3"; 220mm x 267mm x 27.4-33.1mm

### Case material
- Color: black; All: magnesium alloy

### Battery
- Li-ion 8-cell / supports optional Extended Life Battery on base (for two batteries): supports optional Ultrabay Slim battery in opt X6 Tablet UltraBase (for two batteries)

### Battery - life
- 8-cell: up to 7.5 hr; with optional Extended Life Battery: up to 9.5 hr

### Architecture
- Mobile Intel 945GM Express Chipset® / 82895GM Graphics Memory Controller Hub / 82801GMICH-I/ICH7-M I/O Controller Hub (SATA300, ATA-100, IDE, PCI Express x1)
- PCI bus, USB, LPC interface (Rhinocerus R9C801, Phoenix PX204, System Port Bus, Ultra ATA-66/100)

### Media software
- Optional: ThinkPad X6 Tablet UltraBase

### Secure Digital slot
- One Secure Digital Card slot / supports SD memory cards used in consumer devices

### Wireless antenna
- UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- Two Mini PCI Express slots / Bluetooth® 4.0 / LAN 10/100 / 8-cell battery / WiFi 802.11ab/g/b/n / WWAN

### Media reader
- 60GB Disk 7200 rpm 41N53013
- 80GB Disk 5400 rpm 41N5662
- 100GB Disk 7200 rpm 41N5673

### Software
- Supports ThinkVantage® technologies

### Additional features
- Provides desktop expansion and cable mgmt for X60 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel
- Ultrabay Slim options in right side:
  - ThinkPad Advanced Ultrabay Battery 3-cell (flat bezel) 40Y6789
  - ThinkPad X6 Tablet UltraBase Burner (flat bezel) 41N5643
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725
- All additional features of ThinkPad X6 Tablet UltraBase
- Additional features of ThinkPad X6 Tablet UltraBase
  - Analog DB-15 monitor port (no DVI)
  - Four USB 2.0 ports
  - Gigabit ethernet port (RJ-45)
  - Modem port (RJ-11)
  - Microphone in and headphone out
  - Requires 65- or 90-watt AC adapter
  - 1.48 lb; 670g

**See footnotes for important warranty information**

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*Powered by Intel Centrino® Duo mobile technology*

**Lenovo Training Solutions**

**Personal Systems Reference (PSREF)**

**US models announced November 14, 2006 or April 10, 2007**

**US models withdrawn effective July 2007**

**Windows XP Tablet**
- Microsoft® Windows® XP Tablet PC Edition 2005®
- Disk-To-Disk Recovery

**Preloaded**

- Microsoft Office OneNote® 2003
- VitalSource Library education software
- Adobe® Photoshop Elements plus Adobe Premiere® Elements
- Microsoft Education Pack
- Microsoft Office Starter Pack
- Rescue and Recovery™
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security™
- Director (diagnostics)
- PCDoctor™
- Fingerprint Software
- InterVideo VirtualDrive CD/DVD Emulator

**Fingerprint**
- Zino Reader

**CD included**
- Adobe Photoshop Elements plus Adobe Premiere Elements
- Microsoft Office OneNote 2003

**License (CD not included)**
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

*65-watt AC Adapter*
These models have a limited onsite service⁵ - 3-year limited warranty
These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Preloaded operating system¹⁰ - Microsoft® Windows® Vista™
Business Edition (32-bit)

Preloaded applications¹⁴ (only some listed)
- Some (K12): K-12 educ software
  - VitalSource Library School Edition
  - Adobe® Instruct Resource Center
  - Adobe Digital School Collection
  - Photoshop Elements 5 (and CD)
  - Premier Elements 3 (and DVD)
  - Acrobat 8 Professional (and CD)
  - Contribube 4 (and CD)
  - Sony® High Definition Software
  - VitalSource Library College Edition
  - Adobe® Instruct Resource Center
  - Adobe Photoshop Elements 5 (and CD)
  - Adobe Premier Elements 3 (and DVD)
  - Microsoft Education Pack
  - Microsoft Experience Pack
  - Rescue and Recovery™
  - Access Connections⁶
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Lenovo Multimedia Center
  - Norton Internet Security
  - Diskeeper® Home
  - PC-Doctor™ (diagnostics)
  - InteVideo VirtualDrive CD/DVD Burner (flat bezel)
  - Intel® DVD Ultrabay Slim drive
  - Intel® DVD Ultrabay Slim drive
  - Intel® DVD Ultrabay Slim drive
  - Intel® DVD Ultrabay Slim drive
  - Intel® DVD Ultrabay Slim drive
  - Intel® DVD Ultrabay Slim drive
  - Intel® DVD Ultrabay Slim drive

License - CD not included
- Lotus® Notes® Stand-alone Client

Supports ThinkVantage® technologies

ThinkPad® X6 Tablet UltraBase
- Provides desktop expansion and cable management for tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel UltraBay Slim options in right side:
  - ThinkPad Advanced UltraBay Battery 3-cell (flat bezel) 40Y7889
  - ThinkPad DVD UltraBay Slim Burner (flat bezel) 41N5643
  - Serial Hard Drive UltraBay Slim Adapter (flat bezel) 40Y8725
  - SATA discs supported (some):
    - 60GB Disk 7200 rpm 41N3012
    - 80GB Disk 5400 rpm 41N5662
    - 100GB Disk 7200 rpm 41N5013

Other features:
- Power button (front)
- Security lock (1 watt)
- Security keylock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog DVI 15-monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modem port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb; 670g

65-watt AC Adapter
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<td>*Intel 11a/b/g</td>
<td>Finger 4-cell</td>
<td>3-yr Dec 06</td>
</tr>
<tr>
<td>6366-8KU Core Duo L2500</td>
<td>1.83</td>
<td>1GB</td>
<td>12.1&quot; XGA Touch</td>
<td>100GB</td>
<td>Thinkpad 11in™</td>
<td>Blue</td>
<td>Blue</td>
<td>Finger 4-cell</td>
<td>3-yr Dec 06</td>
<td>Blue</td>
</tr>
<tr>
<td>6366-98U Core Duo L2500</td>
<td>1.83</td>
<td>2GB</td>
<td>12.1&quot; XGA Touch</td>
<td>120GB</td>
<td>DVD±RW UltraBase</td>
<td>*Intel 11a/b/g</td>
<td>Verizon</td>
<td>Blue</td>
<td>Finger 3-yr Dec 06</td>
<td>65-watt AC Adapter</td>
</tr>
</tbody>
</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program

**These models have a 3-year limited warranty**

### Positioning

**Processor**: Convertible tablet: one spindle

**Intel Core™ Duo processor L2400 or L2500** with low voltage, dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

### Memory

| 1GB or 2GB Standard memory in both sockets; no sockets available | 8:5:7:3-yr |
| 9:3:10:5:7-yr |

### Ultrabay™ Slim EIDE Combo

Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

### Display

**Resolution**: some: 12.1" (307mm) XGA (1024x768) TFT color; 4.3 /185 nits / 170° viewing

**Touch**: some: 12.1" (307mm) XGA (1024x768) TFT color; 4.3 / 180 nits / 170° viewing

### Graphics

**Intel Graphics Media Accelerator 9500 (GMA 950)** / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

### Keyboard

89-key / Touch Vantage button / spill-resistant / multimedia Fn keys / Windows, API keys / TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar 2, magnifying glass

### Dimensions

4-cell: 10.8" x 6.6" x 1.1-1.3"; 274mm x 244mm x 27.4-33.1mm

8-cell: 10.8" x 10.5" x 1.1-1.3"; 274mm x 267mm x 27.4-33.1mm

### Weight

3-cell: 3.7 to 4.1 lb (1.7 to 1.9 kg);

4-cell: 3.7 to 4.6 lb (1.7 to 2.1 kg)

### Case material

Color: black; All: magnesium alloy

### Battery - type

Li-Ion / 4-cell or 8-cell / supports optional Extended Life Battery on base (for two batteries); supports optional Ultrabay Slim battery in optional X6 Tablet UltraBase (for two batteries)

### Battery - life

With 4-cell: up to 3.3 hr; with 8-cell: up to 7.5 hr; 8-cell and Ultrabay Slim: up to 8.5 hr with 8-cell and optional Extended Life Battery: up to 9.5 hr

### Architecture


### Docking station

Secure Digital slot

### Secure Digital slot

One Secure Digital Card slot / supports SD memory cards used in consumer devices

### PC Card Std slot

One Type I or one Type II / CardBus+ (34mm ExpressCard/adapter) / door / Three USB (version 2.0) / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ether); IEEE 1394 port / 4-pin; no serial, parallel, keyboard/mouse ports

### Wireless antenna

Mini PCI Express

**ThinkPad 11in™**

UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

11a/b/g wireless; Mini PCI Express Adapter, Intel PRO/Wireless 3945ABG

11a/b/g/n wireless; ThinkPad 11in™ g/n Mini PCI Express Adapter, Atheros AR5008 chipset, MIMOD 2x2

**WWAN™**

Some: Wireless WAN, Sierra Wireless 1xEV-DO Network Adapter, Mini PCI Adapter, EV-DO/1xRTT, WWAN antenna on display, service contract required with Verizon® Wireless

56K V90 (V92-designed)™ modem in Communication Daughtercard

**Bluetooth™**

Some: 2.6 to 2.4 GHz wireless / USB interface via [CH-77 / LED indicator]

**Ethernet**

Gigabit ethernet on systemboard / Intel 82573L (MAC/PHY) / PCle x1 / PXE

**Audio support**

High Definition (HD) Audio / Audio 191811 codec / mono speaker 0.5 watt / volume down, up, mute buttons / internal microphone / mic input jack (green) / headphone jack (green)

**Security**

Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**

Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on right base of display / use in tablet or notebook mode / 2-way swipe / supports the security chip / *Zinio Reader*

Other features:

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, 4-cell security screw
- Serial and parallel ports
- Analog DB-15 monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit ethernet port (RJ-45)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb 670g
- 65-watt AC Adapter

*Powered by Intel Centrino® Duo mobile technology

© Lenovo (DL1-4) August 2007

See footnotes for important warranty information

US models announced November 14, 2006

US models withdrawn effective July 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Screen</th>
<th>SATA disk</th>
<th>Optical in UltraBase</th>
<th>X6 Tablet UltraBase</th>
<th>802.11 wireless</th>
<th>WWAN wireless</th>
<th>Blue-tooth</th>
<th>Fingerprint Battery Limited Avail warranty date</th>
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</thead>
<tbody>
<tr>
<td>6366-F6U</td>
<td>Core Duo L2400 1.66 1GB 12.1&quot; XGA</td>
<td>80GB Optional</td>
<td>80GB ThinkPad X6 Tablet UltraBase</td>
<td>Finger 4-cell</td>
<td>3-yr Jan 07</td>
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<td>6366-F6U</td>
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<td>80GB ThinkPad X6 Tablet UltraBase</td>
<td>Finger 4-cell</td>
<td>3-yr Feb 07</td>
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<td>6366-F6U</td>
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<td>6366-L4U</td>
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<td>120G DVD+RW</td>
<td>UltraBase</td>
<td>Finger 8-cell</td>
<td>3-yr Feb 07</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty

Positioning

Converter tablet: one spindle

Intel® Core™ Duo processor L2400 with low voltage, dual-core

Enhanced Intel SpeedStep® technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Memory

1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / standard memory in both sockets / no sockets available

Ultrabay™ Slim

Some: Supports Ultrabay™ Slim devices in optional ThinkPad X6 Tablet UltraBase

Some: DVD-ROM/CD-RW / 24X/24X/24X/8X1 / speed / removable from X6 UltraBase

Some: DVD burner / Super Multi-Burner (40Y6823) / dual-layer / removable from X6

UltraBase

Some: 80GB (5400 rpm), 100GB (5400 rpm), or 120GB (5400 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / ThinkPad Shock Mounted Hard Drive

Active Protection System™ supports 2nd disk in optional X6 Tablet UltraBase

Display

Some: 12.1" (307mm) XGA (1024x768) / TFT color / 4.3 / 185 nits / 170° viewing

Some: 12.1" (307mm) SXGA+ (1400x1050) / TFT color / 4.3 / 180 nits / 170° viewing

Touch: 12.1" (307mm) XGA (1024x768) / TFT color / 4.3 / 150 nits / 170° viewing / Multi-touch (touchscreen via finger or pen)

All: Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, utility, Esc, NavDial/enter)

Graphics

Intel Graphics Media Accelerator 950 (GMA 950) / integrated in 945GM / 200MHz / external monitor support via analog DB-15 connector / no DVI-out support

Preloaded operating system

- Vista Premium logo

Preloaded applications

- Microsoft Office OneNote® 2003
- Microsoft Education Pack
- Microsoft Experience Pack
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor (for Windows)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Picasa from Google
- Microsoft Experience Pack
- System Migration Assistant
- Norton Internet Security™
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- System Migration Assistant
- Norton Internet Security™ (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor (for Windows)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Picasa from Google
- Windows Media Player 12
- Norton Internet Security via Norton Security Center

CD included

- Microsoft Office OneNote 2003

ThinkPad X6 Tablet UltraBase

- Provides desktop expansion and cable management for X6 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel Ultrabay Slim options in right side:
  - ThinkPad Advanced Ultrabay Slim Drive (flat bezel) 40Y8789
  - CD-RW/DVD Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
  - DVD-ROM Ultrabay Slim Drive (curved bezel) 73P3270
  - ThinkPad DVD Ultrabay Slim Burner (flat bezel) 41N5634
  - Serial Hard Drive Ultrabay Slim Adapter (flat bezel) 40Y8725

SATA disks supported (some):
- 100GB Disk 7200 rpm 41N3013
- 120GB Disk 7200 rpm 41N3017
- 250GB Disk 5400 rpm 43R8152

Other features:
- USB 2.0 ports
- Gigabit Ethernet (RJ-45)
- Modern port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.48 lb; 670g

Limited warranty

- 3-years / 1-year battery / EasyServ™ depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo

US models announced January 30 or February 22, 2007

US models withdrawn effective July 2007 or April 2008
**ThinkPad X6 Tablet (7762) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor GHz</th>
<th>Memory 1GB or 2GB std.</th>
<th>Display</th>
<th>Optical in UltraBase</th>
<th>X6 Tablet UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Finger print reader</th>
<th>Battery Preload</th>
<th>Global (G)</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>7762-54U</td>
<td>L7500 1.60</td>
<td>1GB 12.1&quot; XGA</td>
<td>80GB</td>
<td>5400 rpm</td>
<td>★ Intel 4965AG</td>
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<td>7762-55U</td>
<td>L7500 1.60</td>
<td>1GB 12.1&quot; XGA+ SV</td>
<td>80GB</td>
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<tr>
<td>7762-65U</td>
<td>L7500 1.60</td>
<td>2GB 12.1&quot; XGA Touch</td>
<td>160G</td>
<td>5400 DVD+RW UltraBase</td>
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<td>7762-56U</td>
<td>L7500 1.60</td>
<td>2GB 12.1&quot; XGA</td>
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<td>L7500 1.60</td>
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<td>160G</td>
<td>5400 Combo UltraBase</td>
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<td>2GB 12.1&quot; XGA</td>
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<td>5400 rpm</td>
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<td>7762-98U</td>
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</table>

**US Govt (TAA)®**

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel Core™ 2 Duo processor L7500 and L7700 with low voltage, dual-core, Intel 64 Technology, 800MHz system bus, and 4MB shared L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>1GB or 2GB standard</td>
</tr>
<tr>
<td><strong>Italics:</strong> standard memory in both sockets; no sockets available. <strong>Non-italics:</strong> standard memory in one socket; one socket available</td>
<td></td>
</tr>
<tr>
<td>Ultrabay™ Slim</td>
<td>Supports Ultrabay Slim devices in optional or standard ThinkPad X6 Tablet UltraBase or next to the 9-cell battery.</td>
</tr>
<tr>
<td>EIDE DVD+RW</td>
<td>Supports optional EIDE DVD+RW up to 4.7 GB, optional EIDE hard drive, AMD processor technology, and 1.44 MB disk drive.</td>
</tr>
<tr>
<td>Serial ATA disk</td>
<td>Supports Serial ATA disk with 2.5&quot;/1.8&quot; 4200 to 7200 rpm disk drives.</td>
</tr>
</tbody>
</table>

**Display**

- **Some:** 12.1" (307mm) XGA (1024x768) TF color, 185 nits, 4:3, 500:1, 170° viewing
- **Some:** 12.1" (307mm) SXGA+ (1400x1050) color, 190 nits, 4:3, 500:1, 170° viewing, direct bonding panel (SuperView) for improved outdoor viewability
- **Touch:** 12.1" (307mm) XGA (1024x768) TF color, 4:3, 150 nits, 170° viewing
- **All:** Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode on top of display (power, lock, reboot, rotation, utility, Esc, NavDial/enter)

**Graphics controller** Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

**Graphics - external External VGA monitor support via analog DB-15 connector / no DVI-out support**

**Keyboard**

- TrackPoint® 89-key, ThinkVantage button, spill-resistant, multimedia F keys, 18.5mm pitch
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass

**Dimensions**

- Without X6 UltraBase: 4-cell: 10.8" x 9.6" x 1.1-1.3"; 274mm x 244mm x 27.4-33.1mm
- Without X6 UltraBase: 8-cell: 10.8" x 10.5" x 1.1-1.3"; 274mm x 267mm x 27.4-33.1mm
- 4-cell: starting at 3.77 lb (1.71kg); 8-cell: starting at 4.25 lb (1.93kg)

**Weight**

- Color: black; All: magnesium alloy
- Li-ion 8-cell: supports optional Extended Life Battery on battery (for two batteries)
- Battery: life: with 8-cell: up to 3.0 hr; with 8-cell: up to 7.0 hr; 8-cell: up to 9.0 hr with 8-cell and optional Extended Life Battery: up to 9.5 hr

**Chipset**

- Mobile Intel GM965 Express Chipset
- ICH6M-Enhanced I/O Controller Hub
- ATAPI-32 IDE, ATAPI-64 IDE
- PCI Express x1, x4, x8, x16
- USB (2.0 ports)
- PC Card 54mm ExpressCard slot
- 8-cell Li-Ion in battery, Announces WinCE, MS Internet Explorer, 2GB / TAA availability

**Media slicer**

- Secure Digital slot
- Secure Digital Card slot
- One Secure Digital Card slot, supports SD memory cards in consumer devices
- One CardBus Plus (34mm ExpressCard via adapter), door Three USB 2.0, DB-15 (external VGA monitor), RJ-45 (ethernet), IEEE 1394 FireWire 400 (4-pin connector, 1394a-2000 standard)

**Mini PCI Express**

- Intel 11a/b/g
- Intel 4965AG
- Intel 11n

- Two Mini PCI Express slots
- Two Mini PCI Express slots
- Two Mini PCI Express slots
- Two Mini PCI Express slots
- Two Mini PCI Express slots

**WWAN upg 1G Turbo**

- Intel Turbo Memory, Mini PCI adapter, 1GB flash, disk-cache accelerator
- Modern
- Bluetooth™ 56K V.92 modem in Communications Daughter Card
- Ethernet
- Intel AMT
- Audio support
- High Definition (HD) 1920x1080 video / mono speaker, 0.5 watt / volume up, down, mute buttons / internal microphone, mic input jack (pin), headphone jack (green)
- Security
- Secure disk password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, Atmel chip, TCG 1.2-compliant
- Finger print reader
- Some: Finger print reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

- 3-years/1-year battery - EasyServ™/™ EasyServ™/™ depot repair service / service upgrades™/™ available

**Preloaded operating system**

- 2GB Vista D6U/77U/99U/9CU: Vista Premium logo
- Other Vista models: Vista Basic logo

**Preloaded applications**

- All OSes: Lenovo Client Security Solution, Mobile Lenovo Security, TCG 1.2-compliant
- Other features:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - Lenovo Global Warranty
  - Lenovo Client Security Solution
  - Finger Print Software
  - Core VirtualDrive CD/DVD Emulator

**Lenovo**

- ThinkPad X6 Tablet UltraBase
  - Provides desktop expansion and cable mgmt for X60/X61 Tablet
  - Connects to the bottom of tablet
  - Converts tablet to a two-spiindle system with optional flat bezel Ultrabay Slim options in right side:
    - ThinkPad Advanced Ultrabay Battery II 3-cell (flat)
    - ThinkPad DVD Ultrabay Slim Burner (flat bezel)
    - Serial Hard Drive Ultrabay Slim Adapter (flat bezel 40Y77ST)
    - SATA disks supported (some):
      - 250GB FDE 7200 rpm 43N3410
      - 250GB Disk 5400 rpm 43R8152
      - 320GB Disk 7200 rpm 43N3411

**Other features:**

- Power button (front)
- Stereo speakers (1 watt)
- Security key lock, security keyhole, and optional security screw
- Serial and parallel ports
- Analog VGA monitor port (no DVI)
- Four USB 2.0 ports
- Gigabit Ethernet port (RJ-45)
- Modem port (RJ-11)
- Microphone in and headphone out
- Requires 65- or 90-watt AC adapter
- 1.45 lb; 670g

- 65-watt (GMA graphics) AC Adapter ENERGY STAR 4.0-compliant RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period (flat)

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(DL2-2) May 2009

US models announced


ThinkPad X6 Tablet (7763) - Onsite - withdrawn

**Low Voltage processor**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>7763-54U</td>
<td>1.60 1GB</td>
<td>12.1&quot; XGA</td>
<td>80GB/5400 Optional</td>
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<tr>
<td>7763-95U</td>
<td>1.60 1GB</td>
<td>12.1&quot; XGA</td>
<td>Intel 4965AG None</td>
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<tr>
<td>7763-B6U</td>
<td>1.60 1GB</td>
<td>12.1&quot; XGA</td>
<td>Intel 4965AG None</td>
</tr>
<tr>
<td>7763-B6U</td>
<td>1.60 1GB</td>
<td>12.1&quot; XGA</td>
<td>Intel 4965AG None</td>
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<tr>
<td>7763-B8U</td>
<td>1.60 2GB</td>
<td>12.1&quot; XGA</td>
<td>Intel 4965AG None</td>
</tr>
</tbody>
</table>

**Disk**

- SATA GB: 80GB
- rpm: 5400

**Optical in UltraBase**

- X6 Tablet UltraBase
- Optional

**Mini PCle 802.11 wireless**

- Generic

**Mini PCle WWAN or Turbo**

- None

**Finger print reader cells**

- None

**Vista preload**

- Business Edition

**Workhorse (W)**

- Intel 4965AG

**Global (G)**

- 32-bit

**GMP (P)**

- 32-bit

**Preloaded operating system**


**Vista models:**

- Vista Basic logo

**Preloaded applications**

- (all OSes; only some listed)
  - Rescue and Recovery
  - Access Connections
  - Client Security Solution
  - ThinkVantage Productivity Center
  - Norton Internet Security
  - Diskkeeper
  - ThinkPad Utilities
  - PC-Doctor (diagnostics)
  - Fingerprint Software
  - Corel VirtualDrive CD/DVD Emulator

**Touch**

- Touch 120G 5400 Optional

**Limited warranty**

- 3-year limited warranty

---

**Graphics controller**

- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965

**Graphics - external**

- VGA: External VGA monitor support via analog DB-15 connector / no DVI-out support

**Keyboard**

- 80-key, ThinkVantage button, spill-resistant, multimedia Fn keys, 1.5mm pitch

**TrackPoint**

- "Press-to-Select," Internet Scroll Bar, magnifying glass

**Dimensions**

- without X6 UltraBase: 4-cell: 10.8" x 9.6" x 1.1-1.3"; 274mm x 244mm x 27.4-33.1mm
- without X6 UltraBase: 8-cell: 10.8" x 10.5" x 1.1-1.3"; 274mm x 267mm x 27.4-33.1mm

**Weight**

- 4-cell: starting at 3.77 lb (1.71kg)
- 8-cell: starting at 4.25 lb (1.93kg)

**Battery - type**

- Li-Ion 8-cell

**Battery - life**

- up to 9.0 hr

**Chipset**

- Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 IDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])
- LPC bus (Ricoh R5C847 Cardbus/1394/Multicard)

**Media slot**

- Secure Digital slot
- Card PC slot

**Ports**

- USB 2.0, DB-15 (external VGA monitor)
- RJ-45 (ethernet)
- IEEE 1394 FireWire 400 (4-pin connector)

**Finger print reader**

- Palm rest

**Limited warranty**

- 3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

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See footnotes for important warranty information

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(DL2-6) May 2009
Low Voltage processor GHz Memory Display Disk SATA rpm Optical in UltraBase X6 Tablet UltraBase Mini PCIe 802.11 wireless Mini PCIe WWAN or Turbo Finger Battery Workhorse (W) reader cells Vista preload Global (G) Available
7767-59U L7500 LV 1.60 1GB 12.1" XGA 120G 5400 * Intel 11a/b/g
7767-5AU L7500 LV 1.60 1.6G DVD±RW UltraBase * Intel 11a/b/g 1G Turbo 8 Business 32 Jun 07
7767-96U L7500 LV 1.60 1.6G DVD±RW UltraBase * Intel 11a/b/g 1G Turbo 8 Business 32 Jun 07
7767-B7U L7500 LV 1.60 2GB 12" XGA Touch 120G 5400 * Intel 11a/b/g 1G Turbo 8 Business 32 Jul 07
7767-C5U L7500 LV 1.60 1GB 12.1" XGA Touch 120G 5400 * Intel 11a/b/g AT&T 8 Ultimate 32 W Jul 07
7767-C4U L7500 LV 1.60 1.6G 12.1" XGA Touch 120G 5400 * Intel 11a/b/g AT&T 8 Ultimate 32 W Jul 07
7767-01U L7500 LV 1.60 1GB 12.1" XGA 120G 5400 * Intel 11a/b/g XP Tablet 8 Tablet Aug 07
7767-02U L7500 LV 1.60 1GB 12.1" XGA 120G 5400 * Intel 11a/b/g XP Tablet 8 Tablet Sep 07
7767-5CU L7500 LV 1.60 2GB 12.1" XGA Touch 160G 5400 * Intel 11a/b/g AT&T 8 Ultimate 32 W Jul 07

Positioning
Processor Convertible tablet; one spindle [Intel®] Core™ 2 Duo processor L7500 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep® technology, [Intel®] Dynamic Acceleration, EDB, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache
Memory 1GB or 2GB std / 4GB max7 / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

UltradynSlim Supports Ultradyn Slim devices in optional or standard ThinkPad X6 Tablet UltraBase
EIDE DVD:RW Serial ATA disk Supports DVD:RW, Super Multi-Burner (40Y682), dual-layer, removable from X6 100GB (7200 rpm), 120GB (5400 rpm), or 160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, supports 2nd disk in std or optional X6 Tablet UltraBase, ThinkPad Shock Protection System

Display
Some: 12.1" (307mm) XGA (1024x768) TFT color, 155 nits, 4.3, 500:1, 170° viewing. Touch: 12.1" (307mm) XGA (1024x768) TFT color, 130 nits, 4.3, 500:1, 170° viewing / MultiTouch (touchscreen view finger and pen) All: Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / pen holder in front base / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display (power, lock, reboot, rotation, utility, Esc, NavDial/enter)

Chipset Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH6M-Enhanced I/O Controller Hub (SATA 3Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, Bluetooth, [fingerprint]) / PCI bus (Ricoh® R8C847 Cardbus/1394/Multi card) / LPC bus (PC8785 Super I/O, Atmal® 97SC3203 TMP)

Graphics controller Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965 Graphics - external VGA monitor support via analog DB-15 connector / no DVI-out support


Preloaded applications (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- Norton Internet Security (90 days of virus definitions)
- PC-Doctor™ (diagnostics)
- FingerPrint Software
- Microsoft Office 2007 Trial (60-day)
- Corel VirtualDrive CD/DVD Emulator

Supports ThinkVantage® technologies
- Provides desktop expansion and cable mgmt for X60/X61 Tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel
- Ultradyn Slim options in right side:
  - ThinkPad Advanced UltraBay Battery (flat) / 439290
  - ThinkPad DVD UltraBase Burner (flat bezel) / 41NS64
  - Serial Hard Drive UltraBay Adapter (flat bezep V88W765
  - UltraBay Slim disk (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411
- Other features:
  - Power button (front)
  - Speaker gang (1 watt)
  - Security key lock, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog VGA monitor port (no DVI)
  - Four USB 2.0 ports
  - Gigabit ethernet port (RJ-45)
  - Modern 4-11
  - Microphone in and headphone out
  - Requires 65- or 90-watt AC adapter
  - 1.48 lb, 670g

ENERGY STAR® 65-watt (GMA graphics) AC Adapter
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information
© Lenovo (US models withdrawn effective May 2009)
## ThinkPad X61 Tablet (Education) - EasyServ - withdrawn

### General Information

- **Type**: ThinkPad X61 Tablet (Education)
- **EasyServ**: Withdrawn

### Preloaded operating system

- **Microsoft Windows**: Vista Business Edition (32-bit)

### Preloaded applications

- **Microsoft Office OneNote**: 2007 (and CD)
- **Linux (K12)**: K-12 education software
- **Adobe Acrobat Reader**: 7.0 (and CD)
- **Adobe Photoshop Elements**: 3 (and DVD)
- **Adobe Premiere Elements**: 3 (and DVD)
- **Norton Internet Security**: 2007 (and CD)

### See footnotes for important warranty information

US models announced May 31 or July 16, 2007

US models withdrawn effective May 2009

---

### Table: Technical Specifications

<table>
<thead>
<tr>
<th>Key Area</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel Core 2 Duo processor L7500</td>
</tr>
<tr>
<td>Memory</td>
<td>1GB 2GB std / 4GB max. / PC2-5300 667Mhz DR2 - non parity, dual-channel capable, two 200-pin SO-DIMM sockets</td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GM965 Graphics</td>
</tr>
<tr>
<td>Display</td>
<td>12.1&quot; (307mm) XGA (1024x768) TFT color, 185 nits, 4:3, 500:1, 170° viewing and 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, 15.8mm pitch</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [fingerprint])</td>
</tr>
<tr>
<td>Wireless antenna</td>
<td>UltraConnect II Antenna / on-off switch for all wireless radios</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-year battery - EasyServ(TM) - depot repair service</td>
</tr>
</tbody>
</table>

### Additional Notes

- **These models have an EasyServ(TM) depot repair service 3-year limited warranty**
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- **US models withdrawn effective May 2009**
- **US models announced May 31 or July 16, 2007**

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© Lenovo

(DL2-4) May 2009
ThinkPad X6 Tablet (Education) - Onsite - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Optional</th>
<th>Mini PCIe WWAN</th>
<th>Edc</th>
<th>Workforce (W)</th>
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</thead>
<tbody>
<tr>
<td>Low Voltage processor</td>
<td>mini card</td>
<td></td>
<td>Limited Global (G)</td>
<td>Avail date</td>
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<tr>
<td>7763-BSU L7500 LV</td>
<td>1.60</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>32</td>
</tr>
<tr>
<td>7763-U1U L7500 LV</td>
<td>1.60</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>None Business 32</td>
</tr>
<tr>
<td>7763-02U L7500 LV</td>
<td>1.60</td>
<td>1GB</td>
<td>12.1&quot; XGA</td>
<td>None Business 32</td>
</tr>
</tbody>
</table>

- These models have a limited onsite service²³ - 3-year limited warranty
- These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use qualified students and teachers.

Positioning

Positioning: Convertible tablet: one spindie

Intel Core 2 Duo processor L7500 with low voltage, dual-core.

Memory: 1GB or 2GB std / 4GB max³ / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;

Non-Italics: standard memory in one socket: one socket available

Ultraslim EIDE DVD+RW

Serial ATA disk: Supports Ultraslim devices in optional or standard ThinkPad X6 Tablet UltraBase Option for ThinkPad X6 Tablet UltraBase

Display:

Some: 12.1" (307mm) XGA (1024x768) TFT color, 185 nits, 4.3, 500:1, 170° viewing Touch: 12.1" (307mm) XGA (1024x768) TFT color, 4.3, 150 nits, 170° viewing MultiView (indoor/outdoor), MultiTouch (touchscreen via finger and pen)

All: Super Wide Angle FFS / anti-reflective and anti-glare protective coatings / write on screen with standard digitizer pen / rotate and swivel hinge in middle bottom of display for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user) / buttons on display bottom (power, lock, reboot, rotation, utility, Esc, Navigate/enter)

Chipset:

Mobile Intel GM965 Express Chipset (Graphics Memory Controller Hub); ICH8M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC bus, [Bluetooth], [frontport]) / PCI bus (Ricoh® R5C874 Cardbus/1394/Multicard) / LPC bus (PCB9875 Super I/O, Atmel® 97C3203 TPM)

Media slice

Option: ThinkPad X6 Tablet UltraBase (see right side)

One Secure Digital slot, supports SD memory cards used in consumer devices

One Type I or one Type II, CardBus Plus (34mm ExpressCard via adapter), door

Three USB 2.0, DB-15 (external VGA Monitor), PS/2-11 (modem), RJ-45 (ethernet), IEEE 1394 Firewire 4-pin (connector 1394a-2000 standard)

Wireless antenna

UltraConnect™ II Antenna / on/off switch for all wireless radios

Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

11a/b/g wireless, ThinkPad 11a/b/g Mini PCIe Adapter, Atheros AR5006EX

None

WWAN Turbo 1G

Modern

56K V.92 modem in Communications Daughter Card

Bluetooth 2.0 wireless, USB 2.0 interface via ICH8M, LED indicator

Gigabit ethernet, Intel 82566MNM Nineveh (PHY), PCIex 1 (GLC), PXE

Intel AMT

High Definition (HD) Audio, AD1984 codec / mono speaker, 0.5 watt / volume up, down, mute buttons / internal microphone, mic input jack (pink), headphone jack (green)

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, Atmel chip, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty²²

3-years/1-year battery, limited onsite service²³ - 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time²⁴

1GB PC2-5300 DDR2 SODIMM 40Y7734

2GB PC2-5300 DDR2 SODIMM 40Y7735

USB 2.0 Lenovo Multimedia Headset 40Y8518

USB 2.0 Security Memory Key 4GB 41U5120

USB 2.0 Super Multi-Burner Drive 41N5565

320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411

TrackPoint Cap Collection 73P2698

Other accessories on O-X600-T sheet

ThinkPad X6 Tablet UltraBase 41U3120

ThinkPad X60 Tablet Digitizer Pen 41U3143

ThinkPad X60 Digital Tether (3-pack) 40Y8518

ThinkPad X60T Li-Ion Battery 8-cell 40Y8318

ThinkPad X60 Extended Life Battery 40Y7005

ThinkPad X60 Tablet Sleeve 41U3142

ThinkPad UltraPortable Case 41U5062

Other accessories at lenovo.com/accessories

See footnotes for important warranty information

US models announced May 31, or July 16, 2007

US models withdrawn effective May 2009

Personal Systems Reference (PSREF)

Preloaded operating system¹⁰

- Vista Basic Only

Preloaded applications¹⁴ (only some listed)

- 01U/02U: Microsoft Office OneNote 2007 (and CD)
- Some (K12): K-12 education software
- - VitalSource Library School Edition
- - Adobe Instructor Resource Center
- - Adobe Digital School Collection
- - Photoshop Elements 5 and (CD)
- - Premier Elements 3 (and DVD)
- - Acrobat 8 Professional
- - Adobe Creative Suite
- - (HE): Higher education software
- - VitalSource Library College Edition
- - Adobe Instructor Resource Center
- - Adobe Photoshop Elements 5 (and CD)
- - Adobe Premier Elements 3 (and DVD)
- - Rescue and Recovery¹⁰
- - Access Connections¹⁰
- - Client Security Solution¹⁰
- - Norton Internet Security¹⁰
- - Corel® VirtualDrive CD/DVD Emulator

Supports ThinkVantage technologies

ThinkPad X6 Tablet UltraBase

- Provides desktop expansion and cable mgmt for X60/X61 tablet
- Connects to the bottom of tablet
- Converts tablet to a two-spindle system with optional flat bezel UltraBase support in right side: ThinkPad Advanced UltraBase Battery II-3 cell (flat) 43R9250
- ThinkPad DVD UltraBase Slim Burner (flat bezel) 41N5643
- Serial Hard Drive UltraBase Slim Adapter (flat bezel) 40Y8725
- SATA disks supported (some): 250GB 7200 rpm 2007 43N3410
- Other features:
  - Power button (front)
  - Stereo speakers (1 watt)
  - Security key lock, security keyhole, and optional security screw
  - Serial and parallel ports
  - Analog VGA monitor port (no DVI)
  - Four USB 2.0 ports
  - Gigabit ethernet port (RJ-45)
  - Modern port (RJ-11)
  - Microphone in and headphone out
  - Requires 65- or 90-watt AC adapter
  - 4.18 lb 670g

65-watt (GMA graphics) AC Adapter ENERGY STAR 4.0-compliant RoHS-compliant International Warranty Service¹⁷

24 hour x 7 day¹⁸ toll-free support during the warranty period¹⁸ via 800-426-7378

Lenovo (DL2-5) May 2009
Partial list of accessories supported on:
- ThinkPad X60 Tablet originally announced on Nov 14, 2006
- ThinkPad X61 Tablet originally announced on May 31, 2007

<table>
<thead>
<tr>
<th>Memory</th>
<th>512MB PC2-5300 DDR2 SODIMM</th>
<th>40Y7733</th>
<th>ann 01/05/06</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1GB PC2-5300 DDR2 SODIMM (TopSeller)</td>
<td>43R1999</td>
<td>ann 03/25/08</td>
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<tr>
<td></td>
<td>1GB PC2-5300 DDR2 SODIMM</td>
<td>40Y7734</td>
<td>ann 01/05/06</td>
</tr>
<tr>
<td></td>
<td>2GB PC2-5300 DDR2 SODIMM (TopSeller)</td>
<td>43R2000</td>
<td>ann 03/25/08</td>
</tr>
<tr>
<td></td>
<td>2GB PC2-5300 DDR2 SODIMM</td>
<td>40Y7775</td>
<td>ann 11/28/06</td>
</tr>
</tbody>
</table>

| Ultradisk Slim 9.5mm | None (Ultradisk Slim on optional ThinkPad X6 Tablet UltraBase) |

| Ultradisk Enhanced 12.7mm | None |

| Storage and removable storage | 160GB Disk SATA 1.5Gbps (5400 rpm) | 41N5692 | ann 03/20/07 |
|                              | 160GB Disk SATA 1.5Gbps (7200 rpm) | 41N5737 | ann 10/16/07 |
|                              | 250GB Disk SATA 1.5Gbps (5400 rpm) | 43R8152 | ann 01/15/08 |
|                              | 250GB Disk SATA 1.5Gbps (7200 rpm) | 43N3410 | ann 01/20/09 |
|                              | 320GB Disk SATA 1.5Gbps (5400 rpm) | 43N3403 | ann 08/05/08 |
|                              | 320GB Disk SATA 1.5Gbps (7200 rpm) | 43N3411 | ann 01/20/09 |

- Can be used as the main disk or with ThinkPad

| ThinkPad X6 Tablet UltraBase | 41U3120 |

| Multimedia | USB 2.0 Lenovo Multimedia Headset | 40Y8518 | ann 06/27/06 |
|            | USB 2.0 Lenovo Webcam | 40Y8519 | ann 08/29/06 |

| Batteries | X60 Tablet Li-Ion 4-cell | 40Y8314 | ann 11/14/06 |
|          | X60 Tablet Li-Ion 8-cell | 40Y8318 | ann 11/14/06 |
|          | X60 Extended Life Battery | 40Y7005 | ann 01/05/06 |
| ThinkPad External Battery Charger** | 40Y7625 | ann 09/20/05 |
| **Requires the ThinkPad 90W AC Adapter | 40Y7659 | (adapter provided with some systems). |
| ThinkPad 65W AC Adapter | 40Y7696 | ann 09/20/05 |
| ThinkPad 90W AC Adapter | 40Y7659 | ann 09/20/05 |
| ThinkPad 90W Slim AC/DC Combo Adapter | 41N8460 | ann 11/27/07 |

| Tablet | ThinkPad X60 Tablet Digitizer Pen | 41U3143 | ann 11/14/06 |
|        | ThinkPad X60 Tether (3-pack) | 41U4820 | ann 11/14/06 |

| Carrying Cases | ThinkPad X60 Tablet Sleeve | 41U3142 | ann 11/14/06 |
|               | Up to 13.3" widescreen models: ThinkPad Ultraportable Case | 41U5062 | ann 05/13/08 |
|               | Up to 14.1" widescreen models: ThinkPad Professional | 43R9118 | ann 06/24/08 |
|               | ThinkPad Women's Microfiber Tote | 22P8855 |
|               | ThinkPad Convertible Carrying Case | 22P8860 |
|               | ThinkPad Women's Executive Leather Tote | 22P8857 |
|               | ThinkPad Executive Leather Case | 22P8858 |

- Can be used as the main disk or with ThinkPad

| ThinkPad X6 Tablet UltraBase | 41N5656 | ann 01/23/07 |

| ThinkPad Expansion | USB 2.0 Enhanced Port Replicator | 43R8770 | ann 02/26/08 |
|                    | ThinkPad Adjustable Notebook Stand | 40Y7676 | ann 09/20/05 |
|                    | ThinkPad X6 Tablet UltraBase | 41U3120 | ann 11/14/06 |

| Keyboard | TrackPoint Cap Collection | 73P2698 | ann 12/16/03 |
|          | USB Numeric Keypad | 33L3225 | ann 05/01/00 |
|          | Preferred Pro USB Keyboard | 73P5220 | ann 06/21/05 |
|          | Enhanced Performance USB Keyboard | 73P2620 | ann 03/22/04 |
|          | Wireless Kybd & Opt Wheel Mouse (via USB) | 73P4067 | ann 12/07/04 |
|          | USB Keyboard with UltraNav | 31P8950 | ann 01/28/03 |
|          | USB Travel Keyboard with UltraNav | 31P9490 | ann 04/27/04 |
| Lenovo ² USB Fingerprint Keyboard | 73P4730 | ann 02/22/05 |
| Lenovo USB Smartcard Keyboard | 51J0155 | ann 03/24/09 |

| Mouse | Optical Wheel Mouse (USB) | 06P4069 | ann 05/21/03 |
|       | Optical ScrollPoint² Mouse (USB, PS/2) | 31P7405 | ann 08/27/02 |
|       | Optical Wheel Travel Mouse (USB, PS/2) | 31P7410 | ann 06/04/02 |
|       | Laser Tilt Wheel Mouse (USB, PS/2) | 41U3074 | ann 01/23/07 |
| Lenovo Wireless Mouse (red, via USB) | 51J0198 | ann 11/25/08 |
| Lenovo Wireless Laser Mouse (blk, via USB) | 45K1696 | ann 11/25/08 |
| Lenovo Laser Tilt Wheel Mouse (Bluetooth) | 41U5008 | ann 01/22/08 |
| Wireless Kybd & Opt Wheel Mouse (via USB) | 73P4067 | ann 12/07/04 |

| Security | Kensington® Cable Lock from Lenovo | 73P2582 | ann 12/29/03 |
|          | Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |
|          | USB-Gemplus GemPC Smart Card Reader | 41N3040 | ann 12/13/05 |
|          | PC Card Gemplus Smart Card Reader | 41N3004 | ann 12/13/05 |

| Multimedia | USB 2.0 Lenovo Multimedia Headset | 40Y8518 | ann 06/27/06 |
|            | USB 2.0 Lenovo Webcam | 40Y8519 | ann 08/29/06 |

| Monitors | ThinkVision L174 17” Monitor | 9227AE1 | ann 04/15/08 |
|          | ThinkVision L1700p 17” Monitor | 9417HE2 | ann 09/17/08 |
|          | ThinkVision L1900p 19” Monitor | 4431HE1 | ann 11/11/08 |
|          | ThinkVision L1940p Wide 19” Monitor | 442HB6 | ann 09/17/08 |
|          | ThinkVision L2000p Wide 20.1” Monitor | 442HB6 | ann 09/17/08 |
|          | ThinkVision L2240p Wide 22” Monitor | 442HB6 | ann 09/17/08 |
|          | ThinkVision L2440p Wide 24” Monitor | 442HB2 | ann 09/17/08 |
|          | ThinkVision L2440x Wide 24” Monitor | 442HB2 | ann 09/17/08 |

| Monitor Accessories* | ThinkVision USB Soundbar | 40Y7616 | ann 08/23/05 |
|                      | ThinkVision Soundbar | 45K1263 | ann 09/16/08 |
|                      | Kensington Cable Lock from Lenovo | 73P2582 | ann 12/29/03 |
|                      | Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |
|                      | ThinkPad Convertible Monitor Stand | 40Y7620 | ann 01/05/06 |
|                      | Radial Arm | 19K4644 | ann 05/05/00 |

*Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

| Medialess License Key (MLK) | Microsoft Office 2007 Basic, English | 43R1528 | ann 01/31/07 |
|                            | Microsoft Office 2007 Small Business, English | 43R1534 | ann 01/31/07 |
|                            | Microsoft Office 2007 Professional, English | 43R1531 | ann 01/31/07 |

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide
**ThinkPad X100e (3508) - TopSeller (XP Home) - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Clock</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk Sata</th>
<th>SASA optical</th>
<th>Mini Card</th>
<th>Mini Card WWAN</th>
<th>Battery Carrier</th>
<th>Workhorse</th>
<th>Preload</th>
<th>Workhorse (W)</th>
<th>Battery (G)</th>
<th>Availability</th>
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</thead>
<tbody>
<tr>
<td>3508-24U</td>
<td>MV-40</td>
<td>1.6G</td>
<td>1GB</td>
<td>11.6&quot; HD LED</td>
<td>0.3M</td>
<td>HD 2200</td>
<td>160G 5400</td>
<td>None</td>
<td>11b/g/n</td>
<td>Gobi 2000</td>
<td>None</td>
<td>None</td>
<td>6</td>
<td>XP Home</td>
<td>No</td>
<td>Jan 10</td>
<td></td>
</tr>
</tbody>
</table>

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

### Preloaded operating system
- Genuine Windows® XP Home Edition
- **Preloaded applications** (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Presentation Director
  - Lenovo System Toolbox
  - Lenovo Online Data Backup
  - Norton™ Internet Security 2009
  - Adobe® Reader®
  - Adobe Flash® Player
  - Windows Live™ Toolbar
  - Skype™ for Windows
  - Microsoft® Office 2007 Trial (60-day)

Supports ThinkVantage® technologies
- 65-watt AC Adapter
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

**Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty**

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**See footnotes for important warranty information**

US model announced January 12, 2010

US model withdrawn effective October 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL or LED</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA GB</th>
<th>Mini Card G8</th>
<th>Mini Card 802.11</th>
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- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning

Processor

Entry ultraportable for excellent usability and reliability; one spindle
AMD Athlon™ Neo Processor for Ultrathin Notebooks MV-40 with single-core, virtualization technology, integrated DDR3 memory controller, and 1GB L2 cache or
AMD Athlon Neo X2 Processor for Ultrathin Notebooks L335 with dual-core, virtualization technology, integrated DDR3 memory controller, and 1GB L2 cache

Memory

1GB or 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
Non-Italics: standard memory in one socket; one socket available

SATA DVD:RW

None (use optional USB-based optical drive)

SATA disk

160GB (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™, upgradable

Widescreen display

11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera

Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive

Integrated graphics

ATI™ Radeon HD 3200 graphics, in M780G, external analog monitor support via VGA DB-15 connector;
Maximum external resolution: 2048x1536 @ 60Hz

Keyboard

Full-size, 6-row, spill-resistant, multimedia Fn keys

TrackPoint®

TrackPoint pointing device, Internet Scroll Bar®, magnifying glass

Touchpad

Two-button touch pad, supports multi-touch function

ThinkLight™

None

Dimensions³

6-cell: 11.1" x 8.2" x 0.6-1.2"; 282mm x 209mm x 16-30mm

Weight³

6-cell: from 3.3 lb (1.5kg)

Battery - type

Lithium 6-cell

Battery - life³

6-cell: up to 5 hr

Chipset

AMD M780G Chipset, SB710 south bridge

Multicard reader

4-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital)

ExpressCard/54

None

Ports

Three USB 2.0 (one powered), external monitor (VGA DB-15), ethernet (RJ-45)

PCIe Mini Card

Two PCI Express Mini Card slots

11b/g/n

Some: 11b/g/n wireless, ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x2

11a/b/g/n

Some: 11a/b/g/n wireless, ThinkPad 11a/b/g/n, PCIe Half Mini Card, Broadcom® chipset, 2x2

WWAN upg

Some: Wireless WAN upgradable

Gobi® 2000

Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS

Carrier

Some: AT&T®, contract required with service provider

Some: User selectable at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider

Modem

None

Bluetooth®

Some: Bluetooth 2.1 wireless

Ethernet

Realtek RT8111DL Gigabit Network Connection, PHY, PCIe x1

Audio support

High Definition (HD) Audio, Conexant CX20382-11Z codec /
Stereo speakers, 1.5 watt x 2 / combo audio/mic jack

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

None

Fingerprint reader

None

• These small and medium business (SMB) models are part of the US TopSeller™ Program
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system¹⁰

- Some: Genuine Windows® 7
- Some: Genuine Windows® 8
- Some: Home Premium 32
- Professional 32

Preloaded applications¹⁴ (only some listed)

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Remote Desktop Manager

Preloaded games

Software

- Some: Preloaded games
- Supports ThinkVantage® technologies

65-watt AC Adapter

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service¹⁷

24 hour x 7 day¹⁷ toll-free support during the warranty period¹¹ via 800-426-7378

See notes for important warranty information

US models announced January 5, March 30, April 6, July 6, July 27, or September 21, 2010

US models withdrawn effective June 2011

Lenovo.com/thinkplus/warranty

Lenovo (MS) 2012

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(MNK1-2) June 2011
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- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows® 7 Professional 32

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Windows Live™ Toolbar
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

Supports ThinkVantage® technologies
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service®

24 hour x 7 day toll-free support during the warranty period via 800-426-7378

ThinkPlus™, 1-year LOR® 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD

Lenovo.com/thinkplus/warranty
ThinkPad® X100e (3508) - Education (Windows 7) - withdrawn

| Type-model | Processor | Memory | Wide-screen display | CCFL or LED | Camera | Integrated graphics | Disk | SATA optical | PCIe Mini Card | PCIe Mini Card | Battery cells | Workhorse (W) | Workhorse (W) | Avail date |
|------------|-----------|--------|---------------------|------------|--------|---------------------|------|---------------|---------------|---------------|---------------|-------------|--------------|--------------|-----------|
| 3508-2GU   | MV-40     | 1.60   | 2GB                 | 11.6" HD   | LED    | 0.3M                | 250G | 5400          | None           | WWAN upg      | None          | 6           | Pro 32       | Edu          | Jan 10     |

- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning
- Entry ultraportable for excellent usability and reliability; one spindle

Processor
- AMD Athlon™ Neo Processor for Ultrathin Notebooks MV-40 with single-core, virtualization technology, integrated DDR2 memory controller, and 512KB L2 cache

Memory
- 2GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SO-DIMM sockets;
- Non-italics: standard memory in one socket; one socket available

SATA DVD RW
- None (use optional USB-based optical drive)

SATA disk
- 250GB® (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™, upgradable

Widescreen display
- 11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive

Integrated graphics
- ATI™ Radeon™ HD 3200 graphics, in M780G, external analog monitor support via VGA DB-15 connector;
- Maximum external resolution: 2048x1536@60Hz

Keyboard
- Full-size, 6-row, spill-resistant, multimedia Fn keys

Touchpad
- Two-button touchpad, supports multi-touch function

ThinkLight™
- None

Dimensions
- 6-cell: 11.1" x 8.2" x 0.6-1.2"; 282mm x 209mm x 16-30mm

Weight
- 6-cell: from 3.3 lb (1.5kg)

Case
- Material: PolyCarbomate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - type
- Lithium Ion

Battery - life
- 6-cell: up to 5 hr

Chipset
- AMD M780G Chipset, SB710 south bridge

Multicard reader
- 4-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital)

ExpressCard/54
- None

Ports
- Three USB 2.0 (one powered), external monitor (VGA DB-15), ethernet (RJ-45)

PCle Mini Card
- Two PCI Express Mini Card slots
- 11b/g/n wireless®, ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x2 WAN upg

Gobi™ 2000
- None

Carrier
- None

Modem
- None

Bluetooth™
- None

Ethernet
- Realtek RT8111DL Gigabit Network Connection, PHY, PCIe x1

Audio support
- High Definition (HD) Audio, Conexant CX20682-11Z codec / stereo speakers, 1.5 watt x 2 / combo audio/mic jack

Security
- Power-on password, hard disk password, supervisor password, security keyhole

Security chip
- None

Fingerprint reader
- None

Limited warranty
- 1-year - depot repair service / service upgrades available

Preloaded operating system
- Genuine Windows® 7 Professional 32

Preloaded applications
- Education software
- VitalSource Library College Edition
- Adobe® Instructor Resource Cntn
- Adobe® Digital School Collection
- Photoshop Elements (and CD)
- Premiere Elements (and DVD)
- Acrobat 8 Professional
- Contribute 4
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Windows Media Player®
- Microsoft Office 2010 preloaded; purchase product key to activate

Supports ThinkVantage® technologies
- ENERGY STAR® Gold rating
- 5.0-compliant ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period
- via 800-426-7378

See footnotes for important warranty information

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US model announced January 5, 2010
US model withdrawn effective June 2011
ThinkPad X100e Accessories - withdrawn

Personal Systems Reference (PSREF)

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| Storage and removable storage | USB 2.0 Portable 500GB Hard Disk | 45K1689 | ann 03/17/09 |
|                               | USB 2.0 Portable Secure 320GB Hard Disk | 43R2019 | ann 11/18/08 |
|                               | eSATA/USB 2.0 Secure 500GB Hard Drive | 57Y4400 | ann 01/07/10 |
|                               | USB 2.0 Portable DVD Burner | 43N3264 | ann 01/07/10 |

USB-attached models:

| Wireless WAN (Mini PCI Express) | ThinkPad AT&T Gobi 2000 Broadband Option | 78Y1398 | ann 01/07/10 |

ThinkPad Expansion

Lenovo Essential Notebook Stand | 45J9292 | ann 05/12/09 |

USB Port Replicator with Digital Video | 45K1610 |

ThinkPad X100e Accessories - withdrawn

By ThinkPad X100e due to the system's CPU capabilities.

ThinkPad Expansion
Lenovo® Essential Notebook Stand | 45J9292 | ann 05/12/09 |

USB Port Replicator with Digital Video | 45K1610 |

TrackPoint Cap Collection | 73P2698 | ann 12/16/03 |

USB Numeric Keypad | 33L3225 | ann 05/01/00 |

Enhanced Performance USB Keyboard | 73P2620 | ann 03/23/04 |

UltraSlim Wireless Keyboard and Mouse | 57Y4700 | ann 09/15/09 |

USB Wireless via 2.4GHz technology using a micro-size USB receiver.

ThinkPad USB Keyboard with TrackPoint | 55Y9003 | ann 08/18/09 |

Preferred Pro USB Fingerprint Keyboard | 73P4730 | ann 02/22/05 |

Lenovo Optical Smartcard Keyboard | 51J0155 | ann 03/24/09 |

Lenovo Optical Mouse (USB) | 06P4069 | ann 05/21/03 |

Lenovo Laser Mouse (USB) | 41U3074 | ann 01/23/07 |

Lenovo ScrollPoint® Mouse (USB, Optical) | 31P7405 | ann 08/27/02 |

Lenovo TrackPoint Mouse (USB, Optical) | 31P7410 | ann 06/04/02 |

Lenovo Bluetooth Laser Mouse | 41U5008 | ann 01/22/08 |

Lenovo Wireless Laser Mouse | 49K1696 | ann 11/25/08 |

Lenovo Wireless Laser Mouse - Black | 49K1696 | ann 11/25/08 |

Security
Kensington® MicroSaver® Cable Lock | 73P2582 | ann 12/29/09 |
Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |
Lenovo Security Cable Lock | 57Y4303 | ann 08/24/10 |
USB Gemplus GemPC Smart Card Reader | 41N3040 | ann 02/21/06 |

Multimedia
ThinkPad In-Ear Headphones with mic | 57Y4488 | ann 01/07/10 |

Modem
USB 2.0 Lenovo Modem | 43R1814 | ann 02/26/08 |

Batteries
ThinkPad Battery 17+ (6-cell) | 57Y4559 | ann 01/05/10 |
ThinkPad External Battery Charger | 40Y7625 | ann 09/20/05 |

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter | 40Y7696 |
ThinkPad 90W AC Adapter | 40Y7659 | ann 09/20/05 |
ThinkPad 65W AC Adapter with USB Hub | 57Y4600 | ann 09/07/10 |
90W UltraSlim AC/DC Combo Adapter | 41R4493 | ann 09/22/09 |

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W UltraSlim AC/DC Combo Adapter | 41R4493 |

• iPod and Phone Charge Tip (L10a) | 41R4481 | ann 12/18/07 |

• Generic Micro USB charge tip (L18) | 41R4490 | ann 01/06/09 |

More information at www.lenovopowertips.com

Carrying Cases
ThinkPad 11W Case Sleeve | 57Y4286 | ann 01/05/10 |
ThinkPad 11W Sling Case | 57Y4287 | ann 01/05/10 |

More information at www.lenovo.com/support/cases

Monitors
ThinkVision® L1711p 17" Monitor | 5047HB2 | ann 10/20/09 |
ThinkVision L1900p 19" Monitor | 4431HE1 | ann 11/11/08 |
ThinkVision L1951p Wide 19" Monitor | 2448H86 | ann 10/20/09 |
ThinkVision L2250p Wide 22" Monitor | 2572H86 | ann 10/20/09 |
ThinkVision L2251p Wide 22" Monitor | 2572H86 | ann 10/20/09 |
ThinkVision L2251x Wide 22" Monitor | 2578H86 | ann 10/20/09 |

More information at www.lenovo.com/support/monitors

Monitor Accessories
ThinkVision USB Soundbar | 40Y7616 | ann 08/23/05 |
ThinkVision Soundbar | 45K1263 | ann 09/16/08 |
Kensington MicroSaver® Cable Lock | 73P2582 | ann 12/29/03 |
Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |

Lenovo Security Cable Lock | 57Y4303 | ann 08/24/10 |
Lenovo Easy Reach Monitor Stand | 55Y9258 | ann 09/22/09 |

40 Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
www.lenovo.com/accessories
Purchase Lenovo accessories
www.lenovo.com/support/accessories
Product specifications on Lenovo Support
www.lenovo.com/accessoriesguide
Option Compatibility Matrix (OCM) and accessory brochures
www.lenovoquickpick.com
An Options Compatibility Configurator for Lenovo systems

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(O-X100-E) June 2011
### ThinkPad X120e (0596) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Integrated graphics</th>
<th>Disk SATA GB</th>
<th>SATA optical</th>
<th>PCIe Mini Card WLAN</th>
<th>PCIe Mini Card WWAN</th>
<th>Carrier</th>
<th>Bluetooth</th>
<th>Battery life</th>
<th>cells Preload</th>
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</table>

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Positioning
- **Processor**
  - Entry ultraportable for excellent usability and reliability; one spindle
  - AMD Accelerated Processor E-350 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache
  - AMD Accelerated Processor E-240 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache

### Memory
- 4GB max7 / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- System automatically clocks down for processors with 1066MHz DDR3 memory controller

### Optical
- None (use optional USB-based optical drive)
- **SATA disk**
  - Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradeable
  - Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradeable, Active Protection System™

### Widescreen display
- 11.6" (295mm) HD (1366x768) TFT color
  - anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

### Camera
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

### Graphics
- **AMD Radeon™ HD 6310M graphics** in processor,
  - external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display;
  - Maximum external resolution: 2048x1536 (VGA) @60Hz; 1920x1200 (HDMI) @60Hz

### Keyboard
- Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys

### TrackPoint
- TrackPoint pointing device, Internet Scroll Bar™, magnifying glass

### Touch pad
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

### ThinkLight
- None

### Dimensions
- 3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm
- 6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm

### Weight
- 3-cell: from 2.93 lb (1.33kg); 6-cell: from 3.31 lb (1.49kg)

### Case material
- Matte black (top)
- PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: Magnesium alloy

### Battery
- type: Lithium Ion 3-cell or 6-cell
- life: up to 3 hr; 6-cell: up to 6 hr

### Chipset
- **AMD A50M FCH Chipset**

### Preloaded applications
- Some: Genuine Windows® 7
- Some: Genuine Windows 7 Home Premium 64
- Some: Genuine Windows 7 Professional 64

### Preloaded applications (only some listed)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

### Preloaded operating system
- Some: Genuine Windows 7 Home Premium 64
- Some: Genuine Windows 7 Professional 64

### Ready to install applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)

### User selectable carrier at first boot, AT&T, Verizon

### Modem
- None

### Blueto-oth
- None

### Bluetooth™
- Some: Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)

### Ethernet
- Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1

### Audio support
- High Definition (HD) Audio, Conexant CX20582 codec /
- Supports ThinkVantage® technologies
- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service17
- 24 hour x 7 day²⁴ toll-free support during the warranty period²³ via 800-426-7378

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- None

### Fingerprint reader
- None

### Limited warranty
- 1-year - depot repair service / service upgrades available

See footnotes for more detailed information

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US model(s) announced February 15, May 3, or November 29, 2011

US models withdrawn effective November 2011 or January 2012

[1] www.lenovo.com

[2] Preloaded operating system20

[3] Ready to install applications14

[4] Some:

[5] For compatible accessories, please go to O-X120-E sheet;

[6] Some:

[7] © Lenovo

[8] Some:

[9] For compatible accessories, please go to O-X120-E sheet;

[10] Some:

## ThinkPad X120e (0611) - withdrawn

<table>
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<tr>
<th>Type-model</th>
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<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
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</table>

- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

### Preloaded operating system
- Genuine Windows 7 Professional 64

### Ready to install applications
(all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011
(30 days of virus definitions)

### Preloaded applications
(all OSes; only some listed)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

### See footnotes for more detailed information
© Lenovo

US models announced February 15 or May 3, 2011
US models withdrawn effective January 2012

---

### Positions
- **Processor**: Entry ultra portable for excellent usability and reliability; one spindle
  - AMD Accelerated Processor E-240 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache
  - AMD Accelerated Processor E-350 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache

### Memory
- 4GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- System automatically clocks down for processors with 1066MHz DDR3 memory controller

### Optical SATA disk
- None (use optional USB-based optical drive)
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable, Active Protection System™

### Widescreen display
- 11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

### Graphics
- AMD Radeon™ HD 6310M graphics in processor
- External analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content)
- Supports dual independent display:
  - Maximum external resolution: 2048x1536 (VGA)@60Hz; 1920x1200 (HDMI)@60Hz

### Keyboard
- Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys

### TrackPoint
- TrackPoint pointing device, Internet Scroll Bar™, magnifying glass

### Touchpad
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

### ThinkLight™
- None

### Dimensions
- 3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm
- 6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm

### Weight
- 3-cell: from 2.93 lb (1.33kg); 6-cell: from 3.31 lb (1.5kg)

### Case color
- Matte black (top)

### Case material
- Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic;
- Bottom: Magnesium alloy

### Battery - type
- Lithium Ion 3-cell or 6-cell

### Battery - life
- 3-cell: up to 3 hr; 6-cell: up to 6 hr

### Chipset
- AMD A50M FCH Chipset

### Multicard reader
- 4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)

### ExpressCard Ports
- Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)

### PCIe Mini Card WLAN/WWAN
- Two PCI Express Mini Card slots
- ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1
- Supports ThinkVantage technologies

### Modern
- None

### Bluetooth™
- Some: Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)

### Ethernet
- Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1

### Audio support
- High Definition (HD) Audio, Conexant CX20582 codec / stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- None

### FingerPrint reader
- None

### Limited warranty
- 1-year - depot repair service / service upgrades available

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See footnotes for more detailed information
### ThinkPad X120e Accessories - withdrawn

#### Personal Systems Reference (PSREF)

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#### Storage and removable storage

| USB 2.0 Portable 320GB Hard Disk | 45K1689 | ann 03/17/09 |
| USB 2.0 Portable 500GB Hard Disk | 45K1690 | ann 05/26/09 |
| USB 2.0 Portable Secure 320GB Hard Disk | 43R2019 | ann 11/18/08 |
| USB 3.0 Secure 500GB Hard Drive | 0A65619 | ann 11/29/11 |
| USB 3.0 Secure 750GB Hard Drive | 0A65616 | ann 11/29/11 |
| Lenovo Slim USB Portable DVD Burner | 0A33988 | ann 06/14/11 |

#### Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:
- ThinkPad Gobi™ 2000 Broadband Option | 78Y1399 | ann 01/07/10 |
- ThinkPad AT&T™ 2000 Broadband Option | 78Y1398 | ann 01/07/10 |

#### ThinkPad Expansion

| Lenovo® Essential Notebook Stand | 45J9292 | ann 05/12/09 |

#### Keyboard

- TrackPoint Cap Collection | 73P2698 | ann 12/16/03 |
- USB Numeric Keypad | 33L3225 | ann 05/01/00 |
- Preferred Pro USB Keyboard | 73P5220 | ann 06/21/05 |
- Enhanced Performance USB Keyboard | 73P2620 | ann 03/23/04 |
- ThinkPad USB Keyboard with TrackPoint | 55Y9003 | ann 08/18/09 |
- Preferred Pro USB Fingerprint Keyboard | 73P4730 | ann 02/22/05 |
- Lenovo USB Smartcard Keyboard | 51J0155 | ann 03/24/09 |

#### Mouse

| Lenovo Optical Mouse (USB) | 06P4069 | ann 05/21/03 |
| Lenovo Laser Mouse (USB) | 41U3074 | ann 01/23/07 |
| ThinkPad USB Laser Mouse | 57Y4635 | ann 12/15/09 |
| Lenovo ScrollPoint® Mouse (USB, Optical) | 31P7405 | ann 08/27/02 |
| ThinkPad Travel Mouse (USB, Optical) | 31P7410 | ann 06/04/02 |
| ThinkPad Bluetooth Laser Mouse | 41U5008 | ann 01/22/08 |
| Lenovo Wireless Laser Mouse | 0A36188 | ann 12/20/11 |
| d) Wireless via 2.4GHz technology using a micro-size USB receiver. |

#### Security

| 3M 11.6W Privacy Filter from Lenovo | 0A81768 | ann 04/05/11 |
| Kensington® MicroSaver® Cable Lock | 79P2582 | ann 12/29/03 |
| Kensington Twin Head Cable Lock | 45K1620 | ann 09/30/08 |
| Lenovo Security Cable Lock | 57Y4303 | ann 08/24/10 |
| USB Gemplus GemPC Smart Card Reader | 41N3040 | ann 02/21/08 |

#### Multimedia

| ThinkPad In-Ear Headphones with mic | 57Y4488 | ann 01/07/10 |

#### Modem

| USB 2.0 Lenovo Modem | 43R1814 | ann 02/26/08 |

### Batteries

- ThinkPad Battery 17+ (6-cell) | 57Y4559 | ann 01/05/10 |
- ThinkPad External Battery Charger | 40Y7625 | ann 09/20/05 |
| Requires the ThinkPad 90W AC Adapter | 40Y7659 | or the adapter provided with the system. |

More information at [www.lenovo.com/alldaycomputing](http://www.lenovo.com/alldaycomputing)

