# ThinkPad X230 (2320) - TopSeller

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- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

**Positioning Processor**
An ultraportable for the executive on the move; one spindle volume up, down, mute buttons / dual array microphone, combo audio/mic jack

**Intel**: Core™ i5-3210M processor (2 cores, 2.50GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology

**Intel Core i5-3320M processor (2 cores, 2.60GHz, 3MB cache)**, Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

**Intel Core i7-3520M processor (2 cores, 2.90GHz, 4MB cache)**, Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology

**Memory**
16GB max / PC3-12800 1600MHz 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 (0A33932)

**SATA disk**
Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high

**mSATA™ SSD**
None

**Wide screen display**
12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

**Camera**
HD720p resolution, wide view angle, low light sensitive, face tracking, focused focus

**Graphics**
Intel HD Graphics 4000 in processor.

Supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display;

Maximum external resolution: 2560x1600 @60Hz (DisplayPort via optional Mini DP cable); 1920x1200 @60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536 @75Hz (VGA)

**Keyboard**
6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight

**Touchpad**
ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight

**Dimensions**
without UltraBay (mm): 46/6-cell: 12.0” x 8.13” x 0.75-1.05”; 305mm x 206.5mm x 19.0-26.6mm

**Weight**

**Case material**
Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™

**Standard Battery**
All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk

**Battery - life**
10.6 hr; 128GB SSD 6.0Gb/s 0A65630

12.5 hr; 180GB SSD 6.0Gb/s 0A65630

18.5 hr; 256GB SSD 6.0Gb/s 0A65630

**Chipset**
Mobile Intel GM77 Express Chipset

**Ultrasound**
Some: ThinkPad Ultrabase Series 3 (see right side)

**Multicard reader**
4-in-1 reader (SD, SDHC, SDXC, MMC)

**Smart Card Read Port**
One slot (ExpressCard/34, ExpressCard/54)

**Ports**
Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)

**PCle Mini Card**
Two PCI Express Mini Card slots

**PCle WLAN**
Some: 11b/g/n, PCle Half Main Card, Intel Centrino® Wireless-N 2200, 2x2

Some: 11a/b/g/n, PCle Half Main Card, Intel Centrino Advanced-N 6205, 2x2

**PCle WWAN**
None

**Modem**
None

**Bluetooth™**
None

**Wireless WWAN**
Bluetooth 4.0 wireless

**Ethernet**
Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1

**Intel AMT**
Some: Intel Active Management Technology (IAMT)

**Audio support**
High Definition (HD) Audio, Realtek® ALC2202 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

**Fingerprint reader**
AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty**
3-years/1yr battery - depot repair service / service upgrades[^c] available

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[^a]: Preloaded operating system[^c]:
- Genuine Windows® 7 Professional 64

[^b]: Ready to install applications[^c]:
- Rescue and Recovery™
- Password Manager

[^c]: Preloaded applications[^c]:
- Access Connections[^c]
- ThinkVantage Power Manager
- Fingerprint Software (fingerprint models)
- ThinkVantage System Update
- Microsoft® Office preloaded; purchase a product key to activate

[1]: Supports ThinkVantage™ technologies

[2]: An ultraportable for the executive on the move; one spindle volume up, down, mute buttons / dual array microphone, combo audio/mic jack

[3]: Intel Active Management Technology (IAMT)

[4]: Dual independent display

[5]: Maximum external resolution:
- 2560x1600 @60Hz (DisplayPort via optional Mini DP cable)
- 1920x1200 @60Hz (single-link DVI-I via optional Mini DP cable)
- 2048x1536 @75Hz (VGA)

[6]: Supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort, supports dual independent display

[7]: Maximum external resolution:
- 2560x1600 @60Hz
- 1920x1200 @60Hz
- 2048x1536 @75Hz

[8]: Supports ThinkVantage System Update

[9]: Some listed)

[10]: Some listed)

[11]: Provides desktop expansion and cable management for X230 and X230 Tablet

[12]: Easily connects to the bottom of the X230 or X230 Tablet for traveling

[13]: Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side

[14]: - Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412

[15]: Disks supported (some):
- 128GB SSD 6.0Gb/s 0A65629
- 180GB SSD 6.0Gb/s 0A65630
- 500GB Disk 7200 rpm 0A65632

[16]: Other features:
- Power button (front)
- Security key lock, security keyhole
- Analog VGA DB-15 monitor port
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.39 lb; 630g

