



Personal Systems Reference Lenovo® ThinkPad® TopSeller™ Notebooks

March 2011 - Version 395



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PC3-8500 DDR3 Low-Halogen SODIMM
1GB 55Y3706
2GB 55Y3707



ThinkPad Mini Dock Plus Series 3
433810U



USB 2.0 Portable Secure Hard Disk
320GB 43R2019



ThinkPad Bluetooth Laser Mouse
41U5008



ThinkPad 65W AC Adapter with USB Hub
57Y4600



90W Ultraslim AC/DC Combo Adapter
41R4493



Lenovo® ThinkPad L412



Lenovo ThinkPad L412 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L412



Lenovo ThinkPad L412



Lenovo ThinkPad L412



Lenovo ThinkPad L412

ThinkPad® L412 4403 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Avail date
4403-33U	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg	None		Blue	Pro 64	May 10
4403-34U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	None	Finger	Blue	Pro 64	May 10
4403-69U	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg	None		Blue	Pro 64	Jul 10
4403-75U	i5-480M	2.66	2.93	2GB	14.0" HD	2.0M	320G 7200	11b/g/n	WWAN upg	None			Pro 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-480M or i5-520M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	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 via 800-426-7378
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None	
Dimensions ³ Weight ²	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg)	
Case color Case material Battery - type Battery - life ¹⁰	black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card 11b/g/n Intel 6200 ²⁶ WWAN upg	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable	
Modem Bluetooth™ Ethernet Intel AMT	None <i>Some:</i> Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection	
Audio support	None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available lenovo.com/thinkplus/warranty	

See footnotes for important warranty information

US model announced January 11, 2011; previous models on May 11 or July 6, 2010

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(DMD3-7) January 2011

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
4404-32U	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 64	May 10
4404-33U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg		Blue	6	Pro 64	May 10
4404-34U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	May 10
4404-35U	i5-540M	2.53	3.06	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	6	Pro 64	May 10
4404-4LU	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-540M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None	
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm 4-cell: from 4.92 lb (2.23kg); 6-cell: from 5.11 lb (2.32kg); 9-cell: from 5.45 lb (2.47kg) black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell 4-cell: up to 2.8 hr; 6-cell: up to 5.0 hr; 9-cell: up to 8.1 hr	Supports ThinkVantage® technologies
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	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 via 800-426-7378
PCIe Mini Card 11b/g/n Intel 6200 ²⁸ WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable None Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	ThinkPlus™. ²² 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip	Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US model announced July 6, 2010; previous models on May 11, 2010

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(DMD3-8) July 2010

ThinkPad® L412 4403 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Preload	Avail date
4403-58U	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg	None	None	Blue	Pro 64	Jun 10

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage Toolbox • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Discrete graphics	ATI™ Mobility Radeon™ HD 5145 graphics, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None	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 via 800-426-7378
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm 4-cell: from 5.09 lb (2.31kg); 6-cell: from 5.28 lb (2.40kg); 9-cell: from 5.62 lb (2.55kg) black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 9-cell 4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card Intel 6200 ²⁸ WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable None Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole	
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information
US model announced June 22, 2010

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(DMD3-9) June 2010

ThinkPad® L412 4404 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
4404-3GU	i3-370M	2.40		2GB	14.0" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg		Finger	Blue	9	Pro 64	Jun 10
4404-3HU	i3-370M	2.40		2GB	14.0" HD	2.0M	320G 7200	Intel 6200	Gobi 2000	AT&T ²³		Blue	9	Pro 64	Jun 10
4404-3JU	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg		Finger	Blue	9	Pro 64	Jun 10
4404-3KU	i3-350M	2.26		2GB	14.0" HD	2.0M	160G 7200	Intel 6200	WWAN upg			Blue	9	Pro 64	Jun 10
4404-3LU	i5-520M	2.40	2.93	2GB	14.0" HD	2.0M	320G 7200	Intel 6200	WWAN upg			Blue	9	Pro 64	Jun 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Windows Live™ Toolbar • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available														
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™														
Widescreen display Camera	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus														
Discrete graphics	ATI™ Mobility Radeon™ HD 5145 graphics , 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None														
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm 4-cell: from 5.09 lb (2.31kg); 6-cell: from 5.28 lb (2.40kg); 9-cell: from 5.62 lb (2.55kg) black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 9-cell 4-cell: up to 2.5 hr; 6-cell: up to 4.5 hr; 9-cell: up to 7.4 hr										Supports ThinkVantage® technologies				
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)										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 via 800-426-7378				
PCIe Mini Card Intel 6200 ²⁸ WWAN upg Gobi™ 2000	Two PCI Express Mini Card slots 11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider														
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T®, contract required with service provider None Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack														
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available										ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty				

See footnotes for important warranty information
US models announced June 22, 2010

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

SL410/510 500GB Disk SATA 3G/s (5400 rpm)	43N3422	ann	10/22/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann	01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann	01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB Port Replicator with Digital Video	45K1610	ann	07/28/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 ⁶¹	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 ⁶²	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - Mobile WS	433820U	ann	01/07/10
⁶¹ When docked, ThinkPad Mini Dock Series 3 (433710U) Audio ports are inactive, ThinkPad Audio ports are active.			
⁶² When docked, ThinkPad Mini Dock Plus Series 3 (433810U) eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.			

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
⁴⁴ Requires the <i>ThinkPad 90W AC Adapter</i> 40Y7659 or the adapter provided with the system.			

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
⁴⁵ Only compatible with the integrated graphics models.			
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com**Carrying Cases**

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08

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

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad L420



Lenovo ThinkPad L420 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L420



Lenovo ThinkPad L420



Lenovo ThinkPad L420



Lenovo ThinkPad L420

ThinkPad® L420 7854 (TopSeller)

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	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7854-34U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	Finger	Blue	9	Pro 64
7854-37U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7854-38U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	None		
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm		
Weight ²	4-cell: from 4.94 lb (2.24kg); 6-cell: from 5.14 lb (2.33kg); 9-cell: from 5.47 lb (2.48kg)		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell		
Battery - life ¹⁰	4-cell: up to 3.9 hr; 6-cell: up to 7.0 hr; 9-cell: up to 11.5 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	<i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	Realtek® RTL8111DL Gigabit Network Connection		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM		
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 Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378		
For compatible accessories, please go to O-L420 sheet;		
For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet		

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® L420 7856 (TopSeller)

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	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7856-34U	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	Finger	Blue	9	Pro 64
7856-37U	i5-2410M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7856-38U	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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		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 via 800-426-7378 For compatible accessories, please go to O-L420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	
Optical SATA disk	DVD burner, 12.7mm high, fixed, not removable, tray-in <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™			
mSATA™ SSD	None			
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass			
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch			
ThinkLight™	None			
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.2" x 1.26–1.42"; 344mm x 233mm x 32–36mm			
Weight ²	<i>4-cell:</i> from 4.94 lb (2.24kg); <i>6-cell:</i> from 5.14 lb (2.33kg); <i>9-cell:</i> from 5.47 lb (2.48kg)			
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic			
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell			
Battery - life ¹⁰	<i>4-cell:</i> up to 3.9 hr; <i>6-cell:</i> up to 7.0 hr; <i>9-cell:</i> up to 11.5 hr			
Chipset	Mobile Intel HM65 Express Chipset			
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)			
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2			
WWAN	Wireless WAN upgradable			
Modem	None			
Bluetooth™	Bluetooth 3.0 wireless, LED indicator			
Ethernet	Realtek® RTL8111DL Gigabit Network Connection			
Intel AMT	None			
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
US models announced February 22, 2011

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3 ⁶³	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 ^{61, 63}	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 ^{62, 63}	433810U	ann	06/23/09

⁶¹ When docked, ThinkPad Mini Dock Series 3 (433710U) Audio ports are inactive, ThinkPad Audio ports are active.

⁶² When docked, ThinkPad Mini Dock Plus Series 3 (433810U) eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.

⁶³ Not supported on ThinkPad L421 systems.

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06
ExpressCard Gemplus Smart Card Reader ⁵⁷	41N3043	ann	06/27/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
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⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
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ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
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90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09
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More info at www.lenovo.com/support/poweradapters

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
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• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09
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More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Wenger Backpack for Lenovo	57Y4271	ann	01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann	01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann	01/07/10

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad L512



Lenovo ThinkPad L512 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L512



Lenovo ThinkPad L512



Lenovo ThinkPad L512



Lenovo ThinkPad L512

ThinkPad® L512 4444 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
4444-32U	i3-350M	2.26		2GB	15.6" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 32	May 10
4444-33U	i3-350M	2.26		2GB	15.6" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg		Blue	6	Pro 64	May 10
4444-34U	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	6	Pro 64	May 10
4444-4EU	i3-370M	2.40		2GB	15.6" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 64	Jul 10
4444-4FU	i3-370M	2.40		2GB	15.6" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	6	Pro 64	Jul 10
4444-4VU	i5-560M	2.66	3.20	2GB	15.6" HD	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	6	Pro 64	Sep 10

• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)			
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available													
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB⁸ (7200 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™													
Widescreen display Camera	15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus													
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)										Supports ThinkVantage® technologies			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch None										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 via 800-426-7378			
Dimensions ³ Weight ² Case color Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm 4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg) black Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell 4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr										ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976			
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card 11b/g/n Intel 6200 ²⁸ WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable None Bluetooth 2.1 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole													
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty			

See footnotes for important warranty information

US model announced September 28, 2010; previous models on May 11 or July 6, 2010

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(RUB3-5) October 2010

ThinkPad® L512 4447 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
4447-32U	i3-350M	2.26		2GB	15.6" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 32	May 10
4447-33U	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	160G 7200	Intel 6200 ²⁸	WWAN upg	Finger	Blue	6	Pro 64	May 10
4447-3EU	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	6	Pro 32	Jul 10
4447-3HU	i3-370M	2.40		2GB	15.6" HD	2.0M	160G 7200	11b/g/n	WWAN upg		Blue	6	Pro 64	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)			
Memory	2GB std / 8GB max ⁷ / PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available													
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™													
Widescreen display	15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus													
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass													
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch													
ThinkLight™	None													
Dimensions ³	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm													
Weight ²	4-cell: from 5.48 lb (2.49kg); 6-cell: from 5.67 lb (2.57kg); 9-cell: from 6.01 lb (2.73kg)													
Case color	black													
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic													
Battery - type	Lithium Ion 6-cell													
Battery - life ¹⁰	4-cell: up to 2.8 hr; 6-cell: up to 4.9 hr; 9-cell: up to 8.0 hr													
Chipset	Mobile Intel HM55 Express Chipset													
ExpressCard/34	One slot (ExpressCard/34)													
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)													
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)													
PCIe Mini Card	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2													
11b/g/n	Wireless WAN upgradable													
Intel 6200 ²⁸	None													
WWAN upg	None													
Modem	Bluetooth 2.1 wireless, LED indicator													
Bluetooth™	Realtek® RTL8111DL Gigabit Network Connection													
Ethernet	None													
Intel AMT	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / digital mic, mic mute button, combo audio/mic jack													
Audio support	Power-on password, hard disk password, supervisor password, security keyhole													
Security	Trusted Platform Module, TCG 1.2-compliant													
Security chip	<i>Some:</i> UPEK fingerprint reader on palm rest, swipe sensor, supports the security chip													
Fingerprint reader														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

See footnotes for important warranty information

US models announced July 6, 2010; previous models on May 11, 2010

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(RUB3-6) July 2010

Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

SL410/510 500GB Disk SATA 3G/s (5400 rpm)	43N3422	ann	10/22/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann	01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann	01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB Port Replicator with Digital Video	45K1610	ann	07/28/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 ⁶¹	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 ⁶²	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - Mobile WS	433820U	ann	01/07/10
⁶¹ When docked, ThinkPad Mini Dock Series 3 (433710U) Audio ports are inactive, ThinkPad Audio ports are active.			
⁶² When docked, ThinkPad Mini Dock Plus Series 3 (433810U) eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.			

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
⁴⁴ Requires the <i>ThinkPad 90W AC Adapter</i> 40Y7659 or the adapter provided with the system.			

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
⁴⁵ Only compatible with the integrated graphics models.			
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com**Carrying Cases**

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08

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

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09
⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.			

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad L520



Lenovo ThinkPad L520 with
ThinkPad Battery 55++ (9-cell)
57Y4186



Lenovo ThinkPad L520



Lenovo ThinkPad L520



Lenovo ThinkPad L520



Lenovo ThinkPad L520

ThinkPad® L520 7859 (TopSeller)

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	Finger print reader	Blue-tooth	Battery cells	Preload
7859-35U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-36U	i5-2410M	4GBx1	15.6" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7859-38U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard TrackPoint® Touch pad ThinkLight™	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch None		
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>15.6W" (WxDxH):</i> 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm <i>4-cell:</i> from 5.54 lb (2.51kg); <i>6-cell:</i> from 5.75 lb (2.61kg); <i>9-cell:</i> from 6.07 lb (2.75kg) Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell, 6-cell, or 9-cell <i>4-cell:</i> up to 3.6 hr; <i>6-cell:</i> up to 6.6 hr; <i>9-cell:</i> up to 10.8 hr		
Chipset ExpressCard Multicard Reader Ports	Mobile Intel HM65 Express Chipset One slot (ExpressCard/34, ExpressCard/54) 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		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 via 800-426-7378
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		
			For compatible accessories, please go to O-L520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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(RUB4-1) February 2011

ThinkPad® L520 7860 (TopSeller)

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	Finger print reader	Blue-tooth	Bat-tery cells	Preload
7860-35U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7860-36U	i5-2410M	4GBx1	15.6" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64
7860-38U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	TP 11b/g/n	WWAN upg	Finger	Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream business performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high, removable, upgradable <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Active Protection System™		
mSATA™ SSD	None		
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Integrated graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass		
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	None		
Dimensions ³	15.6W" (WxDxH): 15" x 9.7" x 1.26–1.42"; 380mm x 247mm x 32–36mm		
Weight ²	4-cell: from 5.54 lb (2.51kg); 6-cell: from 5.75 lb (2.61kg); 9-cell: from 6.07 lb (2.75kg)		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell		
Battery - life ¹⁰	4-cell: up to 3.6 hr; 6-cell: up to 6.6 hr; 9-cell: up to 10.8 hr		
Chipset	Mobile Intel HM65 Express Chipset		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor ¹¹ (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	Realtek® RTL8111DL Gigabit Network Connection		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Realtek ALC269Q codec / stereo speakers, 1.5 watt x 2 / volume up, down, mute buttons / monaural digital mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, supports the TPM		
Limited warranty ¹²	3-years/1-yr battery - 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 via 800-426-7378	
For compatible accessories, please go to O-L520 sheet;	
For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US models announced February 22, 2011

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3 ⁶¹	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 ⁶²	433810U	ann	06/23/09

⁶¹ When docked, ThinkPad Mini Dock Series 3 (433710U) Audio ports are inactive, ThinkPad Audio ports are active.

⁶² When docked, ThinkPad Mini Dock Plus Series 3 (433810U) eSATA & Audio ports are inactive, ThinkPad eSATA & Audio ports are active.

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06
ExpressCard Gemplus Smart Card Reader ⁵⁷	41N3043	ann	06/27/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
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⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
Wenger Backpack for Lenovo	57Y4271	ann	01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann	01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann	01/07/10

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad T410



Lenovo ThinkPad T410



Lenovo ThinkPad T410



Lenovo ThinkPad T410



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



ThinkPad Mini Dock Series 3
433710U

ThinkPad® T410 2516 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Max Base (GHz)	turbo (GHz)	Memory (MHz)	Wide-screen display	Cam-era	Disk SATA GB ⁸	rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery Intel vPro	Preload	Avail date
2516-ADU	i5-520M	2.40	2.93	2GBx1 1066	14.1" WXGA	2.0M	250G	5400	11b/g/n		None	None	6	No	Pro 32 Jan 10
2516-DCU	i5-560M	2.66	3.20	2GBx1 1066	14.1" WXGA	2.0M	320G	7200	11b/g/n		None	None	6	No	Pro 64 Sep 10
2516-F9U	i5-480M	2.66	2.93	4GBx1 1333	14.1" WXGA	2.0M	320G	7200	Intel 1000	WWAN upg	None	None	6	No	Pro 64 Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-480M, i5-520M, or i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64				
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)				
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB⁸ (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™										Supports ThinkVantage® technologies				
Widescreen display	14.1" (358mm) WXGA (1280x800) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio										65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Camera	Camera on top of screen, 2.0-megapixel, fixed focus										ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968				
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)										ThinkPlus 2-year LOR 9x5 NBD 45K5969				
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys										ThinkPlus 3-year LOR 9x5 NBD 45K5970				
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass										ThinkPlus 4-year LOR 9x5 NBD 45K5973				
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch										ThinkPlus 5-year LOR 9x5 NBD 45K5975				
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions										ThinkPlus 2-year P&L P/U Depot 45K5971				
Dimensions ³	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm										ThinkPlus 3-year P&L P/U Depot 45K5972				
Weight ²	6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)										ThinkPlus 4-year P&L P/U Depot 45K5974				
Case color	Black										ThinkPlus 5-year P&L P/U Depot 45K5976				
Case material	<i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic										Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty				
Battery - type	Lithium Ion 6-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom														
Battery - life ¹⁰	6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice battery: up to 22 hr														
Chipset	Mobile Intel QM57 Express Chipset														
ExpressCard/34	One slot (ExpressCard/34)														
Smart Card read	None														
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)														
Ports	Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> Wireless WAN upgradable														
11b/g/n															
Intel 1000															
WWAN upg															
Modem	56K V.92 ⁶ modem														
Bluetooth™	None														
Ethernet	Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	None														
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available														

See footnotes for important warranty information

US model announced January 11, 2011; previous models on January 7 or September 28, 2010

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(NZ1-1) January 2011

ThinkPad® T410 2518 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Max Base turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Bat- Blue- tooth	Intel terys vPro	Preload	Avail date
2518-C2U	i5-520M	2.40	2.93	2GB	14.1" WXGA	2.0M	250G 5400	Intel 6200 ²⁸	Gobi 2000	AT&T ²³	Finger	Blue 6 vPro	Pro 32 Jan 10	
2518-F3U	i5-520M	2.40	2.93	2GB	14.1" WXGA	2.0M	250G 5400	11b/g/n	WWAN upg		Blue 6	Pro 32 Jan 10		
2518-F6U	i5-520M	2.40	2.93	4GB	14.1" WXGA+	2.0M	80G SSD	Intel 6200	WWAN upg	Finger	Blue 9 vPro	Pro 32 Jan 10		
2518-4HU	i5-520M	2.40	2.93	2GB	14.1" WXGA	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue 6 vPro	Pro 32 Mar 10		
✂ 2518-QBU	i5-540M	2.53	3.06	4GB	14.1" WXGA	2.0M	160G SSD	Intel 6200	WWAN upg	Finger	6 vPro	Pro 64 Jul 10		
🔪 2518-AHU	i5-560M	2.66	3.20	2GB	14.1" WXGA	2.0M	320G 7200	Intel 6200	WWAN upg		Blue 6 vPro	Pro 64 Sep 10		

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> 80GB⁸ or 160GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high <i>Some:</i> 250GB (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive	
Widescreen display	<i>Some:</i> 14.1" (358mm) WXGA (1280x800) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case color Case material	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm <i>6-cell:</i> starting at 5.0 lb (2.27kg); <i>9-cell:</i> starting at 5.35 lb (2.43kg) Black <i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell , supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 6.6 hr; <i>9-cell:</i> up to 11 hr; <i>9-cell plus Slice battery:</i> up to 22 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
PCIe Mini Card 11b/g/n Intel 6200 ²⁸ WWAN upg Gobi™ 2000	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider <i>Some:</i> AT&T®, contract required with service provider	
Carrier Modem Bluetooth™ Ethernet	56K V.92 ⁶ modem <i>Some:</i> Bluetooth 2.1 wireless, LED indicator <i>Non-vPro model:</i> Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 <i>vPro model:</i> Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT)	
Intel AMT Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available	

See footnotes for important warranty information

US model announced September 28, 2010; previous models on January 7, March 2, or July 6, 2010

US model withdrawn effective February 2011

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(NZ1-3) October 2010

ThinkPad® T410 2518 (TopSeller) - Windows 7 (January 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Max Base turbo (GHz)	Memory (MHz)	Wide-screen display	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Battery cells	Power Adapter (watt)	Intel vPro	Preload	Avail date
2518-BGU	i7-620M	2.66 3.33	4GBx1 1333	14.1" WXGA+	500G 7200	Intel 1000			9	90W		Pro 64	Jan 11
2518-BJU	i5-560M	2.66 3.20	2GBx1 1066	14.1" WXGA+	320G 7200	WiMAX	Gobi 2000	selectable	6	65W	vPro	Pro 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5 processor i5-560M with dual-core , or Intel Core i7 processor i7-620M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; <i>i5-560M</i> : 3MB cache; <i>i7-620M</i> : 4MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB ⁸ (7200 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)</i>	
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case color Case material	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm 6-cell : starting at 5.0 lb (2.27kg); 9-cell : starting at 5.35 lb (2.43kg) Black <i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell , supports optional Slice battery (57Y4545) as 2nd battery 6-cell : up to 6.6 hr; 9-cell : up to 11 hr; 9-cell plus Slice battery : up to 22 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
PCIe Mini Card Intel 1000 WiMAX Gobi™ 2000 Carrier	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider <i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem Bluetooth™ Ethernet Intel AMT Audio support	56K V.92 ⁶ modem Bluetooth 2.1 wireless, LED indicator <i>Non-vPro model:</i> Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 <i>vPro model:</i> Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	ThinkPlus™. ²² 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
 US models announced January 11, 2011

