



*Personal Systems Reference
Lenovo® ThinkPad® Edge Notebooks
2010 to present - withdrawn*

February 2013 - Version 432 (Western Europe)



ThinkPad Edge E320



Lenovo® ThinkPad Edge E320



Lenovo ThinkPad Edge E320



Lenovo ThinkPad Edge E320



Lenovo ThinkPad Edge E325



Lenovo ThinkPad Edge E320



Lenovo ThinkPad Edge E325

ThinkPad® Edge E320 1298 (Intel) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Blue-tooth	Battery cells	Preload
1298-3RG	i3-2310M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000		Ericsson	selectable	Matte black	Blue	6 Pro 64
1298-3QG	i3-2310M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000				Matte black	Blue	6 Pro 64
1298-37G	i3-2310M	4GBx1	13.3" HD	720p	320G 7200	TP 11a/b/g/n				Matte red	Blue	6 Prem 64
1298-35G	i3-2310M	4GBx1	13.3" HD	720p	320G 7200	TP 11a/b/g/n				Matte black	Blue	6 Prem 64
1298-34G	i3-2310M	4GBx1	13.3" HD	720p	320G 7200	TP 11a/b/g/n				Matte black	Blue	6 Pro 64
1298-5PG	i3-2330M	4GBx1	13.3" HD	720p	320G 7200	TP 11a/b/g/n				Matte red	Blue	6 Prem 64
1298-5MG	i3-2330M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000				Matte black	Blue	6 Pro 64
1298-5LG	i3-2330M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000		Ericsson	selectable	Matte black	Blue	6 Pro 64
1298-6KG	i3-2330M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000		Ericsson	selectable	Matte black	Blue	6 Prem 64
1298-AAG	i3-2350M	4GBx1	13.3" HD	720p	320G 5400	TP 11a/b/g/n				Matte black	Blue	6 Pro 64
1298-A7G	i3-2350M	4GBx1	13.3" HD	720p	320G 5400	TP 11a/b/g/n				Matte red	Blue	6 Prem 64
1298-A6G	i3-2350M	4GBx1	13.3" HD	720p	320G 5400	Intel 1000		Ericsson	selectable	Matte black	Blue	6 Pro 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; one spindle</i></p> <p>Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p> <p>Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p> <p>Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p>								<p>Preloaded operating system²⁰</p> <ul style="list-style-type: none"> - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64 <p>Ready to install applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) 	
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™									
mSATA™ SSD	None									
Widescreen display	13.3" (338mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio									
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator									
Graphics	<p>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; <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 2560x1600 (HDMI)@60Hz</p>									
Keyboard	6-row, spill-resistant, multimedia Fn keys									
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³									
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch									
ThinkLight™	None									
Dimensions ³	13.3W" (WxDxH): 12.67" x 8.98" x 1.05-1.21"; 322 x 228mm x 26.7-30.9mm									
Weight ²	6-cell: from 4.07 lb (1.85kg)									
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom									
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic									
Battery - type ³⁷	Lithium Ion 6-cell									
Battery - life ¹⁰	6-cell (62Whr): up to 6.0 hr									
Chipset	Mobile Intel HM65 Express Chipset									
ExpressCard	None									
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)									
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)									
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2									
WWAN	<i>Some:</i> Wireless WAN, Ericsson® F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS									
Carrier	<i>Some:</i> User selectable, 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 20671 codec / stereo speakers, 2 watt x 2/ mono digital microphone, combo audio/mic jack								Supports ThinkVantage® technologies	
Security	Power-on password, hard disk password, supervisor password, security keyhole								65-watt AC adapter	
Security chip	None								EPEAT™ Gold rating	
Fingerprint reader	None								ENERGY STAR® 5.0-compliant	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available								RoHS-compliant	
									International Warranty Service ¹⁷	
									24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²	

See footnotes for more detailed information
 WE model(s) announced December 20, 2011; previous models on July 5 or October 4, 2011
 WE model(s) withdrawn effective July 2012

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 (G-PT1-1) February 2013

ThinkPad® Edge E320 1298 (Intel) - TopSeller (January 2012) - withdrawn *Personal Systems Reference (PSREF)*

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Blue-tooth	Battery cells	Preload
1298-85G	i5-2450M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000			Matte black	Blue	6	Pro 64
1298-84G	i3-2350M	4GBx1	13.3" HD	720p	500G 5400	TP 11a/b/g/n			Matte red	Blue	6	Prem 64
1298-83G	i3-2350M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000			Matte black	Blue	6	Pro 64
1298-82G	i3-2350M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000	Ericsson	selectable	Matte black	Blue	6	Pro 64
1298-A9G	i5-2450M	4GBx1	13.3" HD	720p	320G 5400	Intel 1000	Ericsson	selectable	Matte black	Blue	6	Pro 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindle</i> Intel® Core™ i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology								Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								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			
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™								Preloaded applications¹⁴ (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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)			
mSATA™ SSD	None											
Widescreen display	13.3" (338mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio								Supports ThinkVantage® technologies 65-watt AC adapter 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 ¹²			
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, 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; <i>Max external resolution:</i> 2048x1536 (VGA)@75Hz; 2560x1600 (HDMI)@60Hz											
Keyboard	6-row, spill-resistant, multimedia Fn keys											
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³											
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch											
ThinkLight™	None											
Dimensions ³	13.3W" (WxDxH): 12.67" x 8.98" x 1.05-1.21"; 322 x 228mm x 26.7-30.9mm											
Weight ²	6-cell: from 4.07 lb (1.85kg)											
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom											
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic											
Battery - type ³⁷	Lithium Ion 6-cell											
Battery - life ¹⁰	6-cell (62Whr): up to 6.0 hr											
Chipset	Mobile Intel HM65 Express Chipset											
ExpressCard	None											
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2 <i>Some:</i> 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2											
WWAN	<i>Some:</i> Wireless WAN, Ericsson® F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS											
Carrier	<i>Some:</i> User selectable, 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 20671 codec / stereo speakers, 2 watt x 2/ mono digital 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 upgrades ²² available												