[17]: Energy STAR® 5.0-compliant

[18]: ENERGY STAR® 5.0-compliant

[19]: GREENGUARD® certified

[20]: ROHS-compliant

[21]: International Warranty Service

[22]: 24 hour x 7 day toll-free support during the warranty period

See footnotes for more detailed information © Lenovo

(DSH2-1) August 2012
### Product Specifications Reference (PSREF)

**ThinkPad X230 (2320) - TopSeller - II**

| Type-model | Processor | Memory | Wide-screen display | Camera | Disk | Optical in UltraBase | ThinkPad Ultrabase | Backlit keyboard | PCIe Mini Card | PCIe Mini Card | Battery life | Carrier cells | Intel vPro | Pre-load (mm/y) | Ann date |
|------------|-----------|--------|---------------------|--------|------|----------------------|-------------------|------------------|----------------|----------------|--------------|-------------|-------------|-------------|-------------|----------|
| 2320-8U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 128G SSD | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-9U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 128G SSD | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-3U | i5-3320M | 4GBx1 | 12.5" HD | None | 320G 7200 | Optional | Opt | None | Gobi 3000 | select | vPro | Pro 64 | 06/12 |
| 2320-3AU | i5-3720M | 4GBx1 | 12.5" HD | 720p | 500G 7200 | Optional | Opt | None | Gobi 3000 | select | vPro | Pro 64 | 06/12 |
| 2320-39U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 500G 7200 | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-38U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 180G SSD | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-37U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 180G SSD | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-36U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 500G 7200 | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-35U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 320G 7200 | DVD+RW UltraB | None | Intel 6205/® | WWAN upg | None | vPro | Pro 64 | 06/12 |
| 2320-34U | i5-3320M | 4GBx1 | 12.5" HD | 720p | 320G 7200 | Optional | Opt | None | Gobi 3000 | select | vPro | Pro 64 | 06/12 |

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

**Positioning Processor**

An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology

**Memory**

16GB max / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DDIMM 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 (0A33932)

Some: Solid State Drive (SSD) / SATA 6.0Gbps, 2.5" wide, 7mm high

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

**mSATA™ SSD**

None

**Widescreen display**

12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio

**Camera**

Some: HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus

**Graphics**

Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600 @60Hz (DisplayPort via optional Mini DP cable); 1920x1200 @60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536 @75Hz (VGA)

**Keyboard TrackPoint® Touchpad ThinkVantage™**

6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, “Press-to-Select,” Internet Scroll Bar™, magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch, illuminated keyboard to improve visibility in low-light conditions

**Dimensions ³ Weight ³ Case Standard Battery**

without UltraBase: 4/6-cell: 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm

4-cell: from 2.96 lb (1.34kg); 6-cell: from 3.31 lb (1.50kg); 9-cell: from 3.67 lb (1.67kg)

Display cover: Magnesium / PCABS; Bottom: Magnesium alloy

Height: 1.39 lb; 630g

Battery - life ¹⁰

4-cell (28.8Whr): up to 4.6 hr; 6-cell (62.4Whr): up to 10.3 hr; 9-cell (93.6Whr): up to 15.5 hr; external battery (64Whr, 0A65629): up to 10.6 hr; 9-cell plus external battery: up to 26.1 hr

**Chipset**

Mobile Intel QM77 Express Chipset

**Ultrabay**

Some: ThinkPad Ultrabase Series 3 (see right side)

**Multicard reader**

4-in-1 reader (SD, SDHC, SDXC, MMC)

**ExpressCard**

One slot (ExpressCard/34, ExpressCard/54)

**Smart Card Read Ports**

None

**PC/e Mini Card**

Two 3.0 USB, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)

**PC/e LAN³**

Two PCI Express Mini Card slots

11a/b/g/n, PCI/e Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2

**PC/e WWAN**

Some: Wireless WAN upgradable

Some: Wireless WAN, Qualcomm™ Gobi™ 3000 chipset, PC/e Mini Card, EV-DO Rev. A, GPRS/CDMA/HSPA/GPS

**Carrier Modern**

Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider

**Bluetooth™**

Bluetooth 4.0 wireless

**Ethernet**

Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCI/e 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**

Authenticode fingerprint reader: fingerprint on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