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 (NZ1-19) February 2011

ThinkPad® T410 2518 (Optimus) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Intel vPro	Preload	Avail date
2518-AJU	i5-560M	2.66	3.20	2GB	14.1" WXGA+	2.0M	320G 7200	Intel 6200 ²⁸	WWAN upg	None	Blue	vPro	Pro 64	Sep 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus	
Optimus graphics ³⁷	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA Quadro® NVS3100M , PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint®	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
Touchpad	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
ThinkLight™	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm	
Weight ²	<i>6-cell:</i> starting at 5.0 lb (2.27kg); <i>9-cell:</i> starting at 5.35 lb (2.43kg)	
Case color	Black	
Case material	<i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type	Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom	
Battery - life ¹⁰	<i>6-cell:</i> up to 6.5 hr; <i>9-cell:</i> up to 10.9 hr; <i>9-cell plus Slice battery:</i> up to 21.9 hr	
Chipset	Mobile Intel QM57 Express Chipset	
ExpressCard/34	One slot (ExpressCard/34)	
Smart Card read	None	
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)	
Ports	Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
PCIe Mini Card	Two PCI Express Mini Card slots	
Intel 6200 ²⁸	11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2	
WWAN upg	Wireless WAN upgradable	
Modem	56K V.92 ⁶ modem	
Bluetooth™	Bluetooth 2.1 wireless, LED indicator	
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

		Supports ThinkVantage® technologies
		90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
		ThinkPlus™.22 3-year LOR²⁴ 9x5 NBD 45K6021
		ThinkPlus 4-year LOR 9x5 NBD 45K6022
		ThinkPlus 5-year LOR 9x5 NBD 45K6024
		ThinkPlus 4-year P&L P/U Depot 45K6023
		ThinkPlus 5-year P&L P/U Depot 45K6025
		Post-warranty annual maintenance agreements at **lenovo.com/thinkplus/warranty**

See footnotes for important warranty information
US model announced September 28, 2010

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(NZ1-17) December 2010

ThinkPad® T410 2516 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	CCFL or LED	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Avail date
2516-AEU	i5-520M	2.40	2.93	2GB	14.1" WXGA	LED	2.0M	320G 7200	11b/g/n	None	None	Blue	9	No	Pro 32	Jan 10

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 32 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW) Supports ThinkVantage® technologies
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™		
Widescreen display	14.1" (358mm) WXGA (1280x800) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Discrete graphics	NVIDIA® Quadro® NVS3100M , PCI Express® x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm		
Weight ²	6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)		
Case color	Black		
Case material	<i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type	Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom		
Battery - life ¹⁰	6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Slice battery: up to 16.6 hr		
Chipset	Mobile Intel QM57 Express Chipset		
ExpressCard/34	One slot (ExpressCard/34)		
Smart Card read	None		
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)		
Ports	Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		
PCIe Mini Card	Two PCI Express Mini Card slots		
11b/g/n	11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card		
WWAN upg	None		
Modem	56K V.92 ⁶ modem		
Bluetooth™	Bluetooth 2.1 wireless, LED indicator		
Ethernet	Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

			ThinkPlus™.²² 1-year LOR²⁴ 9x5 NBD 45K5968
			ThinkPlus 2-year LOR 9x5 NBD 45K5969
			ThinkPlus 3-year LOR 9x5 NBD 45K5970
			ThinkPlus 4-year LOR 9x5 NBD 45K5973
			ThinkPlus 5-year LOR 9x5 NBD 45K5975
			ThinkPlus 2-year P&L P/U Depot 45K5971
			ThinkPlus 3-year P&L P/U Depot 45K5972
			ThinkPlus 4-year P&L P/U Depot 45K5974
			ThinkPlus 5-year P&L P/U Depot 45K5976
			Post-warranty annual maintenance agreements at **lenovo.com/thinkplus/warranty**

See footnotes for important warranty information
US model announced January 7, 2010

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(NZ1-4) January 2010

ThinkPad® T410 2518 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Max Base (GHz)	turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Intel vPro	Preload	Avail date
2518-C4U	i5-520M	2.40	2.93	2GB	14.1" WXGA+	2.0M	320G 7200	11b/g/n	Gobi 2000	Verizon ¹⁶	Fing	Blue		Pro 32	Jan 10
2518-F5U	i5-540M	2.53	3.06	4GB	14.1" WXGA+	2.0M	500G 7200	WiMAX	WWAN upg		Fing	Blue	vPro	Pro 32	Jan 10
2518-4KU	i5-520M	2.40	2.93	4GB	14.1" WXGA+	2.0M	320G 7200	Intel 6200 ²⁸	Gobi 2000	Verizon	Fing	Blue	vPro	Pro 64	Mar 10
2518-4LU	i5-540M	2.53	3.06	4GB	14.1" WXGA+	2.0M	320G 7200	WiMAX	WWAN upg		Fing	Blue	vPro	Pro 64	Mar 10
≧ 2518-QCU	i5-540M	2.53	3.06	4GB	14.1" WXGA+	2.0M	160G SSD	Intel 6200	WWAN upg			Blue	vPro	Pro 64	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> 160GB⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high <i>Some:</i> 320GB (7200 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive	
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Discrete graphics	NVIDIA® Quadro® NVS3100M , PCI Express® x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)	
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm	
Weight ²	6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)	
Case color	Black	
Case material	<i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type	Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom	
Battery - life ¹⁰	6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Slice battery: up to 16.6 hr	
Chipset	Mobile Intel QM57 Express Chipset	
ExpressCard/34	One slot (ExpressCard/34)	
Smart Card read	None	
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)	
Ports	Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
PCIe Mini Card	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2 <i>Some:</i> 11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX	
WWAN upg	<i>Some:</i> Wireless WAN upgradable	
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider	
Carrier	<i>Some:</i> Verizon®, contract required with service provider	
Modem	56K V.92 ⁶ modem	
Bluetooth™	Bluetooth 2.1 wireless, LED indicator	
Ethernet	<i>Non-vPro model:</i> Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 <i>vPro model:</i> Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	Supports ThinkVantage® technologies
		90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
		ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 45K6021
		ThinkPlus 4-year LOR 9x5 NBD 45K6022
		ThinkPlus 5-year LOR 9x5 NBD 45K6024
		ThinkPlus 4-year P&L P/U Depot 45K6023
		ThinkPlus 5-year P&L P/U Depot 45K6025
		Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US model announced July 6, 2010; previous models on January 7 or March 2, 2010

US model withdrawn effective February 2011

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(NZ1-6) July 2010

ThinkPad® T410i 2516 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Battery Intel cells vPro	Preload	Avail date
2516-AQU	i3-330M	2.13	2GB	14.1" WXGA	2.0M	250G 5400	Intel 1000			None	None	6	No	Pro 32 Feb 10
2516-72U	i3-370M	2.40	2GB	14.1" WXGA	2.0M	250G 5400	Intel 1000			None	None	6	No	Pro 64 Jul 10
2516-73U	i3-370M	2.40	2GB	14.1" WXGA	2.0M	320G 7200	Intel 1000			None	None	6	No	Pro 64 Jul 10
2516-74U	i3-370M	2.40	2GB	14.1" WXGA	2.0M	320G 7200	Intel 1000	Gobi 2000	selectable	None	None	6	No	Pro 64 Jul 10
2516-FBU	i3-390M	2.66	2GB	14.1" WXGA	2.0M	320G 7200	Intel 1000	WWAN upg		None	None	6	No	Pro 64 Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i3 processor i3-330M, i3-370M, or i3-390M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64			
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)			
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB⁸ (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™													
Widescreen display	14.1" (358mm) WXGA (1280x800) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus													
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³ Weight ² Case color Case material	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm 6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg) Black <i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic										Supports ThinkVantage® technologies			
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.6 hr; 9-cell: up to 11 hr; 9-cell plus Slice battery: up to 22 hr										65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378			
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)													
PCIe Mini Card Intel 1000 WWAN upg Gobi™ 2000	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS										ThinkPlus™.22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975			
Carrier	<i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider										ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976			
Modem Bluetooth™ Ethernet Intel AMT Audio support	56K V.92 ⁹ modem None Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack													
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty			

See footnotes for important warranty information

US model announced January 11, 2011; previous models on February 2 or July 6, 2010

US model withdrawn effective July 31, 2010

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(NZ1i-2) January 2011

ThinkPad® T410i 2518 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB	s rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Preload	Avail date
2518-JWU	i3-370M	2.40	2GB	14.1" WXGA	2.0M	320G	7200	Intel 1000	Gobi 2000	selectable		Blue	9	No	Pro 64	Jul 10
2518-JXU	i3-370M	2.40	2GB	14.1" WXGA	2.0M	250G	5400	Intel 1000	WWAN upg		Finger		9	No	Pro 64	Jul 10
2518-MHU	i3-370M	2.40	2GB	14.1" WXGA	2.0M	250G	5400	Intel 1000			Finger		9	No	Pro 64	Jul 10

- *These small and medium business (SMB) models are part of the US TopSeller™ Program*
- *These models have a depot repair service 3-year limited warranty*
- *These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i3 processor i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB ® (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	14.1" (358mm) WXGA (1280x800) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case color Case material	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm <i>6-cell:</i> starting at 5.0 lb (2.27kg); <i>9-cell:</i> starting at 5.35 lb (2.43kg) Black <i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 6.6 hr; <i>9-cell:</i> up to 11 hr; <i>9-cell plus Slice battery:</i> up to 22 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
PCIe Mini Card Intel 1000 WWAN upg Gobi™ 2000 Carrier	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS <i>Some:</i> User selectable at first boot, AT&T®, Verizon®, or Sprint®, contract required with service provider	
Modem Bluetooth™ Ethernet Intel AMT Audio support	56K V.92 ⁹ modem <i>Some:</i> Bluetooth 2.1 wireless, LED indicator Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies

65-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378

ThinkPlus™.²² 3-year LOR²⁴ 9x5 NBD 45K6021
ThinkPlus 4-year LOR 9x5 NBD 45K6022
ThinkPlus 5-year LOR 9x5 NBD 45K6024
ThinkPlus 4-year P&L P/U Depot 45K6023
ThinkPlus 5-year P&L P/U Depot 45K6025
Post-warranty annual maintenance agreements at
lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced July 6, 2010

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ThinkPad® T410i 2518 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	CCFL or LED	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Blue/Fing	Intel vPro	Preload	Avail date
2518-JYU	i3-370M	2.40	2GB	14.1" WXGA+	LED	2.0M	320G 7200	Intel 6200 ²⁸	WWAN upg	None	Yes	No	Pro 64	Jul 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i3 processor i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64			
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)			
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports 2nd disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™													
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 220 nits, 16:10 aspect ratio, 300:1 contrast ratio													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus													
Discrete graphics	NVIDIA® Quadro® NVS3100M , PCI Express® x16, 256MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass													
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch													
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³	14.1W" (WxDxH): 13.2" x 9.4" x 1.1–1.3"; 335.5 x 239mm x 27.6–31.9mm													
Weight ²	6-cell: starting at 5.0 lb (2.27kg); 9-cell: starting at 5.35 lb (2.43kg)													
Case color	Black													
Case material	<i>Top:</i> High Elasticity PolyCarbonate (HEPC); <i>Bottom:</i> Carbon-Fiber Reinforced Plastic													
Battery - type	Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom													
Battery - life ¹⁰	6-cell: up to 5.0 hr; 9-cell: up to 8.3 hr; 9-cell plus Slice battery: up to 16.6 hr													
Chipset	Mobile Intel QM57 Express Chipset													
ExpressCard/34	One slot (ExpressCard/34)													
Smart Card read	None													
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)													
Ports	Four USB 2.0 (one powered), eSATA port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)													
PCIe Mini Card	Two PCI Express Mini Card slots													
Intel 6200 ²⁸	11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2													
WWAN upg	Wireless WAN upgradable													
Modem	56K V.92 ⁶ modem													
Bluetooth™	Bluetooth 2.1 wireless, LED indicator													
Ethernet	Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	Trusted Platform Module, TCG 1.2-compliant													
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip													
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available													

See footnotes for important warranty information
US model announced July 6, 2010

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Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann	06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann	06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann	06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann	06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann	06/23/09

Ultrabay Slim 9.5mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann	08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann	06/23/09
Ultrabay Slim Blu-ray Burner II (SATA)	43N3230	ann	06/23/09

Storage and removable storage

160GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	41N5737	ann	10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43R8152	ann	01/15/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3410	ann	01/20/09
320GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43N3403	ann	08/05/08
320GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3411	ann	01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3423	ann	01/07/10

⁴¹ Can be used as the main HDD or

with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)	43N3406	ann	08/26/08
256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover)	43N3417	ann	06/23/09
ThinkPad 160GB Intel X25-M SSD ⁴¹	43N3435	ann	06/22/10

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann	01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann	01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB Port Replicator with Digital Video	45K1610	ann	07/28/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 - Mobile WS	433820U	ann	01/07/10

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06
ThinkPad T400/T410/R400 Privacy Filter	43R2472	ann	08/05/08

Note: ThinkPad T400/T410/R400 Privacy Filter (43R2472) is not supported on T400s or T410s.

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

⁴³ To be used along with system battery for all-day computing;

attaches under ThinkPad using docking connector

(not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
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⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
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⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
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• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09
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More information at www.lenovopowertips.com**Carrying Cases**

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Wenger Backpack for Lenovo	57Y4271	ann	01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann	01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann	01/07/10

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

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad T420



Lenovo ThinkPad T420



Lenovo ThinkPad T420



Lenovo ThinkPad T420



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



ThinkPad Mini Dock Series 3
433710U

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel AMT	Intel vPro	Preload
4178-6UU	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg		1394	Finger	Blue	6	iAMT	vPro	Pro 64
4178-9RU	i5-2410M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Modem			Blue	6			Pro 64
4178-59U	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg				Blue	6	iAMT	vPro	Pro 64
4178-57U	i5-2540M	2GBx2	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg				Blue	6	iAMT	vPro	Pro 64
4178-56U	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg				Blue	6	iAMT	vPro	Pro 64
• These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a depot repair service 3-year limited warranty • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <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, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio														
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³ Weight ² Case material	14.0W" (WxDxH): 13.4" x 9.05" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.13 lb (1.87kg); <i>6-cell:</i> from 4.31 lb (1.96kg); <i>9-cell:</i> from 4.70 lb (2.13kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic														
Battery - type Battery - life ¹⁰	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr														
Chipset ExpressCard Smart Card read Multicard reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 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, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card WLAN ⁴ WWAN Modem IEEE 1394 Bluetooth™ Ethernet	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable <i>Some:</i> 56K V.92 ⁶ modem <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 3.0 wireless, LED indicator <i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT)									Supports ThinkVantage® technologies					
Intel AMT Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole									65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378					
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip									For compatible accessories, please go to O-T420 sheet; For ThinkPlus™ ²² service upgrade options, please go to S-TA sheet					
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for more detailed information
 US models announced February 22, 2011

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ThinkPad® T420 4178 (Optimus) - TopSeller

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	Modem	IEEE 1394	Finger print reader	Blue-tooth	Battery cells	Intel vPro	Preload
4178-6WU	i7-2620M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	1394	Finger	Blue	9	vPro	Pro 64
4178-6VU	i5-2520M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	Blue	9	vPro	Pro 64
4178-58U	i5-2520M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	None			Blue	9	vPro	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <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, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® NVS4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.4" x 9.05" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight ²	<i>4-cell:</i> from 4.13 lb (1.87kg); <i>6-cell:</i> from 4.31 lb (1.96kg); <i>9-cell:</i> from 4.70 lb (2.13kg)	
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery	
Battery - life ¹⁰	<i>6-cell:</i> up to 9.0 hr; <i>9-cell:</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30.0 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card read	None	
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
WWAN	Wireless WAN upgradable	
Modem	None	
IEEE 1394	<i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies	
90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378	
For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® T420i 4177 (TopSeller)

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	Modem	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4177-QGU	i3-2310M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	Modem	None	None	None	6	None	Pro 64

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Premiere performance; two spindles Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <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, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.4" x 9.05" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm		
Weight ²	4-cell: from 4.13 lb (1.87kg); 6-cell: from 4.31 lb (1.96kg); 9-cell: from 4.70 lb (2.13kg)		
Case material	Display cover: Carbon-fiber / Glass-fiber hybrid; Bottom: Carbon-Fiber Reinforced Plastic		
Battery - type	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery		
Battery - life ¹⁰	6-cell: up to 9.0 hr; 9-cell: up to 15.0 hr; 9-cell plus Slice battery: up to 30.0 hr		
Chipset	Mobile Intel QM67 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card read	None		
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
WWAN	Wireless WAN upgradable		
Modem	56K V.92 ⁶ modem		
IEEE 1394	None		
Bluetooth™	None		
Ethernet	Non-vPro model: Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 vPro model: Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		
Supports ThinkVantage® technologies			
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378			
For compatible accessories, please go to O-T420 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet			

See footnotes for more detailed information
US model announced March 1, 2011

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ThinkPad® T420 Accessories

Personal Systems Reference (PSREF)

Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD Burner Ultrabay Enhanced II SATA	43N3294	ann	01/07/10

Storage and removable storage

256GB 1.8" FDE Solid State Drive ⁴¹	43N3417	ann	06/23/09
160GB 2.5" Intel X25-M Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0Gb/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 (170W)	433830U	ann	02/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Note: ThinkPad T400/T410/R400 Privacy Filter (43R2472) is not supported on T420 or T420s.

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
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⁴⁴ Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
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⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
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• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09
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More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
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Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08
Wenger Backpack for Lenovo	57Y4271	ann	01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann	01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann	01/07/10

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad T410s



Lenovo ThinkPad T410s



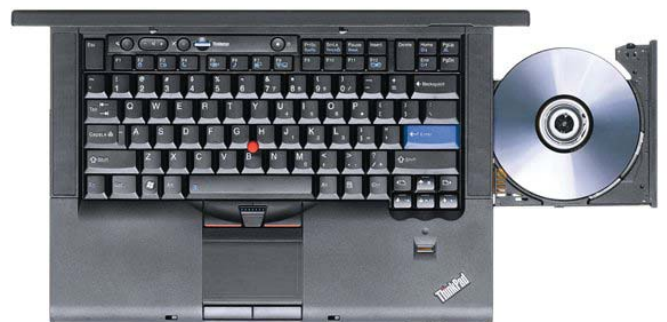
ThinkPad Battery 42 (3-cell, bay)
57Y4536



ThinkPad Battery 59+ (6-cell)
51J0497



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



Lenovo ThinkPad T410s

ThinkPad® T410s 2901 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Max Base turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Card slot	Intel vPro Preload	Avail date
2901-ATU	i5-560M	2.66 3.20	2GB	14.1" WXGA+	2.0M	250G 5400	11b/g/n	WWAN upg	None	Blue	Express	No Pro 64	Sep 10

- *This small and medium business (SMB) model is part of the US TopSeller™ Program*

Positioning Processor	<i>Premiere performance and ultraportability; two spindles</i> Intel® Core™ i5 processor i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Client Security Solution™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Presentation Director • ThinkVantage Productivity Center • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 250GB ⁸ (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive, Active Protection System™	
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)	Supports ThinkVantage® technologies
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Dimensions ³	14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm	ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968
Weight ²	6-cell: starting at 3.94 lb (1.79kg)	ThinkPlus 2-year LOR 9x5 NBD 45K5969
Case material	<i>Display cover:</i> Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); <i>Base:</i> Magnesium alloy	ThinkPlus 3-year LOR 9x5 NBD 45K5970
Battery - type	Lithium Ion 6-cell , supports unique 2nd battery in Ultrabay Slim	ThinkPlus 4-year LOR 9x5 NBD 45K5973
Battery - life ¹⁰	6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr	ThinkPlus 5-year LOR 9x5 NBD 45K5975
Chipset	Mobile Intel QS57 Express Chipset	ThinkPlus 2-year P&L P/U Depot 45K5971
ExpressCard/34	One slot (ExpressCard/34)	ThinkPlus 3-year P&L P/U Depot 45K5972
Multicard Reader	None	ThinkPlus 4-year P&L P/U Depot 45K5974
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	ThinkPlus 5-year P&L P/U Depot 45K5976
PCIe Mini Card	Two PCI Express Mini Card slots	Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
11b/g/n	11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card	
WWAN upg	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 2.1 wireless, LED indicator	
Ethernet	Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information
US model announced September 28, 2010

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(SN2-11) October 2010

ThinkPad® T410s 2904 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Card slot	Power Adapter (watt)	Intel vPro	Preload	Avail date
2904-FZU	i5-520M	2.40	2.93	4GB	14.1" WXGA+	128G SSD	Intel 6200 ²⁸	WWAN upg	Finger	Express	65W	vPro	Pro 64	Mar 10
2904-GGU	i5-520M	2.40	2.93	2GB	14.1" WXGA+	250G 5400	Intel 6200	WWAN upg		Express	90W	vPro	Pro 64	May 10
2904-HCU	i5-560M	2.66	3.20	4GB	14.1" WXGA+	128G SSD	Intel 6200	WWAN upg		Express	65W	vPro	Pro 64	Sep 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5 processor i5-520M or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available		
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> 128GB ⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high <i>Some:</i> 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive		
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 300:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm		
Weight ²	6-cell: starting at 3.94 lb (1.79kg)		
Case material	<i>Display cover:</i> Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); <i>Base:</i> Magnesium alloy		
Battery - type	Lithium Ion 6-cell , supports unique 2nd battery in Ultrabay Slim		
Battery - life ¹⁰	6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr		
Chipset	Mobile Intel QS57 Express Chipset		
ExpressCard/34	One slot (ExpressCard/34)		
Multicard Reader	None		
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
Intel 6200 ²⁸	11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2		
WWAN upg	Wireless WAN upgradable		
Modem	None		
Bluetooth™	Bluetooth 2.1 wireless, LED indicator		
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