#### Carry Cases

- ThinkPad 11W Case Sleeve | 57Y4286 | ann 01/05/10 |
- ThinkPad 11W Sling Case | 57Y4287 | ann 01/05/10 |

More information at [www.lenovo.com/support/cases](http://www.lenovo.com/support/cases)

#### Monitors

- ThinkVision® L1711p 17" (VGA, DVI-D) | 5047HB2 | ann 10/20/09 |
- ThinkVision L1900p 19" (VGA, DVI-D) | 4431HE1 | ann 11/11/08 |
- ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) | 2448MB6 | ann 09/13/11 |
- ThinkVision L2250p Wide 22" (VGA, DVI-D) | 2572HB6 | ann 10/20/09 |
- ThinkVision L2251x Wide 22" (VGA, DP) | 2578HB6 | ann 10/20/09 |
- ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) | 2572MB6 | ann 09/13/11 |
- ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) | 4420MB2 | ann 09/13/11 |
| e) DisplayPort cable is not included. |

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

#### Monitor Accessories

- Lenovo USB-to-DVI Monitor Adapter | 45K5296 | ann 05/12/09 |
- ThinkVision SoundBar | 45K1263 | ann 09/16/08 |
- Kensington MicroSaver Cable Lock | 73P2582 | ann 12/29/03 |
- Lenovo Security Cable Lock | 57Y4303 | ann 08/24/10 |
- Lenovo Easy Reach Monitor Stand | 55Y9258 | ann 09/22/09 |
| Compatible on selected Lenovo and ThinkVision monitors. |

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:
- [www.lenovo.com/accessories](http://www.lenovo.com/accessories)
- Purchase Lenovo accessories
- [www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)
- Product specifications on Lenovo Support
- [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)
- Option Compatibility Matrix (OCM) and accessory brochures
- [www.lenovoquickpick.com](http://www.lenovoquickpick.com)
- An Options Compatibility Configurator for Lenovo systems

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(O-X120-E) January 2012
### ThinkPad® X130e 2338 (Intel) - TopSeller - withdrawn

**Preloaded operating system**
- Some: Genuine Windows® 7
- Some: Genuine Windows 7 Professional 64

**Ready to install applications** (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011

**Preloaded applications**
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

---

### Dimensions

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA</th>
<th>Mini Card</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Top color</th>
<th>Finger print reader</th>
<th>Battery - life</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card</th>
<th>Ann Date</th>
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<tr>
<td>2338-2FU</td>
<td>Cel 867</td>
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<td>11.6&quot; HD 0.3M</td>
<td>320G</td>
<td>7200</td>
<td>TP 11b/g/n</td>
<td>WWAN up</td>
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<td>11a/b/g/n</td>
<td>6</td>
<td>04/12</td>
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</tbody>
</table>

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- Microsoft® Office 2010 Product Key Ready (O10PKR)

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**Positioning Processor**

- Entry ultraportable for excellent usability and reliability; one spindle
- Intel® Celeron® 867 processor (dual-core, 1333MHz, 2MB Cache)
- DDR3 memory controller (up to 1333MHz), Hyper-Threading technology

**Memory**

- 8GB max (PC3-10600)
- 1333MHz DDR3, non-parity, dual-channel capable, 204-pin SO-DIMM sockets

**Optical SATA disk**

- None (optional USB-based optical drive)
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™

**Widescreen display Camera**

- 11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

**Graphics**

- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital content via HDMI™ (supporting HDCP to output protected content); supports dual independent display;
- Maximum external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI port) @60Hz

**Keyboard**

- Full-size, 6-row, spill-resistant, multimedia Fn keys
- Touchpad: UltraNav™, buttonless touchpad below keyboard, multi-touch

**TrackPoint™**

- TrackPoint pointing device, Internet Scroll Bar™

**Touchpad**

- None

**Dimensions**

- 11.6W (WxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm
- 6-cell: from 3.93 lb (1.78kg)

**Weight**

- 6-cell: up to 9.0 hr

**Chipset**

- Mobile Intel HM65 Express Chipset

**Security**

- Trusted Platform Module, TCG 1.2-compliant
- Power-on password, hard disk password, supervisor password, security keyhole
- For compatible accessories, please go to O-X130-E sheet; for Lenovo service upgrade options, please go to S-TA sheet

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**See footnotes for more detailed information**

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US model(s) announced December 20, 2011, or February 14, April 3, or April 10, 2012

US model(s) withdrawn effective September 2012

(JN1-1) September 2012
### ThinkPad® X130e 2339 (Intel) - withdrawn

**Personal Systems Reference (PSREF)**

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<th>Type-model</th>
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<th>Wide-screen display</th>
<th>Camera</th>
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<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Carrier</th>
<th>Top color</th>
<th>Finger print reader</th>
<th>Blue-tooth cells</th>
<th>Pre-load</th>
<th>Ann Date (mm/yy)</th>
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<tr>
<td>2339-2AU</td>
<td>i3-2367M</td>
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<td>4GBx1</td>
<td>11.6&quot; HD</td>
<td>0.3M</td>
<td>320G 7200</td>
<td>TP 11a/b/g/n</td>
<td>WWAN upgradable</td>
<td>Matte black</td>
<td>None</td>
<td>Blue</td>
<td>6</td>
<td>Pro 64</td>
<td>12/11</td>
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<td>320G 7200</td>
<td>TP 11a/b/g/n</td>
<td>WWAN upgradable</td>
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<td>None</td>
<td>Blue</td>
<td>6</td>
<td>Pro 64</td>
<td>12/11</td>
</tr>
</tbody>
</table>

- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

#### Positioning

**Entry ultraportable for excellent usability and reliability; one spindle**

**Intel® Core™ i3-2367M processor (dual-core, 1.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Hyper-Threading technology**

**Memory**

6GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical**

None (use optional USB-based optical drive)

**SATA disk**

- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™

**Widescreen display**

11.6" (295mm) HD (1366x768) FTF color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

**Camera**

On top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

**Graphics**

Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 2048x1536 (VGA) @75Hz; 1920x1200 (HDMI port) @60Hz

**Keyboard**

Full-size, 6-row, spill-resistant, multimedia Fn keys

**TrackPoint®**

TrackPoint pointing device, Internet Scroll Bar

**Touch pad**

UltraNav™, buttonless touchpad below keyboard, multi-touch

**ThinkLight™**

None

**Dimensions**

11.6"W (WxOxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm

**Weight**

6-cell: from 3.93 lb (1.78kg)

**Case color**

Matte black (top)

**Case material**

Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

6-cell (62.4Whr): up to 9.0 hr

**Chipset**

Mobile Intel HM65 Express Chipset

**Multicard reader**

4-in-1 reader (MMC, SD, SDHC, SDXC)

**ExpressCard**

None

**Ports**

Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)

**PCLe Mini Card**

Two PCI Express Mini Card slots
- Some: 11b/g/n, PCLe Half Mini Card, ThinkPad b/g/n, 1x1
- Some: 11a/b/g/n, PCLe Half Mini Card, ThinkPad a/b/g/n, 2x2

**WWAN**

Some: Wireless WAN upgradeable
- Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCLe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS

**Carrier**

Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider

**Modem**

None

**Bluetooth™**

Bluetooth 3.0 wireless

**Ethernet**

Gigabit ethernet, Atheros® AR8151

**Intel AMT**

None

**Audio support**

High Definition (HD) Audio, Conexant CX20671 codec / stereo speakers, 2 watts x 2 / digital mono microphone, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

None

**Limited warranty**

1-year - depot repair service / service upgrades available

---

### Preloaded operating system

- Some: Genuine Windows® 7 Home Premium 64
- Some: Genuine Windows 7 Professional 64

### Ready to install applications

- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Norton™ Internet Security 2011 (30 days of virus definitions)

### Preloaded applications

- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

**Supports ThinkVantage® technologies**

65-watt AC Adapter

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service™

24 hour x 7 day® toll-free support during the warranty period®

For compatible accessories, please go to O-X130-E sheet;

For Lenovo service® upgrade options, please go to S-TA sheet

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See footnotes for more detailed information

© Lenovo (JN1-2) September 2012

US model(s) announced December 20, 2011

US model(s) withdrawn effective September 2012
## Lenovo X130e 0622 (AMD) - TopSeller - withdrawn

**Type-model** | **Processor** | **Memory** | **Wide-screen display** | **Camera** | **Disk** | **PCIe Mini Card WLAN** | **PCIe Mini Card WWAN** | **Carrier** | **Top color** | **Finger print reader** | **Battery type** | **Ann Date** |
---|---|---|---|---|---|---|---|---|---|---|---|---|
0622-2HU | E-450 | 4GBx1 | 11.6" HD | 0.3M | 320G 7200 | TP 11b/g/n | WWAN upg | Matte black | None | Blue | 6 year | 04/12 |
0622-2GU | E-450 | 2GBx1 | 11.6" HD | 0.3M | 320G 7200 | TP 11b/g/n | WWAN upg | Matte black | None | Blue | 6 year | 12/11 |
0622-2HU | E-450 | 4GBx1 | 11.6" HD | 0.3M | 320G 7200 | TP 11b/g/n | WWAN upg | Matte black | None | Blue | 6 year | 04/12 |
0622-2GU | E-450 | 2GBx1 | 11.6" HD | 0.3M | 320G 7200 | TP 11b/g/n | WWAN upg | Matte black | None | Blue | 6 year | 12/11 |

### Additional Information
- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- Microsoft® Office 2010 Product Key Ready (O10PKR)

**Positioning**
- Entry ultraforrable for excellent usability and reliability; one spindle

**Processor**
- **AMD Accelerated Processor E-300** (dual-core, 1.30GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)
- **AMD Accelerated Processor E-450** (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon HD 6320 Graphics, integrated DDR3 memory controller (up to 1333MHz)

**Memory**
- 8GB max† / PC3-10600 1333MHz DDR3, non-parity, two 204-pin SO-DIMM sockets
- * System automatically clocks down for processors with 1066MHz DDR3 memory controller

**Optical SATA disk**
- None (use optional USB-based optical drive)

**Widescreen display Camera**
- 11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16.9 aspect ratio, 300:1 contrast ratio
- Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

**Graphics**
- AMD Radeon HD 6310 or 6320 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI (supporting HDCP to output protected content); supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; supports dual independent display; 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**Chipset**
- **AMD A50M FCH Chipset**

**MultiCard reader**
- 4-in-1 reader (MMC, SD, SDHC, SDXC)

**PCIe Mini Card**
- Two PCI Express Mini Card slots
- Some: 11b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 1x1
- Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2
- **WWAN**
  - Some: Wireless WAN upgradeable
  - Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS
- **Carrier**
  - Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider

**Modem**
- None

**Ethernet**
- Gigabit ethernet, Atheros® AR8151
- **Audio support**
  - High Definition (HD) Audio, Conexant CX20671 codec / speaker speakers, 2 watt x 2 / digital mono microphone, combo audio/mic jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**
  - None
- **Fingerprint reader**
  - None

**Limited warranty**
- **1-year** - depot repair service / service upgrades available

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See footnotes for more detailed information

**US model(s) announced December 20, 2011, April 3, 2012, or April 10, 2012**

**US model(s) withdrawn effective September 2012**

© Lenovo
## ThinkPad® X130e 0627 (AMD) - withdrawn

### Type-models Processor GHz Memory Display Memory Camera Disk SATA Carrier Top color

<table>
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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Memory</th>
<th>Camera</th>
<th>SATA</th>
<th>GB</th>
<th>rpm</th>
<th>Mini Card</th>
<th>Carrier</th>
<th>Top color</th>
<th>Pre-load</th>
<th>Ann Date</th>
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<tbody>
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<td>0627-2AU</td>
<td>E-450</td>
<td>1.65</td>
<td>4GBx1</td>
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<td>0.3M</td>
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<td>7200</td>
<td>TP</td>
<td>11b/g/n</td>
<td>WWAN upg</td>
<td>Matte black</td>
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<td>Matte black</td>
<td>None</td>
<td>Blue</td>
<td>6 Prem</td>
</tr>
</tbody>
</table>

### Preloaded operating system
- Some: Genuine Windows™ 7
- Some: Genuine Windows 7

### Ready to install applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Microsoft Office 2010 Product Key Ready (O10PKR)
- Norton™ Internet Security 2011 (30 days of virus definitions)

### Preloaded applications
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

### Positioning
Entry ultra-portable for excellent usability and reliability; one spindle

### Processor
- **AMD Accelerated Processor E-300** (dual-core, 1.30GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)
- **AMD Accelerated Processor E-450** (dual-core, 1.65GHz, 1MB L2 cache), integrated AMD Radeon HD 6320 Graphics, integrated DDR3 memory controller (up to 1333MHz)

### Memory
8GB max / PC3-10600 1333MHz DDR3, non-parity, two 204-pin SODIMM sockets

### Optical
- SATA disk: None (use optional USB-based optical drive)
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm, upgradable, Active Protection System™

### Widescreen display
- **11.6"** (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
- Camera: On top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

### Graphics
- **AMD Radeon HD 6310 or 6320 graphics** in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 2048x1536 (VGA); 1920x1200 (HDMI)

### Keyboard
- Full-size, 6-row, spill-resistant, multimedia Fn keys
- TrackPoint®: TrackPoint pointing device, Internet Scroll Bar™
- Touchpad: UltraNav™, buttonless touchpad below keyboard, multi-touch
- ThinkLight™: None

### Dimensions
- **11.6W" (WxDxH): 11.6" x 8.5" x 0.98"**: 293.4mm x 216mm x 24.8mm
- 6-cell: from 3.93 lb (1.78kg)

### Weight
- Case color: Matte black (top)
- Case material: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

### Battery
- Battery: Lithium Ion 6-cell
- Battery life: 6-cell (62.4Whr): up to 9.2 hr

### Chipset
- **AMD A50M FCH Chipset**

### Preloading
Supports ThinkVantage technologies

- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

### Warranty
- 24 hour x 7 day toll-free support during the warranty period of 1 year
- Depot repair service / service upgrades available
- For compatible accessories, please go to O-X130-E sheet;
- For Lenovo service upgrade options, please go to S-TA sheet

### Footnotes
- See footnotes for more detailed information
- Lenovo (JN1-4) September 2012
**ThinkPad® X130e 0627 (AMD) - DOS - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory GB</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk GB rpm</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Carrier</th>
<th>Top color</th>
<th>Finger print reader</th>
<th>Battery cells</th>
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<td>0627-2FU</td>
<td>E-300 1.30</td>
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</tbody>
</table>

- Microsoft® Office 2010 Product Key Ready (O10PKR)

## Positioning

**Processor**

Entry ultraportable for excellent usability and reliability; one spindle

**AMD Accelerated Processor E-300** (dual-core, 1.30GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6310 Graphics, integrated DDR3 memory controller (up to 1066MHz)

**Memory**

8GB max7 / PC3-10600 1333MHz DDR3, non-parity, two 204-pin SO-DIMM sockets

* System automatically clocks down for processors with 1066MHz DDR3 memory controller

**Optical SATA disk**

None (use optional USB-based optical drive)

**Widescreen display**

11.6" (295mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

**Camera**

Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator

**Graphics**

AMD Radeon HD 6310 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 2048x1536 (VGA); 1920x1200 (HDMI)

**Keyboard**

Full-size, 6-row, spill-resistant, multimedia Fn keys

**TrackPoint®**

TrackPoint pointing device, Internet Scroll Bar¹³

**Touchpad**

UltraNav™, buttonless touchpad below keyboard, multi-touch

**ThinkLight™**

None

**Dimensions³**

11.6W" (WxDxH): 11.6" x 8.5" x 0.98"; 293.4mm x 216mm x 24.8mm

**Weight³**

6-cell: from 3.93 lb (1.78kg)

**Case color**

Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic;

Bottom: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Battery - type**

Lithium Ion 6-cell

**Battery - life¹⁰**

6-cell (62.4Whr): up to 9.2 hr

**Chipset**

AMD A50M FCH Chipset

**Multicard reader**

4-in-1 reader (MMC, SD, SDHC, SDXC)

**ExpressCard**

None

**Ports**

Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)

**PCIe Mini Card**

Two PCI Express Mini Card slots

**WWAN**¹⁰

11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2

**Carrier**

None

**Modem**

None

**Bluetooth™**

None

**Ethernet**

Gigabit ethernet, Atheros® AR8151

**Audio support**

High Definition (HD) Audio, Conexant CX20671 codec / stereo speakers, 2 watt x 2 / digital mono microphone, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

None

**Fingerprint reader**

None

**Limited warranty¹²**

1-year - depot repair service / service upgrades²² available

Preloaded operating system¹⁰

- None (DOS License ready)

See footnotes for more detailed information

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US model(s) announced February 28, 2012

US model(s) withdrawn effective September 2012
ThinkPad® X130e Accessories - withdrawn

Memory
- 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
- 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
** System automatically clocks down for processors with 1066MHz DDR3 memory controller.

Storage and removable storage
- USB 2.0 Portable 32GB Hard Disk 45K1689 ann 03/17/09
- USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09
- USB 2.0 Portable Secure 320GB Hard Disk 45R2019 ann 11/18/08
- USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11
- USB 3.0 Secure 750GB Hard Drive 0A66519 ann 08/28/11
- Lenovo Slim USB Portable DVD Burner 0A33988 ann 06/14/11

Wireless WAN (Mini PCI Express)
- Only WWAN upgradable models: Lenovo ThinkPad Gobi

Wireless LAN
- 51J0155 Lenovo Wireless Keyboard
- 55Y9003 Preferred Pro USB Keyboard
- 73P2620 USB Numeric Keypad
- 33L3225 Lenovo USB Numeric Keypad
- 73P2620 ThinkPad USB Keyboard with TrackPoint
- 73P4730 Enhanced Performance USB Keyboard
- 33L3225 USB Gemplus GemPC Smart Card Reader
- 41N3040 Kensington Twin Head Cable Lock

Security
- 3M 11.6W Privacy Filter from Lenovo
- Thinkpad ScrollPoint® Mouse (USB, Optical)
- ThinkPad Travel Mouse (USB, Optical)
- ThinkPad Bluetooth Laser Mouse
- ThinkPad Laser Mouse
- ThinkPad Laser Mouse

Batteries
- ThinkPad Battery 35+ (6-cell) 0A36292 ann 07/05/11
- ThinkPad External Battery Charger 40Y7625 ann 09/20/05
- ThinkPad Gobi 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/aldaycomputing

Carrying Cases
- ThinkPad 11W Sling Case 57Y4287 ann 01/05/10
- ThinkPad 12W Case Sleeve 51J0476 ann 08/19/08
- ThinkPad 15.6” widescreen models:
  - Lenovo Messenger Max 41US253 ann 05/01/07
  - ThinkPad Business BackPack 41US254 ann 05/01/07
  - ThinkPad Business Topload Case 0A33896 ann 02/28/12
  - Lenovo Sport Slimcase - Red 0A33897 ann 02/28/12
  - Lenovo Sport Messenger - Red 0A33898 ann 02/28/12

More information at www.lenovo.com/support/cases

Monitors
- ThinkVision L1711p 17” (VGA, DVI-D) 5047HB2 ann 10/20/09
- ThinkVision L1900p 19” (VGA, DVI-D) 4431HE1 ann 11/11/08
- ThinkVision LT1952p Wide 19” (VGA, DP, DVI-D) 2448MB6 ann 09/13/11
- ThinkVision L2252p Wide 22” (VGA, DVI-D) 2572HB6 ann 10/20/09
- ThinkVision LT2252p Wide 22” (VGA, DP, DVI-D) 2572HB6 ann 10/20/09
- ThinkVision LT2452p Wide 24” (VGA, DP, DVI-D) 4420MB2 ann 09/13/11

More information at www.lenovo.com/support/monitors

Monitor Accessories
- Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
- Lenovo USB Soundbar 0A36190 ann 05/01/12
- Kensington MicroSaver Cable Lock 73P2582 ann 12/09/03
- Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
- Lenovo Security Cable Lock 57Y4303 ann 08/24/10
- Lenovo Easy Reach Monitor Stand 55Y9258 ann 09/22/09

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:
- www.lenovo.com/accessories
- www.lenovo.com/support/accessories
- www.lenovo.com/accessoriesguide
- www.lenovoquickpick.com

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(O-X130-E) September 2012
Lenovo ThinkPad X200

ThinkPad 65W AC Adapter
40Y7696
ThinkPad X200 (7454) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA rpm</th>
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<th>ThinkPad UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
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<td>4</td>
<td>XP Pro</td>
<td>Aug 08</td>
<td></td>
</tr>
</tbody>
</table>

**Preloaded operating system**

- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista<sup>™</sup> Business (non-qualified) and Windows Vista Business (qualified)
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32

**Preloaded applications**

- Recovery and Restore<sup>™</sup>
- Access Connections<sup>™</sup>
- Client Security Solution<sup>™</sup>
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software
- Lenovo System Toolbox

**Supports ThinkVantage<sup>™</sup> technologies**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - CD-RW/DVD-ROM Ultrabay Slim SATA 1.5Gb/s
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s
  - Serial ATA Hard Drive
- Bay Adapter III
- Disks supported (some):
  - 250GB 5400 rpm 320GB 7200 rpm 434340
  - 320GB Disk 7200 rpm 434341

Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter Climate Savers<sup>™</sup> certified
ePEAT® Gold rating (LED models)
ePEAT Silver rating (other models)
ENERGY STAR® 5.0-compliant
ROHS-compliant

International Warranty Service 24 hour x 7 day toll-free support during the warranty period 2600 846-7378

See footnotes for important warranty information
The ThinkPad X200 (7454) - TopSeller (XP with Win 7 License) - withdrawn

<table>
<thead>
<tr>
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<th>Wide-screen display</th>
<th>Sata GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
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<th>Intel WUB or Turbo AMT</th>
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<td>1600 WXGA LED</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning
An ultraportable for the executive on the move; one spindle

Processor
Intel® Core™ 2 Duo processor P8600, P8700, or P8800 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache

Memory
2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

SATA DVD/±RW Ultrabay Slim
Some: DVD burner (43N3214), SATA 1.5Gb/s, removable from X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8761)

SATA disk
160GB(SATA) (6400 or 7200 rpm) or 250GB (SATA) (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, Active Protection System™, removable, upgradable, Shock Mounted Hard Drive, supports second disk in optional or standard X200 UltraBase

Widescreen display
12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

Battery-life
Up to 6.5 hr; 9-cell: 4GB, up to 7.5 hr; 6-cell: up to 6.5 hr; 4-cell: up to 5.3 hr; 9-cell: up to 9 hr

Battery-type
Lithium Ion

Case material
Black

Case color
Black

Weight
4.1lbs (1.86kg)

Camera
Some: camera on top of screen, 1.3-megapixel, fixed focus

Graphics controller
Intel Graphics Media Accelerator 4500/4500MHD (GMA 4500MHD), in GM45

Graphics - external
External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @75Hz

Keyboard
Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

TrackPoint®
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

ThinkLight™
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
7.8" x 11.1" x 0.8" (198mm x 281mm x 20mm); 6.5 lbs (2.95kg)

Weight
Some: 1.76 lbs (0.85kg)

Camera
Some: camera on top of screen, 1.3-megapixel, fixed focus

Chipset
Mobile Intel GM45 Express Chipset

Media slice
Some: X200 UltraBase media slice (see right side)

Multicard reader
5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)

Ports
Three USB 2.0, external monitor (VGA DB-15), modem (RI-11), ethernet (RI-45)

Mini PCI Express
Three Mini PCI Express slots

WWAN upg
2G Turbo
None

UWB
None

Modem
56K V.92 modem

Bluetooth®
Bluetooth 2.1 wireless, LED indicator

Ethernet
Non-Wi-Fi model: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1 vPro model: Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT
Some: Intel Active Management Technology (IATM)

Audio support
High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
1-year - depot repair service / service upgrades available

See footnotes for important warranty information

Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update

Supports ThinkVantage™ technologies

ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB FDE 7200 rpm
    - 320GB Disk 7200 rpm

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone output
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lbs; 730g

65-watt (GMA graphics) AC Adapter
Climate Savers® certified
EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

See footnotes for important warranty information

US models announced on October 22 or December 15, 2009

© Lenovo (MOC2-1) June 2010

US models withdrawn effective June 2010

Intel Centrino® 2 processor technology
Intel Centrino 2 with vPro™ technology
### ThinkPad® X200 (7454) - TopSeller (Windows 7) - withdrawn

#### Positioning

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>CCFL LED Camera</th>
<th>Disk Sata GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini Pcle 802.11</th>
<th>Mini Pcle WWAN</th>
<th>Mini Pcle UWB</th>
<th>Battery</th>
<th>Whose (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7454-33U</td>
<td>P8700 2.53</td>
<td>2GB</td>
<td>12.1&quot; WXGA LED</td>
<td>640GB 5400</td>
<td>12.1&quot; WXGA LED</td>
<td>Intel 5100®</td>
<td>WWAN upg</td>
<td>None</td>
<td>Pro 32</td>
<td>No Oct 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7454-3SVU</td>
<td>P8700 2.53</td>
<td>2GB</td>
<td>12.1&quot; WXGA LED</td>
<td>640GB 7200</td>
<td>12.1&quot; WXGA LED</td>
<td>Intel 5100®</td>
<td>WWAN upg</td>
<td>None</td>
<td>Pro 32</td>
<td>No Nov09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7454-W8P</td>
<td>2GB</td>
<td>12.1&quot; WXGA LED</td>
<td>640GB 7200</td>
<td>12.1&quot; WXGA LED</td>
<td>12.1&quot; WXGA LED</td>
<td>Intel 5100®</td>
<td>WWAN upg</td>
<td>None</td>
<td>Pro 32</td>
<td>Nov09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

#### Preloaded operating system

- Genuine Windows® 7 Professional 32

#### Preloaded applications

- *only some listed*
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - ThinkVantage Toolbox

#### ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 5. 25Gbps
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Supports ThinkVantage technologies

#### Media slice

<table>
<thead>
<tr>
<th>Media slice</th>
<th>Multicard reader</th>
<th>Ports</th>
<th>Mini PCI Express</th>
<th>WWAN upg</th>
<th>Security</th>
<th>Fingerprint reader</th>
<th>Limited warranty1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: X200 UltraBase media slice</td>
<td>5-in-1 reader</td>
<td>Three USB 2.0</td>
<td>Mini PCI Express Intel 5100®</td>
<td>Wireless WWAN</td>
<td>None</td>
<td>Fingerprint reader</td>
<td>1-year - depot repair service</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information © Lenovo

US models announced on October 22 or November 3, 2009
US models withdrawn effective August 2008 or June 2010

(MOC-2) June 2010
### ThinkPad X200 (7455) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Type-model</th>
<th>Ghz Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>Optical</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Battery cells</th>
<th>Power</th>
<th>Whorse (W)</th>
<th>Qaul (BS)</th>
<th>Educat</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7455-D9U</td>
<td>P8600</td>
<td>2.40</td>
<td>2GB</td>
<td>12.1&quot; WXGA Cam</td>
<td>160GB</td>
<td>5400</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5100a WWAN upg</td>
<td>None</td>
<td>6</td>
<td>Ult 32</td>
<td>Educ</td>
<td>Mar 09</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has an EasyServ™, depot repair service 3-year limited warranty

### Positioning and Processors

- An ultraportable for the executive on the move; one spindle Intel® Core™ 2 Duo processor P8600 with dual-core
- Intel HD boost, 1066MHz system bus, and 3MB L2 cache

### Memory

- 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-Italics: standard memory in 1 socket; 1 socket available

### Diskette drive

- None (use optional USB-based diskette drive)
- Option for ThinkPad X200 UltraBase

### Ultrabay Slim

- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, Active Protection System™, removable, upgradeable, Shock Mounted Hard Drive, supports second disk in optional or standard X200 UltraBase

### Widescreen display

- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

### Graphics controller

- Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

### Graphics - external

- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD)
- Camera on top of screen, 1.3-megapixel, fixed focus

### Chipset

- Maximum external resolution: 2048x1536@75Hz

### Keyboard

- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- ThinkLight™ illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

- Without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm
- Without X200 UltraBase: 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm
- 4-cell: from 2.98 lb (1.35kg); 6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)

### Weight

- Black
- Magnesium alloy
- Lithium Ion 6-cell
- 4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

### Battery - type

- Battery - life

### Multimedia reader

- Option: ThinkPad X200 UltraBase media slice (see right side)
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

### Media slice, ExpressCard, Ports

- One slot (ExpressCard 34, ExpressCard 54)
- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

### Preloaded operating system

- Genuine Windows® Vista Ultimate 32
- Vista Premium logo

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerPrint models)

### Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### Limited warranty

- 3-years/1-year battery - EasyServ™, depot repair service / service upgrades available

### See footnotes for important warranty information

- US model withdrawn effective December 2009
- © Lenovo (MOC-1-7) January 2010
<table>
<thead>
<tr>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical</th>
<th>Bluetooth</th>
<th>Finger</th>
<th>Whorse</th>
<th>Batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Core i7</td>
<td>2.4</td>
<td>4GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB</td>
<td>5400</td>
<td>Optional</td>
<td>6</td>
<td>B32 W Aug 08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intel Core i7</td>
<td>2.4</td>
<td>4GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB</td>
<td>5400</td>
<td>Optional</td>
<td>6</td>
<td>B32 W Aug 08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intel Core i7</td>
<td>2.4</td>
<td>4GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB</td>
<td>5400</td>
<td>Optional</td>
<td>6</td>
<td>B32 W Aug 08</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*These models have a depot repair service 3-year limited warranty*

---

**Positioning**
An ultraportable for the executive on the move; one spindle drive (E5.40 W/RAID, model (IAA) compliant)

**Processor**
Intel Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache

**Memory**
1GB, 2GB, or 4GB std / 4GB max7 / PC3-8500 1066MHz

**SATA Combo**
Option for ThinkPad X200 UltraBase

**Ultradyn Slim SATA disk**
Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

**Dimensions**
without X200 UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm

**Weight**
without Ultrabay Hot Swap (HSW), 3-cell: 2.9 lb (1.3kg); 1.36 kg

**Case material**
Magnesium alloy

**Battery - type**
Lithium Ion 4-cell, 6-cell, or 9-cell

**Battery - life ISO**
4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

**Chipset**
Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express™ 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**
Option: ThinkPad X200 UltraBase media slice (see right side)

**Multicard reader**
ExpressCard/54 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

**ExpressCard/54 Ports**
One slot (ExpressCard/34, ExpressCard/54)
Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**Mini PCI Express**
Intel 5100®

**Intel 5300® WWAN upg**
Verizon® AT&T™

**2G Turbo UWB**
Media

**Modem**
56K V.92 modem

**Bluetooth™**
Some: Bluetooth 2.1, wireless, LED indicator

**Ethernet**
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Audio support**
Intel High Definition Audio (HD Audio), Conexant CX8761 codec / mon speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Limitations**
Limited warranty 3-years 1-yr battery - depot repair service - service upgrades available

---

**Preloaded operating system**
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista Business
- Some: Genuine Windows Vista Business 32

**Preloaded applications**
- Vista models: Vista Premium logo

**Supports ThinkVantage technologies**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle option with optional Ultrabay Slim accessores in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
- Disks supported (some):
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411
- Other features:
  - Power button (front)
  - Stereo speakers (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet port
  - Microphone in and headset output
  - Second battery charger
  - Requires 65 or 90 watt AC adapter
  - 1.6 lb; 730g
- 65-watt (GMA graphics) AC Adapter Climate Savers® certified
- EPEAT® Silver rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information

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US models announced on August 5 or September 2, 2008
US models withdrawn effective August 2008 or June 2010
ThinkPad X200 (7458) - December 2008 - withdrawn

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>An ultraportable for the executive on the move; one spindle Intel® Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>SATA Combo</td>
<td>Some: CD-RW/DVD-ROM, SATA 1.5Gbps, removable from X200 UltraBase</td>
</tr>
<tr>
<td>Ultrabase Slim</td>
<td>Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) Some: 12GBG Solid State Drive (SSD) / SATA 3.0Gbps, 1.8” wide, 8mm thick Some: 160GBG (7200 rpm) / SATA 1.5Gbps, 2.5” wide, 9.5mm high, Active Protection System™ All: removable, upgradable, shock mounted storage, supports 2nd disk in optional or standard X200 UltraBase</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Some: camera on top of screen, 1.3-megapixel, fixed focus</td>
</tr>
<tr>
<td>Graphics controller</td>
<td>Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45 Graphics - external External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz (VGA)</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys TrackPoint® pointing device, &quot;Press-to-Select,&quot; Internet Scroll Bar™, magnifying glass Touch pad None TouchLight™ Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions³</td>
<td>without X200 UltraBase; 4-cell: 11.6” x 8.3” x 0.8-1.4”; 295mm x 210mm x 21-35mm without X200 UltraBase; 9-cell: 11.6” x 9.2” x 0.8-1.4”; 295mm x 243mm x 21-35mm</td>
</tr>
<tr>
<td>Weight⁴</td>
<td>4-cell: from 2.98 lb (1.35kg); 6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)</td>
</tr>
<tr>
<td>Battery - life⁵</td>
<td>Lithium Ion 6-cell or 9-cell 4-cell: up to 3.3 hr; 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gbps, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)</td>
</tr>
</tbody>
</table>

Preloaded operating system²⁰

- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32

Preloaded applications²¹ (all OSes; some only listed)

- Rescue and Recovery™
- Access Connections™

Supports ThinkVantage® technologies

Thinpad X200 UltraBase™

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gbps
  - Serial ATA Hard Drive
  - Bay Adapter III
- Disks supported (some):
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter Climate Savers® certified EPEAT® Silver rating ENERGY STAR® 5.0-compliant ROHS-compliant

International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378

See footnotes for important warranty information  ✦ Intel Centrino® 2 with vPro™ technology

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US models announced December 2 or December 9, 2008

US models withdrawn effective February or June 2010
## ThinkPad X200 (7459) - Onsite - withdrawn

### Personal Systems Reference (PSREF)

| Type-model | Processor | Memory | Display | Camera | Graphics controller | Graphics - external | Keyboard | TrackPoint | Touch pad | Dimensions | Weight | Case | Battery | Chipset | Media slice | Multicard Reader | ExpressCard slot | Ports | Mini PCI Express | Intel 5100™ Intel 5300™ WiMAX | WWAN upg | Mode | Modem | Bluetooth™ Ethernet | Audio support | Security | Security chip | Fingerprint reader | Limited warranty |
|------------|-----------|--------|---------|--------|----------------------|---------------------|----------|------------|-----------|------------|---------|------|---------|---------|------------|-----------------|-----------------|----------------|-------|-----------------|-----------------|----------|----------|-------------|----------------|-----------------|
| 7459-M2U  | P8600 2.40GHz | 1GB | WXGA | 160GB | Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45 | Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys | Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys | None | without X200 UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm without X200 UltraBase; 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 214mm x 23-35mm | 4-cell: from 2.98 lb (1.35kg); 6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg) | Color: black; Material: magnesium alloy | 4-cell: up to 3.3 hr; 6-cell: up to 6 hr; 9-cell: up to 9.5 hr, 9-cell | Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub),ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC) | 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC) | One ExpressCard/34 or ExpressCard/54 | Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45) | Three Mini PCI Express slots | Three Mini PCI Express slots | None | Some: ThinkPad X200 UltraBase media slice (see right side) | Three PCI Express slots | One IEEE 1394a (43R9151) or AT&T® | 56K V.92 modem | Bluetooth 2.1 wireless, LED indicator | Intel 82567LM Gigabit Network Connection (Bozaman), PHY, PCI x1 | High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack | Security: Power-on password, hard disk password, supervisor password, security keyhole Security: Trusted Platform Module, integrated in ICH9M, TC5 1.2-compliant | Fingerprint reader | 3-years/1-year battery, limited onsite service*, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available | Lenovo US models announced August 5 or October 14, 2008
Lenovo US models withdrawn effective February 2010 or June 2010

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*Some models are part of the Global Models Plus program with limited onsite service**
- **3-year limited warranty**
- **Preloaded operating system**
  - None: Genuine Windows® Vista® Business 32
  - Some: Genuine Windows Vista Ultimate 32
  - Vista Premium logo
- **Preloaded applications***
  - (all OSes; only some listed)
  - 86-bit, 64-bit, 32-bit, or 16-bit Windows
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - FingerPrint Software (fingerprint models)

---

*Preloaded applications***
- Supports ThinkVantage technologies
- ThinkPad X200 UltraBase™
  - Provides desktop expansion and cable management for X200 Series
  - Easily connects to the bottom of the X200 Series for traveling
  - Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
    - DVD Burner Ultrabay Slim SATA 1.5Gb/s
    - Serial ATA Hard Drive
- Bay Adapter III
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

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*Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

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65-watt (GMA graphics) AC Adapter Climate Savers® certified EPEAT® Silver rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service 24 hour x 7 day* toll-free support during the warranty period** via 800-426-7378

See footnotes for important warranty information

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(MOC1-3) June 2010

2008 Lenovo

** footnotes

* marks it as preloaded

** marks it as limited
ThinkPad X200 (7458) - Education (EasyServ) - withdrawn

**Positioning Processor**

An ultraportable for the executive on the move; one spindle Intel® Core™ 2 Duo processor P8600 with dual-core, Intel HD boost, 1066MHz system bus, and 3MB L2 cache

**Memory**

2GB std / 4GB max” / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

**SATA DVD:RW Ultrabay Slim SATA disk**

Option for ThinkPad X200 UltraBase

Supports Ultrabay Slim drives in optional ThinkPad X200 UltraBase (43R8781)

160GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

**Widescreen display**

12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Camera**

Camera on top of screen, 1.3-megapixel, fixed focus

**Graphics controller**

Intel Graphics Media Accelerator 4500MHD (Intel 945GM Express Chipset), in GM45

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**TrackPoint**

pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

**ThinkLight™**

illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

11.6” x 8.3” x 0.8-1.4”; 295mm x 210mm x 20-35mm (without X200 UltraBase); 4-cell; 11.6” x 9.2” x 0.8-1.4”; 295mm x 234mm x 21-35mm (without X200 UltraBase); 9-cell; 11.6” x 9.2” x 0.8-1.4”; 295mm x 234mm x 21-35mm

**Weight**

6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)

**Battery - type**

Li-ion 6-cell

**Battery - life**

6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

**Chipset**

Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**

Option: ThinkPad X200 UltraBase media slice (see right side)

**Multicard Reader**

5-in-1 reader (MultimediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

**Ports**

One ExpressCard®/34 or ExpressCard®/54

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

Three Mini PCI Express slots

Intel 5100™ WWAN upg None

Intel 5100™ WWAN upg None

3G Turbo UWB

None

56K V.92 modem

Bluetooth™ 2.1 wireless, LED indicator

Ethernet 10/100/1000 Base-X Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT Intel Active Management Technology (IAMT)

Audio support High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security Power-on password, hard disk password, supervisor password, security keyhole

Security chip Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty 3-years / 1-year battery - depot repair service / service upgrades available

See footnotes for important warranty information

• This model has a depot repair service 3-year limited warranty

• Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Preloaded operating system frenzy: - Genuine Windows Vista® Business 32 - Vista Premium logo

Preloaded applications (only some listed): - Rescue and Recovery™ - Access Connections™ - FingerPrint Software (fingerprint models)

Supports ThinkVantage™ technologies

ThinkPad X200 UltraBase™ - Provides desktop expansion and cable management for X200 Series - Easily connects to the bottom of the X200 Series for traveling - Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: - DVD Burner Ultrabay Slim SATA 1.5Gb/s: 43N3214 - Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): - 320GB Disk 7200 rpm 43N3411

Other features:

- Power button (front) - Stereo speakers (2 watt) - Security key lock, security keyhole, and optional security screw - Analog DB-15 monitor port - DisplayPort (supports single-link DVI-D via cable 45J7915) - Four USB 2.0 ports - Gigabit ethernet port - Microphone in and headphone out - Second battery charger - Requires 65 or 90 watt AC adapter - 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter Climate Savers® certified EPEAT® Silver rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

US models announced August 5, 2008 or March 24, 2009

US models withdrawn effective June 2010

© Lenovo (MOC1-4) June 2010
ThinkPad® X200 (7459) - Education (Onsite) - withdrawn

<table>
<thead>
<tr>
<th>Processor</th>
<th>Memory</th>
<th>Disk</th>
<th>Optical</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe or Turbo</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Whorse (G)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel Core 2 Duo processor P8600 with dual-core, Intel HD boost, 1066/7MHz system bus, and 3MB L2 cache</td>
<td>2GB std / 4GB max² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;</td>
<td>SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase</td>
<td>Option for ThinkPad X200 UltraBase</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>1.1-year battery, limited onsite service⁸, 8 am - 5 pm, Mon - Fri coverage</td>
<td>24 hour x 7 day²⁸ toll-free support during the warranty period²⁸ via 800-426-7378</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Positioning Processor

• An ultraportable for the executive on the move; one spindle
• Intel Core 2 Duo processor P8600 with dual-core, Intel HD boost, 1066/7MHz system bus, and 3MB L2 cache

Memory

• 2GB std / 4GB max² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
• Standard memory in 1 socket; 1 socket available

SATA DVD:RW

• Supports Ultrabay Slim devices in optional ThinkPad X200 UltraBase (43R8781)

Ultrabay Slim SATA disk

• 160GB² (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

Widescreen display

• 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera

• Camera on top of screen, 1.3-megapixel, fixed focus

Graphics controller

• Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45

Graphics - external

• External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase

Keyboard

• Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

TouchPoint

• TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar¹, magnifying glass

ThinkPad

• Illuminates the keyboard to improve visibility in low-light conditions

Dimensions

• without X200 UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 21-35mm

Weight

• 6-cell: from 3.26 lb (1.48kg); 9-cell: from 3.61 lb (1.64kg)

Battery - type

• Lithium Ion 6-cell

Battery - life

• 6-cell: up to 6.5 hr; 9-cell: up to 9.8 hr

Chipset

• Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express³, 2.0, security chip, ethernet MAC)

Media slice

• Option: ThinkPad X200 UltraBase media slice (see right side)

Multicard Reader

• 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard slot

• One ExpressCard/34 or ExpressCard/54

Ports

• Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

Mini PCI Express

• Three Mini PCI Express slots

Intel 5100²⁴ WWAN upg

• 11a/b/g/n wireless⁶, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

UWB

• Wireless WAN upgrade, requires Verizon* (43R9151) or AT&T* (43R9152)

Not supported

• None

Communication

• Three Mini PCI Express slots

Bluetooth

• Bluetooth 2.1 wireless, LED indicator

Ethernet

• Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Intel AMT

• Intel Active Management Technology (IAMP)

Audio support

• High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up / down, mute buttons / digital microphone, microphone input jack, headphone jack / power-on password, hard disk password, supervisor password, security keyhole

Security

• Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Security chip

• Fingerprint reader

Fingerprint reader

• None

Limited warranty³²

• 3-years/1-year battery, limited onsite service⁸, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades⁶ available

Preloaded operating system⁰³

- Genuine Windows® Vista® Business 32
- Vista Premium logo

Preloaded applications⁴⁴ (only some listed)

• Rescue and Recovery™
• Access Connections™
• Client Security Solution™
• Lenovo System Toolbox
• Supports ThinkVantage® technologies

ThinkPad X200 UltraBase™

• Provides desktop expansion and cable management for X200 Series
• Easily connects to the bottom of the X200 Series for traveling
• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s, Serial ATA Hard Drive, Bay Adapter III, Disks supported (some):
    • 250GB IDE 7200 rpm 43N3410
    • 320GB Disk 7200 rpm 43N3411

Other features:

• Power button (front)
• Stereo speakers (2 watt)
• Security key lock, security keyhole, and optional security screw
• Analog DB-15 monitor port
• DisplayPort (supports single-link DVI-D via cable 45J9715)
• Four USB 2.0 ports
• Gigabit ethernet port
• Microphone in and headphone out
• Second battery charger
• Requires 65 or 90 watt AC adapter
• 1.6 lb; 730g

ENERGY STAR® Silver rating

65-watt (GMA graphics) AC Adapter

Climate Savers® certified

EPEAT® Silver rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

MicroBattery® International Warranty Service¹⁷

24 hour x 7 day²⁸ toll-free support during the warranty period²⁸ via 800-426-7378

See footnotes for important warranty information

- Intel Centrino® 2 with vPro™ technology

© Lenovo

US model announced August 5, 2008

US model withdrawn effective June 2010

(MOC1-5) June 2010
## ThinkPad X200s (7465) - TopSeller - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory GB</th>
<th>Widescreen display</th>
<th>Disk SATA GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Blue/ Fingerprint</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Global (G) Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7465-DFU Cell 723 1.20</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB 5400</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5100™</td>
<td>None</td>
<td>None</td>
<td>Yes</td>
<td>6</td>
<td>XP Pro</td>
<td>No</td>
</tr>
</tbody>
</table>

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**

### Positioning

**Processor**

An ultra portable for the executive on the move; one spindle Intel® Celeron® Processor 723 with single-core, 800MHz system bus, and 1MB L2 cache

**Memory**

2GB std / 4GB max™ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; 

*Non-italics:* standard memory in 1 socket; 1 socket available

**Diskette drive**

None (use optional USB-based diskette drive)

**SATA DVD±RW**

Option for ThinkPad X200 UltraBase

Supports UltraBay Slim devices in optional or standard X200 UltraBase (43R8781)

**UltraBay Slim SATA disk**

160GB (5400 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

**Widescreen display**

12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Camera**

None

**Graphics controller**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

Graphics - external Monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @75Hz

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia F keys

**TrackPoint®**

TrackPoint® pointing device, "Press-to-Select", Internet Scroll Bar®, magnifying glass

**Touchpad**

None

**ThinkLight™**

Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

without X200 UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 21-29mm

without X200 UltraBase; 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm

4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

**Weight**

black

**Case color**

Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); 

*Base:* Magnesium alloy

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

**Chipset**

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**

Option: ThinkPad X200 UltraBase media slice (see right side)

**Multicard Reader**

5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

**ExpressCard/54**

One slot (ExpressCard/34, ExpressCard/54)

**Ports**

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**Mini PCI Express**

Intel 5100™

Three Mini PCI Express slots

11a/b/g/n wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

**WWAN upg**

None

**2G Turbo**

None

**Modem**

56K V.92™ modem

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (iAMT)

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt /

Volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

1-year - EasyServ™ depot repair service / service upgrades™ available

1GB PC3-8500 DDR3 L-H SODIMM 55Y3706

X200 Series Li-Ion Battery 4-cell 43R9253

2GB PC3-8500 DDR3 L-H SODIMM 55Y3707

X200 Series Li-Ion Battery 6-cell 43R9254

ThinkPad X200 UltraBase 43R8781

X200 Series Li-Ion Battery 9-cell 43R9255

Other accessories on O-X200 sheet

Other accessories at lenovo.com/accessories

### Preloaded operating system

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business

- Vista logo: None

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software

Supports ThinkVantage® technologies

### ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional UltraBay Slim accessories in right side:

  - CD-RW/DVD-ROM UltraBay Slim SATA 1.5Gb/s 43N3213
  - DVD Burner UltraBay Slim SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

### Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter

Next Generation ThinkPad Roll Cage (in display cover)

Climate Savers® certified

EPEAT™ Gold rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service™

24 hour x 7 day™ toll-free support during the warranty period™ via 800-426-7738

See footnotes for important warranty information

US model announced July 7, 2009

US model withdrawn effective December 2009

© Lenovo

(PEC1-6) December 2009
### ThinkPad X200s (7466) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Wann</th>
<th>Blue/ Fing</th>
<th>Battery cells</th>
<th>Workhorse (W)</th>
<th>Global (G) Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7466-3GU SL9400 1.86</td>
<td>4GB 12.1&quot; WXGA+</td>
<td>160GB 7200</td>
<td>DVD:RW UltraBase</td>
<td>Intel 5100®</td>
<td>None</td>
<td>2G Turbo</td>
<td>Yes</td>
<td>9</td>
<td>Bus 32</td>
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<td>Sep 08</td>
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<td></td>
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<tr>
<td>7466-3HU SL9400 1.86</td>
<td>2GB 12.1&quot; WXGA+</td>
<td>160GB 7200</td>
<td>DVD:RW UltraBase</td>
<td>Intel 5100®</td>
<td>None</td>
<td>Yes</td>
<td>6</td>
<td>XP Pro</td>
<td>No</td>
<td>Sep 08</td>
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<td></td>
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<tr>
<td>7466-3JU SL9400 1.86</td>
<td>4GB 12.1&quot; WXGA+</td>
<td>160GB 7200</td>
<td>DVD:RW UltraBase</td>
<td>Intel 5100®</td>
<td>None</td>
<td>Yes</td>
<td>9</td>
<td>XP Pro</td>
<td>No</td>
<td>Sep 08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Limited warranty**
  - 3-years/1-y batter - EasyServ™ depot repair service / service upgrades® available

- **Preloaded operating system**
  - Some: Windows® XP Professional preinstalled through downgrade rights in Vista® Business
  - Some: Genuine Windows Vista Business

- **Preloaded applications**
  - (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - Fingerprint Software

### Positioning and Processor

- An ultraportable for the executive on the move; one spindle Intel® Core™ 2 Duo processor
- SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory

- 2GB or 4GB std / 4GB max®
- Non-parity, DDR3 1066MHz dual-channel capable, two 204-pin SO-DIMM sockets;
- Intel® Centrino® 2 with vPro™ technology

### Diskette drive

- SATA DVD:RW Ultrabay Slim
- Supports Ultrabay Slim drives in optional or standard X200 UltraBase (43R8781)
- 160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, ThinkPad Shock Mounted Hard Drive, Advanced Protection System™, supports 2nd disk in optional or std X200 UltraBase

### Widescreen display

- 12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Graphics controller

- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

### Keyboard

- Full-size, 99-key, ThinkVantage button, spill-resistant, multimedia F keys
- Touchpad
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass

### Battery - type

- Lithium-Ion 6-cell or 9-cell
- 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

### Chipset

- Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub), Intel®ICH9M-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® x1, PCI 2.3, security chip, ethernet MAC)

### Media slice

- Some: X200 UltraBase media slice (see right side)
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
- One slot (ExpressCard®/34, ExpressCard®/54)

### Ports

- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

### Multicard Reader ExpressCard/54

- Some: X200 UltraBase ExpressCard/54

- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

### Mini PCI Express

- Intel® 5100® WWAN upg
- 2GB Turbo
- None

### Intel AMT

- Intel Active Management Technology (iAMT)

### Audio support

- High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

### Security chip

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

### Fingerprint reader

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty®

- 3-years/1-yr battery - EasyServ™ depot repair service / service upgrades® available

See footnotes for important warranty information

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US models announced September 23, 2008

US models withdrawn effective December 2009
**ThinkPad X200s (7466) - TopSeller (XP with Win 7 License) - withdrawn**

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Disk Sata GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Blue/ery</th>
<th>Workhorse (W) Pre-Global (G)</th>
<th>Availability</th>
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</thead>
<tbody>
<tr>
<td>7466-43U SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160GB</td>
<td>DVD±RW UltraBase</td>
<td>Intel 5100</td>
<td>802.11</td>
<td>WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>6</td>
<td>XP Pro</td>
</tr>
</tbody>
</table>

- Compared to the X200, the X200s has lighter weight, low voltage processors, LED backlight displays, and roll cage in display cover.
- This small and medium business (SMB) model is part of the US TopSeller™ Program.
- This model has a 3-years limited warranty.

**Positioning**

An ultraportable for the executive on the move; one spindle

**Processor** Intel® Core™2 Duo processor SL9600

Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**

2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

- Non-Italics: standard memory in 1 socket; 1 socket available

**SATA DVD±RW Ultradib Slim**

SATA 1.5Gb/s; removable from X200 UltraBase

**SATA disk** 160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or standard X200 UltraBase

**Battery - life**

4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: fixed focus

**Battery - type**

4-cell: up to 8.8 hr; 6-cell: up to 16.1 hr; 9-cell: 251-1 hr ratio

**Display**

12.1" (308mm) WXGA (1280x800) color; anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

**Camera**

Camera on top of screen, 1.3-megapixel, fixed focus

**Graphics controller** Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

**Graphics - external** External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touch pad** None

**ThinkLight™** Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

without X200 UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 21-29mm

without X200 UltraBase; 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 21-35mm

**Weight**

4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

**Case color**

black

**Case material**

Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: fixed focus

**Chipset**

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub)

ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**

X200 UltraBase media slice (see right side)

**Multicard Reader ExpressCard/54**

5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

**ExpressCard/54 Ports**

One slot (ExpressCard/34, ExpressCard/54)

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**Mini PCI Express**

Three Mini PCI Express slots

Intel 51002 Duo processor SL9600, with wireless, dual-core, 2.13 GHz, 1066MHz system bus, and 6MB L2 cache

**Intel SMI**

WWAN upg 2.0 Turbo

**UWB**

None

**Modem**

56K V.92 modem

**Bluetooth**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (AMT)

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, supports the security chip

**Limited warranty**

3-years/1-yr battery - depot repair service / service upgrades available

See footnotes for important warranty information

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US model announced October 22, 2009

US model withdrawn effective June 2010

PEC2-1 June 2010

Preloaded operating system™

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

Preloaded applications14 (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software

Supports ThinkVantage technologies

**ThinkPad X200 UltraBase™**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultradib Slim accessories in right side:
  - DVD Burner Ultradib Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter 

Climate Savers® certified EPEAT® Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service17 24 hour x 7 days toll-free support during the warranty period15 via 800-426-7378

Preloaded applications14

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- Fingerprint Software
## ThinkPad X200s (7466) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>Disk SATA GB rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe USB or Turbo Fingerprint cells</th>
<th>Baterry</th>
<th>Workhorse (W) Preload</th>
<th>Global (G) Availability</th>
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<tr>
<td>7466-44U SL9600</td>
<td>2.13</td>
<td>4GB</td>
<td>12.1&quot; WXGA+</td>
<td>320GB</td>
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<td>None</td>
<td>Yes</td>
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</table>

- Compared to the X200, the X200s has lighter weight, low voltage processors, LED backlight displays, and roll cage in display cover
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-years limited warranty

### Positioning
Processor:
ThinkPad® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel® HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory:
4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

SATA DVD: RW UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 320GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or standard X200 UltraBase

Widescreen display:
12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

Camera:
ThinkLight™
- Illuminates the keyboard to improve visibility in low-light conditions

Graphics controller:
Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

Keyboard:
- Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass
- Touchpad

Dimensions:
- without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 21-29mm
- with X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 234mm x 21-35mm

Weight:
- 4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)
- 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr

Chipset:
Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub), Intel® GM965/960M/955 Pro 64 No Oct 09

Other features:
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3410
  - Serial ATA Hard Drive
  - Bay Adapter III 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411
- Other features:
  - Power button (front)
  - Stereo speakers (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2 ports
  - Gigabit ethernet port
  - Microphone in and headphone out
  - Second battery charger
  - Requires 65 or 90 watt AC adapter

Limited warranty:
- 3-years/1-yr battery - EasyServ™/10 depot repair service / service upgrades® available

Preloaded operating system:
- Genuine Windows® 7 Professional 64
- Supports ThinkVantage® technologies

### Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Software
- Lenovo Online Data Backup
- Norton™ Internet Security 2009 (30 days of virus definitions)

### Support Information
- Climate Savers Gold rating
- International Warranty Service
- ROHS-compliant
- 65-watt (GMA graphics) AC Adapter Climate Savers® certified EPEAT® Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant Information about the US model withdrawn effective June 2010

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(PEC2-2) June 2010
### ThinkPad X200s (7469) - withdrawn

**Personal Systems Reference (PSREF)**

*See footnotes for important warranty information  © Intel Centrino® 2 with vPro™ technology  US models announced on September 23 or December 9, 2008, or March 10, 2009  US models withdrawn effective September 2009 or June 2010  Lenovo (P/E-1-2) June 2010*

---

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<th>Memory</th>
<th>Disk</th>
<th>Optical</th>
<th>ThinkPad X200 UltraBase</th>
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<th>Mini PCIe</th>
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</tbody>
</table>

*Compared to the X200, the X200s has lighter weight, low voltage processors, LED backlight displays, and roll cage in display cover*

### Positioning

An ultraportable for the executive on the move; one spindle

*Intel® Core™ 2 Duo processor SL9300 or SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache*

### Memory

2GB or 3GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;

*Standard memory in both sockets; no sockets available; Intel® 5100 dual-core processor is required in both sockets; standard memory in 1 socket, 1 socket available*

### SATA Combo

Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

*x Some: CD-RW/DVD-ROM, SATA 1.5Gb/s, removable from X200 UltraBase

**Some:** 80GB or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high

*Some:** 160GB (5400 or 7200 rpm) / SATA 1.5Gb/s, 2.5" wide, 9.5mm high, Active Protection System\textsuperscript{m}*

### Widescreen display

12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Camera

None

### Graphics controller

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

*Graphics - external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz*

### Keyboard

Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

*TrackPoint\textsuperscript{m} pointing device, "Press-to-Select," Internet Scroll Bar\textsuperscript{m}, magnifying glass*

### Touch pad

None

### ThinkLight\textsuperscript{m}

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions\textsuperscript{b}

without X200 UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 21-29mm

*without X200 UltraBase: 9-cell: 11.6" x 9.2" x 1.45"; 295mm x 234mm x 21-35mm

### Weight\textsuperscript{d}

4-cell: from 2.43 lb (1.1kg); 6-cell: from 2.71 lb (1.23kg); 9-cell: from 3.05 lb (1.38kg)

### Case material

Black

### Display cover

Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Magnesium alloy

### Battery type

Lithium Ion 4-cell or 6-cell

*4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr*

### Chipset

Mobile Intel GS45 Express Chipset

*Graphics Memory Controller Hub, ICH9M/FFP-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)*

### Media slice

Some: ThinkPad X200 UltraBase media slice (see right side)

### Multicard reader

5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

### ExpressCard/S4

One slot (ExpressCard34, ExpressCard54)

### Ports

3 USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

### Mini PCI Express

Three Mini PCI Express slots

*Some:** 11a/b/g/n wireless\textsuperscript{m}, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

*Some:** 11a/b/g/n wireless\textsuperscript{m}, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3

*Some:** 11a/b/g and WiMAX wireless, Mini PCIe adapter, Intel WiFi Link/WiFi Link 5350, 3x3 (450Mbps) WiFi + 1x2 WiMAX (Echo Peak)

### WWAN upg

2G Turbo UWB None

### Modem

56K V.92 modem

### Bluetooth\textsuperscript{m}

*Bluetooth 2.1 wireless, LED indicator*

*Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

### Ethernet

Intel I211AT Gigabit Ethernet\textsuperscript{m}

*Intel Active Management Technology (iAMT)\textsuperscript{™}*

### Audio support

High Definition (HD) Audio, Conexant CX20651 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

*Security:

Power-on password, hard disk password, supervisor password, security keyhole

*Security:

Password on palm rest, swipe sensor, supports the security chip

### Limited warranty\textsuperscript{b}

3-years – 1yr battery - depot repair service / upgrade services\textsuperscript{d} available

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*US models withdrawn on September 23 or December 9, 2008, or March 10, 2009

**International Warranty Service 3-years – 1yr battery - depot repair service / upgrade services available**
| Type-model | Processor | GHz | Memory | Display | Disk | Optical | ThinkPad X200 Wired/Wireless | Mini PCIe WWAN | Mini PCIe UWB | Blue/Tooth | Battery | Workhorse | Global Avail. | Preloaded operating system | Preloaded applications |
|-----------|-----------|-----|--------|--------|-------|---------|---------------------------|----------------|-----------------|------------|---------|-----------|---------------|--------------------------|-------------------------|------------------------|
| 7469-7UU | Core 2 Duo T7400 | 2.0 | 4GB | WXGA | 160GB | Optional | Optional Intel 5100AGN | WWAN upg | None | Blue/6 | None | 3-years | Feb 07 | GT - Windows Vista *Premium Edition* | - Vista Premium logo |
| 7469-8UU | Core 2 Duo T7500 | 2.2 | 4GB | WXGA | 160GB | Optional | Optional Intel 5100AGN | WWAN upg | None | Blue/6 | None | 3-years | Feb 07 | GT - Windows Vista *Premium Edition* | - Vista Premium logo |

- **These models have a depot repair service 3-year limited warranty**

---

### Additional Features

- **Positioning Processor**: An upportable for the executive on the move; one spindle Intel Celeron Processor 723 with single-core, 800MHz system bus, and 1MB L2 cache
- **Memory**: 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available
- **SATA Combo Ultrabay Slim SATA disk**: Option for ThinkPad X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB (5400) / SATA 1.5Gb/s, 9.5mm high, removable, upgradeable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase
- **Widescreen display**: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
- **Battery - life (h)**: 4-cell: up to 4.4 hr; 6-cell: up to 8.8 hr; 9-cell: up to 13.2 hr
- **Chipset**: Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, external expansion: 2048x1536@75Hz)

---

**See footnotes for important warranty information**

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US models announced on April 14 or May 12, 2009

US models withdrawn effective June 2010

(PEC1-4) June 2010
### ThinkPad X200s (7470) - Onsite - withdrawn

#### Personal Systems Reference (PSREF)

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<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe USB or TurboFingers</th>
<th>Blue/terry</th>
<th>Workhorse (W)</th>
<th>Bat-</th>
<th>Global (G)</th>
<th>Avail (P)</th>
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* Some models are part of the Global Models Plus program with limited onsite service*\(^d\) 3-year limited warranty

### Positioning

**Processor**

- **ThinkPad X200 UltraBase**
- **SATA SSD**
- **Limited warranty**

**Fingerprint reader**

- Security chip
- **Intel AMT**
- **Modem**
- **2G Turbo**
- **WWAN upg**
- **11n 28**
- **Intel 5300 28**

**Battery - life**

- **Case material**
- **Weight**
- **Dimensions**
- **Touch pad**
- **Touchpad**
- **Display cover**
- **Glass fiber reinforced plastic (top)**
- **Battery type**
- **Battery life**
- **Chipset**

**Graphics controller**

- **Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD)**, in GS45
- **Graphics - external**
- **External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase:**
- **Maximum external resolution:**
- **External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase:**
- **Maximum external resolution:**

**Keyboard**

- **TrackPoint**
- **Touchpad**
- **Touchpad**
- **ThinkLight**
- **Dimensions**
- **Weight**
- **Case color**
- **Case material**
- **Battery type**
- **Battery life**
- **Chipset**

**Media slice**

- **MultiCard reader**
- **ExpressCard/S4**
- **Ports**

**Mini PCI Express**

- **Intel 5100™**
- **11n™**
- **WWAN upg**

**2G Turbo**

- **USB**

**Modem**

- **56K V.92 modem**

**Bluetooth™**

- **Bluetooth 2.1 wireless, LED indicator**

**Ethernet**

- **Non-vPro model**
- **Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1**
- **vPro model**
- **Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1**

**Audio support**

- **Intel Active Management Technology (AMT)**
- **High Definition (HD) Audio, Conexant CX20561 codec / mono speaker, 1 watt / volume up, down mute buttons / digital microphone, microphone jack**

**Security**

- **Power-on password, hard disk password, supervisor password, security keyhole**
- **Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant**

**Fingerprint reader**

- **Some:**

**Limited warranty**

- **3-years/1-year battery, limited onsite service**

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See footnotes for important warranty information.  
1. Intel Centrino® 2 with vPro™ technology  
2. Lenovo Systems Reference (PSREF)  
3. US models announced on September 23 or December 9, 2008, or March 10, April 14, or May 12, 2009  
4. US models withdrawn effective September 2009 or June 2010
### ThinkPad X200s (7469) - Education - withdrawn

**Type-model**: 7469-E2U  
**Brand**: ThinkPad

#### Processor
- **Brand**: Intel
- **Model**: Celeron Processor 723 with single-core
- **Frequency**: 1.20 GHz
- **Memory**: 2GB / 4GB max
- **Architecture**: 64-bit
- **Compatibility**: Windows 10 Professional

#### Disk
- **Type**: SATA 1.5Gb/s
- **Capacity**: 160GB / 320GB / 450GB / 500GB / 640GB / 750GB / 1TB
- **Rotation**: 5400 rpm
- **Interface**: 7+6 pin SATA, IDE

#### Optical Drive
- **Type**: Serial ATA
- **Capacity**: 12.1GB (308mm)
- **Drive**: WXGA (1280x800) TFT color
- **Contrast Ratio**: 280:1
- **Resolution**: 1280x800 pixels

#### Battery
- **Type**: Lithium Ion
- **Capacity**: 7400 mAh
- **Weight**: 1.6 lb
- **Life**: 4-8.8 hr

#### Graphics
- **Controller**: Intel Graphics Media Accelerator 4500MHD
- **Type**: Mobile Intel GS45 Express Chipset

#### Audio
- **Controller**: Conexant CX20561 codec
- **Speakers**: Monaural, 1 watt

#### Ethernet
- **Interface**: Intel 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Wireless WAN
- **Interface**: Mini PCIe Express
- **Speed**: 11 a/b/g/n wireless
- **Security**: WPA, WPA2, WPA3

#### Security Chip
- **Type**: Trusted Platform Module, integrated in ICH9M

#### System Software
- **License**: Windows 10 Pro (64-bit System)
- **Included**: Lenovo System Toolbox, Lenovo Setup Utility, Lenovo Fingerprint Software, Lenovo ThinkVantage Productivity Center, Lenovo ThinkVantage Toolbox, Lenovo ThinkVantage Tools, Lenovo ThinkVantage凭证管理, Lenovo ThinkVantage System Update, Lenovo ThinkVantage System Update, Lenovo ThinkVantage System Update, Lenovo ThinkVantage System Update

#### Limited Warranty
- **Duration**: 3 years / 1 year
- **Service**: Depot repair service / Service upgrades

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### Additional Information

- **Warranty Information**: See footnotes for important warranty information
- **Model Announcement**: April 14, 2009
- **Model Withdrawn**: June 2010
- **Operating System**: Genuine Windows 10 Pro
- **Membership**: Business 32
- **Vista Premium Logo
- **Preloaded Applications**: Rescue and Recovery, Access Connections, Client Security Solution, ThinkVantage Productivity Center, ThinkVantage System Update, FingerPrint Software (fingerprint models)
- **Lenovo System Toolbox
- **Supports ThinkVantage technologies
- **Supports**: Turbo UWB, Mini PCIe-UWB, Mini PCIe-WLAN
- **For More Information**: 800-426-7378
- **Support**: 24 hour x 7 day toll-free support
- **International Warranty**: 2017
- **Service Agreement**: 65-watt (GMA graphics) AC Adapter ROHS-compliant
- **Warranty Period**: 2017

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*This model has a depot repair service 3-year limited warranty*
ThinkPad® X200, X200s Accessories - withdrawn

Personal Systems Reference (PSREF)

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706 ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385 ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707 ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386 ann 06/23/09

Ultrabay Slim 9.5mm
Most Ultrabay Slim accessories supported in ThinkPad X200 UltraBase

Storage and removable storage
160GB Disk SATA 1.5Gb/s (5400 rpm) 41N5692 ann 03/20/07
160GB Disk SATA 1.5Gb/s (7200 rpm) 41N5737 ann 10/16/07
250GB Disk SATA 1.5Gb/s (5400 rpm) 43R8151 ann 01/15/08
250GB Disk FDE SATA 1.5Gb/s (7200 rpm) 43N3410 ann 01/20/09
320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403 ann 08/05/08
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ann 01/20/09
500GB Disk SATA 1.5Gb/s (5400 rpm) 43N3420 ann 06/23/09
500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 ann 01/07/10
320GB Disk SATA 1.5Gb/s (5400 rpm) 43N3403 ann 08/05/08
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ann 01/20/09
500GB Disk SATA 1.5Gb/s (5400 rpm) 43N3420 ann 06/23/09
500GB Disk SATA 3.0Gb/s (7200 rpm) 43N3423 ann 01/07/10
320GB Disk SATA 1.5Gb/s (7200 rpm) 43N3411 ann 01/20/09

USB 2.0 Portable Secure 500GB Hard Disk 57Y4400 ann 08/26/08
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 01/05/10
USB 2.0 Portable 500GB Hard Disk 43R2019 ann 11/18/08
USB 2.0 Portable 320GB Hard Disk 43R2019 ann 11/18/08

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:
- Verizon® WWAN UNDP Broadband Mini PCIe 43R9151 ann 08/06/08
- AT&T® Wan UNDP Broadband Mini PCIe 43R9152 ann 08/06/08

ThinkPad Expansion

Lenovo® Essential Notebook Stand 45R9292 ann 05/12/09
ThinkPad X200 UltraBase 43R8781 ann 08/05/08

ThinkPad Business Topload Case 43R8781 ann 07/28/09

ThinkPad X200 UltraBase (43R8781)

Keyboard
TrackPoint Cap Collection 73P2698 ann 12/16/03
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
USI USB Keyboard 37K4700 ann 09/15/00
26 Wireless via 2.4GHz technology using a micro-size USB receiver.
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo® USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

Mouse
Lenovo Mini Optical Mouse - Black (USB) 55Y9308 ann 05/19/09
Lenovo Mini Optical Mouse - White (USB) 55Y9309 ann 05/19/09
Lenovo Optical Mouse (USB) 60P4069 ann 05/21/03
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07
ThinkPad USB Laser Mouse 57Y4635 ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Bluetooth Laser Mouse 41U5008 ann 01/22/08

Security
Kensington® MicroSaver® Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
X200s (WXGA+), X201s 12W Privacy Filter 43R2470 ann 08/05/08
X200/X200s (WXGA), X201 12W Privacy Filter 55Y9264 ann 04/07/09
USB Gempinus Gempc Smart Card Reader 41N3040 ann 02/21/06
ExpressCard Gempinus Smart Card Reader 41N3043 ann 06/27/06

Multimedia
ThinkPad In-Ear Headphones 57Y4488 ann 01/07/10

Batteries
ThinkPad Battery 47 (4-cell) 43R9253 ann 08/05/08
ThinkPad Battery 47+ (6-cell) 43R9254 ann 08/05/08
ThinkPad Battery 47++ (9-cell) 43R9255 ann 08/05/08
ThinkPad External Battery Charger 40Y7625 ann 09/20/05

More information at www.lenovo.com/adidaycomputing

ThinkPad 65W AC Adapter 40Y7686 ann 01/05/06
ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
90W Ultraslim AC/DC Combo Adapter 41R4493 ann 09/22/09

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493
- iPod and iPhone Charge Tip (L10a) 41R4481
- Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

For more information on ThinkPad accessories, please visit: www.lenovo.com/support/accessories

Carrying Cases
Up to 12” widescreen models:
ThinkPad 12W Case Sleeve 51J0476 ann 08/19/09

Up to 13.3” widescreen models:
ThinkPad Ultraportable Case 43R8781 ann 07/28/09

Up to 15.4” widescreen models:
Lenovo Business Messenger Case 51J0475 ann 08/19/09
Lenovo Performance Backpack 41U5253 ann 05/01/07
Checkpoint Friendly Business Topload Case 51J0418 ann 05/05/09
ThinkPad Business Topload Case 43R2476 ann 05/13/08
ThinkPad Deluxe Expander Case 43R2478 ann 05/13/08
ThinkPad Executive Leather Case 43R2480 ann 05/13/08

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision® L1711p 17” Monitor 5047HB2 ann 10/20/09
ThinkVision L1900p 19” Monitor 431H31E ann 11/11/08
ThinkVision L1951p Wide 19” Monitor 248H8B6 ann 10/20/09
ThinkVision L2250p Wide 22” Monitor 257H8B6 ann 10/20/09
ThinkVision L2251p Wide 22” Monitor 257H8B6 ann 10/20/09
ThinkVision L2251x Wide 22” Monitor 257H8B6 ann 10/20/09
ThinkVision L2440p Wide 24” Monitor 4420HB2 ann 09/17/08

Monitor Accessories
Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09
DisplayPort to Single-link DVI-Cable 45J7915 ann 08/05/08

ThinkVision USB Soundbar 40Y7616 ann 08/23/05
ThinkVision Soundbar 45K1263 ann 09/16/08
Kensington MicroSaver Cable Lock 73P2582 ann 12/29/03
Kensington Twin Head Cable Lock 45K1620 ann 09/30/08
Kensington Easy Reach Monitor Stand 55Y9258 ann 05/22/09
Radial Arm 19K4464 ann 09/20/05

Compatible on selected Lenovo and ThinkVision monitors.