**Limited warranty** ³ ³ ³ ³ ³ ³: 3-years/1-yr battery - depot repair service / service upgrades available

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See footnotes for more detailed information

© Lenovo (DHS2-0) July 2012
## ThinkPad X230 (2320) - TopSeller (Windows 8)

### Product Specifications Reference (PSREF)

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<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Disk Sata</th>
<th>Optical</th>
<th>ThinkPad Ultrabase</th>
<th>Backlit keyboard</th>
<th>PCle Mini Card</th>
<th>PCle Mini WWAN</th>
<th>Card Battery</th>
<th>Intel AMT</th>
<th>Intel vPro</th>
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- **Small and medium business (SMB) model(s), part of the US TopSeller℠ Program**
- **A depot repair service 3-year limited warranty**

### Preloaded operating system
- Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
- Some: Windows 8 Pro 64-bit

### Preloaded applications
- Windows 7 models
  - Lenovo® Message Center Plus
  - ThinkVantage Product Recovery
  - ThinkVantage Power Manager
  - Lenovo SimpleTap
- Windows 8 models
  - Lenovo Support
  - Lenovo Companion
  - Lenovo QuickLaunch
- All models
  - Lenovo Solution Center
  - Password Manager
  - Microsoft® Office preloaded; purchase a product key to activate

### Supports ThinkVantage® technologies
- Enables desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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

### Additional 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
- 65-watt AC Adapter
- EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- GREENGUARD® certified
- ROHS-compliant
- International Warranty Service17 24 hour x 7 day 18 toll-free support during the warranty period19

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See footnotes for more detailed information

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(0SH2-7) November 2012
ThinkPad X230 (2320) - TopSeller (Windows 8) - II

Preloaded operating system\(^2\):
- Some: Windows 7 Professional 64
  preinstalled through
downgrade rights in
Windows 8 Pro 64-bit
- Some: Windows 8 Pro 64-bit

Preloaded applications\(^2\) (only some listed):
- Windows 7 models
  • Lenovo\(^\circ\) Message Center Plus
  • ThinkVantage Product Recovery
  • ThinkVantage Power Manager
  • Lenovo SimpleTap
- Windows 8 models
  • Lenovo Support
  • Lenovo Companion
  • Lenovo QuickLaunch
- All models
  • Lenovo Solution Center
  • Password Manager
  • Microsoft\(^\circ\) Office preloaded;
purchase a product key to activate

Supports ThinkVantage\(^\circ\) technologies
- Provides desktop expansion and
cable management for X230 and X230 Tablet
- Easily connects to the bottom of the
X230 or X230 Tablet for traveling
- Converts ThinkPad to a two-stack
system with optional Ultrabase Slim
accessories in right side:
  - Serial ATA Hard Drive
  - 9.5mm Bay Adapter III 43N3412
  - 93.6Whr:
    - up to 15.5 hr;
    - 9-cell:
      - 3.67 lb (1.67kg)
  - 4-cell (28.6Whr):
    - up to 4.6 hr;
    - 6-cell (62.4Whr):
      - up to 10.3 hr;
      - 9-cell (93.6Whr):
        - up to 15.5 hr;
        - external battery (64Whr, 0A36280):
          - up to 10.6 hr;
          - 9-cell plus external battery:
            - up to 26.1 hr

Chipset
- Mobile Intel GM77 Express Chipset
- Ultrabase
- Option: ThinkPad Ultrabase Series 3 (see right side)
- Multicard reader
  - 4-in-1 reader (SD, SDHC, SDXC, MMC)
- ExpressCard
  - One slot (ExpressCard 54/ExpressCard 44)
- Smart Card Read
- None
- Ports
  - Two USB 3.0, one powered USB 2.0
  - external monitor (VGA DB-15, Mini DisplayPort, ethernet (RJ-45)

PCIe Mini Card
- Two PCI Express Mini Card slots
- None
PCIe WLAN\(^4\)
- Some:
  - 11b/g/n, PCIe Half Mini Card, Intel Centrino\(^\circ\) Wireless-N 2200, 2x2
  - 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Advanced-N 6205, 2x2
PCIe WWAN
- Wireless WWAN upgradable
Carrier
- None
Modem
- None
Bluetooth\(^\circ\)
- Bluetooth 4.0 wireless
Ethernet
- Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1
Intel iAMT
- Some:
  - Intel Active Management Technology (iAMT)
Audio support
- High Definition (HD) Audio, Realtek\(^\circ\) ALC2302 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
- Some:
  - AuthenTec fingerprint reader on palm rest, swipe sensor, LED indicator
  - Power On Authentication, supports the security chip