			Supports ThinkVantage® technologies
			65-watt or 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378
			ThinkPlus™, ²² 3-year LOR²⁴ 9x5 NBD 45K6021
			ThinkPlus 4-year LOR 9x5 NBD 45K6022
			ThinkPlus 5-year LOR 9x5 NBD 45K6024
			ThinkPlus 4-year P&L P/U Depot 45K6023
			ThinkPlus 5-year P&L P/U Depot 45K6025
			Post-warranty annual maintenance agreements at **lenovo.com/thinkplus/warranty**

See footnotes for important warranty information

US model announced September 28, 2010; previous models on March 2 or May 4, 2010

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(SN2-7) October 2010

ThinkPad® T410s 2904 (Switchable) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Card slot	Intel vPro	Preload	Avail date
2904-G2U	i5-520M	2.40	2.93	4GB	14.1" WXGA+	2.0M	128G SSD	Intel 6200 ²⁸	WWAN upg	Finger	Blue	3-in-1	vPro	Pro 64	Mar 10
2904-GEU	i5-520M	2.40	2.93	2GB	14.1" WXGA+	2.0M	250G 5400	Intel 6200	WWAN upg		Blue	3-in-1	vPro	Pro 64	May 10
2904-GFU	i5-540M	2.53	3.06	2GB	14.1" WXGA+	2.0M	128G SSD	Intel 6200	WWAN upg		Blue	3-in-1	vPro	Pro 64	May 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i5 processor i5-520M or i5-540M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> 128GB ⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high <i>Some:</i> 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive	
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 300:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus	
Switchable graphics	Dynamic switching between discrete and integrated graphics (user selectable), Intel HD Graphics in processor, and NVIDIA® Quadro® NVS3100M , PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2048x1536 (VGA) @75Hz(integrated) or 85Hz(discrete); 1920x1200@60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP) @60Hz	
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm	Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 ThinkPlus™. ²² 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Weight ²	6-cell: starting at 3.94 lb (1.79kg)	
Case material	<i>Display cover:</i> Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); <i>Base:</i> Magnesium alloy	
Battery - type	Lithium Ion 6-cell , supports unique 2nd battery in Ultrabay Slim	
Battery - life ¹⁰	6-cell: up to 4.8 hr; 6-cell plus Ultrabay battery: up to 7.9 hr	
Chipset	Mobile Intel QS57 Express Chipset	
ExpressCard/34	None	
Multicard Reader	3-in-1 reader (MMC, SD, SDHC)	
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
Intel 6200 ²⁸	11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2	
WWAN upg	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 2.1 wireless, LED indicator	
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US models announced May 4, 2010; previous model on March 30, 2010

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(SN2-8) May 2010

ThinkPad® T410s 2904 (Optimus) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Card slot	Intel vPro	Preload	Avail date
2904-HDU	i5-560M	2.66	3.20	4GB	14.1" WXGA+	2.0M	128G SSD	Intel 6200 ²⁸	WWAN upg	Finger	Blue	3-in-1	vPro	Pro 64	Sep 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a depot repair service 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Premiere performance and ultraportability; two spindles</i> Intel® Core™ i5 processor i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64				
Memory	4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)				
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access 128GB⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive														
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 300:1 contrast ratio														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus														
Optimus graphics ³⁷	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA Quadro® NVS3100M , PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent display; <i>Maximum external resolution:</i> 2048x1536 (VGA) @ 75Hz; 1920x1200 @ 60Hz (single-link DVI-D via cable 45J7915); 2560x1600 (DP) @ 60Hz														
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys														
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass														
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch														
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions ³	14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm														
Weight ²	6-cell: starting at 3.94 lb (1.79kg)														
Case material	<i>Display cover:</i> Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); <i>Base:</i> Magnesium alloy														
Battery - type	Lithium Ion 6-cell , supports unique 2nd battery in Ultrabay Slim														
Battery - life ¹⁰	6-cell: up to 4.7 hr; 6-cell plus Ultrabay battery: up to 7.8 hr														
Chipset	Mobile Intel QS57 Express Chipset														
ExpressCard/34	None														
Multicard Reader	3-in-1 reader (MMC, SD, SDHC)														
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)														
PCIe Mini Card	Two PCI Express Mini Card slots														
Intel 6200 ²⁸	11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2														
WWAN upg	Wireless WAN upgradable														
Modem	None														
Bluetooth™	Bluetooth 2.1 wireless, LED indicator														
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack														
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for important warranty information
US model announced September 28, 2010

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Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Card slot	Intel vPro	Preload	Avail date
2901-ARU	i3-370M	2.40	2GB	14.1" WXGA+	2.0M	250G 5400	11b/g/n	WWAN upg	Finger	Blue	Express	No	Pro 64	Aug 10
2901-ASU	i3-370M	2.40	2GB	14.1" WXGA+	2.0M	128G SSD	Intel 6200 ²⁸	WWAN upg	Finger	Blue	Express	No	Pro 64	Aug 10

- *These small and medium business (SMB) models are part of the US TopSeller™ Program*
- *These system are Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i3 processor i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Client Security Solution™ • Fingerprint Software • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Presentation Director • ThinkVantage Productivity Center • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)		
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available					
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> 128GB ⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high <i>Some:</i> 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive					
Widescreen display	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 300:1 contrast ratio					
Camera	Camera on top of screen, 2.0-megapixel, fixed focus					
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			Supports ThinkVantage® technologies 65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378		
Keyboard	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys					
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass					
Touchpad	UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch					
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions					
Dimensions ³	14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm			ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty		
Weight ²	<i>6-cell:</i> starting at 3.94 lb (1.79kg)					
Case material	<i>Display cover:</i> Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); <i>Base:</i> Magnesium alloy					
Battery - type	Lithium Ion 6-cell , supports unique 2nd battery in Ultrabay Slim					
Battery - life ¹⁰	6-cell: up to 4.8 hr; <i>6-cell plus Ultrabay battery:</i> up to 7.9 hr					
Chipset	Mobile Intel QS57 Express Chipset			ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty		
ExpressCard/34	One slot (ExpressCard/34)					
Multicard Reader	None					
Ports	Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)					
PCIe Mini Card	Two PCI Express Mini Card slots					
11b/g/n	<i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card			ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty		
Intel 6200 ²⁸	<i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2					
WWAN upg	Wireless WAN upgradable					
Modem	None					
Bluetooth™	Bluetooth 2.1 wireless, LED indicator					
Ethernet	Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1			ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty		
Intel AMT	None					
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack					
Security	Power-on password, hard disk password, supervisor password, security keyhole					
Security chip	Trusted Platform Module, TCG 1.2-compliant					
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available					

See footnotes for important warranty information
US models announced August 3, 2010

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(SN2i-3) August 2010

ThinkPad® T410si 2904 (TopSeller) - Windows 7 (August 2010)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ^a rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Card slot	Intel vPro	Preload	Avail date
2904-H6U	i3-370M	2.40	2GB	14.1" WXGA+	2.0M	250G 5400	11b/g/n	WWAN upg	Finger	Blue	Express	No	Pro 64	Aug 10
2904-H7U	i3-370M	2.40	2GB	14.1" WXGA+	2.0M	160G SSD	Intel 1000	WWAN upg	Finger	Blue	Express	No	Pro 64	Aug 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Premiere performance and ultraportability; two spindles Intel® Core™ i3 processor i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available			
SATA DVD±RW Ultrabay Slim SATA disk	DVD burner, SATA 1.5Gb/s, 9.5mm Ultrabay slim, removable One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <i>Some:</i> 160GB ⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 5mm high <i>Some:</i> 250GB (5400 rpm) / SATA 3.0Gb/s, 1.8" wide, 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive			
Widescreen display Camera	14.1" (358mm) WXGA+ (1440x900) color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 300:1 contrast ratio, Camera on top of screen, 2.0-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³ Weight ² Case material	14.1W" (WxDxH): 13.3" x 9.5" x 0.83–1.02"; 337 x 241.5mm x 21.1–25.9mm <i>6-cell:</i> starting at 3.94 lb (1.79kg) <i>Display cover:</i> Carbon-fiber reinforced plastic (top), glass-fiber reinforced plastic (side walls); <i>Base:</i> Magnesium alloy Lithium Ion 6-cell , supports unique 2nd battery in Ultrabay Slim <i>6-cell:</i> up to 4.8 hr; <i>6-cell plus Ultrabay battery:</i> up to 7.9 hr			
Battery - type Battery - life ¹⁰				
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel QS57 Express Chipset One slot (ExpressCard/34) None Two USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)			
PCIe Mini Card 11b/g/n Intel 1000 WWAN upg	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable			
Modem Bluetooth™ Ethernet Intel AMT Audio support	None Bluetooth 2.1 wireless, LED indicator Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 None High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information
US models announced August 3, 2010

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Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann 06/23/09

Ultrabay Slim 9.5mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann 06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann 08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann 06/23/09
Ultrabay Slim Blu-ray Burner II (SATA)	43N3230	ann 06/23/09

Storage and removable storage

1.8" 250GB Disk SATA 3.0Gb/s (5400 rpm)	43N3418	ann 06/23/09
500GB Disk SATA 3.0Gb/s (7200 rpm) ⁵¹	43N3423	ann 01/07/10

⁵¹ Can be used with *Serial ATA Hard Drive Bay Adapter III* 43N3412 in the Ultrabay

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover) ⁴⁹	43N3406	ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover) ⁴⁹	43N3417	ann 06/23/09

⁴⁹ Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III* 43N3412 in Ultrabay via the removable adaptive cover provided with the drive

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

Wireless WAN (Mini PCI Express)

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann 01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB Port Replicator with Digital Video	45K1610	ann 07/28/09
ThinkPad Port Replicator Series 3	433610W	ann 06/23/09
ThinkPad Mini Dock Series 3	433710U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3	433810U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3 - Mobile WS	433820U	ann 01/07/10

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Batteries

ThinkPad Battery 59+ (6-cell)	51J0497	ann 06/23/09
ThinkPad Battery 42 (3-cell, bay) ⁴³	57Y4536	ann 08/25/09
⁴³ Used in Ultrabay Slim bay.		
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05
⁴⁴ Requires the <i>ThinkPad 90W AC Adapter</i> 40Y7659 or the adapter provided with the system.		

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

<i>Up to 14" widescreen models:</i>		
ThinkPad 14W Case Sleeve	57Y4294	ann 03/16/10

<i>Up to 15.6" widescreen models:</i>		
ThinkPad 15W Case Sleeve	51J0477	ann 08/18/09
Lenovo Business Messenger Case	51J0475	ann 08/18/09
Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Wenger Backpack for Lenovo	57Y4271	ann 01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann 01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann 01/07/10

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann 08/05/08
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad T420s



Lenovo ThinkPad T420s



ThinkPad Battery 42 (3-cell, bay)
57Y4536



ThinkPad Battery 66+ (6-cell)
0A36287



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



Lenovo ThinkPad T420s

ThinkPad® T420s 4170 (TopSeller)

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ² rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Intel AMT	Intel vPro	Preload
4170-33U	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205 ²⁸	WWAN upg	None	Blue	iAMT	vPro	Pro 64
4170-32U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	TP 11b/g/n	WWAN upg	None	Blue			Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance and ultraportability; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Bay battery	DVD burner, 9.5mm Ultrabay slim, removable None	
Ultrabay SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <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, supports the second disk, Shock Mounted Hard Drive	
mSATA™ SSD	None	
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus	
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm	
Weight ²	6-cell: starting at 3.68 lb (1.67kg)	
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy	
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim	
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr	
Chipset	Mobile Intel QM67 Express Chipset	
ExpressCard	One slot (ExpressCard/34)	
Smart Card Read	None	
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)	
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n, PCIe Half Mini Card, ThinkPad 11b/g/n, 1x1 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
WWAN	Wireless WAN upgradable	
Modem	None	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>Some:</i> Intel Active Management Technology (iAMT)	
Intel AMT		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

Supports ThinkVantage® technologies	
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378	
For compatible accessories, please go to O-T420-S sheet;	
For ThinkPlus™.22 service upgrade options, please go to S-TA sheet	

See footnotes for more detailed information
US models announced February 22, 2011

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For compatible accessories, please go to O-T420-S sheet;
For ThinkPlus™.22 service upgrade options, please go to S-TA sheet

ThinkPad® T420s 4171 (TopSeller)

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	Finger print reader	Blue-tooth	Intel vPro	Preload
4171-53U	i5-2540M	4GBx1	14.0" HD+	720p	128G SSD	Intel 6205 ²⁸	WWAN upg	None	Blue	vPro	Pro 64
4171-52U	i5-2520M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	None	Blue	vPro	Pro 64

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a depot repair service 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Premiere performance and ultraportability; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology		Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Bay battery	DVD burner, 9.5mm Ultrabay slim, removable None		
Ultrabay SATA disk	One modular bay for interchangeable devices (right side), 9.5mm high, bottom access <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, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	14.0" (355mm) HD+ (1600x900) color , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	14.0W" (WxDxH): 13.5" x 9.1" x 0.83–1.02"; 343 x 230.1mm x 21.2–26.0mm		
Weight ²	6-cell: starting at 3.68 lb (1.67kg)		
Case material	<i>Display cover:</i> Hybrid Carbon-fiber reinforced plastic; <i>Bottom:</i> Magnesium alloy		
Battery - type	Lithium Ion 6-cell, supports unique 2nd battery in Ultrabay Slim		
Battery - life ¹⁰	6-cell: up to 5.5 hr; 6-cell plus Ultrabay battery: up to 9.3 hr		
Chipset	Mobile Intel QM67 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card Read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 2.0 (one powered), one USB 3.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

Supports ThinkVantage® technologies
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Silver rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-T420-S sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US models announced February 22, 2011

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann 03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Ultrabay Slim 9.5mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann 06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann 08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann 06/23/09

Storage and removable storage

160GB 2.5" Intel X25-M Solid State Drive II ⁴¹	0A33983	ann 02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann 02/22/11
250GB 7200rpm SATA 3.0G/s		
OPAL-capable FDE HDD II ⁴¹	0A33985	ann 02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann 02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann 02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
ThinkPad Port Replicator Series 3	433610W	ann 06/23/09
ThinkPad Mini Dock Series 3	433710U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3	433810U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3 (170W)	433830U	ann 02/22/11

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Batteries

ThinkPad Battery 66+ (6-cell)	0A36287	ann 02/22/11
ThinkPad Battery 42 (3-cell, bay) ⁴²	57Y4536	ann 08/25/09
⁴² Used in Ultrabay Slim bay.		
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05
⁴⁴ Requires the ThinkPad 90W AC Adapter 40Y7659 or the adapter provided with the system.		

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 14" widescreen models:		
ThinkPad 14W Case Sleeve	57Y4294	ann 03/16/10

Up to 15.6" widescreen models:		
ThinkPad 15W Case Sleeve	51J0477	ann 08/18/09
Lenovo Business Messenger Case	51J0475	ann 08/18/09
Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Wenger Backpack for Lenovo	57Y4271	ann 01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann 01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann 01/07/10

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann 08/05/08
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad T510



Lenovo ThinkPad T510



ThinkPad Mini Dock Plus Series 3
433810U



ThinkPad Battery 27++ (9-cell, slice)
57Y4545



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



Lenovo ThinkPad T510

ThinkPad® T510 4313 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery Intel vPro	Preload	Avail date
4313-28U	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	250G 5400	DVD±RW	11b/g/n	None	None	None	6	No	Pro 32 Jan 10
4313-CTU	i5-560M	2.66	3.20	2GB	15.6" HD	2.0M	320G 7200	DVD±RW	11b/g/n	None	None	None	6	No	Pro 64 Sep 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-520M or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW) Supports ThinkVantage® technologies
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 250GB⁸ (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm <i>6-cell:</i> starting at 5.66 lb (2.57kg); <i>9-cell:</i> starting at 6.01 lb (2.72kg) <i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic Lithium Ion 6-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 6.2 hr; <i>9-cell:</i> up to 10.4 hr; <i>9-cell plus Slice battery:</i> up to 20.8 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
PCIe Mini Card 11b/g/n WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card None 56K V.92 ⁶ modem None Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US model announced September 28, 2010; previous model on January 7, 2010

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(KN1-1) October 2010

ThinkPad® T510 4313 (TopSeller) - Windows 7 (January 2011)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory (MHz)	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Battery Intel cells vPro	Preload	Avail date
4313-J6U	i5-480M	2.66	2.93	2GBx1 1066	15.6" HD	2.0M	320G 7200	DVD±RW	Intel 1000	WWAN upg	6	No Pro 64	Jan 11
4313-J8U	i5-480M	2.66	2.93	4GBx1 1333	15.6" HD+	2.0M	320G 7200	DVD±RW	Intel 1000	WWAN upg	6	No Home P 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-480M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	Supports ThinkVantage® technologies
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Camera	Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm 6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg) <i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic Lithium Ion 6-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slice battery: up to 20.8 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	ThinkPlus™, 22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
PCIe Mini Card Intel 1000 WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable 56K V.92 ⁶ modem None Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information
 US models announced January 11, 2011

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ThinkPad® T510 4314 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory (MHz)	Wide-screen display	Disk SATA GB ^a rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Bat- tery cells	Power Adapter (watt)	Intel vPro	Preload	Avail date
4314-36U	i5-520M	2.40	2.93	2GBx1 1066	15.6" HD	320G 7200	WiMAX	WWAN upg	Finger	6	65W	vPro	Pro 32	Jan 10
4314-2JU	i5-520M	2.40	2.93	2GBx1 1066	15.6" HD	250G 5400	11b/g/n	WWAN upg		6	65W		Pro 32	Jan 10
4314-9BU	i5-520M	2.40	2.93	2GBx1 1066	15.6" HD	160G 7200	Intel 6200 ²⁸	WWAN upg		9	90W	vPro	Pro 64	May 10
4314-C5U	i5-540M	2.53	3.06	2GBx1 1066	15.6" HD	160G SSD	Intel 6200	WWAN upg	Finger	9	65W	vPro	Pro 64	Jul 10
4314-DDU	i5-560M	2.66	3.20	2GBx1 1066	15.6" HD	320G 7200	Intel 6200	WWAN upg		6	65W	vPro	Pro 64	Sep 10
4314-DPU	i7-620M	2.66	3.33	4GBx1 1333	15.6" HD+	500G 7200	Intel 1000	WWAN upg		6	65W		Pro 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core, or Intel Core i7 processor i7-620M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; <i>i5-520M/i5-540M/i5-560M: 3MB cache; i7-620M: 4MB cache</i>		Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64	
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)	
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some: 160GB⁸ Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high</i> <i>Some: 160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) /</i> <i>SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™</i> <i>All: removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive</i>			
Widescreen display	<i>Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight,</i> 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight,</i> 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 2.0-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution: 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)</i>			
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm</i> <i>6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)</i> <i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic Lithium Ion 6-cell or 9-cell , supports optional Slice battery (57Y4545) as 2nd battery <i>6-cell: up to 6.2 hr; 9-cell: up to 10.4 hr; 9-cell plus Slice battery: up to 20.8 hr</i>			
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0 (one powered), external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		Supports ThinkVantage® technologies	
PCIe Mini Card 11b/g/n Intel 1000 Intel 6200 ²⁸ WiMAX	Two PCI Express Mini Card slots <i>Some: 11b/g/n wireless⁴, ThinkPad 11b/g/n, PCIe Half Mini Card</i> <i>Some: 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2</i> <i>Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2</i> <i>Some: 11a/b/g/n and WiMAX wireless, PCIe Half Mini Card, Intel Centrino Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX</i>		65-watt or 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378	
WWAN upg Modem Bluetooth™ Ethernet	Wireless WAN upgradable 56K V.92 ⁶ modem Bluetooth 2.1 wireless, LED indicator Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1		ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025	
Intel AMT Audio support	Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack		Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip</i>			
Limited warranty ¹²	3-years/1-yr - battery depot repair service / service upgrades²² available			

See footnotes for important warranty information

US model announced January 11, 2011; previous models on January 7, May 4, July 6, or September 28, 2010

US model withdrawn effective February 2011

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ThinkPad® T510 4314 (Optimus) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Avail date
4314-DEU	i5-560M	2.66	3.20	2GB	15.6" HD+	2.0M	320G 7200	Intel 6200 ²⁸	WWAN upg	None	Blue	9	vPro	Pro 64	Sep 10
• This small and medium business (SMB) model is part of the US TopSeller™ Program • This model has a depot repair service 3-year limited warranty • This system is Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5 processor i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64				
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)				
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™														
Widescreen display Camera	15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus														
Optimus graphics ³⁷	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics in processor, and NVIDIA Quadro® NVS3100M , PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										Supports ThinkVantage® technologies 90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm <i>6-cell:</i> starting at 5.66 lb (2.57kg); <i>9-cell:</i> starting at 6.01 lb (2.72kg) <i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 6.1 hr; <i>9-cell:</i> up to 10.3 hr; <i>9-cell plus Slice battery:</i> up to 20.7 hr														
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card Intel 6200 ²⁸ WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino Advanced-N 6200, 2x2 Wireless WAN upgradable 56K V.92 ⁶ modem Bluetooth 2.1 wireless, LED indicator Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack														
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None														
Limited warranty ¹² 3-years/1-yr - battery depot repair service / service upgrades ²² available															

See footnotes for important warranty information
 US model announced September 28, 2010

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 (KN1-14) December 2010

ThinkPad® T510 4313 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery Intel vPro	Preload	Avail date
4313-29U	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	320G 7200	DVD±RW	11b/g/n	None	None	Blue	9	No	Pro 32 Feb 10