See footnotes for more detailed information
WE model(s) announced January 17, 2012
WE model(s) withdrawn effective July 2012

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(G-PT1-6) February 2013

ThinkPad® Edge E320 1298 (Intel) - Switchable (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Blue-tooth	Battery cells	Preload
1298-3SG	i3-2310M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000	Ericsson	selectable	Matte black	Blue	6	Prem 64
1298-5NG	i3-2330M	4GBx1	13.3" HD	720p	320G 7200	Intel 1000	Ericsson	selectable	Matte black	Blue	6	Prem 64
1298-7ZG	i5-2450M	4GBx1	13.3" HD	720p	500G 5400	Intel 1000			Matte red	Blue	6	Prem 64
1298-A8G	i5-2450M	4GBx1	13.3" HD	720p	320G 5400	Intel 1000			Matte red	Blue	6	Prem 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; one spindle</i></p> <p>Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p> <p>Intel Core i3-2330M processor (dual-core, 2.20GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p> <p>Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology</p>									<p>Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64</p> <p>Ready to install applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox 		
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									<p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) 		
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™											
mSATA™ SSD	None											
Widescreen display	13.3" (338mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio											
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator											
Graphics	Switches between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and AMD Radeon™ HD 6630M graphics, 1GB memory, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz</i>											
Keyboard	6-row, spill-resistant, multimedia Fn keys											
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³											
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch											
ThinkLight™	None											
Dimensions ³	<i>13.3W" (WxDxH): 12.67" x 8.98" x 1.05-1.21"; 322 x 228mm x 26.7-30.9mm</i>											
Weight ²	<i>6-cell: from 4.11 lb (1.87kg)</i>											
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom											
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic											
Battery - type ³⁷	Lithium Ion 6-cell											
Battery - life ¹⁰	<i>6-cell (62Whr): up to 5.6 hr</i>											
Chipset	Mobile Intel HM65 Express Chipset											
ExpressCard	None											
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2											
WWAN	Some: Wireless WAN, Ericsson® F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS											
Carrier	Some: User selectable, 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 20671 codec / stereo speakers, 2 watt x 2/ mono digital microphone, combo audio/mic jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	None											
Fingerprint reader	None											
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available									<p>Supports ThinkVantage® technologies</p> <p>90-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</p>		

See footnotes for more detailed information
 WE model(s) announced January 17, 2012; previous model(s) on July 5 or October 4, 2011
 WE model(s) withdrawn effective July 2012

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 (G-PT1-2) February 2013

ThinkPad® Edge E320 1298 (Intel) - TopSeller (DOS) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Blue-tooth	Bat-tery cells	Preload
1298-5QG	i3-2330M	4GBx1	13.3" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black	Blue	6	DOS-Lic.

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

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindle</i> Intel® Core™ i3-2330M processor (dual-core, 2.20GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology									Preloaded operating system²⁰ - DOS-Lic.					
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets														
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™														
mSATA™ SSD	None														
Widescreen display	13.3" (338mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio														
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 2560x1600 (HDMI)@60Hz</i>														
Keyboard	6-row, spill-resistant, multimedia Fn keys														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³														
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch														
ThinkLight™	None														
Dimensions ³	<i>13.3W" (WxDxH): 12.67" x 8.98" x 1.05-1.21"; 322 x 228mm x 26.7-30.9mm</i>														
Weight ²	<i>6-cell: from 4.07 lb (1.85kg)</i>														
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom														
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic														
Battery - type ³⁷	Lithium Ion 6-cell														
Battery - life ¹⁰	<i>6-cell (62Whr): up to 6.0 hr</i>														
Chipset	Mobile Intel HM65 Express Chipset														
ExpressCard	None														
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)														
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1									Supports ThinkVantage® technologies					
WWAN	None														
Modem	None														
Bluetooth™	Bluetooth 3.0 wireless														
Ethernet	Gigabit ethernet, Atheros® AR8151														
Intel AMT	None														
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ mono digital microphone, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	None														
Fingerprint reader	None														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												65-watt AC adapter EPEAT™ Gold rating (Windows 7 models) ENERGY STAR® 5.0-compliant (Windows 7 models) RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²		

See footnotes for more detailed information
WE model(s) announced October 4, 2011
WE model(s) withdrawn effective July 2012