Limited warranty\(^7\)
- 3-years/1-yr battery - depot repair service / service upgrades\(^2\) available
ThinkPad X230 (2324)

Product Specifications Reference (PSREF)

<table>
<thead>
<tr>
<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
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<th>Optical</th>
<th>ThinkPad Ultrabase</th>
<th>Backlit key-board</th>
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<td>06/12</td>
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</tbody>
</table>

* A depot repair service 3-year limited warranty

Positioning Processor
An ultraportable for the executable on the move; one spindles

Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

Intel Core i5-3360M processor (dual-core, 2.80GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology

Memory
16GB max / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

Optical Ultrabay SATAs
Some: DVD burner, removable from ThinkPad Ultrabase Series 3
Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A39932)
Some: Solid State Drive (SSD) / SATA 6.0Gb/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

mSATAtm SSD
None

Widescreen display
Some: 12.5" (317.5mm) HD (1366x768) TFT color, anti-glares, LED backlight, 200 nits, 16:9 aspect ratio
Some: (Premium) 12.5" (317.5mm) HD (1366x768) TFT color, anti-glares, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, WideView (170° viewing)

Camera
HD720p resolution, wide angle view, low light sensitive, face tracking, fixed focus

Graphics
Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display;
Maximum external resolution: 2560x1600 @ 60Hz (DisplayPort via optional Mini DP cable); 1920x1200 @ 60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536 @ 75Hz (VGA)

Keyboard
TrackPoint® Touchpad
6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight
ThinkLight™
Buttonless touchpad below keyboard, multi-touch
Illuminates the keyboard to improve visibility in low-light conditions

Dimensions
8.91mm (0.350") thickness

Weight
2.95 lbs (1.34kg)

Case material
Magnesium + PCABS

Standard Battery
4-cell: from 2.96 lb (1.34kg); 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm

External Battery
Battery - life
4-cell: (28.1Whr) up to 4.6 hr; 6-cell: (62.4Whr): up to 10.3 hr; 9-cell: (93.6Whr): up to 15.5 hr;
external battery: (64Whr, 0A36280): up to 10.6 hr; 9-cell plus external battery: up to 26.1 hr

Chipset
Mobile Intel® GM77 Express Chipset
Some: ThinkPad Ultrabase Series 3 (see right side)
4-in-1 reader (SD, SDHC, SDXC, MMC)

ExpressCard
One slot (ExpressCard34/53, ExpressCard/SB)

Smart Card Reader
Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)

PCIe Mini Card
Two PCI Express Mini Card slots
11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2

PCIe WWAN
Wireless WAN upgradable

Carrier
None

Modem
None

Bluetooth
Some: Bluetooth 4.0 wireless

Etahernet
Intel(R) Gigabit Network Connection (Lewisville), PHY, PCIe x1

Intel AMT
Intel AMT 11.0

Audio support
High Definition (HD) Audio, Realtek® ALC3202 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
Authentic fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Limited warranty
3-years 1yr battery - depot repair service / service upgrades available

Preloaded operating system
- Genuine Windows® 7 Professional 64

Ready to install applications (only some listed)
- Rescue and Recovery™
- Password Manager

Preloaded applications (only some listed)
- Norton™ Internet Security 2012 (30 days of virus definitions)
- Access Connections™
- ThinkVantage Power Manager
- ThinkVantage Tools
- Microsoft® Office preloaded; purchase a product key to activate
- Skype™ for Windows

Supports ThinkVantage technologies
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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 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 cable 45J7915)
- USB 2.0 ports
- Gigabit ethernet (RJ-45) port
- Microphone in and headphone out
- Requires 65W or 90W AC adapter
- 1.19 lbs 9.3kg
- 65-watt AC Adapter EPEAT™ Gold Rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service 24 hour x 7 day's toll-free support during the warranty period

See footnotes for more detailed information © Lenovo (DSH2-3) August 2012
ThinkPad X230 (2324) - II

Product Specifications Reference (PSREF)

Type-model Processor Memory Widescrin display Camera Disk SATA Optical in UltraBase3 PCIle Mini Card PCIle Mini Card Backlit key-board Wlan Battery Global (G) Pre-date