More information at www.lenovo.com/support/monitoraccessories

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide
**ThinkPad X200 Tablet (7448) - TopSeller - withdrawn**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor</td>
<td>Intel® Core™ i5-2520M, 2.50 GHz, 2 cores, 4 threads</td>
</tr>
<tr>
<td>Memory</td>
<td>4GB DDR3 1600 MHz, 16GB (optional)</td>
</tr>
<tr>
<td>Display</td>
<td>12.1&quot; WXGA (1366x768) HD, 16:9 aspect ratio, anti-glare protective coatings,</td>
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<tr>
<td></td>
<td>write on screen with standard digitizer pen</td>
</tr>
<tr>
<td>Battery</td>
<td>9-cell: 11.1V, 43Wh, 2.98A, up to 7 hours</td>
</tr>
<tr>
<td>keyboard</td>
<td>Full-sized, 89-key, ThinkVantage button, spill-resistant, mm Fn keys</td>
</tr>
<tr>
<td>Graphics controller</td>
<td>Intel® Graphics Media Accelerator, 4500MHz, in GS45</td>
</tr>
<tr>
<td>Graphics - external</td>
<td>External support via analog VGA DB-15 connector</td>
</tr>
<tr>
<td></td>
<td>Maximum external resolution: 2048x1536@75Hz</td>
</tr>
<tr>
<td>Ports</td>
<td>Three Mini PCI Express, Intel® 1300™ WWAN upgradable, requires VeriSign™</td>
</tr>
<tr>
<td></td>
<td>(43R9150) or AT&amp;T™ (43R9152)</td>
</tr>
<tr>
<td>Battery</td>
<td>9-cell: 11.1V, 43Wh, 2.98A, up to 7 hours</td>
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<td>Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub)</td>
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<td>Optional: X200 UltraBase media slice (see right side)</td>
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<td>Multicard Reader</td>
<td>5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)</td>
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<td>Battery</td>
<td>9-cell: 11.1V, 43Wh, 2.98A, up to 7 hours</td>
</tr>
</tbody>
</table>

**Positioning**

- **Converter tablet**: ultraportable; one spindle
- **Intel® Core™ 2 Duo processor SL9400** with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache
- **Memory**: 2GB std / 4GB max7 / PC3-8500 DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available
- **Diskette drive**: None (use optional USB-based diskette drive)
- **SATA disk**: Supports UltraSlim devices in optional X200 UltraBase (43R8781)
- **Battery**: 160GB (5400 rpm) / SATA 1.5gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System®, supports 2nd disk in optional or std X200 UltraBase
- **Dimensions**: Without X200 UltraBase; 4-cell: 11.6" x 9" x 1.3-1.5"; 295mm x 228mm x 26.5-33mm Without X200 UltraBase; 8-cell: 11.6" x 10.1" x 1.3-1.5"; 295mm x 257mm x 26.5-33mm
- **Weight**: 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)
- **Battery**: Color: black; Material: magnesium alloy
- **Camera**: Camera on top of screen, 1.3-megapixel, fixed focus
- **Graphics controller**: Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)
- **Media slice**: Optional: X200 UltraBase media slice (see right side)
- **Multicard Reader**: 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
- **ExpressCard/S4**: One slot (ExpressCard/34, ExpressCard/54)
- **Ports**: Three Mini PCI Express, Intel® 1300™ WWAN upgradable, requires VeriSign™ (43R9150) or AT&T™ (43R9152)
- **Battery**: 9-cell: 11.1V, 43Wh, 2.98A, up to 7 hours
- **Chipset**: Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)
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**Preloaded operating system**: Windows® Vista Ultimate 32

**Preloaded applications**: (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerPrint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Microsoft® Office 2007 Trial (60-day)

**Supports ThinkVantage® technologies**

**ThinkPad X200 UltraBase™**

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Convert ThinkPad to a two-spindle system with optional UltraSlim Slim devices in optional or std
- Supports ThinkVantage® technologies

**Other features**

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable)
- 4US 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

**58-watt (GMA graphics) AC Adapter**

**ENERGY STAR® 5.0-compliant**

**ROHS-compliant**

**International Warranty Service**

**24 hour x 7 day ³**

**24 hour x 7 day ³** toll-free support during the warranty period via 800-426-7378

**Disclaimer**

- Lenovo (CML-1) January 2010
- © Lenovo

**Notes**

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has an EasyServ™, PC Preload service 1-year limited warranty

**See footnotes for important warranty information**

**US model announced March 17, 2009**

**US model withdrawn effective December 2009**
ThinkPad® X200 Tablet (7449) - TopSeller - withdrawn

| Type-model | Processor | GHz | Memory | Widescreen display | CFCL or LED Cam | Disk SATA rpm | Optical in UltraBase | ThinkPad X200 UltraBase | Mini PCIe W/ WWAN | Mini PCIe UWB | Mini PCIe Bat- | Avail date |
|------------|-----------|-----|--------|-------------------|----------------|--------------|-------------------|------------------------|----------------|--------------|tery cells |           |
| 7449-EKU SL9400 1.86 4GB 12.1" WXGA | Intel® Core™ DUO processor SL9400 | 2.3 | 4GB std / 4GB max | (3840x2160) FHD, 8-cell | LED Cam | 1600G 7200 | DVDRW UltraBase | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | 2G Turbo | 6 Oct 08 |
| 7449-8U2 SL9400 1.86 6GB 12.1" WXGA | Intel® Core™ DUO processor SL9400 | 2.3 | 4GB std / 4GB max | (3840x2160) FHD, 8-cell | LED Cam | 1600G 7200 | DVDRW UltraBase | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | 2G Turbo | 8 Bus 32 Oct 08 |
| 7449-9FU SL9400 1.86 2GB 12.1" WXGA | Intel® Core™ DUO processor SL9400 | 2.3 | 4GB std / 4GB max | (3840x2160) FHD, 8-cell | LED Cam | 1600G 5400 | DVDRW UltraBase | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | 2G Turbo | 8 Tab Oct 08 |
| 7449-9EU SL9400 1.86 12.1" WXGA | Intel® Core™ DUO processor SL9400 | 2.3 | 4GB std / 4GB max | (3840x2160) FHD, 8-cell | LED Cam | 1600G 5400 | DVDRW UltraBase | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | 2G Turbo | 8 Tab Oct 08 |
| 7449-8U2 SL9400 1.86 6GB 12.1" WXGA | Intel® Core™ DUO processor SL9400 | 2.3 | 4GB std / 4GB max | (3840x2160) FHD, 8-cell | LED Cam | 1600G 5400 | DVDRW UltraBase | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | 2G Turbo | 8 Tab Oct 08 |
| 7449-9FU SL9400 1.86 2GB 12.1" WXGA | Intel® Core™ DUO processor SL9400 | 2.3 | 4GB std / 4GB max | (3840x2160) FHD, 8-cell | LED Cam | 1600G 5400 | DVDRW UltraBase | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | Intel 5100™ AT&T™ | 2G Turbo | 8 Tab Oct 08 |

- These small and medium business (SMB) models are part of the US TopSeller™ Program

Processor

Intel® Core™ DUO processor SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory

2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 4GB SO-DIMM sockets; standard memory in both sockets; no sockets available; italics: non-italics: standard memory in 1 socket; 1 diskette drive

Diskette drive

SATA DVD RW Ultrabay Slam Drive None (use optional USB-based diskette drive)

Widescreen display

Some: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CL ACL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, 8-cell

Weight

Color: black; Material: magnesium alloy

Battery - type

Lithium Ion 4-cell or 8-cell

Chipset

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub)

Media slice

Some: X200 UltraBase media slice (see right side)

Multicard Reader

ExpressCard/34, ExpressCard/54, ExpressCard/261, ExpressCard/34, ExpressCard/54

Ports

Three USB 2.0, external monitor (VGA DB-15), modular RJ-11 (RJ-45), Ethernet V.92 modem

Mini PCIe Express

Three Mini PCIe Express slots

IEEE 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)

WWAN upg

AT&T™

Intel® 5100™ AT&T™

UWB

None

Gigabit ethernet port

Power button (front)

 sigue

Security

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader

Standard digital signature, 512-bit, 550-megapixel camera

Limited warranty

3-years/1-year battery - EasyServ™/Free depot repair service / service upgrades available

Other accessories on O-X200-T sheet

Other accessories at lenovo.com/accessories

See footnotes for important warranty information

ThinkPad X200 UltraBase™

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - CD-RW/DVD-ROM Ultrabay Slim 43N3213
  - SATA 1.5Gb/s 43N3213
  - Serial ATA Hard Drive 43N3214

Other features:

- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone (external microphone headset out)
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb. 730g

65-watt (GMA graphics) AC Adapter

Climate Savers® certified

EPEAT® Gold rating (LED models)

EPEAT Silver rating (other models)

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service17

24 hour x 7 day toll-free support during the warranty period18 via 800-426-7378

Preloaded operating system

- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 64
- Some: Genuine Windows Vista Ultimate 32
- Vista models: Vista Premium logo

Preloaded applications

(All OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)

Supported ThinkVantage™ technologies

- Intel Centrino® 2 with vPro™ technology

US models announced September 23, 2008, October 14, 2008, or March 24, 2009

US models withdrawn December 2009
### ThinkPad X200 Tablet (7449) - TopSeller (XP with Win 7 License)

#### Type-model | Processor | GHz Memory | WideScreen Display | Disk | Optical in UltraBase | ThinkPad X200 UltraBase | Mini PCIe | Mini PCIe Battery | WWAN UWB | Turbo Cells | Preload | Avail date
---|---|---|---|---|---|---|---|---|---|---|---|---|---
7449-43U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13 GHz | 2GB | DVD+RW | DVD+RW UltraBase | DVD+RW UltraBase | None | None | 4 | XP Tab Oct 09
7449-45U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13 GHz | 2GB | DVD+RW | DVD+RW UltraBase | DVD+RW UltraBase | None | None | 8 | XP Tab Oct 09
7449-47U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13 GHz | 2GB | DVD+RW | DVD+RW UltraBase | DVD+RW UltraBase | None | None | 8 | XP Tab Oct 09
7449-49U SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13 GHz | 2GB | DVD+RW | DVD+RW UltraBase | DVD+RW UltraBase | None | None | 8 | XP Tab Oct 09
7449-4AU SL9600 | Intel® Core™2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and SMB L2 cache | 2.13 GHz | 2GB | DVD+RW | DVD+RW UltraBase | DVD+RW UltraBase | None | None | 8 | XP Tab Oct 09

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

**Preloaded operating system**: Windows® XP Tablet PC Edition 2005 preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**: (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Windows Live Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD:RW)
- Roxio MyDVD® (DVD:RW)
- Corel® WinDVD® (DVD:RW)

Supports ThinkVantage® technologies

**ThinkPad X200 UltraBase™**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - X200 UltraBase Slim
  - Serial ATA Hard Drive
  - Bay Adapter III

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- EPEAT® Gold rating
- ENERGY STAR® 5.0 compliant
- ROHS-compliant
- International Warranty Service

### Specifications

#### Processor
- Intel® Core™2 Duo processor SL9600

#### Memory
- 2GB or 4GB std / 4GB max / PCl-E 8000 MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-Dimm sockets:
  - Standard memory in both sockets; no sockets available;
  - Non-italics: standard memory in 1 socket; 1 socket available

#### SATA DVD RW/SATA UltraBase Slim
- 2.13 GHz / 2GB
- 2GB or 4GB std / 4GB max

#### Widescreen display
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, frameless screen
- Multi-Touch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support
- WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotateable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

#### Camera
- Camera on top of screen. 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

#### Graphics controller
- Mobile Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

#### Graphics - external
- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536@75Hz (VGA)

#### Keyboard
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys, TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

#### Touchpad
- None

#### TouchThink™
- None

#### Dimensions
- without X200 UltraBase: 4-cell: 11.6" x 9" x 1.3-1.6", 295mm x 228mm x 26.5-33mm without X200 UltraBase: 8-cell: 11.6" x 10.1" x 1.3-1.5", 295mm x 257mm x 25.5-33mm

#### Weight
- 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

#### Color
- black; Material: magnesium alloy

#### Battery
- Lithium Ion 4-cell or 8-cell
- 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

#### Chipset
- Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub)

#### Media slice
- Some: X200 UltraBase media slice (see right side)
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

#### Multicard Reader ExpressCard/54
- Some: X200 ExpressCard/54 (see right side)
- One slot (ExpressCard/34, ExpressCard/54)

#### Ports
- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)
- 11a/b/g/n wireless
- Full-featured, Intel WiFi Link 5100, 1x2 (Shirley Peak)
- Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)
- Wireless WiFi, Ericsson chipset, MiniPCI adapter and SIM
- GPRS/WCDMA/3GPP, service contract required with AT&T

#### 2G Turbo UWB
- None

#### Modem
- 56k V.92 modem

#### Bluetooth
- Bluetooth 2.1 wireless, LED indicator

#### Ethernet
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Audio support
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chipset
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### Fingerprint reader
- FingerPrint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

#### Limited warranty
- 3-years - 1-year battery - EasyServ®/19 depot repair service / service upgrades® available

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See footnotes for important warranty information © Lenovo

US models announced October 22, 2009

US models withdrawn effective June 2010

(CML2-3) June 2010
**ThinkPad X200 Tablet (7449) - TopSeller (Windows 7) - withdrawn**

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>WideScreen display</th>
<th>Disk SATA GB rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe UWB or Turbo cells</th>
<th>Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>7449-44U SL9600</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1” WXGA Entry</td>
<td>160G</td>
<td>5400</td>
<td>Optional</td>
<td>Optional</td>
<td>✧</td>
<td>Intel 5100/6</td>
<td>WWan upg None 4</td>
</tr>
<tr>
<td>7449-4KU SL9600</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1” WXGA MultiTouch Cam</td>
<td>160G</td>
<td>7200</td>
<td>Optional</td>
<td>Optional</td>
<td>✧</td>
<td>Intel 5100/6</td>
<td>WWan upg None 8</td>
</tr>
</tbody>
</table>

- *These small and medium business (SMB) models are part of the US TopSeller™ Program*

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**Preloaded operating system**
- Genuine Windows 7
- Professional 32

**Preloaded applications**
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- Fingerprint Int Software
- ThinkVantage Toolbox
- Lenovo Online Data Backup
- Adobe® Reader™
- Skype™ for Windows
- Microsoft Research AutoCollage
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)

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**ThinkPad X200 UltraBase™**
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
- Bay Adapter III
- Disks supported (some):
  - 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

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**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

---

**Limited warranty**
- 3-years/1-year battery - EasyServ™/SA® depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo

(CML2-4) June 2010

US models announced October 22, 2009

US models withdrawn effective June 2010

✧ Intel Centrino® 2 with vPro™ technology
## ThinkPad® X200 Tablet (7450) - withdrawn

### Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>CCFL or LED Cam</th>
<th>Disk SATA</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBasic</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo</th>
<th>Blue/Gray</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
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<tbody>
<tr>
<td>7450-2CU SL9400</td>
<td>Intel® Core™ 2 Duo processor SL9300 or SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160G 5400 Optional</td>
<td>Opt</td>
<td>Intel 5100 WWAN upg</td>
<td>Bus 32 W G Oct 08</td>
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<tr>
<td>7450-2CU SL9300</td>
<td>Intel® Core™ 2 Duo processor SL9300 or SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160G 5400 Optional</td>
<td>Opt</td>
<td>Intel 5100 WWAN upg</td>
<td>Bus 32 W G Oct 08</td>
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<tr>
<td>7450-EDU SL9400</td>
<td>Intel® Core™ 2 Duo processor SL9300 or SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA Touch LED</td>
<td>160G 7200 Optional</td>
<td>Opt</td>
<td>Intel 5100 WWAN upg</td>
<td>Busy 32 W G Oct 08</td>
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<tr>
<td>7450-8HU SL9400</td>
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<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160G 7200 Optional</td>
<td>Opt</td>
<td>Intel 5100 WWAN upg</td>
<td>Busy 32 W G Oct 08</td>
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<td>7450-9GU SL9400</td>
<td>Intel® Core™ 2 Duo processor SL9300 or SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160G 7200 Optional</td>
<td>Opt</td>
<td>Intel 5300 WWAN upg</td>
<td>Busy 32 W G Oct 08</td>
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<td>7450-EYU SL9300</td>
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<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>160G 5400 Optional</td>
<td>Opt</td>
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<tr>
<td>7450-FDU SL9400</td>
<td>Intel® Core™ 2 Duo processor SL9300 or SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA Touch LED</td>
<td>160G 7200 Optional</td>
<td>Opt</td>
<td>Intel 5100 WWAN upg</td>
<td>Busy 32 W G Oct 08</td>
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### Positioning Processor
Convertible tablet ultraportable; one spindle

Intel® Core™ 2 Duo processor SL9300 or SL9400 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory
2GB std / 4GB max / PC3-8500 DDR3 L-H SODIMM 55Y3707

### SATA DVD: RW Ultrabay Slim SATA disk
None

### Widescreen display
Some: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, FFS, frameless screen

Some: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 255 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, frameless screen

Touch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 230 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, Multi-Touch (touchscreen via finger and pen)

**All:** WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front face, rotateable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

### Camera
Some: camera on top of screen, 1.3-megapixel, fixed focus

### Graphics controller
Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

### Graphics - external
External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @ 75Hz

### Keyboard
TrackPoint®
Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys, TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

ThinkLight™
None

### Dimensions
without X200 UltraBase: 4-cell: 11.6" x 9" x 1.3"; 295mm x 228mm x 26.5-33mm
without X200 UltraBase: 8-cell: 11.6" x 10.1" x 1.3"; 295mm x 257mm x 26.5-33mm

### Weight
4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

### Battery - type
Lithium Ion 8-cell

### Battery - life
4-cell: up to 4.4; 8-cell: up to 10.3 hr

### Chipset
Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub),ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

### Media slice
Multicard Reader ExpressCard/54
Optional: X200 UltraBase media slice (see right side)
5-in-1 reader (MultiMediaCard, Memory Stick, Mm Stick Pro, Secure Digital, SDHC)

### Ports
One slot (ExpressCard/34, ExpressCard/44)
Three USB 2.0, external monitor (VGA DB-15), modem ( RJ-11, ethernet (RJ-45)

### Mini PCIe Express
Intel 5100 WWAN upg
3 Mini PCIe Express slots
Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless WAN upgradable, requires Verizon® (4391915) or AT&T® (4391952)

Some: Intel Turbo Memory, Half-Mini PCIe adapter, 2GB flash, disk-cache accelerator

### Modern
56K V.92 modem

### Bluetooth™
Some: Bluetooth 2.1 wireless, LED indicator

### Ethernet
Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

### Audio support
High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack / power-on password, hard disk password, supervisor password, security keyhole

### Security
Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

### Security chip
Fingerprint reader
Some: Fingerprint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

### Limited warranty
3-years/1-yr battery - EasyServ™ depot repair service / service upgrades available

| 1GB PC3-8500 DDR3 L-H SODIMM | 55Y3706 | ThinkPad Battery 12 (4-cell) | 439R256 |
| 2GB PC3-8500 DDR3 L-H SODIMM | 55Y3706 | ThinkPad Battery 12++ (8-cell) | 439R257 |

Other accessories on O-X200-T sheet

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See footnotes for important warranty information

US models announced Sept 23, 2008

US models withdrawn effective September 2009, December 2009, or June 2010

Intel Centrino® 2 with vPro™ technology

Lenovo (CML1-2) June 2010

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ibrated through downgrade rights in Genuine Windows Vista Business

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter certified

Climate Savers® certified

EPEAT® Gold rating (LED models)

EPEAT Silver rating (other models)

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service
24 hour x 7 day toll-free support during the warranty period via 800-426-7378

Preloaded applications:
- Some: Genuine Windows Vista Business 32

Intel Centrino® 2 with vPro™ technology
### ThinkPad X200 Tablet (7450) - December 2008 - withdrawn

**Personal Systems Reference (PSREF)**

#### Type-model | Processor | GHz | Memory | Disk | Optical in UltraBase | ThinkPad X200 UltraBase | Mini PCIe | Mini PCIe | Mini PCIe | Battery | Preload | Available
---|---|---|---|---|---|---|---|---|---|---|---|---
7450-8UU SL9400 1.86 2GB 12.1" WXGA | Intel® Core™ 2 Duo processor SL9300 or SL9400 | 1.86 | 2GB | DVD±RW UltraBase | + Intel® 3500® AT&T | None | Yes | 8 | Bus 32 Dec 08 | 8-cell: 3.88 lb (1.76kg)
7450-9GU SL9400 1.86 2GB 12.1" WXGA | Intel® Core™ 2 Duo processor SL9300 or SL9400 | 1.86 | 2GB | HDD | DVD±RW UltraBase | + Intel® 5100® WWAN, upg | None | Yes | 8 | Bus 32 Dec 08 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g
7450-GDU SL9400 1.86 2GB 12.1" WXGA | LED Cam 128GB SSD | 1.86 | 2GB | HDD | DVD±RW UltraBase | + Intel® 5300® WWAN, upg | None | Yes | 8 | Bus 32 Dec 08 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g
7450-GDU SL9400 1.86 2GB 12.1" WXGA | LED Cam 128GB SSD | 1.86 | 2GB | HDD | DVD±RW UltraBase | + Intel® 5300® WWAN, upg | None | Yes | 8 | Bus 32 Dec 08 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g
7450-GEU SL9400 1.86 2GB 12.1" WXGA | Touch Cam 128GB SSD | 1.86 | 2GB | HDD | DVD±RW UltraBase | + Intel® 5300® WWAN, upg | None | Yes | 8 | Bus 32 Dec 08 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g
7450-GAU SL9400 1.86 2GB 12.1" WXGA | Cam 128GB SSD | 1.86 | 2GB | HDD | DVD±RW UltraBase | + WIMAX | None | Yes | 8 | Bus 32 Jan 09 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g
7450-GBU SL9400 1.86 2GB 12.1" WXGA | LED Cam 128GB SSD | 1.86 | 2GB | HDD | DVD±RW UltraBase | + WIMAX | None | Yes | 8 | Bus 32 Jan 09 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g
7450-GCU SL9400 1.86 2GB 12.1" WXGA | Touch Cam 128GB SSD | 1.86 | 2GB | HDD | DVD±RW UltraBase | + WIMAX | None | Yes | 8 | Bus 32 Jan 09 | 8-cell: 3.5 lb (1.6kg); 1.6 lb; 730g

#### Positioning
- **Processor**: Convertible tablet ultraportable; one spindle
- **Memory**: 2GB small / 4GB max /
- **SATA/DVD**: DVD burner (43N3214), SATA 1.5GHz, removable from X200 UltraBase
- **Display**: WXGA (1280x800) TFT color
- **Widescreen**: Some: 12.1" (306mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, FFS, frameless screen
- **Weight**: 3.5 lbs (1.6kg) / 3.88 lbs (1.76kg)
- **Battery**: Lithium Ion 4-cell or 8-cell
- **Chipset**: Mobile Intel® GS45 Express Chipset (Graphics Memory Controller Hub),ICH9M-SFF-Enhanced I/O Control Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)
- **Media slice**: X200 UltraBase media slice (see right side)
- **Multi-card reader**: 5-in-1 reader (MultiMediaCard, Memory Stick, Micro SD, Secure Digital, SDHC)
- **Operating system**: Microsoft® Windows® 7 Business, Home Premium, Professional, Professional 64-bit, Ultimate Edition, or Ultimate 64-bit
- **Processor**: Intel® Core™ 2 Duo processor SL9300 or SL9400
- **Memory**: 2GB small / 4GB max
- **Disk**: DVD±RW UltraBase
- **Optical**: LED Cam 128GB SSD
- **Mini PCIE**: None
- **Mini PCI Express**: Three Mini PCI Express slots
- **Mini PCI Express adapter**: Intel® 5100® or Intel® 5300®
- **WIMAX**: None
- **WWAN**: None
- **USB Turbo**: None
- **Battery**: None
- **Security**: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- **Power button**: + Intel® 3500®
- **Ethernet**: Intel® 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
- **Audio support**: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack
- **Security**: Power-on password, hard disk password, supervisor password, security keyhole
- **Security chip**: Trusted Platform Module, integrated in ICH9M, TC1 1.2-compliant
- **Fingerprint reader**: Fingerprint reader on right side base of display / used in tablet mode / 2-way swipe sensor, LED indicator / supports the security chip

### Preloaded operating systems
- **Windows Vista® Business 32**
- **Vista Premium logo**

### Preloaded applications
- **Microsoft® Office 2007 Trial (60-day)**
- **Roxio® MyDVD® (DVD+RW)**

### Supports ThinkVantage® technologies
- **ThinkPad X200 UltraBase™**
  - Provides desktop expansion and cable management for X200 Series
  - Easily connects to the bottom of the X200 Series for traveling
  - Converts ThinkPad® to a two-spindle system with optional Ultrabay Slim accessories in right side:
    - DVD Burner Ultrabay Slim
    - SATA 1.5Gb/s
    - Serial ATA Hard Drive
    - Bay Adapter III
    - Disks supported (some):
      - 250G 7200 rpm 43N3410
      - 320GB Disk 7200 rpm 43N3411
- **ThinkPad® 2 with vPro®**
- **Climate Savers® certified**
- **ENERGY STAR® 6.0**
- **International Warranty Service**

### Other features:
- **Power button (front)**
- **Stereo speakers (2 watt)**
- **Security key lock, security keyhole, and optional security screw**
- **Optional Analog DB-15 connector**
- **Second battery charger**
- **Gigabit ethernet port**
- **Four USB 2.0 ports**
- **Microphone in and headphone out**
- **Second battery charging**
- **Requires 65 or 90 watt AC adapter**
- **1.6 lb; 730g**

### 65-watt (GMA graphics) AC Adapter
- **Climate Savers® certified**
- **EPEAT Gold rating (LED models)**
- **IP65 rating (overt models)**
- **ENERGY STAR® 5.0-compliant**
- **ROHS-compliant**
- **International Warranty Service**
- **Preload service repair / service upgrades available**
- **3-years/1-yr battery**
- **EasyServ™**
- **Current: 2 with vPro™ technology**
- **Lenovo (CML1-6) June 2010**

See footnotes for important warranty information.

© Lenovo
US models announced December 9, 2008 or January 6, 2009
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>CCFL or LED Cam</th>
<th>Disk SATA GB rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe WWAN</th>
<th>Mini PCIe UWB or Turbo Fing cells</th>
<th>Bat- Preload</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>7450-9RU SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1” WXGA LED Cam</td>
<td>160GB</td>
<td>7200</td>
<td>DVD:RW UltraBase</td>
<td>None</td>
<td>Yes</td>
<td>None</td>
<td>8</td>
<td>Bus 32</td>
<td>May 09</td>
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<td>7450-9SU SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1” WXGA LED Cam</td>
<td>128G SSD</td>
<td>7450-2NU SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1” WXGA</td>
<td>160GB</td>
<td>5400</td>
<td>Intel 5100</td>
<td>None</td>
</tr>
</tbody>
</table>

Preloading operating system
- Genuine Windows Vista Business 32
- Vista Premium logo

Preloaded applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

Supports ThinkVantage® technologies

ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-spindle system with optional UltraBay Slim accessories in right side:
  - DVD Burner UltraBay Slim SATA 1.5GB/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - Disks supported (some):
    - 250GB IDE 7200 rpm 43N3410
    - 320GB IDE 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- EPEAT Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Optical Drive</th>
<th>Mini PCE</th>
<th>Mini PCE WWAN</th>
<th>Bluetooth</th>
<th>Battery</th>
<th>Preload</th>
<th>Avail Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7450-66U</td>
<td>Intel Core™ 2 Duo processor SL9600</td>
<td>2GB</td>
<td>12.1&quot; WXGA MultiTouch</td>
<td>LED Cam</td>
<td>160GB 5400</td>
<td>Intel 5100™ 802.11 wireless</td>
<td>Built-in</td>
<td>4-cell</td>
<td>Silver</td>
<td>Yes</td>
</tr>
<tr>
<td>7450-67U</td>
<td>Intel Core™ 2 Duo processor SL9600</td>
<td>2GB</td>
<td>12.1&quot; WXGA MultiTouch</td>
<td>LED Cam</td>
<td>160GB 7200</td>
<td>Intel 5100™ 802.11 wireless</td>
<td>Built-in</td>
<td>4-cell</td>
<td>Silver</td>
<td>Yes</td>
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<tr>
<td>7450-68U</td>
<td>Intel Core™ 2 Duo processor SL9600</td>
<td>2GB</td>
<td>12.1&quot; WXGA MultiTouch</td>
<td>LED Cam</td>
<td>160GB 7200</td>
<td>Intel 5100™ 802.11 wireless</td>
<td>Built-in</td>
<td>4-cell</td>
<td>Silver</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- **These models have a depot repair service 3-year limited warranty**

**Preloaded operating system**
- Some: Windows® XP Tablet PC Edition
- Some: Genuine Windows Vista® Business

**Preloaded applications**
- Some: McAfee Antivirus Plus with SiteAdvisor™
- Some: Lenovo System Toolbox
- Some: ThinkVantage® Power Manager and Presentation Director
- Some: Roxio® Creator® Business Edition (DVD+RW)

**Supports ThinkVantage® technologies**

**ThinkPad X200 UltraBase**
- Provides desktop expansion and cable management for X200 Series
- USB 2.0 supports ThinkPad Fold Mounting Hard Drive, Auto Protection System™, supports 2nd dock in optional or standard X200 UltraBase

**Additional features**
- Notebook expansion and cable management for X200 Series
- Requires 65 or 90 watt AC adapter
- 4-cell: 3.88 lb (1.76kg)
- 8-cell: 4.63 lb (2.10kg)
- Second battery charger

See footnotes for important warranty information.

© Lenovo (CML2-1) June 2010

US models announced September 15, 2009

US models withdrawn effective June 2010
<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>SATA DVD:RW</td>
<td>None</td>
</tr>
<tr>
<td>Ultrabay Slim</td>
<td>Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB / SATA 1.5GB/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase</td>
</tr>
<tr>
<td>Widescreen display</td>
<td>12.1&quot; (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (screen touch support pen &amp; two-finger touch), WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)</td>
</tr>
</tbody>
</table>

**Graphics controller**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @ 75Hz (VGA)

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touch pad

None

ThinkLight™

None

**Dimensions**

without X200 UltraBase; 4-cell: 11.6" x 9" x 1.1-3.3"; 295mm x 228mm x 26.5-33mm

without X200 UltraBase; 8-cell: 11.6" x 10.1" x 1.1-3.3"; 295mm x 257mm x 26.5-33mm

Weight:

4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

**Case**

Color: black; Material: magnesium alloy

**Battery - type**

Lithium Ion 8-cell

**Battery - life**

4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

**Chipset**

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**

Optional: X200 UltraBase media slice (see right side)

**Multicard Reader ExpressCard/54**

5-in-1 reader (MultiMediaCard, Memory Stick, M2 Micro, Secure Digital, SDHC)

**Ports**

Three USB 2.0, external monitor support (VGA DB-15), modem ( RJ-11), ethernet ( RJ-45)

**Mini PCI Express Intel 5300™ WWAN upg**

Three Mini PCI Express slots

11a/b/g/n wireless®, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless WAN upgradable, requires Version® (43R9151) or AT&T® (43R9152) Some:

None

**Modem**

56K V.92 modem

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (IAMP)

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on right base of display / used in tablet mode / 2-way swipe sensor, LED indicator / supports the security chip

**Limited warranty**

3 years/1-yr battery - EasyServ®/15 depot repair service / service upgrades® available

1GB PC3-8500 DDR3 L-H SODIMM 55Y3706 ThinkPad Battery 12 (4-cell) 43R9256

2GB PC3-8500 DDR3 L-H SODIMM 55Y3707 ThinkPad Battery 12+ (8-cell) 43R9257

Other accessories on O-X200-T sheet

Other accessories at lenovo.com/accessories

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**ThinkPad X200 Tablet (7450) - Windows 7 - withdrawn**

**Processor**

Intel® Core™ 2 Duo processor SL9600, with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

**Memory**

2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

**SATA DVD:RW**

None

**Ultrabay Slim**

Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

**Widescreen display**

12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (screen touch support pen & two-finger touch), WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Camera**

Camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

**Graphics controller**

Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

**Graphics - external**

External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @ 75Hz (VGA)

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**TrackPoint®**

Pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

**Touch pad**

None

**ThinkLight™**

None

**Dimensions**

without X200 UltraBase; 4-cell: 11.6" x 9" x 1.1-3.3"; 295mm x 228mm x 26.5-33mm

without X200 UltraBase; 8-cell: 11.6" x 10.1" x 1.1-3.3"; 295mm x 257mm x 26.5-33mm

**Weight**

4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

**Case**

Color: black; Material: magnesium alloy

**Battery - type**

Lithium Ion 8-cell

**Battery - life**

4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

**Chipset**

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC)

**Media slice**

Optional: X200 UltraBase media slice (see right side)

**Multicard Reader ExpressCard/54**

5-in-1 reader (MultiMediaCard, Memory Stick, M2 Micro, Secure Digital, SDHC)

**Ports**

Three USB 2.0, external monitor support (VGA DB-15), modem ( RJ-11), ethernet ( RJ-45)

**Mini PCI Express Intel 5300™ WWAN upg**

Three Mini PCI Express slots

11a/b/g/n wireless®, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless WAN upgradable, requires Version® (43R9151) or AT&T® (43R9152) Some:

None

**Modem**

56K V.92 modem

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (IAMP)

**Audio support**

High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

Security chip

Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

**Fingerprint reader**

Fingerprint reader on right base of display / used in tablet mode / 2-way swipe sensor, LED indicator / supports the security chip

**Limited warranty**

3 years/1-yr battery - EasyServ®/15 depot repair service / service upgrades® available

1GB PC3-8500 DDR3 L-H SODIMM 55Y3706 ThinkPad Battery 12 (4-cell) 43R9256

2GB PC3-8500 DDR3 L-H SODIMM 55Y3707 ThinkPad Battery 12+ (8-cell) 43R9257

Other accessories on O-X200-T sheet

Other accessories at lenovo.com/accessories

---

See footnotes for important warranty information

© Lenovo (CML2-5) June 2010
**ThinkPad® X200 Tablet (7453) - Onsite - withdrawn**

### Type-model

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>CCFL LED Cam</th>
<th>Disk SATA GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Workhorse (W) Global (G) Availability</th>
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<tbody>
<tr>
<td>7453-2CU</td>
<td>SL9400 1.86 2GB 12.1&quot; WXGA</td>
<td>160G5400</td>
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<td>Intel 5100™ WWAN upg No Bus 32 W G P Oct 08</td>
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<td>Intel 5100™ WWAN upg No Yes Bus 32 W G P Oct 08</td>
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<tr>
<td>7453-9RU</td>
<td>SL9600 2.13 2GB 12.1&quot; WXGA</td>
<td>160G7200</td>
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<td>Intel 5100™ WWAN upg No Yes Bus 32 W G Apr 08</td>
</tr>
</tbody>
</table>

### Positioning Processor

Convertible tablet upportable; one spindle Intel Core™ 2 Duo processor SL9400 or SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

### Memory

2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets: Non-Italics: standard memory in 1 socket; 1 socket available

### SATA DVD±RW UltraBase 7453-9RU

Some: DVD burner (43N3214), SATA 1.5GB/s, removable from X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB (5400 or 7200 rpm) SATA 1.5GB/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

### Widescreen display

**Some:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits, 16:10 aspect ratio, 500:1 contrast ratio, FFS, frameless screen **Some:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 265 nits, 16:10 aspect ratio, IPS, frameless screen **Touch:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 230 nits, 16:10 aspect ratio, 500:1 contrast ratio, IPS, Multi-touch (touchpad via finger and pen) All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual svivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

### Camera

Some: camera on top of screen, 1.3-megapixel, fixed focus

### Graphics controller

ThinkPad Graphics Media Controller 4500HMH (GMA 4500HMH), in GS45

Graphics - external: External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; Maximum external resolution: 2048x1536 @75Hz

### Keyboard

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Touch pad: None

ThinkLight™: None

### Dimensions

without X200 UltraBase: 4-cell: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33mm without X200 UltraBase: 8-cell: 11.6" x 10.1" x 1.3-1.5"; 295mm x 257mm x 26.5-33mm

### Weight

4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

### Case

Color: black; Material: magnesium alloy

Battery life: Lithium Ion 8-cell

4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

### Chipset

Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SPF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC)

### Media slice

Some: X200 UltraBase media slice (see right side)

Multicard Reader ExpressCard/54:

5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC) One slot (ExpressCard/34, ExpressCard/54)

### Ports

USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

### Mini PCI Express

Intel 5100™

Intel 5300™

WWAN upg 2G Turbo UWB None

### Modern

56K V.92 modem

### Ethernet

Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support

Intel Active Management Technology (AMT)

Security

Power-on password, supervisor password, security keyhole Security chip

Fingerprint reader

Some: fingerprint reader on right base of display / used in tablet mode or notebook / 2-way swipe sensor, LED indicator / supports the security chip

### Limited warranty

3-years 1-year battery, limited onsite service®: 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

### Other features

- Power button (front)
- Speaker stereo (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### Preloaded operating system®

- Some: Genuine Windows Vista Business 32

### Preloaded applications®

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Microsoft® Office 2007 Trial (60-day)

### Supports

ThinkVantage® technologies

- Provides desktop expansion and cable management for X200 Series
- Easily connects to the bottom of the X200 Series for traveling
- Converts ThinkPad to a two-sindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim
  - SATA 1.5GB/s
  - Serial ATA Hard Drive
  - Bay Adapter III
  - 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411
- Other features:
  - Power button (front)
  - Speaker stereo (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J9715)
  - Four USB 2.0 ports
  - Gigabit ethernet port
  - Microphone in and headphone out
  - Second battery charger
  - Requires 65 or 90 watt AC adapter
  - 1.6 lb; 730g

### 65-watt (GMA graphics) AC Adapter

- Climate Savers® certified
- EPEAT® Gold rating (LED models)
- EPEAT Silver rating (other models)
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service® 12

### Model Information

- 7453-2CU: 1.86GHz dual-core Intel Core™ 2 Duo processor SL9400, 2GB 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available
- 7453-EDU: 1.86GHz dual-core Intel Core™ 2 Duo processor SL9400, 2GB 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

### Footnotes

- Some: Genuine Windows Vista Business 32
- Vista models: Vista Premium logo
- Some: Genuine Windows Vista Business 32
- ✓ Intel Centrino® II with vPro® technology
- Lenovo
- US model announced September 23, 2008 or April 28, 2009
- US models withdrawn effective December 2009 or June 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>CCL or LED</th>
<th>Cam</th>
<th>Disk SATA GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe WWAN</th>
<th>Workhorse (W) Global (G) Availability</th>
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</thead>
<tbody>
<tr>
<td>7453-6BU SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA MultiTouch</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache</td>
<td>160G 7200</td>
<td>Optional</td>
<td>Intel 5100 (WWAN upg)</td>
<td>Yes Bus 32 G P Sep 09</td>
<td>ThinkPad Battery 12 (4-cell)</td>
<td>43R9256</td>
<td>43N3214</td>
<td>Domestic</td>
</tr>
<tr>
<td>7453-6BU SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA Outdoor</td>
<td>160G 7200</td>
<td>Optional</td>
<td>Intel 5300 (WWAN upg)</td>
<td>Yes XP Tab G P Sep 09</td>
<td>ThinkPad Battery 12+ (8-cell)</td>
<td>43R9257</td>
<td>43N3214</td>
<td>Domestic</td>
<td></td>
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<tr>
<td>7453-6AU SL9600</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA Outdoor</td>
<td>Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache</td>
<td>160G 7200</td>
<td>Optional</td>
<td>Intel 5300 (WWAN upg)</td>
<td>Yes Bus 32 G P Sep 09</td>
<td>Other accessories at lenovo.com/accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Positioning Processor** 
- Convertible tablet upgradable; one spindle
- Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache

**Memory** 
- 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets:
  - Non-italics: standard memory in 1 socket; 1 socket available

**SATA DVD:RW Ultrabay Slim SATA disk** 
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB (7200 rpm) / SATA 1.5Gb/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or std X200 UltraBase

**Widescreen display** 
- **Outdoor:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS
- **MultiTouch:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support pen & two-finger touch)
  - **All:** WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotational dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Camera** 
- **Some:** camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

**Graphics controller** 
- Intel® Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

**Graphics - external** 
- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
  - Maximum external resolution: 2048x1536@75Hz

**Keyboard Input/Output** 
- **TrackPoint® pointing device, \"Press-to-Select,\" Internet Scroll Bar® magnifying glass
- None

**Dimensions** 
- **without X200 UltraBase:** 11.6" x 9" x 1.3-1.7"; 295mm x 228mm x 26.5-33mm
- **without X200 UltraBase:** 8-cell: 11.6" x 10.1" x 1.3-1.7"; 295mm x 257mm x 26.5-33mm

**Weight** 
- **Battery - type:** Lithium Ion
- **Battery - life:** 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

**Chipset** 
- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub), ICH9M-SSF-Enhanced I/O Controller Hub (SATA 3.0Gbs, USB 2.0, PCI Express® x1, PCI 2.3, security chip, ethernet MAC)

**Media slice** 
- Optional: X200 UltraBase media slice (see right side)
- 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)
  - One slot (ExpressCard/34, ExpressCard/54)

**Ports** 
- Three Mini PCI Express slots
  - Some: 11a/b/g wireless®, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak)
  - Some: 11a/b/g wireless®, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3
  - Some: 11a/b/g wireless®, Mini PCIe Adapter II
  - Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)
- None
- None
- 56K V.92 modem
- Bluetooth® 2.1 wireless, LED indicator
- Non-vPro model: Intel® 82567LF Gigabit Network Connection (Boazman), PHY, PCIe x1
  - vPro model: Intel® 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1
- Intel AMT
- Intel Active Management Technology (AMT)
- High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack
- Power-on password, hard disk password, supervisor password, security keyhole
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
- Intel® 5100 WWAN upg
  - Yes Bus 32 G P Sep 09
- 2GB Turbo
  - None
- UWB
- Modem 56K V.92 modem
- Modem 56K V.92 modem
- Bluetooth® 2.1 wireless, LED indicator

**Display** 
- Dual-core, 12.1" WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS

**Battery** 
- **Type-model:** 11.6" x 9" x 1.3-1.7"; 295mm x 228mm x 26.5-33mm
- **None:** power button (front)
- **Stereo speakers (2 watt)**
- **Security key lock, security keyhole, and optional security screw**
- **Analyzer DB-15 monitor**
- **DisplayPort (supports single-link DVI-D via cable 45J7915)**
- **Four USB 2.0 ports**
- **Gigabit ethernet port**
- **Microphone in and headphone out**
- **Second battery charger**
- **Requires 65 or 90 watt AC adapter**
- **1.6 lb; 730g**

**Other features** 
- 65-watt (GMA graphics) AC Adapter
- Climate Savers® certified
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service®

**Limited warranty** 
- 3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

**See footnotes for important warranty information**

- Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and GMB L2 cache
- Lenovo

(CML-2.2) June 2010

**Personal Systems Reference (PSREF)**

- ThinkX200 Tablet (7453) - Onsite (September 2009) - withdrawn
- ThinkPad X200 Tablet (7453) - Onsite (September 2009) - withdrawn
- ThinkPad X200 Tablet (7453) - Onsite (September 2009) - withdrawn
ThinkPad® X200 Tablet (7453) - Onsite (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Proces-sor</th>
<th>GHz Memory</th>
<th>Widescreen display</th>
<th>Disk Sata GB</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini Pcle UWB</th>
<th>Mini Intel AMT</th>
<th>Mini PCle WWAN</th>
<th>UWB or Turbo cells</th>
<th>Workhorse (W)</th>
<th>Global (G) Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7453-DDU SL9600</td>
<td>2.13</td>
<td>2GB 12.1” WXGA MultiTouch</td>
<td>160G(7200 rpm)</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>3-years / 1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available</td>
</tr>
</tbody>
</table>

• This model is part of the Global Models Plus program with limited onsite service, 3-year limited warranty

Processor: Intel® Core™ 2 Duo processor SL9600 with low voltage, dual-core, Intel HD Boost, 1066MHz system bus, and 6MB L2 cache

Memory: 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available

SATA DVD±RW 160GB (7200 rpm) / SATA 1.5GB/s, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™, supports 2nd disk in optional or standard X200 UltraBase

Display: 12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 270 nits, 16:10 aspect ratio, IPS, MultiView (indoor/outdoor), enhanced MultiTouch (touchscreen support pen & two-finger touch), WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotateable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

Camera: Camera on top of screen, 1.3-megapixel, digital zoom (focus range: 33 - 330cm)

Graphics controller: Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

Keyboard: Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

Touchpad: None

ThinkLight™: None

Dimensions²: without X200 UltraBase: 4-cell: 11.6” x 9” x 1-1.3”; 295mm x 228mm x 26.5-33mm without X200 UltraBase: 8-cell: 11.6” x 10.1” x 1-1.3”; 295mm x 257mm x 26.5-33mm

Weight²: 4-cell: from 3.5 lb (1.6kg); 8-cell: from 3.88 lb (1.76kg)

Case: Color: black; Material: magnesium alloy

Battery - type: Lithium Ion

Battery - life: 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

Chipset: Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub),ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x 1.1, PCI 2.3, security chip, ethernet MAC)

Media slice: Optional: X200 UltraBase media slice (see right side)

Multicard Reader: 5-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital, SDHC)

ExpressCard/54 Port: Three USB 2.0, external monitor (VGA DB-15, modem (RJ-11), ethernet (RJ-45)

Mini PCI Express: Three Mini PCI Express slots 11a/b/g/n wireless¹, Mini PCie adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless WAN upgradable, requires Verison* (43R9151) or AT&T* (43R9152)

Modem: 56K V.92 modem

Bluetooth™: Bluetooth 2.1 wireless, LED indicator

Ethernet: Intel 82567LM Gigabit Network Connection (Bozeman), PHY, PCIe x1

Potential: Intel Active Management Technology (iAMT)

Audio support: High Definition (HD) Audio, Conexant CX20561 codec / stereo speakers, 1 watt / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

Security: Power-on password, hard disk password, supervisor password, security keyhole

Security chip: Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader: Fingerprint reader on right base of display / used in tablet or notebook mode / 2-way swipe sensor, LED indicator / supports the security chip

Limited warranty³: 3-years / 1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

See footnotes for important warranty information

Preloaded operating system: Genuine Windows® 7 Professional 64

Preloaded applications: (only some listed)

• Rescue and Recovery™
• Access Connections™
• Password Manager
• ThinkVantage Power Manager
• ThinkVantage System Update
• FingerPrint Software
• ThinkVantage Toolbox
• Lenovo Online Data Backup
• Skype® for Windows
• Microsoft Research AutoCollage Touch
• Roxio® Creator® Business Edition (DVD±R/RW)

Supports ThinkVantage® technologies

ThinkPad X200 UltraBase™

• Provides desktop expansion and cable management for X200 Series

• Easily connects to the bottom of the X200 Series for traveling

• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:

  - DVD Burner Ultrabay Slim
  - SATA 1.5Gb/s
  - Serial ATA Advanced
  - Bay Adapter III
  - 4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

• Provides extended battery life

• Enhanced security

• Fast boot

• Power button (front)

• Stereo speakers (2 watt)

• Security key lock, security keyhole, and optional security screw

• Analog DB-15 monitor port

• DisplayPort (supports single-link DVI-D via cable 45J7915)

• Four USB 2.0 ports

• Gigabit ethernet port

• Microphone in and headphone out

• Second battery charger

• Requires 65 or 90 watt AC adapter

• 1.6 lb; 730g

Other features:

• Dual battery/two battery charger

• 250GB FDE 7200 rpm 43N3410

• 320GB Disk 7200 rpm 43N3411

• IBM Personal Systems Reference (PSREF)

• Lenovo Online Data Backup

• Rescue and Recovery™

• Intel Centrino® 2 with vPro™ technology

© Lenovo

US model announced October 22, 2009

US model withdrawn effective June 2010

(CML2-6) June 2010
### ThinkPad X200 Tablet (7450) - Education (EasyServ) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor GHz</th>
<th>Memory</th>
<th>Display</th>
<th>Widescreen display</th>
<th>Cam</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>Mini PCIe 802.11</th>
<th>Mini PCIe WWAN</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Global (G)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>7450-2DU SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>Cam</td>
<td>160G 5400</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>8</td>
<td>Bus</td>
<td>32</td>
<td>W</td>
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<tr>
<td>7450-2KU SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>Cam</td>
<td>160G 7200</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>8</td>
<td>Ult</td>
<td>32</td>
<td>W</td>
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<tr>
<td>7450-2PU SL9400</td>
<td>1.86</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>Cam</td>
<td>160G 5400</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 5100™ WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>8</td>
<td>Bus</td>
<td>32</td>
<td>W</td>
</tr>
</tbody>
</table>

- **These models have an EasyServ™ depot repair service 3-year limited warranty**
- Educational only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.
- **Microsoft® Office Ultimate 2007 Academic Edition:** Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.
- **Lenovo System Toolbox**
- **ThinkPad Utilities (Power Manager and Presentation Director)**

### Preloaded operating system
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Ultimate 32
- Vista Premium logo

### Preloaded applications
- (all Oses; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software (fingerprint models)
  - Lenovo System Toolbox
  - ThinkPad Utilities (Power Manager and Presentation Director)

### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 739g

### Limited warranty
- **3-years/1-year battery - EasyServ™ depot repair service / service upgrades available**

### See footnotes for important warranty information

© Lenovo
(CML-1-4) June 2010
ThinkPad® X200 Tablet (7453) - Education (Onsite) - withdrawn

| Type-model          | Processor | GHz Memory | Widescreen display | Cam | Disk Sata GB rpm | Optical in UltraBase | ThinkPad X200 UltraBase | Mini PCIe 802.11 wireless | Mini PCIe WWAN | Mini PCIe UWB or Turbo Fing | Battery | Workhorse (W) Global (G) | Available date |
|---------------------|-----------|------------|--------------------|-----|------------------|----------------------|------------------------|--------------------------|----------------|-----------------------------|---------|---------------------------|-------------|--------------------------|
| 7453-2DU SL9400     | Intel® Core™2 Duo processor SL9400 with low voltage, dual-core, 11a/b/g/n wireless, 1066MHz system bus, and 6MB L2 cache | 1.86 | 2GB 12.1" WXGA Cam | 160G Sata 5400 | Optional | Optional | Intel 5100™ WWAN upg | None | Yes | 8 | Bus 32 | W | Oct 08 |
| 7453-KLJ SL9400     | Intel® Core™2 Duo processor SL9400 with low voltage, dual-core, 11a/b/g/n wireless, 1066MHz system bus, and 6MB L2 cache | 1.86 | 2GB 12.1" WXGA Cam | 160G Sata 7200 | Optional | Optional | Intel 5100™ WWAN upg | None | Yes | 8 | Uls 32 | W | Feb 09 |

- These models have a limited onsite service® - 3 year limited warranty
- Educational models are available only to public or private K-12 or higher accredited schools operated exclusively for educational purposes for use by qualified students and teachers.
- Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

Positioning
Processor
Convertible tablet ultraportable; one spindle
Intel® Core™2 Duo processor SL9400 with low voltage, dual-core, 11a/b/g/n wireless, 1066MHz system bus, and 6MB L2 cache

Memory
2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Non-italics: standard memory in 1 socket; 1 socket available

SATA DVD±RW
None

SATA disk
Supports Ultrabay Ultrabay Slim devices in optional or standard

Widescreen display
12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, CCFL backlight, 190 nits; 16:10 aspect ratio, 500:1 contrast ratio, FFS, frameless screen, WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in front base, rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

Camera
Camera on top of screen, 1.3-megapixel, fixed focus

Graphics controller
Intel Graphics Media Accelerator 4500HD (GMA 4500H)

Chipset
Mobile Intel G545 Express Chipset (Graphics Controller Memory Hub), ICH9MM-SFF-Enhanced I/O Controller Hub (SATA 3.0G/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC)

Keyboard
Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
TrackPoint®
TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass
ThinkLight™
None

Dimensions
without X200 UltraBase; 4-cell: 11.6" x 9" x 1.3"; 295mm x 228mm x 26.5-33.6mm

Weight
4-cell: from 3.5 lb (1.6kg); B-cell: from 3.88 lb (1.76kg)

Battery - type
Lithium Ion 8-cell

Battery - life (h)
4-cell: up to 4.4 hr; 8-cell: up to 10.3 hr

Preloaded operating system
- Some: Genuine Windows® Vista™ Business 32
- Some: Genuine Windows Vista Ultimate 32
- Vista Premium logo

Preloaded applications (all O/Ses; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®

ThinkPad X200 UltraBase™
Provides desktop expansion and cable management for X200 Series
Easily connects to the bottom of the X200 Series for traveling
Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
- DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
- Serial ATA Hard Drive
- Bay Adapter III 43N3412
- Disks supported (some): 250GB FDE 7200 rpm 43N3410
- 320GB Disk 7200 rpm 43N3411

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

65-watt (GMA graphics) AC Adapter
Climate Savers® certified EPEAT Silver rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service™
24 hour x 7 day 18 toll-free support during the warranty period 12 via 800-426-7378

See footnotes for important warranty information
Intel Centri®2 with vPro™ technology
Lenovo (CML-1.5) June 2010
US model announced September 23, 2008 or February 17, 2009
US model withdrawn effective June 2010
## ThinkPad X201 (3249) - TopSeller (XP with Win 7 License) - withdrawn

### Personal Systems Reference (PSREF)

#### Type-model  Processor  Max turbo Memory  Wide-screen display  Camera  Disk  Optical in ThinkPad  PCIe  PCIe  Carrier  Intel vPro Preload  Avail date
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad 2000 UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Carrier</th>
<th>Intel vPro Preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>3249-2RU i5-540M</td>
<td>2.53</td>
<td>3.06 GB</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>2.0M</td>
<td>250G</td>
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<td>DVD:RW UltraBase</td>
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<td>vPro XP Pro</td>
<td>Apr 10</td>
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</table>

### Preloaded operating system
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update

### Supports ThinkVantage™ technologies

### ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II 1.5G/s 43N3292
  - Serial ATA Hard Drive Bay Adapter III 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411

### Other features
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

### See footnotes for important warranty information

### US models announced March 2 or April 6, 2010

### US models withdrawn effective October 2010

### © Lenovo (MOC3-7) October 2010

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- These small and medium business (SMB) models are part of the US TopSeller™ Program
### ThinkPad X201 (3249) - TopSeller (Windows 7) - withdrawn

#### Personal Systems Reference (PSREF)

**Type-model** | Processors | Base turbo (GHz) | Max turbo (GHz) | Memory | Wide-screen display (inch) | Camera | Disk | Optical in UltraBase | ThinkPad X200 UltraBase | PCle Mini Card | PCle Mini Card WWAN | Carrier | Intel vPro | Preload | Availability
3249-2EU i5-540M | 2.53 (2.0GHz) | 3.06 (2.0GHz) | 2GB | 12.1" WXGA | 250G | 5400 | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-2EU i5-540M | 2.53 (2.0GHz) | 3.06 (2.0GHz) | 2GB | 12.1" WXGA | 250G | 5400 | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-2GU i5-540M | 2.53 (2.0GHz) | 3.06 (2.0GHz) | 4GB | 12.1" WXGA | 2.0M | 320G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-2HU i5-540M | 2.40 (2.0GHz) | 2.93 (1.7GHz) | 2GB | 12.1" WXGA | 2.0M | 320G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-2TU i5-540M | 2.53 (2.0GHz) | 3.06 (2.0GHz) | 4GB | 12.1" WXGA | 2.0M | 320G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-2UU i5-540M | 2.53 (2.0GHz) | 3.06 (2.0GHz) | 2GB | 12.1" WXGA | 2.0M | 320G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-C2U i5-540M | 2.53 (2.0GHz) | 3.06 (2.0GHz) | 2GB | 12.1" WXGA | 2.0M | 320G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-EPU i5-540M | 2.66 (2.0GHz) | 3.20 (2.0GHz) | 2GB | 12.1" WXGA | 2.0M | 320G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10
3249-ERU i5-560M | 2.66 (2.0GHz) | 3.20 (2.0GHz) | 2GB | 12.1" WXGA | 160G | 7200 | DVD+RW UltraBase | Intel 6200™ | WWAN upg | vPro | Pro 32 | Mar 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

#### Preloaded operating system

- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

#### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash Player®
- Skype® for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

#### Media slice

Some: ThinkPad X200 UltraBase media slice (see right side)

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

One slot (ExpressCard/34, ExpressCard/54)

#### Chipset

Mobile Intel QM57 Express Chipset

#### PCIe Mini Card

Intel 6200™

Supports ThinkVantage® technologies

65-watt AC Adapter

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service

24-hour x 7-day toll-free support during the warranty period

via 800-426-7378

See footnotes for important warranty information

US models announced February 23, March 2, April 20, or September 28, 2010

US models withdrawn effective August 2011
### ThinkPad X201 (3249) - TopSeller (Windows 7) - Jan 2011 - withdrawn

**Personal Systems Reference (PSREF)**

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<th>Type-model</th>
<th>Processor</th>
<th>Base</th>
<th>Max</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
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<td>7200</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
</tr>
</tbody>
</table>

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PVR)

### Positioning

**Processor**

An ultraportable for the executive on the move; one spindle

- Intel® Core™ i5 processor i5-480M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Intel Turbo Boost, Hyper-Threading technology; 3MB cache

**Memory**

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
- dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-Italics: standard memory in 1 socket; 1 slot available

**SATA DVD±RW Ultrabay Slim SATA disk**

- Option for ThinkPad X200 UltraBase
- Supports UltraBay Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

**Widescreen display**

- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight,
- 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**

- Intel HD Graphics in processor,
- external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
- supports dual independent display;
- **Maximum external resolution:** 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

**Keyboard**

- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®
- magnifying glass

**Touchpad**

- UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**

- **Without UltraBase:** 4/6-cell: 11.6" x 8.3" x 0.8-1.4";
- **295mm x 210mm x 20.7-35.3mm**
- **With UltraBase:** 9-cell: 11.6" x 9.2" x 0.8-1.4";
- **295mm x 233.8mm x 20.7-35.3mm**

**Weight**

- **4-cell:** from 2.89 lb (1.31kg);
- **6-cell:** from 3.18 lb (1.44kg);
- **9-cell:** from 3.52 lb (1.60kg)

**Case**

- Color: black;
- **Material:** magnesium alloy

**Battery - type**

- Lithium Ion
- **6-cell:** 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr

**Chipset**

- Mobile Intel QM57 Express Chipset

**Media slice**

- **Option:** ThinkPad X200 UltraBase media slice (see right side)

**Multicard reader**

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)

**Ports**

- Three USB 2.0 (one powered), external monitor (VGA DB-15),
- modem (RU-11), ethernet (RU-45)

**PCE Mini Card**

- Two PCI Express Mini Card slots
- Intel 1000
- **WWAN upg**
- **Modem**
- **56K V.92**
- **Modern**
- None

**Ethernet**

- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Audio support**

- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 /
- volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack
- Security
- Power-on password, hard disk password, supervisor password, security keyhole
- Security chip
- Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader
- None

**Limited warranty**

- 1-year - depot repair service / service upgrades available

### Preloaded operating system

- Genuine Windows® 7 Professional 64

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

### Personal Systems Reference (PSREF)

See footnotes for important warranty information

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(MOCS-3) August 2011

US model announced January 11, 2011

US model withdrawn effective August 2011
### ThinkPad X201 (3626) - Windows 7 - withdrawn

#### Personal Systems Reference (PSREF)

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<th>Memory</th>
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<th>Camera</th>
<th>Disk</th>
<th>Optical drive</th>
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<th>PCE</th>
<th>Finger print reader</th>
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</tbody>
</table>

#### Preloaded operating system
- Some: Genuine Windows 7 | Professional 32
- Some: Genuine Windows 7 | Professional 64

#### Preloaded applications
- Recovery and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded;
- purchase product key to activate
- Microsoft Research AutoCollage Touch

### Additional Features

- **Positioning Processor:** ThinkPad® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, 9MB cache
- **Memory:** 2GB, 3GB, or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; no sockets available;
- **SATA DVD±RW UltraBay Slim:** Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase
- **SATA disk:** Some: 128GB† Solid State Drive (SSD) / SATA 3.Gb/s, 1.8" wide, 8mm high
- **Some:** 160GB (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm) / SATA 3.Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
- **All:** removable, upgradable, shock mounted storage, 2nd disk in optional or standard X200 UltraBase
- **Display:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
- **Camera:** Some: camera on top of screen, 2.0-megapixel, fixed focus
- **Graphics:** Intel HD Graphics in processor; external monitor supports analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz
- **Keyboard:** Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- **TouchPad:** UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch illuminates the keyboard to improve visibility in low-light conditions
- **Dimensions:** 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- **Weight:**
  - 2560x1600 (DP)@60Hz: 6.7 lb (3.1kg)
  - 2048x1536(VGA)@75Hz: 6.3 lb (2.9kg)
- **Battery:**
  - Lithium Ion 4-cell, 6-cell, or 9-cell
  - 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr
- **Chipset:** Mobile Intel QM57 Express Chipset
- **Media slice:** Some: ThinkPad X200 UltraBase media slice (see right side)
- **Multicard reader:** 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- **Ports:** One slot (ExpressCard/34, ExpressCard/54)
- **PCIe Mini Card:** Two PCI Express Mini Card slots
  - Intel 6200†
  - Intel 6300†
  - WWAN upg
  - Gobi™ 2000
- **Carrier Modem:** 3G/3.5G models: Verizon®, contract required with service provider
- **Bluetooth™:** Some: Bluetooth 2.1 wireless, LED indicator
- **Ethernet:** Intel 82577LM Gigabit Network Connection (Hansville), PHY, PCIe x1
- **Audio support:** Intel Active Management Technology (iAMT)
- **Security:** Trusted Platform Module, TOG 1.2-compliant
- **Fingerprint reader:** Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip
- **Limited warranty:** 3-year 1st year battery - depot repair service / service upgrades available

See footnotes for important warranty information

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US models announced February 23, April 6, April 20, or September 28, 2010
US models withdrawn effective June 2010 or August 2011

(MOC3-3) August 2011
ThinkPad X201 (3626) - Education (Windows 7) - withdrawn

Positioning
Processor: An ultraportable for the executive on the move; one spindle

Memory:
- 2GB std / 8GB max
- PC3-8500 1066MHz DDR3, non-parity
- dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket; 1 socket available

SATA DVD±RW:
- Supports ThinkPad X200 UltraBase
- Supports dual independent display;
- external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
- Intel Turbo Boost, Hyper-Threading technology; 3MB cache

Widescreen display:
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight,
- 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera:
- Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics:
- Intel HD Graphics in processor

Keyboard:
- Full-size, 99-key, ThinkVantage button, spill-resistant, mm Fn keys

Touchpad:
- ThinkVantage touchpad, "Press-to-Select," Internet Scroll Bar®, magnifying glass

Dimensions:
- 770.8 x 120.9 x 20.7 mm (30.3 x 4.75 x 0.8 in)
- 1.16 kg (2.6 lb)

Weight:
- 1.9 kg (4.2 lb)

Battery - life:
- 6-cell: up to 5.5 hr
- 9-cell: up to 6.7 hr

Chipset:
- Mobile Intel QM57 Express Chipset

Media slice:
- Option: ThinkPad X200 UltraBase media slice (see right side)

Multicard reader:
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

ExpressCard/54:
- One slot (ExpressCard/34, ExpressCard/54)

Ports:
- Three USB 2.0 (one powered)

Pcie Mini Card:
- Two PCI Express Mini Card slots
- 11a/b/g/n wireless®, Pcie Mini Card, Intel Centrino® Advanced-N 6200, 2x2

WWAN upg:
- Mobile WWAN upgradable

Modem:
- 56K V.92 modem

Bluetooth:
- Bluetooth 2.1 wireless, LED indicator

Ethernet:
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, Pcie x1

Intel AMT:
- Intel Active Management Technology (iAMT)

Audio support:
- High Definition (HD) Audio, Conexant 20585 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security:
- Power-on password, hard disk password, supervisor password, security keyhole

Security chip:
- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader:
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty:
- 3-years/1-year battery - depot repair service / service upgrades available

See footnotes for important warranty information

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(MOC3-5) April 2011
ThinkPad® X201 (3680) - Onsite (Windows 7) - withdrawn

See footnotes for important warranty information
US models announced February 23, April 6, or April 20, 2010
US models withdrawn effective August 2011

Preloaded operating system10
- Some: Genuine Windows® 7 Professional 32
- Some: Genuine Windows® 7 Professional 64

Preloaded applications14 (only some listed)
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Power Manager
- ThinkVantage System Update
- ThinkVantage Toolbox
- Norton™ Internet Security 2009 (30 days of virus definitions)
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

Personal Systems Reference (PSREF)
### ThinkPad X201 (3680) - Education (Onsite) - Windows 7 - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base turbo (GHz)</th>
<th>Memory</th>
<th>DisplayMemory</th>
<th>Camera</th>
<th>Disk Sata GB</th>
<th>Optical in Ultrabase</th>
<th>ThinkPad X200 Ultrabase</th>
<th>PCIe Mini Card 802.11</th>
<th>PCIe Mini Card WWAN</th>
<th>Blue/ Fing</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
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</thead>
<tbody>
<tr>
<td>3680-N2U i5-540M</td>
<td>2.53</td>
<td>3.06</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>2.0M</td>
<td>250G</td>
<td>5400</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 6200™</td>
<td>WWAN upg</td>
<td>Yes</td>
<td>vPro</td>
<td>Pro 32</td>
</tr>
</tbody>
</table>

*This model has a limited onsite service*3-year limited warranty
*This system is Microsoft® Office 2010 Product Key Ready (O10PKR)*
*Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.*

#### Preloaded operating system
- Genuine Windows® 7 Professional 32

#### Preloaded applications
- (only some listed)
  - Education software
  - Microsoft Office OneNote® 2007 (and CD)
  - Adobe Digital School Collection
  - Rescue and Recovery™
  - Microsoft Office 2010 preloaded; purchase product key to activate

**Supports ThinkVantage™ technologies**

**ThinkPad X200 UltraBase™**
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s
  - Serial ATA Hard Drive
- Bay Adapter III
- Disks supported (some):
  - 250GB FDE 7200 rpm
  - 320GB Disk 7200 rpm
- 24 hour x 7 day toll-free support during the warranty period
- Requires 65 or 90 watt AC adapter
- Requires 65 or 90 watt AC adapter
- Includes 65-watt AC Adapter EPEAT®, Energy Star® compliant, ROHS-compliant

**International Warranty Service**
- 24 hour x 7 day toll-free support during the warranty period via 800-624-7378

**See footnotes for important warranty information**

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US model announced February 23, 2010
US model withdrawn effective April 2011

(MOC3-6) April 2011

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**Positioning and Processor**
- An ultraportable for the executive on the move; one spindle
- Integrated Intel processor i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3M cache

**Memory**
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 cell; 1 socket available

**SATA DVD±RW**
- Supports ThinkPad X200 Ultrabase

**UltraSlim SATA disk**
- Option for ThinkPad X200 Ultrabase
- Supports Ultrabay Slim devices in optional or standard X200 Ultrabase (43R8781)
- 250GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std Ultrabay Slim drive

**Widescreen display**
- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio
- Camera on top of screen, 2.0-megapixel, fixed focus

**Integrated graphics**
- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via Ultrabase; supports dual independent display
- Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

**Keyboard**
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- Without Ultrabase: 4/6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- Weight:
  - 4-cell: from 2.89 lb (1.31kg);
  - 6-cell: from 3.18 lb (1.44kg);
  - 9-cell: from 3.52 lb (1.60kg)
- Color: black; Material: magnesium alloy
- Case:
  - Battery - type
  - Battery - life: 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr
- Chipset:
  - Mobile Intel QM57 Express Chipset

**Media slice**
- Option: ThinkPad X200 UltraBase media slice (see right side)
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)

**Ports**
- Three USB 2.0 (one powered), external monitor (VGA DB-15), Gigabit ethernet port, USB 2.0, Airport Extreme, Bluetooth 2.1, 802.11a/b/g/n wireless, CD ROM, DVD+R/-RW, 1394a, serial, parallel, infrared, i.LINK, DVI-D via cable 45J7915 (supports single-link DVI-D via cable 4S7915), DVI-D supports second display

**PCIe Mini Card**
- Intel 6200™ Wireless WAN upgradable
- Two PCI Express Mini Card slots
- 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2

**Modem**
- 56K V.92 modem

**Bluetooh™**
- Bluetooth 2.1 wireless, LED indicator

**Ethernet**
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Intel AMT**
- Intel Active Management Technology (IATM)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**
- Power-on password, hard disk password, supervisor password, security keyhole
- Power-On Authentication, supports the security chip
- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**
- UEPS Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-year - battery, limited onsite service**3-year limited warranty**
- 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

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See footnotes for important warranty information

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US model announced February 23, 2010
US model withdrawn effective April 2011

(MOC3-6) April 2011
ThinkPad® X201i (3249) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card WWAN</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
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<tbody>
<tr>
<td>3249-J2U</td>
<td>i3-330M</td>
<td>2.13</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>None</td>
<td>250G</td>
<td>5400 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>Pro 32</td>
<td>Mar 10</td>
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<td>3249-8DU</td>
<td>i3-370M</td>
<td>2.20</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
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<td>160G</td>
<td>7200 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>Pro 64</td>
<td>Apr 10</td>
</tr>
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<td>3249-MDU</td>
<td>i3-370M</td>
<td>2.40</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>None</td>
<td>160G</td>
<td>7200 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>Pro 64</td>
<td>Jul 10</td>
</tr>
<tr>
<td>3249-1HU</td>
<td>i3-390M</td>
<td>2.66</td>
<td>2GB</td>
<td>12.1&quot; WXGA</td>
<td>None</td>
<td>160G</td>
<td>7200 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>Pro 64</td>
<td>Jan 11</td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning

Processor: An ultra portable for the executive on the move; one spindle drive.