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ThinkPad® Edge E325 1297 (AMD) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Top color	Blue-tooth	Battery cells	Preload
1297-2GG	E-350	1.60	4GBx1	13.3" HD	720p	HD 6310	320G 5400	TP 11b/g/n	None	Matte black	Blue	6	Pro 64
1297-2FG	E-350	1.60	2GBx1	13.3" HD	720p	HD 6310	320G 5400	TP 11a/b/g/n	None	Matte red	Blue	6	Prem 64
1297-2TG	E-450	1.65	2GBx1	13.3" HD	720p	HD 6320	320G 7200	TP 11a/b/g/n	None	Matte red	Blue	6	Prem 64
1297-2SG	E-450	1.65	4GBx1	13.3" HD	720p	HD 6320	320G 7200	TP 11b/g/n	None	Matte black	Blue	6	Pro 64
1297-39G	E-450	1.65	4GBx1	13.3" HD	720p	HD 6320	320G 7200	TP 11b/g/n	None	Matte black	Blue	6	Prem 64
1297-3MG	E-450	1.65	2GBx1	13.3" HD	720p	HD 6320	320G 5400	TP 11a/b/g/n	None	Matte red	Blue	6	Prem 64
1297-3LG	E-450	1.65	4GBx1	13.3" HD	720p	HD 6320	320G 5400	TP 11b/g/n	None	Matte black	Blue	6	Pro 64
1297-3HG	E-450	1.65	2GBx1	13.3" HD	720p	HD 6320	500G 5400	TP 11a/b/g/n	None	Matte red	Blue	6	Prem 64
1297-3QG	E-450	1.65	4GBx1	13.3" HD	720p	HD 6320	500G 5400	TP 11a/b/g/n	None	Matte red	Blue	6	Prem 64

- Small and medium business (SMB) model(s), part of the WE TopSeller™ Program
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; one spindle AMD Accelerated Processor E-350 with dual-core, integrated AMD Radeon™ HD 6310M Graphics, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache AMD Accelerated Processor E-450 with dual-core, integrated AMD Radeon HD 6320M Graphics, virtualization technology, integrated 1333MHz DDR3 memory controller, and 1MB L2 cache										Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64		
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller										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		
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										Preloaded applications ¹⁴ (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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)		
mSATA™ SSD	None												
Widescreen display	13.3" (338mm) HD (1366x768) color, anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio										Supports ThinkVantage® technologies		
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator												
Graphics	AMD Radeon HD 6310M or 6320M 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										65-watt AC adapter 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 ¹²		
Keyboard TrackPoint®	6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³ UltraNav™, buttonless touchpad below keyboard, multi-touch ThinkLight™ None												
Dimensions ³	13.3W" (WxDxH): 12.67" x 8.98" x 1.05-1.21"; 322 x 228mm x 26.7-30.9mm										Supports ThinkVantage® technologies		
Weight ²	6-cell: from 3.95 lb (1.79kg)												
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom										Supports ThinkVantage® technologies		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic												
Battery - type ³⁷	Lithium Ion 6-cell										Supports ThinkVantage® technologies		
Battery - life ¹⁰	6-cell (62Whr): up to 6.2 hr												
Chipset	AMD A50M FCH Chipset										Supports ThinkVantage® technologies		
ExpressCard	None												
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										Supports ThinkVantage® technologies		
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)												
PCIe Mini Card WLAN ⁴	One PCI Express Mini Card slot Some: 11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1 Some: 11a/b/g/n, PCIe Half Mini Card, ThinkPad a/b/g/n, 2x2										Supports ThinkVantage® technologies		
WWAN	None												
Modem	None										Supports ThinkVantage® technologies		
Bluetooth™	Bluetooth 3.0 wireless												
Ethernet	Gigabit ethernet, Atheros® AR8151										Supports ThinkVantage® technologies		
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ mono digital microphone, combo audio/mic jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole										Supports ThinkVantage® technologies		
Security chip	None												
Fingerprint reader	None										Supports ThinkVantage® technologies		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available												

See footnotes for more detailed information

WE model(s) announced April 10 2012; previous model(s) on July 5, October 4 or December 20, 2011; January 17, 2012

WE model(s) withdrawn effective July 2012

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ThinkPad® Edge E325 1297 (AMD) - TopSeller (DOS) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Top color	Blue-tooth	Battery cells	Preload
1297-2UG	E-450	1.65	4GBx1	13.3" HD	720p	HD 6320	320G 7200	TP 11b/g/n	None	Matte black	Blue	6	DOS-Lic.

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

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; one spindle</i> AMD Accelerated Processor E-450 with dual-core, integrated AMD Radeon™ HD 6320M Graphics, virtualization technology, integrated 1333MHz DDR3 memory controller, and 1MB L2 cache										Preloaded operating system²⁰ - DOS-Lic.
Memory	8GB max ⁷ / 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 <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable, Active Protection System™										
mSATA™ SSD	None										
Widescreen display	13.3" (338mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 400:1 contrast ratio										
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator										
Graphics	AMD Radeon HD 6320M 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; <i>Maximum external resolution:</i> 2048x1536 (VGA) @60Hz; 1920x1200 (HDMI) @60Hz										
Keyboard	6-row, spill-resistant, multimedia Fn keys										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch										
ThinkLight™	None										
Dimensions ³	<i>13.3W" (WxDxH):</i> 12.67" x 8.98" x 1.05-1.21"; 322 x 228mm x 26.7-30.9mm										
Weight ²	<i>6-cell:</i> from 3.95 lb (1.79kg)										
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom										
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										
Battery - type ³⁷	Lithium Ion 6-cell										
Battery - life ¹⁰	<i>6-cell (62Whr):</i> up to 6.2 hr										
Chipset	AMD A50M FCH Chipset										
ExpressCard	None										
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)										
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)										
PCIe Mini Card WLAN ⁴	One PCI Express Mini Card slot 11b/g/n, PCIe Half Mini Card, ThinkPad b/g/n, 1x1										Supports ThinkVantage® technologies
WWAN	None										
Modem	None										
Bluetooth™	Bluetooth 3.0 wireless										
Ethernet	Gigabit ethernet, Atheros® AR8151										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 2 watt x 2/ mono digital microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	None										
Fingerprint reader	None										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										