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5 processor i5-520M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system²⁰ - Genuine Windows® 7 Professional 32 Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW) Supports ThinkVantage® technologies
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Discrete graphics	NVIDIA® Quadro® NVS3100M , PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm <i>6-cell:</i> starting at 5.66 lb (2.57kg); <i>9-cell:</i> starting at 6.01 lb (2.72kg) <i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 4.7 hr; <i>9-cell:</i> up to 7.8 hr; <i>9-cell plus Slice battery:</i> up to 15.6 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
PCIe Mini Card 11b/g/n WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card None 56K V.92 ⁶ modem Bluetooth 2.1 wireless, LED indicator Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information
US model announced January 7, 2010

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(KN1-4) January 2010

ThinkPad® T510 4314 (Discrete) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory	Wide-screen display	Camera	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Battery Intel vPro	Preload	Avail date
4314-2MU	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	250G 5400	Intel 1000	WWAN upg			9	Pro 32	Feb 10
4314-2PU	i5-540M	2.53	3.06	4GB	15.6" HD+	2.0M	500G 7200	Intel 6200 ²⁸	WWAN upg	Finger	Blue	9 vPro	Pro 32	Feb 10
4314-7QU	i5-520M	2.40	2.93	4GB	15.6" HD+	2.0M	320G 7200	Intel 6200	WWAN upg	Finger	Blue	9 vPro	Pro 64	Mar 10
4314-7RU	i5-540M	2.53	3.06	4GB	15.6" HD+	2.0M	128G SSD	Intel 6200	WWAN upg	Finger	Blue	9 vPro	Pro 64	Mar 10
4314-9CU	i5-520M	2.40	2.93	2GB	15.6" HD	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	9 vPro	Pro 64	May 10
4314-9DU	i5-540M	2.53	3.06	2GB	15.6" HD+	2.0M	160G 7200	Intel 6200	WWAN upg		Blue	9 vPro	Pro 64	May 10
✖ 4314-C4U	i5-540M	2.53	3.06	2GB	15.6" HD	2.0M	160G SSD	Intel 6200	WWAN upg	Finger	Blue	9 vPro	Pro 64	Jul 10
• These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a depot repair service 3-year limited warranty • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Premiere performance; two spindles Intel® Core™ i5 processor i5-520M or i5-540M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64			
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; Italics: standard memory in both sockets; no sockets available; Non-italics: standard memory in one socket; one socket available										Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)			
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access Some: 128GB ⁸ or 160GB Solid State Drive (SSD) / SATA 3.0Gb/s, 1.8" wide, 8mm high Some: 160GB (7200 rpm), 250GB (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, Active Protection System™ removable, upgradable, supports 2nd disk, Shock Mounted Hard Drive All:													
Widescreen display	Some: 15.6" (396mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (396mm) HD+ (1600x900) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus													
Discrete graphics	NVIDIA® Quadro® NVS3100M, PCI Express® x16, 512MB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)													
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions													
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	15.6W" (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm 6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg) Display cover: Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic Lithium Ion 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom 6-cell: up to 4.7 hr; 9-cell: up to 7.8 hr; 9-cell plus Slice battery: up to 15.6 hr													
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)										Supports ThinkVantage® technologies			
PCIe Mini Card Intel 1000 Intel 6200 ²⁸ WWAN upg Modem Bluetooth™ Ethernet	Two PCI Express Mini Card slots Some: 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Some: 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6200, 2x2 Wireless WAN upgradable 56K V.92 ⁶ modem Some: Bluetooth 2.1 wireless, LED indicator Non-vPro model: Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 vPro model: Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip										90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378			
Intel AMT Audio support Security Security chip Fingerprint reader											ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 45K6021 ThinkPlus 4-year LOR 9x5 NBD 45K6022 ThinkPlus 5-year LOR 9x5 NBD 45K6024 ThinkPlus 4-year P&L P/U Depot 45K6023 ThinkPlus 5-year P&L P/U Depot 45K6025 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty			
Limited warranty ¹²	3-years/1-yr - battery depot repair service / service upgrades ²² available													

See footnotes for important warranty information

✕ US model announced July 6, 2010; previous models on January 7, March 2, or May 4, 2010

✕ US model withdrawn effective February 2011

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ThinkPad® T510i 4313 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁸ rpm	SATA optical	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Avail date
4313-C2U	i3-370M	2.40	2GB	15.6" HD	2.0M	250G 5400	DVD±RW	Intel 1000	None	Finger	Blue	6	No	Pro 64	Jul 10
4313-C3U	i3-370M	2.40	2GB	15.6" HD	2.0M	320G 7200	DVD±RW	Intel 1000	None	Finger	Blue	6	No	Pro 64	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i3 processor i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 250GB ⁸ (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	Supports ThinkVantage® technologies
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	<i>15.6W"</i> (WxDxH): 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm <i>6-cell:</i> starting at 5.66 lb (2.57kg); <i>9-cell:</i> starting at 6.01 lb (2.72kg) <i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic Lithium Ion 6-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 6.2 hr; <i>9-cell:</i> up to 10.4 hr; <i>9-cell plus Slice battery:</i> up to 20.8 hr	
Chipset ExpressCard/34 Smart Card read Multicard reader Ports	Mobile Intel QM57 Express Chipset One slot (ExpressCard/34) None 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) Four USB 2.0, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976
PCIe Mini Card Intel 1000 WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 None 56K V.92 ⁶ modem Bluetooth 2.1 wireless, LED indicator Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information
US models announced July 6, 2010

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ThinkPad®



Lenovo® ThinkPad W510



Lenovo ThinkPad W510



ThinkPad Mini Dock Plus Series 3 - Mobile WorkStation
433820U



ThinkPad 135W AC Adapter
55Y9317



Lenovo ThinkPad W510



Lenovo ThinkPad W510

ThinkPad® W510 4319 (TopSeller) - Windows 7

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory (MHz)	Wide-screen display	Multi-Touch Screen	Disk SATA GB ³ rpm	RAID	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Color calib	Intel vPro	Preload	Avail date
4319-2NU	i7-720QM	1.60	2.80	2GBx1 1066	15.6" HD+		320G 7200	None	Intel 6300 ²⁸	WWAN upg			vPro	Pro 32	Jan 10
4319-2PU	i7-720QM	1.60	2.80	2GBx2 1066	15.6" FHD		320G 7200	None	Intel 6300	WWAN upg			vPro	Pro 64	Jan 10
4319-2QU	i7-720QM	1.60	2.80	2GBx2 1066	15.6" FHD		320G 7200	None	Intel 6300	Gobi 2000			vPro	Pro 64	Jan 10
4319-2RU	i7-820QM	1.73	3.06	2GBx2 1066	15.6" FHD	Multi	320G 7200	None	Intel 6300	WWAN upg		X-Rite	vPro	Pro 64	Jan 10
4319-4BU	i7-720QM	1.60	2.80	2GBx2 1066	15.6" FHD		320G 7200	None	Intel 6300	Gobi 2000	AT&T ²³		vPro	Pro 64	Feb 10
4319-4MU	i7-720QM	1.60	2.80	2GBx2 1066	15.6" HD+		320G 7200	None	Intel 6300	Gobi 2000	AT&T		vPro	Pro 64	Mar 10
4319-64U	i7-720QM	1.60	2.80	2GBx1 1066	15.6" HD+		320G 7200	None	Intel 6300	WWAN upg			vPro	Pro 64	Sep 10
• These small and medium business (SMB) models are part of the US TopSeller™ Program • Power-packed engineering with Open GL graphics and ISV certifications • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7 processor i7-720QM or i7-820QM with quad-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1333MHz), Intel Turbo Boost, Hyper-Threading technology; i7-720QM: 6MB cache; i7-820QM: 8MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64				
Memory	2GB or 4GB std / 16GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 204-pin SO-DIMM sockets										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW) • huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)				
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System™														
Widescreen display	Some: 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut Some: 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight , 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut Some: 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight , 242 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut, MultiTouch (touchscreen supports two-finger touch)														
Color calibration Camera	Some: huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest Camera on top of screen, 2.0-megapixel, fixed focus														
Discrete graphics	NVIDIA® Quadro® FX880M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions (WxDxH) ³	HD+: 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm FHD: 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm FHD MultiTouch: 14.68" x 9.65" x 1.35-1.57"; 372.8mm x 245.1mm x 34.3-39.8mm														
Weight ²	6-cell: starting at 5.66 lb (2.57kg); 9-cell: starting at 6.01 lb (2.72kg)														
Case material	Display cover: Glass-fiber reinforced plastic; Base: Carbon-fiber reinforced plastic														
Battery - type	Lithium Ion 9-cell , supports optional Slice battery (57Y4545) as 2nd battery at bottom														
Battery - life ¹⁰	6-cell: up to 3.0 hr; 9-cell: up to 5.1 hr; 9-cell plus slice battery: up to 10.5 hr														
Chipset	Mobile Intel QM57 Express Chipset										Supports ThinkVantage® technologies				
ExpressCard/34	One slot (ExpressCard/34)														
Smart Card Read	None										135-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Multicard Reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)														
Ports	Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card	Two PCI Express Mini Card slots 11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Ultimate-N 6300, 3x3 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider														
Carrier	Some: AT&T®, contract required with service provider										ThinkPlus™, 22 3-year LOR ²⁴ 9x5 NBD 41C9176				
Modem	56K V.92 ⁶ modem										ThinkPlus 4-year LOR 9x5 NBD 41C9177				
Bluetooth™	Bluetooth 2.1 wireless, LED indicator										ThinkPlus 5-year LOR 9x5 NBD 41C9179				
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1										ThinkPlus 4-year P&L P/U Depot 41C9178				
Intel AMT	Intel Active Management Technology (iAMT)										ThinkPlus 5-year P&L P/U Depot 41C9180				
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack										Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty				
Security	Power-on password, hard disk password, supervisor password, security keyhole														
Security chip	Trusted Platform Module, TCG 1.2-compliant														
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available														

See footnotes for important warranty information

US model announced September 28, 2010; previous models on January 7, February 2, or March 2, 2010

US model withdrawn effective February 2010

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(KN1W-1) October 2010

ThinkPad® W510 4319 (TopSeller) - Windows 7 (July 2010)

Personal Systems Reference (PSREF)

Type-model	Processor	Base (GHz)	Max turbo (GHz)	Memory (MHz)	Wide-screen display	Disk SATA GB ³ rpm	RAID	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Color calib	Bat-tery cells	Intel vPro	Preload	Avail date
4319-5RU	i5-520M	2.40	2.93	2GBx1 1066	15.6" HD+	320G 7200	None	Intel 6300 ²⁸	WWAN upg	None	9		Pro 64	Jul 10
4319-5SU	i7-620M	2.66	3.33	2GBx2 1066	15.6" FHD	320G 7200	None	Intel 6300	WWAN upg	None	9		Pro 64	Jul 10
4319-5XU	i5-560M	2.66	3.20	4GBx1 1333	15.6" HD+	320G 7200	None	Intel 6200 ²⁸	WWAN upg	None	6	vPro	Pro 64	Sep 10
4319-65U	i5-560M	2.66	3.20	2GBx1 1066	15.6" HD+	320G 7200	None	Intel 6300	WWAN upg	None	9	vPro	Pro 64	Sep 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Power-packed engineering with Open GL graphics and ISV certifications
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mobile workstation; two spindles Intel® Core™ i5 processor i5-520M or i5-560M with dual-core, or Intel Core i7 processor i7-620M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; <i>i5-520M/i5-560M: 3MB cache; i7-620M: 4MB cache</i>		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • Fingerprint Software (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz or PC3-10600 1333MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
SATA DVD±RW Ultrabay Enhanced SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, supports second disk, Shock Mounted Hard Drive, Active Protection System™		
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight , 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut		
Color calibration	None		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Discrete graphics	NVIDIA® Quadro® FX880M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard TrackPoint® Touchpad ThinkLight™	89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keybrd, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions (WxDxH) ³	<i>HD+:</i> 14.68" x 9.65" x 1.26-1.41"; 372.8mm x 245.1mm x 32-35.8mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm		
Weight ²	<i>6-cell:</i> starting at 5.66 lb (2.57kg); <i>9-cell:</i> starting at 6.01 lb (2.72kg)		
Case material	<i>Display cover:</i> Glass-fiber reinforced plastic; <i>Base:</i> Carbon-fiber reinforced plastic		
Battery - type	Lithium Ion 6-cell or 9-cell , supports optional Slice battery (57Y4545) as 2nd battery		
Battery - life ¹⁰	<i>6-cell:</i> up to 3.0 hr; <i>9-cell:</i> up to 5.1 hr; <i>9-cell plus slice battery:</i> up to 10.5 hr		
Chipset	Mobile Intel QM57 Express Chipset		Supports ThinkVantage® technologies
ExpressCard/34	One slot (ExpressCard/34)		135-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378 ThinkPlus™.22 3-year LOR ²⁴ 9x5 NBD 41C9176 ThinkPlus 4-year LOR 9x5 NBD 41C9177 ThinkPlus 5-year LOR 9x5 NBD 41C9179 ThinkPlus 4-year P&L P/U Depot 41C9178 ThinkPlus 5-year P&L P/U Depot 41C9180 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Smart Card Read	None		
Multicard Reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)		
Ports	Two USB 3.0, one Powered USB 2.0, one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), modem (RJ-11), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		
PCIe Mini Card	Two PCI Express Mini Card slots		
Intel 6200 ²⁸	<i>Some:</i> 11a/b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Advanced-N 6200, 2x2		
Intel 6300 ²⁸	<i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3		
WWAN upg	Wireless WAN upgradable		
Modem	56K V.92 ⁵ modem		
Bluetooth™	Bluetooth 2.1 wireless, LED indicator		
Ethernet	<i>Non-vPro model:</i> Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1 <i>vPro model:</i> Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / speaker volume up, down and mute buttons / dual array microphone, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for important warranty information

US models announced September 28, 2010; previous models on July 13, 2010

US model withdrawn effective February 2011

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Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25Pack)	57Y4385	ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25Pack)	57Y4386	ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann 06/23/09
1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann 03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Ultrabay Slim 9.5mm

Serial ATA Hard Drive Bay Adapter III ⁴⁸	43N3412	ann 06/23/09
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Ultrabay Enhanced 12.7mm

DVD Burner Ultrabay Enhanced II SATA	43N3294	ann 01/07/10
Blu-ray Reader / DVD Burner Ultrabay Enh	43N3295	ann 01/07/10

Storage and removable storage

160GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	41N5737	ann 10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43R8152	ann 01/15/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3410	ann 01/20/09
320GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43N3403	ann 08/05/08
320GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3411	ann 01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3423	ann 01/07/10

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)	43N3406	ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover)	43N3417	ann 06/23/09
ThinkPad 160GB Intel X25-M SSD ⁴¹	43N3435	ann 06/22/10

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann 01/07/10

ThinkPad Expansion

T510:

ThinkPad Port Replicator Series 3	433610W	ann 06/23/09
ThinkPad Mini Dock Series 3	433710U	ann 06/23/09
ThinkPad Mini Dock Plus Series 3	433810U	ann 06/23/09

All:

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB Port Replicator with Digital Video	45K1610	ann 07/28/09
ThinkPad Mini Dock Plus Series 3 - Mobile WS	433820U	ann 01/07/10

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann 03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann 03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann 01/07/10

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05
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⁴⁴ Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

T510:

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann 01/05/06
⁴⁵ Only compatible with the integrated graphics models.		

ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann 09/22/09

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

W510:

ThinkPad 135W AC Adapter	55Y9317	ann 01/07/10
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More info at www.lenovo.com/support/poweradapters

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann 08/18/09
Lenovo Business Messenger Case	51J0475	ann 08/18/09
Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Backpack	43R2482	ann 05/13/08

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann 08/05/08
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad T520



Lenovo ThinkPad T520



ThinkPad Mini Dock Plus Series 3
433810U



ThinkPad Battery 27++ (9-cell, slice)
57Y4545



ThinkPad triple external monitor configuration
using NVIDIA's Optimus technology



Lenovo ThinkPad T520

ThinkPad® T520 4239 (TopSeller)

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	Modem	Smart Card Reader	Finger print reader	Bat- tooth cells	Intel AMT	Intel vPro	Global (G) Educ	Preload
4239-46U	i5-2520M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205 ²⁸	upg	Modem	Smart	None	Blue 6	iAMT	vPro	Pro 64	
4239-4CU	i5-2410M	4GBx1	15.6" HD	720p	320G 7200	Intel 6205	upg	Modem	Smart	None	6			Edu	Prem 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> 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 (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox	
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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, 60% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass			
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)			
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	<i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr			
Chipset	Mobile Intel QM67 Express Chipset			
ExpressCard	One slot (ExpressCard/34)			
Smart Card Read	<i>Some:</i> Smart Card reader			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	<i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card	Two PCI Express Mini Card slots			
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2			
WWAN	Wireless WAN upgradable			
Modem	56K V.92 ⁶ modem			
Bluetooth™	<i>Some:</i> Bluetooth 3.0 wireless, LED indicator			
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT	<i>Some:</i> Intel Active Management Technology (iAMT)			
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Fingerprint reader	None			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for more detailed information

US model announced March 1, 2011; previous model on February 22, 2011

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(KN3-1) March 2011

ThinkPad® T520 4240 (TopSeller)

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	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4240-4AU	i5-2520M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem	Finger	Blue	6	vPro	Pro 64
4240-2GU	i5-2540M	2GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Blue	6	vPro	Pro 64
4240-2FU	i5-2520M	2GBx1	15.6" HD	720p	320G 7200	Intel 6205	WWAN upg				6	vPro	Pro 64
4240-4EU	i7-2620M	4GBx1	15.6" HD	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	6	vPro	Pro 64
• These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a depot repair service 3-year limited warranty • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)													
Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology								Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive												
mSATA™ SSD	None												
Widescreen display	<i>Some:</i> 15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut												
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus												
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)												
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions												
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm												
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)												
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint												
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom												
Battery - life ¹⁰	<i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr												
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)												
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable <i>Some:</i> 56K V.92 ⁶ modem <i>Some:</i> Bluetooth 3.0 wireless, LED indicator <i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1								Supports ThinkVantage® technologies				
Intel AMT Audio support	Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack								65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378				
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip								For compatible accessories, please go to O-T520 sheet;				
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades²² available								For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet				

See footnotes for more detailed information

US model announced March 1, 2011; previous models on February 22, 2011

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ThinkPad® T520 4239 (Optimus) - TopSeller

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	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4239-26U	i7-2620M	4GBx2	15.6" FHD	720p	128G SSD	Intel 6300 ²⁸	WWAN upg	Modem	Finger	Blue	9	vPro	Pro 64
4239-23U	i5-2540M	2GBx2	15.6" HD+	720p	320G 7200	Intel 6205 ²⁸	WWAN upg	Modem	Finger	Blue	9	vPro	Pro 64
4239-24U	i5-2540M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue	9	vPro	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology		Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® NVS4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.67 lb (2.57kg); <i>9-cell:</i> starting at 6.02 lb (2.73kg)			
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	<i>6-cell:</i> up to 8.4 hr; <i>9-cell:</i> up to 14.0 hr; <i>9-cell plus slice battery:</i> up to 28.1 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card WLAN ⁴	Two PCI Express Mini Card slots <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> 11a/b/g/n, PCIe Half Mini Card, Intel Centrino Ultimate-N 6300, 3x3		Supports ThinkVantage® technologies	
WWAN Modem Bluetooth™ Ethernet	Wireless WAN upgradable <i>Some:</i> 56K V.92 ⁶ modem Bluetooth 3.0 wireless, LED indicator <i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT)		90-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378	
Intel AMT Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, ²² service upgrade options, please go to S-TA sheet	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
 US models announced February 22, 2011

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 (KN3-3) March 2011

ThinkPad® T520 4240 (Optimus) - TopSeller

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	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4240-48U	i7-2620M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	Modem	Finger	Blue	9	vPro	Pro 64
4240-49U	i5-2520M	4GBx1	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg	Modem	Finger	Blue	9	vPro	Pro 64
4240-2HU	i5-2540M	2GBx2	15.6" HD+	720p	500G 7200	Intel 6205	WWAN upg			Blue	9	vPro	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Premiere performance; two spindles Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® NVS4200M , PCI Express® x16, 1GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.67 lb (2.57kg); <i>9-cell:</i> starting at 6.02 lb (2.73kg)			
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	<i>6-cell:</i> up to 8.4 hr; <i>9-cell:</i> up to 14.0 hr; <i>9-cell plus slice battery:</i> up to 28.1 hr			
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) None 4-in-1 reader (MMC, SD, SDHC, SDXC) <i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable <i>Some:</i> 56K V.92 ⁶ modem Bluetooth 3.0 wireless, LED indicator <i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT Audio support	Intel Active Management Technology (iAMT) High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack			
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip			
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available			

See footnotes for more detailed information
US models announced February 22, 2011

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ThinkPad® T520i 4239 (TopSeller)

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	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4239-47U	i3-2310M	4GBx1	15.6" HD	720p	320G 7200	Intel 1000	WWAN upg	Modem	None	None	6	None	Pro 64

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Premiere performance; two spindles</i> Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology			Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel 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 Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive			
mSATA™ SSD	None			
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut			
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus			
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)			
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass			
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch			
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions			
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm			
Weight ²	<i>6-cell:</i> starting at 5.54 lb (2.51kg); <i>9-cell:</i> starting at 5.89 lb (2.67kg)			
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint			
Battery - type	Lithium Ion 6-cell or 9-cell, support optional Slice battery (57Y4545) as 2nd battery at bottom			
Battery - life ¹⁰	<i>6-cell:</i> up to 7.7 hr; <i>9-cell:</i> up to 12.8 hr; <i>9-cell plus slice battery:</i> up to 25.6 hr			
Chipset	Mobile Intel QM67 Express Chipset			
ExpressCard	One slot (ExpressCard/34)			
Smart Card Read	None			
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
Ports	<i>Integrated model:</i> Four USB 2.0 (one powered), <i>Optimus model:</i> Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)			
PCIe Mini Card	Two PCI Express Mini Card slots			
WLAN ⁴	11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2			
WWAN	Wireless WAN upgradable			
Modem	56K V.92 ⁶ modem			
Bluetooth™	None			
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1			
Intel AMT	None			
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack			
Security	Power-on password, hard disk password, supervisor password, security keyhole			
Security chip	Trusted Platform Module, TCG 1.2-compliant			
Fingerprint reader	None			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

Supports ThinkVantage® technologies
65-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
For compatible accessories, please go to O-T520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
US model announced March 1, 2011

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD Burner Ultrabay Enhanced II SATA	43N3294	ann	01/07/10

Storage and removable storage

256GB 1.8" FDE Solid State Drive ⁴¹	43N3417	ann	06/23/09
160GB 2.5" Intel X25-M Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0Gb/s OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

ThinkPad Mini Dock Series 3 ⁶²	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 ⁶²	433810U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3 (170W)	433830U	ann	02/22/11
Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09

⁶² Compatible only with dual core models.
⁶³ Requires the adapter provided with the system.