2324-3MU i5-3320M 4GBx1 12.5" HD No 320G 7200 Optional Opt None Intel 6205 upg None No No 6 vPro Pro 64 06/12

2324-5SU i5-3320M 4GBx1 12.5" HD Prem 720p 320G 7200 Optional Opt None Intel 6205 upg None Fing BT 6 vPro G Pro 64 07/12

2324-2LU i5-3320M 4GBx1 12.5" HD 720p 320G 7200 Optional Opt None Intel 6205 upg None Fing BT 6 vPro Pro 64 06/12

2324-23U i7-3520M 4GBx1 12.5" HD Prem No 180G SSD Optional Opt None Intel 630028 upg None Fing BT

Limited warranty 3-years 1-yr battery - depot repair service - service upgrades available

A depot repair service 3-year limited warranty

Positioning

Processor An ultraportable for the executive on the move; one spindle Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-3320M processor (dual-core, 2.80GHz, 3MB Cache). Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology Intel Core i5-3320M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology

Memory 16GB max/ PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

Optical Drive DVD burner, removable from ThinkPad UltraBase Series 3 Supports Ultrabay Slim devices in optional ThinkPad UltraBase Series 3 (OA39392)

SATA disk Some: Solid State Drive (SSD) / SATA 6.0Gbps, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gbps, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradeable, Shutdown 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 Some: (Premium) 12.5" (317.5mm) HD (1366x768) TFT color, anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, WideView (170° viewing)

Camera Some: HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus

Graphics Intel HD Graphics 4000 in processor. supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)

Keyboard 6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar®, magnifying glass UltraNav®, buttonless touchpad below keyboard, multi-touch interfaces the keypad to improve visibility in low-light conditions

Touchpad TrackPoint Intel® ThinkLight™

Dimensions Weight

Case material Some: without UltraBase: 24.6/6-cell: 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-26.6mm 4-cell: from 9.96 lb (1.34kg) 6-cell: from 13.81 lb (1.50kg) 9-cell: from 3.67 lb (1.67kg) Display cover: magnesium + PCABS; Bottom: magnesium alloy

Some: Li-Ion 4-cell, 6-cell, or 9-cell, HW Authentication; optional external battery as 2nd battery Extra Battery Battery - life 16 hours (28.6Whr): up to 4.6 hours 6-cell (62.4Whr): up to 10.3 hours 9-cell (93.6Whr): up to 15.5 hours external battery (64Wh, 0A36280): up to 10.6 hours; 9-cell plus external battery: up to 26.1 hours

Chipset Mobile Intel GM77 Express Chipset

Ultrabase Some: ThinkPad Ultrabase Series 3 (see right side)

Multicard reader 4-in-1 reader (SD, SDHC, SDXC, MMC)

ExpressCard One slot (ExpressCard/54, ExpressCard/22)

Smart Card Reader 2324-5PU model: Gemplus Smart Card Reader in ExpressCard slot

Ports Two USB 3.0, one powered USB 2.0 external monitor (VGA DB-15, Mini DisplayPort), ethernet (RJ-45)

PCle Mini Card Two PCI Express Mini Card slots

PCle WLN 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


Carrier Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider

Modem None

Bluetooth® Some: Bluetooth 4.0 wireless

Ethernet Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCie x1

Audio support High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume down, mute, volume up, standard ThinkPad UltraBase / 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 Some: Authentec fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip

Preloaded operating system Genuine Windows® 7 Professional 64

Ready to install applications (only some listed)

- Rescue and Recovery™
- Password Manager

Preloaded applications (only some listed)

- Norton™ Internet Security 2012 (30 days of virus definitions)
- Access Connections
- ThinkVantage Power Manager
- ThinkVantage Tools
- FingerPrint Software (fingerprint models)
- ThinkVantage System Update
- Adobe® Reader®
- Microsoft® Office preloaded: purchase a product key to activate
- Skype™ for Windows

Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3

- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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 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

65-watt AC Adapter EPEAT Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service17 24 hour x 7 day toll-free support during the warranty period18

See footnotes for more detailed information © Lenovo (DSH2-4) August 2012
### ThinkPad X230 (2324) - Windows 8