See footnotes for more detailed information
WE model(s) announced October 4, 2011
WE model(s) withdrawn effective July 2012

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ThinkPad®



Lenovo® ThinkPad Edge E420s



Lenovo ThinkPad Edge E420s



ThinkVision® LT1421 with ThinkPad Edge E420s



Lenovo ThinkPad Edge E420s



Lenovo ThinkPad Edge E420s

ThinkPad® Edge E420s 4401 (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Blue-tooth	Battery cells	Preload
4401-5BG	i3-2330M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Prem 64
4401-5DG	i5-2430M	4GBx1	14.0" HD	720p	128G SSD	Intel 1000	Ericsson	selectable	Finger	Blue	4	Pro 64
4401-7PG	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Prem 64
4401-8YG	i3-2350M	4GBx1	14.0" HD	720p	320G 5400	Intel 1000	None	None	Finger	Blue	4	Prem 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Elegant design with quality, reliability, and portability for SMB customers; two spindles</i></p> <p>Intel® Core™ i3-2330M processor (dual-core, 2.20GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p> <p>Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology</p> <p>Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology</p>							<p>Preloaded operating system²⁰</p> <ul style="list-style-type: none"> - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64 <p>Ready to install applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • 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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) 				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, slot-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive											
mSATA	None											
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare display with glossy infinity glass, 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 HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 (VGA) @ 75Hz; 1920x1200 (HDMI) @ 60Hz</i>											
Keyboard	6-row, spill-resistant, multimedia Fn keys											
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³											
Touch pad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, scrolling regions, multi-touch											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions											
Dimensions ³	14.0W" (WxDxH): 13.74" x 9.29" x 0.91-1.23"; 349mm x 236mm x 23.1-31.2mm											
Weight ²	starting at 4.14 lb (1.88kg)											
Case color	Moss Black soft touch finish, authentic metal accents											
Case material	Magnesium/Aluminum + PPS											
Battery - type ³⁷	Integrated Lithium Ion 4-cell, 1000 cycle battery											
Battery - life ¹⁰	4-cell (48.8Whr): up to 7.0 hr											
Chipset	Mobile Intel HM65 Express Chipset											
ExpressCard/34	None											
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots											
WWAN	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> Wireless WAN, Ericsson® F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS											
Carrier	<i>Some:</i> User selectable, contract required with service provider											
Modem	None											
Bluetooth™	Bluetooth 3.0 wireless											
Ethernet	Realtek® RTL8111E Gigabit Network Connection							Supports ThinkVantage® technologies				
Intel AMT	None											
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack							65-watt AC adapter 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 ¹²				
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	None											
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor											
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											

See footnotes for more detailed information
WE model(s) announced January 17, 2012; previous model(s) on October 4, 2011
WE model(s) withdrawn effective May 2012

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ThinkPad® Edge E420s 4401 (Switchable) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Finger print reader	Blue-tooth	Bat-tery cells	Preload
4401-5CG	i5-2430M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Pro 64
4401-7SG	i5-2450M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	None	None	Finger	Blue	4	Pro 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Elegant design with quality, reliability, and portability for SMB customers; two spindles</i> Intel® Core™ i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology								Preloaded operating system²⁰ - Genuine Windows 7 Professional 64 Ready to install applications¹⁴ (only some listed)			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets								<ul style="list-style-type: none"> • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox 			
Optical SATA disk	DVD burner, 9.5mm high, fixed, not removable, slot-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive								<ul style="list-style-type: none"> • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox 			
mSATA	None											
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare display with glossy infinity glass, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio								Preloaded applications¹⁴ (only some listed) <ul style="list-style-type: none"> • 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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) 			
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus											
Graphics	Switches between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and AMD Radeon™ HD 6630M graphics, 2GB memory, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz</i>								<ul style="list-style-type: none"> • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) 			
Keyboard display	6-row, spill-resistant, multimedia Fn keys											
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³								Supports ThinkVantage® technologies			
Touch pad	UltraNav™, buttonless touchpad below keyboard, Tap Zones, scrolling regions, multi-touch											
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions								90-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			
Dimensions ³	<i>14.0W" (WxDxH): 13.74" x 9.29" x 0.91-1.23"; 349mm x 236mm x 23.1-31.2mm</i>											
Weight ²	starting at 4.22 lb (1.92kg)								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Case color	Moss Black soft touch finish, authentic metal accents											
Case material	Magnesium/Aluminum + PPS								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Battery - type ³⁷	Integrated Lithium Ion 4-cell, 1000 cycle battery											
Battery - life ¹⁰	<i>4-cell (48.8Whr): up to 6.0 hr</i>								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Chipset	Mobile Intel HM65 Express Chipset											
ExpressCard/34	None								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots											
WWAN	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Modem	None											
Bluetooth™	Bluetooth 3.0 wireless								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Ethernet	Realtek® RTL8111E Gigabit Network Connection											
Intel AMT	None								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Security chip	None											
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor								24 hour x 7 day¹⁸ toll-free support during the warranty period¹²			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											

See footnotes for more detailed information
 WE model(s) announced January 17, 2012; previous model(s) on October 4, 2011
 WE model(s) withdrawn effective May 2012