Dual-core Core™ i3 processor i3-330M, i3-370M, or i3-390M with dual-core, DMI (Direct Media Interface), integrated, standard memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache

Memory

- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
- Non-italics: standard memory in 1 socket; 1 socket available

SATA DVD±RW Ultrabay Slim SATA disk

- Option for ThinkPad X200 UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB® (7200 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

Widescreen display

- 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 250:1 contrast ratio

Keyboard

- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass UltraNav®, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch illuminates the keyboard to improve visibility in low-light conditions

Dimensions

- without UltraBase: 4/6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm
- Without Ultrabay Slim: 5-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm

Battery - type: Lithium Ion 6-cell
- 4-cell: up to 3.4 hr
- 6-cell: up to 6.7 hr
- 9-cell: up to 11.3 hr

Chipset

- Mobile Intel QM57 Express Chipset

Media slice

- Option: ThinkPad X200 UltraBase media slice (see right side)

Multicard/SD ExpressCard/54

- One slot (ExpressCard/34, ExpressCard/54)

Ports

- Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

PCle Mini Card

- Intel 1000 WWAN upg

Modern

- 56K V.92 modem

Ethernet

- Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT

- None

Audio support

- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security

- Power-on password, hard disk password, supervisor password, security keyhole

Security chip

- Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

- None

Limited warranty

- 1-year - depot repair service / service upgrades available

See footnotes for important warranty information

© Lenovo (MOC3i-1) August 2011

US models announced February 23, April 20, or July 6, 2010, or January 11, 2011

US models withdrawn effective July or August 2011

Preloaded operating system

- Some: Genuine Windows 7 Professional 32
- Some: Genuine Windows 7 Professional 64

Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Windows Live Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
### ThinkPad X201s (5143) - TopSeller (Windows 7) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base (GHz)</th>
<th>Max turbo (GHz)</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad X200 UltraBase</th>
<th>PCIe Mini Card</th>
<th>PCIe Card WWAN</th>
<th>Battery cells</th>
<th>Intel vPro</th>
<th>Preload</th>
<th>Availability</th>
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</thead>
<tbody>
<tr>
<td>5143-28U</td>
<td>i7-640LM</td>
<td>2.13</td>
<td>2.93</td>
<td>4GB</td>
<td>12.1&quot; WXGA+</td>
<td>320G</td>
<td>7200 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>None</td>
<td>Yes</td>
<td>6</td>
<td>vPro</td>
<td>Pro 32</td>
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<tr>
<td>5143-4KU</td>
<td>i5-520UM</td>
<td>1.06</td>
<td>1.86</td>
<td>4GB</td>
<td>12.1&quot; WXGA+</td>
<td>320G</td>
<td>7200 rpm</td>
<td>Optional</td>
<td>Optional</td>
<td>None</td>
<td>Yes</td>
<td>6</td>
<td>vPro</td>
<td>Pro 32</td>
</tr>
</tbody>
</table>

- Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover.
- These small and medium business (SMB) models are part of the US TopSeller™ Program.
- These models have a depot repair service 3-year limited warranty.
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR).

#### Positioning

**Processor**

An ultraportable for the executive on the move; one spindle

**Intel** Core™ i5 processor 5-520UM with dual-core.

DVI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache or

**Intel Core i7 processor (4-740LM with dual-core).**

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

**Memory**

4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Th芗nkPad® standard memory in both docks; no sockets available

**SATA DVD±RW Ultrabay Slim**

Option for ThinkPad X200 UltraBase

SATA devices in optional or standard X200 UltraBase (4.38781G)

32GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second hard drive in opt or std X200 UltraBase

**Widescreen display**

12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Camera**

None

**Integrated graphics**

Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP) @60Hz; 2048x1536 (VGA) @75Hz

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

TrackPoint™ pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**ThinkLight™**

UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

**Dimensions**

without UltraBase: 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 20.7-28.7mm

without UltraBase: 6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm

without UltraBase: 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 234mm x 20.7-35.3mm

**Weight**

4-cell: from 2.51 lb (1.1kg); 6-cell: from 2.79 lb (1.23kg); 9-cell: from 3.13 lb (1.39kg)

**Case color**

black

**Case material**

Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

**Battery - type**

Lithium Ion 6-cell

**Battery - life**

4-cell: up to 7.4 hr; 6-cell: up to 12.3 hr

**Chipset**

Mobile Intel GM57 Express Chipset

**Media slice**

Option: ThinkPad X200 UltraBase media slice (see right side)

**Multicard Reader ExpressCard/54**

5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

One slot (ExpressCard/34, ExpressCard/54)

**Ports**

Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**PCIe Mini Card**

Intel 6200™ WWAN upg

**Modern**

56K V.92 modem

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82577LM Gigabit Network Connection (Hanksieville), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (iAMT)

**Audio support**

High Definition (HD) Audio, Conexant 20585 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator

**Limited warranty**

3-years/1-yr battery - depot repair service / service upgrades available

---

See footnotes for important warranty information

US models announced February 23, 2010 or May 25, 2010

US models withdrawn effective July 2010

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(PEC3-2) July 2010
## ThinkPad X201s (5397) - Windows 7 - withdrawn

**Personal Systems Reference (PSREF)**

### Type-model | Processor | Base (GHz) | Max turbo (GHz) | Memory | Widescreen display | Disk | Optical in UltraBase | UltraBase | PCle Mini Card | PCle Card Blue | Battery | Workhorse | Global (G) | Avail date |
<table>
<thead>
<tr>
<th></th>
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<td>i7-640LM</td>
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<td>3.40</td>
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<td>5400</td>
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<td>i5-520UM</td>
<td>1.66</td>
<td>2.00</td>
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<td>i5-520UM</td>
<td>1.66</td>
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<td></td>
<td>Intel 6200</td>
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</table>

- **Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

### Positioning

**Processor**

Intel® Core™ i5 processor i5-520UM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 9MB cache or Intel Core i7 processor 840LM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

**Memory**

2GB, 3GB, or 4GB std / 8GB max7 / PC3-8500 1066MHz, or dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available; **Non-italics:** standard memory in 1 socket; 1 socket available

**SATA DVD:RW UltraBase Ultrabay Slim SATA disk**

Some: DVD burner (43N3214), SATA 1.5Gb/s, removable from X200 UltraBase Supports UltraBay Slim devices in optional or standard X200 UltraBase (43R8781)

### Widescreen display

**Camera**

Integrated graphics Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; Maximum external resolution: 2560x1600 (DP) @60Hz; 2048x1536 (VGA) @75Hz

**Keyboard**

Full-size, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Touchpad**

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch thinkpad; maximum external resolution: 2560x1600 (DP) @60Hz; 2048x1536 (VGA) @75Hz

**Display**

12.1" (308mm) WXGA+ (1440x900) color, anti-glare, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

**Network adapter**

ThinkPad X201 UltraBase Supports ThinkVantage® technologies

**Other Features**

- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional UltraBay Slim accessories in right side:
  - DVD Burner UltraBay Slim Supports UltraBay Slim devices in optional or standard X200 UltraBase (43R8781)
  - SATA 1.5Gb/s
  - Serial ATA Hard Drive
  - Bay Adapter III 43N3214
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3910
    - 320GB FDE 7200 rpm 43N3911
  - Other features:
    - Power button (front)
    - Stereo speakers (2 watt)
    - Security key lock, keyboard, and optional security screw
    - Analog DB-15 monitor port
    - DisplayPort (supports single-link DVI-D via cable 43J7915)
    - Four USB 2.0 ports
    - Gigabit ethernet port
    - Microphone in and headphone output
    - Second battery charger
    - Requires 65 or 90 watt AC adapter
    - 1.6 lb; 730g

**Chipset**

Mobile Intel QM57 Express Chipset

**Media slice**

Some: ThinkPad X200 UltraBase media slice

**Multicard Reader**

5-in-1 reader (MMC, Memory Stick Mem, Stick Pro SD, SDHC)

**ExpressCard/S4 Ports**

One slot (ExpressCard/34, ExpressCard/54)

**PCle Mini Card**

Two PCI Express Mini Card slots

**Modem**

56K V.92 modem

**Bluetooth™**

Bluetooth 2.1 wireless, LED indicator

**Ethernet**

Intel 82577LM Gigabit Network Connection (Hansville), PHY, PCIe x1

**Intel AMT**

Intel Active Management Technology (iAMT)

**Audio support**

High Definition (HD) Audio, Conexant 20585 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone jack / headphone jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

Trusted Platform Module, TG1-1.2-compliant

**Fingerprint reader**

Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the battery chip

**Limited warranty**

3-years / 1-yr battery - depot repair service / service upgrades22 available

---

See footnotes for important warranty information

US models announced February 23, 2010 or May 25, 2010

US models withdrawn effective July 2010
ThinkPad® X201s (5413) - Onsite (Windows 7) - withdrawn

See footnotes for important warranty information

US models announced February 23, 2010 or May 25, 2010
US models withdrawn effective July 2010

Personal Systems Reference (PSREF)

### Preloaded operating system
- Some: Genuine Windows 7
- Some: Genuine Windows 7
- Professional 64

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- ThinkVantage Fingerprint Manager
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- ThinkVantage Toolbox
- Microsoft Office 2010 preloaded; purchase product key to activate

### ThinkPad X201 UltraBase™
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD Burner Ultrabay Slim SATA 1.5Gb/s 43N3214
  - Serial ATA Hard Drive
  - Bay Adapter III 43N3410
  - 320GB Disk 7200 rpm 43N3411

### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7015)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

### 65-watt AC Adapter
- PEPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service17 24 hour x 7 day 18 toll-free support during the warranty period19 via 800-426-7378

### Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover

### These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

### These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Max turbo</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>Optical</th>
<th>ThinkPad Max</th>
<th>PCIe Multi Card</th>
<th>PCIe WWAN</th>
<th>Battery</th>
<th>Whose (W)</th>
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</tbody>
</table>

### Compared to the X201, the X201s has lighter weight, low voltage processors, and roll cage in display cover

### These models are part of the Global Models Plus program with limited onsite service® 3-year limited warranty

### These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning Processor
An ultraportable for the execute on the move; one spindle

Intel® Core™ i5 processor i5-520UM with dual-core

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache or Intel Core i7 processor i7-640LM with dual-core

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

### Memory
2GB, 3GB, or 4GB std / 8GB max7 / PC3-8500 1066MHz, Intel Turbo Boost, Hyper-Threading technology; 3MB cache or Intel Core i7 processor i7-640LM with dual-core

DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

### SATA DVD:RW UltraB

SATA Ultrabay Slim

SATA disk

Some: DVD burner (43N3214), 1.5Gb/s, removable from X200 UltraBase

Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)

250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System, SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System

### Widescreen display

12.1" (308mm) WXGA+ (1440x900) color, anti-glace, LED backlight, 250 nits, 16:10 aspect ratio, 300:1 contrast ratio

### Integrated graphics

Integrated graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display;

### Keyboard

Keyboard: Full-size, B9-key, ThinkVantage button, spill-resistant, multimedia Fn keys

TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass

### Dimensions

Dimensions: Without UltraBase; 4-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 20.7-28.7mm

Without UltraBase: 6-cell: 11.6" x 8.3" x 0.8-1.1"; 295mm x 210mm x 20.7-28.7mm

Without UltraBase: 9-cell: 11.6" x 9.2" x 0.8-1.1"; 295mm x 213mm x 20.7-33.5mm

Weight: 4-cell: from 2.51 lb (1.1kg), 6-cell: from 2.79 lb (1.32kg), 9-cell: from 3.13 lb (1.43kg)

### Battery - type

Battery - type: Lithium Ion

### Battery - life

Battery - life: 4-cell: up to 7.6 hr, 6-cell: up to 7.6 hr, 9-cell: up to 12.3 hr

### Chipset

Chipset: Mobile Intel GM5 Express Chipset

Media slice

Media slice: Some: ThinkPad X200 UltraBase media slice (see right side)

Multicard Reader

Multicard Reader: 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

ExpressCard/54

ExpressCard/54: One slot (ExpressCard/34, ExpressCard/54)

Ports

Ports: Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

PCIe Mini Card

PCIe Mini Card: Two PCI Express Mini Card slots

WWAN upg

WWAN upg: None

Modem

Modem: 56K V.92 modem

Bluetooth™

Bluetooth™: Bluetooth 2.1 wireless, LED indicator

Ethernet

Ethernet: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

Intel AMT

Intel AMT: Intel Active Management Technology (iAMT)

Audio support

Audio support: High Definition (HD) Audio, Conexant 20585 codec / mono speaker, 1 watt / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack

Security

Security: Power-on password, hard disk password, administrator password, security keyhole

Security chip

Security chip: Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader

Fingerprint reader: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty®

Limited warranty®: 3-years/1-year - battery, limited onsite service®; 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available

See footnotes for important warranty information
### ThinkPad X201, X201s Accessories - withdrawn

#### Memory
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM: Lenovo 55Y3706, ann 06/23/09
- 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack): Lenovo 57Y4385, ann 06/23/09
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM: Lenovo 55Y3707, ann 06/23/09
- 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack): Lenovo 57Y4386, ann 06/23/09
- 4GB PC3-8500 DDR3 Low-Halogen SODIMM: Lenovo 55Y3708, ann 06/23/09

#### UltraBay Slim 9.5mm
Most UltraBay Slim accessories supported in ThinkPad X200 UltraBase
- Serial ATA Hard Drive Bay Adapter III: Lenovo 43N3412, ann 06/23/09
- DVD-ROM UltraBay Slim Drive II SATA 1.5Gb/s: Lenovo 43N3292, ann 08/03/10
- DVD Burner UltraBay Slim Drive II SATA 1.5Gb/s: Lenovo 43N3229, ann 06/23/09

#### Storage and removable storage
- 500GB Disk SATA 3.0Gb/s (7200 rpm): Lenovo 43N3423, ann 01/07/10
- 256GB FDE SSD SATA 3Gb/s: Lenovo 43N3417, ann 06/23/09
- USB 2.0 Portable 320GB Hard Disk: Lenovo 45K1689, ann 06/23/09
- USB 3.0 Secure 500GB Hard Disk: Lenovo 57Y4400, ann 01/07/10
- Lenovo Slim USB Portable DVD Burner: Lenovo 0A3988, ann 06/14/11

#### Wireless WAN (Mini PCI Express)
- Only X201 WHAN upgradeable models: ThinkPad Gobi™ 2000 Broadband Option: Lenovo 78Y1399, ann 01/07/10
- ThinkPad AT&T® Gobi 2000 Broadband Option: Lenovo 78Y1398, ann 01/07/10

#### ThinkPad Expansion
- Lenovo® Essential Notebook Stand: Lenovo 45J9292, ann 05/12/09
- USB 2.0 Port Replicator with Digital Video: Lenovo 0A33942, ann 03/22/11

#### Keyboard
- TrackPoint Cap Collection: Lenovo 73P2698, ann 12/16/03
- USB Numeric Keypad: Lenovo 33L3225, ann 05/01/07
- Preferred Pro USB Keyboard: Lenovo 73P2520, ann 06/21/05
- Enhanced Performance USB Keyboard: Lenovo 73P2620, ann 03/23/04
- Ultrasmart Wireless Keyboard and Mouse: Lenovo 57Y4700, ann 09/15/09
- Wireless via 2.4GHz technology using a micro-size USB receiver.
- ThinkPad USB Keyboard with TrackPoint: Lenovo 55Y9003, ann 08/18/09
- Lenovo® USB Fingerprint Keyboard: Lenovo 73P4730, ann 02/22/05
- Lenovo USB Smartcard Keyboard: Lenovo 51J0155, ann 03/24/09

#### Mouse
- Lenovo Optical Mouse (USB): Lenovo 06P4069, ann 05/21/03
- Lenovo Laser Mouse (USB): Lenovo 41U3074, ann 01/23/07
- ThinkPad USB Laser Mouse: Lenovo 57Y4635, ann 12/15/09
- Lenovo ScrollPoint® Mouse (USB, Optical): Lenovo 31P7405, ann 08/27/02
- ThinkPad Travel Mouse (USB, Optical): Lenovo 31P7410, ann 06/04/02
- ThinkPad Bluetooth Laser Mouse: Lenovo 41U5008, ann 01/22/08

#### Security
- Kensington® MicroSaver® Cable Lock: Lenovo 73P2582, ann 12/29/03
- Kensington Twin Head Cable Lock: Lenovo 45K1620, ann 09/30/08
- Lenovo Security Cable Lock: Lenovo 57Y4303, ann 08/24/10
- ExpressCard Gemplus GemPC Smart Card Reader: Lenovo 41N3040, ann 02/21/06
- ExpressCard Gemplus Smart Card Reader: Lenovo 41N3043, ann 06/27/06

#### Multimedia
- ThinkPad In-Ear Headphones with mic: Lenovo 57Y4488, ann 01/07/10

#### Batteries
- ThinkPad Battery 47 (4-cell): Lenovo 43R9253, ann 08/05/08
- ThinkPad Battery 47+ (6-cell): Lenovo 43R9254, ann 08/05/08
- ThinkPad Battery 47++ (9-cell): Lenovo 43R9255, ann 08/05/08
- ThinkPad External Battery Charger: Lenovo 40Y7625, ann 09/20/05

- Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III.
- 90W UltraSlim AC/DC Combo Adapter: Lenovo 41R4493, ann 09/22/09

#### More information at www.lenovo.com/aldidaycomputing

- ThinkPad 65W AC Adapter: Lenovo 40Y7696, ann 01/05/06
- ThinkPad 90W AC Adapter: Lenovo 40Y7659, ann 09/20/05
- ThinkPad 65W AC Adapter with USB Hub: Lenovo 57Y4600, ann 09/07/10
- More info at www.lenovo.com/support/poweradapters

#### Charging tips for 90W UltraSlim AC/DC Combo Adapter: Lenovo 41R4493
- iPod and iPhone Charge Tip (L10a): Lenovo 41R4481, ann 12/18/07
- Generic Micro USB charge tip (L18): Lenovo 41R4490, ann 01/06/09

#### More information at www.lenovoaccessories.com

#### Carrying Cases

- ThinkPad 12W Case Sleeve: Lenovo 51J0476, ann 08/18/09
- ThinkPad Ultraportable Case: Lenovo 41U5062, ann 05/13/08
- ThinkPad Executive Leather Case: Lenovo 43R2480, ann 05/13/08

#### More information at www.lenovo.com/support/cases

#### Lenovo luxury cases at www.lenovoluxurycases.com

#### Monitors

- ThinkVision L1711p 17" Monitor: Lenovo 5047HB2, ann 10/20/09
- ThinkVision L1900p 19" Monitor: Lenovo 43R1635, ann 11/11/08
- ThinkVision L1951p Wide 19" Monitor: Lenovo 2578HB6, ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor: Lenovo 2572HB6, ann 10/20/09
- ThinkVision L2251p Wide 22" Monitor: Lenovo 2578HB6, ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor: Lenovo 4014HB6, ann 06/10/10
- ThinkVision L2440p Wide 24" Monitor: Lenovo 4420HB2, ann 09/17/08

#### More information at www.lenovo.com/support/monitors

#### Monitor Accessories

- ThinkVision L2251p Wide 22" Monitor: Lenovo 2578HB6, ann 10/20/09
- ThinkVision L2250p Wide 22" Monitor: Lenovo 2572HB6, ann 10/20/09
- ThinkVision L2321x Wide 23" Monitor: Lenovo 4014HB6, ann 06/10/10
- ThinkVision L2440p Wide 24" Monitor: Lenovo 4420HB2, ann 09/17/08

#### More information at www.lenovo.com/support/monitoraccessories

#### For more information on accessories: www.lenovo.com/accessories

#### Lenovo Software

- Purchase Lenovo accessories
- www.lenovo.com/support/accessories
- Product specifications on Lenovo Support
- www.lenovo.com/accessoriesguide
- Option Compatibility Matrix (OCM) and accessory brochures
- www.lenovoquickpick.com
- An Options Compatibility Configurator for Lenovo systems

© Lenovo

(O-X201) August 2011
### ThinkPad X201 Tablet (2985) - TopS (XP with Win 7 License) - withdrawn

**Personal Systems Reference (PSREF)**

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<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Base GHz</th>
<th>Max Turbo (GHz)</th>
<th>Memory</th>
<th>WideScreen Display</th>
<th>Camera</th>
<th>Disk Drive</th>
<th>ThinkPad X200 UltraBase</th>
<th>PClé Mini Card</th>
<th>Battery cells</th>
<th>Intel® Turbo Boost Technology™</th>
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<td>5400</td>
<td>WWAN upg</td>
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*These small and medium business (SMB) models are part of the US TopSeller™ Program*

**Positioning Processor**

- Convertible tablet ultraportable; one spindle
  - Intel® Core™ i7 processor i7-640LM with dual-core.
  - DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

**Memory**

- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
  - Standard memory in both sockets; no sockets available;
  - Non-Italics: standard memory in 1 socket; 1 socket available

**SATA DVD±RW Ultrabay Slim**

- SATA DVD burner, SATA 1.5Gbs, removable from X200 UltraBase
  - Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
  - 250GB@6400 rpm or 320GB@7200 rpm / SATA 3.0Gbs/12, 2.5” wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

**Widescreen Display**

- Entry: 12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless WideView (170° viewing), anti-reflective and anti-glare protective coatings, **write on screen with standard digitizer pen**, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Camera**

- Some: camera on top of screen, 2.0-megapixel, fixed focus

**Integrated Graphics**

- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
  - Supports dual independent display, **Maximum external resolution**: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

**Keyboard**

- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys

**TrackPoint® and ThinkPad® Touchpad**

- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

**Dimensions**

- [Some:](#) without UltraBase: 4-cell: 11.6” x 9” x 1.3-3.9” / 295mm x 228mm x 26-35.3mm
  - without UltraBase: 8-cell: 11.6” x 10.1” x 1.3-3.9” / 295mm x 257mm x 26-35.3mm

**Weight**

- 4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

**Case**

- Color: black; Material: magnesium alloy

**Battery - type**

- Lithium Ion 4-cell or 8-cell

**Battery - life**

- 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

**Chips**

- Mobile Intel QM57 Express Chipset

**Media slice**

- [Some:](#) ThinkPad X200 UltraBase media slice (see right side)

**Multicard Reader**

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
  - One slot (ExpressCard/34, ExpressCard/54)

**Ports**

- Three USB 2.0, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**PClé Mini Card**

- Intel 6200Wwan upg Gobi™ 2000
  - Two PCI Express Mini Card slots
  - Some: Wireless WAN upgradable
  - Some: Wireless, Qualcomm chipset, PCié Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider

**Carrier**

- Some: AT&T/3G, contract required with service provider

**Modem**

- 56K V.92 modem

**Bluetooth**

- Bluetooth 2.1 wireless, LED indicator

**Intel AMT**

- Intel Active Management Technology (I AMT)

**Audio support**

- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

**Security Chip**

- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

- UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**

- 3-years / 1-yr battery & digitizer pen - depot repair service / service upgrades available

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**Preloaded operating system**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

**Preloaded applications**

- (only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Power Manager
  - Presentation Director
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - FingerPrint Software
  - Lenovo System Toolbox

**Supports ThinkVantage™ technologies**

- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
  - Serial ATA Hard Drive
  - Bay Adapter III 43N3412
  - Disks supported (some): 250GB FDE 7200 rpm 43N3410
  - 320GB Disk 7200 rpm 43N3411

**Other features**

- Power button (front)
- Speaker stereo (2 watts)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45S7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Resides 65 or 90 watt AC adapter
- 1.6 lb, 730g

65-watt AC Adapter EPEAT Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service™ 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information

US models announced March 2, 2010

US models withdrawn effective October 2010

© Lenovo (CML3-7) October 2010
ThinkPad® X201 Tablet (2985) - TopSeller (Windows 7) - withdrawn

### Positioning
- Processor: Convertible tablet ultraportable; one spindle
- Memory: Dual-core Intel® Core™ i7 processor i7-640LM with dual-core
- Keyboard: DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

### Display
- Widescreen display: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, 2.13 GHz, 2.93 GHz
- Camera: Camera on top of screen, 2.0-megapixel, fixed focus

### Operating System
- Preloaded operating system:
  - Some: Genuine Windows® 7 Professional 32
  - Some: Genuine Windows® 7 Professional 64

### Applications
- Preloaded applications:
  - Rescue and Recovery™
  - Access Connections™
  - Password Manager
  - ThinkVantage Power Manager
  - ThinkVantage System Update
  - ThinkVantage Software
  - ThinkVantage Toolbox
  - Lenovo SimpleTap (Multi-Touch models)
  - Adobe® Reader®
  - Microsoft Office 2010 preloaded;
  - purchase product key to activate
  - Corel® WinDVD® (DvD:RW)
  - Corel BrightNow™ Lenovo Edition (Dvd:RW)

### Security
- Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional UltraBay Slim accessories

### Dimensions
- 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33.3mm
- 12.1" WXGA: 1280x800 (308mm)
- 2.0 320G 7200 rpm

### Other Features
- Power button (front)
- Speaker system (2 watts)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- Dual-link DVI-D via cable 45J7915)
- DVI-D via cable 45J7915)
- Supports dual independent display;
- Intel HD Graphics
- MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)

### Media slice
- Media slice: ThinkPad X200 UltraBase media slice (see right side)

### Battery
- Lithium Ion 4-cell or 8-cell
- 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

### Chipset
- Mobile Intel® GM58 Express Chipset

### License
- Limited warranty:
  - 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades available

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**Notes:**

- See footnotes for important warranty information
- US models announced February 23 or March 2, 2010
- US models withdrawn effective January 2011 or June 2011

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(CML3-1) June 2011
ThinkPad X201 Tablet (2985) - TopSeller (Win 7) - April 2010 - withdrawn

Positioning
Processor
Convertible tablet unportable: one spindle
Intel® Core™ i7 processor i7-620LM with dual-core.
DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
Intel Turbo Boost, Hyper-Threading technology; 4MB cache

Memory
2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
dual-channel capable, two 204-pin SO-DIMM sockets;
Non-Italics: standard memory in 1 socket; 1 socket available

SATA DVD:\RW Ultrabay Slim
SATA disk
Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase
Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
160GB (7200 rpm) or 320GB (7200 rpm) /
SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard
Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

Widescreen display
Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight,
200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless
Outdoor: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight,
460 nits, 16:10 aspect ratio, 1000:1 contrast ratio, 1.2% reflectivity, multiple
anti-reflectivity layers, PVA or IPS
MultiTouch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight,
300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)
All: WideView (170° viewing), anti-reflective and anti-glare protective coatings,
write on screen with standard digitizer pen, pen holder in side base (right),
rotatable dual swivel hinge for tablet mode (portrait or landscape) or
picture frame mode (keyboard faces away from user), buttons on display bottom
(power with slide-lock, reset, rotation, menu, all button lock)

Camera
Camera on top of screen, 2.0-megapixel, fixed focus

Integrated graphics
Intel HD Graphics in processor,
external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
supports dual independent display;
Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz

Keyboard
Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
TrackPoint®
TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®,
magnifying glass
Touchpad
ThinkLight™
None

Dimensions³
without UltraBase: 4-cell: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm
without UltraBase: 8-cell: 11.6" x 10.1" x 1.1-1.3"; 299mm x 257mm x 26.5-33.3mm
Weight³
4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)
Case
Color: black; Material: magnesium alloy
Battery - type
Lithium Ion 8-cell
Battery - life³
4-cell: up to 3.5 hr, 8-cell: up to 7.9 hr
Chipset
Mobile Intel QM57 Express Chipset

Media slice
Some: ThinkPad X200 UltraBase media slice (see right side)
Multicard Reader
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
ExpressCard/54
One slot (ExpressCard/34, ExpressCard/54)
Ports
Three USB 2.0 (one powered), external monitor (VGA DB-15),
modem (RU-11), ethernet (RU-45)

Pcie Mini Card
Two PCI Express Mini Card slots
Intel 6200™ WWAN upg
Gobi™ 2000

Carrier
Some: Verizon®, contract required with service provider
Modem
56K V.92 modem

Bluetooth™
Bluetooth 2.1 wireless, LED indicator
Ethernet
Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Audio support
High Definition (HD) Audio, Conexant 20585 codec / speaker experiences, 1 watt x 2 /
volume up, down, mute buttons / dual array mic, mic input jack, headphone jack
Power-on password, hard disk password, supervisor password, security keyhole
Security chip
Trusted Platform Module, TCG 1.2-compliant
Fingerprint reader
UEP Fingerprint reader (right base of display), used in tablet/notebook mode,
2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty²
3-years/1-yr battery & digitizer pen - depot repair service / service upgrades² available

See footnotes for important warranty information
US models announced April 20, 2010
US models withdrawn effective January or June 2011

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(CML3-8) June 2011

Preloaded operating system²
- Genuine Windows® 7 Professional 64

Preloaded applications¹ (only some listed)
- Rescue and Recovery™
- Windows Live™ Mail
- Norton Internet Security 2011
- Adobe® Reader®
- Adobe Flash® Player
- Skype™ for Windows
- Windows Live™ Toolbar
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch

Supports ThinkVantage™ technologies
ThinkPad X200 UltraBase™
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5Gb/s
  - Gigabit ethernet port
  - Serial ATA Hard Drive
  - Bay Adapter II
  - Disks supported (some):
    - 500GB Disk 7200 rpm 43N3423

Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁷ toll-free support during the warranty period¹⁵
via 800-426-7378

See footnotes for important warranty information
US models announced April 20, 2010
US models withdrawn effective January or June 2011

These small and medium business (SMB) models are part of the US TopSeller™ Program
These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)
### ThinkPad X200 Tablet (3093) - Windows 7 - withdrawn

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<th>Widescreen display</th>
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<th>Disk UltraBase</th>
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<td>vPro Pro 32</td>
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<tr>
<td>3093-RUE</td>
<td>i7-640LM</td>
<td>2.13 2.93 4GB</td>
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<td>2.0M 320G 7200</td>
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<td>vPro Pro 32</td>
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<td>12.1&quot; WXGA Entry</td>
<td>2.0M 320G 7200</td>
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<td>2.0M 256G 7200</td>
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<tr>
<td>3093-96U</td>
<td>i7-680LM</td>
<td>2.13 2.93 4GB</td>
<td>12.1&quot; WXGA Multi</td>
<td>2.0M 256G 7200</td>
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</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (010PKR)

### Positioning

**Processor**

Convertible tablet ultraportable; one spindle

**Memory**

2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; *Italics:* standard memory in both sockets; no sockets available; *Non-italics:* standard memory in 1 socket; 1 socket available

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<td>- UltraBay Slim</td>
<td>- 1GB DVD burner, SATA 1.5GB/s, removable from X200 UltraBase</td>
<td>Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)</td>
<td>160GB (5400 rpm), 250GB (5400 rpm), or 320GB (7200 rpm)</td>
</tr>
<tr>
<td>- 2GB DVD burner</td>
<td>- SATA 0.6GB/s, 2.5&quot; wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase</td>
<td>- SATA 0.6GB/s, 2.5&quot; wide, 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase</td>
<td></td>
</tr>
</tbody>
</table>

**Widescreen display**

- **Entry:** 12.1" (480mm) WXGA (1280x800) TFT color, anti-glare, LED backlight. 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless
- **Outdoor:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight. 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiplicity anti-reflectivity layers, PVA or IPS
- **Multi-Touch:** 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight. 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)
  - All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)
  - **Some:** camera on top of screen, 2.0-megapixel, fixed focus

**Camera**

Integrated graphics

- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display
- *Max. extended maximum performance:* 2560x1600 (DP@60Hz), 2048x1536(VGA)@75Hz

**Keyboard**

- Full-size, black, ThinkVantage button, spill-resistant, mm Fn keys

**Touchpad**

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- ThinkNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch

**Dimensions**

- **Without UltraBase:** 4-cell: 11.6" x 9" x 1-1.3", 295mm x 228mm x 26.5-33.3mm
- **Without UltraBase:** 8-cell: 11.6" x 10.1" x 1-1.3", 295mm x 257mm x 26.5-33.3mm

**Weight**

- **4-cell:** from 3.57 lb (1.62kg), 3-cell: from 3.36 lb (1.5kg)

**Battery**

- **Type:** Lithium Ion
- **5.2V, 4-cell:** up to 3.5 hr, 8-cell: up to 7.9 hr

**Chipsset**

Mobile Intel® GM57 Express Chipset

**Media slice**

- Sona: ThinkPad X200 UltraBase media slice (see right side)

**Multicard Reader**

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

**ExpressCard/54**

- One slot (ExpressCard/34, ExpressCard/54)

**Ports**

- Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

**PCle Mini Card**

- Two PCI Express Mini Card slots: Wireless WAN upgradable

**Modem**

- 56K V.92 modem

**Bluetooth™**

- **Some:** Bluetooth 2.1 wireless, LED indicator

**Ethernet**

- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

**Power details**

- Power-on password, hard disk password, supervisor password, security keyhole

**Security chip**

- Trusted Platform Module, TCG 1.2-compliant

**Fingerprint reader**

- Some: UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

- 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades available

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See footnotes for important warranty information

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US models withdrawn effective March 2010, January 2011, or June 2011
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**Positioning Processor**
Convertible tablet upgradable: one spindle

**Memory**
2GB, 4GB, or 4GB std / BGB max7 / PC3-8500 1066MHz DDR3, non-partly, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD RW Ultrabay Slim**
Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase
Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
Some: 128GB 8 Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high
Some: 160GB (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™
All: removable, upgradable, Shock Mounted Hard Drive, supports second disk in opt or std X200 UltraBase

**Display**
Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless
Outdoor: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 1,200:1 contrast ratio, multi-touch anti-reflectivity layer, PVA or IPS
Multi-Touch: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced Multi-Touch (touch)
All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

**Integrated graphics**
Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display

**Keyboard**
Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
Touchpad
ThinkLight™
Pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**Dimensions**
without UltraBase: 4-cell: 11.6" x 9" x 1.3"; 295mm x 228mm x 26.5-33.3mm
without UltraBase: 8-cell: 11.6" x 10.1" x 1.3"; 295mm x 257mm x 26.5-33.3mm

**Weight**
4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

**Battery**
-type: 4-cell: 11.6" x 9" x 1.3"; 295mm x 228mm x 26.5-33.3mm
- life: up to 3.5 hr; 8-cell: up to 7.9 hr

**Chipset**
Mobile Intel GM75 Express Chipset

**Media slice**
Some: ThinkPad X200 UltraBase media slice (see right side)
5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
One slot (ExpressCard/34, ExpressCard/54)

**Ports**
Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), ethernet (RU-45)

**PcLe Mini Card**
Intel 6200a/6200w WWAN upg
gobi (TM) 2000

**Audio support**
High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / headphone jack

**Security**
Power-on password, hard disk password, supervisor password, security keyhole

**Fingerprint reader**
Trusted Platform Module, TCG 1.2-compliant

**Limited warranty**
3-years/1-yr battery & digitizer pen - depot repair service / service upgrades22 available

---

**Other features:**
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g

---

**Preloaded operating system**: - Some: Genuine Windows 7 Professional 32 - Some: Genuine Windows 7 Professional 64

### Specifications

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</table>

#### Positioning
- Convertible tablet upgradable: one spindle
- Intel® Core™ i5 processor i5-520UM with dual-core.
-DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache

#### Memory
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets.
- Standard memory in 1 socket; 1 socket available

#### SATA Disk
- Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 160GB (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm)
- SATA 3.0Gb/s, 2.5mm high, removable, upgradeable, shock mounted hard drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

#### Display
- Entry: 12.1" (308mm WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, PVA or IPS, frameless
- Outdoor: 12.1" (308mm WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, PVA or IPS, frameless
- MultiTouch: 12.1" (308mm WXGA (1280x800) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch)
- All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)

#### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

#### Integrated Graphics
- Intel® HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase, supports dual independent display

#### Keyboard
- Full-size, 99-key, ThinkVantage button, spill-resistant, mem fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass, Touchpad
- Touchpad

#### Dimensions
- without UltraBase: 4-cell: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase
- with UltraBase: 8-cell: 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 9.5mm high, removable, upgradeable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

#### Weight
- 3.0M: 320G 7200 rpm

#### Battery - type
- Lithium Ion 4-cell or 8-cell
- 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

#### Chipset
- Mobile Intel QM5 Express Chipset

#### Media slice
- Some: ThinkPad X200 UltraBase media slice (see right side)

#### Multicard Reader ExpressCard/54
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

#### Ports
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered, external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)

#### PClé Mini Card
- Two PCI Express Mini Card slots
- 11a/b/g/n wireless, PClé Mini Card, Intel Centrino® Advanced-N 6200, 2x2
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PClé Mini Card, EV-DO Rev. A, 802.11a/b/g/n, MHP, SHP, HSPA, GPS, contract required with service provider
- Some: Verizon®, contract required with service provider
- Some: 56K V.92 modem
- Some: Bluetooth 2.1 wireless, LED indicator
- Some: Bluetooth 2.1 wireless, LED indicator
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

#### Audio support
- Intel Active Management Technology (IATM)
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

#### Security
- Power-on password, hard disk password, supervisor password, security keyhole, volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

#### Security Chip
- Trusted Platform Module, TCG 1.2-compliant

#### FingerPrint reader
- Some: UPEK Fingerprint reader, available, used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

#### Limited warranty
- 3-years/1-yr battery & digitizer pen - depot service repair / service upgrades available
- Preloaded operating system®
  - Some: Genuine Windows® 7 Professional 32
  - Some: Genuine Windows 7 Professional 64
- Preloaded applications® (only some listed)
  - Rescue and Recovery®
  - Access Connections™
  - ThinkVantage Password Manager
  - ThinkVantage ThinkVantage Update
  - FingerPrint Software (fingerprint models)
  - ThinkVantage Toolbox
  - Lenovo SimpleTap (Multi-Touch models)
  - Adobe® Reader®
  - Adobe Flash Player
  - Skype® for Windows
  - Microsoft Office 2010 preloaded; purchase product key to activate
  - Corel® WinDVD® (DVD±RW)
- Supports ThinkVantage® technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II
  - SATA 1.5G/s
  - Serial ATA Hard Drive

#### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 730g
- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378
### ThinkPad X201 Tablet (3093) - Windows 7 (October 2010) - withdrawn

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<th>Type-model</th>
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning Processor
- Convertible tablet ultraportable: one spindle
- Intel® Core™ i5 processor i5-560M with dual-core,
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz),
- Intel Turbo Boost, Hyper-Threading technology; 3MB cache

### Memory
- 2GB or 4GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity,
- dual-channel capable, two 204-pin SO-DIMM sockets:
  - Standard memory in both sockets; no sockets available;
  - Standard memory in one socket; 1 socket available

### SATA DVD:RW Ultrabay Slim SATA disk
- Some: DVD burner, SATA 1.5Gbps, removable from X200 UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gbps, 2.5” wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

### Widescreen display
- Entry: 12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless
- WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right),
  - Rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)
- UltraNav, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
- None

### Camera
- Integrated graphics: Intel HD Graphics in processor,
- External monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase;
- Supports dual independent display;
- Maximum external resolution: 2560x1600 (DP)@60Hz; 2048x1536 (VA)@75Hz

### Keyboard
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
- None

### Weight
- Without UltraBase: 4-cell: 11.6” x 9” x 1-1.3”; 295mm x 228mm x 26.5-33.3mm
- Without UltraBase: 8-cell: 11.6” x 10.1” x 1-1.3”; 295mm x 257mm x 26.5-33.3mm
- 4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

### Battery
- Lithium Ion 8-cell
- 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

### Chipset
- Mobile Intel QM57 Express Chipset

### Media slice
- Some: ThinkPad X200 UltraBase media slice (see right side)

### Multicard Reader ExpressCard/54
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered), external monitor (VGA DB-15),
  - modem (RJ-11), ethernet (RJ-45)

### PCle Mini Card
- Two PCI Express Mini Card slots
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A,
  - GPRS/WCDMA/HSPA, GPS, contract required with service provider
- Some: Verizon®, contract required with service provider
- 56K V.92™ modem

### Bluetooth™
- Bluetooth 2.1 wireless, LED indicator

### Ethernet
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
- Intel Active Management Technology (AMT)

### Audio support
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack
- Power-on password, hard disk password, supervisor password, security keyhole

### Security
- Trusted Platform Module, TCG 1.2-compliant

### Preloaded operating system
- Some: Genuine Windows® 7
- Some: Genuine Windows 7

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Password Manager
- Windows Live™
- ThinkVantage System Update
- FingerPrint Software
- ThinkVantage Toolbox
- Skype™ for Windows
- Microsoft Office 2010 preloaded;
- purchase product key to activate

### Supports ThinkVantage™ technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II
  - SATA 1.5Gbps
  - Serial ATA Hard Drive
  - Bay Adapter III

### Other features:
- Power button (front)
- Stereo speakers (2 watt)
- Security key lock, security keyhole, and optional security screw
- Analog DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet port
- Microphone in and headphone out
- Second battery charger
- Requires 65 or 90 watt AC adapter
- 1.6 lb; 739g

### Limited warranty
- 3-years/1-year battery & digitizer pen - depot repair service / service upgrades available

See footnotes for important warranty information
US models announced September 28
US models withdrawn effective June 2011

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(CML3-11) June 2011
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<td>vPro</td>
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</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Pre.loaded Key Ready (O10PKR)
- Educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning
- Convertible tablet ultraportable; one spindle

### Processor
- Intel® Core™ i7 processor i7-640LM with dual-core
- DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache

### Memory
- 2GB std / 8GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets;
- Non-italics: standard memory in 1 socket; 1 socket available

### SATA DVD±RW
- Option for ThinkPad X200 UltraBase
- Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
- 320GB (7200 rpm) / SATA 3.0Gbps / 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase

### Widescreen display
- Entry: 12.1" *(308mm)* WXGA *(1280x800)* TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, Frameless WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotate/dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display panel (power with slide-lock, reset, rotation, menu, all button lock)

### Camera
- Camera on top of screen, 2.0-megapixel, fixed focus

### Integrated graphics
- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display
- Maximum external resolution: 2560x1600 (DP)@60Hz: 2048x1536(VGA)@75Hz

### Keyboard
- Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass
- UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
- None

### Dimensions
- without UltraBase: 4-cell: 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm
- without UltraBase: 8-cell: 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33.3mm
- 4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

### Weight
- Color: black; Material: magnesium alloy

### Battery - type
- Lithium Ion 8-cell
- 4-cell: up to 3.5 hr; 8-cell: up to 7.9 hr

### Chipset
- Mobile Intel GM57 Express Chipset

### Media slice
- Option: ThinkPad X200 UltraBase media slice (see right side)
- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RU-11), Ethernet (RU-45)

### PCle Mini Card
- Intel 6200™
- Two PCI Express Mini Card slots
- 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2

### WWAN upg
- Wireless WAN upgradable
- 8-cell: from 3.96 lb (1.8kg)

### Modern
- 56K V.92 modem

### Bluetooth™
- Bluetooth 2.1 wireless, LED indicator

### Ethernet
- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

### Intel AMT
- Intel Active Management Technology (AMT)

### Audio support
- High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### Fingerprint reader
- UPEK Fingerprint reader on right base of display, used in tablet or notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- 3-years/1-yr battery & digitizer pen - depot repair service / service upgrades available

### Preloaded operating system
- Genuine Windows® 7 Professional 32

### Preloaded applications (only some listed)
- N2U model: Education software
- Microsoft Office OneNote® 2007 (and CD)
- N3U model: Education software
- Microsoft Office Ultimate 2007 Academic Edition (and CD)
- Education software: Adobe Digital School Collection
- Microsoft Office 2010 preloaded: purchase product key to activate

### Supports ThinkVantage™ technologies
- Provides desktop expansion and cable management for X200 and X201 Series
- Easily connects to the bottom of the X200 or X201 Series for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s: 43N3292
  - Serial ATA Hard Drive Bay Adapter III: 43N3412
  - Disks supported (some):
    - 250GB FDE 7200 rpm 43N3410
    - 320GB Disk 7200 rpm 43N3411
- Other features:
  - Power button (front)
  - Stereo speakers (2 watt)
  - Security key lock, security keyhole, and optional security screw
  - Analog DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet port
  - Microphone in and headphone out
  - Second battery charger
  - Requires 65 or 90 watt AC adapter
  - 1.6 lb; 730g

### ENERGY STAR® Gold rating

### 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

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See footnotes for important warranty information
US models announced February 23, 2010
US models withdrawn effective January 2011

© Lenovo (CML3-5) January 2011
### ThinkPad X201 Tablet (3113) - Onsite (Windows 7) - withdrawn

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<th>Processor</th>
<th>Base Memory</th>
<th>Max Memory</th>
<th>Display</th>
<th>Camera</th>
<th>Disk</th>
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<th>ThinkPad X200 UltraBase</th>
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<td>Yes</td>
<td>4</td>
<td>vPro</td>
<td>Pro 64</td>
<td>Jun 10</td>
</tr>
</tbody>
</table>

**Positioning Processor**
-Convertible tablet ultraportable: one spindle

**Memory**
-2GB or 4GB std / 8GB max¹ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**SATA DVD±RW Ultrabay Slim Drive**
-Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
-USB: X200 UltraBase Media slice
-ThinkVantage Toolbox
-SimpleTap Touch (Multi-Touch models)

**Widescreen display**

<table>
<thead>
<tr>
<th>Entry</th>
<th>Outdoor</th>
<th>All</th>
<th>Camera</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 16:10 aspect ratio, P0 backlighting for wireless, P1 backlighting for display, 1000:1 contrast ratio</td>
<td>12.1” (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, PVA or IPS</td>
<td>WideView (170° viewing), anti-glare and anti-reflective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)</td>
<td></td>
</tr>
</tbody>
</table>

**Preloaded operating system**
-Some: Genuine Windows 7
-Some: Genuine Windows 7
-Professional 32
-Professional 64

**Preloaded applications**
-Rescue and Recoveryµ
-Access Connections™
-Password Manager
-ThinkVantage Task Manager
-ThinkVantage System Update
-Fingerprint Software (fingerprints models)
-ThinkVantage Toolbox
-Lenovo SimpleTap (Multi-Touch models)
-Adobe Readerµ
-Adobe Flashµ Player
-Skype™ for Windows
-Microsoft Office 2010 preloaded; purchase product key to activate
-Microsoft Research AutoCollage Touch

**Supports ThinkVantage™ technologies**

-Provides desktop expansion and cable management for X200 and X201 Series
-Easily connects to the bottom of the X200 or X201 Series for traveling
-Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
-USB: X200 UltraBase Media slice
-Serial ATA Hard Drive
-Bay Adapter III

**Other features**
-65-watt AC Adapter
-ENERGY STAR® 5.0-compliant
-ROHS-compliant
-International Warranty Service¹⁷
-24 hour x 7 day²⁰ toll-free support during the warranty period³⁴ via 800-426-7378
### ThinkPad X201 Tablet (3113) - Onsite (Education) - Win 7 - withdrawn

| Type-model | Processor | Base turbo (GHz)/ (GHz) | Memory | Disk SxATA rpm | Optical in UltraBase | ThinPad X200 UltraBase | PCIe Mini Card | PCIe Mini Card | Workhorse (W) | Global (G) | Preload | Preloaded operating system | Preloaded applications | Other features |
|------------|-----------|-------------------------|--------|-----------------|---------------------|------------------------|-------------------|--------------|---------------|--------------|----------|--------|---------------------------------|-----------------------|-----------------|
| 3113-N2U | i7-640LM 2.13 | 23.93 | 2GB | 12.1" WXGA | Entry | 2.0M | 320G | 7200 | Optional | Opt | Intel | 6202® | WWAN upg | vPro | Pro 32 | W | Mar 10 |
| 3113-N3U | i7-640LM 2.13 | 23.93 | 2GB | 12.1" WXGA | Entry | 2.0M | 320G | 7200 | Optional | Opt | Intel | 6200® | WWAN upg | vPro | Pro 32 | W | Mar 10 |

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)
- Educational systems are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes by use qualified students and teachers.

#### Positioning

- Processor: Convertible tablet ultraportable; one spindle
  - Intel® Core™ i7 processor i7-640LM with dual-core
  - Thinpad Turbo, Hyper-Threading technology; 4MB cache

#### Memory

- 2GB std / 8GB max / 512-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available

#### SATA DVD/-RW

- Ultrabay Slim: Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781)
  - 320GB (7200 rpm) / SATA 3.0Gbps, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System®, supports second disk in opt or std X200 UltraBase

#### Widescreen display

- Entry: 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight, 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display button (power with slide-lock, reset, rotation, menu, all button lock)

#### Camera

- Camera on top of screen, 2.0-megapixel, fixed focus

#### Integrated graphics

- Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display
  - Maximum external resolution: 2560x1600 (DP) @ 60Hz; 2048x1536(VGA) @ 75Hz
  - Intel® HD Graphics
  - ExpressCard/54

#### Keyboard

- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass
  - Touchpad: UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch
  - ThinkLight™

#### Dimensions

- without UltraBase: 4-cell: 11.6" x 9" x 1-1.3"; 95mm x 228mm x 25.6-33.3mm
  - with UltraBase: 8-cell: 11.6" x 10.1" x 1.3"; 259mm x 257mm x 26.5-33.3mm
  - Weight: 4-cell: from 3.57 lb (1.62kg); 8-cell: from 3.96 lb (1.8kg)

#### Battery - life

- 4-cell: 8-cell: up to 3.5; 8-cell: up to 7.9 hr

#### Chipset

- Mobile Intel GM57 Express Chipset

#### Media slice

- Option: ThinkPad X200 UltraBase media slice (see right side)

#### MultiCard Reader

- 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)

#### ExpressCard/54

- One slot (ExpressCard/34, ExpressCard/54)

#### Ports

- Three USB 2.0 (powered), external monitor (VGA DB-15), Intel HD Graphics

#### PCIe Mini Card

- Intel 6200®
- WWAN upg
- Modern
- Bluetooth

#### Ethernet

- Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1

#### Audio support

- Intel Active Management Technology (iAMT)

#### Security

- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip

- Trusted Platform Module, TCG 1.2-compliant

#### FingerPrint reader

- UPEK FingerPrint reader (right base of display), used in tablet/notebook mode

#### Limited warranty

- 3-years/1-year - battery & digitizer pen, limited onsite service®; 8 am - 5 pm, Mon - Fri, excluding holidays, next business day response / service upgrades® available

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See footnotes for important warranty information

US models announced February 23, 2010

US models withdrawn effective January 2011

© Lenovo (CML3-6) January 2011

65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service®

24 hour x 7 day® toll-free support during the warranty period® via 800-426-7378
ThinkPad® X201 Tablet Accessories - withdrawn

Memory
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386
4GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3708

Ultrabay Slim 9.5mm
Most Ultrabay Slim accessories supported in ThinkPad X200 UltraBase
Serial ATA Hard Drive Bay Adapter III 43N3412
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s 43N3229

Storage and removable storage
500GB Disk SATA 3.0Gb/s (7200 rpm)41 43N3423
256GB FDE SSD SATA 3Gb/s 7200 rpm 43N3417
USB 2.0 Portable 320GB Hard Disk 45K1689
USB 2.0 Portable 500GB Hard Disk 45K1690
USB 2.0 Portable Secure 320GB Hard Disk 43R2019
USB 2.0 Secure 500GB Hard Drive 35Y4400
Lenovo Slim USB Portable DVD Burner 0A33988

Wireless WAN (Mini PCI Express)
Only WWAN upgradable models:
ThinkPad Gobi™ 2000 Broadband Option 78Y1398
ThinkPad AT&T® Gobi 2000 Broadband Option 78Y1399

ThinkPad Expansion
Lenovo® Essential Notebook Stand 45J9292
USB 2.0 Port Replicator with Digital Video 0A33942
ThinkPad X200 UltraBase 43R8781

Keyboard
TrackPoint Cap Collection 73P2698
USB Numeric Keypad 33L3225
Preferred Pro USB Keyboard 73P2520
Enhanced Performance USB Keyboard 73P2620
Ultraslim Wireless Keyboard and Mouse 57Y4700

Mouse
Lenovo Optical Mouse (USB) 06P4069
Lenovo Laser Mouse (USB) 41J3074
ThinkPad USB Laser Mouse 57Y4635
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405
ThinkPad Travel Mouse (USB, Optical) 31P7410
ThinkPad Bluetooth Laser Mouse 41U5008

Security
Kensington® MicroSaver® Cable Lock 73P2582
Kensington Twin Head Cable Lock 45K1620
Lenovo Security Cable Lock 57Y4303
USB Gemplus GemPC Smart Card Reader 41N3040
ExpressCard Gemplus Smart Card Reader 41N3043

Multimedia
ThinkPad In-Ear Headphones with mic 57Y4488

Tablet
ThinkPad Digitizer Pen 41U3143
ThinkPad Tablet Tether (3-pack) 41U4820

Batteries
ThinkPad Battery 12 (4-cell) 43R9256
ThinkPad Battery 12++ (8-cell) 43R9257

More information at www.lenovo.com/alladaycomputing
ThinkPad 65W AC Adapter 40Y7696
ThinkPad 90W AC Adapter 40Y7659
ThinkPad 65W AC Adapter with USB Hub 57Y4600

More info at www.lenovo.com/support/poweradapters
Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

Carrying Cases
ThinkPad X200 Tablet Sleeve 43R9115

Monitors
ThinkVision® L1711p 17” Monitor 5047HB2
ThinkVision L1900p 19” Monitor 4431HE1
ThinkVision L1951p Wide 19” Monitor 2448HB2
ThinkVision L2250p Wide 22” Monitor 2572HB6
ThinkVision L2251x Wide 22” Monitor 2572HB6
ThinkVision L2321x Wide 23” Monitor 4014HB6
ThinkVision L2440p Wide 24” Monitor 4420HB2

Monitor Accessories46
Lenovo USB-to-DVI Monitor Adapter 45K2596
Lenovo DisplayPort to VGA Monitor Cable 57Y4393
DisplayPort to Single-link DVI-D Cable 45K7915

For more information on accessories:
www.lenovocom/accessories
www.lenovo.com/support/accessories
www.lenovocom/compatibilityguide
www.lenovopickup.com

Lenovo
ThinkPad®

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(O-X201-T) November 2011
## ThinkPad X220 (4287) - TopSeller - withdrawn

### Preloaded system**10**

- Genuine Windows® 7 Professional 64
- Ready to install applications**14** (only some listed)
  - Rescue and Recovery™
  - Access Connections®
  - Fingerprint Software (fingerprint models)
  - Password Manager (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox

### Preloaded applications**14** (only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype® for Windows
- Windows Live™ Essentials
- Microsoft® Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD+RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD+RW)

### Disk

- SSD None

### Operating System

- All: Windows 7 Professional 64-bit listed

### Other features:

- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort® (supports single-link DVI-D via cable 45J7915)
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lbs 630g

### 65W AC Adapter

- ENERGY STAR® 5.0-compliant
- ROHS-compliant

### International Warranty Service**17**

- 24 hour x 7 day toll-free support
- US model(s) withdrawn effective March or December 2012

See footnotes for more detailed information

US model(s) announced March 1, May 3, August 2, October 4, or October 18, 2011

US model(s) withdrawn effective March or December 2012

### Footnotes

1. Dual-Channel capable, two 204-pin SO-DIMM sockets
2. 13.8 hr; 9-cell (99.9Whr): up to 23.2 hr
3. 220 nits, 16:9 aspect ratio, 300:1 contrast ratio
4. Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
5. 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)
6. DVD burner, removeable from ThinkPad Ultrabase Series 3
7. Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache)
8. Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
9. Digital monitor support via DisplayPort™
10. 10" HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
11. Intel HD Graphics 3000
12. Dual-Channel capable, two 204-pin SO-DIMM sockets
13. 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
14. Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3
15. Intel Active Management Technology (iAMT)
16. 65W AC Adapter
17. 24 hour x 7 day toll-free support during the warranty period
18. 所有型号均采用可选的 Ultrabay Slim 附件
19. 65W AC Adapter
20. 24 hour x 7 day toll-free support during the warranty period

### Type-models

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<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Display</th>
<th>Camera</th>
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<th>ThinkPad Ultrabase Series 3</th>
<th>PCle Mini Card</th>
<th>PCle Mini WWAN</th>
<th>Pallet</th>
<th>Battery cells</th>
<th>Intel AMT</th>
<th>Intel vPro</th>
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<tbody>
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<td>6 AMT</td>
<td>None</td>
<td>No</td>
<td>No Pro 64</td>
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</tr>
</tbody>
</table>

### Optical Ultrabay

- Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)

### Optical Ultrabay (Some):

- DVD burner, removable from ThinkPad Ultrabase Series 3

### Disk

- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™

### Memory

- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Graphics

- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort™ (supports single-link DVI-D via cable 45J7915)
- Supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @ 60Hz;
- 2048x1536 (VGA) @ 75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Display

- Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
- Some: (Premium) 13.3" (337.8mm) HD (1600x900) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)

### Camera

- HD720p resolution, wider angle view, low light sensitive, fixed focus

### Dimensions

- Length: 335mm
- Width: 229mm
- Height: 19.6mm

### Weight

- Pallet: 3.15 lbs 1.43 kg
- Carrying: 2.32 lbs 1.05 kg
- Extended Battery: 1.04 lbs 0.47 kg
- Battery: 1.18 lbs 0.53 kg

### Standard Battery

- Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (OA36280) as 2nd battery

### Extended Battery

- 6-cell: up to 23.2 hr; 9-cell (99.9Whr): up to 13.8 hr; external battery (64Whr): up to 9.4 hr; 9-cell plus external battery: up to 23.2 hr

### Chips

- Mobile Intel 45nm Express Chipset

### Ultrabase

- Some: ThinkPad Ultrabase Series 3 (see right side)

### Multicard reader

- 4-in-1 reader (SD, SDHC, SDXG, MMC)

### ExpressCard

- One slot (ExpressCard/34, ExpressCard/54)

### Ports

- i7 model: One USB 3.0, two USB 2.0 (one powered)
- Other model: Three USB 2.0 (one powered)
- external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PCle Mini Card

- Two PCI Express® Mini Card slots

### PCle WLAN

- Some: 11b/g/n wireless, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
- Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Advanced-N 6205, 2x2

### PCle WWAN

- Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS

### Carrier

- Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider

### Modem

- None

### Bluetooth™

- Bluetooth 3.0 wireless, LED indicator

### Ethernet

- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1

### Audio support

- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic button

### Security chip

- Power-on password, hard disk password, supervisor password, security keyhole

### Security reader

- UPEX Fingerprint reader on palm rest, swipe sensor, LED indicator

### Limited Warranty

- 3-years/1-yr battery - depot repair service / service upgrades available

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(DSH1-1) February 2013
### ThinkPad X220 (4287) - TopSeller (January 2012) - withdrawn

**Personal Systems Reference (PSREF)**

#### Preloaded operating system
- Genuine Windows® 7 Professional 64

#### Ready to install applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Microsoft® Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

#### Preloaded applications (only some listed)
- Adobe® Reader®
- Microsoft® Office 2010 preloaded; purchase product key to activate
- Core® WinDVD™ (DVD±RW)
- Core® Burn.Now™ Lenovo® Edition (DVD±RW)
- Lenovo® DVD MovieFactory® Lenovo Edition (DVD±RW)

Supports ThinkVantage technologies.