#### Type-model  Processor Memory Disk display Camera Sata rpm Optical in USB3.0 Key Board Mini Finger print Blue- Battery Intel Global (G) Ann date 2324-67U i5-3320M 4GBx1 12.5” HD No 320G 7200 Optional Opt None Intel 2200 No 6 No G Win8 Pro64 10/12 2324-66U i7-3520M 4GBx1 12.5” HD 720p 180G SSD Optional Opt None Intel 6205 Fing BT 6 IAMT vPro G Win8 Pro64 10/12 2324-65U i7-3520M 4GBx1 12.5” HD 720p 500G 7200 Optional Opt None Intel 6205 Fing BT 6 IAMT vPro G Win8 Pro64 10/12 2324-64U i5-3320M 4GBx1 12.5” HD 720p 180G SSD Optional Opt None Intel 6205 Fing BT 6 IAMT vPro G Win8 Pro64 10/12 2324-63U i5-3320M 4GBx1 12.5” HD 720p 500G 7200 Optional Opt None Intel 6205 Fing BT 6 IAMT vPro G Win8 Pro64 10/12 2324-62U i5-3320M 4GBx1 12.5” HD 720p 320G SSD Optional Opt None Intel 6205 Fing BT 6 IAMT vPro G Win8 Pro64 10/12 2324-5YU i7-3520M 4GBx1 12.5” HD 720p 500G 7200 Optional Opt None Intel 6205 Fing BT 6 IAMT vPro G Win8 Pro64 10/12 2324-8AU i7-3520M 4GBx1 12.5” HD 720p 240G FDE SSD Optional Opt Backlit Intel 6205 Fing BT 6 IAMT vPro Win7 Pro64 12/12 2324-89U i7-3520M 4GBx1 12.5” HD 720p 240G FDE SSD Optional Opt Backlit Intel 6205 Fing BT 6 IAMT vPro Win7 Pro64 12/12

#### Preloaded operating system
- Some: Windows 7 Professional 64-preinstalled through downgrade rights in Windows 8 Pro 64-bit
- Some: Windows 8 Pro 64-bit

#### Preloaded applications
- Windows 7 models
- Lenovo™ Message Center Plus
- ThinkVantage Product Recovery
- ThinkVantage Power Manager
- Windows 8 models
- Lenovo Support
- Lenovo Companion
- All models
- Lenovo Solution Center
- Password Manager
- Microsoft® Office preloaded; purchase a product key to activate

#### ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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
- Disk 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, supports 4K via MDP 1.2)
- Four USB 2.0 ports
- Gigabit ethernet (RF-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

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**ThinkPad X230 Product Specifications Reference (PSREF)**

**Revision:** 0A33932

**Date:** February 2013

**See footnotes for more detailed information**

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**DHSZ-6**
A depot repair service 3-year limited warranty

Preloaded operating system³⁰
- Windows® 7 Professional 64 preinstalled through downgradable rights in Windows 8 Pro 64-bit

Preloaded applications³ (only some listed)
- Windows 7 models
- Lenovo® Message Center Plus
- ThinkVantage Power Manager
- Windows 8 models
- Lenovo® Support
- All models
  - Lenovo Solution Center
  - Password Manager
  - Microsoft® Office preloaded; purchase a product key to activate

Supports ThinkVantage® technologies

ThinkPad Ultraslim Series 3
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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 0A65630
    - 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® certified

GREENGUARD® certified

65-watt AC Adapter EPEAT® Gold rating
ENERGY STAR® 5.0-compliant
GREENGUARD® certified
ROHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹³

See footnotes for more detailed information

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### ThinkPad X230 (2325) - Onsite

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<th>Camera</th>
<th>Disk</th>
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### Preloaded operating system
- Genuine Windows® 7 Professional 64

### Ready to install applications
- Rescue and Recovery™
- Password Manager

### Preloaded applications
- ThinkVantage System Update
- Adobe® Reader®
- Microsoft® Office preloaded; purchase a product key to activate
- Skype™ for Windows

### ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 Tablet for traveling
- Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:
  - Serial ATA Hard Drive
  - 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

### Support
- Provides technical support for the warranty period:
  - 1.39 lb; 630g
  - Requires 65W or 90W AC adapter

### 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 during the warranty period.

---

See footnotes for more detailed information © Lenovo (D56H-5) July 2012
### ThinkPad X230 (2325) - Onsite - II