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

⁴³ To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
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⁴⁴ Requires the *ThinkPad 90W AC Adapter* 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ^{45, 62}	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter ⁶²	40Y7659	ann	09/20/05
ThinkPad 135W AC Adapter	55Y9317	ann	01/07/10
ThinkPad 65W AC Adapter with USB Hub ⁶²	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter ⁶²	41R4493	ann	09/22/09

⁴⁵ Only compatible with the integrated graphics models.
⁶² Compatible only with dual core models.

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

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
Wenger Backpack for Lenovo	57Y4271	ann	01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann	01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann	01/07/10

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad W520



Lenovo ThinkPad W520



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Lenovo ThinkPad W520

ThinkPad® W520 4270 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁹ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Finger print reader	Blue-tooth	Color calib	Bat-tery cells	Intel vPro	Preload
4270-26U	i7-2620M	4GBx1	15.6" HD	1000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg	None	Blue	None	9	vPro	Pro 64

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **Power-packed engineering with Open GL graphics and ISV certifications**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mobile workstation; two spindles Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology		Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)
Memory	<i>dual-core model:</i> 8GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 16GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-10600 1333MHz DDR3, non-parity, dual-channel capable		
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive		
mSATA™ SSD	None		
Widescreen display	15.6" (396mm) HD (1366x768) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut		
Color calibration	None		
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M , PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm		
Weight ²	<i>6-cell:</i> starting at 5.40 lb (2.45kg); <i>9-cell:</i> starting at 5.75 lb (2.61kg)		
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint		
Battery - type	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom		
Battery - life ¹⁰	<i>6-cell:</i> up to 6.5 hr; <i>9-cell:</i> up to 10.8 hr; <i>9-cell plus slice battery:</i> up to 21.6 hr		
Chipset	Mobile Intel QM67 Express Chipset		
ExpressCard	One slot (ExpressCard/34)		
Smart Card Read	None		
Multicard Reader	4-in-1 reader (MMC, SD, SDHC, SDXC)		
Ports	Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN ⁴	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2		
WWAN	Wireless WAN upgradable		
Modem	56K V.92 ⁶ modem		
Bluetooth™	Bluetooth 3.0 wireless, LED indicator		
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	Intel Active Management Technology (iAMT)		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack		
Security	Power-on password, hard disk password, supervisor password, security keyhole		
Security chip	Trusted Platform Module, TCG 1.2-compliant		
Fingerprint reader	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model announced February 22, 2011

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ThinkPad® W520 4276 (Optimus) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Discrete graphics	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Smart Card Reader	Finger print reader	Blue-tooth	Color calib	Bat-tery cells	Intel vPro	Preload
4276-2QU	i7-2720QM	4GBx1	15.6" FHD	2000M	720p	500G 7200	Intel 6205 ²⁸	WWAN upg			Blue		9	vPro	Pro 64
4276-2PU	i7-2620M	4GBx1	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg			Blue		9	vPro	Pro 64
4276-23U	i7-2920XM	4GBx4	15.6" FHD	2000M	720p	500G 7200	Intel 6205	WWAN upg	Smart	Finger	Blue	X-Rite	9		Pro 64
4276-39U	i7-2820QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue		9	vPro	Pro 64
4276-38U	i7-2720QM	4GBx1	15.6" HD+	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue		9	vPro	Pro 64
4276-37U	i7-2720QM	4GBx2	15.6" FHD	1000M	720p	500G 7200	Intel 6205	WWAN upg		Finger	Blue		9	vPro	Pro 64
• These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a depot repair service 3-year limited warranty • Power-packed engineering with Open GL graphics and ISV certifications • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	<i>Mobile workstation; two spindles</i> Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache), DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2720QM processor (quad-core, 2.20GHz, 6MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology Intel Core i7-2820QM processor (quad-core, 2.30GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology Intel Core i7-2920XM processor (quad-core, 2.50GHz, 8MB Cache), DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology									Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW) • huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)					
Memory	<i>dual-core model:</i> 8GB max ⁷ , two 204-pin SO-DIMM sockets <i>quad-core model:</i> 16GB max, four 204-pin SO-DIMM sockets <i>All:</i> PC3-10600 1333MHz DDR3, non-parity, dual-channel capable														
Optical Ultrabay SATA disk	DVD burner, 12.7mm Ultrabay Enhanced, removable One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access <i>Some:</i> Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™ <i>All:</i> removable, upgradable, supports the second disk, Shock Mounted Hard Drive														
mSATA™ SSD	None														
Widescreen display	<i>Some:</i> 15.6" (396mm) HD+ (1600x900) color , anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut <i>Some:</i> 15.6" (396mm) FHD (1920x1080) color , anti-glare, LED backlight, 270 nits, 16:9 aspect ratio, 500:1 contrast ratio, 95% Gamut														
Color calibration Camera	<i>Some:</i> huey™PRO Colorimeter by X-Rite® color calibration sensor in palm rest HD720p resolution, wider view angle, low light sensitive, fixed focus														
Graphics	NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics, Intel HD Graphics 3000 in processor, and NVIDIA Quadro® 1000M or 2000M , PCI Express® x16, 2GB memory, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports three independent displays; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @85Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)														
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions														
Dimensions (WxDxH) ³	<i>HD & HD+:</i> 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm <i>FHD:</i> 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm														
Weight ²	<i>6-cell:</i> starting at 5.40 lb (2.45kg); <i>9-cell:</i> starting at 5.75 lb (2.61kg)														
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Glass-fiber reinforced plastic without paint														
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom <i>6-cell:</i> up to 6.5 hr; <i>9-cell:</i> up to 10.8 hr; <i>9-cell plus slice battery:</i> up to 21.6 hr														
Chipset ExpressCard Smart Card Read Multicard Reader Ports	Mobile Intel QM67 Express Chipset One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)														
PCIe Mini Card WLAN ⁴ WWAN Modem Bluetooth™ Ethernet	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable 56K V.92 ⁵ modem Bluetooth 3.0 wireless, LED indicator <i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT)									Supports ThinkVantage® technologies 170-watt AC adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378					
Intel AMT Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole														
Security Security chip Fingerprint reader	Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip									For compatible accessories, please go to O-W520 sheet; For ThinkPlus™, 22 service upgrade options, please go to S-TA sheet					
Limited warranty ¹² 3-years/1-yr battery - depot repair service / service upgrades²² available															

See footnotes for more detailed information

US models announced March 1, 2011; previous models on February 22, 2011

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Enhanced 12.7mm

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD Burner Ultrabay Enhanced II SATA	43N3294	ann	01/07/10

Storage and removable storage

256GB 1.8" FDE Solid State Drive ⁴¹	43N3417	ann	06/23/09
160GB 2.5" Intel X25-M Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0G/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in the Ultrabay.

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

ThinkPad Mini Dock Plus Series 3 (170W)	433830U	ann	02/22/11
Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Batteries

ThinkPad Battery 55+ (6-cell)	57Y4185	ann	03/30/10
ThinkPad Battery 55++ (9-cell)	57Y4186	ann	03/30/10
ThinkPad Battery 27++ (9-cell, slice) ⁴³	57Y4545	ann	01/07/10

⁴³ To be used along with system battery for all-day computing;

attaches under ThinkPad using docking connector

(not supported when using Series 3 Port Replicator or Docks).

ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05
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⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 170W AC Adapter for W520	0A36227	ann	03/01/11
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More info at www.lenovo.com/support/poweradapters

Carrying Cases

Up to 15.6" widescreen models:

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
Wenger Backpack for Lenovo	57Y4271	ann	01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann	01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann	01/07/10

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10

www.lenovo.com/support/thinkpad/optimus-monitors

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories

www.lenovo.com/support/notebookaccessories

www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad X100e



Lenovo ThinkPad X100e



Lenovo ThinkPad X100e



Lenovo ThinkPad X100e with 3-cell battery



Lenovo ThinkPad X100e



Lenovo ThinkPad X100e family

ThinkPad® X100e (3508) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Proc- essor	GHz	Memory	Wide- screen display	CCFL or LED	Camera	Integrated graphics	Disk SATA GB ⁶ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Blue- tooth	Preload	Avail date
3508-28U	MV-40	1.60	1GB	11.6" HD	LED	0.3M	HD 3200	160GB 5400	11b/g/n	WWAN upg		black		Home P 32	Jan 10
3508-29U	MV-40	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	WWAN upg		black		Pro 32	Jan 10
3508-2AU	MV-40	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	Gobi 2000	AT&T ²³	black		Pro 32	Jan 10
3508-9BU	L335	1.60	1GB	11.6" HD	LED	0.3M	HD 3200	160GB 5400	11b/g/n	WWAN upg		black		Home P 32	Mar 10
3508-9CU	L335	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	WWAN upg		black		Pro 32	Mar 10
3508-9DU	L335	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	WWAN upg		red		Pro 32	Mar 10
3508-9EU	L335	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	Gobi 2000		black	Blue	Pro 32	Mar 10
3508-9TU	L335	1.60	1GB	11.6" HD	LED	0.3M	HD 3200	160GB 5400	11b/g/n	Gobi 2000	AT&T	black		Home P 32	Apr 10
3508-A9U	MV-40	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	WWAN upg		black	Blue	Home P 32	Jul 10
3508-AAU	L335	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	Gobi 2000	selectable	black		Pro 32	Jul 10
3508-AHU	L335	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	160GB 5400	11a/b/g/n	WWAN upg		black	Blue	Home P 32	Jul 10
3508-AKU	L335	1.60	2GB	11.6" HD	LED	0.3M	HD 3200	250GB 5400	11b/g/n	WWAN upg		black		Home P 32	Sep 10
3508-ALU	MV-40	1.60	1GB	11.6" HD	LED	0.3M	HD 3200	160GB 5400	11b/g/n	Gobi 2000	selectable	black	Blue	Home P 32	Sep 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD Athlon™ Neo Processor for Ultrathin Notebooks MV-40 with single-core, virtualization technology, integrated DDR2 memory controller, and 512KB L2 cache or AMD Athlon Neo X2 Processor for Ultrathin Notebooks L335 with dual-core, virtualization technology, integrated DDR2 memory controller, and 512KB L2 cache	Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 32 - Some: Genuine Windows 7 Professional 32
Memory	1GB or 2GB std / 4GB max ⁷ / PC2-5300 667MHz DDR2 , non-parity, dual-channel capable, two 200-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Windows Live™ Toolbar • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
SATA DVD±RW SATA disk	None (use optional USB-based optical drive) 160GB⁸ (5400 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 9.5mm high, Active Protection System™, upgradable	
Widescreen display Camera	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight , 200 nits, 16:9 aspect ratio, 300:1 contrast ratio Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive	
Integrated graphics	ATI™ Radeon™ HD 3200 graphics , in M780G, external analog monitor support via VGA DB-15 connector; <i>Maximum external resolution:</i> 2048x1536 @ 60Hz	
Keyboard TrackPoint® Touch pad ThinkLight™	Full-size, 6-row, spill-resistant, multimedia Fn keys TrackPoint pointing device, Internet Scroll Bar ¹³ , magnifying glass Two-button touch pad, supports multi-touch function None	
Dimensions ³ Weight ² Case	<i>6-cell:</i> 11.1" x 8.2" x 0.6-1.2"; 282mm x 209mm x 16-30mm <i>6-cell:</i> from 3.3 lb (1.5kg) <i>Color:</i> black or red; <i>Material:</i> PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic	
Battery - type Battery - life ¹⁰	Lithium Ion 6-cell <i>6-cell:</i> up to 5 hr	Supports ThinkVantage® technologies
Chipset	AMD M780G Chipset, SB710 south bridge	
Multicard reader ExpressCard/54 Ports	4-in-1 reader (MultiMediaCard, Memory Stick, Mem Stick Pro, Secure Digital) None Three USB 2.0 (one powered), external monitor (VGA DB-15), ethernet (RJ-45)	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 via 800-426-7378
PCIe Mini Card 11b/g/n 11a/b/g/n	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x2 <i>Some:</i> 11a/b/g/n wireless, ThinkPad 11a/b/g/n, PCIe Half Mini Card, Broadcom® chipset, 2x2	ThinkPlus™, 22 1-year LOR ²⁴ 9x5 NBD 45K5968
WWAN upg Gobi™ 2000	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS	ThinkPlus 2-year LOR 9x5 NBD 45K5969
Carrier	<i>Some:</i> AT&T®, contract required with service provider <i>Some:</i> User selectable at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider	ThinkPlus 3-year LOR 9x5 NBD 45K5970
Modem Bluetooth™ Ethernet	None <i>Some:</i> Bluetooth 2.1 wireless Realtek RT8111DL Gigabit Network Connection, PHY, PCIe x1	ThinkPlus 4-year LOR 9x5 NBD 45K5973
Audio support	High Definition (HD) Audio, Conexant CX20582-11Z codec / stereo speakers, 1.5 watt x 2 / combo audio/mic jack	ThinkPlus 2-year P&L P/U Depot 45K5971
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole None None	ThinkPlus 3-year P&L P/U Depot 45K5972
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced September 21, 2010;
previous models on January 5, March 30, April 6, July 6, or July 27, 2010

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Memory

1GB PC2-5300 DDR2 SODIMM	40Y7734	ann	01/05/06
1GB PC2-5300 DDR2 SODIMM (25-Pack)	51J0502	ann	03/17/09
2GB PC2-5300 DDR2 SODIMM	40Y7735	ann	11/28/06
2GB PC2-5300 DDR2 SODIMM (25-Pack)	51J0548	ann	03/17/09

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

⁵³ USB-only attach.**Wireless WAN (Mini PCI Express)**

Only WWAN upgradable models:

ThinkPad AT&T® Gobi 2000 Broadband Opt	78Y1398	ann	01/07/10
ThinkPad Gobi 2000 Broadband Option	78Y1399	ann	01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
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⁵⁶ USB Port Replicator with Digital Video 45K1610 is not supported by ThinkPad X100e due to the system's CPU capabilities.**Keyboard**

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Preferred Pro USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann	11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann	11/25/08

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries

ThinkPad Battery 17+ (6-cell)	57Y4559	ann	01/05/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696		
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com**Carrying Cases**

ThinkPad 11W Case Sleeve	57Y4286	ann	01/05/10
ThinkPad 11W Sling Case	57Y4287	ann	01/05/10

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

ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10

Monitor Accessories⁴⁶

ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo® ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e



Lenovo ThinkPad X120e

ThinkPad® X120e (0596) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Integrated graphics	Disk SATA GB ⁹ rpm	SATA optical	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Blue-tooth	Bat-tery cells	Preload
0596-2UU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-2TU	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	Gobi 2000	selectable	Blue	6	Pro 64
0596-2SU	E-240	1.50	2+1GB	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2RU	E-350	1.60	2GBx2	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2PU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64
0596-2NU	E-350	1.60	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg			6	Pro 64
0596-24U	E-240	1.50	2GBx1	11.6" HD	0.3M	HD 6310	320G 7200	None	TP 11b/g/n	WWAN upg		Blue	6	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Entry ultraportable for excellent usability and reliability; one spindle AMD Fusion™ Processor E-240 with single-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 512KB L2 cache AMD Fusion Processor E-350 with dual-core, virtualization technology, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) Preloaded applications¹⁴ (all OSes; only some listed) • Adobe® Reader® • Skype™ for Windows • Windows Live™ Essentials • Microsoft Office 2010 preloaded; purchase product key to activate			
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets * System automatically clocks down for processors with 1066MHz DDR3 memory controller													
Optical SATA disk	None (use optional USB-based optical drive) Some: Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, upgradable, Active Protection System™													
Widescreen display	11.6" (295mm) HD (1366x768) TFT color , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio													
Camera	Camera on top of screen, 0.3-megapixel, fixed focus, low light sensitive, LED indicator													
Graphics	AMD Radeon™ HD 6310 graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; Maximum external resolution: 2560x1600 (VGA) @60Hz; 1920x1080 (HDMI) @60Hz(1080p)													
Keyboard	Full-size, 6-row, 89-key, spill-resistant, multimedia Fn keys													
TrackPoint®	TrackPoint pointing device, Internet Scroll Bar ¹³ , magnifying glass													
Touch pad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch													
ThinkLight™	None													
Dimensions ³	3-cell: 11.1" x 7.4" x 0.6-1.2"; 282mm x 189mm x 15.6-29.5mm 6-cell: 11.1" x 8.3" x 0.6-1.2"; 282mm x 210mm x 15.6-29.5mm													
Weight ²	3-cell: from 2.93 lb (1.33kg); 6-cell: from 3.31 lb (1.5kg)													
Case color	Matte black (top)													
Case material	Top: PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic; Bottom: Magnesium alloy													
Battery - type	Lithium Ion 3-cell or 6-cell													
Battery - life ¹⁰	3-cell: up to 3 hr; 6-cell: up to 6 hr													
Chipset	AMD A50M FCH Chipset													
Multicard reader	4-in-1 reader (MMC, SD, Memory Stick, Memory Stick Pro)													
ExpressCard	None													
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card	Two PCI Express Mini Card slots													
WLAN	11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card, Realtek® chipset, 1x1													
WWAN	Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 2000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS Some: User selectable carrier at first boot, AT&T, Verizon®, or Sprint®, contract required with service provider										Supports ThinkVantage® technologies			
Modem	None													
Bluetooth™	Some: Bluetooth 3.0 wireless (requires Bluetooth 3.0 driver support)													
Ethernet	Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1													
Audio support	High Definition (HD) Audio, Conexant CX20582 codec / stereo speakers, 1 watt x 2 / digital mono microphone, combo audio/mic jack													
Security	Power-on password, hard disk password, supervisor password, security keyhole													
Security chip	None													
Fingerprint reader	None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available										For compatible accessories, please go to O-X120-E sheet; For ThinkPlus™ service upgrade options, please go to S-TA sheet			

See footnotes for more detailed information
US models announced February 15, 2011

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(MNK2-1) February 2011

Memory⁶⁴

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

⁶⁴ System automatically clocks down for processors with 1066MHz DDR3 memory controller.

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

⁵³ USB-only attach.