**ThinkPad Ultras bay Series 3**
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive (only some listed)
  - 9.5mm Bay Adapter III (supports single-link DVI-D via cable 45J7915)

- Disks supported (some):
  - 128GB SSD 6.0Gb/s 0A65629
  - 128GB SSD 6.0Gb/s 0A65630
  - 500GB Disk 7200 rpm 0A65632

- Other features:
  - Power button (front)
  - Security key lock, security keyhole
  - Analog VGA DB-15 monitor port
  - DisplayPort™ (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet (RJ-45) port
  - Microphone in and headphone out
  - Requires 65W or 90W AC adapter
  - 1.39 lb; 630g

**65W AC Adapter**
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period

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### Type-model | Processor | Memory | Widescreen display | Camera | Disk | Optical in UltraBase | ThinkPad UltraBase Series 3 | PCIe Mini Card | PCIe Mini Card | Battery cells | Intel vPro | Intel | vPro | Preload | Ann Date (mm/yy) |
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<td>No</td>
<td>Pro 64</td>
<td>01/12</td>
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</tr>
</tbody>
</table>

- Small medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

### Positioning

- Processor: An ultraportable for the executive on the move; one spindle
- Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache).
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache).
- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

### Memory
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical Ultrabay
- Disk: Some: DVD burner, removable from ThinkPad UltraBase Series 3
- Supports Ultrabay Slim devices in optional or standard ThinkPad UltraBase Series 3 (0A33932)
- Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad UltraBase Series 3
- mSATA™ SSD: None

### Display
- 12.5" (317.5mm) HD (1366x768) TFT color, anti-glide, LED backlight,
- 200 nits; 10:1 contrast ratio
- 16:9 aspect ratio, fixed focus

### Graphics
- Intel HD Graphics 3000 in processor,
- external analog monitor support via VGA DB-15 connector
- external digital support via DisplayPort™ (supports single-link DVI-D via cable 45J7915)
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
  2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 7 row, 89-key, ThinkVantage® button, spill-resistant, multimedia Fn keys

### Touchpad
- UltraNav™, buttonless touchpad below keyboard, multi-touch
- ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions
- Weight: without UltraBase: 4.6/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
- 4-cell: from 2.97 lb (1.35kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg)

### Case material
- Display cover: Magnesium + PCABS; Bottom: Magnesium alloy

### Standard Battery
- Lithium ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
- Extended Battery: None

### Battery - life
- 4-cell (28Whr): up to 4.1 hr; 6-cell (62.4Whr): up to 9.2 hr; 9-cell (99.9Whr): up to 13.8 hr;
  external battery (64Whr): up to 9.4 hr; 9-cell plus external battery up to 23.2 hr

### Chipset
- Mobile Intel QM67 Express Chipset

### Ultrabay
- Some: ThinkPad UltraBase Series 3 (see right side)
- 4-in-1 reader (SD, SDHC, SDXC, MMC)
- One slot (ExpressCard/34, ExpressCard/54)
- i7 model: One USB 3.0, two USB 2.0 (one powered)
  other model: Three USB 2.0 (one powered)
- external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PClé Mini Card
- Two PCI Express® Mini Card slots
- Two PCI Express® Mini Card slots

### PClé WLAN
- 11a/g/n/ac, PClé Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
- Wireless WAN upgradable

### Carrier
- None

### Modem
- None

### Bluetooth™
- Bluetooth 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PClé x1

### Intel vPro
- Some: Intel Active Management Technology (vAMT)

### Audio support
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack
- Power-on password, hard disk disk supervisor password, security keyhole

### Security
- Trusted Platform Module, TCG 1.2-compliant
- UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator,
- Power On Authentication, supports the security chip

### Limited Warranty
- 3-years/1-year battery - depot repair service / service upgrades available

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See footnotes for more detailed information

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US model(s) announced January 3 or January 17, 2012

US model(s) withdrawn effective December 2012

(DSH1-6) February 2013
ThinkPad® X220 (4290) - withdrawn

Preloaded operating system:
- Genuine Windows® 7 Professional 64
- Ready to install applications (all OSes; only some listed):
  • Rescue and Recovery™
  • Access Connections™
  • FingerPrint Software (fingerprint models)
  • Password Manager (fingerprint models)
  • ThinkVantage System Update
  • ThinkVantage Power Manager
  • ThinkVantage Toolbox
Preloaded applications (all OSes; only some listed):
- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel® DVD MovieFactory® Lenovo Edition (DVD:RW)

Supports ThinkVantage® technologies:
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  • Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412
  • 128GB SSD 6.0Gb/s 0A65629
  • 180GB SSD 6.0Gb/s 0A65630
  • 500GB Disk 7200 rpm 0A65632

Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Requires 65W or 90W AC adapter
- 1.35 lb 630g
- 65-watt AC Adapter ENERGY STAR 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period

See footnotes for more detailed information
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US model(s) announced March 1 or October 4, 2011
US model(s) withdrawn effective March or December 2012

<table>
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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA rpm</th>
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<th>ThinkPad UltraBase Series 3</th>
<th>PCIe Mini Card</th>
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See footnotes for more detailed information

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US model(s) announced March 1 or October 4, 2011
US model(s) withdrawn effective March or December 2012
### ThinkPad® X220 (4290) - May 2011 - withdrawn

**Limited warranty**
- 3-years/1-year battery - depot repair service / service upgrades available

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<th>Widescreen display</th>
<th>Camera</th>
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<th>UltraBase</th>
<th>Ultrabase Series 3</th>
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<td>Pro 64</td>
<td>05/11</td>
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</table>

### Preloaded operating systems
- Genuine Windows® 7 Professional 64
- Windows 8 Professional
- Windows 8 Home Premium

### Ready to install applications (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

### Preloaded applications (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)

### Technical Features

- **Processor**
  - Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache)
  - DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology

- **Memory**
  - 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

- **Optical Ultrabay**
  - Option for ThinkPad Ultrabase Series 3

- **SATA disk**
  - Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
  - Hard Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™

- **Memory**
  - 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

- **Screen**
  - 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio
  - Premium: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)

- **Graphics**
  - Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
  - supports dual independent display:
    - Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
    - 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

- **Keyboard**
  - 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

- **Touchpad**
  - UltraNav™, buttonless touchpad below keyboard, multi-touch

- **Dimensions**
  - with UltraBase: 4.6/6-cell: 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm
  - 4-cell: from 2.97 lb (1.35kg); 6-cell: from 3.31 lb (1.5kg);
  - 9-cell: from 3.67 lb (1.67kg)

- **Weight**
  - 317.5mm)

- **Case material**
  - Magnesium alloy

- **Battery**
  - 4-cell (28Whr): 18.5V, 1.54Ah, 22.9Wh, 3.24INCH, 15.4INCH, 1INCH, 2.62INCH
  - 6-cell:
    - 12.5" HD
    - 12.0" x 8.13" x 0.75-1.36"; 305mm x 206.5mm x 19.0-34.6mm

- **Chipset**
  - Mobile Intel GM67 Express Chipset

- **Ultrabase**
  - Option: ThinkPad Ultrabase Series 3 (see right side)

- **Modem**
  - 3G mobile Broadband module, GSM/GPRS/EDGE/UMTS

- **Other Features**
  - Power button (front)
  - Security key lock, security keyhole
  - Analog VGA DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)

- **Modem**
  - None

- **Ethernet**
  - Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

- **Ethernet**
  - Intel Active Management Technology (IATM)

- **Audio support**
  - High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack

- **Security**
  - Power-on password, hard disk password, supervisor password, security keyhole

- **Security chip**
  - Trusted Platform Module, TCG 1.2-compliant

- **Fingerprint reader**
  - LPEKP Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

- **Limited warranty**
  - 3-years/1-year battery - depot repair service / service upgrades available

See footnotes for more detailed information
US model(s) announced May 3, 2011 or January 3, 2012
US model(s) withdrawn effective March or December 2012

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(DSH1-4) February 2013
### ThinkPad® X220 (4291) - Onsite - withdrawn

#### Type-model | Processor | Memory | Widescreen display | Camera | Disk | Optical in UltraBase | ThinkPad Ultrabase Series 3 | PCIe Mini Card | PCIe Mini Card | Finger print reader | Blue-tooth cells | Intel vPro | Global (G) | Pre-load
---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---
4291-33U | i5-2540M | 4GBx1 | 12.5" HD | 320GB 7200 | Intel 6300a | WWAN upg | FS Blue | 6 vPro | Pro 64
4291-32U | i5-2540M | 4GBx1 | 12.5" HD | 320GB 7200 | Intel 6205a | WWAN upg | FS Blue | 6 vPro | Pro 64
4291-2ZU | i5-2520M | 4GBx1 | 12.5" HD Prem | 720p | Intel 6205 | WWAN upg | FS Blue | 6 vPro | G P Pro 64
4291-2YU | i5-2540M | 2GBx1 | 12.5" HD | 320GB 7200 | Intel 6205 | WWAN upg | FS Blue | 6 vPro | G P Pro 64
4291-2LU | i5-2540M | 2GBx1 | 12.5" HD | 320GB 7200 | Intel 6205 | WWAN upg | FS Blue | 6 vPro | G P Pro 64
4291-2TU | i5-2540M | 2GBx1 | 12.5" HD | 320GB 7200 | Intel 6205 | WWAN upg | FS Blue | 6 vPro | G P Pro 64

### Positioning

An ultraportable for the executive on the move; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

Inte isupgradable

All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3

### Memory

8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical Ultrabay

Some: DVD burner, removable from ThinkPad Ultrabase Series 3

Supports UltraBay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A39932)

### SATA disk

Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high

Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™

All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3

### mSATA™ SSD

None

### Widescreen display

Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio, IPS, WideView (170° viewing)

Some: (Premium) 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)

### Camera

Some: HD720p resolution, wider view angle, low light sensitive, fixed focus

### Graphics

Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display

Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard

7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### TrackPoint

TrackPoint®-pointing device, "Press-to-Select," InScroll Bar™, magnifying glass

### Touchpad

UltraNav™, buttons/touchpad below keyboard, multi-touch

### ThinkLight™

Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions

without UltraBase: 4/6:cell: 12.0" x 8.13" x 0.75-1.36; 305mm x 206.5mm x 19.0-34.6mm

4-cell: from 2.87 lb (1.35kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg)

DisplayPort (supports single-link DVI-D via cable 45J7915)

### Weight

4-cell: (28Whr): up to 4.1 hr; 6-cell: (62.4Whr): up to 9.2 hr; 9-cell (99.9Whr): up to 13.8 hr; external battery: (64Whr): up to 9.4 hr; 9-cell plus external battery: up to 23.2 hr

### Battery - life

9.5mm Bay Adapter III 43N3412

### Chipset

Mobile Intel GM67 Express Chipset

### Ultrabase

Some: ThinkPad Ultrabase Series 3 (see right side)

ExpressCard

One slot (ExpressCard/34, ExpressCard/54)

### Ports

7-in-1 reader (SD, SDHC, SDXC, MMC)

### ExpressCard

PCIe Mini Card

Two PCI Express Mini Card slots

### WLan

Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2

Some: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® 3600, 3x3

### WWan

Wireless WAN upgradable

### Modem

None

### Bluetooth™

Some: Bluetooth 3.0 wireless, LED indicator

### Ethernet

Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

### Intel AMT

Intel Active Management Technology (AMT)

### Audio support

High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack

### Security chip

Power-on password, hard disk password, supervisor password, security keyhole

### Security

Fingerprint Software (fingerprint models)

### Fingerprint reader

Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

### Limited warranty

3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

### Preloaded operating system

- Genuine Windows® 7 Professional 64

### Ready to install applications

- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

### Preloaded applications

- Norton® Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate Corel® WinDVD® (DvD:RW)
- Corel Burn.Now™ Lenovo Edition (DvD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DvD:RW)

### Supports ThinkVantage® technologies

- Provides desktop expansion and cable management for X220 and X220 Tablet
- Extends direct contacts to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive
  - 9.5mm Bay Adapter III 43N3412

### Other features:

- Power button (front)
- Security lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 693g

### 65-watt AC Adapter

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service 17 hour x 7 day toll-free support during the warranty period

---

See footnotes for more detailed information © Lenovo

US models announced March 1, 2011

US model(s) withdrawn effective March or December 2012

(3SH-1) 2013 Lenovo
### ThinkPad X220 (4291) - Onsite (May 2011) - withdrawn

#### Personal Systems Reference (PSREF)

#### Preloaded operating system°
- Genuine Windows® 7 Professional 64

#### Ready to install applications° (only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

#### Preloaded applications° (only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live® Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD:RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD:RW)

Supports ThinkVantage® technologies

### Type-model | Processor | Memory | Widescreen display | Disk | Optical in UltraBase | ThinkPad UltraBase Series 3 | PCle Mini Card | PCle Mini Card | Finger print reader | Battery | Global (G) | Preload |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>4291-43U</td>
<td>i5-2520M</td>
<td>4GBx1</td>
<td>12.5” HD</td>
<td>128GB SSD</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 6300® WWAN upg</td>
<td>Fing Blue</td>
<td>6 vPro G P Pro 64</td>
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<tr>
<td>4291-44U</td>
<td>i5-2520M</td>
<td>4GBx1</td>
<td>12.5” HD</td>
<td>320GB SSD</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 6300® WWAN upg</td>
<td>Fing Blue</td>
<td>6 vPro G P Pro 64</td>
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<tr>
<td>4291-45U</td>
<td>i5-2520M</td>
<td>4GBx1</td>
<td>12.5” HD</td>
<td>720p</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 6205® WWAN upg</td>
<td>Fing Blue</td>
<td>6 vPro G P Pro 64</td>
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<tr>
<td>4291-42U</td>
<td>i5-2520M</td>
<td>4GBx1</td>
<td>12.5” HD</td>
<td>128GB SSD</td>
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<td>Optional</td>
<td>Intel 6300® WWAN upg</td>
<td>Fing Blue</td>
<td>6 vPro G P Pro 64</td>
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<td>i5-2520M</td>
<td>4GBx1</td>
<td>12.5” HD</td>
<td>128GB SSD</td>
<td>Optional</td>
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<td>Intel 6300® WWAN upg</td>
<td>Fing Blue</td>
<td>6 vPro G P Pro 64</td>
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<td>4291-45U</td>
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<td>4GBx1</td>
<td>12.5” HD</td>
<td>320GB SSD</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 6300® WWAN upg</td>
<td>Fing Blue</td>
<td>6 vPro G P Pro 64</td>
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</tr>
</tbody>
</table>

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**Footnotes:**
- 3-years/1-year battery, limited onsite service°°, 8 - am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades°° available.
### ThinkPad® X220i (4286) - TopSeller (withdrawn)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk</th>
<th>GB</th>
<th>rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad Ultrabase Series 3</th>
<th>PCIe Mini Card</th>
<th>PCIe Mini Card</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Intel</th>
<th>Preload</th>
</tr>
</thead>
<tbody>
<tr>
<td>4286-2AU</td>
<td>i3-2310M</td>
<td>4GBx1</td>
<td>12.5' HD</td>
<td>720p</td>
<td>320G</td>
<td>7200</td>
<td>Optional</td>
<td>Optional</td>
<td>Intel 1000</td>
<td>WWAN upg</td>
<td>None</td>
<td>None</td>
<td>6</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

**Positioning**

**This small and medium business (SMB) model is part of the US TopSeller™ Program**

This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

**Processor**

Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology

**Memory**

8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay**

Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)

**Dimensions**

without UltraBase: 46/6-cell: 12.0' x 8.1' x 0.75-1.36'; 305mm x 206.5mm x 19.0-34.6mm

**Weight**

4-cell: from 2.97 lb (1.35kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg)

**Battery**

External Battery: 4-cell (28Whr): up to 4.1 hr; 6-cell (62.4Whr): up to 9.2 hr; 9-cell (99.9Whr): up to 13.8 hr; external battery (64Whr): up to 9.4 hr; 9-cell plus external battery: up to 23.2 hr

**Chipset**

Mobile Intel GM67 Express Chipset

**UltraBase**

Option: ThinkPad Ultrabase Series 3 (see right side)

**ExpressCard**

One slot (ExpressCard/34, ExpressCard/54)

**Ports**

i7 model: One USB 3.0, two USB 2.0 (one powered)

**PCle Mini Card**

Two PCI Express Mini Card slots

**WLAN**

Wireless WAN upgradable

**Modern**

None

**Ethernet**

Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

**Audio support**

High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack

**Security**

Power-on password, hard disk password, supervisor password, security keyhole

**Limited warranty**

1-year - depot repair service / service upgrades available

---

See footnotes for more detailed information

US model(s) announced March 1, 2011

US model(s) withdrawn effective March 2012
## ThinkPad® X220i (4287) - TopSeller - withdrawn

### Preloaded operating system
- Genuine Windows® 7 Professional 64
- Ready to install applications (all OSes; only some listed)
  - Rescue and Recovery™
  - Access Connections™
  - FingerPrint Software (fingerprint models)
  - Password Manager (fingerprint models)
  - ThinkVantage System Update
  - ThinkVantage Power Manager
  - ThinkVantage Toolbox

### Preloaded applications (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows

### Supports ThinkVantage™ technologies

### ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for travel
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412
  - 128GB SSD 6.0Gb/s 0A65629
  - 180GB SSD 6.0Gb/s 0A65630
  - 500GB Disk 7200 rpm 0A65632
- Other features:
  - Power button (front)
  - Security key lock, security keyhole
  - Analog VGA DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet (RJ-45) port
  - Microphone in and headphone out
  - Ready for 65W or 90W AC adapter
  - 1.39 lb; 630g

- 65-watt AC Adapter
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during the warranty period

### Dimensions
- 12.5" (317.5mm) HD (1366x768)
- TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

### Graphics
- Intel HD Graphics 3000 in processor
- External analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915)
- Supports dual independent display
- Maximum external resolution: 2560x1600 (DisplayPort)@60Hz;
- 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 7 row: 88-key, ThinkVantage button, spill-resistant, multimedia Fn keys
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar, magnifying glass
- UltraNav™, buttonless touchpad below keyboard, multi-touch
- Illuminates the keyboard to improve visibility in low-light conditions

### Case material
- Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery
- Battery - life:**
  - 4-cell (28WHr): up to 4.1 hr;
  - 6-cell (62.4WHr): up to 9.2 hr;
  - 9-cell (99.9WHr): up to 13.8 hr;
  - external battery (64WHr): up to 9.4 hr;
  - 9-cell plus external battery: up to 23.2 hr

### Chipset
- Mobile Intel QM67 Express Chipset

### Ultrabay
- Option: ThinkPad Ultrabase Series 3 (see right side)
- 4-in-1 reader (SD, SDHC, SDXC, MMC)

### ExpressCard
- One slot (ExpressCard/34, ExpressCard/54)

### Ports
- i7 model:
  - One USB 3.0, two USB 2.0 (one powered)
- other model:
  - Three USB 2.0 (one powered)
- external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PCle Mini Card
- WLAN:
  - Two PCI Express Mini Card slots
  - Some: 11b/g/n, PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2
  - Some: 11a/b/g/n, PCle Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
- WWAN:
  - Wireless WAN upgradable

### Other:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Ready for 65W or 90W AC adapter
- 1.39 lb; 630g

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### FingerPrint reader
- None

### Display
- HD (1366x768) TFT color
- LED backlight, wider view angle, low light sensitive, fixed focus

### Camera
- 12.5" (317.5mm) HD (1366x768)

### Battery
- 8GB max / PC/3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Security
- Trusted Platform Module, TCG 1.2-compliant
- Power-on password, hard disk password, supervisor password, security keyhole

### Audio support
- HD720p resolution, wider view angle, low light sensitive, fixed focus
- Dual array microphone, combo audio/mic jack

### Security chip
- Trusted Platform Module, TCG 1.2-compliant

### FingerPrint reader
- None

### Limited warranty:
- 3-years/1yr battery - depot repair service / service upgrades available

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<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB/ rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad UltraBase Series 3</th>
<th>PCle Mini Card WLAN</th>
<th>PCle Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Intel vPro</th>
<th>Preload</th>
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<tbody>
<tr>
<td>4287-2UU</td>
<td>i3-2310M</td>
<td>4GBx1</td>
<td>12.5&quot; HD</td>
<td>720p</td>
<td>320G 7200</td>
<td>Optional</td>
<td>Intel 1000</td>
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<td>320G 7200</td>
<td>Optional</td>
<td>Intel 6205</td>
<td>WWAN upg</td>
<td>WWAN upg</td>
<td>None</td>
<td>None</td>
<td>6</td>
<td>Pro 64</td>
</tr>
</tbody>
</table>
### Memory
- 2GB PC3-10600 DDR3 L-H SODIMM: 55Y3710 (ann 03/20/10)
- 2GB PC3-10600 DDR3 L-H SODIMM (25Pack): 57Y4416 (ann 03/20/10)
- 4GB PC3-10600 DDR3 L-H SODIMM: 55Y3711 (ann 03/20/10)

### Ultrabook Slim 9.5mm
- Most Ultrabook Slim accessories supported in ThinkPad Ultrabase Series 3
- SATA 6.0Gb/s 7mm Solid State Drive: 41 0A65630
- Ultraslim Plus Wireless Keyboard and Mouse: 52 0A34032
- TrackPoint Cap Collection: 73P2698
- ExpressCard Gemplus Smart Card Reader: 41N3047 (ann 06/27/07)
- Lenovo Security Cable Lock: 57Y4303
- Kensington Twin Head Cable Lock: 45K1620 (ann 09/30/08)
- Lenovo Security Cable Lock: 57Y4303 (ann 08/24/10)
- USB Gemplus GemPC Smart Card Reader: 41N3040 (ann 02/21/06)
- ExpressCard Gemplus Smart Card Reader: 41N3043 (ann 06/27/06)

### Storage and removable storage
- 500GB 5400rpm SATA 3.0Gb/s Hard Drive II: 41 0A33987
- 320GB 5400rpm SATA 3.0Gb/s Hard Drive II: 41 0A33987
- USB 3.0 Secure 750GB Hard Disk: 45K1689 (ann 06/05/12)
- USB 3.0 Secure 720GB Hard Disk: 45K1689 (ann 06/05/12)
- USB 2.0 Secure 320GB Hard Disk: 45K1689 (ann 06/05/12)
- USB 2.0 Secure 230GB Hard Disk: 43N3412 (ann 02/22/11)
- 256GB 7.2 SATA 6.0Gb/s Solid State Drive: 57Y4303 (ann 09/30/11)
- 128GB SATA 6.0Gb/s 7mm Solid State Drive: 57Y4303 (ann 09/30/11)
- 80GB SATA 6.0Gb/s 7mm Solid State Drive: 57Y4303 (ann 09/30/11)
- 40GB SATA 6.0Gb/s 7mm Solid State Drive: 57Y4303 (ann 09/30/11)
- 16GB MLC 7.2 SATA 6.0Gb/s Solid State Drive: 57Y4303 (ann 09/30/11)

### Batteries
- ThinkPad Battery 44 (4-cell): 0A36305 (ann 06/05/12)
- ThinkPad Battery 44+ (6-cell): 0A36306 (ann 06/05/12)
- ThinkPad Battery 44++ (9-cell): 0A36307 (ann 06/05/12)
- ThinkPad Battery 19+ (6-cell, Slim External): 0A36280 (ann 03/10/11)
- ThinkPad External Battery Charger: 40Y7625 (ann 09/20/05)

### Carrying Cases
- ThinkPad 12W Case Sleeve: 51J0476 (ann 08/19/09)
- ThinkPad 12.5” Ultrabook Topload: 0B47416 (ann 12/04/12)
- ThinkPad Business Topload Case: 41R4489 (ann 12/15/11)
- ThinkPad Business Backpack: 41R4489 (ann 12/15/11)
- ThinkPad Deluxe Expander Case: 43R2019 (ann 12/15/11)
- ThinkPad Executive Leather Case: 43R2476 (ann 05/13/08)
- Lenovo Sport Backpack - Red: 0A33896 (ann 02/28/12)
- Lenovo Sport Slimcase - Red: 0A33897 (ann 02/28/12)
- Lenovo Sport Messenger - Red: 0A33898 (ann 02/28/12)
- Lenovo messenger cases at: www.lenovoluxurycases.com

### Multimedia
- ThinkPad L1711p 17” (VGA, DVI-D): 5047HB2 (ann 02/28/12)
- ThinkVision LT2452p Wide 24” (VGA, DVI-D): 4420MB2 (ann 02/28/12)
- ThinkVision L2251x Wide 22” (VGA, DVI-D): 2578HB6 (ann 02/28/12)
- ThinkVision LT1525p Wide 19” (VGA, DVI-D): 45R4489 (ann 02/28/12)
- ThinkPad 12W Case Sleeve: 51J0476 (ann 08/19/09)
- ThinkPad 12.5” Ultrabook Topload: 0B47416 (ann 12/04/12)
- ThinkPad Business Topload Case: 41R4489 (ann 12/15/11)
- ThinkPad Business Backpack: 41R4489 (ann 12/15/11)
- ThinkPad Deluxe Expander Case: 43R2019 (ann 12/15/11)
- ThinkPad Executive Leather Case: 43R2476 (ann 05/13/08)
- Lenovo Sport Backpack - Red: 0A33896 (ann 02/28/12)
- Lenovo Sport Slimcase - Red: 0A33897 (ann 02/28/12)
- Lenovo Sport Messenger - Red: 0A33898 (ann 02/28/12)

### More information at www.lenovo.com/support/monitors
- Lenovo luxury cases at www.lenovoluxurycases.com

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**ThinkPad® X220 Accessories - withdrawn**

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© Lenovo (O-X220) February 2013
### Positioning
- Convertible tablet ultraportable; one spindle
- Ultrabay processor: Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

### Memory
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical bay
- Ultrabay supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932)
- Some models: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5” wide, 7mm high
- Some models: Hard Disk Drive / SATA 3.0Gb/s, 2.5” wide, 7mm high, Active Protection System™

### mSATA SSD
- Optional or standard ThinkPad Ultrabase Series 3

### Widescreen display
- Outdoor: 12.5” (317.5mm) HD (1366x768) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflective layers, IPS
- MultiTouch: 12.5” (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture

### Camera
- HD720p resolution, wider view angle, low light sensitive, fixed focus

### Graphics
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);
- Supports dual independent display; Maximum external resolution: 2560×1600 (DisplayPort) @ 60Hz; 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915)

### Keyboard
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

### Trackpoint
- TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass

### Touchpad
- UltraNav™, buttonless touchpad below keyboard, multi-touch
- None

### Dimensions
- Without UltraBase: 3-cell: 12.0” x 9” x 1.1-1.23”; 305mm x 228.7mm x 27-31.3mm
- 3-cell: from 3.67 lb (1.66 kg)
- 6-cell: from 3.97 lb (1.80 kg)

### Weight
- Case material: Display cover: Magnesium + PCABS; Bottom: Magnesium alloy
- Battery: Lithium ion 3-cell or 6-cell, supports optional external battery (0A36280) as 2nd battery
- Battery life: 3-cell (30Whr): up to 4.0 hr; 6-cell (66Whr): up to 8.8 hr
- External battery (64Whr): up to 9.0 hr; 6-cell plus external battery: up to 17.8 hr

### Chipset
- Mobile Intel GM67 Express Chipset

### Ultrabase
- ThinkPad Ultrabase Series 3 (see right side)
- 4-in-1 reader (SD, SDHC, SDXC, MMC)

### ExpressCard
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

### PCle Mini Card
- Two PCI Express Mini Card slots: 11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX
- WWAN Modern
- None

### Bluetooth
- Bluetooth 3.0 wireless, LED indicator

### Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

### Audio support
- Intel Active Management Technology (iAMT)
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack

### Security
- Power-on password, hard disk password, supervisor password, security keyhole

### Security key lock
- Trusted Platform Module, TCG 1.2-compliant

### Finger print reader
- UPEK FingerPrint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip

### Limited warranty
- 1-year - depot repair service / service upgrades§ available

---

### ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412
  - Disks supported (some):
    - 128GB SSD 6.0Gb/s 0A65629
    - 180GB SSD 6.0Gb/s 0A65630
    - 500GB Disk 7200 rpm 0A65632

### Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

### BIOS update:
- 65-watt AC Adapter
- ENERGY STAR® 5.0-compliant
- ROHS-compliant

### International Warranty Service
- 24 hour x 7 day 18 toll-free support during the warranty period
- Depot repair service / service upgrades available

---

### Notes:
- See footnotes for more detailed information
- © Lenovo
- US model(s) announced May 10, 2011
- US model(s) withdrawn effective December 2012
### ThinkPad® X220 Tablet (4296) - TopSeller - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
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<th>UltraBase</th>
<th>ThinkPad</th>
<th>PCIe</th>
<th>Mini Card</th>
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<th>Preload</th>
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<td>12.5&quot; HD Multi</td>
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<td>DVD±RW</td>
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<td>12.5&quot; HD Multi</td>
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<td>Intel 6205™ WWAN upg</td>
<td>Blue 6</td>
<td>None</td>
<td>vPro</td>
<td>Pro 64</td>
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</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O1OPKR)**

#### Preloaded operating system

- **Some:** Genuine Windows® 7 Home Premium 64-bit
- **Some:** Genuine Windows 7 Professional 64-bit

#### Ready to install applications

(all OSes, only some listed)

- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

#### Preloaded applications

(all OSes; only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVd:RW)
- Corel Burn:Now™ Lenovo Edition (DVd:RW)

#### Supports ThinkVantage™ technologies

- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive
  - 9.5mm Bay Adapter III 43N3412

#### 3-year/1-yr battery - depot repair service / service upgrades

- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headset out
- Requires 65W or 90W AC adapter
- 1.39 lb; 690g

#### Additional features

- 65-watt AC Adapter
- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service

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**See footnotes for more detailed information**

US model(s) announced March 22, 2011

US model(s) withdrawn effective November 2011 or December 2012

© Lenovo

(CMT1-1) February 2013
### ThinkPad X220 Tablet (4296) - TopSeller (May 2011) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad Ultrabase Series 3</th>
<th>PCIe Mini Card</th>
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<th>Battery cells</th>
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<th>Preload</th>
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<td>Intel 6205™</td>
<td>WWAN up</td>
<td>6</td>
<td>vPro</td>
</tr>
</tbody>
</table>

**Positioning**
- Convertible tablet ultraportable; one spindle
- Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz, Intel Turbo Boost 2.0 (3.20GHz), HT technology)
- Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz, Intel Turbo Boost 2.0 (3.50GHz), HT technology)

**Memory**
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay SATA disk**
- Some: DVD burner, removable from ThinkPad Ultrabase Series 3
- Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A39392)
- Some: SerialATA/300GBs (SATA 3.0Gbps, 2.5" wide, 7mm high, Active Protection System™)

**Widescreen display**
- Outdoor: 12.5" (317.5mm) HD (1366x788) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multi-touch anti-reflectivity layers, IPS
- MultiTouch: 12.5" (317.5mm) HD (1366x788) TFT color, anti-glare LED, blacklight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports 5finger gesture
- All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, wide-view angle, low light sensitive, fixed focus

**Graphics**
- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display!

**Keyboard**
- TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar™, magnifying glass

**Chipset**
- Mobile Intel QM67 Express Chipset

**Preloaded operating system™**
- Genuine Windows® 7 Professional 64

**Ready to install applications™**
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

**Supports ThinkVantage™ technologies**
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side
- Serial ATA Hard Drive

**Other features:**
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

**Limited warranty: 3-years 1-year battery - depot repair service / service upgrades available**

See footnotes for more detailed information

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US model(s) announced May 10 or October 4, 2011, or January 3, 2012

US model(s) withdrawn effective December 2012
Outdoor
4298-27U i5-2520M 2GBx1 12.5" HD

Multi
4298-3PU i5-2520M 4GBx1 12.5" HD

4298-31U i7-2620M 4GBx1 12.5" HD

4298-3SU i5-2520M 4GBx1 12.5" HD

4298-3WU i5-2520M 4GBx1 12.5" HD

4298-42U i5-2520M 4GBx1 12.5" HD

4298-43U i7-2620M 4GBx1 12.5" HD

4298-44U i7-2620M 4GBx1 12.5" HD

US model(s) withdrawn effective November 2011 or December 2012.

US model(s) announced March 22, 2011

Limited warranty

3-years

1-year battery - depot repair service / service upgrades available

Preloaded operating system

- Genuine Windows 7 Professional 64

Preloaded applications (all OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- FingerPoint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Supports ThinkVantage technologies

ThinkPad Ultrabase Series 3

- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive
  - 9.5mm Bay Adapter III 43N3412
  - 180GB SSD 6.0Gb/s 0A65629
  - 180GB SSD 6.0Gb/s 0A65630
  - 500GB Disk 7200 rpm 0A65632
- 180GB SSD 6.0Gb/s 0A65629
- 180GB SSD 6.0Gb/s 0A65630
- 500GB Disk 7200 rpm 0A65632

Other features:

- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J7915)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

- ENERGY STAR® 5.0-compliant
- ROHS-compliant
- International Warranty Service 24 hour x 7 day toll-free support during warranty period

See footnotes for more detailed information.

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(CMT-1-2) February 2013

US model(s) announced March 22, 2011

US model(s) withdrawn effective November 2011 or December 2012
**ThinkPad® X220 Tablet (4298) - May 2011 - withdrawn**

**Preloaded operating system**
Genuine Windows® 7 Professional 64

**Ready to install applications**
- Rescue and Recovery™
- Access Connections™
- FingerPrint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

**Preloaded applications**
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD™ (DVD:RW)

**Supports ThinkVantage® technologies**
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive 9.5mm Bay Adapter III
  - 43N3412 Disks supported (some):
    - 128GB SSD 6.0Gbps 0A65629
    - 180GB SSD 6.0Gbps 0A65630
    - 500GB Disk 7200 rpm 0A65632

**Other features:**
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- DisplayPort (supports single-link DVI-D via cable 45J9715)
- Four USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

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**Personal Systems Reference (PSREF)**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad Ultrabase</th>
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<td>vPro G</td>
<td>G Pro 64</td>
<td>6</td>
<td>Pro 64</td>
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</table>

**Positioning Processor**
- Core i5TM-2520M processor (dual-core, 2.50GHz, 3MB Cache)
- Intel® Core i7TM-2620M processor (dual-core, 2.70GHz, 4MB Cache)
- Intel® Core i7TM-2640M processor (dual-core, 2.80GHz, 4MB Cache)

**Memory**
- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay SATA disk**
- Option for ThinkPad Ultrabase Series 3
- Some: Solid State Drive (SSD) / SATA 3.0Gbps, 2.5" wide, 7mm high
- All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3

**mSATA® SSD**
- None

**Widescreen display**
- Outdoor: 12.5” (317.5mm) HD (1366x786) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlit, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS

**Camera**
- Some: Hard Disk Drive / SATA 3.0Gbps, 2.5" wide, 7mm high, Active Protection System™
- All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3

**Graphics**
- Intel® HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J9715): supports dual independent display;
- Maximum external resolution: 2560x1600 (DisplayPort) @60Hz;
- 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J9715)

**Keyboard**
- 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys

**Display**
- Trackpoint® pointing device, "Press-to-Select", Internet Scroll Bar13, magnifying glass, UltraNav™, buttonless touchpad below keyboard, multi-touch
- All: WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotate and swivel hinge, power, reset, and rotation buttons on display bottom

**Chipset**
- Mobile Intel® QM67 Express Chipset

**Ultrasound MultiCard reader ExpressCard**
- Option: ThinkPad Ultrabase Series 3 (see right side)
- 4-in-1 reader (SD, SDHC, SDXC, MMC)
- One slot (ExpressCard/34, ExpressCard/54)
- Three USB 2.0 (one powered) (VGA DB-15, DisplayPort), ethernet (RJ-45)

**WLAN**
- Two PCI Express Mini Card slots
- One: 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
- One: 11a/b/g, PCIe Half Mini Card, Intel Centrino® Advanced-N 6300, 3x3

**WWAN**
- Some: Wireless WAN upgradable
- Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev.A, GPRS/WCDMA/HSPA/UMTS
- Some: User selectable at first boot, AT&T®, Verizon®, or Sprint®

**Modem**
- None

**Bluetooth**
- Bluetooth 3.0 wireless, LED indicator
- Lenovo 85279LM Gigabit Network Connection (Lewisville), PHY, PCIe x1

**Audio support**
- Intel® Intel Active Management Technology (iAMT)
- High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack
- Security: Power-on password, hard disk password, supervisor password, security keyhole
- Security chip: Trusted Platform Module, TCG 1.2-compliant
- Fingerprint reader: UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
- 3-years/1-year battery - depot repair service / service upgrades available
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
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<th>Disk</th>
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</table>
| 4299-36U  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-35U  | i5-2520M  | 4GBx1  | 12.5" HD Multi    | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-34U  | i7-2620M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-33U  | i7-2620M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-32U  | i7-2620M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-22U  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-21U  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-20U  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-19U  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-18X  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   
| 4299-17X  | i5-2520M  | 4GBx1  | 12.5" HD Outdoor  | 720p   | 320G | 7200   | DVD±RW UltraB    | Intel 6205™    | upg     | Finger 6  | vPro G P | Pro 64   

Preloaded operating system
- Genuine Windows 7 Professional 64

Ready to install applications (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications (all OSes; only some listed)
- Norton® Internet Security 2011 (30 days of virus definitions)
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive
  - 9.5mm Bay Adapter III 43N3412
- Disks supported (some):
  - 128GB SSD 6.0Gb/s 0A65629
  - 180GB SSD 6.0Gb/s 0A65630
  - 500GB Disk 7200 rpm 0A65632
- Other features:
  - Power button (front)
  - Security key lock, security keyhole
  - Analog VGA DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet (RJ-45) port
  - Microphone in and headphone out (500GB Disk 7200 rpm 0A65632)
  - 65-watt AC Adapter

65-watt AC Adapter

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service
- 24 hour x 7 day toll-free support during the warranty period

See footnotes for more detailed information

© Lenovo

US model(s) announced March 22, 2011

US model(s) withdrawn effective November 2011 or December 2012
**ThinkPad® X220 Tablet (4299) - Onsite (May 2011) - withdrawn**

**Positioning Processor**

Converts tablet ultraportable; one spindle Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache).

- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), Intel Turbo Boost 2.0 (3.40GHz), HT technology
- Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache).

- DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

- 3-years limited warranty

**Widescreen display**

- Outdoor: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nibs, 16:9 aspect ratio, 500:1 contrast ratio, 1.22 reflectivity, multiple anti-reflectivity layers, IPS.
- MultiTouch: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nibs, 16:9 aspect ratio, 500:1 contrast ratio, IPS.
- MultiTouch screen supports pen & five-finger gesture.

**Camera**

- Some: HD720p resolution, wider view angle, low light sensitive, fixed focus
- HiView 720p HD resolution, wider view angle, low light sensitive, fixed focus

**Graphics**

- Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display.

**Memory**

- 8GB max / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

**Optical Ultrabay SATA disk**

- Option for ThinkPad Ultrabase Series 3

**mSATA SSD**

- None

**Preloaded operating system**

- Genuine Windows 7 Professional 64

**Ready to install applications**

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Skype™ for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Core2 WinDVD® (DVD:RW)
- Core2 Burn.Now™ Lenovo Edition (DVD:RW)

**ThinkPad Ultrabase Series 3**

- Provides desktop expansion and cable management for X220 and X220 Tablet
- Easily connects to the bottom of the X220 or X220 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive
  - 9.5mm Bay Adapter I
  - 43N3412
  - Disks supported (some):
    - 128GB SSD 6.0Gb/s 0A65629
    - 180GB SSD 6.0Gb/s 0A65630
    - 500GB Disk 7200 rpm 0A65632

- Other features:
  - Power button (front)
  - Security key lock, security keyhole
  - Analog VGA DB-15 monitor port
  - DisplayPort (supports single-link DVI-D via cable 45J7915)
  - Four USB 2.0 ports
  - Gigabit ethernet (RJ-45) port
  - Microphone in and headphone out
  - Requires 65W or 90W AC adapter
  - 1.39 lb; 630g

**Other information**

- Disks included:
  - 320G 7200 0A65632
  - 720p 128G SSD Optional Opt Intel 6205 WWAN upg 6 vPro G P Pro 64
  - 320G 7200 Optional Opt Intel 6300 28 WWAN upg 6 6 vPro G P Pro 64
  - 720p 128G SSD Optional Opt Intel 6205 WWAN upg 6 vPro G P Pro 64

**Preload specifications**

- 3-years limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>rpm</th>
<th>Optical in UltraBase</th>
<th>ThinkPad UltraBase Series 3</th>
<th>PCIe Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Battery type</th>
<th>Intel</th>
<th>Preload</th>
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</thead>
<tbody>
<tr>
<td>4294-2EU</td>
<td>i3-2310M</td>
<td>4GBx1</td>
<td>12.5&quot; HD Multi</td>
<td>720p</td>
<td>320G 7200</td>
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<td>WWAN upg</td>
<td>Blue 6</td>
<td>None</td>
<td>Pro 64</td>
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<tr>
<td>4294-2DU</td>
<td>i3-2310M</td>
<td>4GBx1</td>
<td>12.5&quot; HD Multi</td>
<td>720p</td>
<td>320G 7200</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
<td>WWAN upg</td>
<td>Blue 6</td>
<td>None</td>
<td>Pro 64</td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Positioning Processor</th>
<th>Convertible tablet ultraportable; one spindle</th>
<th>Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</th>
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</thead>
<tbody>
<tr>
<td>Optical Ultrabay SATA disk</td>
<td>Option for ThinkPad UltraBase Series 3</td>
<td>Supports Ultrabay Slim devices in optional or standard ThinkPad UltraBase Series 3 (0A33932)</td>
</tr>
<tr>
<td>Some:</td>
<td>Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5&quot; wide, 7mm high</td>
<td>Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5&quot; wide, 7mm high, Active Protection System™</td>
</tr>
<tr>
<td>All:</td>
<td>removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad UltraBase Series 3</td>
<td></td>
</tr>
</tbody>
</table>

- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

<table>
<thead>
<tr>
<th>Widescreen display</th>
<th>12.5&quot; (317.5mm) HD (1366x768) TFT color, anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16.9 aspect ratio, 501:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Touch:</td>
<td>12.5&quot; (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16.9 aspect ratio, 501:1 contrast ratio, IPS, Multi-Touch screen supports pen &amp; five-finger gesture</td>
</tr>
<tr>
<td>All:</td>
<td>WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen, pen holder in side base (right), rotate and swivel hinge, power, reset, and rotation buttons on display bottom</td>
</tr>
</tbody>
</table>

| Graphics | Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915) |

| Keyboard | 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys |
| TrackPoint® | TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar13, magnifying glass |
| Touchpad ThinkLight™ | UltraNav™, buttonless touchpad below keyboard, multi-touch |
| Dimensions3 | without UltraBase: 3-cell: 12.0" x 9" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm |
| Weight2 | 3-cell: from 3.67 lb (1.66kg); 6-cell: from 3.97 lb (1.80kg) |
| Case material Battery - type Extended Battery | Display cover: magnesium + PCABS; Bottom: Magnesium alloy |
| Battery - type | Lithium Ion 3-cell or 6-cell, supports optional external battery (O36A280) as 2nd battery |
| Extended Battery | 3-cell: up to 4.0 hr; 6-cell: up to 8.8 hr; slice battery: up to 9.0 hr; 6-cell plus slice battery: up to 17.8 hr |

| Chipset | Mobile Intel QM67 Express Chipset |
| Ultrabase | Option: ThinkPad Ultrabase Series 3 (see right side) |
| Multicard Reader ExpressCard | 4-in-1 reader (SD, SDHC, SDXC, MMC) |
| Ports | One slot (ExpressCard/34, ExpressCard/54) |
| PCI Express Mini Card | Two PCI Express Mini Card slots |
| WLAN6 | Some: 11a/b/g/n, PCI Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 |
| Modem | Some: 11a/b/g/n, PCI Half Mini Card, Intel Centrino Advanced-N 6205, 2x2 |
| WWAN Modem | Wireless WAN upgradable |
| Bluetooth™ | None |
| Ethernet Intel AMT | Bluetooth 3.0 wireless, LED indicator |
| Intel AMT | Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 |
| Audio support | None |
| Security Power-on password, hard disk password, supervisor password, security keyhole |
| Security Fingerprint reader | Trusted Platform Module, TCG 1.2-compliant |
| Finger print reader | UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip |

Limited warranty12 1-year - depot repair service / service upgrades22 available
ThinkPad® X220 Tablet Accessories - withdrawn

Memory
2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 ann 03/02/10

ThinkPad UltraSlim 9.5mm
Most UltraSlim Slim accessories supported in ThinkPad UltraBase Series 3
Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 ann 06/23/09
DVD ROM UltraSlim Drive III 0A66628 ann 06/05/12
DVD Burner UltraSlim Drive III 0A66626 ann 06/05/12

Storage and removable storage
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD 41 0A66531 ann 06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD 41 0A66532 ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD 41 0A66535 ann 06/05/12
128GB SATA 6.0Gb/s 7mm Solid State Drive 41 0A66529 ann 06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive 41 0A66530 ann 06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD 41 0A66520 ann 05/15/12
256GB 7200rpm SATA 3.0Gb/s 41 0A66525 ann 04/12/11

Lenovo USB Smartcard Keyboard 51J0155
Ultraslim Plus Wireless Keyboard and Mouse 52 0A34032
ThinkPad External Battery Charger 47 40Y7625 ann 09/20/05

41 Can be used as the main HDD or with Serial ATA Hard Drive 9.5mm Bay Adapter III in ThinkPad Ultrabase Series 3

Wireless WAN (Mini PCI Express)
Only WWAN upgradeable models:
ThinkPad Gobi 41U3143

Batteries
ThinkPad Battery 67 (3-cell) 0A36316 ann 06/05/12
ThinkPad Battery 67+ (6-cell) 0A36317 ann 06/05/12
ThinkPad Battery 14+ (6-cell, Slim External) 41 0A36280 ann 03/01/11

41 To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector

47 Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

41 Only supports ThinkPad Battery 67 (3-cell) 0A36316.

Carrying Cases

Lenovo Wireless Laser Mouse 52 0A36188
Kensington Security

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03
ThinkPad USB Laser Mouse 57Y4635 ann 12/08/09
ThinkPad ScrollPoint® Mouse (USB, Optical) 31P7405 ann 08/27/02
ThinkPad Travel Mouse (USB, Optical) 31P7410 ann 06/04/02
ThinkPad Laser Mouse 0A36407 ann 06/26/12
Lenovo Wireless Laser Mouse 41 0A36188 ann 12/20/11

• Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

ThinkPad Ultrabase Series 3 0A33932 ann 03/01/11
Lenovo Essential Notebook Stand 45J9292 ann 05/12/09

Keyboards
TrackPoint® Cap Collection 73P2698 ann 12/16/03
Ultraslim Plus Wireless Keyboard and Mouse 42 0A34032 ann 04/05/11
USB Numeric Keypad 33L3225 ann 05/01/00
Preferred Pro USB Keyboard 73P5220 ann 06/21/05
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
ThinkPad USB Keyboard with TrackPoint 55Y9003 ann 08/18/09
Lenovo USB Fingerprint Keyboard 73P4730 ann 02/22/05
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09

• Wireless via 2.4GHz technology using a micro-size USB receiver.

Monitor Accessories

Monitor
ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 ann 11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) 2448MB6 ann 09/13/11
ThinkVision L2252p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09
ThinkVision L2515x Wide 22" (VGA, DVI, DP) 2578HB6 ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) 2572MB6 ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) 4420MB2 ann 09/13/11

• DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable 0A36537.

ThinkVision LT1421 Wide 14" Monitor with Protective Screen Cover (USB 2.0) 1452DS6

• Compatible on selected Lenovo and ThinkVision monitors.

For more information on accessories:
www.lenovo.com/accessories
More information at www.lenovo.com/support/monitoraccessories

More information at www.lenovo.com/support/poweradapters

ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) 4420MB2 ann 09/13/11

• Compatible on selected Lenovo and ThinkVision monitors.

For more information on accessories:
www.lenovo.com/accessories
More information at www.lenovo.com/support/monitoraccessories

More information at www.lenovo.com/support/monitoraccessories

Monitor Accessories

Monitor
Lenovo USB-to-DVI Monitor Adapter 41R4490 ann 01/06/09
Lenovo Business Backbone 43R2476 ann 05/13/08
Lenovo Deluxe Expander Case 43R2478 ann 05/13/08
Lenovo Executive Leather Case 43R2480 ann 05/13/08
Lenovo Sport Backpack - Red 0A38896 ann 02/28/12
Lenovo Sport Slimcase - Red 0A38897 ann 02/28/12
Lenovo Sport Messenger - Red 0A38898 ann 02/28/12

More information at www.lenovo.com/support/cases
Lenovo luxury cases at www.lenovoluxurycases.com

Carrying Cases

Lenovo Easy Reach Monitor Stand 55Y9258
Kensington Twin Head Cable Lock 45K1620

• Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

Monitor
ThinkVision LT1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 ann 11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) 2448MB6 ann 09/13/11
ThinkVision L2252p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09
ThinkVision L2515x Wide 22" (VGA, DVI, DP) 2578HB6 ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) 2572MB6 ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) 4420MB2 ann 09/13/11

• DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable 0A36537.

ThinkVision LT1421 Wide 14" Monitor with Protective Screen Cover (USB 2.0) 1452DS6

• Compatible on selected Lenovo and ThinkVision monitors.

For more information on accessories:
www.lenovo.com/accessories
More information at www.lenovo.com/support/monitoraccessories

More information at www.lenovo.com/support/poweradapters

ThinkPad X220 Tablet Accessory Model 0A38833 ann 03/22/11

• Used with ThinkPad Ultrabase Series 3

ThinkPad Ultrabase Series 3 0A33932

For more information on accessories:
www.lenovo.com/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovoclickpick.com

An Options Compatibility Configurator for Lenovo systems
### ThinkPad X300 (6478) - TopSeller - withdrawn

#### Specifications

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB</th>
<th>SSD</th>
<th>IDE optical</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Mini PCIe UWB wireless</th>
<th>Mini PCIe Finger print reader cells</th>
<th>Battery - life</th>
<th>Battery - type</th>
<th>Weight</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6478-1HU SL7100</td>
<td>1.20</td>
<td>2GB</td>
<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>64GB SSD</td>
<td>DVD-RW</td>
<td>Intel 11n</td>
<td>Intel 11n</td>
<td>Verizon+GPS UWB</td>
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<tr>
<td>6478-1JU SL7100</td>
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<td>13.3&quot; WXGA+</td>
<td>Cam</td>
<td>64GB SSD</td>
<td>DVD-RW</td>
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<td>6</td>
<td>XP Pro Feb 08</td>
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</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Thinnest (starting at .75") and lightest (starting at 2.83 lb) notebook
- Latest connectivity options including WLAN, WWAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultra-thin display

### Environmental friendly

#### Preloaded operating system

- Some: Microsoft® Windows® XP Professional with Vista® COA
- Vista models: Vista Basic logo

#### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security
- (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- Corel® WinDVD™ (DVD+RW)
- Corel® WinDVD Creator (XP Pro DVD+RW models)

#### Accessories

- 65-watt (GMA graphics) AC Adapter
- Next Generation ThinkPad Roll Cage (in display cover)

#### Post-warranty annual maintenance agreements

- ThinkPlus™ 2-year LOR® 9x5 NBD 41C9175
- ThinkPlus 3-year LOR 9x5 NBD 41C9176
- ThinkPlus 4-year LOR 9x5 NBD 41C9177
- ThinkPlus 5-year LOR 9x5 NBD 41C9179

See footnotes for important warranty information

© Lenovo

US models announced February 26, 2008
US models withdrawn effective May 2009
### ThinkPad X300 (6477) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA SSD</th>
<th>IDE optical</th>
<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
<th>Mini PCIe Finger Battery reader cells</th>
<th>UWB wireless</th>
<th>Video preload</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>6477-1TU SL7100 1.20 2GB 13.3&quot; WXGA+ Cam 64GB SSD DVD±RW * Intel 11n²²* 6477-1UU SL7100 1.20 4GB 13.3&quot; WXGA+ Cam 64GB SSD DVD±RW * Intel 11n²²* 6477-02U SL7100 1.20 2GB 13.3&quot; WXGA+ Cam 64GB SSD DVD±RW * Intel 11n²²*</td>
<td>Finger 6 Business 32 Feb 08</td>
<td>Finger 6 Business 32 Feb 08</td>
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</table>

**Positioning**
- Thinnest (starting at under .75") and lightest (starting at 2.93 lb) notebook
- Latest connectivity options including WLAN, WWAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultrathin DVD
- Environmentally-friendly EPEAT Gold rating

**Diskette drive**
- None (use optional USB-based diskette drive)

**Audio support**
- 2GB or 4GB std / 4GB max / PC2-5300 667MHz DDR2, non-parity, 2GB 4GB and 4MB shared L2 cache

**Chipset**
- Mobile Intel GS965 Express Chipset (Graphics Memory Controller Hub): ICH8M-SFF-Enhanced I/O Controller Hub (SATA 1.5Gb/s, ATA-100 IDE), PCI Express x1, USB, LPC bus, Bluetooth, fingerprint / LPC bus (Atmel 97SC3203 TPM)

**Wireless antenna**
- UltraConnect™ II Antenna / on-off switch for all wireless radios

**Mini PCI Express Intel 11n²²**
- None

**WWAN uwp Verizon+GPS²²**
- None

**AT&T²³**
- None

**Turbo Memory UWB**
- None

**Modem**
- None

**Bluetooth²²**
- None

**Ethernet**
- Gigabit ethernet on systemboard, Intel 82566MM Ninevah (PHY), PCIe x1, PXE

**Intel AMT**
- Intel Active Management Technology (IATOM)

**Audio support**
- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

**Security chip**
- Trusted Platform Module, Atmel chip

**Fingerprint reader**
- Finger reader on palm rest, swipe sensor, supports the security chip

**Limited warranty²²**
- 3-years/1-year battery - EasyServ™ depot repair service / service upgrades²² available

- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM 40Y7735
- 128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)43N3406 USB 2.0 Portable Secure 320GB Hard Disk 43R2019

See footnotes for important warranty information

* Intel Centrino with vPro™ technology

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US models announced February 26 or April 14, 2008

US models withdrawn effective May 2009
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<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
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<td>SSD: DVD+RW Intel 11m™</td>
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<td>None</td>
<td>Finger 6</td>
<td>Business 32</td>
<td>P</td>
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- This model is part of the Global Models Plus program with limited onsite service. 3-year limited warranty
- Thinnest (starting at under .75") and lightest (starting at 2.93 lb) notebook
- Latest connectivity options including WLAN, WWAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultrathin DVD
- Environmentally-friendly EPEAT Gold rating

### Positioning

- Processor:
  - ThinkPad® 2 Duo processor SL7100 with low voltage, dual-core, Intel 64 Technology, Enhanced Intel SpeedStep technology, Intel Dynamic Acceleration, Execute Disable Bit, Virtualization Technology, 800MHz system bus, and 4MB shared L2 cache

- Memory:
  - 2GB std / 4GB max

- Diskette drive:
  - None (use optional USB-based diskette drive)

- EIDE DVD/CDRW:
  - Optional Bay

- Option Bay:
  - Modular bay for devices (DVD burner, battery), 7mm high

- Serial ATA disk:
  - 64GB

- Widescreen display:
  - 13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio

- Camera:
  - Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Graphics

- Intel Graphics Media Accelerator X3100 (GMA X3100), integrated in GS965, 16:10 aspect ratio, 250:1 contrast ratio, LED backlight

### Chipset

- Mobile Intel GS965 Express Chipset (Graphics Memory Controller Hub): Ich8m-SFF-Enhanced I/O Controller Hub (SATA 1.5Gb/s, ATA-100 IDE), PCI Express x1, USB, LPC bus, Bluetooth, fingerprint

### ExpressCard slot

- None

### MultiCard reader

- None

### Ports

- Three USB 2.0, external monitor (VGA DB-15), ethernet (RJ-45)

### Wireless antenna

- UltraConnect II Antenna / on/off switch for all wireless radios

### Mini PCI Express

- Intel 11m™

### Modem

- None (use optional USB-based modem)

### Ethernet

- Gigabit Ethernet on system board, Intel 82566MM Nineveh (PHY), PCIe x1, PXE

### Audio support

- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

### Security

- Power-on password, hard disk password, supervisor password, security keyhole

### Security chip

- Trusted Platform Module, Atmel chip, TCG 1.2-compliant

### Fingerprint reader

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

### Limited warranty

- 3-years/1-year battery, limited onsite service. 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

### Additional features

- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 2GB PC2-5300 DDR2 SODIMM 40Y7735
- 128GB SSD SATA 1.8" (2.5" cover) 43N3406
- USB 2.0 Portable Diskette Drive 05K9276
- USB 2.0 Lenovo Modem 43R1814
- USB 2.0 Portable Secure 32GB Hard Disk 43R2019
- USB 2.0 Super Multi-Burner Drive 41N5565
- USB 2.0 Lenovo Enhanced Port Replicator 43R8770
- ThinkPad Adjustable Notebook Stand 40Y7766
- Other accessories on O-X300 sheet

Preloaded operating system
- Vista Basic logo

Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- System Migration Assistant
- Norton Internet Security (90 days of virus definitions)
- Diskeeper® Home
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Microsoft Office 2007 Trial (60-day)
- EarthLink Trial (Vista Ultimate model)
- Sonic RecordNow and Drive Letter Access (DVD+RW)
- Corel® WinDVD™ (DVD+RW)

Supports ThinkVantage® technologies
- 65-watt (GMA graphics) AC Adapter Next Generation ThinkPad Roll Cage (in display cover)
- EPEAT® Gold rating
- ENERGY STAR® 4.0-compliant
- RoHS-compliant
- International Warranty Service 24 hour x 7 day® toll-free support during the warranty period via 800-426-7378

ThinkPlus™
- 2-year LOR® 9x5 NBD 41C9175
- 3-year LOR 9x5 NBD 41C9176
- 4-year LOR 9x5 NBD 41C9179
- 4-year P & L P/U Depot 41C9178
- 5-year P & L P/U Depot 41C9180

Post-warranty annual maintenance agreements
- @lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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*Intel Centrino with vPro™ technology

US model announced April 8, 2008
US model withdrawn effective May 2009
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*These small and medium business (SMB) models are part of the US TopSeller™ Program.

### Preloaded operating system

- Windows XP Professional preinstalled through distribution agreement with Genuine Windows Vista Business
- Windows Vista Business 32
- Windows Vista Business 64

### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVR:RW)
- Roxio MyDVD® (DVR:RW)
- Corel® WinDVD® (DVR:RW)

### ExpressCard

- Supports ThinkVantage® technologies

### Next Generation ThinkPad Roll Cage

- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service
- 24-hour x 7 day toll-free support during the warranty period via 800-426-7378

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

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**Footnotes:**

1. *Centrino®* 2 with vPro™ technology
2. US models withdrawn effective July, September, or December 2009
3. US models withdrawn effective April 2009

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(KOD2-1) January 2010
<table>
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<tr>
<th>Type-model</th>
<th>Low Voltage processor</th>
<th>GHz Memory</th>
<th>Wide-screen display</th>
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</table>

* These small and medium business (SMB) models are part of the US TopSeller™ Program

Preloaded operating system:
- Some: Windows XP Professional preinstalled through downgrade rights in Genuine Windows Vista™ Business
- Some: Genuine Windows Vista Business 32
- Some: Genuine Windows Vista Business 64
- Vista models: Vista Premium logo

Preloaded applications (all OSes; only some listed):
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan™ Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader™
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® iBusiness Edition (DVD:RW)
- Roxio MyDVD™ (DVD:RW)
- Corel® WinDVD™ (DVD:RW)

Positions
Processor
Thin and light; two spindles
Intel® Core™ 2 Duo processor SU9600 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

Memory
2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets,
Italics: standard memory in both sockets; no sockets available;
Non-italics: standard memory in 1 socket; 1 socket available

Diskette drive
None (use optional USB-based diskette drive)

EIDE DVD:RW
UltraThin DVD burner, 7mm high, removable from Option Bay, tray-in

Option Bay Modular bay for devices (DVD burner, battery), 7mm high

Serial ATA disk
Some: 64GB 80GB, or 128GB Solid State Drive (SSD) / SATA 3.0Gb/s
Some: 250GB (5400 rpm) / SATA 1.5Gb/s, Active Protection System™
All: 1.8" wide, 8mm high, removable, upgradable, shock mounted storage

Widescreen display
13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight,
300 nits, 16:10 aspect ratio, 250:1 contrast ratio

Camera
Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Integrated graphics
Intel Graphics Media Accelerator 4500HM (GMA 4500HM), in GS45
External monitor support via analog VGA DB-15 connector or DisplayPort (supports single-link DVI-D via cable 45J7915),
Maximum external resolution: 2048x1536@75Hz (VGA, DisplayPort)

Keyboard
89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)

TrackPoint® TrackPoint®: positioning device, “Press-to-Select,” Intel Scal Scroll Bar™, magnifying glass

Touch pad
UltraNav™, wide touch pad below keyboard, Tap zones, scrolling regions label, supports multi-touch function

ThinkLight™ Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
3-cell: (WxDxH): 12.5" x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm
6-cell: (WxDxH): 12.5" x 9.09" x 0.85-0.92"; 318mm x 231mm x 18.6-25.9mm

Weight
3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 lb (1.52kg)

Case color
Black

Case material
Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

Battery - type Battery - life
Lithium Ion 6-cell, supports optional Option Bay 3-cell battery (for two batteries),
3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

Chipset
Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub):
ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express x1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)

ExpressCard
None

Multicard reader
None

Ports
Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Wireless antenna
UltraConnect™ LI Antenna / on-off switch for all wireless radios

Mini PCI Express
Three Mini PCI Express slots / 802.11 and WWAN are customer upgradable

Intel 5100™ WWAN upg
Some: Wireless WAN upgradable, requires Verizon® (43R9151) or AT&T® (43R9152)

Intel 5100™ AT&T®
Some: Wireless WAN, Ericsson chipset, Mini PCIe adapter and SIM

GPRS/WMCOMA/HSPA, GPS; service contract required with AT&T

Turbo Memory
None

Modem
None (use optional USB-based modem)

Bluetooh™ Bluetooth 2.1 wireless, 2USB interface, VIA CHIP, LED indicator

Ethernet
802.567LM Gigabit Network Connection (Bozaiman), PHV, PCIe x1

Intel iMRT Intel Active Management Technology (AMT)
Audio support
High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security
Power-on password, hard disk password, supervisor password, security keyhole

Security chip
Trusted Platform Module, integrated in ICH9M, TC1.2-compliant

Fingerprint reader
Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty
3-years / 1-year battery - EasyServ™ depot repair service / service upgrades available

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See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

Lenovo

US models announced July 7, 2009

US models withdrawn effective December 2009

Lenovo

(KOD2-6) January 2010
- These small and medium business (SMB) models are part of the US TopSeller™ Program

### Preloaded operating system

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32

### Preloaded applications (only some listed)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (Fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)

### Supports ThinkVantage technologies

- 65-watt (GMA graphics) AC Adapter
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service

24 hour x 7 day toll-free support during the warranty period after via 800-426-7378

### ThinkPlus™ 3-year LOR 9x5 NBD

- ThinkPlus™ 4-year LOR 9x5 NBD
- ThinkPlus™ 5-year LOR 9x5 NBD
- ThinkPlus™ 4-year P&L P/U Depot
- ThinkPlus™ 5-year P&L P/U Depot

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

---

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<th>Type-model</th>
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<th>Memory 4GB or 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets</th>
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<tr>
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</table>

### Disk

- SATA GB RPM
- DVD±RW
- Intel 5100® WWAN upg
- None

### Mini PCIe

- 802.11 WiFi
- Intel 802.11a/b/g/n wireless
- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

### WWAN

- None (use optional USB-based modem)
- Intel 5100 WWAN upg

### Audio support

- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack
- Intel Active Management Technology (I AMT)

### Bluetooth

- Bluetooth 2.1 wireless, USB 2.0 interface via ICH, LED indicator

### Camera

- 1.8" wide, 8mm high, removable, upgradable, shock mounted storage
- 250GB (5400 rpm) / SATA 1.5Gb/s, Active Protection System™
- Intel Centrino® 2 with vPro™ technology

### Chipset

- Mobile Intel GS45 Express Chipset
- Intel 802.11 and WWAN are customer upgradable
- supports optional Option Bay 3-cell battery (for two batteries)
- 3-cell: up to 4.3 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

### Display

- 300 nits, 16:10 aspect ratio, 250:1 contrast ratio
- Maximum external resolution: 2048x1536@75Hz (VGA, DisplayPort)
- WXGA+ (1440x900) TFT color, in GS45

### Fingerprint reader

- FingerPrint reader on palm rest, swipe sensor, supports the security chip
- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

### Manual

- These small and medium business (SMB) models are part of the US TopSeller™ Program

**Note:**

- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional 32
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (Fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition (DVD+RW)
- Roxio® MyDVD® (DVD+RW)
- Corel® WinDVD® (DVD+RW)
### Low Voltage processor

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### Memory

- 2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable
- 204-pin SO-DIMM sockets
- Standard memory in both sockets; no sockets available
- Standard memory in one socket; one socket available

### Widescreen display

- 13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio
- Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

### Integrated graphics

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45
- External monitor support via analog VGA DB-15 connector or DisplayPort (supports single-link DVI-D via cable 45J7915)
- Maximum external resolution: 2048x1536 @75Hz (VGA, DisplayPort)

### Preloaded applications

- Adobe® Reader®
- Adobe Flash® Player
- Skype® for Windows
- Microsoft Office 2010 preloaded; purchase product key to activate
- Microsoft Research AutoCollage Touch
- Roxio® Creator® Business Edition (DVD±RW)
- Roxio MyDVD® (DVD±RW)
- Corel® WinDVD® (DVD±RW)

### Battery

- 10 years for ThinkPad® 2 Duo processor SU9600 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

### System preloads

- Professional 32
- Professional 64

### Preloaded operating system

- Some: Genuine Windows® 7
- Professional 32
- Some: Genuine Windows® 7
- Professional 64

### US models withdrawn effective September 2010

- US models withdrawn effective September 2010

### Full specifications

- AT&T®
- None

- 23 years of virus definitions
- 22 years of virus definitions

### Intel Centrino® 2 with vPro™ technology

- Supports Intel® vPro™ technology
- 65-watt (GMA graphics) AC Adapter
- ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service
- 17 month x 7 day toll-free support during the warranty period via 800-426-7378

### Intel Centrino® 2 with vPro™ technology

- Some: Windows® 7
- Professional 32

### Lenovo Online Data Backup

- Some: Windows® 7
- Professional 64

### Rescue and Recovery®

- Some: Windows® 7
- Professional 64

### Access Connections™

- Some: Windows® 7
- Professional 64

### Password Manager

- Some: Windows® 7
- Professional 64

### ThinkVantage Technology

- Some: Windows® 7
- Professional 64

### ThinkPlus®

- Some: Windows® 7
- Professional 64

### Intel® Centrino® 2 with vPro™ technology

- Intel® Centrino® 2 with vPro™ technology
- Intel® Centrino® 2 with vPro™ technology

### Lenovo ThinkPlus® warranty

- Lenovo ThinkPlus® warranty
- Lenovo ThinkPlus® warranty

### Footnotes

- See footnotes for important warranty information
- © Lenovo (KOD2-8) September 2010
- © Lenovo
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</table>

- Latest connectivity options including WLAN, WWAN, UWB, and GPS
- Cutting edge technologies including LED backlight, Solid State Drive, and ultraThin DVD

Positioning Processor Thin and light; two spindles Intel® Core™ 2 Duo processor SU9400 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache

Memory 2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both socket; Non-italics: standard memory in 1 socket; 

EIDE DVD±RW Option Bay battery Some: Ultrathin DVD burner, 7mm high, removable from Option Bay, tray-in

Option Bay Battery Some: 3-cell Li-Polymer second battery in Option Bay

Serial ATA disk Modular bay for devices (DVD burner, battery), 7mm high

Widescreen display Camera Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

Integrated graphics Intel Graphics Media Accelerator 4500MHDD (GMA 4500MDH), in GS45

Keyboard 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)

TrackPoint® TrackPoint® pointing device, 3"Press-to-Select," Internet Scroll Bar12, magnifying glass

Touch pad UltraNavTM, wide touch pad below keyboard, Tap Zones, scrolling regions label

ThinkLightTM Illuminates the keyboard to improve visibility in low-light conditions

Dimensions Weight Height Case color Case material 3-cell: (WxDxH): 12.5" x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm 3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 (1.52kg) Black Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium Alloy

Battery - type Battery - life 6-cell: 13.3" WXGA+ Cam 64GB SSD DVD

Chipset Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);ICH9M-SFF-Enhanced I/O Controller Hub (SAT A 9.0.0.0, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-IDE bridge (for optical)

ExpressCard None

Multicard reader None

Ports Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)

Wireless antenna Mini PCI Express Intel 51000a WiMAX

Mini PCI Express Intel 51000a WiMAX

WWAN upg Verizon16

Turbo Memory UWB None

New 2010

USB

Bluetooth® Intel AMT Ethernet Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

Audio support High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

Security Power-on password, hard disk password, supervisory password, security keyhole

Security chip Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

Fingerprint reader Fingerprint reader on palm rest, swipe sensor, supports the security chip

Limited warranty 3-years 1-year battery - EasyServ®17 depot repair service / service upgrades22 available

1GB PC3-8500 DDR3 L H SODIMM 55Y3706 ThinkPad Battery 49 (3-cell) 43R1965

2GB PC3-8500 DDR3 L H SODIMM 55Y3707 ThinkPad Battery 49+ (6-cell) 43R1967

Other accessories on O-X300 sheet

See footnotes for important warranty information

Intel Centrino® 2 with vPro™ technology

Lenovo

US models announced Aug 26, Sep 2, Nov 25 or Dec 2, 2008

US models withdrawn effective July 2009 or March 2010

Preloaded applications14 (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- FingerPrint Software (fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor® (30 days of virus definition)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD®
- Corel® WinDVD® (DVD±RW)

Preloaded operating system10
- Some: Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business
- Some: Genuine Windows Vista Business 32

Vista models: Vista Premium logo

Supports ThinkVantage® technologies

65-watt (GMA graphics) AC Adapter Next Generation ThinkPad Roll Cage (in display cover) EPEAT® Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service17 24 hour x 7 day17 toll-free support during the warranty period17 via 800-426-7378

ThinkPlus® 3-year LOR 9x5 NBD

ThinkPlus® 4-year LOR 9x5 NBD

ThinkPlus® 5-year LOR 9x5 NBD

ThinkPlus® 4-year P&L P/U Depot

ThinkPlus® 5-year P&L P/U Depot

Post-warranty maintenance agreements at lenovo.com/thinkplus/warranty
## ThinkPad X301 (2774) - Education - withdrawn

**Personal Systems Reference (PSREF)**

| Positioning/Processor | Thin and light; two spindles
|-----------------------|--------------------------------------------------|
| Memory                | 2GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Non-italics: standard memory in 1 socket; 1 socket available
| EIDE DVD±RW Option Bay option Bay | None None
| Option Bay serial ATA disk | 64GBB Solid State Drive (SSD): SATA 3.0Gb/s, 1.8" wide, 8mm high, removable, upgradable, shock mounted storage
| Widescreen display camera | 13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio, Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0
| Integrated graphics | Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45
| Keyboard | 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)
| TrackPoint touch pad ThinkLight | TrackPoint: pointing device, “Press-to-Select,” Internet Scroll Bar, magnifying glass UltraNav, wide touch pad below keyboard, Tap Zones, scrolling regions label
| Dimensions weight case material battery - type | 3-cell: (WxHxD): 12.5” x 9.09" x 0.73-0.92"; 318mm x 231mm x 18.6-23.4mm 6-cell: (WxHxD): 12.5” x 9.09" x 0.85-0.92"; 318mm x 231mm x 18.6-25.9mm 3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 (1.52kg) Black Carbon-fiber-reinforced plastic (top), glass-fiber-reinforced plastic (side walls); Base: Magnesium alloy
| Battery - life | 3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr
| Chipset expresscard multicard reader ports | Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub);ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express, 1.1, PCI 2.3, security chip, ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical) None None Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)
| Wireless antenna mini PCI express WWAN upg turbo memory UWB modem | UltraConnect II Antenna / on-off switch for all wireless radios Three Mini PCI Express slots / 802.11 and WWAN are customer upgradable 11a/b/g/n wireless®, Mini PCIe adapter, Intel Ultimate N WiFi Link 5300, 3x3 Wireless LAN upgradeable, requires Verizon® (43R9151) or AT&T® (43R9152) None None
| Bluetooth ethernet audio support security chip | Bluetooth 2.1 wireless, USB 2.0 interface via ICH, LED indicator Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIex1 High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant
| Fingerprint reader | Fingerprint reader on palm rest, swipe sensor, supports the security chip
| Limited warranty | 3-years/1-y battery - EasyServ™ depot repair service / service upgrades available

### Preloaded operating system
- Genuine Windows® Vista™ Ultimate 32
- Windows® Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)

### Preloaded applications
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerprit Software (Fingerprint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- Lenovo System Toolbox
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Windows Live™ Toolbar
- Microsoft® Office 2007 Trial (60-day)

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**Table:**

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<th>Type-model</th>
<th>Low Voltage processor GHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Camera</th>
<th>Disk SATA GB SSD</th>
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<th>Mini PCIe 802.11 wireless</th>
<th>Mini PCIe WWAN or Turbo</th>
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- **These models have an EasyServ™ depot repair service 3-year limited warranty**
- **Educational models are organized only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.**
- **Microsoft® Office Ultimate 2007 Academic Edition:** Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.