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<th>Type-model</th>
<th>Processor</th>
<th>Memory</th>
<th>Widescreen display</th>
<th>Disk</th>
<th>Optical in UltraBase</th>
<th>ThinkPad Backlit keyboard</th>
<th>PCIe Mini Card</th>
<th>PCI Express Card</th>
<th>Finger print reader</th>
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<td>Pro 64</td>
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</table>

- **Part of the Global Models Plus program with limited onsite service**
- 3-year limited warranty

### Positioning
- Processor: An ultraportable for the executive on the move; one spindle
- Intel Core i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology

### Memory
- 16GB max / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets

### Optical
- Ultrabay SATA disk: Some: DVD burner, removable from ThinkPad Ultrabay Series 3
- Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabay Series 3 (0A33932)
- Some: Solid State Drive (SSD) / SATA 6.0Gb/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
- (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)
- HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus

### Graphics
- Intel HD Graphics 4000 in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort
- supports dual independent display:
  - Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)

### Keyboard
- Trackpoint:
  - 6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight
- Touchpad:
  - UltraNav
  - buttonless touchpad below keyboard, multi-touch

### Preloaded system
- Ready to install applications
- Preloaded operating system

### ThinkPad Ultrabay Series 3
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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

### 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

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

---

See footnotes for more detailed information © Lenovo (DSH2-6) August 2012
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<th>Type-model</th>
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- Some models are part of the Global Models Plus program with limited onsite service3 3-year limited warranty

Preloaded operating system30
- Some: Windows 7 Professional 64-bit preinstalled through downgrade rights in Windows 8 Pro 64-bit
- Some: Windows 8 Pro 64-bit

Preloaded applications30 (only some listed)
- Windows 7 models
- Lenovo® Message Center Plus
- ThinkVantage Product Recovery
- ThinkVantage Power Manager
- Windows 8 models
- Lenovo Support
- Lenovo Companion
- Lenovo QuickLaunch
- All models
- Lenovo Solution Center
- Password Manager
- Microsoft® Office preloaded;
  - purchase a product key to activate
- Supports ThinkVantage® technologies

ThinkPad Ultrabase Series 3
- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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
d  - 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)

65-watt AC Adapter EPEAT® Gold rating
- ENERGY STAR® 5.0-compliant
- GREENGUARD® certified
- ROHS-compliant
- International Warranty Service17
- 24 hour x 7 days toll-free support during the warranty period17

See footnotes for more detailed information © Lenovo

(DSH2-9) February 2013
ThinkPad X230 (2325) - Onsite (Windows 8) - II

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**Positioning**

An ultraportable for the executive on the move; one spindle

**Processor**

Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology

**Audio support**

Intel Active Management Technology (iAMT)

**Ethernet**

Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCle x1

**Fingerprint reader**

None

**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

---

Preloaded operating system

- Windows 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit

Preloaded applications

- Only (some) listed
  - Windows 7 models
    - Lenovo® Message Center Plus
    - ThinkVantage Power Manager
  - Windows 8 models
    - Lenovo Support
    - Lenovo Companion
    - All models
      - Lenovo Solution Center
      - Password Manager
      - Microsoft® Office preloaded: purchase a product key to activate

Supports ThinkVantage® technologies

- Provides desktop expansion and cable management for X230 and X230 Tablet
- Easily connects to the bottom of the X230 or X230 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 II
  - 43N3412 Disks supported (some):
    - 128GB SSD 6.0Gb/s
    - 180GB SSD 6.0Gb/s
    - 500GB Disk 7200 rpm

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

65-watt AC Adapter

EPEAT® Gold rating

ENERGY STAR® 5.0-compliant

GREENGUARD® certified

ROHS-compliant

International Warranty Service

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

See footnotes for more detailed information © Lenovo

(DSHZ-12) July 2013
ThinkPad X230 Accessories

Memory
- 2GB PC3-12800 DDR3 SODIMM 0A65722
- 4GB PC3-12800 DDR3 SODIMM 0A65723
- 8GB PC3-12800 DDR3 SODIMM 0A65724

UltraBay Slim 9.5mm
- Most UltraBay Slim accessories supported in ThinkPad UltraBase Series 3
- Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412
- DVD ROM UltraBay Slim Drive III 0A66628
- DVD Burner UltraBay Slim Drive III 0A66626