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann	01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann	01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
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Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Preferred Pro USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann	11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann	11/25/08

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries

ThinkPad Battery 17+ (6-cell)	57Y4559	ann	01/05/10
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter* 40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

ThinkPad 11W Case Sleeve	57Y4286	ann	01/05/10
ThinkPad 11W Sling Case	57Y4287	ann	01/05/10

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

Monitors

ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
 Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad X201
(TrackPoint model)



Lenovo ThinkPad X201 with
ThinkPad Battery 47++ (9-cell)
43R9255



Lenovo ThinkPad X201
(UltraNav model)



Lenovo ThinkPad X201
(UltraNav model)



ThinkPad X200 UltraBase
43R8781



ThinkPad 65W AC Adapter
40Y7696

ThinkPad® X201 (3249) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Proc- essor	Max Base turbo (GHz)(GHz)	Memory	Wide- screen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad X200 UltraBase	PCle Mini Card 802.11	PCle Mini Card WWAN	Carrier	Intel vPro	Preload	Avail date
3249-2EU	i5-540M	2.53 3.06	2GB	12.1" WXGA	250G 5400			Intel 6200 ²⁸	WWAN upg	vPro Pro 32	Mar 10			
3249-2FU	i5-540M	2.53 3.06	2GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	Intel 6200	WWAN upg	vPro Pro 32	Mar 10			
3249-2GU	i5-540M	2.53 3.06	4GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	Intel 6200	Gobi 2000	Verizon ¹⁶	vPro Pro 32	Mar 10		
3249-2HU	i5-520M	2.40 2.93	4GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	Intel 6200	WWAN upg	vPro Pro 32	Mar 10			
3249-2TU	i5-540M	2.53 3.06	4GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	WiMAX	WWAN upg	vPro Pro 64	Mar 10			
3249-2UJ	i5-540M	2.53 3.06	4GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	Intel 6200	Gobi 2000	AT&T ²³	vPro Pro 64	Mar 10		
3249-2VU	i5-540M	2.53 3.06	4GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	Intel 6200	WWAN upg	vPro Pro 64	Mar 10			
3249-C2U	i5-520M	2.40 2.93	2GB	12.1" WXGA	2.0M 160G 7200			Intel 6200	WWAN upg	vPro Pro 64	Apr 10			
3249-C3U	i5-520M	2.40 2.93	2GB	12.1" WXGA	2.0M 320G 7200			Intel 6200	WWAN upg	vPro Pro 64	Apr 10			
3249-EPU	i5-560M	2.66 3.20	2GB	12.1" WXGA	2.0M 320G 7200	DVD±RW	UltraBase	Intel 6200	WWAN upg	vPro Pro 64	Sep 10			
3249-ERU	i5-560M	2.66 3.20	2GB	12.1" WXGA	160G 7200			Intel 6200	WWAN upg	vPro Pro 64	Sep 10			

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5 processor i5-520M, i5-540M, or i5-560M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in 1 socket; 1 socket available	
SATA DVD±RW Ultrabay Slim SATA disk	<i>Some:</i> DVD burner, SATA 1.5Gb/s, removable from <i>X200 UltraBase</i> Supports Ultrabay Slim devices in optional or standard <i>X200 UltraBase</i> (43R8781) 160GB ⁸ (7200 rpm), 250GB (5400 rpm), or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std <i>X200 UltraBase</i>	
Widescreen display	12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 200 nits, 16:10 aspect ratio, 250:1 contrast ratio <i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus	
Camera		
Integrated graphics	Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DP) @60Hz; 2048x1536(VGA) @75Hz	
Keyboard	Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	<i>without UltraBase</i> ; 4/6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm <i>without UltraBase</i> ; 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm 4-cell: from 2.89 lb (1.31kg); 6-cell: from 3.18 lb (1.44kg); 9-cell: from 3.52 lb (1.60kg) Color: black; Material: magnesium alloy	
Weight ²		
Case	Lithium Ion 6-cell	
Battery - type	4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr	
Battery - life ¹⁰		
Chipset	Mobile Intel QM57 Express Chipset	
Media slice	<i>Some:</i> ThinkPad X200 UltraBase media slice (see right side)	
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)	
ExpressCard/54	One slot (ExpressCard/34, ExpressCard/54)	
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)	
PCle Mini Card	Two PCI Express Mini Card slots	
Intel 6200 ²⁸	<i>Some:</i> 11a/b/g/n wireless, PCle Mini Card, Intel Centrino® Advanced-N 6200, 2x2	
WiMAX	<i>Some:</i> 11a/b/g/n and WiMAX wireless, PCle Half Mini Card, Intel Centrino Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX	
WWAN upg	<i>Some:</i> Wireless WAN upgradable	
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider	
Carrier	<i>Some:</i> AT&T® or Verizon®, contract required with service provider	
Modem	56K V.92 ⁶ modem	
Bluetooth™	Bluetooth 2.1 wireless, LED indicator	
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCle x1	
Intel AMT	Intel Active Management Technology (iAMT)	
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

| | | **ThinkPad X200 UltraBase™** • Provides desktop expansion and cable management for X200 and X201 Series • Easily connects to the bottom of the X200 or X201 Series for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 250GB FDE 7200 rpm 43N3410 • 320GB Disk 7200 rpm 43N3411 Other features: • Power button (front) • Stereo speakers (2 watt) • Security key lock, security keyhole, and optional security screw • Analog DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet port • Microphone in and headphone out • Second battery charger • Requires 65 or 90 watt AC adapter • 1.6 lb; 730g 65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service¹⁷ 24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378 |

See footnotes for important warranty information

US models announced September 28, 2010; previous models on February 23, March 2, or April 20, 2010

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ThinkPad® X201 (3249) - TopSeller (Windows 7) - January 2011

Personal Systems Reference (PSREF)

Type-model	Proc- essor	Base (GHz)	Max turbo (GHz)	Memory	Wide- screen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad X200 UltraBase	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Intel vPro	Preload	Avail date
3249-1FU	i5-480M	2.66	2.93	2GB	12.1" WXGA	2.0M	160G 7200	Optional	Optional	Intel 1000	WWAN upg	No	Pro 64	Jan 11

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5 processor i5-480M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64			
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in 1 socket; 1 socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update			
SATA DVD±RW Ultrabay Slim SATA disk	Option for <i>ThinkPad X200 UltraBase</i> Supports Ultrabay Slim devices in optional or standard <i>X200 UltraBase</i> (43R8781) 160GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std <i>X200 UltraBase</i>										Supports ThinkVantage® technologies			
Widescreen display Camera	12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 200 nits, 16:10 aspect ratio, 250:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus										ThinkPad X200 UltraBase™ • Provides desktop expansion and cable management for X200 and X201 Series • Easily connects to the bottom of the X200 or X201 Series for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 250GB FDE 7200 rpm 43N3410 • 320GB Disk 7200 rpm 43N3411			
Integrated graphics	Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz										Other features: • Power button (front) • Stereo speakers (2 watt) • Security key lock, security keyhole, and optional security screw • Analog DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet port • Microphone in and headphone out • Second battery charger • Requires 65 or 90 watt AC adapter • 1.6 lb; 730g			
Keyboard TrackPoint® Touchpad ThinkLight™	Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch Illuminates the keyboard to improve visibility in low-light conditions										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 via 800-426-7378			
Dimensions ³	<i>without UltraBase</i> ; 4/6-cell: 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm <i>without UltraBase</i> ; 9-cell: 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm 4-cell: from 2.89 lb (1.31kg); 6-cell: from 3.18 lb (1.44kg); 9-cell: from 3.52 lb (1.60kg)													
Weight ² Case Battery - type Battery - life ¹⁰	<i>Color:</i> black; <i>Material:</i> magnesium alloy Lithium Ion 6-cell 4-cell: up to 3.4 hr; 6-cell: up to 6.7 hr; 9-cell: up to 11.3 hr													
Chipset	Mobile Intel QM57 Express Chipset													
Media slice Multicard reader ExpressCard/54 Ports	<i>Option:</i> ThinkPad X200 UltraBase media slice (see right side) 5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC) One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)													
PCIe Mini Card Intel 1000 WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable 56K V.92 ⁵ modem None Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 None High Definition (HD) Audio, Conexant 20585 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack													
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant None													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													

See footnotes for important warranty information
US model announced January 11, 2011

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(MOC3-7) January 2011

ThinkPad® X201i (3249) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Camera	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad X200 UltraBase	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Intel vPro	Preload	Avail date
3249-J2U	i3-330M	2.13	2GB	12.1" WXGA	None	250G 5400	Optional	Optional	Intel 1000	WWAN upg	No	Pro 32	Mar 10
3249-MCU	i3-330M	2.13	2GB	12.1" WXGA	None	160G 7200	Optional	Optional	Intel 1000	WWAN upg	No	Pro 64	Apr 10
3249-MDU	i3-370M	2.40	2GB	12.1" WXGA	None	160G 7200	Optional	Optional	Intel 1000	WWAN upg	No	Pro 64	Jul 10
3249-1HU	i3-390M	2.66	2GB	12.1" WXGA	None	160G 7200	Optional	Optional	Intel 1000	WWAN upg	No	Pro 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i3 processor i3-330M, i3-370M, or i3-390M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in 1 socket; 1 socket available	
SATA DVD±RW Ultrabay Slim SATA disk	Option for <i>ThinkPad X200 UltraBase</i> Supports Ultrabay Slim devices in optional or standard <i>X200 UltraBase</i> (43R8781) 160GB ⁸ (7200 rpm) or 250GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std <i>X200 UltraBase</i>	Supports ThinkVantage® technologies
Widescreen display	12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 200 nits, 16:10 aspect ratio, 250:1 contrast ratio	ThinkPad X200 UltraBase™ • Provides desktop expansion and cable management for X200 and X201 Series • Easily connects to the bottom of the X200 or X201 Series for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5Gb/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 250GB FDE 7200 rpm 43N3410 • 320GB Disk 7200 rpm 43N3411
Camera	None	
Integrated graphics	Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz	Other features: • Power button (front) • Stereo speakers (2 watt) • Security key lock, security keyhole, and optional security screw • Analog DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet port • Microphone in and headphone out • Second battery charger • Requires 65 or 90 watt AC adapter • 1.6 lb; 730g
Keyboard	Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys	
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass	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 via 800-426-7378
Touchpad	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch	
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions ³	<i>without UltraBase; 4/6-cell:</i> 11.6" x 8.3" x 0.8-1.4"; 295mm x 210mm x 20.7-35.3mm <i>without UltraBase; 9-cell:</i> 11.6" x 9.2" x 0.8-1.4"; 295mm x 233.8mm x 20.7-35.3mm <i>4-cell:</i> from 2.89 lb (1.31kg); <i>6-cell:</i> from 3.18 lb (1.44kg); <i>9-cell:</i> from 3.52 lb (1.60kg)	
Weight ²	<i>Color:</i> black; <i>Material:</i> magnesium alloy	
Case	Lithium Ion 6-cell	
Battery - type	<i>4-cell:</i> up to 3.4 hr; <i>6-cell:</i> up to 6.7 hr; <i>9-cell:</i> up to 11.3 hr	
Battery - life ¹⁰		
Chipset	Mobile Intel QM57 Express Chipset	
Media slice	<i>Option: ThinkPad X200 UltraBase media slice</i> (see right side)	
Multicard reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)	
ExpressCard/54	One slot (ExpressCard/34, ExpressCard/54)	
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)	
PCIe Mini Card	Two PCI Express Mini Card slots	
Intel 1000	11b/g/n wireless ⁴ , PCIe Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
WWAN upg	Wireless WAN upgradable	
Modem	56K V.92 ⁶ modem	
Bluetooth™	None	
Ethernet	Intel 82577LC Gigabit Network Connection (Hanksville), PHY, PCIe x1	
Intel AMT	None	
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / digital microphone, microphone input jack, headphone jack	
Security	Power-on password, hard disk password, supervisor password, security keyhole	
Security chip	Trusted Platform Module, TCG 1.2-compliant	
Fingerprint reader	None	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US model announced January 11, 2011; previous models on February 23, April 20, or July 6, 2010

US models withdrawn effective July 31, 2010

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(MOC3i-1) January 2011

65-watt AC Adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹² via 800-426-7378

Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann 06/23/09

Ultrabay Slim 9.5mm

<i>Most Ultrabay Slim accessories supported in ThinkPad X200 UltraBase</i>		
Serial ATA Hard Drive Bay Adapter III	43N3412	ann 06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann 08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann 06/23/09
Ultrabay Slim Blu-ray Burner II (SATA)	43N3230	ann 06/23/09

Storage and removable storage

160GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	41N5737	ann 10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43R8152	ann 01/15/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3410	ann 01/20/09
320GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43N3403	ann 08/05/08
320GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3411	ann 01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3423	ann 01/07/10

⁴¹ Can be used as the main HDD or with Serial ATA Hard Drive Bay Adapter III 43N3412 in X200 UltraBase (43R8781)

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)	43N3406	ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover)	43N3417	ann 06/23/09
ThinkPad 160GB Intel X25-M SSD ⁴¹	43N3435	ann 06/22/10

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10

⁵³ USB-only attach.

Wireless WAN (Mini PCI Express)

Only X201 WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann 01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB Port Replicator with Digital Video	45K1610	ann 07/28/09
ThinkPad X200 UltraBase	43R8781	ann 08/05/08

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
X200s (WXGA+), X201s 12W Privacy Filter	43R2470	ann 08/05/08
X200/X200s (WXGA), X201 12W Privacy Filter	55Y9264	ann 04/07/09
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
ExpressCard Gemplus Smart Card Reader	41N3043	ann 06/27/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Batteries

ThinkPad Battery 47 (4-cell)	43R9253	ann 08/05/08
ThinkPad Battery 47+ (6-cell)	43R9254	ann 08/05/08
ThinkPad Battery 47++ (9-cell)	43R9255	ann 08/05/08
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05

⁴⁴ Requires the ThinkPad 90W AC Adapter

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann 01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 12" widescreen models:

ThinkPad 12W Case Sleeve	51J0476	ann 08/18/09
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Up to 13.3" widescreen models:

ThinkPad Ultraportable Case	41U5062	ann 05/13/08
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Up to 15.6" widescreen models:

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08

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

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
DisplayPort to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08

⁵⁰ Can only be used via ThinkPad X200 UltraBase (43R8781)

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo® ThinkPad X220



Lenovo ThinkPad X220



ThinkPad 65W AC Adapter
40Y7696



Lenovo ThinkPad X220



Lenovo ThinkPad X220



Lenovo ThinkPad X220

ThinkPad® X220 (4287) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4287-2WU	i5-2520M	4GBx1	12.5" HD	720p	320G 7200	DVD±RW	UltraBase	Intel 1000	WWAN upg	Finger	Blue	6	None	Pro 64
4287-2VU	i5-2410M	4GBx1	12.5" HD	720p	320G 7200			Intel 1000	WWAN upg	Finger	Blue	6	None	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a depot repair service 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology Intel Core i5-2520M processor (dual-core, 2.50GHz, 3MB Cache) , DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <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, 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	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard TrackPoint® Touchpad ThinkLight™	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, buttonless touchpad below keyboard, multi-touch Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³ Weight ² Case material Standard Battery External Battery Battery - life ¹⁰	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-34.6mm <i>4-cell:</i> from 2.97 lb (1.35kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery None <i>4-cell:</i> up to 4.1 hr; <i>6-cell:</i> up to 9.2 hr; <i>9-cell:</i> up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; <i>6-cell plus external battery:</i> up to 23.2 hr		
Chipset	Mobile Intel QM67 Express Chipset		
Ultrabase Multicard reader ExpressCard Ports	<i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 3-in-1 reader (SD, SDHC, SDXC) One slot (ExpressCard/34, ExpressCard/54) <i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card WLAN WWAN Modem Bluetooth™ Ethernet	Two PCI Express Mini Card slots 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN upgradable None Bluetooth 3.0 wireless, LED indicator <i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT Audio support	None High Definition (HD) Audio, Conexant 20672 codec / stereo speaker, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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; 620g
65-watt AC Adapter 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 via 800-426-7378

See footnotes for more detailed information
US models announced March 1, 2011

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ThinkPad® X220i (4286) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4286-2AU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <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, 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		Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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; 620g 65-watt AC Adapter 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 via 800-426-7378
Camera	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-34.6mm		
Weight ²	4-cell: from 2.97 lb (1.35kg)		
Case material	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy		
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery		
External Battery	None		
Battery - life ¹⁰	4-cell: up to 4.1 hr; 6-cell: up to 9.2 hr; 9-cell: up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; 6-cell plus external battery: up to 23.2 hr		
Chipset	Mobile Intel QM67 Express Chipset		
Ultrabase	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side)		
Multicard reader	3-in-1 reader (SD, SDHC, SDXC)		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Ports	<i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	None		
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speaker, 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	None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model announced March 1, 2011

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(DSH1i-1) March 2011

ThinkPad® X220i (4287) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB ⁹ rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload
4287-2UU	i3-2310M	4GBx1	12.5" HD	720p	320G 7200	Optional	Optional	Intel 1000	WWAN upg	None	None	6	None	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a depot repair service 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	An ultraportable for the executive on the move; one spindle Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache), DDR3 memory controller (up to 1333MHz), HT technology		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Ready to install applications ¹⁴ (all OSes; only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox Preloaded applications ¹⁴ (all OSes; only some listed) • Norton™ Internet Security 2011 (30 days of virus definitions) • Skype™ for Windows Supports ThinkVantage® technologies ThinkPad Ultrabase Series 3 • Provides desktop expansion and cable management for X220 and X220 Tablet • Easily connects to the bottom of the X220 or X220 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 128GB 2.5" SSD II 0A33984 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; 620g 65-watt AC Adapter 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 via 800-426-7378
Memory	8GB max ⁷ / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay SATA disk	Option for ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <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, 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	HD720p resolution, wider view angle, low light sensitive, fixed focus		
Graphics	Intel HD Graphics 3000 in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915); supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)		
Keyboard	7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys		
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass		
Touchpad	UltraNav™, buttonless touchpad below keyboard, multi-touch		
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions		
Dimensions ³	<i>without UltraBase; 4/6-cell:</i> 12.0" x 8.13" x 0.75-1.05"; 305mm x 206.5mm x 19.0-34.6mm		
Weight ²	<i>4-cell:</i> from 2.97 lb (1.35kg)		
Case material	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy		
Standard Battery	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional external battery (0A36280) as 2nd battery		
External Battery	None		
Battery - life ¹⁰	<i>4-cell:</i> up to 4.1 hr; <i>6-cell:</i> up to 9.2 hr; <i>9-cell:</i> up to 13.8 hr; <i>external battery:</i> up to 9.4 hr; <i>6-cell plus external battery:</i> up to 23.2 hr		
Chipset	Mobile Intel QM67 Express Chipset		
Ultrabase	<i>Option:</i> ThinkPad Ultrabase Series 3 (see right side)		
Multicard reader	3-in-1 reader (SD, SDHC, SDXC)		
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)		
Ports	<i>i7 model:</i> One USB 3.0, two USB 2.0 (one powered) <i>other model:</i> Three USB 2.0 (one powered) external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)		
PCIe Mini Card	Two PCI Express Mini Card slots		
WLAN	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2		
WWAN	Wireless WAN upgradable		
Modem	None		
Bluetooth™	None		
Ethernet	<i>Non-vPro model:</i> Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1 <i>vPro model:</i> Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1		
Intel AMT	None		
Audio support	High Definition (HD) Audio, Conexant 20672 codec / stereo speaker, 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	None		
Limited warranty ¹²	3-years/1-yr battery - depot repair service / service upgrades ²² available		

See footnotes for more detailed information
US model announced March 1, 2011

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Memory

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Ultrabay Slim 9.5mm

Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3

Serial ATA Hard Drive Bay Adapter III	43N3412	ann	06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann	08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann	06/23/09

Storage and removable storage

160GB 2.5" Intel X25-M Solid State Drive II ⁴¹	0A33983	ann	02/22/11
128GB 2.5" Solid State Drive II ⁴¹	0A33984	ann	02/22/11
250GB 7200rpm SATA 3.0G/s			
OPAL-capable FDE HDD II ⁴¹	0A33985	ann	02/22/11
320GB 7200rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33986	ann	02/22/11
320GB 5400rpm SATA 3.0Gb/s Hard Drive II ⁴¹	0A33987	ann	02/22/11

⁴¹ Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in ThinkPad Ultrabase Series 3

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann	01/07/10
⁵³ USB-only attach.			
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

ThinkPad Ultrabase Series 3	0A33932	ann	03/01/11
ThinkPad Port Replicator Series 3	433610W	ann	06/23/09
ThinkPad Mini Dock Series 3	433710U	ann	06/23/09
ThinkPad Mini Dock Plus Series 3	433810U	ann	06/23/09
Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
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Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06
ExpressCard Gemplus Smart Card Reader	41N3043	ann	06/27/06

Batteries

ThinkPad Battery 29 (4-cell)	0A36281	ann	03/01/11
ThinkPad Battery 29+ (6-cell)	0A36282	ann	03/01/11
ThinkPad Battery 29++ (9-cell)	0A36283	ann	03/01/11
ThinkPad Battery 19+ (6-cell, Slim External)	0A36280	ann	03/01/11
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter 40Y7659* or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann	01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultrastim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultrastim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

Up to 12" widescreen models:			
ThinkPad 12W Case Sleeve	51J0476	ann	08/18/09

Up to 13.3" widescreen models:			
ThinkPad Ultraportable Case	41U5062	ann	05/13/08

Up to 15.6" widescreen models:			
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08

More information at www.lenovo.com/support/cases
Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
Lenovo DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to Single-link DVI-D Cable	45J7915	ann	08/05/08
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories
Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad X201 Tablet