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ThinkPad®



Lenovo® ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520



Lenovo ThinkPad Edge E520

ThinkPad® Edge E520 1143 (Intel) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload
1143-DPG	i3-2330M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	Ericsson	selectable	Matte black	None	Blue	6	Prem 64
1143-3HG	i3-2310M	4GBx1	15.6" HD	720p	500G 5400	Intel 1000	None	None	Matte red	None	Blue	6	Prem 64
1143-3JG	i3-2310M	2GBx1	15.6" HD	720p	320G 5400	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-3KG	i3-2310M	4GBx1	15.6" HD	720p	500G 5400	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-3LG	i5-2410M	4GBx1	15.6" HD	720p	500G 5400	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-7UG	i3-2310M	4GBx1	15.6" HD	720p	500G 5400	Intel 1000	None	None	Matte black	None	Blue	6	Prem 64
1143-B8G	i3-2330M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	None	Blue	6	Prem 64
1143-B7G	i3-2330M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte red	None	Blue	6	Prem 64
1143-B6G	i3-2330M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-B5G	i5-2430M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-H8G	i3-2350M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64
1143-HHG	i3-2350M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte red	Finger	Blue	6	Prem 64
1143-GXG	i3-2350M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Prem 64
1143-GWG	i5-2450M	4GBx1	15.6" HD	720p	500G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i3-2330M processor (dual-core, 2.20GHz, 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), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: 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 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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	8GB max ⁷ / 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 Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, 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	
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch	
ThinkLight™	None	
Dimensions ³	<i>15.6W" (WxDxH): 14.96" x 9.78" x 1.15-1.33"; 380 x 248.5mm x 29.3-33.7mm</i>	
Weight ²	<i>6-cell: from 5.51 lb (2.5kg); 9-cell: from 5.86 lb (2.66kg)</i>	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell	
Battery - life ¹⁰	<i>6-cell (48Whr): up to 6.2 hr; 9-cell (94Whr): up to 11.7 hr</i>	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard	One ExpressCard/34	
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, HDMI), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
WWAN	<i>Some: Wireless WAN, Ericsson® F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS</i>	
Carrier	<i>Some: User selectable, contract required with service provider</i>	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless	Supports ThinkVantage® technologies
Ethernet	Realtek® RTL8111E Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack	65-watt AC adapter 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 ¹²
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some: UPEK Fingerprint reader on palm rest, swipe sensor</i>	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

WE model(s) announced January 17, 2012; previous model(s) on April 19, August 2, August 30, October 4 or December 13, 2011

WE model(s) withdrawn effective September 2012

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ThinkPad® Edge E520 1143 (Intel) - TopSeller (February 2012) - withdrawn *Personal Systems Reference (PSREF)*

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Ann date (mm/yy)
1143-KCG	i3-2350M	4GBx1	15.6" HD	720p	500G 5400	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64	01/12
1143-KBG	i5-2450M	4GBx1	15.6" HD	720p	500G 5400	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64	01/12
1143-K9G	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64	01/12
1143-K8G	i5-2450M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64	01/12
1143-K7G	i3-2350M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	None	None	Matte black	Finger	Blue	6	Prem 64	01/12

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i3-2350M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64				
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										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				
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™										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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
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										Supports ThinkVantage® technologies				
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>										65-watt AC adapter 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 ¹²				
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad														
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										Supports ThinkVantage® technologies				
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch														
ThinkLight™	None										Supports ThinkVantage® technologies				
Dimensions ³	<i>15.6W" (WxDxH): 14.96" x 9.78" x 1.15-1.33"; 380 x 248.5mm x 29.3-33.7mm</i>														
Weight ²	<i>6-cell: from 5.51 lb (2.5kg); 9-cell: from 5.86 lb (2.66kg)</i>										Supports ThinkVantage® technologies				
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom														
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										Supports ThinkVantage® technologies				
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell														
Battery - life ¹⁰	<i>6-cell (48Whr): up to 6.2 hr; 9-cell (94Whr): up to 11.7 hr</i>										Supports ThinkVantage® technologies				
Chipset	Mobile Intel HM65 Express Chipset														
ExpressCard	One ExpressCard/34										Supports ThinkVantage® technologies				
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, HDMI), ethernet (RJ-45)										Supports ThinkVantage® technologies				
PCIe Mini Card	Two PCI Express Mini Card slots														
WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2										Supports ThinkVantage® technologies				
WWAN	None														
Carrier	None										Supports ThinkVantage® technologies				
Modem	None														
Bluetooth™	Bluetooth 3.0 wireless										Supports ThinkVantage® technologies				
Ethernet	Realtek® RTL8111E Gigabit Network Connection														
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack										Supports ThinkVantage® technologies				
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	None										Supports ThinkVantage® technologies				
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
WE model(s) announced January 24, 2012
WE model(s) withdrawn effective September 2012

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(G-GGR1-5) February 2013

ThinkPad® Edge E520 1143 (Intel) - TopSeller (October 2011) - withdrawn *Personal Systems Reference (PSREF)*