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**See footnotes for important warranty information**

**US model announced February 17, 2009**

**US model withdrawn effective March 2010**

© Lenovo (KOD2-4) March 2010
### ThinkPad® X301 (4057) - Onsite - withdrawn

**Personal Systems Reference (PSREF)**

#### Low Voltage processor

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<th>Type-model</th>
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<td>4057-LDU</td>
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<td>2GB</td>
<td>13.3&quot; WXGA+ Cam</td>
<td>64GB SSD</td>
<td>DVD±RW</td>
<td>Intel 51000 WWAN upg</td>
<td>None</td>
<td>Yes</td>
<td>3 XP Pro G P Aug08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These models are part of the Global Models Plus program with limited onsite service and 3-year limited warranty.
- Latest connectivity options including WLAN, WWAN, UWB, and GPS.
- Cutting edge technologies including LED backlight, Solid State Drive, and ultra thin DVD.
- Environmentally-friendly EPEAT Gold rating.

#### Positioning

- Thin and light; two spindles

#### Processor

- Intel® Core™ 2 Duo processor SU9400 with ultra low voltage, dual-core, Intel HD Boost, 800MHz system bus, and 3MB L2 cache.

#### Memory

- 2GB or 4GB std / 4GB max / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; standard memory in both sockets; no sockets available.

#### Diskette drive

- None (use optional USB-based diskette drive)

#### EIDE DVD±RW

- Ultrathin DVD burner, 7mm high, removable from Option Bay, tray-in

#### Serial ATA disk

- Modular bay for devices (DVD burner, battery), 7mm high

#### Widescreen display

- Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0

#### Graphics

- Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GS45

#### Keyboard

- 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLock)

#### TrackPoint

- "Press-to-Select," Internet Scroll Bar, magnifying glass

#### Touchpad

- UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label

#### Dimensions

- 13.3" (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio

#### Weight

- 3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 (1.52kg)

#### Case material

- Color: black; Display cover: Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); Base: Magnesium alloy

#### Battery - type

- Lithium Polymer 3-cell or Lithium Ion 6-cell

#### Battery - life

- 3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr

#### Chipset

- Mobile Intel GS45 Express Chipset (Graphics Memory Controller Hub); ICH9M-SFF-Enhanced I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, security chip, Ethernet MAC), Marvell® SATA-to-EIDE bridge (for optical)

#### ExpressCard slot

- None

#### Multicard Reader

- None

#### Ports

- Three USB 2.0, external monitor (VGA DB-15 connector or DisplayPort), ethernet (RJ-45)

#### Wireless antenna

- UltraConnect™ II Antenna / on-off switch for all wireless radios

#### Mini PCI Express

- Three Mini PCI Express slots / 802.11 and WWAN are customer upgradable

#### Turbo Memory

- None

#### UWB

- None

#### Bluetooth™

- None (use optional USB-based modem)

#### Ethernet

- Intel 82567LM Gigabit Network Connection (Boazman), PHY, PCIe x1

#### Audio support

- High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack

#### Security

- Power-on password, hard disk password, supervisor password, security keyhole

#### Security chip

- Trusted Platform Module, integrated in ICH9M, TCG 1.2-compliant

#### Fingerprint reader

- Fingerprint reader on palm rest, swipe sensor, supports the security chip

#### Limited warranty

- 3-years/1-year battery, limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available

#### Preloaded operating system

- Some: Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)
- Some: Genuine Windows Vista Business 32

#### Preloaded applications

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Fingerpoint Software (fingerpoint models)
- McAfee VirusScan® Plus with SiteAdvisor™ (30 days of virus definitions)
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Windows Live™ Toolbar
- Windows Live Search
- Microsoft® Office 2007 Trial (60-day)
- Roxio® Creator® Business Edition
- Roxio MyDVD® (DVD+RW)

#### Supports ThinkVantage® technologies

- 65-watt (GMA graphics) AC Adapter Next Generation ThinkPad Roll Cage (in display cover)
- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- RoHS-compliant
- International Warranty Service 17
- 24 hour x 7 day toll-free support during the warranty period via 800-426-7378

#### Windows Vista®

- 3-year LOR® 9x5 NBD
- ThinkPlus® 3-year LOR® 9x5 NBD
- ThinkPlus® 5-year LOR® 9x5 NBD
- ThinkPlus® 4-year P&L P/U Depot
- ThinkPlus® 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

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US models announced August 26, 2008
US models withdrawn effective July 2009
<table>
<thead>
<tr>
<th>Feature</th>
<th>Specifications</th>
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</thead>
<tbody>
<tr>
<td>Type-model</td>
<td>4057-ETU SU9400</td>
</tr>
<tr>
<td>Processor</td>
<td>Intel Core™ 2 Duo processor SU9400 with ultra low voltage, dual-core,</td>
</tr>
<tr>
<td></td>
<td>Intel HD Boost, 800MHz system bus, and 3MB L2 cache</td>
</tr>
<tr>
<td>Memory</td>
<td>2GB std / 4GB max² / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable,</td>
</tr>
<tr>
<td></td>
<td>204-pin SO-DIMM sockets; Non-Italics: standard memory in 1 socket; 1 socket available</td>
</tr>
<tr>
<td>Diskette drive</td>
<td>None (use optional USB-based diskette drive)</td>
</tr>
<tr>
<td>Option Bay</td>
<td>Modular bay for devices (DVD burner, battery), 7mm high</td>
</tr>
<tr>
<td>Serial ATA disk</td>
<td>64GB² Solid State Drive (SSD) / Sata 3.0Gb/s, 1.8” wide, 8mm high, removable, upgradable, shock mounted storage</td>
</tr>
<tr>
<td>Widescree display</td>
<td>13.3” (338mm) WXGA+ (1440x900) TFT color, anti-glare, LED backlight, 300 nits, 16:10 aspect ratio, 250:1 contrast ratio</td>
</tr>
<tr>
<td>Camera</td>
<td>Camera on top of screen, 1.3-megapixel, fixed focus, USB 2.0</td>
</tr>
<tr>
<td>Keyboard</td>
<td>89-key, ThinkVantage button, spill-resistant, multimedia Fn keys, illuminated buttons (Power, ThinkVantage, Mute, and CapsLk)</td>
</tr>
<tr>
<td>TrackPoint®</td>
<td>TrackPoint® pointing device, “Press-to-Select,” Internet Scroll Bar®, magnifying glass</td>
</tr>
<tr>
<td>Touch pad</td>
<td>UltraNav®¹¹, wide touch pad below keyboard, Tap Zones, scrolling regions label</td>
</tr>
<tr>
<td>ThinkLight™</td>
<td>Illuminates the keyboard to improve visibility in low-light conditions</td>
</tr>
<tr>
<td>Dimensions²</td>
<td>3-cell: (WxDxH): 12.5” x 9.09” x 0.73-0.92”; 318mm x 231mm x 18.6-23.4mm</td>
</tr>
<tr>
<td></td>
<td>6-cell: (WxDxH): 12.5” x 9.09” x 0.85-0.92”; 318mm x 231mm x 18.6-25.9mm</td>
</tr>
<tr>
<td>Weight²</td>
<td>3-cell: from 3.16 lb (1.43kg); 6-cell: from 3.35 (1.52kg)</td>
</tr>
<tr>
<td>Case material</td>
<td>Black; Display cover: Carbon-fiber reinforced plastic (top),</td>
</tr>
<tr>
<td></td>
<td>glass-fiber reinforced plastic (side walls); Base: Magnesium alloy</td>
</tr>
<tr>
<td>Battery - type</td>
<td>Lithium Polymer 3-cell; supports optional Option Bay 3-cell battery (for two batteries)</td>
</tr>
<tr>
<td>Battery - life¹⁰</td>
<td>3-cell: up to 3.4 hr; 6-cell: up to 5.5 hr; 6-cell and Option Bay battery: up to 9.5 hr</td>
</tr>
<tr>
<td>Chipset</td>
<td>Mobile Intel G45 Express Chipset (Graphics Memory Controller Hub):</td>
</tr>
<tr>
<td>ExpressCard slot</td>
<td>None</td>
</tr>
<tr>
<td>Multicard Reader</td>
<td>None</td>
</tr>
<tr>
<td>Ports</td>
<td>Three USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)</td>
</tr>
<tr>
<td>Wireless antenna</td>
<td>UltraConnect™ II Antenna / on-off switch for all wireless radios</td>
</tr>
<tr>
<td>Mini PCIe Express</td>
<td>Three Mini PCIe Express slots / 802.11 and WWAN are customer upgradable</td>
</tr>
<tr>
<td>Intel 5300²</td>
<td>11a/b/g/n wireless², Mini PCIe adapter, Intel WiFi Link 5300, 3x3 (Shirley Peak)</td>
</tr>
<tr>
<td>WWAN upg</td>
<td>Wireless WWAN upgrade, requires Verizon® (43R9151) or AT&amp;T (43R9152)</td>
</tr>
<tr>
<td>Turbo Memory UWB</td>
<td>None</td>
</tr>
<tr>
<td>WWAN</td>
<td>None</td>
</tr>
<tr>
<td>Intel AMT</td>
<td>Intel Active Management Technology (iAMT)</td>
</tr>
<tr>
<td>Audio support</td>
<td>High Definition (HD) Audio, AD1984A codec / stereo speakers, 1 watt / volume up, down, mute buttons / digital microphone, mic input jack, headphone jack</td>
</tr>
<tr>
<td>Security</td>
<td>Power-on password, hard disk password, supervisor password, security keyhole</td>
</tr>
<tr>
<td>Security chip</td>
<td>Trusted Platform Module, integrated in ICH9, TCG 1.2-compliant</td>
</tr>
<tr>
<td>Fingerprint reader</td>
<td>Fingerpring reader on palm rest, swipe sensor, supports the security chip</td>
</tr>
<tr>
<td>Limited warranty</td>
<td>3-years/1-year battery, limited onsite service®, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades® available</td>
</tr>
</tbody>
</table>

**Footnotes:**

- ¹² This model has a limited onsite service® 3-year limited warranty
- ² Educational models are available only to public or private K-12 or higher accredited schools and operated exclusively for educational purposes for use by qualified students and teachers.
- ³ Microsoft® Office Ultimate 2007 Academic Edition: Only valid for sale to students, faculty and staff of accredited educational institutions in the United States.
ThinkPad® X300, X301 Accessories - withdrawn

Personal Systems Reference (PSREF)

Memory

**X300:**
- 1GB PC2-5300 DDR2 SODIMM 40Y7734
- 1GB PC2-5300 DDR2 SODIMM (25-Pack) 51J0502
- 2GB PC2-5300 DDR2 SODIMM 40Y7735
- 2GB PC2-5300 DDR2 SODIMM (25-Pack) 51J0548

**X301:**
- 1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
- 1GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4385
- 2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
- 2GB PC3-8500 DDR3 L-H SODIMM (25-Pack) 57Y4386

Storage and removable storage

- 1.8" 250GB Disk SATA 3.0Gb/s (5400 rpm) 43N3418
- 128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) 43N3406
- 256GB FDE SSD SATA 3Gb/s (2.5" cover) 43N3417

USB

- USB 2.0 Portable 320GB Hard Disk 45K1689
- USB 2.0 Portable 500GB Hard Disk 45K1690
- USB 2.0 Portable Secure 160GB Hard Disk 43R2018
- USB 2.0 Portable Secure 320GB Hard Disk 43R2019
- eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400
- USB 2.0 Portable DVD Burner 43N3264

Wireless WAN (Mini PCI Express)

- X301 WWAN upgradable models:
  - Verizon® WWAN UNDP Broadband Mini PCIe 43R9151
  - AT&T® WWAN HSPA Broadband Mini PCIe 43R9152

ThinkPad Expansion

- Lenovo® Essential Notebook Stand 45J0292
- Lenovo® USB Port Replicator with Digital Video 45K1610

Keyboard

- TrackPoint Cap Collection 73P2698
- US Numeric Keypad 33L3225
- Preferred Pro USB Keyboard 73P2520
- Enhanced Performance USB Keyboard 73P2620
- Ultrasmall Wireless Keyboard and Mouse 57Y4700

Security

- Kensington® MicroSaver® Cable Lock 73P2582
- Kensington® Twin Head Cable Lock 45K1620
- Lenovo Security Cable Lock 57Y4303

Multimedia

- ThinkPad In-Ear Headphones 57Y4488

Modem

- USB 2.0 Lenovo Modem 43R1814

Batteries

- ThinkPad Battery 49 (3-cell) 43R1965
- ThinkPad Battery 49+ (6-cell) 43R1967
- ThinkPad Battery 50 (3-cell, bay) 43R1966
- ThinkPad External Battery Charger 40Y7625

Monitors

- Lenovo L2230x Wide 21.5" Monitor 5453HB1
- ThinkVision™ L1711p 17" Monitor 5047HB2
- ThinkVision L1900p 19" Monitor 4431HE1
- ThinkVision L1951p Wide 19" Monitor 2448B6
- ThinkVision L2250p Wide 22" Monitor 2572HB6
- ThinkVision L2251p Wide 22" Monitor 2572HD6
- ThinkVision L2251x Wide 22" Monitor 2578B6
- ThinkVision L2321x Wide 23" Monitor 4014HB6
- ThinkVision L2440p Wide 24" Monitor 4420HB2

Monitor Accessories

- Lenovo DisplayPort to VGA Monitor Cable 57Y4393
- DisplayPort to Single-link DVI-D Cable 45J7915

Carrying Cases

- ThinkPad Ultraportable Case 41US062
- ThinkPad 15W Case Sleeve 51J0477
- Lenovo Business Messenger Case 51J0475
- Lenovo Messenger Max 41US523
- Lenovo Performance Backpack 41US524
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business Backpack 43R2482
- ThinkPad Deluxe Expander Case 43R2478

More information at www.lenovoluxurycases.com

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

- Palm device charge tip (L7)
- Blackberry charge tip (L8a)
- iPhone USB Charge Tip (L10a)
- Generic Micro USB charge tip (L18)

Carrying Cases

Up to 13.3" widescreen models:
- ThinkPad Ultraportable Case 41US062

Up to 15.4" widescreen models:
- ThinkPad 15W Case Sleeve 51J0477
- Lenovo Business Messenger Case 51J0475
- Lenovo Messenger Max 41US523
- Lenovo Performance Backpack 41US524
- ThinkPad Business Topload Case 43R2476
- ThinkPad Business Backpack 43R2482
- ThinkPad Deluxe Expander Case 43R2478

More information at www.lenovoluxurycases.com

More information at www.lenovopowertips.com

For more information on ThinkPad accessories, please visit:
- www.lenovo.com/accessories
- www.lenovo.com/support/security
- www.lenovo.com/support/notebookaccessories
- www.lenovo.com/support/accessoriesguide

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(O-X300) September 2010
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA GB</th>
<th>PCle Mini Card</th>
<th>PCle Mini Card WWAN</th>
<th>Finger print reader</th>
<th>Blue-tooth</th>
<th>Ext Battery cells</th>
<th>Intel AMT</th>
<th>Intel vPro</th>
<th>Anno Date Preload(mmyyy)</th>
<th>Ann Date Preload(mmyyy)</th>
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</thead>
<tbody>
<tr>
<td>1286-2XU</td>
<td>i7-2620M</td>
<td>4GBx1</td>
<td>13.3&quot; HD Prem</td>
<td>720p</td>
<td>160G</td>
<td>SSD</td>
<td>Intel 6300</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>BT</td>
<td>No</td>
<td>No IAMT</td>
<td>No vPro</td>
<td>08/11</td>
<td>08/11</td>
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<tr>
<td>1286-3LU</td>
<td>i7-2640M</td>
<td>4GBx1</td>
<td>13.3&quot; HD Prem</td>
<td>720p</td>
<td>160G</td>
<td>SSD</td>
<td>Intel 6300</td>
<td>WWAN upg</td>
<td>Finger</td>
<td>BT</td>
<td>No</td>
<td>No IAMT</td>
<td>No vPro</td>
<td>12/11</td>
<td>12/11</td>
</tr>
</tbody>
</table>

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- Microsoft® Office 2010 Preload Key Ready (O10PKR)

Positioning: Premiere mobility, performance, and style; one spindle

Processor: Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology

Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

Memory: 8GB max / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket (8GB is maximum memory for Lenovo® installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L+H SODIMM 55Y3711)

Optical Disk: None

Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high

Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™

mSATA SSD: None

Display: (Premium) 13.3" (338mm) HD (1366x768) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass

LED backlight, 350 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera: HD720p resolution, wide view angle, low light sensitive, fixed focus

Graphics: Intel HD Graphics 3000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort™ (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display;

Max external resolution: 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HD)@60Hz

Keyboard: 6 row, ThinkVantage® button, LED backlight, spill-resistant, multimedia fn keys

TrackPoint®: TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar®

Touchpad: None

ThinkLight™: UltraNav™, buttonless touchpad below keyboard, multi-touch

Dimensions: 13.26" (width) x 9.1" x 0.81-0.84"; 337mm x 231.1mm x 21.3mm

Weight: Integrated battery from 3.73 lb (1.69kg); integrated plus slice battery: from 4.52 lb (2.05kg)

Case material: Display cover: Magnesium/Aluminum + PC/ABS; Bottom: Magnesium/Aluminum

Standard Battery: Integrated Lithium Polymer 4-cell RapidCharge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery

Extended Battery: None

Battery - life: Integrated battery (38.4Whr): up to 5.2 hr; integrated plus slice battery (35.5Whr): up to 10 hr

Chipset: Mobile Intel GM67 Express Chipset

Multicard reader: 4-in-1 reader (SD, SDHC, SDXC, MMC)

ExpressCard: None

Ports: One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini-DisplayPort, HDMI), ethernet (RJ-45)

PCle Mini Card: Two PCI Express Mini Card slots

PCle WLAN: 11a/b/g/n®

PCle Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3

PCle WWAN: Wireless WAN upgradable

Modem: None

Modem Input: None

Bluetooth™: Bluetooth 3.0 wireless, LED indicator

Audio: Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIex1

Intel AMT: Intel Active Management Technology (IAMT)

Audio support: HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, consumer jack for headphones

Security: Power-on password, hard disk password, supervisor password, security keyhole, reset switch

Security Chip: Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited Warranty: 1-year - depot repair service / service upgrades** available

Preloaded operating system: 20

Some: Genuine Windows® 7 Professional 32

Some: Genuine Windows 7 Professional 64

Preloaded applications: 14 (only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft® Office 2010 preloaded; purchase product key to activate

Preloaded applications: 14 (only some listed)

- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo® SimpleTap

Supports ThinkVantage technologies

90-watt AC Adapter (RapidCharge)

ThinkPad Roll Cage (one-piece magnesium frame)

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

ROHS-compliant

International Warranty Service: 22 upgrade options,

For compatible accessories, please go to S-TA sheet

24 hour x 7 day® toll-free support during the warranty period®

For Lenovo service® upgrade options, please go to S-TA sheet

See footnotes for more detailed information

US model(s) announced August 2 or December 13, 2011

US model(s) withdrawn effective December 2012

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### Specifications

#### Processor
- **Type:** Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- **CPU:** Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), Intel Active Management Technology (iAMT)

#### Display
- **Screen Size:** 13.3" HD Widescreen (1366x768) TFT color
- **Resolution:** 2560x1600 (Mini-DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz
- **Color:** HD (1366x768) TFT color

#### Memory
- **Type:** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology
- **Speed:** 1333MHz
- **Cache:** 3MB

#### Hard Drive
- **Type:** Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- **Maximum:** 7mm high, Active Protection System

#### Optical Drive
- **Type:** Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high
- **Quality:** None

#### Storage
- **Battery - life:** up to 5.2 hr; integrated plus slice battery (35.5Whr): up to 10 hr
- **Weight:** from 3.73 lb (1.69kg)

#### Dimensions
- **Width:** 13.3W" (WxDxH): 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm
- **Height:** 13.3W" (WxDxH): 13.26" x 9.1" x 0.65-0.84"; 337mm x 231.1mm x 16.5-21.3mm

#### Multimedia
- **Audio:** HD720p resolution, wide view angle, light low sensitive, fixed focus
- **Camera:** HD720p, HD720p, HD720p

#### Connectivity
- **Wi-Fi:** 802.11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Wireless-N 1000, 1x2
- **Bluetooth:** 802.11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2

#### Security
- **Security chip:** Trusted Platform Module, TCG 1.2-compliant
- **Security feature:** Power-on password, hard disk password, supervisor password, security keyhole, reset switch

#### Special Features
- **Power:** 90-watt AC Adapter (RapidCharge)
- **Compatibility:** for compatible accessories, please go to O-X1 sheet; For Lenovo service upgrade options, please go to S-TA sheet

#### Additional Features
- **Operating system:** Windows 7
- **Battery:** 90-watt AC Adapter (RapidCharge)
- **Compatibility:** for compatible accessories, please go to O-X1 sheet; For Lenovo service upgrade options, please go to S-TA sheet

---

#### Preloaded Applications

**Preloaded operating system**
- Some: Genuine Windows 7 Home Premium 64
- Some: Genuine Windows 7 Professional 64

**Preloaded applications**
- Norton Internet Security 2011 (30 days of virus definitions)
- Adobe Reader
- Skype for Windows
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

---

### Additional Information

- Small and medium business (SMB) model(s), part of the US TopSeller® Program
- A depot repair service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

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### Contact Information

Lenovo

### Furthermore

For more information, please go to S-TA sheet.
ThinkPad® X1 (1293) - withdrawn

Personal Systems Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Camera</th>
<th>Disk</th>
<th>SATA</th>
<th>GB</th>
<th>rpm</th>
<th>PClie Mini Card WLAN</th>
<th>PClie Mini Card WWAN/mSATa</th>
<th>Carrier</th>
<th>Finger print reader</th>
<th>Bluetooth cells</th>
<th>Ext Battery Intel vPro GMP (P)</th>
<th>Global (G) Pre-load</th>
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</tbody>
</table>

- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning

Processor: Premiere mobility, performance, and style; one spindle

Memory: 8GB max / PC3-10600 1333MHz DDR3, non-parity, one 204-pin SO-DIMM socket

Optical SATA disk: None

SATA disk: None

Displays (Premium) 13.3” (338mm) HD (1366x768) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass, LED backlight, 390 nits, 16:9 aspect ratio, 300:1 contrast ratio

Camera: HD720p resolution, wide view angle, low light sensitive, fixed focus

Graphics: Intel HD Graphics 3000 in processor, external digital monitor support via HDMI™ or Mini DisplayPort (supports VGA analog monitor via Mini DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display; Max external resolution: 2560x1600 (Mini DisplayPort)@60Hz; 1920x1200 (HDMI)@60Hz

Keyboard: 6 row, ThinkVantage button, LED backlight, spill-resistant, multimedia Fn keys

TrackPoint®: ThinkPoint® pointing device, “Press-to-Select,” Internet Scroll Bar

Touchpad: UltraNav™, buttonless touchpad below keyboard, multi-touch

ThinkLight™: None

Dimensions: 13.3W” (WxOxD): 12.36” x 8.1” x 0.65-0.84”; 337mm x 213.1mm x 16.5-21.3mm

Weight: 3.93 lb (1.78kg); integrated plus slice battery: from 4.52 lb (2.05kg)

Display cover: Magnesium/Aluminum + PC/ABS; Bottom: Magnesium/Aluminum

Standard Battery: Lithium Polymer 4-cell Rapid Charge battery, 1000 cycle, supports standard or optional external 6-cell slice battery (0A36279) as 2nd battery

Extended Battery: Lithium Polymer 6-cell slice battery (ThinkPad Battery 39+, 0A36279), Rapid Charge

Chipset: Mobile Intel GM67 Express Chipset

Multicard reader: 4-in-1 reader (SD, SDHC, SDXC, MMC)

ExpressCard Ports: One USB 3.0, one USB 2.0, one powered USB 2.0/eSATA combo port, external monitor (Mini DisplayPort, HDMI), ethernet (RJ-45)

PClie Mini Card WLAN 4

PClie Mini Card WWAN

Some: 11a/b/g/n, 12a/b/g/n

WWAN

Some: Wireless WAN, Qualcomm Advanced-N 6205, 2x2

Power On Authentication, supports the security chip

Supports ThinkVantage® technologies

Preloaded operating system

- Some: Genuine Windows® 7 Home Premium 64
- Some: Genuine Windows 7 Professional 64

Ready to install applications (all OSes; only some listed)

- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox
- Lenovo SimpleTap

Preloaded applications (all OSes; only some listed)

- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate

Other specifications

See footnotes for more detailed information

© Lenovo

US model(s) announced May 17 or May 24, 2011

US model(s) withdrawn effective December 2012

(NGNT1-2) February 2013
ThinkPad® X1 (1294) - Onsite - withdrawn

Positioning Processor: 
Premiere mobility, performance, and style; one spindle
Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology

Memory: 
8GB max² / PC3-10600 DDR3, non-parity, one 204-pin SO-DIMM socket
(8GB is maximum memory for Lenovo installed only, and 4GB is maximum memory when customer installed using 4GB PC3-10600 DDR3 L+HD SODIMM 55Y3711)

Optical SATA disk: None
SATA 3.0Gb/s, 2.5" wide, 7mm high

Disk Sata All: removable, upgradable, Shock Mounted Hard Drive

SSD: None

Widescreen display: 
(Premium) 13.3" (338mm) HD (1366x768) TFT color, anti-glare display with glossy infinity Corning® Gorilla® Glass, HD720p resolution, wide view angle, low light sensitive, fixed focus

Camera: 
HD200p resolution, wide view angle, low light sensitive, fixed focus

Graphics: 
Intel HD Graphics 3000 in processor, external digital monitor via HDMI™ or Mini DisplayPort (supports VGA analog monitor via Mini-DisplayPort to VGA Monitor Cable 0A36536); supports dual independent display;
Max external resolution: 2560x1600 (Mini DisplayPort) @ 60Hz; 1920x1200 (HDMI) @ 60Hz

Keyboard: 
6 row, ThinkVantage button, LED backlight, spill-resistant, multimedia Fn keys

Touchpad: Optional

ThinkLight™: None

Chipset: 
Mobile Intel GM45 Express Chipset

Multicard reader: 4-in-1 reader (SD, SDHC, SDXC, MMC)

ExpressCard Ports: None

Pcie Mini Card WLan: Two Pcie Express Mini Card slots
Some: 11a/b/g/n, Pcie Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2
Some: 11a/b/g/n, Pcie Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3

WWAN: Wireless WAN upgradable

Modem: None

Bluetooth™: 
Bluetooth 3.0 wireless, LED indicator

Ethernet: Intel 82579LM Gigabit Network Connection (Lewisville), PHY, Pcie x1

Intel AMT: Intel Active Management Technology (IATM)

Audio support: HD Audio, Conexant 20672 codec, Dolby® Home Theater® v4 / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, mic mute button, combo audio/mic jack

Security: 
Power-on password, hard disk password, supervisor password, security keyhole, reset switch

Security chip: Trusted Platform Module, TCG 1.2-compliant

Fingerprint reader: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty: 3-years/1-year battery, limited onsite service†, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades² available

See footnotes for more detailed information
© Lenovo
US model(s) announced May 17 or May 24, 2011
US model(s) withdrawn effective December 2012

These models are part of the Global Models Plus program with limited onsite service† 3-year limited warranty
These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Preloaded operating system: Genuine Windows® 7 Professional 64

Ready to install applications: (30 days of virus definitions)

Preloaded applications: Norton™ Internet Security 2011

For Lenovo service upgrade options, go to O-X1 sheet;
For compatible accessories, please go to O-X1 sheet;
For Lenovo service upgrade options, please go to S-TA sheet
ThinkPad® X1 Accessories - withdrawn

Memory

4GB PC3-10600 DDR3 L-H SODIMM 55Y3711

*5 ThinkPad X1 has only one SO-DIMM socket and doesn't support adding additional memory.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk 45K1689
USB 2.0 Portable 500GB Hard Disk 45K1690
USB 2.0 Portable Secure 320GB Hard Disk 43R2019
USB 3.0 Secure 500GB Hard Drive 0A665619
USB 3.0 Secure 750GB Hard Drive 0A665616
USB 3.0 Secure 1TB Hard Drive 0A656621
Lenovo Slim USB Portable DVD Burner 0A33988

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models: ThinkPad Gobi™ Mobile Broadband Option 0A36185

ThinkPad Expansion

USB 2.0 Port Replicator with Digital Video 0A33942
ThinkPad USB 3.0 Dock 0A33970
Lenovo® Essential Notebook Stand 45J9292

Keyboard

TrackPoint Cap Collection 73P2698
Ultraslim Plus Wireless Keyboard and Mouse*2 0A34032
USB Numeric Keypad 33L3225
Preferred Pro USB Keyboard 73P5225
Enhanced Performance USB Keyboard 73P2620
ThinkPad USB Keyboard with TrackPoint 55Y9003
Lenovo® USB Fingerprint Keyboard 73P4730
Lenovo USB Smartcard Keyboard 51J0115

*3 Wireless via 2.4GHz technology using a micro-size USB receiver.

Mouse

Lenovo Optical Mouse (USB) 06P4069
Lenovo Laser Mouse (USB) 41U3074
ThinkPad USB Laser Mouse 57Y4635
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405
ThinkPad Travel Mouse (USB, Optical) 31P7410
ThinkPad Bluetooth Laser Mouse 0A36407
Lenovo Wireless Laser Mouse*2 0A36188

Multimedia

ThinkPad In-Ear Headphones with microphone 57Y4488

Modem

USB 2.0 Lenovo Modem 43R1814

Security

Lenovo Security Cable Lock 57Y4303
USB Gemplus GemPC Smart Card Reader 41N3040

Batteries

ThinkPad Battery 39+ (6-cell, slice) 0A36279
ThinkPad External Battery Charger*4 40Y7625

*4 Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter*5 40Y7696

*5 ThinkPad 65W AC Adapter 40Y7696 supports “Rapid Charge” only when ThinkPad X1 system is off.

ThinkPad 90W AC Adapter 40Y7659

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

Carrying Cases

Up to 13.3” widescreen models:
ThinkPad Ultraportable Case 41US5922

Up to 14” widescreen models:
ThinkPad 14W Case Sleeve 57Y4294

Up to 15.6” widescreen models:
Lenovo Messenger Max 41U5062

Monitor Accessories

ThinkVision LT1952p Wide 19” (VGA, DP, DVI-D) 692448MB6

More information at www.lenovo.com/support/monitoraccessories

More information at www.lenovo.com/support/cases

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

ThinkVision® L1711p 17” (VGA, DVI-D) 5047HB2

ThinkVision L1900p 19” (VGA, DVI-D) 4431HE1

ThinkVision LT1952p Wide 19” (VGA, DP, DVI-D) 2448MB6

ThinkVision L2250p Wide 22” (VGA, DVI-D) 2572HB6

ThinkVision L2251x Wide 22” (VGA, DVI-D) 2578HB6

ThinkVision LT1421 Wide 14” Mobile Monitor 4240MB2

More information at www.lenovo.com/support/poweradapters

ThinkVision LT2452p Wide 24” (VGA, DVI-D) 4420MB2

ThinkVision LT1421 Wide 14” Mobile Monitor with Protective Screen Cover (USB 2.0) 1452D56

Monitor Accessories

Lenovo USB-to-DVI Monitor Adapter 45K5296
Lenovo HDMI to VGA Monitor Cable 0B47092
Lenovo Mini-DisplayPort to VGA Monitor Cable 0A36536

Mini-DisplayPort to Single-link DVI Monitor Cable 0B47090
Mini-DisplayPort to DisplayPort Monitor Cable 0B47091
Lenovo USB Soundbar 0A36190
Lenovo Security Cable Lock 57Y4303
Lenovo Easy Reach Monitor Stand 55Y9258

More information at www.lenovo.com/support/monitoraccessories

For more information on accessories:

www.lenovo.com/accessories

Purchase Lenovo accessories

www.lenovo.com/support/accessories

Product specifications on Lenovo Support

www.lenovo.com/accessoriesguide

Option Compatibility Matrix (OCM) and accessory brochures

www.lenovopowertips.com

An Options Compatibility Configurator for Lenovo systems

© Lenovo (O-X1) February 2013
### ThinkPad G40 (January 2004) - withdrawn

#### Type-model Processor Screen Disk GB Comm Bay Battery Ethernet Workhorse: 

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Screen</th>
<th>Disk GB</th>
<th>Optical</th>
<th>Comm Bay</th>
<th>Battery</th>
<th>Ethernet on planar</th>
<th>Workhorse (W) or Global (G)</th>
<th>Avail date</th>
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<tr>
<td>2388-DAU</td>
<td>Celeron®</td>
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<td>802.11b</td>
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<td>10/100</td>
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<td>30GB CD</td>
<td>None</td>
<td>None</td>
<td>6-cell</td>
<td>10/100</td>
<td>802.11b</td>
<td>EasyServ</td>
</tr>
</tbody>
</table>

#### Processor
- **Powerful desktop replacement: three-spindle system**
- **Intel® Celeron® 2.4GHz** with 400MHz system bus or **Intel Pentium 4 at 2.6 or 3.0GHz** with 400MHz system bus

#### L2 cache
- **Celeron: 128KB**
- **Pentium 4: 512KB**
- **All: on die (at processor speed)**

#### Memory
- **US models withdrawn effective January or December 2005**
- **US models announced January 20, 2004**

#### Diskette drive
- **CD**: 3.5" 1.44MB, fixed, not removable, 12.7mm high
- **Some**: CD-ROM/CD-R/W: 24X/10X speed, fixed, not removable / 12.7mm high
- **Some**: DVD-ROM/CD-RW / 24X/10X/24X/8X3; speed, fixed, not removable / 12.7mm high

#### Display
- **Some**: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Some**: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- **Some**: 15.0" (381.0mm) SXGA+ (1140x900) TFT color / Active Matrix / 150 nits
- *all: one latch to unlatch and open with one hand*

#### Graphics
- **Integrated Intel Extreme® Graphics** / Direct AGP / in 852GM GMCH / uses main memory (8 to 32MB with 128MB memory; 8 to 64MB with 256MB +) / 133MHz / DMVT

#### Video out
- **Ports**: Video out

#### Ports
- **PC Card Std slots**: PC Card Std slots

#### Battery
- **Battery - type**: Lithium Ion or 12-cell / intelligent / removable
- **Battery - life**: 15.0 hr / 30L9195

#### Software
- **Windows XP Professional**
- **Microsoft® Windows® XP Professional**
- **Disk-to-Disk Recovery**
- **(in hidden protected area)**

#### Preloaded
- **features**
  - Access IBM
  - Access Connections
  - Adobe Reader
  - Norton AntiVirus (OEM edition)
  - PC-Doctor™
  - ThinkPad Utilities
  - Update Connector

#### License
- **License (CD not included)**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

#### Architecture
- **Intel® 852GM chipset** / 82852GM Graphics Memory Controller Hub (GMCH)
- **82801DB ICH4 M I/O Controller Hub (ATA-100 IDE, PCI bus, ethernet, MAC, Low Pin Count (LPC) interface, USB, Firmware Hub, PCI bus 2.2, 32-bit, 33MHz (TI©) / PCI1410A CardBus controller, Mini PCI) / LPC bus 33MHz (PC87393F Super I/O for diskette, parallel, PS/2)

#### PC Card Std slots
- **Ports**: One Type I, one Type II, or one Type III / CardBus 32-bit / PCI</HCI> 2.1 / integrated dongle
- **4 USB (Version 2.0) / parallel / external monitor support (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / PS/2 (for keyboard or mouse) / no serial or infrared

#### Video out
- **IEE 1394**: No video output
- **Wireless antenna**: Some (wireless models): UltraConnect® Antenna built into the display cover
- **Mini PCI**: None / One Mini PCI type III slot (Communications Bay) / not customer upgradable
- **Some**: external / not customer upgradable
- **Some**: 11b / 11a Wi-Fi®;** Wireless: Some (wireless models): 802.11b / 11a Wi-Fi®
- **Modem**: Some (wireless models): 802.11a/b/g Wireless CardBus Adapter
- **Audio support**: Soft audio / ICH AC 97 controller / DirectSound® support / AD1981B AC 97 codec / mono speaker / 2 watt / volume up, down, mute buttons / no internal mic / microphone input jack (3.5 mm) / microphone jack (3.5 mm) / no line in jack / Power-on-password / hard disk password / supervisor password / security keyhole / None
- **Security chip**: None

#### Limited warranty
- **1 year**: - EasyServ™ on-site pickup and delivery

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**Lenovo**

© Lenovo (G40) October 2005

See footnotes for important warranty information

US models announced January 20, 2004

US models withdrawn effective January or December 2005

Other ServicePac options at ibm.com/services/its/us/source/warnexmceu.pdf

Visit thinkpad.com/thinkadvantage

Universal 120 watt AC adapter

Asset ID**™**, (system-specific info in chip accessed over network)

PC 2001 and P E 2.0-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR®-compliant

ImageT Edge Servicemobile

International Warranty Service**†**

24 hour x 7 day toll-free warranty support during the warranty**†** via 800-IBM-SERV (426-7737)

ServicePac**™**, 1yr 9x5 NBD

ServicePac 2 yr 9x5 NBD

ServicePac 3 yr 9x5 NBD

ServicePac 4 yr 9x5 NBD

ServicePac 5 yr 9x5 NBD

ServicePac 2 yr P & L P/U Depot

ServicePac 3 yr P & L P/U Depot

ServicePac 4 yr P & L P/U Depot

ServicePac 5 yr P & L P/U Depot

Other ServicePac options at ibm.com/services/its/us/source/novammaspbleu.pdf

† Post-warranty annual maintenance agreements
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor Code</th>
<th>Speed</th>
<th>GHz Memory</th>
<th>Screen</th>
<th>Mini PCI Comm Bay</th>
<th>Cable</th>
<th>Ethernet</th>
<th>on planar</th>
<th>Battery</th>
<th>Small and medium business (SMB) models are part of the US Think Express Program</th>
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These small and medium business (SMB) models are part of the US Think Express Program

SOFTWARE

- Windows XP Professional
  - Microsoft® Windows® XP Professional
  - Disk-to-Disk Recovery (in hidden protected area)

Preloaded Software

- Access IBM
  - Access Connections
  - Adobe Reader
  - Rapid Restore™ PC
- Software Delivery Assistant
  - PC-Doctor
- ThinkPad Utilities
  - Update Connector™

Downloadable Software

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License

- CD (not included)
  - Lotus® SmartSuite® Millennium
  - Lotus Notes® Stand-alone Client

Universal 120 watt AC adapter

- Asset ID™, (system-specific info in chip accessed over network)

PC 2001 and PXE 2.0-compliant

- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- ImageUltra Services available
- International Warranty Service
- 24 hour x 7 day toll-free warranty support from date of ThinkPad purchase (including warranty period)

News and support during the warranty via 800-IBM-SERV (426-7378)

- Lotus® SmartSuite® Millennium
- Lotus Notes® Stand-alone Client

Post-warranty annual maintenance services

- ServicePac 2 yr P&L P/U Depot
- ServicePac 3 yr P&L P/U Depot
- ServicePac 4 yr P&L P/U Depot

Other ServicePac options at ibm.com/services/its/services/wamomxeu.pdf

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G40 (G40B) October 2005

See footnotes for important warranty information

US models announced May 6, 2003, or July 29, 2003

US models withdrawn effective October 2003, April 2004, January 2005, or December 2005
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<th>Speed GHz</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Screen</th>
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<th>Graphics</th>
<th>Mini PCI</th>
<th>Ethernet on Board</th>
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See footnotes for important warranty information.
US models announced October 19, 2004
US models withdrawn effective January or December 2005.
ThinkPad G41 (November 2004) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

Table: ThinkPad G41 Specifications

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<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Cache</th>
<th>Memory</th>
<th>Screen</th>
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Positioning Processor

Powerful desktop replacement; two models without diskette drive or three-spindle system

Intel® Celeron D Processor 320 (2.40 GHz), 325 (2.53 GHz), 330 (2.66 GHz), or 335 (2.80 GHz) with 333 MHz system bus or Mobile Intel Pentium 4 Processor 532 (3.06 GHz) with enhanced Intel SpeedStep™ technology

Hyper-Threading technology, and 333 MHz system bus

L2 cache Memory

Celeron: 256KB, Pentium 4: 1MB

All: on die (at processor speed) / ECC

256MB std / 2GB max / PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive CD

Some: 3.5" 1.44MB / fixed, not removable / 12.7mm high

Some: CD-ROM / 24X-10X speed / fixed, not removable / 12.7mm high

Display

Some: 14.1" (351.8mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

Some: 15.0" (381.0mm) XGA (1024x768) TFT color / Active Matrix / 150 nits

All: one latch to unlatch and open with one hand

Architectures

Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 852GMG GCMI / uses main memory (up to 64MB) / 266MHz / DMVT

Intel® G41 (November 2004) - withdrawn

Software

Windows XP Professional

- Microsoft® Windows® XP Professional37 (Service Pack 2)

- Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Rescue and Recovery™
- Access IBM
- Access Connections
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- Adobe Reader
- Update Connector™
- RecordNOW and Drive Letter

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License

CD not included

Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter

PC 2001 and PXE 2.0-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

ENERGY STAR®-compliant

ImageUltra™ Services available

International Warranty Service (IWS) 24 hour x 7 day toll-free warranty support during the warranty

ServicePac 1yr IOR 9x5 NBD

30L9188

ServicePac 2 yr IOR 9x5 NBD

30L9198

ServicePac 3 yr IOR 9x5 NBD

30L9195

ServicePac 4 yr IOR 9x5 NBD

30L9194

ServicePac 5 yr IOR 9x5 NBD

30L9196

ServicePac 2 yR P/L P/U Depot

30L9191

ServicePac 3 yR P/L P/U Depot

30L9192

ServicePac 4 yR P/L P/U Depot

30L9195

ServicePac 5 yR P/L P/U Depot

69P9195


See footnotes for important warranty information

US models announced November 23, 2004 or January 11, 2005

US models withdrawn effective December 2005

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(G4V) October 2005
Mobile Intel Pentium 4 Processor 532 (3.06GHz), 538 (3.2GHz), 548 (3.33GHz), or 552 (3.46GHz) with enhanced Intel SpeedStep technology, Hyper-Threading technology, and 533MHz system bus

PCI-Express slots

0.5mm pitch / Serial ATA (SATA)

Secure Boot support

**Software**

- Windows XP Professional
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - DirectX-to-Disk Recovery (in hidden protected area)

Preloaded

- Rescue and Recovery™
- Access IBM
- Access Connections
- Norton AntiVirus (OEM edition)
- PC-Doctor for Windows
- ThinkPad Utilities
- Adobe Reader

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License

- Lotus® Smartsuite® Millennium and Lotus® Notes® Stand-Alone Client

ThinkPad notebooks implement IBM’s technologies and design; visit thinkpad.com/thinkvantage

Universal 120 watt AC adapter
PC 2001 and PXE 2.0-compliant
AC P11.0.2 and 2.0-compliant
CIM and DMI 2.0-compliant
ENERGY STAR®-compliant ImageUltra®Services available International Warranty Service®
24 hour x 7 day toll-free warranty support during the warranty

**Limited warranty**

1 year - EasyServ™ onsite pickup and delivery / service upgrades available

**See footnotes for important warranty information**

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US models announced October 19, 2004 or January 11, 2005

US models withdrawn effective December 2005

**Created by Lenovo Training Solutions**

**Personal Systems Reference (PSREF)**

- System Information Base
- Device Driver Information Base
- Performance Information Base
- IBM Director Information Base
- Regulatory Information Base
- Technical Support Information Base

- ThinkPad G41i (NVIDIA Graphics) - withdrawn
The 2882 has an EasyServ™ on-site pickup and delivery 3 year limited warranty

These educational models of the ThinkPad notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers. This model for education is for sale direct from Lenovo or through an Authorized Education Reseller.

The model or models for education are not available for resale to any other organization or individual.

SOFTWARE

Preloaded

- ASU only: Education software from VitalSource Technologies™: VitalSource Key™ and Lenovo Personal Portable library™
- Rescue and Recovery™
- Access IBM
- Access Connections
- Norton AntiVirus (OEOM edition)
- PC-Doctor™
- ThinkPad® Utilities
- Lenovo Rescue and Recovery
- Update Connector™
- RecordNOW and Drive Letter Access powered by Sonic products (combo model)
- InterVideo WinDVD (combo model)

Downloadable

- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Lenovo.com
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

License (CD not included)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinKvantum technologies and design visit thinkpad.com/thinkvantage

See footnotes for important warranty information

US models announced October 19, 2004 or January 11, 2005
US models withdrawn effective December 2005

© Lenovo (6) October 2005
These small and medium business (SMB) models are part of the US ThinkPad® Program

**Positioning**

**Processor**

- Powerful desktop replacement: two models without diskette drive
- Three-spindle system

**L2 cache**

- 256MB or 512MB std / 2GB max / 2PC2700 333MHz DDR1 / non-parity / CL2.5 / two 200-pin SODIMM sockets / std memory in one socket / one socket available

**Diskette drive**

- Some: 3.5"/1.44MB / fixed, not removable / 12.7mm high
- Some: CD-ROM / 24X / 10X speeds / fixed, not removable / 12.7mm high

**EasyPivot**

- 87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
- Touchpad: (UltraNav multi-pointing system) / no ThinkLight™

**Display**

- Some: 14.1" (358.1mm) XGA (1024x768) TFT color / Active Matrix / 150 nits
- Some: 15.0" (381.0mm) XGA+ (1400x1050) TFT color / Active Matrix / 150 nits
- All: one latch to unlatch and open with one hand

**Graphics**

- Some: Integrated Intel Extreme Graphics 2 / Direct AGP / in 852GE GMCH / uses main memory (up to 64MB) / 256MB DTV
- Some: NVIDIA GeForce FX Go5200 / NV34M / AGP 4X / 64 or 128MB memory

**Architecture**

- Intel 852GE chip / 82852GE GMCH Graphics Memory Controller Hub (GMCH) / 82801DB ICH4-M / I/O Controller Hub (ATA-100 IDE, PCI bus, Ethernet MAC, LSI Logic Parallel Port/Serial Port / Ultra, In-Count (LPC) interface, USB, Firmware Hub, LPC bus / PCI bus 32-bit, 33MHz, 115MHz (T) / I/O controller, Mini PCI / LCP bus 33MHz (PCI 83789 SuperI/O for [diskette], parallel, PS/2)

**PC Card Std slots**

- Two Type I, two Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated four USB 2.0 (Version 2.0) / parallel / external monitor (DB-15) / RJ-15 (mon) / RJ-45 (ethernet) / PS/2 / keyboard / mouse / infrared

**Security Chip**

- Power-on password / hard disk password / supervisor password / security keyhole

**Software**

- Windows XP Professional
  - Microsoft® Windows XP® Professional[1] (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- Preloaded
  - Rescue and Recovery™
  - Access Program
  - Access Connections™
- Norton AntiVirus (OEM edition)
- PC-Doctor®
- ThinkVantage™ utilities
- Adobe® Reader
- Update Connector™
- RecordNow® and Drive Letter
- Access Media by Sonic products (combo, DVD-RW models)
- InterVideo WinDVD combo, DVD, DVD-RW models
- InterVideo WinDVD Creator (DVD-RW models)
- Simple Backup (DVD-RW)

**Limited warranty**

- 1-year - EasyServ™ onsite pickup and delivery / service upgrades[2] available

**License**

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
- Support for ThinkVantage™ technologies; visit thinkpad.com/thinkvantage

**Universal 120 watt AC adapter**

- PC 2001 and PXE 2.0-compliant
- ENERGY STAR®-compliant
- ImageUltra® Services available international Warranty Service[3]
- 24 hour x 7 day® toll-free warranty support during the warranty[12]

**Supports**

- ThinkPlus™ 1-year LOR 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD

**For more information**

- call 1-877-483-9676
- visit lenovo.com/thinkplus
<table>
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<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>L2 cache</th>
<th>Memory</th>
<th>Screen</th>
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Positioning
- Processor

Windows XP Home models
- Microsoft® Windows® XP Home Edition® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Windows XP Pro models
- Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Rescue and Recovery™
- Access IBM™
- Access Connections
- Norton AntiVirus (OEIM edition)
- PC-Doctor®
- Access IBM Utilities
- Adobe Reader
- Update Connector™
- InterVideo WinDVD (DVD)

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- License (not included) (all)

ThinkPad notebooks implement Lenovo ThinkVantage™ technologies and design. For more information, visit thinkpad.lenovo.com/thinkvantage

PUBLIC DOMAIN

See footnotes for important warranty information
US models announced October 19 or November 23, 2004
US models withdrawn effective December 2005
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</table>

**These small and medium business (SMB) models are part of the US TopSeller™ Program.**

*These 2529 models have a 1-year limited warranty.*

### Software

- **Windows XP Professional models**
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

### Windows XP Home models

- Microsoft Windows XP
- Home Edition (Service Pack 2)
- Disk-to-Disk Recovery

### Preloaded (all)

- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor™
- ThinkPad utilities
- Adobe® Reader
- Microsoft® Office 2003
- Adobe Reader
- Acrobat Reader

### License - CD not included (all)

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information. © 2006 Lenovo (W1) April 2006
### ThinkPad Z60m (2529) - TopSeller (November 2005) - withdrawn

**Positioning**
- Stylish notebooks for work and life: widescreen display; two-spindle system
- These 2529 models have a 1-year limited warranty

**Processor**
- Intel® Celeron® M Processor 360, 370, or with Execute Disable Bit and 400MHz bus or
- Intel Pentium® M Processor 740 with Enhanced Intel SpeedStep™ technology
- Execute Disable Bit and 533MHz system bus

**L2 cache**
- Celeron® M 1 MB, Pentium® M 2MB
- All on die (at processor speed) / ECC

**Memory**
- 256MB, 512MB, or 1GB std / 2GB max
- 533MHz DDR2 / non-parity / dual channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**CD Combo**
- Some: DVD-ROM / 24X10X speed / removable from Ultrabay™ Enhanced
- Some: DVD-RW / 24X2X4X24X/8X/8X speed / removable from Ultrabay Enhant
- Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Enhanced

**Widescreen display**
- Some: 15.4" (391.0mm) WXGA (1280x800) TFT color / 200 nits / 16:10 aspect ratio
- Some: 14.1" (357mm) x 236mm x 37.3-40.2mm with optical drive and battery: 6-cell / up to 7.0 lb (3.2kg)

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys / TrackPoint® pointing device / UltraNav® multi-pointing system (touchpad)

**Dimensions**
- (Wx Dx H): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

**Weight**
- Some: black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Some: top cover: silver color; ABS, aluminum, titanium material; bottom: black, PC/ABS

**Battery**
- 6-cell: up to 4.0 hr; optional 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

**Wireless antenna**
- UltraConnect™ antenna built into the display cover / on-off switch for all wireless radios

**Software**
- Windows XP Professional models
  - Microsoft® Windows® XP Professional² (Service Pack 2)
- Windows XP Home models
  - Microsoft Windows XP
  - Home Edition² (Service Pack 2)
  - Preloaded (all; only some listed)
    - Rescue and Recovery™
    - Access Connections*¹
    - Client Security Edition
    - ThinkVantage Productivity Center
    - ThinkVantage System Update
    - Symantec® Client Security
    - Diskeeper® Lite
    - PC-Doctor®
    - Fingerprint Software (some)
    - Multimedia Center for Think Offers
    - Sonic RecordNow® and Drive Letter Access (combo, DVD/CD)
    - InterVideo WinDVD® (combo, DVD/CD)
    - InterVideo WinDVD Creator (DVD/CD models)

**License**
- CD not included (all)
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
  - (Notes client not supported on XP Home)

**ThinkPad notebooks implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage

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### Type-model | Top cover logo color | Olympic logo on cover | Processor | Speed | Memory | Wide-screen display | Graphics | SATA Disk | Optical | Mini PCI | Bluetooth | Finger print reader | Battery | Pre-loaded OS | Limited warranty | Availability
| 2529-FYU | Black | Celeron® M 360 | 1.4 | 256 15.4" WXGA | GMA | 40G CD | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EU Black | Pentium® M 740 | 1.73 | 256 15.4" WXGA | GMA | 40G + Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-ESU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X600 | 60G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EH Silver | Celeron® M 370 | 1.5 | 512 15.4" WXGA | GMA | 40G DVD/CRW | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X600 | 60G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-ELU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X600 | 60G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EZU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X300 | 30G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EZU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X300 | 30G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X300 | 80G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X300 | 80G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X300 | 80G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05
| 2529-EU Silver | Pentium® M 740 | 1.73 | 512 15.4" WX Maxx X300 | 80G DVD/CRW | Intel 11b/g | Intel 11b/g | GM | 6 | Home | 1-yr Nov 05

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*Powered by Intel Centrino™ mobile technology

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**Table Note:**

- **Dimensions:**
  - (WXxDxH): 14.1” x 10.3” x 1.471-58”
  - 357mm x 263mm x 37.4-40.2mm
- **Weight:**
  - 7.4 lb (3.4kg)
  - 3.4kg
- **Battery:**
  - 6-cell: up to 4.0 hr; 9-cell: up to 6.0 hr; 9-cell plus Ultrabay battery: up to 8.0 hr

**Software:**

- **Windows XP Professional models**
  - Microsoft Windows XP Professional
  - ThinkPad Roll Cage
  - Disk-To-Disk Recovery
- **Windows XP Home models**
  - Microsoft Windows XP Home Edition
  - ThinkPad Roll Cage
  - Disk-To-Disk Recovery
- **Preloaded (all)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec Client Security
  - Diskkeeper Lite
  - PC-Doctor™
  - ThinkPad utilities
  - Adobe Reader
  - FingerPrint Software (some)
  - Multimedia Center for Think
  - Sonic RecordNOW and Drive Letter Access (combo, DVD/RW)
  - InterVideo WinDVD (combo, DVD/RW)
  - InterVideo WinDVD Creator (DVD/RW models)

**License:**

- CD not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

*ThinkPad notebooks implement ThinkVantage technologies and design, visit thinkpad.com/thinkvantage*
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### SOFTWARE

- **Windows XP Professional models**
  - **Microsoft Windows XP Professional** (Service Pack 2)
  - **Windows XP Home models**
  - **Microsoft Windows XP Home Edition** (Service Pack 2)

### Additional Information

- **Preloaded (all)**
  - Rescue and Recovery™
  - Access Connections™
  - Client Security™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symanec® Client Security
  - Diskeeper Lite
  - P-Doctor®
  - FingerPrint Software (some)
  - Multimedia Center for ThinkPad®, ThinkPad® Mobile Center
  - IBM CopyGuard
  - Sonic RecordNow® and Drive Letter Access (combo, DVD-RW)
  - InterVideo WinDVD® (combo, DVD-RW models)
  - InterVideo WinDVD Creator (DVD-RW models)

### License

- **CD - not included (all)**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
  - Note: Client not supported on XP Home

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Universal 90-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
AP 11g, 11a/b, and 2.0-compliant
CIM and DMI 2.0-compliant
PXE 2.1-compliant
ENERGY STAR®-compliant
RoHS-compliant
International Warranty Service®
24 hour x 7 day® toll-free warranty support during the warranty

ThinkPlus® 1-yr LOR 9x5 NBD
ThinkPlus® 3-yr LOR 9x5 NBD
ThinkPlus® 4-year LOR 9x5 NBD
ThinkPlus® 5-yr LOR 9x5 NBD
ThinkPlus® 3-yr P&L P/U Depot
ThinkPlus® 5-yr P&L P/U Depot
Other ThinkPlus services at lenovo.com/thinkplus/warranty

### Footnotes

- **© Lenovo**
- **(2004-2006)**
- **® Lenovo**
- **(W2R) October 2006**
- **See footnotes for important warranty information**
ThinkPad Z60m (2531) - withdrawn

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<td>512 MB</td>
<td>15.4&quot; WXGA</td>
<td>X600</td>
<td>60G</td>
<td>DVD+RW</td>
<td>Intel 11b/11g</td>
<td>PM</td>
<td>6-3 yr</td>
<td>Y Oct 05</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positioning Processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage for more information.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L2 cache Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1GB PC2-4200 DDR2 NP CL4 SOD</td>
</tr>
</tbody>
</table>

| COMBO | UltraBay Enhanced Serial ATA disk (SAT150) |
|-------|
| 9.5mm high / removable and upgradeable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™ |

<table>
<thead>
<tr>
<th>Graphics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: Intel Graphics Media Accelerator 900 (GMA 900) / integrated in 915GM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Widescreen display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: 15.4&quot; (391.0mm) WXGA (1280x800) TFF color / 200 nits / 16:10 aspect ratio</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Battery - type Battery - life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: 6-cell: up to 4.9h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: Mobile Intel 915GM Express Chipset</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wireless antenna Mini PCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: UltraConnect™ Antenna built into the display / on-off switch for all wireless radios</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Modem Bluetooth Ethernet Audio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: Bluetooth 2.0 wireless / USB 2.0 interface viaICH6-M / LED indicator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Security Security chip Finger print reader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power-on password / hard disk password / supervisor password / security keyhole / Secure boot / Secure Multi-Boot Platform Model</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Limited warranty 3-year/1-year battery - EasyServ™ on-site pickup and delivery / service upgrades available</th>
</tr>
</thead>
<tbody>
<tr>
<td>256MB PC2-4200 DDR2 2 GB CL4 SOD</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOFTWARE</th>
<th>Windows XP Professional models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some: Finger GM 3-yr  Oct 05</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preloaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue and Recovery™ (in hidden protected area)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>License</th>
</tr>
</thead>
<tbody>
<tr>
<td>- CD not included</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Lotus SmartSuite® Millennium and Lotus Notes® Stand-alone Client</td>
</tr>
</tbody>
</table>

See footnotes for important warranty information

*Powered by Intel Centrino® mobile technology

© Lenovo (WR3) August 2006

US models announced September 20, 2006

US models withdrawn effective June or September 2006
ThinkPad® Z60m (2532) - Education - withdrawn

Type-model Top cover color Processor Speed GHz Memory MB Wide-screen display Graphics controller Disk controller SATA controller EIDE controller Mini PCI Express WWAN wireless Mini PCI Express Bluetooth Finger reader Battery charge cells Limited warranty\(^\text{1}\) Available date

| 2532-1PU | Black | Pentium M 750 | 1.86 | 512 | 15.4" WXGA | X300 | 4GB | DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05
| 2532-MU | Black | Pentium M 750 | 1.86 | 512 | 15.4" WXGA | X300 | 4GB | DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05
| 2532-MWU | Black | Pentium M 750 | 1.86 | 512 | 15.4" WXGA | X300 | 4GB | DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05
| 2532-MSU | Black | Pentium M 750 | 1.86 | 512 | 15.4" WXGA | X300 | 4GB | DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05
| 2532-MTU | Black | Pentium M 760 | 2.00 | 1GB | 15.4" WXGA | X600 | 100GB DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05
| 2532-MUW | Black | Pentium M 760 | 2.00 | 1GB | 15.4" WXGA | X600 | 100GB DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05
| 2532-1PUW | Black | Pentium M 760 | 2.00 | 1GB | 15.4" WXGA | X600 | 100GB DVD\(\text{x}\)RW \(\text{Intel} \text{ 11a/b/g}\) None PM Wireless None 3-cell PM Oct 05

\(*\) This model has a limited onsite service\(^\text{2}\) 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

Positioning Processor

Stylish notebooks for work and life; widescreen display; two-suspend system

Intel\(^\text{®}\) Pentium M Processor 750 or 760 with Enhanced Intel SpeedStep\(\text{™}\) technology, Execute Disable Bit, and 533MHz Memory bus

L2 cache Memory

2MB / on (at processor speed) / EEC

512MB or 1GB std / 2GB max / PC2-4200 533MHz DDR2 / CL4 / dual channel capable two 200-pin SO-DIMM sockets / std mem in one socket / one socket available

Diskette drive IDE Combo

None standard / use optional USB-based diskette drive

EIDE DVD\(\text{x}\)RW

Some: DVD-ROM / CD-R / 24X/24X/24X/4x speed / removable from Ultrabay Enhanced

UltraBay Enhanced Serial ATA disk (SATA150)

Some: DVD burner / Super Multi-Burner (40Y8632) dual-layer, removable Ultrabay Enhanced

Some: One bay for removable devices / Ultrabay Slim-compatible / 12.7mm high / curved bezel

Some: 60 or 80 or 100GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System\(\text{™}\)

Widescreen display

Some: 15.4" (391.0mm) WXGA (1280x800) TFT color / 200 nits / 16:10 aspect ratio

Some: 15.4" (391.0mm) WXGA+ (1440x900) TFT color / 200 nits / 16:10 aspect ratio

Some: Intel Graphics Media Acceleration 900 (GMA 900) / integrated in 915GM

Some: ATI\(\text{™}\) Mobility RADEON\(\text{™}\) X800 / PCI Express x16 / 64MB memory

Some: ATI\(\text{™}\) MOBILITY RADEON X600 / PCI Express x16 / 128MB memory

Graphics

Some: Intel Graphics Media Acceleration 900 (GMA 900) / integrated in 915GM

Some: ATI\(\text{™}\) MOBILITY RADEON\(\text{™}\) X800 / PCI Express x16 / 64MB memory

Some: ATI\(\text{™}\) MOBILITY RADEON X600 / PCI Express x16 / 128MB memory

Z3X00/X300: DVI pass-through support to opt Advanced Mini Dock and Advanced Dock

Keyboard TrackPoint

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys

ThinkLight\(\text{™}\)

89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Apple keys

Illuminates the keyboard to improve visibility in low-light conditions.