Lenovo ThinkPad X201 Tablet



Lenovo ThinkPad X201 Tablet



Lenovo ThinkPad X201 Tablet



Lenovo ThinkPad X201 Tablet with
ThinkPad X200 Tablet Sleeve
43R9115



Lenovo ThinkPad X201 Tablet with
ThinkPad X200 Tablet Sleeve
43R9115

ThinkPad® X201 Tablet (2985) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Proc- essor	Max Base turbo (GHz)(GHz)	Memory	Widescreen display	Camera (Mega- pixel)	Disk SATA GB ³ rpm	Optical in UltraBase	ThinkPad X200 UltraBase	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Bat- tery Intel vPro	Preload	Avail date	
2985-C2U	i7-640LM	2.13	2.93	2GB	12.1" WXGA	Entry	250G 5400		Intel 6200 ²⁸	upg	4	vPro	Pro 32	Mar 10	
2985-C3U	i7-640LM	2.13	2.93	2GB	12.1" WXGA	Entry	2.0 320G 7200	DVD±RW	UltraB	Intel 6200		8	vPro	Pro 32	Mar 10
2985-C4U	i7-640LM	2.13	2.93	4GB	12.1" WXGA	Entry	2.0 320G 7200	DVD±RW	UltraB	Intel 6200	Gobi Verizon ¹⁶	8	vPro	Pro 32	Mar 10
✂ 2985-C5U	i7-640LM	2.13	2.93	4GB	12.1" WXGA	Outdoor	2.0 320G 7200		Intel 6200	upg		8	vPro	Pro 32	Mar 10
2985-C6U	i7-640LM	2.13	2.93	2GB	12.1" WXGA	Multi	2.0 250G 5400		Intel 6200	upg		8	vPro	Pro 32	Mar 10
2985-C7U	i7-640LM	2.13	2.93	4GB	12.1" WXGA	Multi	2.0 320G 7200	DVD±RW	UltraB	Intel 6200		8	vPro	Pro 32	Mar 10
☞ 2985-EWU	i7-640LM	2.13	2.93	4GB	12.1" WXGA	Entry	2.0 320G 7200	DVD±RW	UltraB	Intel 6200	Gobi Verizon	8	vPro	Pro 64	Mar 10
☞ 2985-EXU	i7-640LM	2.13	2.93	4GB	12.1" WXGA	Entry	2.0 320G 7200	DVD±RW	UltraB	Intel 6200	Gobi AT&T ²³	8	vPro	Pro 64	Mar 10
☞ 2985-EYU	i7-640LM	2.13	2.93	4GB	12.1" WXGA	Multi	2.0 320G 7200	DVD±RW	UltraB	Intel 6200	upg	8	vPro	Pro 64	Mar 10
• These small and medium business (SMB) models are part of the US TopSeller™ Program • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i7 processor i7-640LM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64				
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in 1 socket; 1 socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software • ThinkVantage Toolbox • Lenovo SimpleTap (Multi-Touch models) • Adobe® Reader® • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® WinDVD® (DVD±RW) • Corel Burn.Now™ Lenovo Edition (DVD±RW) • Corel DVD MovieFactory® Lenovo Edition (DVD±RW)				
SATA DVD±RW Ultrabay Slim SATA disk	Some: DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 250GB⁸ (5400 rpm) or 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase														
Widescreen display	<i>Entry:</i> 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight , 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless <i>Outdoor:</i> 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight , 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, PVA or IPS <i>MultiTouch:</i> 12.1" (308mm) WXGA (1280x800) TFT color, anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch) <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)														
Camera	Some: camera on top of screen, 2.0-megapixel, fixed focus										Supports ThinkVantage® technologies				
Integrated graphics	Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz										ThinkPad X200 UltraBase™ • Provides desktop expansion and cable management for X200 and X201 Series • Easily connects to the bottom of the X200 or X201 Series for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 250GB FDE 7200 rpm 43N3410 • 320GB Disk 7200 rpm 43N3411				
Keyboard TrackPoint® Touchpad ThinkLight™	Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch None														
Dimensions ³	<i>without UltraBase; 4-cell:</i> 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm <i>without UltraBase; 8-cell:</i> 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33.3mm <i>4-cell:</i> from 3.57 lb (1.62kg); <i>8-cell:</i> from 3.96 lb (1.8kg) <i>Color:</i> black; <i>Material:</i> magnesium alloy														
Weight ²															
Case															
Battery - type	Lithium Ion 4-cell or 8-cell														
Battery - life ¹⁰	<i>4-cell:</i> up to 3.5 hr; <i>8-cell:</i> up to 7.9 hr														
Chipset	Mobile Intel QM57 Express Chipset														
Media slice	Some: ThinkPad X200 UltraBase media slice (see right side)														
Multicard Reader ExpressCard/54	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)														
Ports	One slot (ExpressCard/34, ExpressCard/54) Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)														
PCIe Mini Card	Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider														
Carrier	Some: AT&T® or Verizon®, contract required with service provider														
Modem	56K V.92 ⁹ modem														
Bluetooth™	Bluetooth 2.1 wireless, LED indicator														
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1														
Intel AMT	Intel Active Management Technology (iAMT)														
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant														
Security	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Security chip															
Fingerprint reader															
Limited warranty ¹²	3-years/1-yr battery & digitizer pen - depot repair service / service upgrades²² available										Other features: • Power button (front) • Stereo speakers (2 watt) • Security key lock, security keyhole, and optional security screw • Analog DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet port • Microphone in and headphone out • Second battery charger • Requires 65 or 90 watt AC adapter • 1.6 lb; 730g 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 via 800-426-7378				

See footnotes for important warranty information

☞ US models announced March 2, 2010; previous models on February 23, 2010

✕ US model withdrawn effective January 2011

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(CML3-1) December 2010

ThinkPad® X201 Tablet (2985) - TopSeller (Windows 7) - April 2010

Personal Systems Reference (PSREF)

Type-model	Processor	Max turbo (GHz)		Memory	Widescreen display	Camera (Mega-pixel)	Disk SATA GB ⁵ rpm	Optical in UltraBase	ThinkPad X200 UltraBase	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Bat-tery cells	Intel vPro	Preload	Avail date
2985-F2U	i7-620LM	2.00	2.80	2GB	12.1" WXGA	Entry	2.0 160G 7200	DVD±RW	UltraB	Intel 6200 ²⁸	Gobi	Verizon ¹⁶	8	vPro	Pro 64	Apr 10
2985-F3U	i7-620LM	2.00	2.80	2GB	12.1" WXGA	Outdoor	2.0 160G 7200			Intel 6200	upg		8	vPro	Pro 64	Apr 10
2985-F4U	i7-620LM	2.00	2.80	2GB	12.1" WXGA	Multi	2.0 320G 7200	DVD±RW	UltraB	Intel 6200	upg		8	vPro	Pro 64	Apr 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i7 processor i7-620LM with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 4MB cache										Preloaded operating system²⁰ - Genuine Windows® 7 Professional 64		
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in 1 socket; 1 socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Windows Live™ Toolbar • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch		
SATA DVD±RW Ultrabay Slim SATA disk	<i>Some:</i> DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB⁸ (7200 rpm) or 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase												
Widescreen display	<i>Entry:</i> 12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless <i>Outdoor:</i> 12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, PVA or IPS <i>MultiTouch:</i> 12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch) <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)												
Camera	Camera on top of screen, 2.0-megapixel, fixed focus										Supports ThinkVantage® technologies		
Integrated graphics	Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz										ThinkPad X200 UltraBase™ • Provides desktop expansion and cable management for X200 and X201 Series • Easily connects to the bottom of the X200 or X201 Series for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – DVD-ROM Ultrabay Slim Drive II SATA 1.5Gb/s 43N3292 – Serial ATA Hard Drive Bay Adapter III 43N3412 Disks supported (some): • 250GB FDE 7200 rpm 43N3410 • 320GB Disk 7200 rpm 43N3411		
Keyboard TrackPoint® Touchpad ThinkLight™	Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch None												
Dimensions ³	<i>without UltraBase; 4-cell:</i> 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm <i>without UltraBase; 8-cell:</i> 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33.3mm <i>4-cell:</i> from 3.57 lb (1.62kg); <i>8-cell:</i> from 3.96 lb (1.8kg) <i>Color:</i> black; <i>Material:</i> magnesium alloy												
Weight ²													
Case													
Battery - type	Lithium Ion 8-cell												
Battery - life ¹⁰	<i>4-cell:</i> up to 3.5 hr; <i>8-cell:</i> up to 7.9 hr												
Chipset	Mobile Intel QM57 Express Chipset												
Media slice	<i>Some:</i> ThinkPad X200 UltraBase media slice (see right side)												
Multicard Reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)												
ExpressCard/54	One slot (ExpressCard/34, ExpressCard/54)												
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)												
PCIe Mini Card	Two PCI Express Mini Card slots												
Intel 6200 ²⁸	11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2												
WWAN upg	<i>Some:</i> Wireless WAN upgradable												
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider												
Carrier	<i>Some:</i> Verizon®, contract required with service provider												
Modem	56K V.92 ⁶ modem												
Bluetooth™	Bluetooth 2.1 wireless, LED indicator												
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1												
Intel AMT	Intel Active Management Technology (iAMT)												
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery & digitizer pen - depot repair service / service upgrades²² available												

See footnotes for important warranty information

US models announced April 20, 2010

2985 US model withdrawn effective January 2011

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(CML3-8) December 2010

65-watt AC Adapter
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
ROHS-compliant
International Warranty Service¹⁷
24 hour x 7 day¹⁸ toll-free support during the warranty period¹²
via 800-426-7378

ThinkPad® X201 Tablet (2985) - TopSeller (Windows 7) - June 2010

Personal Systems Reference (PSREF)

Type-model	Proc- essor	Max Base turbo (GHz)	Memory	Widescreen display	Camera (Mega- pixel)	Disk SATA GB ³ rpm	Optical in UltraBase	ThinkPad X200 UltraBase	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Bat- tery Intel cells vPro	Preload	Avail date
2985-F7U	i5-520UM	1.06	1.86	4GB	12.1" WXGA Multi	2.0M 320G 7200	DVD±RW	UltraB	Intel 6200 ²⁸	WWAN upg	8	vPro Pro 32 Jun 10	
2985-FAU	i5-520UM	1.06	1.86	2GB	12.1" WXGA Entry	250G 5400			Intel 6200	WWAN upg	4	vPro Pro 64 Jun 10	
2985-FBU	i5-520UM	1.06	1.86	2GB	12.1" WXGA Outdoor	2.0M 320G 7200			Intel 6200	WWAN upg	8	vPro Pro 64 Jun 10	
2985-FCU	i5-520UM	1.06	1.86	2GB	12.1" WXGA Multi	2.0M 250G 5400			Intel 6200	WWAN upg	8	vPro Pro 64 Jun 10	
2985-FSU	i5-560M	2.66	3.20	2GB	12.1" WXGA Entry	160G 7200			Intel 6200	WWAN upg	4	vPro Pro 64 Sep 10	
2985-FYU	i5-560M	2.66	3.20	2GB	12.1" WXGA Outdoor	2.0M 160G 7200			Intel 6200	WWAN upg	8	vPro Pro 64 Sep 10	

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Convertible tablet ultraportable; one spindle Intel® Core™ i5 processor i5-520UM with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 800MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-560M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64		
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in 1 socket; 1 socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Lenovo SimpleTap (Multi-Touch models) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch		
SATA DVD±RW Ultrabay Slim SATA disk	<i>Some:</i> DVD burner, SATA 1.5Gb/s, removable from X200 UltraBase Supports Ultrabay Slim devices in optional or standard X200 UltraBase (43R8781) 160GB⁸ (7200 rpm), 250GB⁸ (5400 rpm), or 320GB⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™, supports second disk in opt or std X200 UltraBase												
Widescreen display	<i>Entry:</i> 12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 200 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, frameless <i>Outdoor:</i> 12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 400 nits, 16:10 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, PVA or IPS <i>MultiTouch:</i> 12.1" (308mm) WXGA (1280x800) TFT color , anti-glare, LED backlight , 300 nits, 16:10 aspect ratio, 500:1 contrast ratio, PVA or IPS, enhanced MultiTouch (touchscreen support pen & two-finger touch) <i>All:</i> WideView (170° viewing), anti-reflective and anti-glare protective coatings, write on screen with standard digitizer pen , pen holder in side base (right), rotatable dual swivel hinge for tablet mode (portrait or landscape) or picture frame mode (keyboard faces away from user), buttons on display bottom (power with slide-lock, reset, rotation, menu, all button lock)												
Camera	<i>Some:</i> camera on top of screen, 2.0-megapixel, fixed focus												
Integrated graphics	Intel HD Graphics in processor, external monitor support via analog VGA DB-15 connector / DisplayPort via UltraBase; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DP)@60Hz; 2048x1536(VGA)@75Hz												
Keyboard TrackPoint® Touchpad ThinkLight™	Full-size, 89-key, ThinkVantage button, spill-resistant, mm Fn keys TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions, multi-touch None												
Dimensions ³	<i>without UltraBase; 4-cell:</i> 11.6" x 9" x 1-1.3"; 295mm x 228mm x 26.5-33.3mm <i>without UltraBase; 8-cell:</i> 11.6" x 10.1" x 1-1.3"; 295mm x 257mm x 26.5-33.3mm <i>4-cell:</i> from 3.57 lb (1.62kg); <i>8-cell:</i> from 3.96 lb (1.8kg)												
Weight ²	<i>Color:</i> black; <i>Material:</i> magnesium alloy												
Case	Lithium Ion 4-cell or 8-cell												
Battery - type	<i>4-cell:</i> up to 3.5 hr; <i>8-cell:</i> up to 7.9 hr												
Battery - life ¹⁰													
Chipset	Mobile Intel QM57 Express Chipset												
Media slice	<i>Some:</i> ThinkPad X200 UltraBase media slice (see right side)												
Multicard Reader	5-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC)												
ExpressCard/54	One slot (ExpressCard/34, ExpressCard/54)												
Ports	Three USB 2.0 (one powered), external monitor (VGA DB-15), modem (RJ-11), ethernet (RJ-45)												
PCIe Mini Card Intel 6200 ²⁸ WWAN upg	Two PCI Express Mini Card slots 11a/b/g/n wireless, PCIe Mini Card, Intel Centrino® Advanced-N 6200, 2x2 Wireless WAN upgradable												
Modem	56K V.92 ⁶ modem												
Bluetooth™	Bluetooth 2.1 wireless, LED indicator												
Ethernet	Intel 82577LM Gigabit Network Connection (Hanksville), PHY, PCIe x1												
Intel AMT	Intel Active Management Technology (iAMT)												
Audio support	High Definition (HD) Audio, Conexant 20585 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic input jack, headphone jack												
Security	Power-on password, hard disk password, supervisor password, security keyhole												
Security chip	Trusted Platform Module, TCG 1.2-compliant												
Fingerprint reader	UPEK Fingerprint reader (right base of display), used in tablet/notebook mode, 2-way swipe sensor, LED indicator, Power On Authentication, supports the security chip												
Limited warranty ¹²	3-years/1-yr battery & digitizer pen - depot repair service / service upgrades²² available												

See footnotes for important warranty information

US models announced September 28, 2010; previous models on May 25, 2010

US models withdrawn effective January 2011

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(CML3-9) December 2010

Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann 06/23/09

Ultrabay Slim 9.5mm

<i>Most Ultrabay Slim accessories supported in ThinkPad X200 UltraBase</i>		
Serial ATA Hard Drive Bay Adapter III	43N3412	ann 06/23/09
DVD-ROM Ultrabay Slim Drive II SATA 1.5G/s	43N3292	ann 08/03/10
DVD Burner Ultrabay Slim Drive II SATA 1.5G/s	43N3229	ann 06/23/09
Ultrabay Slim Blu-ray Burner II (SATA)	43N3230	ann 06/23/09

Storage and removable storage

160GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	41N5737	ann 10/16/07
250GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43R8152	ann 01/15/08
250GB Disk FDE SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3410	ann 01/20/09
320GB Disk SATA 3.0Gb/s (5400 rpm) ⁴¹	43N3403	ann 08/05/08
320GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3411	ann 01/20/09
500GB Disk SATA 3.0Gb/s (7200 rpm) ⁴¹	43N3423	ann 01/07/10

⁴¹ Can be used as the main HDD or with *Serial ATA Hard Drive Bay Adapter III 43N3412* in X200 UltraBase (43R8781)

128GB SSD SATA 3.0Gb/s 1.8" (2.5" cover)	43N3406	ann 08/26/08
256GB FDE SSD SATA 3Gb/s 1.8" (2.5" cover)	43N3417	ann 06/23/09
ThinkPad 160GB Intel X25-M SSD ⁴¹	43N3435	ann 06/22/10

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10

⁵³ USB-only attach.

Wireless WAN (Mini PCI Express)

Only WWAN upgradable models:

ThinkPad Gobi™ 2000 Broadband Option	78Y1399	ann 01/07/10
ThinkPad AT&T® Gobi 2000 Broadband Option	78Y1398	ann 01/07/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB Port Replicator with Digital Video	45K1610	ann 07/28/09
ThinkPad X200 UltraBase	43R8781	ann 08/05/08

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultralim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
ExpressCard Gemplus Smart Card Reader	41N3043	ann 06/27/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Tablet

ThinkPad Digitizer Pen	41U3143	ann 11/14/06
ThinkPad Tablet Tether (3-pack)	41U4820	ann 11/14/06

Batteries

ThinkPad Battery 12 (4-cell)	43R9256	ann 09/23/08
ThinkPad Battery 12++ (8-cell)	43R9257	ann 09/23/08
ThinkPad External Battery Charger ^{44, 47}	40Y7625	ann 09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

⁴⁷ Only supports *ThinkPad Battery 12 (4-cell)* 43R9256

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter	40Y7696	ann 01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultralim AC/DC Combo Adapter	41R4493	ann 09/22/09

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

Charging tips for 90W Ultralim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com

Carrying Cases

X200 Tablet:

ThinkPad X200 Tablet Sleeve	43R9115	ann 09/23/08
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Up to 13.3" widescreen models:

ThinkPad Ultraportable Case	41U5062	ann 05/13/08
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Up to 15.6" widescreen models:

Lenovo Business Messenger Case	51J0475	ann 08/18/09
Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08

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

Lenovo luxury cases at www.lenovoluxurycases.com

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Lenovo DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
DisplayPort to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08

⁵⁰ Can only be used via ThinkPad X200 UltraBase (43R8781)

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

Partial list of Lenovo® ThinkPlus Services²² for ThinkPad notebooksFor more information see: http://www.lenovo.com/services_warranty/us/en/index.html

ThinkPlus service upgrade options for ThinkPad W/X series	ThinkPlus Secure Business
ThinkPad X100e and X120e notebook with 1-year Depot warranty 2-year parts and labor depot repair service 45K5971 3-year parts and labor depot repair service 45K5972 4-year parts and labor depot repair service 0A34460 1-year LOR 9x5 Next Business Day 45K5968 2-year LOR 9x5 Next Business Day 45K5969 3-year LOR 9x5 Next Business Day 45K5970 4-year LOR 9x5 Next Business Day 0A34462 ThinkPad W/X series notebook with 1-year Depot warranty 2-year parts and labor depot repair service 41C9169 3-year parts and labor depot repair service 41C9170 4-year parts and labor depot repair service 41C9172 5-year parts and labor depot repair service 41C9174 1-year LOR 9x5 Next Business Day 41C9166 2-year LOR 9x5 Next Business Day 41C9167 3-year LOR 9x5 Next Business Day 41C9168 4-year LOR 9x5 Next Business Day 41C9171 5-year LOR 9x5 Next Business Day 41C9173 ThinkPad W/X series notebook with 3-year Depot warranty 4-year parts and labor depot repair service 41C9178 5-year parts and labor depot repair service 41C9180 3-year LOR 9x5 Next Business Day 41C9176 4-year LOR 9x5 Next Business Day 41C9177 5-year LOR 9x5 Next Business Day 41C9179 ThinkPad W/X series notebook with 3-year Onsite warranty 4-year LOR 9x5 Next Business Day 12X5630 5-year LOR 9x5 Next Business Day 43R2162	Lenovo Online Data Backup • Secure offsite data storage • 256-bit Advanced Encryption System • Data recovery or access in case of an unforeseen event • Automatic, remote management • Choose which business critical data to back up 1-year Lenovo Online Data Backup - 10GB 51J0787 1-year Lenovo Online Data Backup - 25GB 51J0795
	ThinkPlus Priority Support for enterprise customers • 9x5 next-business-day response Lenovo Onsite Repair • 24x7 support with priority routing and advanced level technicians ThinkPad notebook with 1-year Depot warranty 3-year Priority Support 45J9094 ThinkPad notebook with 3-year Depot warranty 3-year Priority Support 45J9095 4-year Priority Support 45J9096 5-year Priority Support 45J9097 3-year Priority Support 4-hour response 45J9101 4-year Priority Support 4-hour response 45J9102 5-year Priority Support 4-hour response 45J9103 ThinkPad notebook with 3-year Onsite (GMP) warranty 3-year Priority Support 45J9098 4-year Priority Support 45J9099 5-year Priority Support 45J9100 3-year Priority Support 4-hour response 45J9104 4-year Priority Support 4-hour response 45J9105 5-year Priority Support 4-hour response 45J9106 ThinkPad Workstation notebook with 1-year Depot warranty 3-year Priority Support 45J9107 ThinkPad Workstation notebook with 3-year Depot warranty 3-year Priority Support 45J9108 4-year Priority Support 45J9109 5-year Priority Support 45J9110 3-year Priority Support 4-hour response 45J9114 4-year Priority Support 4-hour response 45J9115 5-year Priority Support 4-hour response 45J9116 ThinkPad Workstation notebook with 3-year Onsite (GMP) warranty 3-year Priority Support 45J9111 4-year Priority Support 45J9112 5-year Priority Support 45J9113 3-year Priority Support 4-hour response 45J9117 4-year Priority Support 4-hour response 45K1520 5-year Priority Support 4-hour response 45K1521
ThinkPlus service upgrade options for ThinkPad T/L series ThinkPad T/L series notebook with 1-year Depot warranty 2-year parts and labor depot repair service 45K5971 3-year parts and labor depot repair service 45K5972 4-year parts and labor depot repair service 45K5974 5-year parts and labor depot repair service 45K5976 1-year LOR 9x5 Next Business Day 45K5968 2-year LOR 9x5 Next Business Day 45K5969 3-year LOR 9x5 Next Business Day 45K5970 4-year LOR 9x5 Next Business Day 45K5973 5-year LOR 9x5 Next Business Day 45K5975 ThinkPad T/L series notebook with 3-year Depot warranty 4-year parts and labor depot repair service 45K6023 5-year parts and labor depot repair service 45K6025 3-year LOR 9x5 Next Business Day 45K6021 4-year LOR 9x5 Next Business Day 45K6022 5-year LOR 9x5 Next Business Day 45K6024 ThinkPad T/L series notebook with 3-year Onsite warranty 4-year LOR 9x5 Next Business Day 45K6038 5-year LOR 9x5 Next Business Day 43R2162	

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.

⁵ **TAA:** ThinkPad notebook is compliant with the U.S. Federal Government's country-of-origin requirements prescribed in 48 C.F.R. Subpart 25.4; Trade Act Agreement (TAA) model.

⁶ **Public network download modem speeds** are limited to 53Kbps. Upload speeds are limited to 48Kbps for 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.

⁸ **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.

⁹ **CD/DVD drive speeds** list maximum rates; rates are variable and are often less than the maximum.

¹⁰ **Battery:** These model numbers achieved the battery life based on MobileMark® 2007 during testing. For the ThinkPad X300, battery life is based on Business Winstone Battery Mark 2002. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

¹¹ **External monitor:** This system supports a maximum of two external monitors. The integrated display(s) must be disabled to support two external monitors.

¹² **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.

¹³ **Internet access not included.**

¹⁴ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

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.

²¹ **For combination drives**, maximum possible speeds only are given in the following order: CD write, CD rewrite, CD read, DVD read.

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.

²⁶ **Full-size keyboard:** As defined by ISO/IEC 15412.

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 been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

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.

³⁶ **Wireless upgradable** allows the system to be wireless-enabled with an optional wireless Mini PCI or Mini PCI Express card. Designed to operate only with Lenovo options.