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload
1143-8QG	B810	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	None	Matte red	None	Blue	6	Prem 64
1143-8PG	B810	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	None	Matte black	None	Blue	6	Pro 64
1143-8NG	B940	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	None	Matte red	None	Blue	6	Prem 64
1143-8MG	B940	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	None	None	Matte black	None	Blue	6	Prem 64
1143-BAG	B950	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	None	None	Matte black	None	Blue	6	Prem 64
1143-B9G	B800	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	None	Matte black	None	Blue	6	Pro 64
1143-CNG	B800	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	None	Matte red	None	Blue	6	Prem 64
1143-CMG	B950	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	None	None	Matte red	None	Blue	6	Prem 64
1143-H2G	B960	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64
1143-GZG	B960	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64
1143-GYG	B800	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64
1143-KAG	B960	4GBx1	15.6" HD	720p	250G 5400	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64
1143-K6G	B960	2GBx1	15.6" HD	720p	250G 5400	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64
1143-K5G	B960	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64
1143-KLG	B960	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	None	None	Matte black	Finger	Blue	6	Prem 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Celeron® B800 processor (dual-core, 1.50GHz, 2MB Cache), DDR3 memory controller (up to 1333MHz) Intel Celeron B810 processor (dual-core, 1.60GHz, 2MB Cache), DDR3 memory controller (up to 1333MHz) Intel Pentium® B940 processor (dual-core, 2.00GHz, 2MB Cache), DDR3 memory controller (up to 1333MHz) Intel Pentium B950 processor (dual-core, 2.10GHz, 2MB Cache), DDR3 memory controller (up to 1333MHz) Intel Pentium B960 processor (dual-core, 2.20GHz, 2MB Cache), DDR3 memory controller (up to 1333MHz)	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: 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
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, 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	
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator	
Graphics	Intel HD 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>	
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad	
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch	
ThinkLight™	None	
Dimensions ³	<i>15.6" (WxDxH): 14.96" x 9.78" x 1.15-1.33"; 380 x 248.5mm x 29.3-33.7mm</i>	
Weight ²	<i>6-cell: from 5.51 lb (2.5kg); 9-cell: from 5.86 lb (2.66kg)</i>	
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom	
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic	
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell	
Battery - life ¹⁰	<i>6-cell (48Whr): up to 6.2 hr; 9-cell (94Whr): up to 11.7 hr</i>	
Chipset	Mobile Intel HM65 Express Chipset	
ExpressCard	One ExpressCard/34	
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, HDMI), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1	
WWAN	None	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless	Supports ThinkVantage® technologies
Ethernet	Realtek® RTL8111E Gigabit Network Connection	
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack	65-watt AC adapter 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 ¹²
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	None	
Fingerprint reader	<i>Some: UPEK Fingerprint reader on palm rest, swipe sensor</i>	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for more detailed information

WE model(s) announced June 21 or October 4, 2011; January 17, January 24, or February 28, 2012

WE model(s) withdrawn effective September 2012

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(G-GGR1-2) February 2013

ThinkPad® Edge E520 1143 (Intel) - Switchable (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Discrete graphics	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload
1143-3MG	i5-2410M	4GBx1	15.6" HD	720p	1G	500G 5400	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-3NG	i5-2410M	4GBx1	15.6" HD	720p	1G	500G 5400	Intel 1000	None	None	Matte red	None	Blue	6	Prem 64
1143-B4G	i5-2430M	4GBx1	15.6" HD	720p	1G	750G 5400	Intel 1000	None	None	Matte red	None	Blue	6	Prem 64
1143-B3G	i5-2430M	4GBx1	15.6" HD	720p	1G	750G 5400	Intel 1000	None	None	Matte black	None	Blue	6	Pro 64
1143-JYG	i5-2450M	4GBx1	15.6" HD	720p	2G	500G 7200	Intel 1000	None	None	Matte red	Finger	Blue	6	Prem 64
1143-GVG	i5-2450M	4GBx1	15.6" HD	720p	2G	750G 5400	Intel 1000	None	None	Matte black	Finger	Blue	6	Pro 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> 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 i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology</p>										<p>Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64</p>
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<p>Ready to install applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox <p>Preloaded applications¹⁴ (only some listed)</p> <ul style="list-style-type: none"> • 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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, 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										
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator										
Graphics	Switches between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and AMD Radeon™ HD 6630M graphics, 1GB or 2GB memory, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz</i>										
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch										
ThinkLight™	None										
Dimensions ³	<i>15.6W" (WxDxH): 14.96" x 9.78" x 1.15-1.33"; 380 x 248.5mm x 29.3-33.7mm</i>										
Weight ²	<i>6-cell: from 5.51 lb (2.5kg); 9-cell: from 5.86 lb (2.66kg)</i>										
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom										
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell										
Battery - life ¹⁰	<i>6-cell (48Whr): up to 6.2 hr; 9-cell (94Whr): up to 11.7 hr</i>										
Chipset	Mobile Intel HM65 Express Chipset										
ExpressCard	One ExpressCard/34										
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, HDMI), ethernet (RJ-45)										
PCIe Mini Card	Two PCI Express Mini Card slots										
WLAN ⁴	11b/g/n, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2										
WWAN	None										
Modem	None										
Bluetooth™	Bluetooth 3.0 wireless										
Ethernet	Realtek® RTL8111E Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	None										
Fingerprint reader	<i>Some: UPEK Fingerprint reader on palm rest, swipe sensor</i>										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										
											Supports ThinkVantage® technologies
											90-watt AC adapter 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 ¹²

See footnotes for more detailed information

WE model(s) announced January 17, 2012; previous model(s) on April 19 or October 4, 2011

WE model(s) withdrawn effective September 2012

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(G-GGR1-3) February 2013

ThinkPad® Edge E520 1143 (Intel) - TopSeller (DOS) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCle Mini Card WLAN	PCle Mini Card WWAN /mSATA	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload
1143-BBG	i5-2430M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	None	None	Matte black	None	Blue	6	DOS-Lic.