Dimensions\(^3\)

Length: 11.17" (283.8mm) / Width: 7.97" (202.5mm) / Depth: 1.06" (26.9mm)

Weight\(^4\)

Black color / Poly carbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

Battery - type

Lithium Ion / Smart battery / intelligent / supports unique 2nd battery in Ultrabay Enhanced

Battery - life\(^5\)

6-cell: up to 4.0 hours / 9-cell: up to 6.0 hours / 9-cell plus Ultrabay battery: up to 8.0 hours

Architecture

Some: Mobile Intel 915GM Express Chipset / 82915GM Graphics Mem Cont Hub

Some: Mobile Intel 915PM Express Chipset / 82915GM Memory Controller Hub

All: 82801FI BM ICH6-M I/O Controller Hub (SATA150, ATA100 EIDE, PCI Express x1, PCI bus, ethernet, USB, [Bluetooth], [fingerprint]) / PCI bus (Ricon PCBC 9381)

CardBus, Mini PCI / LPC bus (NS PC783827 Super IO, Atmel 975C S3200PM)

PC Card slot

One Type I or Type II slot / CardBus 32-bit / integrated door

ExpressCard slot

One ExpressCard/34 or ExpressCard/54 / PCI Express x1 or USB 2.0 / integrated door

Ports

3-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital) / Smart Media Card (T-Flash) / IDE-1394 (FireWire) / three USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / docking connector / no keyboard or mouse or parallel or serial ports (use USB)

Wireless antenna

Multi PC Card slot / custom upgradable

Mini PCI slot / custom upgradable

Intel 11a/b/g\(^2\)

11a/b/g\(^2\)

Mini PCI Express Slot

One Mini PCI Express slot / custom upgradable

Modem

None

Bluetooth\(^\text{™}\)

656/90 (V92-designed) modem in Comm Daughter Card socket / Comexant chip

Ethernet

Some: Bluetooth wireless technology / USB 2.0 interface via ICH6-M / LED indicator

Audio

Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE High Definition (HD) Audio / AD1981HD controller / stereo speakers, 1 watt / volume up, down, mute, volume control / internal microphone / microphone input jack / headphone jack

Security

Security key

Power-on password / hard disk password / supervisor password / security keyhole

Security chip

Some: Trusted Platform Module / Atmel chip / TCX 1.1-compliant

Fingerprint reader

Some: Fingerprint reader on palm rest / swipe sensor / integrated with security chip

Limited warranty\(^6\)

3-year / 1-year battery, limited onsite service\(^7\) 8 am - 5 pm, Mon - Fri coverage (excluding holidays, next business day)

3-year / 1-year battery, limited onsite service\(^7\) 8 am - 5 pm, Mon - Fri coverage (excluding holidays, next business day)

Windows XP Professional models

- Microsoft\(\text{®}\) Windows\(\text{®}\) XP Professional\(\text{™}\) (Service Pack 2)

- Disk-to-Disk Recovery (in hidden protected area)

Preloaded

- Education software from Vital Source Technologies\(\text{™}\) / vtlsourse KEY\(\text{™}\) and Personal Portable Library\(\text{™}\)

- Rescue and Recovery\(\text{™}\)

- Access Connections\(\text{™}\)

- Client Security Solution\(\text{™}\)

- ThinkVantage Productivity Center

- ThinkVantage System Update

- Symantec\(\text{™}\) Client Security

- Diskeeper Lite

- PC-Doctor\(\text{™}\)

- ThinkPad utilities

- Adobe\(\text{®}\) Reader

- Multimedia Center for ThinkPad

- Sonic RecordNOW and Drive

License - CD not included

- Lotus\(\text{®}\) SmartSuite\(\text{™}\) Millennium and Lotus Notes\(\text{®}\) Stand-alone Client

Other options at lenovo.com/options

Universal 90-watt AC adapter

ThinkPad Roll Cage (one-piece magnesium frame)

PC 2001-compliant

ACPI 1.0b and 2.0-compliant

CIM and DMI 2.0-compliant

PXE 2.1-compliant

CIM and DMI 2.0-compliant

IME and 10-key

International Warranty Service\(^7\)

24 hour x 7 day\(^8\) toll-free warranty support during the warranty\(^7\)

Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

\(^1\) Powered by Intel Centrino\(\text{®}\) mobile technology

\(^2\) Lenovo

US models announced September 20, 2005 or January 31, 2006

US models withdrawn effective June or October 2006

(WRS) October 2006

©Lenovo

\(^3\) Windows XP Professional models

\(^4\) Preloaded

\(^5\) License - CD not included

\(^6\) Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
**SOFTWARE**

**Windows XP Professional models**
- Microsoft® Windows® XP Professional Service Pack 2
- Disk-to-Disk Recovery

**Windows XP Home models**
- Microsoft Windows XP
- Home Edition® Service Pack 2
- Disk-to-Disk Recovery

**Preloaded (as shipped):**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskkeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNow and Drive
- Letter Access (combo, DVD±RW models)
- Stand-alone Client
- Access Connections (combo, DVD±RW models)

**License - CD not included (all):**
- Lotus® SmartSuite™ Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

**Supports ThinkVantage® technologies**

- 65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- RoHS-compliant
- International Warranty Serviçe
- 24 hour x 7 day toll-free warranty support during the warranty

**9450-32U Silver Celeron® M 410**
- 1.46 GHz 1.54" WXGA
- GMA 400 Combo
- 11a/b/g
- GM: Home May 06
- Finger: GM: Pro W May 06
- Finger: GM: Pro W May 06
- Finger: GM: Pro W May 06
- Finger: P M Cam Pro W May 06
- Finger: P M Cam Pro W May 06
- Finger: P M Cam Pro W May 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

**These models have a 1-year limited warranty**

**Positioning**

- Processor: Intel® Celeron M Processor 410 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache
- Core Duo processor T2300E or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache
- Core Duo processor T2300E or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache
- Core Duo processor T2300E or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache
- Core Duo processor T2300E or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache
- Intel® Core 2 Duo processor 2600+ with Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache

**Memory**

- 256MB, 512MB, or 1GB std / 4GB max
- 512MB std in memory in two 256MB modules

**Widescreen display (anti-glare)**

- 15.4" (391mm) WXGA (1280x800) TFT color
- 15.4" (391mm) WXGA (1280x800) TFT color
- 15.4" (391mm) WXGA (1280x800) TFT color
- 15.4" (391mm) WXGA (1280x800) TFT color
- 15.4" (391mm) WXGA (1280x800) TFT color
- 15.4" (391mm) WXGA (1280x800) TFT color

**Graphics**

- Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- ATI® MOBILITY™ Radeon® X1400 M54 / PCI Express x16 / 128MB GDDR1 / DVI pass-through support to opt Advanced Mini Dock and Advanced Dock

**Battery - life**

- Celeron models: up to 3.7 hr; 6-cell GMA graphics: up to 5.6 hr; 6-cell ATi graphics: up to 4.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Ultrabay balt: up to 10.3 hr

**Architecture**

- Mobile Intel 945GM Express chipset / 82894GM Graphics Memory Cont Hub
- Mobile Intel® 945GM Express Chipset / 82894GM Memory Controller Hub
- Mobile Intel® 945G Express Chipset / 82894G Memory Controller Hub
- Mobile Intel® 945G Express Chipset / 82894G Memory Controller Hub
- Mobile Intel® 945G Express Chipset / 82894G Memory Controller Hub

**Wireless access**

- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- Two Mini PC Express slots / 802.11a wireless is customer upgradable
- Two Mini PC Express slots / 802.11a wireless is customer upgradable
- Two Mini PC Express slots / 802.11a wireless is customer upgradable
- Two Mini PC Express slots / 802.11a wireless is customer upgradable
- Two Mini PC Express slots / 802.11a wireless is customer upgradable

**Modem**

- 3G, GPRS or EDGE
- EV-DO Rev A
- EV-DO/1XRTT
- EV-DO/1XRTT
- EV-DO/1XRTT
- EV-DO/1XRTT

**Ethernet**

- Gigabit ethernet on system board / Broadcom® BCM5752M (MAC/PHY) / PCIe I / PXE High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume knob / down, mode buttons / GMA models: mono microphones

**Security**

- Active Protection System
- HDD Protection Pack
- Removable and upgradeable
- 9.5mm high bay
- Supports 2nd disk
- Supports unique 2nd battery in Ultrabay Enhanced
- DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Enh

**Finger Print reader**

- Fingerprint reader on palm rest / swipe sensor / supports the security chip

**Limited warranty**

- 1-year - EasyServ™ on-site pickup and delivery / service upgrades available

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See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

Lenovo
(2R-1) September 2006

US models announced May 16 or 30, 2006

US models withdrawn effective February or September 2007
### ThinkPad Z61m (9450) - TopSeller (October 2006) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Memory</th>
<th>Speed</th>
<th>Memory</th>
<th>Speed</th>
<th>Screen</th>
<th>Graphics</th>
<th>SATA</th>
<th>EIDE</th>
<th>Mini PCI</th>
<th>Mini PCIc</th>
<th>Finger print</th>
<th>One Note</th>
<th>Work-horse</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>9450-D5U silver</td>
<td>Core 2 Duo T5500</td>
<td>1.66 GHz, 15.4&quot; WXGA</td>
<td>512MB DDR2</td>
<td>667MHz</td>
<td>1GB</td>
<td>40Y7733</td>
<td>40Y7679</td>
<td>Z60m/R60 Series Li-Ion Battery 6-cell</td>
<td>40Y6795</td>
<td>40Y6797</td>
<td>None</td>
<td>Blue</td>
<td>None</td>
<td>No Oct 06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9450-D6US</td>
<td>Core 2 Duo T5500</td>
<td>1.66 GHz, 15.4&quot; WXGA</td>
<td>512MB DDR2</td>
<td>667MHz</td>
<td>1GB</td>
<td>40Y7733</td>
<td>40Y7679</td>
<td>Z60m/R60 Li-Ion Battery 9-cell</td>
<td>40Y7697</td>
<td>40Y6797</td>
<td>None</td>
<td>Blue</td>
<td>None</td>
<td>No Oct 06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9450-D9US</td>
<td>Core 2 Duo T5500</td>
<td>1.66 GHz, 15.4&quot; WXGA</td>
<td>512MB DDR2</td>
<td>667MHz</td>
<td>1GB</td>
<td>40Y7733</td>
<td>40Y7679</td>
<td>Z60m/R60 Life Battery 9-cell</td>
<td>40Y6797</td>
<td>40Y6797</td>
<td>None</td>
<td>Blue</td>
<td>None</td>
<td>No Oct 06</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 1-year limited warranty

### Software

- **Windows XP Professional**
  - Microsoft® Windows® XP Professional SP2 (Service Pack 2)
  - Disk-to-Disk Recovery

### Preloaded

- Model DSU: Microsoft Office OneNote® 2003
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think
- Offering
- Sonic RecordNOW and Drive Letter Access (DVD:RW models)
- InterVideo WinDVD (DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

### License

- CD not included

### Hardware

- Atmel® Chip
- Driver
- FingerPrint reader
- WinDVD Creator

### Limited warranty

65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter

ThinkPad Roll Cage

RoHS-compliant

International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty

65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter

ThinkPad Roll Cage

RoHS-compliant

International Warranty Service

24 hour x 7 day toll-free warranty support during the warranty

© Lenovo (WR25-1) September 2007

**Powered by Intel Centrino® Duo mobile technology**
<table>
<thead>
<tr>
<th>Type-model color</th>
<th>Processor</th>
<th>Speed (MHz)</th>
<th>Memory (GB)</th>
<th>Display</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCI</th>
<th>Mini PCIc</th>
<th>Finger print</th>
<th>Workhorse (W)</th>
<th>Pre-</th>
<th>Avail date</th>
</tr>
</thead>
<tbody>
<tr>
<td>9451-NPU Black Celeron® M 420</td>
<td>1.60</td>
<td>256</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>40G Combo</td>
<td>11a/b/g</td>
<td>None</td>
<td>None</td>
<td>GM</td>
<td>No</td>
<td>XP Pro G</td>
<td>Oct 06</td>
</tr>
<tr>
<td>9451-5UU Black Core Duo T2400 1.83</td>
<td>512</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>60G Combo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Finger</td>
<td>No</td>
<td>XP Pro W</td>
</tr>
<tr>
<td>9451-5VU Silver Core Duo T2400 1.83</td>
<td>512</td>
<td>15.4&quot; WXGA</td>
<td>GMA</td>
<td>60G Combo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>None</td>
<td>Finger</td>
<td>No</td>
<td>XP Pro W</td>
</tr>
<tr>
<td>9451-5WU Black Core Duo T2400 1.83</td>
<td>512</td>
<td>15.4&quot; WXGA+</td>
<td>X1400 60G Combo</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- These models have a 1-year limited warranty.  
- These models have a 2-year limited warranty.

**Positioning**
- Processor: Intel® Celeron M Processor 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel Core™ Duo processor T2400 with dual-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache.

**Memory**
- 256MB or 512MB std / 4GB max† / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available.

**EIDE Combo**
- DVD-ROM/CD-RW 24X/24X/24X/8X speed / removable from Ultrabay Enhanced

**Serial ATA drive (SATA150)**
- One modular bay for interchangeable devices / Ultrabay Slim-compatible / 12.7mm high

**Audio**
- mono microphone; volume up, down, mute buttons

**Ethernet**
- Gigabit ethernet on systemboard / Broadcom® BCM5752M (MAC/PHY) / PCIe x1 / PXE

**Ports**
- ExpressCard slot / S-video out port (TV out) / IEEE 1394a-2000 (FireWire 400) / three USB 2.0 / DVI pass-through support to Opt Advanced Mini Dock and Advanced Dock

**Battery**
- Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced

**Dimensions**
- (WxDxH): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

**Weight**
- (WxDxH): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

**Graphics**
- Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

**Software**
- Windows XP Professional
- - Microsoft® Windows® XP Professional (Service Pack 2)
- - Stand-alone Client

**Preloaded**
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center with Away Manager
- - ThinkVantage System Update
- - Symantec® Client Security™
- - Diskeeper® Lite
- - PC-Doctor® (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Google Toolbar
- - Google Desktop
- - Picasa from Google
- - FingerPrint Software (fingerprint models)
- - Multimedia Center for Think Offerings
- - Sonic RecordNOW and Drive
- - Letter Access (combo models)
- - Intel/Video WinDVD (combo models)

**License**
- - CD not included (all)
- - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Battery life**
- up to 10.3 hr

**Memory**
- 1GB PC2-5300 DDR2 CL5 SODIMM / one socket available

**Operability**
- - UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- - Two Mini PCI Express slots / only 802.11 wireless is customer upgradable

**Security**
- - Gigabit ethernet on systemboard / Broadcom® BCM5752M (MAC/PHY) / PCIe x1 / PXE High Definition (HD) Audio / AD19819HD codec / speakers / 1 watt / volume up, down, mute buttons / GMA models: mono microphone; ATI graphics models: stereo microphone / microphone input jack / headphone jack / Power-on password / supervisor password / security keyhole

**Fingerprint reader**
- - Lenovo D221 Wide 22" Monitor (black) 6622HB1
- - Other accessories at lenovo.com/accessories

**Limited warranty**
- - 1-year - EasyServe® onsite pickup and delivery / service upgrades available

**Supports** ThinkVantage™ technologies
- - 65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter
- - ThinkPad Roll Cage
- - RoHS-compliant
- - International Warranty Service™
- - 24 hour x 7 day™ toll-free warranty support during the warranty

**ThinkPlus®**
- - ThinkPlus 2-year LOR 9x5 NBD 41C9166
- - ThinkPlus 3-year LOR 9x5 NBD 41C9168
- - ThinkPlus 4-year LOR 9x5 NBD 41C9171
- - ThinkPlus 5-year LOR 9x5 NBD 41C9173

**Lenovo Support**
- - 2-year P&L P/U Depot 41C9169
- - 3-year P&L P/U Depot 41C9170
- - 4-year P&L P/U Depot 41C9172
- - 5-year P&L P/U Depot 41C9174

**Post-warranty maintenance agreements**
- - lenovo.com/thinkplus/warranty

See footnotes for important warranty information
© Lenovo
US models announced May 16 or October 17, 2006
US models withdrawn effective September 2007
ThinkPad® Z61m (9451) - Education - withdrawn

Positioning

- Intel Centrino M Processor 410 with Execute Disable Bit, L2 cache or
- Intel Core™ Duo processor T2400 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache

Dimensions

- 15.4” (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect ratio
- 15.4” (391mm) WXGA+ (1280x800) TFT color / 150 nits / 16:10 aspect ratio

Memory

- 60GB (5400 rpm) or 80GB (5400 rpm) / 9.5mm high / removable and upgradable / 5.9mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) /

Networking

- Intel® PRO/Wireless 3945ABG Mini PCIe 41N3008
- 11a/b/g wireless

Wireless antenna

- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

License

- Microsoft® Windows XP Professional 32-bit / Service Pack 2
- 65-watt (GMA graphics) or 90 watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- RoHS-compliant

Limited warranty

- EasyServ™ 2-year / onsite pickup and delivery / service upgrades available

SOFTWARE®

- Windows XP Professional / Microsoft® Windows® XP Professional(TM) (Service Pack 2)
- Disk-to-Disk Recovery

Preloaded

- VitalSource Library edition software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery®
- Access Connections®
- Client Security Solution™
- ThinkVantage® Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader®
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (finger printing models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW® and Drive Letter Access (combo, DVD:RW)
- InterVideo WinDVD® (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)
- CD
- Adobe Photoshop Elements plus Adobe Premiere Elements

License - CD not included
- Lotus® SmartSuite® Millennium and Lotus® Notes® Stand-alone Client

Other accessories on O-Z60M sheet

© Lenovo

See footnotes for important warranty information
* Powered by Intel Centrino® Duo processor technology
© Lenovo

US models announced May 16 or 30, 2006
US models withdrawn effective February or September 2007
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor Options</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>EIDE</th>
<th>Mini PCI</th>
<th>Mini PCIe</th>
<th>Finger print</th>
<th>Workhorse Preload</th>
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<tr>
<td>9452-5UU</td>
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<td>9452-9NU</td>
<td>Black Core Duo</td>
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<td>Intel 11a/b/g</td>
<td>None</td>
<td>None</td>
<td>Finger GM</td>
<td>Pro W G May06</td>
</tr>
</tbody>
</table>

**These models have a 3-year limited warranty:**

- **Positioning**
  - Processor: ThinkPad Core Duo processor T2400 with dual-core, Enhanced Intel SpeedStep technology.
  - Memory: Secure Disable Bit, 667MHz system bus, and 2MB L2 cache (shared)
  - EIDE: 512MB std / 4GB max / 1PC2-5300 667MHz DDR2 / non-parity
  - CLS: dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**Software**

- **Windows XP Professional models**
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery
  - Preloaded
    - Rescue and Recovery™
    - Access Connections™
    - Client Security Solution™
    - ThinkVantage Productivity Center with Away Manager
    - ThinkVantage System Update
    - Symantec Client Security™
    - Diskeeper Lite
    - PC-Doctor® (diagnostics)
    - ThinkPad Utilities (Power Manager and Presentation Director)
    - Multimedia Center for Think
    - Sonic RecordNow and Drive
    - InterVideo WinDVD (combo models)

**License**

- CD not included (all)
- Lenovo SmartSuite Millennium and Lenovo Notes Stand-alone Client

**Other Options at Lenovo (W/2-3) February 2007**

- ThinkPad Laptops implement ThinkVantage technologies and design; visit thinkpad.com/thinkvantage
- 65-watt (GMA graphics) or 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- ENERGY STAR®-compliant
- RoHS-compliant
- International Warranty Service**

24 hour x 7 days** toll-free warranty support during the warranty*

- ThinkPius** 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 5-year LOR 9x5 NBD
- ThinkPlus 4-year P&L P/U Depot
- ThinkPlus 5-year P&L P/U Depot
- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

* Powered by Intel Centrino® Duo mobile technology

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US models announced May 16, 2006

US models withdrawn effective February 2007

† Created by Lenovo Training Solutions

Personal Systems Reference (PSREF)
**Type-model number** | **Cover color** | **Processor** | **Speed (GHz)** | **Memory** | **Graphics controllers** | **Disk size** | **Mini PCI 802.11EW** | **Mini PCI PWAN** | **Finger print reader** | **Workhorse (W)** |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
9452-J3U | Black | Core 2 Duo T5600 | 1.83 GB | 15.4" WXGA | GMA | 100 GB DVP-RW | Blue | Finger GM | No | G W Oct 06 |
9452-J4U | Black | Core 2 Duo T7200 | 2.00 GB | 15.4" WXGA/XA+ | 1040 GB DVP-RW | Blue | Finger GM | No | W G Oct 06 |
9452-JNU | Black | Core 2 Duo T7200 | 2.00 GB | 15.4" WXGA | GMA | 80 GB Combo | Blue | Finger GM | No | G W Oct 06 |
9452-JPU | Black | Core 2 Duo T7200 | 2.00 GB | 15.4" WXGA | GMA | 80 GB | Blue | Finger GM | No | G W Oct 06 |

*These models have a 3-year limited warranty*.

**Positioning**
- Widescreen multimedia; two spindles
- Intel® Core™ 2 Duo processor T5600 or T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz FSB system bus;
- T5600: 2MB shared L2 cache; T7200: 4MB shared L2 cache

**Memory**
- 512MB std / 4GB max / 2PC-5300 (666MHz DDR2 / non-parity / OLS / dual-channel capable / 200-pin SO-DIMM sockets) / standard memory in both sockets (512MB each socket); no sockets avail;
- 3U/JU: standard memory in 1 socket; 1 socket available

**EIDE Combo**
- Some: DVD-ROM/CD-RW / 24X/24X/4X/8X/sx* speed / removable from Ultrabay™ Enh
- Some: Fingerprint reader on palm rest

**Battery - life**
- 100GB Disk 9.5mm SATA150 (7200 rpm)
- 9.5mm high bay / supports 2nd disk
- HDD Protection Pack (sticker active) / Active Protection System™

**Widescreen display**
- Some: 15.4" (391mm) WXGA (1280x800) TFT color / 200 nits / 16:10 aspect / 501:1
- Some: 15.4" (391mm) WXGA+ (1680x1050) TFT color / 200 nits / 16:10 aspect

**Graphics**
- Some: ATI MOBILITY™ Radeon® X1400 M54 / PCI Express x16 / 128MB DDR1 / DVI pass-through support to opt Advanced Mini Dock and Advanced Dock
- Some: Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

**Keyboard**
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appt keys

**Dimensions**
- (WxHxD): 14.1" x 10.3" x 1.47-1.58"

**Weight**
- 6.8 lbs / 3.1 kg

**Battery - type**
- 9.5mm high bay / supports 2nd disk
- USB Fingerprint Reader 41U3167
- USB 2.0 Security Memory Key 4GB
- USB 2.0 Super Multi-Burner Drive 415N555
- Hard Serial Drive Ultrabay Slim Adapter 410Y7026

**Processor**
- 9452-JPU Black Core 2 Duo T7200 2.00 GB 15.4" WXGA GMA 80 GB Combo
- 9452-JNU Black Core 2 Duo T7200 2.00 GB 15.4" WXGA GMA 100 GB DVP-RW

**Software**
- Windows XP Professional
- - Microsoft® Windows® XP Professional (Service Pack 2)
- - Disk-to-Disk Recovery

**Preloaded**
- - Rescue and Recovery™
- - Access Connections™
- - Client Security Solution™
- - ThinkVantage Productivity Center with Away Manager
- - ThinkVantage System Update
- - Symantec Client Security™
- - Diskeeper® Lite
- - PC-Doctor® (diagnostics)
- - ThinkPad Utilities (Power Manager and Presentation Director)
- - Adobe® Reader
- - Google Toolbar
- - Google Desktop
- - Picasa from Google
- - Fingerprint Software (fingerprint models)
- - Multimedia Center for Think

**License**
- - CD not included (all)
- - Lotus® SmartSuite® Millennium and Notes® Stand-alone Client

**Supports**
- - ThinkVantage technologies
- - 65-watt (GMA graphics) or 90-watt (ATI graphics) AC adapter
- - ThinkPad Roll Cage
- - RoHS-compliant

**International Warranty Service**
- 24 hour x 7 day toll-free warranty support during the warranty**

**Limited warranty**
- 2-year: 1-year battery - EasyServ™ onsite pickup and delivery / service upgrades available

**See footnotes for important warranty information**

© Lenovo (WR25-2) September 2007

*Powered by Intel Centrino® Duo mobile technology*

US models announced October 17, 2006

US models withdrawn effective September 2007
### Enhanced - withdrew

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>MB</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk type</th>
<th>Mini PCI</th>
<th>Mini PCIe WWAN</th>
<th>Finger print reader</th>
<th>Chip Camera</th>
<th>Limited Workhorse (W)</th>
<th>Gbt (G)</th>
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<tr>
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</tbody>
</table>

- **These models have an EasyServ™ onsite pickup and delivery 3-year limited warranty**

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Software

- **Windows XP Professional**
- Microsoft® Windows® XP Professional29 (Service Pack 2)
- Disk-to-Disk Recovery

**Preloaded**

- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad® Utilities (Power Manager and Presentation Director)
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- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)
- Adobe Photoshop Elements plus Adobe Premiere Elements

**License** - CD not included

- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information  
* Powered by Intel Centrino® Duo mobile technology

© Lenovo

US models announced May 16 or 30, 2006

US models withdrawn effective February or September 2007

**ThinkPlus® services at lenovo.com/thinkplus/warranty**
## ThinkPad Z61m (9453) - Education - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory (MB)</th>
<th>Wide-screen display (diagonal)</th>
<th>Graphics controller</th>
<th>Disk (SATA)</th>
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<th>Mini PCIe (wlan)</th>
<th>Finger print reader</th>
<th>Chip Camera</th>
<th>Limited Workhorse (W)</th>
<th>GB (G)</th>
<th>Avail date</th>
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</table>
| 9453-E1U   | Silver Celeron® M 410 | 1.46 | 512 | 15.4" WXGA | GMA | 60G Combo | Intel 11a/b.g/b | None | Finger GM | Onsite | May 06  
| 9453-E2U   | Black Celeron M 410 | 1.46 | 512 | 15.4" WXGA | GMA | 60G Combo | Intel 11a/b.g/b | None | Finger GM | Onsite | May 06  
| 9453-E3U   | Silver Core Duo T2400 | 1.83 | 512 | 15.4" WSXGA | Intel 5450 | 80G | None | Finger GM | Onsite | May 06  
| 9453-E4U   | Black Core Duo T2400 | 1.83 | 512 | 15.4" WSXGA | Intel 5450 | 80G | None | Finger GM | Onsite | May 06  
| 9453-E7U   | Black Core M 420 | 1.60 | 512 | 15.4" WXGA | GMA | 80G Combo | Intel 11a/b.g/b | None | Finger GM | Onsite | May 06  
| 9453-E8U   | Silver Core Duo T2500 | 2.00 | 512 | 15.4" WSXGA | Intel 5450 | 80G | None | Finger GM | Onsite | May 06  
| 9453-E9U   | Black Core Duo T2500 | 2.00 | 1GB | 15.4" WSXGA | Intel 5450 | 80G | None | Finger GM | Onsite | May 06  
| 9453-EAU   | Silver Celeron M 420 | 1.60 | 512 | 15.4" WXGA | GMA | 80G Combo | Intel 11a/b.g/b | None | Finger GM | Onsite | May 06  
| 9453-EBU   | Silver Core Duo T2500 | 2.00 | 1GB | 15.4" WSXGA | Intel 5450 | 80G | None | Finger GM | Onsite | May 06  
| 9453-ECU   | Silver Core Duo T2500 | 2.00 | 1GB | 15.4" WSXGA | Intel 5450 | 80G | None | Finger GM | Onsite | May 06  

* These models have a limited onsite service** 3-year limited warranty

These educational models are available to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning
- Processor: Intel® Celeron® Processor 410 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel® Core™ Duo processor T2400 or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB L2 cache (shared)
- Memory: 512MB or 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets / 1G MB models: std memory in one socket; one socket available / 1G MB models: std memory in two sockets; none available
- EIDE Combo / EIDE DVD:RW Ultrabay Enhanced Serial ATA disk (SATA150)
- Widescreen multimedia; two spindles
- Keyboard: 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys
- TrackPoint® pointing device / UltraNav® multi-pointing system (touchpad)
- Dimensions: (WXDH): 14.1 x 10.3 x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm
- Weight: with optical drive and battery: 6-cell black: starting at 5.94 lb (2.7kg)/6.33 lb (2.9kg); 6-cell titanium: starting at 6.47 lb (2.9kg)/6.85 lb (3.1kg)
- Case material: black; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Battery: type 6-cell / lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced
- Battery - life: 6-cell GMA graphics: up to 5.6 hr; 6-cell ATI graphics: up to 4.0 hr; optional 9-cell GMA graphics: up to 8.3 hr; 9-cell plus Ultrabay battery: up to 10.3 hr
- Architecture: Mobile Intel 455GM Express Chipset / 82945GM Memory Control Hub Cont
- PC Card slot: ExpressCard slot
- Ports: 4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, XD-Picture Card®) / S-video out port (TV out) / IEEE 1394a-2000 (FireWire 400) / three USB 2.0 / integrated door
- Wireless antenna: UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- Integrated camera: Mini PCI Express 11a/b/g
- WWAN: Mobile Internet DataCard modem / Mobile Internet DataCard modem
- Modem: Bluetooth™ connection
- Ethernet: Gigabit ethernet on systemboard / Broadcom® BCM5752M (MAC/PHY) / PCIex1 / PXE High Definition (HD) Audio / AT1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / GMA models: mono microphone; ATi graphics models: stereo microphone / microphone input jack / headphone jack
- Security: power-on password / hard disk password / security keyhole
- Security chip: Trusted Platform Module / Atmel chip / TCG 1.2-compliant
- Fingerprint reader: FingerPrint reader on palm rest / swipe sensor / supports the security chip

### Limited warranty**
- 3-year/1-year battery, limited onsite service**, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

### SOFTWARE**

**Windows XP Professional**
- Microsoft® Windows® XP Professional29 (Service Pack 2)

**Preloaded**
- VitalSource Library education software
- Adobe® Photoshop® Elements plus Adobe Premiere® Elements
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think
- Sonic RecordNOW® and Drive Letter Access (combo, DVD:RW)
- InterVideo WinDVD® (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

**CD**
- Adobe Photoshop Elements plus Adobe Premiere Elements

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

See footnotes for important warranty information * Powered by Intel Centrino® Duo mobile technology © Lenovo

US models announced May 16 or 30, 2006
US models withdrawn effective February or September 2007

<https://www.lenovo.com/thinkplus/warranty>
ThinkPad Z60m, Z61m, Z61p Accessories - withdrawn

Partial list of accessories supported on:
- ThinkPad Z60m announced on September 20, 2005
- ThinkPad Z61m announced on May 16, 2006
- ThinkPad Z61p announced on July 18, 2006

Memory (Z60m)
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06

Memory (Z61m and Z61p)
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 ann 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 ann 01/05/06
- 2GB PC2-5300 DDR2 SODIMM 40Y7735 ann 11/20/06

Ultrabay Slim 9.5mm (best to use curved bezel options)
- Serial Hard Drive Ultrabay Slim Adapter (flat)™ 40Y8725 ann 09/20/05
- Supports 3.5" SATA hard disk drives with IDE interface

Ultrabay Enhanced 12.7mm (best to use curved bezel options)
- Serial Hard Drive Ultrabay Enhanced Drive (curved) 3928642 ann 03/14/06
- CD-RW/DVD Combo Ultrabay Enhanced (curved) 73P3275 ann 10/07/03

Storage and removable storage
- 60GB Disk 9.5mm SATA150 (7200 rpm)™ 41N3012 ann 01/05/06
- 80GB Disk 9.5mm SATA150 (5400 rpm)™ 41N5662 ann 08/15/06
- 100GB Disk 9.5mm SATA150 (7200 rpm)™ 41N3013 ann 01/05/06
- 120GB Disk 9.5mm SATA150 (5400 rpm)™ 41N5691 ann 03/20/07
- 160GB Disk 9.5mm SATA150 (5400 rpm)™ 41N5692 ann 03/20/07
- "Can be used as the main HDD or with ThinkPad Serial ATA Hard Drive Ultrabay Slim Adapter 40Y8725s in the Ultrabay or in the ThinkPad Advanced Dock 250310U.

Wireless LAN (Mini PCI) (Z60m)
- 11a/b/g Wireless Mini PCI Adapter 41U4940 ann 01/23/07
- System must be wireless upgradable.

Wireless LAN (Mini PCI Express) (Z61m and Z61p)
- 11a/b/g Wireless Mini PCI Express Adapter 40Y7026 ann 09/20/05
- Intel PRO/Wireless 3945ABG Mini PCI Express Adpt™ 41N3008 ann 01/05/06
- System must be wireless upgradable

ThinkPad Expansion
- USB Serial Parallel Adapter 22P5298 ann 10/09/01
- ThinkPad Adjustable Notebook Stand 40Y7676 ann 09/20/05
- ThinkPad Essential Port Replicator 250510W ann 09/20/05
- ThinkPad Advanced Mini Dock 250410U ann 09/20/05
- ThinkPad Advanced Dock™ 250310U ann 09/20/05
- "ThinkPad Advanced Dock supports dual-head graphics adapters:
  - ATI® X1300 256MB Dual Head TV-out 41U0508
  - ATI Radeon™ X300 SE 128MB Dual Head 41U4813

Batteries
- Z60m/R60 Series Li-Ion Battery 6-cell 40Y7679S ann 09/20/05
- Z60m/T60/R60 Li-Ion Battery 9-cell 40Y7679 ann 09/20/05
- ThinkPad Advanced Ultrabay Battery 3-cell™ 40Y7689 ann 09/20/05
- In Ultrabay Enhanced bays
- ThinkPad External Battery Charger™ 40Y7625 ann 09/20/05
- "Requires the ThinkPad 90W AC Adapter 40Y7659 (adapter provided with some systems).
- ThinkPad 65W AC Adapters™ 40Y7696
- "Only compatible with the 945GM and GM965 chipset models.
- ThinkPad 90W AC Adapter 40Y7659 ann 09/20/05
- ThinkPad 90W AC/DC Combo Adapter 40Y7680 ann 12/12/05
- Belkin 1 Outlet Notebook Surge 31P7658
- Belkin Universal Notebook Travel Surge 22P7127
- Belkin Surge Protector 31P7659

Data/Video Projectors
- Lenovo M500 Projector 0037A05 ann 02/28/06
- Lenovo C500 Projector 0039A05 ann 07/11/06

Carrying Cases
- Lenovo Carrying Case - Messenger Max 41U5253 ann 05/01/07
- Lenovo Carry Case - Performance Backpack 41U5254 ann 05/01/07
- ThinkPad Nylon Carrying Case 10K0207
- ThinkPad Carrying Case - Expander 73P3597
- ThinkPad Carrying Case - PackBack 73P3599
- ThinkPad Premiere Leather Carrying Case 10K0209
- ThinkPad Convertible Carrying Case 22P8860

Security
- Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03
- USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06
- PC Card Gemplus Smart Card Reader 41N3004 ann 12/13/05
- ExpressCard Gemplus Smart Card Reader 41N3403 ann 06/27/06
- USB Fingerprint Reader 41U3167 ann 10/24/06

External Keyboard
- TrackPoint Cap Collection 73P2698 ann 12/16/03
- USB Numeric Keypad 33L3225 ann 05/01/00
- Preferred Pro USB Keyboard 73P5220 ann 06/21/05
- Enhanced Performance USB Keyboard 73P2620 ann 03/23/04
- ThinkPad Enhanced USB Keyboard 40Y7721
- Entri Perf Wireless Keyboard and Mouse 73P4067 ann 12/07/04
- USB Keyboard with UltraNav 31P9950 ann 01/28/03
- USB Travel Keyboard with UltraNav 31P9490 ann 04/27/04
- Preferred Pro USB Fingerprint Keyboard 73P4730 ann 02/22/05

External Mouse
- USB Optical Wheel Mouse 06P4069 ann 05/21/03
- Optical 3-Button ScrollPoint® Mouse 31P7405 ann 08/27/02
- Optical 3-Button ScrollPoint Pro Mouse 31P8700 ann 10/01/02
- Optical 3-Button Travel Wheel Mouse 31P7410
- Lenovo Laser Mouse (USB, PS/2) 41U3074 ann 01/23/07

Monitors
- Lenovo E75 17" CRT Monitor (16.0" vis) 637706N ann 01/16/07
- Lenovo L155 15" Monitor (black) 9165AB6 ann 02/28/06
- Lenovo L171 17" Monitor (black) 9227AC1 ann 11/07/06
- Lenovo L191 19" Monitor (black) 6135AB1 ann 06/27/06
- Lenovo L192 Wide 19" Monitor (black) 6920AB1 ann 09/30/06
- Lenovo D221 Wide 22" Monitor (black) 6622B81 ann 11/21/06
- ThinkVision™ L171p 17" Monitor (black) 9417HC2 ann 10/31/06
- ThinkVision L182p 18" Monitor (black) 9417HC2 ann 10/31/06
- ThinkVision L201p 20.1" Monitor (black) 9417HC2 ann 10/31/06

Monitor Accessories™
- ThinkVision USB Soundbar 40Y7616 ann 08/23/05
- Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03
- ThinkPad Convertible Monitor Stand 40Y7620 ann 01/05/06
- Radial Arm 19K4464 ann 05/05/00
- "Compatible on selected Lenovo and ThinkVision monitors.

Multimedia
- USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06
- USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

Other accessories at lenovo.com/accessories

Need to buy accessories no longer marketed by Lenovo? See www.lenovo.com for the Options Continuation Program.
### Type-model  | Top cover color | Olympic logo on cover | Processor | Speed (MHz) | Memory | Wide-screen display | Disk SATA Drive | Mini PCIe WWAN | Mini PCIe WWAN(B) | Finger Battery | Finger Battery Preload | Lim. warranty | Avail. date  
---|---|---|---|---|---|---|---|---|---|---|---|---|---  
2511-3BU Silver | Pentium M™ 760 | 2.00 | 512MB | 14.0” WXGA | 80GB | DVD±RW | 11a/b/g  
2511-E2U Black | Celeron® M 360 | 1.4 | 256MB | 14.0” WXGA | 40GB | Combo | 11a/b/g  
2511-E3U Black | Celeron M 360 | 1.4 | 256MB | 14.0” WXGA | 60GB | DVD±RW | 11a/b/g  
2511-E4U Black | Pentium M 740 | 1.73 | 512MB | 14.0” WXGA | 80GB | DVD±RW | 11a/b/g  
2511-E5U Black | Pentium M 740 | 1.73 | 512MB | 14.0” WXGA | 80GB | DVD±RW | 11a/b/g  
2511-E6U Black | Pentium M 750 | 1.85 | 512MB | 14.0” WXGA | 80GB | DVD±RW | 11a/b/g  
2511-E7U Silver | Pentium M 760 | 2.00 | 1GB | 14.0” WXGA | 100GB | DVD±RW | Verizon Blue  
2511-EAU Black | Celeron M 360 | 1.4 | 256MB | 14.0” WXGA | 40GB | Combo | 11a/b/g  
2511-EBU Black | Celeron M 360 | 1.5 | 256MB | 14.0” WXGA | 40GB | Combo | 11a/b/g  
2511-ECU Black | Celeron M 370 | 1.5 | 256MB | 14.0” WXGA | 40GB | Combo | 11a/b/g  
2511-EDU Black | Celeron M 370 | 1.5 | 256MB | 14.0” WXGA | 40GB | DVD±RW | 11a/b/g  
2511-EU Black | Pentium M 740 | 1.73 | 512MB | 14.0” WXGA | 80GB | DVD±RW | 11a/b/g  
2511-EVU Black | Pentium M 750 | 1.85 | 512MB | 14.0” WXGA | 80GB | DVD±RW | 11a/b/g  
2511-FDU Silver | Pentium M 760 | 2.00 | 1GB | 14.0” WXGA | 100GB | DVD±RW | Verizon Blue  
2511-FEU Silver | Pentium M 760 | 2.00 | 1GB | 14.0” WXGA | 100GB | DVD±RW | Verizon Blue  
2511-FFU Silver Logo | Pentium M 760 | 2.00 | 1GB | 14.0” WXGA | 100GB | DVD±RW | 11a/b/g  

### Positioning
- **Processor**: Intel® Pentium M Processor 730 or 740 or 370 with XD B0 and 400MHz system bus or Intel® Pentium M Processor 740 (1.73GHz), 750 (1.86GHz), or 760 (2.00GHz) with Enhanced Intel SpeedStep technology™, Execute Disable Bit, and 533MHz system bus.
- **L2 cache**: 256KB, 512KB, or 1MB.
- **Diskette drive**: None standard / optional USB-based diskette drive. Some: DVD-ROM/CD-RW / 24x/24x/24x/8x/2 / speed / removable from Ultrabay Slim.
- **EIDE Combo**: Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim.
- **US models withdrawn effective June or October 2006**
- **Other options at O-Z60T sheet**
- **Software**: Windows XP Professional models,
  - Micros.. software and professional Service Pack 2, Driver and Disk-to-Disk Recovery (in hidden protected area)
  - Windows XP Home models,
  - Microsoft Windows XP Home Edition (Service Pack 2), Driver and Disk-to-Disk Recovery (in hidden protected area)
  - Preloaded (all),
  - Rescue and Recovery™, Access Connections™, Client Security Solution™,
  - ThinkVantage Productivity Center, ThinkVantage System Update, Symantec Client Security, Diskeeper, PC-Doctor®, ThinkPad utilities, Adobe Reader, FingerPrint Software, Multimedia Center for Think, Sonic RecordNOW and Drive, Travel Access (combo, DVD±RW), InterVideo WinDVD (combo, DVD±RW models), InterVideo WinDVD Creator (DVD±RW models)
  - License - CD not included
  - Lotus® Software, Lenovo® Rescue Center, and Lotus Notes® Stand-alone Client

### Key features
- **Limited warranty**: 1-year or 1-year LOR 9x5 NBD
- **Operating System**: Windows XP Home / Windows XP Professional
- **Processor**: Intel® Pentium M Processor 730 or 740 or 370 with XD B0 and 400MHz system bus or Intel® Pentium M Processor 740 (1.73GHz), 750 (1.86GHz), or 760 (2.00GHz) with Enhanced Intel SpeedStep technology™, Execute Disable Bit, and 533MHz system bus.
- **L2 cache**: 256KB, 512KB, or 1MB.
- **Diskette drive**: None standard / optional USB-based diskette drive. Some: DVD-ROM/CD-RW / 24x/24x/24x/8x/2 / speed / removable from Ultrabay Slim.
- **EIDE Combo**: Some: DVD and CD burner / Multi-Burner Plus / removable from Ultrabay Slim.
- **US models withdrawn effective June or October 2006**
- **Other options at O-Z60T sheet**
- **Software**: Windows XP Professional models,
  - Microsoft Windows® XP Professional Service Pack 2, Driver and Disk-to-Disk Recovery (in hidden protected area)
  - Windows XP Home models,
  - Microsoft Windows XP Home Edition (Service Pack 2), Driver and Disk-to-Disk Recovery (in hidden protected area)
  - Preloaded (all),
  - Rescue and Recovery™, Access Connections™, Client Security Solution™,
  - ThinkVantage Productivity Center, ThinkVantage System Update, Symantec Client Security, Diskeeper, PC-Doctor®, ThinkPad utilities, Adobe Reader, FingerPrint Software, Multimedia Center for Think, Sonic RecordNOW and Drive, Travel Access (combo, DVD±RW), InterVideo WinDVD (combo, DVD±RW models), InterVideo WinDVD Creator (DVD±RW models)
  - License - CD not included
  - Lotus® Software, Lenovo® Rescue Center, and Lotus Notes® Stand-alone Client

### License - CD not included
- **Lotus® Software**, Lenovo® Rescue Center, and Lotus Notes® Stand-alone Client

### Lenovo
- **Windows XP Professional models**
  - Microsoft Windows® XP Professional Service Pack 2
  - Driver and Disk-to-Disk Recovery (in hidden protected area)
- **Windows XP Home models**
  - Microsoft Windows XP Home Edition (Service Pack 2)
  - Driver and Disk-to-Disk Recovery (in hidden protected area)
- **Preloaded (all)**
  - Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center, ThinkVantage System Update, Symantec Client Security, Diskeeper, PC-Doctor®, ThinkPad utilities, Adobe Reader, FingerPrint Software, Multimedia Center for Think, Sonic RecordNOW and Drive, Travel Access (combo, DVD±RW), InterVideo WinDVD (combo, DVD±RW models), InterVideo WinDVD Creator (DVD±RW models)
- **License - CD not included**
  - Lotus® Software, Lenovo® Rescue Center, and Lotus Notes® Stand-alone Client

### Lenovo
- **Windows XP Professional models**
  - Microsoft Windows® XP Professional Service Pack 2
  - Driver and Disk-to-Disk Recovery (in hidden protected area)
- **Windows XP Home models**
  - Microsoft Windows XP Home Edition (Service Pack 2)
  - Driver and Disk-to-Disk Recovery (in hidden protected area)
- **Preloaded (all)**
  - Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center, ThinkVantage System Update, Symantec Client Security, Diskeeper, PC-Doctor®, ThinkPad utilities, Adobe Reader, FingerPrint Software, Multimedia Center for Think, Sonic RecordNOW and Drive, Travel Access (combo, DVD±RW), InterVideo WinDVD (combo, DVD±RW models), InterVideo WinDVD Creator (DVD±RW models)
- **License - CD not included**
  - Lotus® Software, Lenovo® Rescue Center, and Lotus Notes® Stand-alone Client
## ThinkPad Z60t (2511) - TopSeller (January 2006) - withdrawn

### Positioning
- **Processor**: Stylish notebooks for work and life; thin and light; two-spindle system
- **Memory**: Intel® Celeron M Processor 370 or 380 with XD Bit and 400MHz system bus or Intel® Pentium M Processor 740, 750, 760 or 770 with Enhanced Intel SpeedStep™ technology. Execute Disable Bit and 800MHz system bus

### L2 cache
- **Memory**: Celeron M: 1 MB; Pentium M: 2 MB; All: on die (at processor speed) / ECC

### Diskette drive
- **EIDE combo**: Some: DVD-ROM/C-RW / 2X4/2X4/2X8/16x speed / removable from Ultrabay Slim
- **EIDE DVD+RW**: Some: DVD burner / Super Multi-Burner (40Y8623) dual-layer, removable Ultrabay Slim

### Display
- **Wide-screen**: 14.0" WXGA GMA
- **Battery life**: 4-cell: up to 4.8 lb (2.2kg); 7-cell: up to 5.1 lb (2.3 kg)

### Processor
- **Type**: Mobile Intel 915GM Express Chipset / 82801FB ICH6-M / ISA-PCI, and UltraDMA-66/100 bus, Ethernet, USB, [Bluetooth], [fingerprint] / PCI bus (Ricoh - EasyServ)
- **Memory**: Some: top-cover silver color; CFFP, aluminum, titanium material; bottom: black, CFFP

### Other options
- **Z60t Series**: Lithium Ion 4-cell or 7-cell / intelligent / supports up to 2nd battery in Ultrabay Slim
- **Software**: IBM Rescue and Recovery™ / Access Connections / Client Security Solution™ / ThinkVantage Technology / ThinkVantage System Update / ThinkVantage Productivity Center / ThinkVantage System Update
- **License**: - Microsoft Windows XP Professional models
- **Support**: - USB 2.0 interface via ICH6-M / LED indicator

### Limited warranty
- **1-year**: EasyServ™ on-site pickup and delivery / service upgrades available
- **ThinkPad Roll Cage**: one-piece magnesium frame
- **Lenovo 2001-Compliant**: ACPI 1.0b and 2.0-compliant
- **3-year LOR**: 24 hour 7 day 7 toll-free warranty support during the warranty period

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### Table: TopSeller (January 2006) - withdrawn

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>RAM</th>
<th>Hard Disk</th>
<th>Optical Drive</th>
<th>Display</th>
<th>Battery</th>
<th>Limited warranty + Preload warranty</th>
<th>Available Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2511-H1U</td>
<td>Black Celeron M 380</td>
<td>1.6</td>
<td>512MB</td>
<td>14.0&quot; WXGA</td>
<td>GMA</td>
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<td>GMA</td>
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<td>GMA</td>
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<td>Open; upg</td>
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<td>14.0&quot; WXGA</td>
<td>GMA</td>
<td>40GB</td>
<td>Combo</td>
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<td>512MB</td>
<td>14.0&quot; WXGA</td>
<td>GMA</td>
<td>40GB</td>
<td>Combo</td>
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<td>40GB</td>
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<td>Silver Pentium M 740</td>
<td>1.73</td>
<td>512MB</td>
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<td>GMA</td>
<td>40GB</td>
<td>Combo</td>
<td>Open; upg</td>
</tr>
</tbody>
</table>

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These 2511 models have a 1-year limited warranty**
ThinkPad Z60t (2512) - withdrawn

Created by Lenovo Training Solutions
Personal Systems Reference (PSREF)

ThinkPad
™
ThinkLight
Fingerprint reader
Security
™
Bluetooth
Battery - type
Weight2
TrackPoint
Keyboard
Graphics
Display
Serial ATA disk
L2 cache

Positioning Processor
L2 cache Memory

Diskette drive IDE Combo
Ultrabay Slim Disk (SATA150)

Display Widescreen / 14.0" (356mm) WXGA (1280x768) TFT color / 200 nits / 15:9 ratio / stainless steel hinges / one hand activates dual latches / secure screen surround

Graphics

Keyboard TrackPoint
ThinkLight™

Dimensions2
Weight2
Case material Battery - type Battery - life 10-

Architecture Mobile Intel 915GM Express Chipset /82915GM Graphics Memory Controller Hub /82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 EIDE, PCI Express x1, PCI)/82915GM Graphics Memory Controller Hub /uses main memory (up to 128MB with 256MB+) /200MHz / integrated graphics in 915GM

PC Card slot Ports

Wireless antenna Mini PCI Express 11a/b/g

Modem
Bluetooth™

Ethernet
Audio

Security Security chip

Fingerprint reader

Limited warranty1-yr - EasyServ™ on site pickup and delivery / service upgrades2 available

ThinkPad® Z60t (2512) - withdrawn

Type-model Top cover display color Processor Speed GHz Memory GHz Wide-screen Graphics Speed SATA Disk Media Mini PCIe WWAN Bluetoohl Mini PCIe WWAN Blueooth Finger- print reader Battery - type Battery - life Preload Limited warranty Avail
2512-11U Black Pentium® M 740 1.73 512MB 14.0" WXGA GMA 40GB Combo 11a/b/g2 None None None 4-cell XP Pro 1-yr Sep 05
2512-13U Black Celeron® M 360J 1.4 256MB 14.0" WXGA GMA 40GB Combo 11a/b/g2 None None None 4-cell XP Home 1-yr Sep 05
2512-J GU Black Celeron® 370 1.5 256MB 14.0" WXGA GMA 40GB Combo 11a/b/g2 None None None 4-cell XP Home 1-yr Feb 06

SOFTWARE


Windows XP Professional models
- Microsoft® Windows® XP Professional (Service Pack 2)
- Disk-to-Disco Recovery (in hidden protected area)

Windows XP Home models
- Microsoft® Windows XP Home Edition2 (Service Pack 2)
- Disk-to-Disco Recovery (in hidden protected area)

Preloaded (all)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center
- ThinkVantage System Update
- Symantec® Client Security
- Diskeeper Lite
- PC-Doctor®
- ThinkPad utilities
- Adobe® Reader
- Multimedia Center for Think
- Sonic RecordNOW and Drive
- InterVideo WinDVD Creator (DVD-RW models)

License - CD not included (all)
- Lotus® Smartsuite Millennium and Lotus Notes® Stand-alone Client

ThinkPad notebooks implement ThinkVantage® technologies and design; visit thinkpad.com/thinkvantage

Universal 90-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant
- RoHS-compliant
- International Warranty Service
- 24 hour x 7 day toll-free warranty support during the warranty

ThinkPlus®
- 1-year LOR 9x5 NBD
- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 2-year P & L P/U Depot
- 3-year P & L P/U Depot
- 4-year P & L P/U Depot

Other options at lenovo.com/options

See footnotes for important warranty information
US models announced September 20, 2005 or February 28, 2006
US models withdrawn effective June or October 2006

- Lenovo (MN2) October 2006
## ThinkPad Z60t (2513) - withdrawn

### Top Cover Color

| Type-model | Processor | Speed (GHz) | Memory | Graphics | Mini PCI Express | Mini PCI Express WWAN | Finger Reader | Front-End Processor Frequency (GHz) | Rear-End Processor Frequency (GHz) | Fingerprint Reader | Security | Battery - Life (h) | Weight (G) | Keyboard | Graphics | WWAN | License
|------------|-----------|-------------|--------|----------|-----------------|----------------------|--------------|------------------------------------|------------------------------------|-------------------|-----------|-----------------|------------|----------|---------|-------|--------
| 2513-63U | Black Pentium® M 740 | 1.73 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.14 lbs (970G, 1000G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-64U | Black Pentium® M 750 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.46 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-65U | Black Pentium® M 755 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.64 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-66U | Black Pentium® M 740 | 1.73 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.44 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-67U | Black Pentium® M 755 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-68U | Black Pentium® M 750 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-71U | Black Pentium® M 740 | 1.73 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.44 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-72U | Black Pentium® M 755 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-73U | Black Pentium® M 750 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-74U | Black Pentium® M 740 | 1.73 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.44 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-75U | Black Pentium® M 750 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-76U | Black Pentium® M 755 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-77U | Black Pentium® M 740 | 1.73 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.44 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-78U | Black Pentium® M 750 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter
| 2513-79U | Black Pentium® M 755 | 1.86 | 512MB 14.0" WXGA GMA | 60GB | Combo | 11a/b/g | Blue Finger 3-cell | 3-yr | 2.75 lbs (920G, 1020G, 900G Daula) | 2-cell | Integrated with security chip | 12.6" | 4.6 | WXGA (1280x768) TFT color | 356mm | Universal 90-Watt AC Adapter

### Discontinued

#### Feature Summary

- **ThinkPad applications**: Implement ThinkVantage technologies and design.
- **ThinkPad notebooks**: Feature includes stand-alone ThinkPad application, integrated with security chip.
- **Preloaded software**: Includes Windows XP Professional, Microsoft® Office Professional, ThinkPad Roll Cage, and ThinkPad utilities.
- **Security**: Includes Certo Security, Client Security, and ThinkVantage System Update.
- **Network**: Includes Intel® 82566EM/82569EM/82575EM Gigabit Ethernet, integrated into the motherboard.
- **Graphics**: Integrated graphics in 915GM GDX.
- **Keyboard**: USB 2.0 keyboard, includes power-on password and hard disk password.
- **Memory**: Includes 2GB max DDR2 / PC2-4200 SODIMM, 200-pin SO-DIMM sockets, 512 MB PC2-4200 DDR2 NP CL4 SOD.
- **Ports**: Includes 3-ports USB 2.0, 1-ports USB 2.0, 1-ports universal serial bus.
- **Wireless**: Includes UltraConnect2 wireless, built-in cover and on/off switch for all wireless radios.
- **Audio**: Includes Bluetooth, Gigabit Ethernet, and 1-ports Line In.
- **Battery**: Includes lithium ion or lithium polymer battery, including secure screen surround.
- **Display**: Includes 1-ports DisplayPort, 1-ports Video out port, and 1-ports S-video out port.
- **Security**: Includes power-on password and hard disk password.
- **License**: Includes Universal 90-Watt AC Adapter.
- **Operating System**: Includes Microsoft® Windows XP Professional.
### ThinkPad Z60t (2514) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top color</th>
<th>Processor</th>
<th>Speed MHz</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SAVATA</th>
<th>EIDE controller</th>
<th>Mini PCIe WWAN</th>
<th>Battery</th>
<th>Finger print reader</th>
<th>3-year Limited warranty Available date</th>
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<td>Pentium® M 740</td>
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<td>80GB</td>
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<td>11a/b/g</td>
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<td>None</td>
<td>7-cell Onsite</td>
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</tbody>
</table>

*These models have a limited onsite service \(^{14}\) 3-year warranty*

### Positioning
- **Processor**: Stylish notebooks for work and life; thin and light; two-spindle system
- **L2 cache Memory**: ThinkPad 11a/b/g Mini PCI Express Adapter, Atheros AR5006EX chip
- **Diskette drive**: None standard / use optional USB-based diskette drive
- **EIDE Combo**: DVD-ROM/CARD-W/R | 24x24x24x8x2| speed / removable from Ultrabay Slim
- **Serial ATA disk (SATA150)**: One modular bay for interchangeable cables (right side) / 9.5mm high / flat bezel / 60 or 80GB (5400 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™
- **Display**: Widescreen / 14.0" (356mm) WXGA (1280x768) TFT color / 200 nits / 15.9: ratio / stainless steel hinges / one hand activates dual tracks / screen后续 available
- **Graphics**: Mobile Intel 915GM Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM / uses main with 256MB + 200MHz
- **Keyboard**: 99-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, Appk keys
- **TrackPoint™ ThinkLight™**: TrackPoint® pointing device / UltraNav® multi-pointing system (touchpad)
- **Dimensions**: (WxDxH): 13.1" x 9.0" x 1.05-1.22"; 334mm x 228mm x 26.6-30.9mm
- **Weight**: Some: black color; Hybrid carbon fiber; reinforced polyurethane (CFR) material
- **Battery**: Lithium Ion 4-cell or 7-cell / intelligent / supports 2nd unique battery in Ultrabay Slim
- **Architecture**: Mobile Intel 915GM Express Chipset / 882915GM Graphics Memory Controller Hub / 82801FBM ICH6-M I/O Controller Hub (SAT150, ATA-100 EIDE, PCI Express x1, PCI Express x1)
- **PC Card slot**: One Type I or Type II / CardBus 32-bit / PCMCIA 2.1 / integrated door
- **Wireless antenna**: UltraConnect™ Antenna built into the display cover / on-off switch for all wireless radios
- **Mini PCI Express**: Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- **USB Portable Diskette Drive**: 11a/b/g/WWAN
- **USB Serial Adapter**: None
- **USB Fingerprint Reader**: None
- **USB 2.0 CD-RW/DVD-ROM Combo Drive**: 9GB 8x
- **USB 2.0 USB 50 Portable Hard Disk**: 80GB 8x
- **USB 2.0 Memory Key LGB**: 40Y724
- **USB 2.0 Super Multi-Burner Drive**: 40Y8621
- **Super Multi-Burner UltraSlim Drive (flat bezel)**: 40Y8621
- **Serial Hard Drive Ultrabay Slim Adptr (flat)**: 40Y8725
- **100GB Disk 9.5mm SATA150 (5400 rpm)**: 40Y8721
- **Intel PRO/Wireless 3945ABG Mini PCI-e**: 41N3008
- **3-Button Travel Wheel Mouse**: 31P7410
- **USB Travel Keyboard with UltraNav™**: 31P9490
- **Enh Perf Wireless Keyboard and Mouse**: 73P4067
- **Verizon Wireless V620 WWAN PC Card**: 73P4067
- **Other options on O-Z600 sheet**: None

### SOFTWARE
- **Windows XP Professional models**:  
  - Microsoft Windows XP Professional\(^{16}\) (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- **Preloaded**:  
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - SystemRescue™
  - Diskeeper Lite
  - PC-Doctor™
  - ThinkPad utilities
  - Adobe® Reader
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive Letter Access (combo, model)
  - InterVideo WinDVD (combo, model)
- **License**: CD not included
- **Lenovo™ SmartCenter™ Millennium and Lenovo Notes™ Stand-alone Client**

### Limited warranty
- **3-year limited battery, limited onsite service\(^{16}\)** 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

### Other options
- **ThinPad Roll Cage (one-piece magnesium frame)**
- **Universal 90-watt AC adapter**: ThinkPad AC adapter
- **ACPI 1.0b and 2.0-compliant**: ThinkPad AC adapter
- **PCI 2.0-compliant**: ThinkPad AC adapter
- **ENERGY STAR®-compliant**: ThinkPad AC adapter
- **Universal power supply**: ThinkPad AC adapter
- **Post-warranty annual maintenance agreements**: Visit thinkplus/lenovo.com

See footnotes for important warranty information

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US models announced January 24 or February 6, 2006

US models withdrawn effective October 2006

(MN6) October 2006
### ThinkPad Z60t (2514) - Education - withdrawn

<table>
<thead>
<tr>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed</th>
<th>GHz</th>
<th>Memory</th>
<th>Wide-screen monitor</th>
<th>Graphics controller</th>
<th>Disk controller</th>
<th>Mini PCIe</th>
<th>Mini PCIe</th>
<th>Finger print reader</th>
<th>Battery</th>
<th>Limited warranty</th>
<th>Education Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2514-2GU</td>
<td>Black Pentium M 750 1.86 GHz</td>
<td>512MB</td>
<td>14.0&quot; WXGA</td>
<td>GMA 60GB</td>
<td>Combo 11a/b</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>7-cell</td>
<td>3-year</td>
<td>Yes Sep 05</td>
</tr>
</tbody>
</table>

*This model has a limited onsite service*3 3-year limited warranty

These educational models are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### Positioning

- Processor: Intel® Pentium M Processor 750 (1.86GHz) with Enhanced Intel SpeedStep™ technology9, Execute Disable Bit, and 533MHz system bus
- L2 cache: 2MB / on die (at processor speed) / ECC
- Keyboard: 512MB std / 2GB max / PC2-4200 533MHz DDR2 / non-parity / CL4 / dual channel capable / two 200-pin S-DIMM sockets / std mem in one socket / one socket available

### Diskette drive

- Combo Ultrabay Slim Serial ATA disk (SATA150)
- None standard / usable USB-based diskette drive
- DVD-ROM/CD-RW / 24x/24x/4x/8x speed / removable from Ultrabay Slim
- One modular bay for interchangeable devices (right side) / 9.5mm high bay / flat bezel
- 60GB8 (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™

### Display

- Widescreen / 14.0" (358.4mm) WXGA (1280x768) TFT color / 200 nits / 15:9 ratio / stainless steel bezel / one hand activation / secure screen surround
- Trackpoint® 89-key / ThinkVantage button / spill-resistant / multimedia F keys / Windows, Appl keys
- Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GM
- Widescreen / 14.0" / 200 nits / 15:9 ratio / (358.4mm)
- GMCH / uses main memory (up to 128MB with 256MB+) / 200MHz

### Architecture

- Mobile Intel 915GM Express Chipset / 82811GM Graphics Memory Controller Hub / 82801FBM ICH6-M I/O Controller Hub (SATA150, ATA-100 IDE / PCI Express x1, PCI / 82915GM Graphics Memory Controller Hub / uses main memory (up to 128MB with 256MB+) / 200MHz
- One Type II or one Type II / CardBus 32-bit / PCMCIA 2.1 / integrated / 3-video out port (TV / Secure Digital / IDE) / 1394 (FireWire) / docking / one 3 USB 2.0 / external DB-15 monitor / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (Ethernet) / no keyboard or mouse or parallel or serial ports (use USB)

### Wireless antenna

- Mini PCI Express 11a/b/g/54/64-N WiFi
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- 11a/b/g wireless⁴, ThinkPad 11a/b Mini PCI Express Adapter, Aerohes AR5006EX chip
- None

### Modem

- 65K × 90 (V.92-designed)^⁵ modem in Comm Daughter Card socket / Conexant® chipset
- None

### Security

- Gigabit ethernet on systemboard / Broadcom BCM5751M (MAC/PHY) / PCIe x1 / PXE
- High Definition (HD) Audio / AD1981HD codec / stereo speakers, 1 watt / volume up, down, mute buttons / internal microphone / microphone input jack / headphone jack
- Power-on password / hard disk password / supervisor password / security keyhole
- Trusted Platform Module / Atmel chip / TCG 1.1-compliant
- Finger print reader
- None

### Post-warranty annual maintenance
- 3-years/1-year battery, limited onsite service^⁶, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time
- Limited warranty^⁶ 3-years/1 yr battery, limited onsite service^⁶, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

See footnotes for important warranty information

US model announced September 20, 2005
US model withdrawn effective June 2006

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(MNS) April 2006

### SOFTWARE

- Windows XP Professional models
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)
- Preloaded
  - Education software from Vital Source Technologies®; vitalsource KEY™ and Personal Portable library™
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center
  - ThinkVantage System Update
  - Symantec® Client Security
  - Diskeeper Lite
  - PC-Doctor™
  - ThinkPad utilities
  - Adobe® Reader
  - Multimedia Center for Think
  - Sonic RecordNow® and Drive Letter Access (combo, DVD±RW)
- License – CD not included
  - Lotus® SmartSite® (Millenium and Lotus Notes® Stand-alone Client)

ThinkPad notebooks implement ThinkVantage™ technologies and design; visit thinkpad.com/thinkvantage

Universal 90 watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- PC 2001-compliant
- ACPI 1.0b and 2.0-compliant
- CIM and DMI 2.0-compliant
- PXE 2.1-compliant
- ENERGY STAR®-compliant
- ROHS-compliant

International Warranty Service^17
- 24 hour x 7 day^17 toll-free warranty support during the warranty^17

Post-warranty annual maintenance agreements at lenovo.com/options
## ThinkPad® Z61t (9440) - TopSeller - withdrawn

| Type-model | Top cover | Processor | Speed | Memory | Disk | Mini PCIe | Mini PCIe | Finger | Secur- | Workhorse (W) |
|------------|-----------|-----------|-------|--------|------|-----------|-----------|--------|ity    |              |
| 9440-2SU  | Silver Celeron M 410 | 1.46 512M 14.1 WXGA | 60GB Combo | 11a/b | 802.11 | 802.11 | Finger 1394 | Yes | Home | May 06 |
| 9440-2SU  | Black Celeron M 410 | 1.46 256M 14.1 WXGA | 40GB Combo | 11a/b | 802.11 | 802.11 | Finger 1394 | Yes | Home | May 06 |
| 9440-2SU  | Black Celeron M 420 | 1.60 256M 14.0 WXGA | 40GB Combo | 11a/b | 802.11 | 802.11 | Finger 1394 | Yes | Pro | W Oct 06 |
| 9440-4SU  | Black Celeron M 420 | 1.60 512M 14.0 WXGA | 40GB Combo | 11a/b | 802.11 | 802.11 | Finger 1394 | Yes | Pro | W Oct 06 |
| 9440-4SU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2TU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2TU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2TU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2AU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2AU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2AU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |
| 9440-2CU  | Silver Celeron Duo T2300E 661M 14.1 WXGA | 60GB Combo *Intel 11a/b | 802.11 | Finger 1394 | Yes | Pro | W May 06 |

### Positioning
- Widescreen multimedia, two spindles
- Intel® Celeron M Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel® Core™ Duo processor T2300 or T2500 with dual-core, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz bus, and 2MB shared L2 cache (Note: Intel® Celeron M 410 only in 1.46 GHz models)

### Memory
- 2GB PC2-5300 DDR2 SODIMM
- 512 MB PC2-5300 DDR2 CL5

### Software
- Windows XP Professional models
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

### Preloaded (all)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think
- Sonic RecordNow! and Drive
- Letter Access (combo, DVD+RW)
- InterVideo WinDVD Combo (combo, DVD+RW)
- InterVideo WinDVD Creator (DVD+RW models)