Storage and removable storage
- ThinkPad 16GB mSATA Solid State Cache Drive 0B47309
- 500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD 41R4493
- 500GB 7200rpm SATA 3.0Gb/s 7mm HDD 41R4493
- 500GB 7200rpm SATA 3.0Gb/s 7mm HDD 41R4493
- 500GB 7200rpm SATA 3.0Gb/s 7mm HDD 41R4493
- Self Encrypting (SED) OPAL Capable HDD
- 128GB SATA 6.0Gb/s 7mm Solid State Drive
- 180GB SATA 6.0Gb/s 7mm Solid State Drive
- 256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD

- Can be used as the main HDD or with Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 in ThinkPad UltraBase Series 3

USB
- USB 2.0 Portable 500GB Hard Disk 45K1690
- USB 3.0 Secure 500GB Hard Drive 0A66619
- USB 3.0 Secure 750GB Hard Drive 0A66616
- USB 3.0 Secure 1TB Hard Drive 0A66621
- Lenovo UltraBay Slim USB Portable Drive Burner 0A33988

Wireless WAN (Mini PCI Express)
- Only WWAN upgradable models:
  - ThinkPad Gobi Mobile Broadband Option 0A36185
  - ThinkPad Gobi 4000 Mobile Broadband - AT&T
  - ThinkPad Gobi 4000 Mobile Broadband - Verizon

ThinkPad Expansion
- Lenovo Essential Notebook Stand 45J9292
- ThinkPad Ultrabase Series 3 0A33932
- ThinkPad Port Replicator Series 3 with USB 3.0 433615W
- ThinkPad Mini Dock Series 3 w/ USB 3.0 - 90W 433715U
- ThinkPad Mini Dock Plus Series 3 w/ USB 3.0 - 170W 433835U
- ThinkPad Mini DisplayPort to USB-C Cable 433835U

Keyboard
- TrackPoint Cap Collection 73P2698
- Ultrasonic Plus Wireless Keyboard and Mouse 0A34032
- USB Numeric Keypad 33L3225
- Preferred Pro USB Keyboard 0A65725
- Enhanced Performance USB Keyboard 73P2620
- ThinkPad USB Keyboard with TrackPoint 55Y9003
- Lenovo® USB Fingerprint Keyboard 73P4730
- Lenovo USB Smartcard Keyboard 51J0155

- 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 0A36188

Multimedia
- ThinkPad In-Ear Headphones with microphone 57Y4488

Security
- 3M 12.5W Privacy Filter from Lenovo 0A61770
- Kensington® MicroSaver® Cable Lock 73P2582
- Kensington Twin Head Cable Lock 45K1620
- Lenovo Security Cable Lock 57Y4305
- USB Gemplus GemPC Smart Card Reader 41N3040

Batteries
- ThinkPad Battery 44 (4-cell) 0A36305
- ThinkPad Battery 44+ (6-cell) 0A36306
- ThinkPad Battery 44++ (9-cell) 0A36307
- ThinkPad Battery 19+ (6-cell, Slim External)

- 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, UltraBase, or Docks)

More information at www.lenovo.com/aldaycomputing

ThinkPad 65W AC Adapter 40Y7696
- ThinkPad 90W AC Adapter 40Y7659
- 90W Ultrasilent AC/DC Combo Adapter 41R4493

More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultrasilent AC/DC Combo Adapter 41R4493
- USB Gemplus GemPC Smart Card Reader 41R4490

More information at www.lenovopowertips.com

Carrying Cases
- Up to 12.5" widescreen models:
  - ThinkPad 12.5" UltraBook Topload 0B47416
  - Not compatible when using ThinkPad Battery 44++ (9-cell)

- Up to 15.6" widescreen models:
  - Lenovo Messenger Max 0A33898
  - Lenovo Sport Messenger - Red 0A33897
  - Lenovo Sport Slimcase - Red 0A33896
  - Lenovo Sport Messenger - Red 0A33898

More information at www.lenovo.com/support/cases

Monitors
- Lenovo ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) 2448MB6
- Lenovo ThinkVision LT2251x Wide 22" (VGA, DP) 25798B6
- Lenovo ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0) 1452DS6
- Lenovo ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0) 1452DB6

More information at www.lenovo.com/support/monitors

Monitor Accessories
- Lenovo USB 3.0 to DVI/VGA Monitor Adapter 0B47072
- Lenovo USB Soundbar 0A36190
- Lenovo USB 3.0 to DVI/VGA Monitor Adapter 0B47072
- Lenovo UltraBay Slim USB Portable Drive Burner 0A33988

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

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