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

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Core™ i5-2430M processor (dual-core, 2.40GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.00GHz), HT technology										Preloaded operating system²⁰ - DOS-Lic.
Memory	8GB max ⁷ / 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 Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, 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										
Camera	HD720p resolution, wide view angle, low light sensitive, fixed focus, 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; <i>Max external resolution: 2048x1536 (VGA)@75Hz; 1920x1200 (HDMI)@60Hz</i>										
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad										
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³										
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch										
ThinkLight™	None										
Dimensions ³	<i>15.6W" (WxDxH): 14.96" x 9.78" x 1.15-1.33"; 380 x 248.5mm x 29.3-33.7mm</i>										
Weight ²	<i>6-cell: from 5.51 lb (2.5kg); 9-cell: from 5.86 lb (2.66kg)</i>										
Case color	Matte black (top), trimmed with a thin silver band (side); black bottom										
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic										
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell										
Battery - life ¹⁰	<i>6-cell (48Whr): up to 6.2 hr; 9-cell (94Whr): up to 11.7 hr</i>										
Chipset	Mobile Intel HM65 Express Chipset										
ExpressCard	One ExpressCard/34										
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, HDMI), ethernet (RJ-45)										
PCle Mini Card WLAN ⁴	Two PCI Express Mini Card slots 11b/g/n, PCle Half Mini Card, ThinkPad 11b/g/n, 1x1										
WWAN	None										
Modem	None										
Bluetooth™	Bluetooth 3.0 wireless										
Ethernet	Realtek® RTL8111E Gigabit Network Connection										
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack										
Security	Power-on password, hard disk password, supervisor password, security keyhole										
Security chip	None										
Fingerprint reader	None										
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										
											Supports ThinkVantage® technologies 65-watt AC adapter 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 ¹²

See footnotes for more detailed information

WE model(s) announced October 4, 2011

WE model(s) withdrawn effective September 2012

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(G-GGR1-4) February 2013

ThinkPad® Edge E525 1200 (AMD) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	Top color	Finger print reader	Blue-tooth	Battery cells	Preload
1200-2KG	A8-3500M	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	Matte red	None	Blue	6	Prem 64
1200-2JG	A6-3400M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	Matte black	None	Blue	6	Pro 64
1200-2HG	A4-3300M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	Matte red	None	Blue	6	Prem 64
1200-2GG	A4-3300M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	Matte black	None	Blue	6	Pro 64
1200-3HG	E2-3000M	2GBx1	15.6" HD	720p	320G 5400	TP 11b/g/n	Matte black	Finger	Blue	6	Prem 64
1200-3GG	A4-3300M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	Matte black	Finger	Blue	6	Prem 64
1200-3FG	A6-3420M	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	Matte black	Finger	Blue	6	Pro 64
1200-3EG	A8-3520M	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	Matte red	Finger	Blue	6	Prem 64
1200-3PG	A4-3300M	4GBx1	15.6" HD	720p	500G 5400	TP 11b/g/n	Matte black	Finger	Blue	6	Prem 64
1200-3XG	A6-3420M	4GBx1	15.6" HD	720p	750G 5400	TP 11b/g/n	Matte black	None	Blue	6	Pro 64
1200-3WG	A4-3300M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	Matte black	None	Blue	6	Prem 64

- **Small and medium business (SMB) model(s), part of the WE TopSeller™ Program**
- **Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> AMD Accelerated Processor E2-3000M (dual-core, 1.80GHz, 1MB L2 cache), integrated AMD Radeon™ HD 6380G Graphics, AMD Turbo Core technology (up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A4-3300M (dual-core, 1.90GHz, 2MB L2 cache), integrated AMD Radeon HD 6480G Graphics, AMD Turbo Core technology (up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A6-3400M (quad-core, 1.40GHz, 4MB L2 cache), integrated AMD Radeon HD 6520G Graphics, AMD Turbo Core technology (up to 2.30GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A6-3420M (quad-core, 1.50GHz, 4MB L2 cache), integrated AMD Radeon HD 6520G Graphics, AMD Turbo Core technology (up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A8-3500M (quad-core, 1.50GHz, 4MB L2 cache), integrated AMD Radeon HD 6620G Graphics, AMD Turbo Core technology (up to 2.40GHz), integrated DDR3 memory controller (up to 1333MHz) AMD Accelerated Processor A8-3520M (quad-core, 1.60GHz, 4MB L2 cache), integrated AMD Radeon HD 6620G Graphics, AMD Turbo Core technology (up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz)</p>							<p>Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 64</p> <p>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</p> <p>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 • Adobe Acrobat® X Standard (bundled with Microsoft Office) • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</p>				
Memory	8GB max ⁷ / 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 Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, 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	HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator											
Graphics	<p>AMD Radeon HD 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; <i>Max external resolution: 1920x1600 (VGA)@60Hz; 1920x1080p (HDMI)@60Hz</i></p>											
Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad											
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³											
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch											
ThinkLight™	None											
Dimensions ³	15.6W" (WxDxH): 14.96" x 9.78" x 1.2-1.51"; 380mm x 248.5mm x 30.6-38.3mm											
Weight ²	6-cell: from 5.69 lb (2.58kg); 9-cell: from 6.04 lb (2.74kg)											
Case color	Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom											
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic											
Battery - type ³⁷	Lithium Ion 6-cell or 9-cell											
Battery - life ¹⁰	6-cell (48Whr): up to 3.75 hr; 9-cell (94Whr): up to 7.4 hr											
Chipset	AMD A60M FCH											
ExpressCard	One ExpressCard/34											
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, HDMI), ethernet (RJ-45)											
PCIe Mini Card WLAN ⁴	One PCI Express Half Mini Card slot ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1											
Modem	None											
Bluetooth™	Bluetooth 3.0 wireless							Supports ThinkVantage® technologies				
Ethernet	Realtek® RTL8111E Gigabit Network Connection											
Audio support	High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack							65-watt AC adapter 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 ¹²				
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	None											
Fingerprint reader	Some: UPEK Fingerprint reader on palm rest, swipe sensor											
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											