### License
- CD - not included (all)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

### Limited warranty**
- 1-year - EasyServ™ onsite pickup and delivery / service upgrades** available

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### Footnotes
* Powered by Intel Centrino® Duo processor technology

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US models announced May 16, May 30, or October 17, 2006

US models withdrawn effective February, April, or September 2007

See footnotes for important warranty information

** Limited warranty - 1-year - EasyServ™ onsite pickup and delivery / service upgrades available
## ThinkPad® Z61t (9440) - TopSeller (October 2006) - withdrawn

### Type-model

<table>
<thead>
<tr>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed</th>
<th>RAM</th>
<th>Memory</th>
<th>Display</th>
<th>Disk</th>
<th>I/O</th>
<th>Mini PCIe</th>
<th>Blue</th>
<th>Camera</th>
<th>Finger print reader</th>
<th>Workhorse</th>
<th>World</th>
<th>Available date</th>
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<tbody>
<tr>
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<td>Core 2 Duo T5500</td>
<td>1.66</td>
<td>1GB</td>
<td>14.0” WXGA</td>
<td>80GB</td>
<td>Combo</td>
<td>Intel 11a/b/g</td>
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<td>DVD±RW</td>
<td>ThinkPad 11n</td>
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<td>-</td>
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<td></td>
</tr>
</tbody>
</table>

- These small and medium size (MBM) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty

### Positioning

- Widescreen multimedia; two spindles
- Intel® Core™ 2 Duo processor T5500 or T7200 with dual-core
- Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, and 667MHz system bus; T5500: 2MB shared L2 cache; T7200: 4MB shared L2 cache

### Memory

- 1GB or 2GB std / 4GB max/PCI2-S530 667MHz DDR2 / non-parity / CL5 / dual-channel capable / 200-pin SO-DIMM sockets
- All: std memory in 2 sockets; no sockets available

### Diskette drive

- None standard / use optional USB-based diskette drive

### EIDE Combo

- Some: DVD-ROM/C-D/RW / 24X/24X/24X/8X speed / removable from Ultrabay Slim

### UltraBay Slim

- One modular bay for interchangeable devices (right side) / 9.9mm high bay / flat bezel

### Display

- Some: W1440x900 / 3840x2400 / 14.1” WXGA+ (1380x768) TFT color / 200 nits / 15-9:1 contrast / WXGA+ (1440x900) TFT color / 200 nits / 16:10
- All: stainless steel hinges / one hand activates dual latches

### Graphics

- Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- DVI pass-through support to optional Advanced Mini Dock and Advanced Dock

### Keyboard

- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

### TrackPoint™

- TrackPoint™ pointing device / UltraNav™ multi-pointing system (touchpad)

### ThinkLight™

- Illuminates the keyboard to improve visibility in low-light conditions

### Dimensions³

- (WxHxl): 13.1” x 9.0” x 1.05-1.25” / 334mm x 228mm x 26.6-30.9mm
- Weight³: with optical drive and battery: 4-cell lithium ion: starting from 4.84-9.22 lb (2.2-4.2kg)

### Case material

- Cover: silver color; CFRP, aluminum, titanium material; Bottom: black, CFRP

### Battery - type

- Lithium Ion 4-cell / supports unique 2nd battery in Ultrabay Slim

### Battery - life ℮

- 4-cell: up to 3.7 hr; optional 7-cell: up to 6.25 hr

### Architecture

- Mobile Intel 945GM Express Chipset / 8945GM Graphics Memory Controller Hub / 8945GM Express Memory Controller Hub
- One Type 1 or One Type 2 Card bus 2-bit / PMCLIA 2.1 / integrated door
- in-1 Multicard Reader (MultiMedia Card, Secure Digital, xD-Picture Card™) / S-video out port (TV out) / IEEE 1394 (FireWire 400) / docking / three USB 2.0 / 3-in-1 Multicard Reader

### Wireless antenna

- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- Integrated camera on top of screen / 0.3-megapixel / fixed focus / US models withdrawn effective April or September 2007

### Intel Mini PCIe Express

- Two Mini PCIe Express slots / only 802.11 wireless is customer upgradable
- Intel 11a/b/g² / ThinkPad 11n²

### Modem

- Some: Mini PCI Express adapter, Intel PRO/Wireless 3945ABG
- Some: 11a/b/g wireless, Mini PCI Express adapter

### Bluetooth⁴

- 56K V.90 (V.92-designed²) modem in Comm Daughter Card socket / Conexant® chip
- Bluetooth 2.0 wireless technology / USB 2.0 interface via ICH7-M / LED indicator

### Ethernet

- Gigabit ethernet on system board / Broadcom® BCM5752 (MAC/PHY) / PClxe x1 / PXE Audio
- High Definition (HD) Audio / ADI1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / 25us: mono microphone; others: stereo microphone / microphone input jack / headphone jack

### Security

- Power-on password / hard disk password / supervisor password / security keyhole
- Security chip

### Security chip

- Trusted Platform Module / Atmel chip / TCG 1.2-compliant microcode

### FingerPrint reader

- Fingerprint reader on palm rest / swipe sensor / supports the security chip

### Limited warranty²

- 1-year: EasyServ™ / onsite pickup and delivery / service upgrades² available

## SOFTWARE

### Windows XP Professional

- Microsoft® Windows® XP Professional² (Service Pack 2)
- Disk-to-Disk Recovery

### Preloaded

- Model A8U/A8U/D: Microsoft Office OneNote™ 2003
- Rescue and Recovery™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskeeper Lite
- PC-Doctor® (diagnostics)

### Other ThinkPlus services at lenovo.com/thinkplus/warranty

- Model A8U/A8U/D: Microsoft Office OneNote 2003
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Fingerprint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive

### CD included

- Model A8U/A8U/D: Microsoft Office OneNote 2003
- License - CD not included: Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Software

- Supports ThinkVantage™ technologies
- Universal 65-watt AG adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service

### International Warranty Service

- 24 hour / 7 days toll-free warranty support during the warranty

### US models withdrawn effective April or September 2007

- ThinkPlus™ 22 1-year LOR 9x5 NBD
- ThinkPlus 2-year LOR 9x5 NBD
- ThinkPlus 3-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 4-year LOR 9x5 NBD
- ThinkPlus 2-year P&L P/U Depot
- ThinkPlus 3-year P&L P/U Depot
- Other ThinkPlus services at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
ThinkPad® Z61t (9441) - withdrawn

Positioning
Processor
Intle Celeron M Processor 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or

Memory

Diskette drive
IDE Combo

UltraBay Slim

Serial ATA disk

Display

Graphics

Keyboard

TrackPoint

ThinkLight™

Dimensions²

Weight²

Case material

Battery - type

Battery - life¹⁵

Architecture

PC Card slot

Ports

Wireless antenna

Mini PCi Express

WWAN

Modem

Audio

Security chip

Fingerprint reader

Limited warranty²

1-year - EasyServ²² on-site pickup and delivery / service upgrades²² available

512MB PC2-5300 DDR2 CLS SODIMM 40Y7733
1GB PC2-5300 DDR2 CLS SODIMM 40Y7731
2GB PC2-5300 DDR2 SODIMM 40Y7735
USB Portable Diskette Drive 05K9276
USB Fingerprint Reader 41U3167
USB Gemplus GemPC Smart Card Reader 41N3040
USB 2.0 Lenovo Webcam 40Y8519
USB 2.0 Security Memory Key 2GB 41U1119
USB 2.0 Security Memory Key 4GB 41U1119
USB 2.0 Multi-Subscriber Burner 41N5565
USB 2.0 Portable Hard Disk 41N8379
Combo II UltraBay Slim Drive (flat bezel) 40Y8621
ThinkPad DVD UltraBay Slim Burner (flat) 41N643
Serial Hard Drive UltraBay Slim Adapter (flat) 40Y8725
160GB Disk 5.9mm SATA150 (5400 rpm) 41N5692
Lenovo Laser Mouse (USB, PS/2) 41U3074
Other accessories on O-2601 sheet

SOFTWARE¹⁴

- Microsoft® Windows® XP Professional
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Microsoft Office 2003

Preloaded
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- SYMANTEC® Client Security
- Diskeeper Lite
- PC-Doctor™ (diagnostics)
- Adobe Acrobat
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive
- InterVideo WinDVD (combo models)

License – CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-along Client
- Lenovo Laser Mouse (USB, PS/2) 41U3074
- Serial Hard Drive Ultrabay Slim Adptr (flat) 40Y8725
- ThinkPad DVD Ultrabay Slim Burner (flat) 41N643
- Serial Hard Drive UltraBay Slim Adapter (flat) 40Y8725
- Lenovo Laser Mouse (USB, PS/2) 41U3074
- Other accessories on O-2601 sheet

See footnotes for important warranty information

* Powered by Intel Centrino® Duo processor technology

US models announced May 16, 2006

US models withdrawn effective April or September 2007

Lenovo Laser Mouse (USB, PS/2) 41U3074
Serial Hard Drive Ultrabay Slim Adptr (flat) 40Y8725
ThinkPad DVD Ultrabay Slim Burner (flat) 41N643
Serial Hard Drive UltraBay Slim Adapter (flat) 40Y8725
Lenovo Laser Mouse (USB, PS/2) 41U3074
Other accessories on O-2601 sheet

Lenovo

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Personal Systems Reference (PSRF)

Created by Lenovo Training Solutions

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Personal Systems Reference (PSRF)
## ThinkPad® Z61t (9441) - Education - withdrawn

### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Processor</th>
<th>Memory</th>
<th>Graphics Disk</th>
<th>EIDE optical</th>
<th>Mini PCIe</th>
<th>Finger reading</th>
<th>1-year warranty</th>
<th>Workhorse</th>
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<tbody>
<tr>
<td>9441-E1U</td>
<td>Core2 Duo T2300E 1.65 GHz</td>
<td>1GB DDR2 SODIMM</td>
<td>SATA150</td>
<td>11a/b/g</td>
<td>802.11</td>
<td>Finger</td>
<td>EasyServ</td>
<td>41C9174</td>
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<td>Core2 Duo T2400 1.83 GHz</td>
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<td>SATA150</td>
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<td>EasyServ</td>
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<td>SATA150</td>
<td>11a/b/g</td>
<td>802.11</td>
<td>Finger</td>
<td>EasyServ</td>
<td>41C9174</td>
</tr>
</tbody>
</table>

### Features

- **Diskette drive**: None standard / use optional USB-based diskette drive
- **Audio**: High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt /
- **Battery**: 4-cell; up to 2.5 hr; up to 7 hr; up to 15 hr; up to 20 hr
- **Graphics**: Intel Graphics Media Accelerator 9500 / integrated in 945GM / 250MHz
- **Display**: Widescreen / 14.1" (358mm) WXGA (1280x800) TFT color / 120 nits / 16:10 ratio /
- **Weight**: 512MB std / 4GB max / PCI-5200 667MHz DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets
- **Ports**: USB 2.0 / Gigabit ethernet on systemboard / Broadcom PCI8412
- **SATA**: 90W AC/DC Combo Adapter 40Y7630
- **Computer**: Special USB-based version
- **Operating System**: Windows XP Professional
- **Preloaded software**: VitalSource Library education software / Adobe Photoshop Elements plus Adobe Premiere Elements / Rescue and Recovery™ / Access Connections™ / Client Security Solutions™
- **Support**: During the warranty
- **Limited warranty**: EasyServ™ onsite pickup and delivery / service upgrades available

### Accessories

- **CDs**: ThinkPlus 5-year P&L P/U Depot 41C9172
- **USB Drives**: 144GB / 256GB / 320GB / 500GB / 1TB
- **Batteries**: Advanced Ultrabay Slim battery / Advanced Ultrabay Slim battery (2nd battery / for Ultrabay Slim)
- **Adapters**: Lenovo M500 Projector 0037A05
- **Monitors**: Lenovo L192 Wide 19" Monitor (black) 6920AB1

### Limitations

- **Models withdrawn effective February, April, or September 2007
- **Windows XP Professional (Service Pack 2)**
- **Disk-to-Drive Recovery**

### Additional Information

- **Lenovo Training Solutions**: Stand-alone Client
- **Software**: ThinkPlus 2-year LOR 9x5 NBD
- **Support**: Universal 65-watt AC adapter
- **CD**: Adobe Photoshop Elements plus Adobe Premiere Elements
- **License**: ThinkPlus 3-year LOR 9x5 NBD
- **Limited warranty**: 1-year EasyServ™ onsite pickup and delivery / 2-year LOR 9x5 NBD

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*Powered by Intel Centrino® Duo processor technology*
ThinkPad® Z61t (9442) - withdrawn

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed (MHz)</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics Disk</th>
<th>Mini PClE Card</th>
<th>Finger print reader</th>
<th>Security chip</th>
<th>Battery Life</th>
<th>Limited warranty</th>
<th>Workhorse (W)</th>
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</thead>
<tbody>
<tr>
<td>9442-4FU Silver</td>
<td>Core Duo T2400 1.83</td>
<td>512MB DDR</td>
<td>14.1&quot; WXGA</td>
<td>60GB Sata</td>
<td>Intel 11a/b/g</td>
<td>Finger</td>
<td>Yes</td>
<td>4-cell 3-yr  W  05/May</td>
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<td>3</td>
<td>3-year limited warranty</td>
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<tr>
<td>9442-4GU Black</td>
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<td>512MB DDR</td>
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<td>80GB Sata</td>
<td>Intel 11a/b/g</td>
<td>Finger</td>
<td>Yes</td>
<td>4-cell 3-yr  W  06/May</td>
<td>*</td>
<td>3</td>
<td>3-year limited warranty</td>
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<tr>
<td>9442-8U Silver</td>
<td>Core Duo T2400 1.83</td>
<td>512MB DDR</td>
<td>14.1&quot; WXGA</td>
<td>80GB Sata</td>
<td>Intel 11a/b/g</td>
<td>Finger</td>
<td>Yes</td>
<td>4-cell 3-yr  W  05/May</td>
<td>*</td>
<td>3</td>
<td>3-year limited warranty</td>
<td></td>
</tr>
</tbody>
</table>

*These models have a 3-year limited warranty

### SOFTWARE

- Windows XP Professional models
  - Microsoft® Windows® XP Professional® (Service Pack 2)
  - Disk-to-Disk Recovery
    - (in hidden protected area)
- Preloaded
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper Lite
  - PC-Doctor® (diagnostics)

- ThinkPad Utilities (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - FingerPrint Software (fingerprint models)

- Multimedia Center for Think Offerings
  - Sonic RecordNOW® and Drive Letter Access (combo models)
  - InterVideo WinDVD® (combo models)

### License
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Other Accessories
- Universal 65-watt AC adapter
- ThinkPad Roll Cage (one-piece carrying frame)

### RoHS-compliant
- International Warranty Service
  - 24 hour x 7 day toll-free warranty support during the warranty

### ThinkPlus®
- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 4-year P&L Depot
- 5-year P&L Depot

### Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

\* Powered by Intel Centrino® Duo processor technology

© Lenovo (MN2-3) September 2007

See notes for important warranty information

US models announced May 16, 2006

US models withdrawn effective September 2007
## Specifications

### System Features

- **Processor**: Intel Core™ 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz memory bus, and 4MB shared L2 cache.

- **Memory**: 1GB or 2GB (4442-PMU only) DDR2 SDRAM, 800MHz, 200-pin, Double Data Rate, 240-pin, Unbuffered, Non-ECC memory.

- **Graphics**: Intel® Graphics Media Accelerator 950, integrated in 945GM/250MHz DVI pass-through support to optional Advanced Mini Dock and Advanced Dock.

- **Display**: WXGA (1280x768) TFT color, 200 nits / 15.9 / stainless steel hinges / one hand activates dual latches.

- **Battery**: 1GB models: standard in both sockets (512MB each socket); no sockets available.

### Software and Operating System

- **Preloaded Software**: Windows XP Professional

### Environment

- **Post-warranty annual maintenance**
- **International Warranty Service**
- **ThinkPlus**
- **ThinkPad Roll Cage (one-piece magnesium frame)**

### Warranty

- **Limited Warranty**: 3-year / 5-year battery - EasyServ™/S EasyServ™ on-site pick up and delivery / service upgrades available.

## Accessories

<table>
<thead>
<tr>
<th>Type-Model</th>
<th>Processor</th>
<th>Speed (GHz)</th>
<th>Memory (GB)</th>
<th>Graphics</th>
<th>Disk</th>
<th>Mini PCIE</th>
<th>Fingerprnt</th>
<th>Battery</th>
<th>Workhorse (W)</th>
<th>Weight?</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Core 2 Duo T7200</td>
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<td>NGA</td>
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<td>DVD+RW</td>
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<td>80GB</td>
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<td>1.19</td>
<td>4-3 cell</td>
<td>4-3 cell</td>
</tr>
</tbody>
</table>

*These models have a 3-year limited warranty.*
### ThinkPad Z61t (9442) - Education - withdrawn

**Positioning**
- Processor: **Intel® Core Duo processor T2300E, T2400, or T2500** with dual-core.
- Other: • Intel® SpeedStep™ technology, • Execute Disable Bit, 667 MHz system bus, and 2MB shared L2 cache.

**Memory**
- 512MB or 1GB std / 4GB max
- 2/PC-5300 667 MHz DDR2 / non-parity
- Diamond: • dual-channel capable • two 200-pin SO-DIMM sockets • 512 MB models: std mem in one socket; one socket available • 1GB models: std memory in two sockets; none available

**Diskette drive**
- EIDE Drive: Non-configurable • optional USB-based diskette drive
- EIDE Drive: Some: • DVD-ROM / CD-ROM • removable from UltraBay Slim
- UltraBay Slim: One modular bay for interchangeable devices (right side) / 9.5mm high bay / supports 2nd disk / HDD Protection System (shock absorber) / Active Protection System™

**Display**
- Widescreen / 14.1" (358mm) WXGA (1280x800) TFT color / 185 nits / 16:10 ratio / stainless steel hinges / one hand activates dual latches

**Graphics**
- Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz
- Keyboard: 89-key / ThinkVantage button / spill-resistant
- TrackPoint®: integrated the keyboard to improve visibility in low-light conditions
- Dimensions: (WxDxH): 13.1" x 9.0" x 1.05-1.22"; 334mm x 228mm x 26.6-30.9mm
- Weight: with optical drive and battery: 4-cell: starting at 4.17 lb/4.57 lb (1.9kg/2.1kg); 7-cell: up to 6.25 lb; 7-cell plus UltraBay Slim battery: up to 8.25 hr

**Architecture**
- Mobile Intel 945GM Express Chipset
- ThinkLight®: illuminate the keyboard to improve visibility in low-light conditions
- ThinkPad® Advanced Dock
- ThinkPad® Essential Port Replicator
- ThinkPad® 90W AC Adapter

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios
- Some: camera on screen / 0.3-megapixel / fixed focus
- Two Mini PCI Express slots / only 802.11 wireless is customer upgradable
- Some: 11a/b/g wireless, ThinkPad 11a/b/g Mini PCI Express Adv, Atheros AR5006EX
- Intel 11a/b/g wireless, 512 MB models: dual-channel capable • two 200-pin SO-DIMM sockets • 1GB models: std memory in two sockets; none available

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole
- Security chip: Trusted Platform Module / Atmel chip / TCG 1.2-compliant

**Limited warranty**
- 3-year Limited Warranty
- FingerPrint reader: 3-year limited warranty

**Software**
- Windows XP Professional: • Microsoft Windows XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery
- Preloaded: • Adobe Photoshop Elements Plus and Adobe Premiere Elements
- • Rescue and Recovery
- • Access Connections
- • Client Security Solution™
- • ThinkVantage Productivity Center with Accessories Support
- • ThinkVantage System Update
- • Symantec Client Security™
- • Diskeeper Lite
- • Intel® PC-Doctor® (diagnostics)
- • ThinkPad Utilities (Power Manager and Presentation Director)
- • Google Toolbar
- • Google Desktop
- • Picasa from Google

**License**
- CD: • Adobe Photoshop Elements Plus and Adobe Premiere Elements
- • Adobe SourceForgeNOW and Drive Letter Access (combo, DVD:RW)
- • InterVideo WinDVD Combo (combo, DVD:RW models)
- • InterVideo WinDVD Creator (DVD:RW models)
- • Adobe Premiere Elements

**Other accessories**
- Universal 65-watt AC adapter ThinkPad Roll Cage (one magnesium frame)
- RoHS-compliant

See footnotes for important warranty information.

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**Notes**
- Created by Lenovo Training Solutions
- Personal Systems Reference (PSREF)
- US models announced May 16 or May 30, 2006
- US models withdrawn effective April or September 2007
- *Powered by Intel Centrino® Duo processor technology

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Color</th>
<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Graphics</th>
<th>Display</th>
<th>Mini PClE</th>
<th>Finger print reader</th>
<th>Workhorse (W)</th>
<th>3-year limited warranty (E)</th>
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<tbody>
<tr>
<td>9442-E1U</td>
<td>Black</td>
<td>Core® Duo T2300E 1.66</td>
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<td>Finger</td>
<td>EasyServ 3 / May 06</td>
<td>2-year</td>
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</table>

**Footnotes**
- User manuals announced May 16 or May 30, 2006
- US models withdrawn effective April or September 2007
- © Lenovo
- *Powered by Intel Centrino® Duo processor technology
ThinkPad® Z61t (9443) - withdrawn

**SOFTWARE**

- Windows XP Professional models
  - Microsoft® Windows® XP Professional® (Service Pack 2)
- Disk-to-Disk Recovery (in hidden protected area)

**Preloaded**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- PC-Doctor® Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- FingerPrint Software (fingerprint models)
- Multimedia Center for Think Offering
- Sonic RecordNOW and Drive
- Letter Access (combo, DVD±RW)
- InterVideo WinDVD (combo, DVi±RW models)
- InterVideo WinDVD Creator (DVi±RW models)

**License**
- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Limited warranty**
- 3-year/1-year battery, limited onsite service @ 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time

See footnotes for important warranty information

* Powered by Intel Centrino® Duo processor technology

© Lenovo

US models announced May 16 or May 30, 2006

US models withdrawn effective April or September 2007

(MN2-4) September 2007

*Lenovo*
ThinkPad® Z61t (9443) - October 2006 - withdrawn

512MB PC2-5300 DDR2 CLS SODIMM 40Y7733
1GB PC2-5300 DDR2 CLS SODIMM 40Y7734
2GB PC2-5300 DDR2 SODIMM 40Y7735
USB Portable Diskette Drive 05K9276
USB Fingerprint Reader 41U3167
USB 2.0 Lenovo Webcam 40Y8519
USB 2.0 Security Memory Key 4GB 41U5120
USB 2.0 CD-ROM/DVD-ROM Combo II Drive 40Y8637
USB 2.0 Super Multi-Burner Drive 41N5565
Combo II Ultrabay Slim Drive (flat bezel) 40Y8621
ThinkPad DVD Ultrabay Slim Burner (flat) 41N5643
Serial Hard Drive Ultrabay Slim Adptr (flat) 40Y8725
ThinkPad Preffered Pro USB Fingerprint Keyboard 73P4730
Other accessories on Z-60T sheet

520 Series Li-Ion Battery 4-cell 40Y6791
Z60 Series Li-Ion Battery 4-cell 40Y6791
40Y7693

- 3-year limited warranty
- 1-year battery, limited onsite service
- 8 or 4 GB standard memory in 1 socket; 1 socket available

Notices
- Other accessories at lenovo.com/accessories

See footnotes for important warranty information

Supported thinkVantage technologies
- Universal 65-watt AC adapter
- ThinkPad Roll Cage (one-piece magnesium frame)
- RoHS-compliant
- International Warranty Service
- 24 hour 7 day a week warranty support during the warranty period

Post-warranty annual maintenance agreements
- lenovo.com/thinkplus/warranty
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<tr>
<th>Top cover color</th>
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<th>Memory</th>
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<td>Finger</td>
<td>Cam</td>
<td>Yes</td>
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</tbody>
</table>

*This model has a limited onsite service* 3-year limited warranty

These educational models are available only to public or private K-12 or higher accredited schools organized and operated exclusively for educational purposes for use by qualified students and teachers.

### SOFTWARE

- Windows XP Professional
  - Microsoft Windows XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

### Preloaded

- VitalSource Library education software
- Adobe Photoshop Elements plus Adobe Premiere Elements
- Rescue and Recovery™
- Access Connections®
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec Client Security™
- Diskeeper Life
- PC Doctor™ (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe Reader
- Google Talk
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offers
- Sonic RecordNOW and Drive Letter Access (combo, DVD:RW)
- InterVideo WinDVD (combo, DVD:RW models)
- InterVideo WinDVD Creator (DVD:RW models)

### CD

- Adobe Photoshop Elements plus Adobe Premiere Elements

### License

- CD not included
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Universal 65-watt AC adapter

- ThinkPad Roll Cage (one-piece magnesium frame)
- ROHS-compliant

### International Warranty Service

- 24 hour x 7 day toll-free warranty support during the warranty period

- Post-warranty annual maintenance agreements available at lenovo.com/thinkplus/warranty
### Partial list of accessories supported on ThinkPad Z60t (and Z61t)

**originally announced on September 20, 2005 (and May 16, 2006)**

#### Memory (Z60t)
- 512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733 anno 01/05/06
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734 anno 01/05/06

#### Memory (Z61t)
- 1GB PC2-5300 DDR2 CL5 SODIMM 40Y7723 anno 01/05/06
- 2GB PC2-5300 DDR2 SODIMM 40Y7724 anno 01/05/06
- 4GB PC2-5300 DDR2 SODIMM 40Y7725 anno 11/28/06

#### Ultrabay Slim 9.5mm
- (best to use flat bezel options)
- Serial Hard Drive Ultrabay Slim Adapter (flat) 40Y8725 anno 09/20/05
- Combo II Ultrabay Slim Drive (flat bezel) 40Y8621 anno 09/20/05
- ThinkPad DVD Ultrabay Slim Burner (flat) 4IN5643 anno 05/31/07

#### Ultrabay Enhanced 12.7mm
- None

#### Storage and removable storage
- 60GB Disk 9.5mm SATA150 (7200 rpm)*
- 80GB Disk 9.5mm SATA150 (5400 rpm)*
- 100GB Disk 9.5mm SATA150 (7200 rpm)*
- 120GB Disk 9.5mm SATA150 (5400 rpm)*
- 160GB Disk 9.5mm SATA150 (5400 rpm)*
- *Can be used as the main HDD or with ThinkPad Serial ATA Hard Drive Ultrabay Slim Adapter 40Y8725 in the Ultrabay or in the ThinkPad Advanced Dock 250310U.

#### USB 2.0
- Essential Memory Key 1GB 41U4940 anno 01/23/07
- Essential Memory Key 2GB 41U4944 anno 01/23/07
- Security Memory Key 1GB 41U5118 anno 07/17/07
- Security Memory Key 2GB 41U5119 anno 07/17/07
- Security Memory Key 4GB 41U5120 anno 07/17/07

#### USB Portables
- Diskette Drive 05K9276 anno 06/05/00
- CD-RW/DVD-ROM Combo II Drive 40Y8637 anno 01/05/06
- Portable 80GB Hard Disk 41N8378 anno 04/17/07
- Portable 120GB Hard Disk 41N8379 anno 04/17/07
- Super Multi-Burner Drive 41N5565 anno 01/23/07

#### Wireless LAN (Mini PCI Express)
- 11a/b/g Wireless Mini PCI Express Adapter 40Y7026 anno 09/20/05
- Intel PRO/Wireless 3945ABG Mini PCI Express Adapter 4IN3008 anno 01/05/06

#### ThinkPad Expansion
- USB Serial Parallel Adapter 22P5298 anno 10/09/01
- Adjustable Notebook Stand 40Y7676 anno 09/20/05
- ThinkPad Essential Port Replicator 250510W anno 09/20/05
- Advanced Mini Dock 250410U anno 09/20/05
- Advanced Dock 250310U anno 09/20/05

#### External Keyboard
- TrackPoint Cap Collection 73P2698 anno 12/16/03
- US Numeric Keypad 33L3225 anno 05/01/00
- Preferred Pro USB Keyboard 73P5220 anno 06/21/05
- Enhanced Performance USB Keyboard 73P2620 anno 03/23/04
- Targus Wireless Keyboard and Mouse Combo 40Y7721
- Enhanced Wireless Keyboard and Mouse 73P4067 anno 12/07/04
- Keyboard with UltraNav 31P9850 anno 01/28/03
- Travel Keyboard with UltraNav 31P9480 anno 04/27/04
- Preferred Pro USB Fingerprint Keyboard 73P4750 anno 02/22/05

#### External Mouse
- Optical Wheel Mouse 06P4069 anno 05/21/03
- Optical 3-Button ScrollPoint® Mouse 31P7405 anno 08/27/02
- Optical 3-Button ScrollPoint Pro Mouse 31P8700 anno 10/01/02
- Optical 3-Button Travel Wheel Mouse 31P7410
- Lenovo Laser Mouse, USB, PS/2 41U3074 anno 01/23/07

#### Batteries
- Z60t Series Li-Ion Battery 4-cell 40Y6791 anno 09/20/05
- Z60t Series Li-Ion Battery 7-cell 40Y6793 anno 09/20/05
- Advanced Ultrabay Battery 3-cell* 40Y6789 anno 09/20/05
- *Used in Ultrabay Slim bay.
- External Battery Charger** 40Y7625 anno 09/20/05
- **Requires the ThinkPad 90W AC Adapter 40Y7659 (adapter provided with some systems).
- 65W AC Adapter** 40Y7696
- **Only compatible with the 945GM and GM965 chipset models.
- 90W AC Adapter 40Y7659 anno 09/20/05
- Advanced DC Combo Adapter 40Y7630 anno 12/13/05
- 1 Outlet Notebook Surge 31P7658
- Universal Notebook Travel Surge 22P7127
- Surge Protector 31P7659

#### Data/Video Projectors
- Lenovo M500 Projector 0037A05 anno 02/28/06
- Lenovo C500 Projector 0039A05 anno 07/11/06

#### Carrying Cases
- X1300LE 256MB Dual Head/TV-out 41U5028
- ThinkPad Advanced Dock 250310U
- Advanced Mini Dock 250410U

#### Security
- Kensington® Cable Lock from Lenovo 73P2582 anno 12/29/03
- Gemplus Smart Card Reader 41N3043 anno 06/27/06
- Fingerprint Reader 41U3167 anno 10/24/06

#### Monitors
- Lenovo E57 17” CRT Monitor (16.0” vis) blk 6307BTN anno 01/16/07
- Lenovo L171 17” Monitor (black) 92165A8 anno 02/28/06
- Lenovo L191 19” Monitor (black) 6135A81 anno 06/27/06
- Lenovo L192 Wide 19” Monitor (black) 6820AB1 anno 09/19/06
- Lenov L221 Wide 22” Monitor (black) 6624AB1 anno 11/21/06
- ThinkVision® L171p 17” Monitor (black) 9417HC2 anno 10/31/06
- ThinkVision L192p 19” Monitor (black) 9419HC2 anno 10/31/06
- ThinkVision L261p 20.1” Monitor (black) 9220H81 anno 10/31/06

#### Monitor Accessories**
- Soundbar 40Y7616 anno 08/29/06
- Kensington Cable Lock from Lenovo 73P2582 anno 12/29/03
- Lenovo C500 Projector 0039A05 anno 07/11/06
- ExpressCard Gemplus Smart Card Reader 41N3043 anno 06/27/06
- Fingerprint Reader 41U3167 anno 10/24/06

#### Multimedia
- USB 2.0 Lenovo Multimedia Headset 40Y8518 anno 06/27/06
- Lenovo WebCam 40Y8519 anno 08/29/06

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Created by Lenovo Training Solutions Personal Systems Reference (PSREF)

Need to buy accessories no longer marketed by Lenovo? See lenovo.com/accessories Other accessories at lenovo.com/accessories

Other accessories at lenovo.com/accessories

See www.lenovotrade.com/lenovo for the Options Continuation Program.
### ThinkPad® Z61e (0672) - Top-Seller - withdrawn

| Type-model | Top cover color | Processor | Speed (GHz) | Mem-| Graphics controller | Disk SATA | EIDE optical | Mini PCI | Mini PCle | Finger print | Workhorse | Pre-load | Workhorse | Avail． |
|------------|----------------|-----------|-------------|-----|---------------------|----------|-------------|----------|-----------|-------------|-----------|----------|-----------|---------|-----|
| 0672-21U | Black Celeron M 410 | 1.46 | 256MB | 15.4" WXGA | GMA | 40GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |
| 0672-23U | Black Celeron M 410 | 1.46 | 512MB | 15.4" WXGA | GMA | 60GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |
| 0672-24U | Silver Celeron M 410 | 1.46 | 512MB | 15.4" WXGA | GMA | 60GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |
| 0672-2B5 | Black Celeron M 420 | 1.60 | 256MB | 15.4" WXGA | GMA | 60GB | CD | 11a/b/g(n) | No | No | GM | No | XP Pro | Gbl | Oct 06 |
| 0672-28U | Black Core Solo T1300 1040 | 1.66 | 256MB | 15.4" WXGA | GMA | 60GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |
| 0672-26U | Silver Core Solo T1300 1040 | 1.66 | 256MB | 15.4" WXGA | GMA | 60GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |
| 0672-2U5 | Black Core Solo T1400 1083 | 1.83 | 512MB | 15.4" WXGA | GMA | 60GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |
| 0672-2VU | Silver Core Solo T1400 1083 | 1.83 | 512MB | 15.4" WXGA | GMA | 60GB | Combo | 11a/b/g(n) | No | No | GM | No | XP Home | Gbl | May 06 |

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty**

#### Positioning Information

**Processor**
- Intel® Celeron M Processor 410 or 420 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or Intel Core® Solo processor T1300 or T1400 with single-core, Enhanced Intel SpeedStep™ technology

**Memory**
- 256MB or 512MB std / 4GB max / PC2-5300 DDR2 / non-parity / CL5 / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in one socket / one socket available

**EIDE CD**
- Some: CD-ROM / 24X-10x^2 speed / fixed, not removable / 12.7mm high

**EIDE Combo**
- Some: DVD-ROM/CD-RW / 24X/24X/24X/24X^2 speed / fixed, not removable / 12.7mm high

**Serial ATA disk**
- 40GB^2 (5400 rpm) or 60GB (5400 rpm) / 9.5mm high / removable and upgradable / 9.5mm high bay / no support for 2nd disk

**HDD Protection Pack** (shock absorber) / Active Protection System™

#### Widescreen display
- 15.4" (931mm) WXGA (1280x800) TFT color / 16:10 aspect ratio / anti-glare / 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

#### Graphics
- Intel® Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

#### Keyboard (7-row)
- 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, App keys

#### Touch pad
- TrackPoint® pointing device

#### ThinkLight™
- No UltraNav® multi-pointing system

#### Dimensions
- (WxHxD): 14.1" x 10.3" x 1.47-1.58"; 357mm x 263mm x 37.3-40.2mm

#### Weight
- With optical drive and battery: 6-cell: starting at 5.3 lb/5.8 lb (2.40kg/2.64kg)

#### Case material
- Some: color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
- Some: top cover; silver color; ABS; aluminum; titanium material; bottom: black; PC/ABS
- Lithium ion 6-cell / intelligent / no support for 2nd battery in Ultrabay Enhanced
- 6-cell: up to 5.6 hr; optional 9-cell: up to 8.3 hr

#### Architecture
- Mobile Intel 945GM Express Chipset / 82945GM Graphics Memory Controller Hub / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 IDE, PCIe Express x1, PCI bus, USB, LPC interface) / bus (II) PCI8412 CardBus controller) / LPC bus (NS PC87382 Super I/O, Atmel® AT97SC3203)

#### Docking station
- No port replicator or docking station support

#### PC Card slot
- One Type I or Type II slot / CardBus 32-bit / integrated door

#### Ports
- 4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, xD-Picture Card™) / S-video out port (TV out) / IEEE 1394 (FireWire 400) / three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no infrared port / three USB 2.0 / one Mini PCI Express slot

#### Wireless antenna
- UltraConnect™ antenna built into the display cover / on-off switch for all wireless radios

#### Integrated camera
- None

#### Mini PCI Express
- One Mini PCI Express slot / 802.11 wireless is customer upgradable
- 11a/b/g wireless®, ThinkPad 11a/b/g Mini PCI Express Adapter, Atheros® AR5006EX

#### Modem
- 56K V.90 (V.92-designed) modem in Comm Daughter Card socket / Conexant® chip

#### Ethernet
- Gigabit ethernet on system board / Broadcom® BCM5752M (MAC/PHY) / PCIe x1 / PEX

#### Audio
- High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume, up, down, mute buttons / mono microphone / microphone input jack / headphone jack

#### Security
- Power on password / hard disk password / supervisor password / security keyhole

#### Finger print reader
- None

#### Limited warranty
- **1-year** - EasyServ™ on-site pickup and delivery / service upgrades available

#### SOFTWARE
- **Windows XP Professional models**
  - Microsoft® Windows® XP Professional (Service Pack 2)
  - Disk-to-Disk Recovery

#### Windows XP Home models
- Microsoft® Windows® XP Home Edition (Service Pack 2)
- Disk-to-Disk Recovery

#### Preloaded (all)
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec® Client Security™
- Diskkeeper Lite
- PC-Doctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think
- Sonic RecordNOW and Drive

#### License
- **CD not included**
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)

#### Support
- **ThinkVantage technologies**
  - 65-watt ac adapter
  - ThinkPad Roll Cage
  - RoHS-compliant
  - International Warranty Service
  - 24 hour x 7 day® toll-free warranty support during the warranty

#### US models
- 0672-21U Black Celeron M 410 1.46 256MB 15.4" WXGA GMA 40GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
- 0672-23U Black Celeron M 410 1.46 512MB 15.4" WXGA GMA 60GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
- 0672-24U Silver Celeron M 410 1.46 512MB 15.4" WXGA GMA 60GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
- 0672-2B5 Black Celeron M 420 1.60 256MB 15.4" WXGA GMA 60GB CD 11a/b/g(n) No No GM No XP Pro Gbl Oct 06
- 0672-28U Black Core Solo T1300 1040 1.66 256MB 15.4" WXGA GMA 60GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
- 0672-26U Silver Core Solo T1300 1040 1.66 256MB 15.4" WXGA GMA 60GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
- 0672-2U5 Black Core Solo T1400 1083 1.83 512MB 15.4" WXGA GMA 60GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
- 0672-2VU Silver Core Solo T1400 1083 1.83 512MB 15.4" WXGA GMA 60GB Combo 11a/b/g(n) No No GM No XP Home Gbl May 06
## ThinkPad Z61e (0673) - withdrawn

### Type-model color | Top cover display | Processor | Speed GHz | Mem CLS MB | Wide-screen controller | Disk SATA/SSD | EIDE controller | Mini PCI | Mini PCle | Finger print Chip Camer reader set | Preload Workhorse (W) | Gbl (G) | Avail date |
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<td>No GM No XP Home No May06</td>
<td>0673-24U Silver Celeron® M 410 1.46 512MB 15.4&quot;WXGA GMA 60GB Combo 11a/b/g, 11a/b</td>
<td>No GM No XP Home No May06</td>
<td>0673-25U Black Core Solo T1300 1.66 512MB 15.4&quot;WXGA GMA 60GB Combo 11a/b/g, 11a/b</td>
<td>No GM No XP Home No May06</td>
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* These models have a 1-year limited warranty.

### Positioning
- **Processor**: Stylish notebooks for work and life; widescreen display; two-spindle system
- **Memory**: Intel® Celeron® M Processor 410 with Execute Disable Bit, 533MHz system bus, and 1MB L2 cache or
- **Intel Core™ Solo processor**: T1300 with single-core, Enhanced Intel SpeedStep™ technology; Execute Disable Bit, 667MHz bus, and 2MB L2 cache.

### Software
- **Operating System**: Windows XP Home
- **Home Edition**
- **Service Pack 2**
- **Preload**: Rescue and Recovery™, Access Connections™, Client Security Solution™, ThinkVantage Productivity Center with Away Manager, ThinkVantage System Update, Symantec™ Client Security™, Diskeeper Lite, PC-Doctor® (diagnostics), ThinkPad Utilities (Power Manager and Presentation Director), Adobe® Reader, Google Desktop, Picasa from Google, Multimedia Center for Think Offerings, Sonic RecordNow® and Drive Letter Access (combo models), InterVideo WinDVD (combo models)

### License - CD not included
- **Laptop SmartSuite® Millennium and Lotus Notes™ Stand-alone Client (Notes client not supported on XP Home)

### ThinkPad notebooks implement ThinkVantage technologies and design;
visit thinkpad.com/thinkvantage

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**See footnotes for important warranty information**

US models announced May 16 or 30, 2006

US models withdrawn effective February 2007

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(WR2E-2) February 2007
<table>
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<th>Type-model color</th>
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<th>Processor</th>
<th>Speed</th>
<th>Memory</th>
<th>Wide-screen display</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>IDE optical</th>
<th>Mini PCI 802.11 wireless</th>
<th>Mini PCI WWAN wireless</th>
<th>Finger print reader set</th>
<th>Workhorse Global Availability</th>
<th>Preload</th>
</tr>
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<tbody>
<tr>
<td>0673-BHU</td>
<td>Black Core™</td>
<td>2 Duo T7200</td>
<td>2.00</td>
<td>1GB 15.4” WXGA</td>
<td>GMA</td>
<td>80GB Combo</td>
<td>Intel 11a/b/g</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No Oct 06</td>
</tr>
</tbody>
</table>

- This model has a 1-year limited warranty.

**Positioning**
- Widescreen multimedia: two spindles
- Intel® Core 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology, Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache
- 1GB std / 4GB max / PC2-5300 667MHz DDR2 / non-parity / CLS / dual-channel capable / two 200-pin SO-DIMM sockets / standard memory in both sockets (512MB each socket) / no sockets available

**EIDE Combo**
- Ultrabay Enhanced Serial ATA disk (SATA150)
- DVD-ROM/CD-RW / 24X24X24X8X” speed / fixed, not removable / 12.7 mm high
- None / no support for removable Ultrabay™ options
- 80GB (5400 rpm) / 9.5mm high / removable and upgradeable / 9.5mm high bay / no support for 2nd disk / HDD Protection Pack (shock absorber) / Active Protection System™

**Widescreen display**
- 15.4” (391mm) WXGA (1280x800) TFT color / 200 nits / 500:1 / 16:10 / anti-glide / stainless steel hinges / one hand activates dual latches

**Graphics**
- Intel Graphics Media Accelerator 950 / integrated in 945GM / 250MHz

**Keyboard**
- (7-row) 89-key / ThinkVantage button / spill-resistant / multimedia Fn keys / Windows, Appl keys

**Touch pad**
- No UltraNav™ multi-pointing system

**ThinkLight™**
- Illuminates the keyboard to improve visibility in low-light conditions

**Dimensions**
- (WXxHxD): 14.1” x 10.3” x 1.47-1.58”; 357mm x 263mm x 37.3-40.2mm

**Weight**
- Intel 11a/b/g32 No No GM No XP Pro No Oct 06

**Modem**
- None

**Processor**
- No UltraNav

**Battery - life**
- up to 8.3 hr

**Battery - type**
- Lithium Ion 6-cell / intelligent / no support for 2nd battery in Ultrabay Enhanced

**Memory**
- 6-cell: up to 5.6 hr; optional 9-cell: up to 8.3 hr

**Architecture**
- Mobile Intel 945GM Express Chipset / 82801GBM ICH7-M I/O Controller Hub (SATA300, ATA-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface) / PCI bus (TI® PCI8412 CardBus controller) / LPC bus (NS PCI7382 Super I/O, Atmel® AT97SC3203)

**Docking station**
- No port replicator or docking station support

**PC Card slot**
- One Type I or Type II slot / CardBus 32-bit / integrated dock

**ExpressCard slot**
- None

**Ports**
- 4-in-1 digital media reader (MultiMediaCard, Memory Stick, Secure Digital, XD-Picture Card™) / S-video out port (TV out) / IEEE 1394 (FireWire 400) / three USB 2.0 / external DB-15 monitor / RJ-11 (modem) / RJ-45 (ethernet) / no infrared port / no dock connector / no keyboard or mouse or parallel or serial ports (use USB)

**Wireless antenna**
- UltraConnect™ Antenna built into the display cover / on/off switch for all wireless radios

**Integrated camera**
- One Mini PCI Express slot / 802.11 wireless is customer upgradable

**Mini PCI Express card slot**
- 11a/b/g wireless®, Mini PCI Express adapter, Intel PRO/Wireless 3945ABG

**Internel Model**
- None

**Modem**
- 56K V.90 / V.92-designed modem / no support in Comm Daughter Card socket / Conexant® chip

**Bluetooth™**
- None

**Ethernet**
- Gigabit ethernet on systemboard / Broadcom® BCM5752M (MAC/PHY) / PCie x1 / PXE

**Audio**
- High Definition (HD) Audio / AD1981HD codec / stereo speakers / 1 watt / volume up, down, mute buttons / mono microphone / microphone input jack / headphone jack

**Security**
- Power-on password / hard disk password / supervisor password / security keyhole

**Security chip**
- None

**Fingerprint reader**
- None

**Limited warranty**
- 1-year - EasyServ™ on-site pickup and delivery / service upgrades available

**Software**
- Windows XP Professional
  - Microsoft® Windows® XP Professional™ (Service Pack 2)
  - Disk-to-Disk Recovery (in hidden protected area)

**Preload**
- Rescue and Recovery™
- Access Connections™
- Client Security Solution™
- ThinkVantage Productivity Center with Away Manager
- ThinkVantage System Update
- Symantec™ Client Security™
- Diskeeper® Lite
- PCDoctor® (diagnostics)
- ThinkPad Utilities (Power Manager and Presentation Director)
- Adobe® Reader
- Google Toolbar
- Google Desktop
- Picasa from Google
- Multimedia Center for Think Offerings
- Sonic RecordNOW and Drive Letter Access (combo models)
- InterVideo WinDVD (combo models)

**License**
- CD not included
- Lenovo SmartSuite® Millennium and Lenovo Notes Stand-alone Client (Notes client not supported on XP Home)

**Supports**
- ThinkVantage® technologies

**Post-warranty annual maintenance support during the warranty**

**Warranty**
- 22 1-year LOR 9x5 NBD

**65-watt AC adapter**
- ThinkPad Roll Cage

**RoHS-compliant**
- International Warranty Service

**24 hour x 7 day© toll-free warranty support during the warranty**

**ThinkPlus™**
- 21-year LOR 9x5 NBD
- 41C9166
- 41C9167
- 41C9168
- 41C9169
- 41C9170
- 41C9171
- 41C9172
- 41C9173
- 41C9174

**Lenovo.com/thinkplus/warranty**

See footnotes for important warranty information

US model announced October 17, 2006

US model withdrawn effective September 2007

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(WR25E-1) September 2007
Partial list of accessories supported on ThinkPad Z61e
originally announced on May 16, 2005

Memory
512MB PC2-5300 DDR2 CL5 SODIMM 40Y7733
1GB PC2-5300 DDR2 CL5 SODIMM 40Y7734
2GB PC2-5300 DDR2 SODIMM 40Y7755

Ultrabay Slim 9.5mm
None (no removable bay options)

Ultrabay Enhanced 12.7mm
None (no removable bay options)

Storage and removable storage
60GB Disk 9.5mm SATA150 (7200 rpm) 41N3012
80GB Disk 9.5mm SATA150 (5400 rpm) 41N5662
100GB Disk 9.5mm SATA150 (7200 rpm) 41N3013
120GB Disk 9.5mm SATA150 (7200 rpm) 41N5691
160GB Disk 9.5mm SATA150 (5400 rpm) 41N5692

USB 2.0 Port Replicator with Video 40Y8132
USB Serial Parallel Adapter 22P5298
ThinkPad Expansion
Kensington WiFi Finder Plus 40Y7625
11a/b/g Wireless Mini PCI Adapter II 40Y7626
USB 2.0 Security Memory Key 4GB 41U5120
USB 2.0 Security Memory Key 2GB 41U5119
USB 2.0 Security Memory Key 1GB 41U5118
USB 2.0 Security Memory Key 4GB 41U5120
USB Portable Diskette Drive 05K9276
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
USB 2.0 Portable 80GB Hard Disk 41N8378
USB 2.0 Portable 120GB Hard Disk 41N8379
USB 2.0 Super Multi-Burner Drive 41N5565

Wireless LAN (Mini PCI Express)
11a/b/g Wireless Mini PCI Adapter II 73P4301
USB 2.0 Essential Memory Key 1GB 41U4940
USB 2.0 Essential Memory Key 2GB 41U4844
USB 2.0 Security Memory Key 1GB 41U5118
USB 2.0 Security Memory Key 2GB 41U5119
USB 2.0 Security Memory Key 4GB 41U5120
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
USB 2.0 Portable 80GB Hard Disk 41N8378
USB 2.0 Portable 120GB Hard Disk 41N8379
USB 2.0 Super Multi-Burner Drive 41N5565

Wireless LAN (Mini PCI Express)
11a/b/g Wireless Mini PCI Adapter II 73P4301
USB 2.0 Essential Memory Key 1GB 41U4940
USB 2.0 Essential Memory Key 2GB 41U4844
USB 2.0 Security Memory Key 1GB 41U5118
USB 2.0 Security Memory Key 2GB 41U5119
USB 2.0 Security Memory Key 4GB 41U5120
USB Portable Diskette Drive 05K9276
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
USB 2.0 Portable 80GB Hard Disk 41N8378
USB 2.0 Portable 120GB Hard Disk 41N8379
USB 2.0 Super Multi-Burner Drive 41N5565

ThinkPad Expansion
USB Serial Parallel Adapter 22P5298
USB 2.0 Port Replicator with Video 40Y8132
ThinkPad Adjustable Notebook Stand 40Y7755

External Keyboard
TrackPoint Cap Collection 73P2698
USB Numeric Keypad 33L3225
Preferred Pro USB Keyboard 73P5220
Enhanced Performance USB Keyboard 73P2620
Targus Wireless Keypad and Mouse Combo 40Y7721
Enh Perf Wireless Keyboard and Mouse 73P4067
USB Keyboard with UltraNav 31P9490
USB Travel Keyboard with UltraNav 31P9490
Preferred Pro USB Fingerprint Keyboard 73P4730

External Mouse
USB Optical Wheel Mouse 06P4069
Optical 3-Button ScrollPoint® Mouse 31P7410
Optical 3-Button ScrollPoint Pro Mouse 31P7410
Lenovo Laser Mouse (USB, PS/2) 41U3074

Multimedia
USB 2.0 Lenovo Multimedia Headset 40Y8518
USB 2.0 Lenovo Webcam 40Y8519

Batteries
Z60m/R60 Series Li-Ion Battery 6-cell 40Y6795
Z60m/T60/R60 Li-Ion Battery 9-cell 40Y6797
ThinkPad External Battery Charger44 40Y7626
44 Requires the ThinkPad 90W AC Adapter 40Y7659.

Carrying Cases
Lenovo Carry Case - Messenger Max 41U5253
Lenovo Carry Case - Performance Backpack 41U5254
ThinkPad Nylon Carrying Case 10K0207
ThinkPad Carrying Case - Expander 73P3597
ThinkPad Carrying Case - BackPack 73P3599
ThinkPad Premiere Leather Carrying Case 10K0209
ThinkPad Convertible Carrying Case 22P8860

Optical 3-Button ScrollPoint Pro Mouse 31P8700
Belkin 1 Outlet Notebook Surge 31P7658
Belkin Universal Notebook Travel Surge 22P7127
Belkin Surge Protector 31P7659

Other accessories at lenovo.com/accessories

Need to buy accessories no longer marketed by Lenovo? See www.itxchange.com/lenovo for the Options Continuation Program.
**ThinkPad Z61p (9450) - TopSeller - withdrawn**

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Top cover color</th>
<th>Processor</th>
<th>Speed Memory</th>
<th>Wide-screen displays</th>
<th>Disk Graphics</th>
<th>Mini PCI WWAN</th>
<th>Mini PCI PCIe</th>
<th>Finger Battery</th>
<th>One-key Note</th>
<th>Workhorse G6L</th>
<th>Avail date</th>
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</thead>
<tbody>
<tr>
<td>9450-3AU</td>
<td>Black</td>
<td>Core Duo T2500 2.00 1GB 15.4” WUXGA 256MB 100GB DVD-RW* Intel 11a/b/g*</td>
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<td>No Oct 06</td>
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<td>9450-1AU</td>
<td>Black</td>
<td>Core Duo T7200 2.00 1GB 15.4” WUXGA 256MB 100GB DVD-RW* ThinkPad 11n*</td>
<td>None</td>
<td>None</td>
<td>Blue 9</td>
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<td></td>
<td>CD No Oct 06</td>
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</tr>
</tbody>
</table>

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty.

**POSITIONING**

- **Processor**: Widescreen multimedia; two spinides
  - **Intel** Core™ Duo processor T2500 with dual-core, Enhanced Intel SpeedStep™ technology
  - Execute Disable Bit, 667MHz system bus, and 2MB shared L2 cache or
  - Intel Core 2 Duo processor T7200 with dual-core, Intel 64 Technology, Enhanced Intel SpeedStep™ technology
  - Execute Disable Bit, 667MHz system bus, and 4MB shared L2 cache

- **Memory**: 1GB std / 4GB max or
  - PC2-6300 667MHz DDR2 / non-parity or
  - CLS / dual-channel capable / two 200-pin SO-DIMM sockets or
  - 3AU: standard memory in both sockets (512MB each socket); no sockets available; or
  - A1U: standard memory in 1 socket; 1 socket available

**EIDE DVD:RW Ultrabay Enhanced Serial SATA150**

- **Processors**: DVD burner / Multi-Burner (40Y8623) dual-layer, removable Ultrabay Enhanced

**Battery - life**

- 5.9 hr; 9-cell plus Ultrabay battery:

**Battery - type**

- 7.9 hr; 6-cell

**Case material**

- Black color; Polycarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic

**Dimensions**

- (WxDxH): 14.1” x 10.3” x 1.47-1.58”; 357mm x 263mm x 37.3-40.2mm

**Weight**

- 6-cell: up to 6.1 lb (2.8kg); 9-cell: up to 7.5 lb (3.4kg)

**Battery - life**

- 7.3 lb (3.3kg)

**Architecture**

- Mobile Intel 945PM Express Chipset / 82801GB ICH7-M I/O Controller Hub / 82800ATG-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (TI/AT97SC9303)

**Keyboard**

- TrackPoint™ pointing device / UltraNav™ multi-pointing system (touchpad)

**Dimensions**

- (WxDxH): 14.1” x 10.3” x 1.47-1.58”; 357mm x 263mm x 37.3-40.2mm

**Weight**

- 6-cell: up to 5.0 lb (2.3kg); 9-cell: up to 6.5 lb (2.9kg)

**Battery - life**

- 2.9 hr; 6-cell

**Architecture**

- Mobile Intel 945PM Express Chipset / 82801GB ICH7-M I/O Controller Hub / 82800ATG-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (TI/AT97SC9303)

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**Dimensions**

- (WxDxH): 14.1” x 10.3” x 1.47-1.58”; 357mm x 263mm x 37.3-40.2mm

**Weight**

- 6-cell: up to 5.0 lb (2.3kg); 9-cell: up to 6.5 lb (2.9kg)

**Battery - life**

- 2.9 hr; 6-cell

**Architecture**

- Mobile Intel 945PM Express Chipset / 82801GB ICH7-M I/O Controller Hub / 82800ATG-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (TI/AT97SC9303)

**Keyboard**

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**Dimensions**

- (WxDxH): 14.1” x 10.3” x 1.47-1.58”; 357mm x 263mm x 37.3-40.2mm

**Weight**

- 6-cell: up to 5.0 lb (2.3kg); 9-cell: up to 6.5 lb (2.9kg)

**Battery - life**

- 2.9 hr; 6-cell

**Architecture**

- Mobile Intel 945PM Express Chipset / 82801GB ICH7-M I/O Controller Hub / 82800ATG-100 EIDE, PCI Express x1, PCI bus, USB, LPC interface, [Bluetooth], [fingerprint] / PCI bus (TI/AT97SC9303)

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<thead>
<tr>
<th>Processor</th>
<th>Speed Memory</th>
<th>Wide-screen displays</th>
<th>Disk Graphics</th>
<th>Mini PCI WWAN</th>
<th>Mini PCI PCIe</th>
<th>Finger Battery</th>
<th>One-key Note</th>
<th>Workhorse G6L</th>
<th>Avail date</th>
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<tbody>
<tr>
<td>Z61m/R6o Series</td>
<td>Li-Ion Battery 6-cell</td>
<td>40Y7679</td>
<td>Z61m/R6o/60 Li-Ion Battery 9-cell</td>
<td>40Y6876</td>
<td>ThinkPad 11n</td>
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<tr>
<td>Z61m/R6o Series</td>
<td>Li-Ion Battery 6-cell</td>
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<td>40Y6876</td>
<td>ThinkPad 11n</td>
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<td>Z61m/R6o/60 Li-Ion Battery 9-cell</td>
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<td>ThinkPad 11n</td>
<td>None</td>
<td>None</td>
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<td>No Oct 06</td>
</tr>
</tbody>
</table>

**SOFTWARE**

- **Windows XP Professional**: Microsoft Windows XP Professional (Service Pack 2)
- **Disk-to-Disk Recovery**
- **Preloaded**
  - Model A1U: Microsoft Office OneNote 2003
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec Client Security™
  - Diskeeper Lite
  - PC-Doctor® (diagnostics)
  - ThinkPlus® UltraConnect™
  - ThinkVantage Productivity Center (Power Manager and Presentation Director)
  - Adobe® Reader
  - Google Toolbar
  - Google Desktop
  - Picasa from Google
  - Multimedia Center for Think Offerings
  - Sonic RecordNOW and Drive Letter Access (DVD:RW models)
  - InterVideo WinDVD (DVD:RW models)
  - InterVideo WinDVD Creator (DVD:RW models)

**CD included**

- **Model A1U**: Microsoft Office OneNote 2003

**License**

- **CD not included**: Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

**Notebook operating system**

- Supports ThinkVantage® technologies

- 90-watt (ATI graphics) AC adapter
- ThinkPad Roll Cage
- RoHS-compliant International Warranty Service™
- 24 hour x 7 day toll-free warranty support during the warranty

**ThinkPlus**

- 1-year LOR 9x5 NBD
- 2-year LOR 9x5 NBD
- 3-year LOR 9x5 NBD
- 4-year LOR 9x5 NBD
- 5-year LOR 9x5 NBD
- 2-year P&L P/U Depot
- 3-year P&L P/U Depot
- 4-year P&L P/U Depot
- 5-year P&L P/U Depot

**Lenovo**

- Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

*Powered by Intel Centrino® Duo processor technology

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(WR2W-1) September 2007

Lenovo Training Solutions

Personal Systems Reference (PSREF)

See footnotes for important warranty information
<table>
<thead>
<tr>
<th>Type-model</th>
<th>Widescreen display (anti-glare)</th>
<th>Processor</th>
<th>Speed Memory</th>
<th>Graphics controller</th>
<th>Disk SATA GB</th>
<th>Mini PCI 802.11 wireless</th>
<th>Mini PCle WWAN wireless</th>
<th>Finger Bluetooth reader Pre-load</th>
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<th>Available Date</th>
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<tbody>
<tr>
<td>9452-JRU</td>
<td>15.4&quot; (391mm) WUXGA (1920x1200) TFT color</td>
<td>Intel® Core™ 2 Duo T7200</td>
<td>1.73 GHz</td>
<td>Intel® 945PM Memory Controller Hub</td>
<td>40Y6785</td>
<td>ThinkPad 90W AC Adapter</td>
<td>Lenovo 1G250S0 Projector</td>
<td>Lenovo 3945ABG (DVD±RW models)</td>
<td>None</td>
<td>Blue Finger</td>
</tr>
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</table>

### Software

- Windows XP Professional
  - Microsoft® Windows® XP Professional(18) (Service Pack 2)
  - 2-year Disk Recovery
- Preloaded:
  - Rescue and Recovery™
  - Access Connections™
  - Client Security Solution™
  - ThinkVantage Productivity Center with Away Manager
  - ThinkVantage System Update
  - Symantec® Client Security™
  - Diskeeper® Lite
  - PC-Doctor®(6) (diagnostics)
  - ThinkPad Utilities (Power Manager and Presentation Director)
  - Sonic SoundNOW and Drive Letter Access (DVD±RW models)
  - InterVideo WinDVD Creator (DVD±RW models)
- License:
  - CD not included
  - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

### Warranty

- Z61p (9452) — withdrawn
- Limited warranty: 3-year
- Post-warranty annual maintenance: 1-year
- Post-warranty annual maintenance: 2-year
- Post-warranty annual maintenance: 3-year

See footnotes for important warranty information

*Powered by Intel® Centrino® Duo processor technology

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(9452-1) September 2007

**Notes:**

1. 3-year LOR 9x5 NBD
2. 2-year LOR 9x5 NBD
3. 4-year LOR 9x5 NBD
4. 5-year LOR 9x5 NBD
5. 2-year Post-warranty annual maintenance agreements
6. 3-year Post-warranty annual maintenance agreements
ThinkPad® Multiple Monitor Configurations with *Mini Dock Series 3*

ThinkPad T series Multiple Monitor Configurations with *ThinkPad Mini Dock Series 3 (4337)* using NVIDIA® Optimus™ technology

For more information see:  [http://www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

### Triple Monitor configurations: ThinkPad T420, T420s, and T520 Dual Core with "ThinkPad Mini Dock Series 3 (4337)"

<table>
<thead>
<tr>
<th>ThinkPad T420, T420s, T520 Dual Core</th>
<th>ThinkPad Mini Dock Series 3 (4337)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkPad Display (1920 x 1080)</td>
<td>Dock VGA (2048 x 1536)</td>
</tr>
<tr>
<td>1st</td>
<td>2nd</td>
</tr>
<tr>
<td>2nd</td>
<td>3rd</td>
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### Quad Monitor configurations: ThinkPad T420, T420s, and T520 Dual Core with "ThinkPad Mini Dock Series 3 (4337)"

<table>
<thead>
<tr>
<th>ThinkPad T420, T420s, T520 Dual Core</th>
<th>ThinkPad Mini Dock Series 3 (4337)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThinkPad Display (1920 x 1080)</td>
<td>Dock VGA (2048 x 1536)</td>
</tr>
<tr>
<td>1st</td>
<td>2nd</td>
</tr>
<tr>
<td>2nd</td>
<td>3rd</td>
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<tr>
<td>3rd</td>
<td>4th</td>
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<td>4th</td>
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</tr>
</tbody>
</table>

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Rear view of *ThinkPad Mini Dock Series 3 (4337)*

![Rear view of ThinkPad Mini Dock Series 3 (4337)](image-url)
ThinkPad® Multiple Monitor Configurations with Mini Dock Plus Series 3

ThinkPad T and W series Multiple Monitor Configurations with ThinkPad Mini Dock Plus Series 3 (4338) using NVIDIA® Optimus™ technology

For more information see: [http://www.lenovo.com/support/thinkpad/optimus-monitors](http://www.lenovo.com/support/thinkpad/optimus-monitors)

**Triple Monitor configurations:** ThinkPad T420, T420s, T520, and W520 with "ThinkPad Mini Dock Plus Series 3 (4338)"

<table>
<thead>
<tr>
<th>ThinkPad T420, T420s, T520, W520</th>
<th>ThinkPad Mini Dock Plus Series 3 (4338)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ThinkPad Display</strong> (1920 x 1080)</td>
<td><strong>Dock DisplayPort</strong> (2560 x 1600)</td>
</tr>
<tr>
<td>1st</td>
<td>2nd</td>
</tr>
<tr>
<td>1st</td>
<td>2nd</td>
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</table>

**Quad Monitor configurations:** ThinkPad T420, T420s, and T520 with "ThinkPad Mini Dock Plus Series 3 (4338)"

<table>
<thead>
<tr>
<th>ThinkPad T420, T420s, T520</th>
<th>ThinkPad Mini Dock Plus Series 3 (4338)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ThinkPad Display</strong> (1920 x 1080)</td>
<td><strong>Dock DisplayPort</strong> (2560 x 1600)</td>
</tr>
<tr>
<td>1st</td>
<td>2nd</td>
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<tr>
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</table>

**Rear view of ThinkPad Mini Dock Plus Series 3 (4338)**

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Availability: All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.


Footnotes:
1 Power management, including Intel® SpeedStep® Technology, reduces processor speed when in battery mode.
2 Weight includes battery and standard optical drive; weight may vary due to vendor components, manufacturing process and options.
3 Thinness may vary at certain points on the system.
4 Wireless capability: Requires compatible wireless-enabled options sold separately.
5 TAA: ThinkPad notebook is compliant with the U.S. Federal Government’s country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.
6 Public network download modem speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for V92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
7 Maximum memory capacity may require the replacement of standard component with largest supported component available. On ThinkPad systems, even though it is possible to physically install 4GB of memory, the actual amount of memory addressable by a 32-bit operating system will be limited to 3GB. This limitation does not exist with 64-bit operating systems.
8 Hard drive: GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
9 CD/DVD drive speeds list maximum rates; rates are variable and are often less than the maximum.
10 Battery: These model numbers achieved the battery life based on MobileMark® 2007 during testing. For the ThinkPad X300, battery life is based on Business Winstone Battery Mark 2002. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
11 External monitor: This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.
12 Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.
13 Internet access not included.
14 Included software may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.
15 Activating Verizon Wireless Service: Lenovo customers will be contacted after purchase to activate service; requires separate agreement with Verizon Wireless and is subject to the Customer Agreement, Calling Plan, and credit approval. Service, airtime, and early termination charges may apply. Verizon Wireless, not Lenovo, is solely responsible for service. Service not available in all areas; purchaser is responsible for verifying that service is available for the intended location before purchasing a computer equipped with WLAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.
16 Telephone support may be subject to additional charges, even during the limited warranty period. Response times may vary. May exclude some holidays. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, Lenovo will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For ThinkPad notebooks with Depot or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.
17 Depot repair service: The customer may be asked certain diagnostic questions before a courier is sent. Your ThinkPad purchase includes this depot repair service, available in the U.S. during the limited warranty period.
20 Operating System: Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to lenovo.com/pc/support and enter your machine type and model number for more information.
21 For combination drives, maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.
Limited onsite service systems are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.

Full-size keyboard: As defined by ISO/IEC 15412.

Based on IEEE 802.11a and 802.11b. A customer can not upgrade to a different wireless Mini PCI adapter due to FCC regulations. Security screws prevent removal of this adapter. This wireless LAN product has been designed to permit legal operation world-wide in regions which it is approved. This product has been tested and certified to be interoperable by the Wireless Ethernet Compatibility Alliance and is authorized to carry the Wi-Fi logo.

The IEEE 802.11n specification (MIMO) has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

Measures only maximum data transfer rate, not application performance. Many factors affect application performance.
32 **Wireless**: Based on IEEE 802.11a, 802.11b, and 802.11g respectively. An adapter with 11a/b, 11b/g, or 11a/b/g can communicate on either/any of these listed formats respectively, the actual connection will be based on the access point to which it connects.

36 **Wireless upgradable** allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

37 **Optimus graphics** Optimus only switches in Windows 7 environment. It performs as discrete graphics in Windows Vista or Windows XP Professional environment.

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