See footnotes for more detailed information

WE model(s) announced April 17, 2012; previous model(s) on August 9, 2011; January 17 or January 24, 2012

WE model(s) withdrawn effective July 2012

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(G-GGR11-1) February 2013

ThinkPad® Edge E525 1200 (AMD) - TopSeller (DOS) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	Top color	Finger print reader	Blue-tooth	Battery cells	Preload
1200-32G	A4-3300M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	Matte black	None	Blue	6	DOS-Lic.
1200-3NG	A4-3300M	4GBx1	15.6" HD	720p	500G 7200	TP 11b/g/n	Matte black	Finger	Blue	6	DOS-Lic.

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

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> AMD Accelerated Processor A4-3300M (dual-core, 1.90GHz, 2MB L2 cache), integrated AMD Radeon™ HD 6480G Graphics, AMD Turbo Core technology (up to 2.50GHz), integrated DDR3 memory controller (up to 1333MHz)							Preloaded operating system²⁰ - DOS-Lic.			
Memory	8GB max ⁷ / 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 Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, 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 HD720p resolution, wide view angle, low light sensitive, fixed focus, LED indicator										
Graphics	AMD Radeon HD 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; <i>Max external resolution: 1920x1600 (VGA)@60Hz; 1920x1080p (HDMI)@60Hz</i>										
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touchpad below keyboard, Tap Zones, multi-touch None										
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	<i>15.6W"</i> (WxDxH): 14.96" x 9.78" x 1.2-1.51"; 380mm x 248.5mm x 30.6-38.3mm <i>6-cell</i> : from 5.69 lb (2.58kg); <i>9-cell</i> : from 6.04 lb (2.74kg) Matte black or Matte red (top), trimmed with a thin silver band (side); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell or 9-cell <i>6-cell (48Whr)</i> : up to 3.75 hr; <i>9-cell (94Whr)</i> : up to 7.4 hr										
Chipset ExpressCard Multicard Reader Ports	AMD A60M FCH One ExpressCard/34 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)										
PCIe Mini Card WLAN ⁴ Modem Bluetooth™ Ethernet Audio support	One PCI Express Half Mini Card slot 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 None Bluetooth 3.0 wireless Realtek® RTL8111E Gigabit Network Connection High Definition (HD) Audio, Conexant 20671 codec / stereo speakers, 1 watt x 2/ mono digital microphone, combo audio/mic jack							Supports ThinkVantage® technologies			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole None <i>Some</i> : UPEK Fingerprint reader on palm rest, swipe sensor							65-watt AC adapter RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹²			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										

See footnotes for more detailed information
WE model(s) announced December 20, 2011; previous models on September 6, 2011
WE model(s) withdrawn effective July 2012

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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.

Warranty: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.

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.
- ⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 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 Windows XP Professional 64-bit and Windows Vista 64-bit Editions.
- ⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.
- 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.
- ¹⁶ **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 WAN card. Network details, coverage limitations, and maps at www.verizonwireless.com.
- ¹⁷ **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ¹⁸ **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 EasyServ or Courier service, Lenovo will attempt to diagnose and resolve the problem remotely before sending a courier.
- ¹⁹ **EasyServ depot repair service:** In the United States call 1-800-426-7378. 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.

²² **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. For ThinkPad notebooks requiring LCD or other component replacement, Lenovo may choose to perform service at the depot repair center. Calls must be received by 5 pm local time in order to qualify for Next Business Day service. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

²³ **Activating AT&T Wireless Service:** Requires separate agreement with AT&T, subject to service agreement, rate plan and coverage maps. AT&T, not Lenovo, is solely responsible for service. Coverage not available in all areas; AT&T BroadbandConnect available in select metropolitan markets. Special credit and tenure restrictions and additional charges may apply to international roaming. A network connection, third-party software, additional hardware, and/or subscription to a third-party service may be required for certain solutions/applications. Additional restrictions apply, including early termination fee; see www.wireless.att.com for details. To activate call Lenovo Wireless Activation Hot Line at 1-877-299-4710.

²⁴ **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. In the United States call 1-800-426-7378. 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.

²⁷ **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.

²⁸ **The IEEE 802.11n specification (MIMO)** has not been finalized and is currently in draft release. The ThinkPad 11a/b/g/n (11n) Wireless LAN Mini PCI Express Adapters are based on the Draft Release, Version 1.02, of the IEEE 802.11n specification. The Intel Mini PCI Express Adapters are based on the Draft Release, Version 2.0 of the IEEE 802.11n specification. 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, or 11a/b/g/n can communicate on any of its supported formats.

³⁰ **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.

³⁵ **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/think/support and enter your machine type and model number for more information.

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