³⁷ **Optimus graphics** Optimus only switches in Windows 7 environment. It performs as discrete graphics in Windows Vista or Windows XP Professional environment.

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Personal Systems Reference Lenovo® ThinkPad® Edge Series and SL Series TopSeller™ Notebooks

March 2011 - Version 394



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ThinkPad®



Lenovo® ThinkPad Edge 14"



Lenovo ThinkPad Edge 14"
(Glossy black model)



Lenovo ThinkPad Edge 14"



USB Port Replicator with Digital Video
45K1610



Lenovo ThinkPad Edge 14"

ThinkPad® Edge 14" 0578 (Intel) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Memory	Wide-screen display	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Avail date
0578-23U	i3-350M	2.26	2+1GB	14.0" HD	320G 7200	Intel 6200 ²⁸			Matte black			6	Pro 64	Mar 10
0578-25U	i3-330M	2.13	2GBx2	14.0" HD	250G 5400	11b/g/n			Matte black			4	Home P 64	Mar 10
0578-27U	i3-330M	2.13	2GBx1	14.0" HD	250G 5400	Intel 1000			Glossy black			6	Pro 32	Mar 10
0578-29U	i3-330M	2.13	2GBx1	14.0" HD	250G 5400	Intel 1000			Glossy black			6	Home P 64	Mar 10
0578-2AU	i3-330M	2.13	2GBx2	14.0" HD	250G 5400	Intel 1000	Gobi 2000	AT&T ²³	Glossy black		Blue	6	Pro 64	Mar 10
0578-2BU	i3-330M	2.13	2GBx2	14.0" HD	320G 7200	Intel 1000	Gobi 2000	Verizon ¹⁶	Glossy black		Blue	6	Pro 64	Mar 10
0578-65U	i3-330M	2.13	2GBx2	14.0" HD	320G 7200	Intel 1000			Glossy black	Finger	Blue	6	Pro 64	Mar 10
0578-66U	i3-330M	2.13	2+1GB	14.0" HD	320G 7200	Intel 1000			Glossy red		Blue	6	Home P 64	Mar 10
0578-28U	Cel P4500	1.86	2GBx1	14.0" HD	250G 5400	Intel 1000			Glossy black			6	Home P 64	Apr 10
0578-64U	Cel P4500	1.86	2GBx1	14.0" HD	250G 5400	Intel 1000			Glossy black			6	Pro 32	Apr 10
0578-7ZU	Cel P4500	1.86	2GBx1	14.0" HD	250G 5400	Intel 1000			Matte black			6	Home P 64	Apr 10
0578-82U	i3-330M	2.13	2GBx1	14.0" HD	250G 5400	Intel 1000			Matte black			6	Pro 32	Apr 10
0578-83U	i3-330M	2.13	2+1GB	14.0" HD	250G 5400	Intel 1000			Glossy red		Blue	6	Pro 32	Apr 10
0578-84U	i3-330M	2.13	2+1GB	14.0" HD	250G 5400	Intel 1000	Gobi 2000	AT&T	Glossy black		Blue	6	Pro 32	Apr 10
0578-85U	i3-330M	2.13	2GBx1	14.0" HD	250G 5400	Intel 1000			Matte black			6	Home P 64	Apr 10
0578-86U	i3-330M	2.13	2GBx2	14.0" HD	320G 7200	Intel 1000			Matte black		Blue	6	Pro 64	Apr 10
0578-C5U	i3-350M	2.26	2GBx1	14.0" HD	320G 7200	Intel 1000			Matte black		Blue	6	Pro 64	Apr 10
0578-C6U	i3-350M	2.26	2GBx2	14.0" HD	500G 7200	Intel 1000			Glossy black		Blue	6	Pro 64	Apr 10
• These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Celeron® Processor P4500 with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), and 2MB cache Intel Core™ i3 processor i3-330M or i3-350M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache									Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 32 - Some: Genuine Windows 7 Professional 64				
Memory	2GB, 3GB, or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets									Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch				
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB⁸ (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™													
Widescreen display Camera	14.0" (355mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus													
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536 @ 75Hz; 1920x1080 (HDMI port)</i>													
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch													
ThinkLight™	None													
Dimensions ³ Weight ² Case color	14.0W" (WxDxH): 13.54" x 9.17" x 1.25-1.46"; 344 x 233mm x 31.8-37.0mm 4-cell: from 4.72 lb (2.14kg); 6-cell: from 4.9 lb (2.22kg); 9-cell: from 5.29 lb (2.40kg) Matte black (top), glossy black (top), or glossy red (top), trimmed with a thin silver band (side); black bottom													
Case material Battery - type ³⁷ Battery - life ¹⁰	Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell or 6-cell 4-cell: up to 2.9 hr; 6-cell: up to 4.5 hr													
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)													
PCIe Mini Card 11b/g/n Intel 1000 Gobi™ 2000	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6200, 2x2 <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider													
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T® or Verizon®, contract required with service provider None <i>Some:</i> Bluetooth 2.1 wireless Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack													
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													
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available													
										ThinkPlus™, ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty				

See footnotes for important warranty information

⌘ US models announced April 13, 2010; previous models on March 23 or April 6 2010

⌘ US models withdrawn effective August 2010

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ThinkPad® Edge 14" 0578 (Intel) - TopSeller (Windows 7) - May 2010

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
0578-9KU	i3-350M	2.26		4GB	14.0" HD	500G 5400	Intel 1000			Matte black			6	Home P 64	May 10
0578-DGU	i3-350M	2.26		2GB	14.0" HD	320G 7200	Intel 1000			Glossy red			6	Pro 64	May 10
0578-DHU	i3-350M	2.26		4GB	14.0" HD	500G 5400	Intel 1000			Glossy red			6	Pro 64	May 10
0578-F5U	i3-370M	2.40		2GB	14.0" HD	250G 5400	Intel 1000			Matte black			6	Pro 64	Jul 10
0578-F6U	i3-370M	2.40		4GB	14.0" HD	320G 7200	Intel 1000			Matte black			6	Pro 64	Jul 10
0578-F7U	i3-370M	2.40		4GB	14.0" HD	320G 7200	Intel 1000			Matte black	Fing	Blue	6	Pro 64	Jul 10
0578-F8U	i3-370M	2.40		4GB	14.0" HD	320G 7200	Intel 1000	Gobi 2000	AT&T ²³	Matte black	Fing	Blue	6	Pro 64	Jul 10
0578-F9U	i3-370M	2.40		4GB	14.0" HD	320G 7200	Intel 1000			Glossy red	Fing	Blue	6	Pro 64	Jul 10
0578-HTU	i3-350M	2.26		4GB	14.0" HD	250G 5400	Intel 1000			Matte black			4	Home P 64	Jul 10
0578-HUU	i3-370M	2.40		4GB	14.0" HD	250G 5400	Intel 1000			Matte black			4	Home P 64	Jul 10
0578-HVU	i3-350M	2.26		4GB	14.0" HD	320G 5400	Intel 1000			Glossy black			4	Home P 64	Jul 10
0578-HWU	i3-370M	2.40		4GB	14.0" HD	320G 5400	Intel 1000			Glossy black			4	Home P 64	Jul 10
0578-HXU	i5-450M	2.40	2.66	4GB	14.0" HD	500G 5400	Intel 1000			Glossy black	Fing	Blue	6	Pro 64	Jul 10
0578-HZU	i3-350M	2.26		4GB	14.0" HD	500G 5400	Intel 1000			Glossy black			6	Pro 64	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-450M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch	
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available			
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB ⁸ (5400 rpm), 320GB (5400 or 7200 rpm), or 500GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™			
Widescreen display Camera	14.0" (355mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 2.0-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536@75Hz; 1920x1080 (HDMI port)			
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch		Supports ThinkVantage® technologies	
ThinkLight™	None			
Dimensions ³ Weight ² Case color	14.0W" (WxDxH): 13.54" x 9.17" x 1.25-1.46"; 344 x 233mm x 31.8-37.0mm <i>4-cell:</i> from 4.72 lb (2.14kg); <i>6-cell:</i> from 4.9 lb (2.22kg); <i>9-cell:</i> from 5.29 lb (2.40kg) Matte black (top), glossy black (top), or glossy red (top), trimmed with a thin silver band (side); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic		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 via 800-426-7378	
Case material Battery - type ³⁷ Battery - life ¹⁰	Lithium Ion 4-cell or 6-cell <i>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr			
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty	
PCIe Mini Card Intel 1000 Gobi™ 2000	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider			
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T®, contract required with service provider None <i>Some:</i> Bluetooth 2.1 wireless Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole			
Security Security chip Fingerprint reader	None None <i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for important warranty information

☞ US models announced July 6, 2010; previous models on May 4, 2010

⚡ US model withdrawn effective October 2010

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(BER1-2) July 2010

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Screen type	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Preload	Avail date
0578-N6U	i3-390M	2.66		4GB	14.0" HD	Glossy	320G 7200	Intel 1000			Matte black	Fing	Blue	Pro 64	Jan 11
0578-N8U	i3-390M	2.66		2GB	14.0" HD	Glossy	250G 5400	Intel 1000			Matte black			Pro 64	Jan 11
0578-NJU	i5-480M	2.66	2.93	4GB	14.0" HD	Glossy	320G 7200	Intel 1000			Matte black	Fing	Blue	Pro 64	Jan 11
0578-P4U	i3-390M	2.66		4GB	14.0" HD	Glossy	320G 7200	Intel 1000	Gobi 2000	AT&T ²³	Glossy black	Fing	Blue	Pro 64	Jan 11
⚡ 0578-Q2U	i3-380M	2.53		2GB	14.0" HD		250G 5400	11b/g/n			Matte black			Pro 64	Jan 11
⚡ 0578-QLU	i3-380M	2.53		2GB	14.0" HD		250G 5400	11b/g/n			Matte black			Pro 64	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3 processor i3-380M or i3-390M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-480M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available		
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB ⁸ (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536@75Hz; 1920x1080 (HDMI port)		
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch		
ThinkLight™	None		
Dimensions ³ Weight ² Case color	14.0W" (WxDxH): 13.54" x 9.17" x 1.25-1.46"; 344 x 233mm x 31.8-37.0mm <i>4-cell:</i> from 4.72 lb (2.14kg); <i>6-cell:</i> from 4.9 lb (2.22kg); <i>9-cell:</i> from 5.29 lb (2.40kg) Matte black (top) or glossy black (top), trimmed with a thin silver band (side); black bottom		Supports ThinkVantage® technologies
Case material Battery - type ³⁷ Battery - life ¹⁰	Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell <i>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr		
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		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 via 800-426-7378
PCIe Mini Card 11b/g/n Intel 1000 Gobi™ 2000	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider		ThinkPlus™.22 1-year LOR ²⁴ 9x5 NBD 45K5968
Carrier Modem	<i>Some:</i> AT&T®, contract required with service provider None		ThinkPlus 2-year LOR 9x5 NBD 45K5969
Bluetooth™ Ethernet	<i>Some:</i> Bluetooth 2.1 wireless Realtek® RTL8111DL Gigabit Network Connection		ThinkPlus 3-year LOR 9x5 NBD 45K5970
Intel AMT	None		ThinkPlus 4-year LOR 9x5 NBD 45K5973
Audio support	High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack		ThinkPlus 2-year P&L P/U Depot 45K5971
Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole None		ThinkPlus 3-year P&L P/U Depot 45K5972
Fingerprint reader	<i>Some:</i> UPEK Fingerprint reader on palm rest, swipe sensor		ThinkPlus 4-year P&L P/U Depot 45K5974
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty

See footnotes for important warranty information

US models announced January 11, 2011

⚡ US models withdrawn effective February 2011

Type-model	Processor	GHz	Memory	Wide-screen display	Screen type	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Avail date
0199-4GU	P340	2.20	2GB	14.0" HD		0.3M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Sep 10
0199-4HU	P340	2.20	2GB	14.0" HD		0.3M	320G 7200	11b/g/n	Glossy red	None	None	6	Pro 64	Sep 10
0199-4JU	P540	2.40	2GB	14.0" HD		0.3M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Sep 10
☞ 0199-6PU	P560	2.50	2GB	14.0" HD	Glossy	0.3M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Mar 11
☞ 0199-6QU	P360	2.30	2GB	14.0" HD	Glossy	0.3M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Mar 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles AMD® Athlon™ II Dual-Core Mobile Processor P340 or P360 with dual-core , virtualization technology, integrated DDR3 memory controller, and 1MB L2 cache or AMD Turion™ II Dual-Core Mobile Processor P540 or P560 with dual-core , virtualization technology, integrated DDR3 memory controller, and 2MB L2 cache		Preloaded operating system ²⁰ - Genuine Windows® 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
Memory	2GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 320GB ⁸ (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™		
Widescreen display	<i>Some:</i> 14.0" (355mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 14.0" (355mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel, fixed focus		
Integrated graphics	ATI™ Radeon™ HD 4250 graphics , in RS880M, 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> 2456x1536@60Hz		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 via 800-426-7378 ThinkPlus™.22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch		
ThinkLight™	None		
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	14.0W" (WxDxH): 13.54" x 9.17" x 1.25-1.46"; 344 x 233mm x 31.8-37.0mm <i>4-cell:</i> from 4.78 lb (2.17kg); <i>6-cell:</i> from 4.96 lb (2.25kg); <i>9-cell:</i> from 5.36 lb (2.43kg) Matte black (top) or glossy red (top), trimmed with a thin silver band (side); black bottom Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 6-cell <i>4-cell:</i> up to 2.6 hr; <i>6-cell:</i> up to 4 hr; <i>9-cell:</i> up to 6 hr		
Chipset ExpressCard/34 Multicard Reader Ports	AMD RS880M Chipset , SB820M south bridge One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card 11b/g/n Modem Bluetooth™ Ethernet Audio support	One PCI Express Half Mini Card slot 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card None None Realtek® RTL8111DL Gigabit Network Connection High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole None None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for important warranty information

☞ US models announced March 1, 2011, previous models on September 28, 2010

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(BER1-5) March 2011

Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann	06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann	06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann	06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann	06/23/09
1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	55Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	55Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB Port Replicator with Digital Video	45K1610	ann	07/28/09

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336		
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann	11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann	11/25/08
Lenovo Optical Mouse A6010 (black)	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B (black)	55Y9360		

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann	10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann	10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann	10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
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⁴⁵ Only compatible with the integrated graphics models.

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

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

Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com

Carrying Cases

ThinkPad 14W Case Sleeve	57Y4294	ann	03/16/10
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08

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

Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad Edge 15"



Lenovo ThinkPad Edge 15"
(Glossy black model)



Lenovo ThinkPad Edge 15"



Lenovo ThinkPad Edge 15"
(Glossy red model)



Lenovo ThinkPad Edge 15"

	Type-model	Proc- essor	GHz	Memory	Wide- screen display	Screen type	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue- tooth	Bat- tery cells	Preload	Avail date
☞	0301-23U	i3-350M	2.26	4GB	15.6" HD	Glossy	320G 7200	Intel 6200 ²⁸			Matte black			6	Pro 64	Mar 10
☞	0301-25U	i3-330M	2.13	4GB	15.6" HD	Glossy	250G 5400	11b/g/n			Matte black			4	Home P	Mar 10
☞	0301-26U	i3-330M	2.13	2GB	15.6" HD		250G 5400	Intel 1000			Glossy black			6	Pro 32	Mar 10
☞	0301-27U	i3-330M	2.13	2GB	15.6" HD		320G 7200	Intel 1000	Gobi 2000	AT&T ²³	Glossy black	Blue		6	Pro 32	Mar 10
☞	0301-29U	i3-330M	2.13	2GB	15.6" HD	Glossy	250G 5400	Intel 1000			Glossy black			6	Home P	Mar 10
☞	0301-2AU	i3-330M	2.13	4GB	15.6" HD		250G 5400	Intel 1000	Gobi 2000	AT&T	Glossy black	Blue		6	Pro 64	Mar 10
☞	0301-2BU	i3-330M	2.13	4GB	15.6" HD		250G 5400	Intel 1000	Gobi 2000	Verizon ¹⁶	Glossy black	Blue		6	Pro 64	Mar 10
☞	0301-5PU	i3-330M	2.13	2GB	15.6" HD		320G 7200	Intel 1000	Gobi 2000	Verizon	Glossy black	Finger	Blue	6	Pro 32	Mar 10
☞	0301-5QU	i3-330M	2.13	2GB	15.6" HD		250G 5400	Intel 1000			Glossy red		Blue	6	Pro 32	Mar 10
☞	0301-5RU	i3-330M	2.13	3GB	15.6" HD		320G 7200	Intel 1000			Glossy red		Blue	6	Home P	Mar 10
☞	0301-5SU	i3-330M	2.13	4GB	15.6" HD		320G 7200	Intel 1000			Glossy black	Finger	Blue	6	Pro 64	Mar 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3 processor i3-330M or i3-350M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Lenovo Online Data Backup • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
Memory	2GB, 3GB, or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available		
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB ⁸ (5400 rpm) or 320GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™		
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 2.0-megapixel, fixed focus		
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536@75Hz; 1920x1080 (HDMI port)		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 via 800-426-7378 ThinkPlus™. 22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch		
ThinkLight™	None		
Dimensions ³ Weight ² Case color	15.6W" (WxDxH): 14.96" x 9.72" x 1.27-1.48"; 380 x 247mm x 32.3-37.5mm <i>4-cell:</i> from 5.32 lb (2.42kg); <i>6-cell:</i> from 5.50 lb (2.50kg); <i>9-cell:</i> from 5.89 lb (2.67kg) Matte black (top), glossy black (top), or glossy red (top), trimmed with a thin silver band (side); black bottom		
Case material Battery - type ³⁷ Battery - life ¹⁰	Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell or 6-cell <i>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr		
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		
PCIe Mini Card 11b/g/n Intel 1000 Intel 6200 ²⁸ Gobi™ 2000	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card <i>Some:</i> 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n wireless, PCIe Half Mini Card, Intel Centrino Advanced-N 6200, 2x2 <i>Some:</i> Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider		
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> AT&T® or Verizon®, contract required with service provider None <i>Some:</i> Bluetooth 2.1 wireless Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack		
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		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for important warranty information
US models announced March 23, 2010

< US models withdrawn effective August 2010

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(LDN1-1) March 2010

	Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Screen type	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Bat-tery cells	Preload	Avail date
%	0301-28U	Cel P4500	1.86		2GBx1	15.6" HD	Glossy	250G 5400	Intel 1000			Glossy black			6	Home P 64	Apr 10
	0301-5NU	Cel P4500	1.86		2GBx1	15.6" HD	Glossy	250G 5400	Intel 1000			Matte black			6	Home P 64	Apr 10
	0301-8GU	i3-330M	2.13		2GBx1	15.6" HD		250G 5400	Intel 1000			Matte black			6	Pro 32	Apr 10
	0301-8HU	i3-330M	2.13		2GBx2	15.6" HD		320G 7200	WiMAX			Matte black	Fing	Blue	6	Pro 64	Apr 10
	0301-8JU	i3-330M	2.13		2GBx1	15.6" HD	Glossy	250G 5400	Intel 1000			Matte black			6	Home P 64	Apr 10
	0301-8KU	i3-330M	2.13		2GBx2	15.6" HD		320G 7200	Intel 1000			Matte black		Blue	6	Pro 64	Apr 10
	0301-9AU	i3-330M	2.13		2GBx1	15.6" HD		250G 5400	Intel 1000	Gobi	AT&T ²³	Glossy black			6	Pro 32	Apr 10
	0301-9CU	i3-350M	2.26		2GBx1	15.6" HD		320G 7200	Intel 1000			Matte black		Blue	6	Pro 64	Apr 10
	0301-9DU	i3-350M	2.26		2GBx2	15.6" HD		500G 7200	Intel 1000			Glossy black		Blue	6	Pro 64	Apr 10
	0301-89U	i5-430M	2.26	2.53	2GBx2	15.6" HD		500G 7200	Intel 1000			Glossy black	Fing	Blue	6	Pro 64	May 10
📷	0301-8AU	i3-350M	2.26		2GBx1	15.6" HD	Glossy	250G 5400	Intel 1000			Matte black			4	Home P 64	May 10
📷	0301-8BU	i3-350M	2.26		2GBx2	15.6" HD		500G 7200	Intel 1000			Glossy black	Fing		6	Pro 64	May 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Sophisticated design with quality, durability and reliability for SMB customers; two spindles</i> Intel® Celeron® Processor P4500 with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), and 2MB cache or Intel Core™ i3 processor i3-330M or i3-350M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-430M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology, and 3MB cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	Supports ThinkVantage® technologies
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB ⁸ (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™	
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus	
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution: 2048x1536@75Hz; 1920x1080 (HDMI port)</i>	
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch	65-watt AC adapter EPEAT™ Gold rating (except Celeron models) ENERGY STAR® 5.0-compliant (except Celeron models) RoHS-compliant International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378
ThinkLight™	None	
Dimensions ³ Weight ² Case color	15.6W" (WxDxH): 14.96" x 9.72" x 1.27-1.48"; 380 x 247mm x 32.3-37.5mm 4-cell: from 5.32 lb (2.42kg); 6-cell: from 5.50 lb (2.50kg); 9-cell: from 5.89 lb (2.67kg) Matte black (top) or glossy black (top), trimmed with a thin silver band (side); black bottom	
Case material Battery - type ³⁷ Battery - life ¹⁰	Acrylonitrile-Butadiene-Styrene (ABS) plastic Lithium Ion 4-cell or 6-cell 4-cell: up to 2.9 hr; 6-cell: up to 4.5 hr	
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
PCle Mini Card Intel 1000 WiMAX	Two PCI Express Mini Card slots <i>Some:</i> 11b/g/n wireless ⁴ , PCle Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 <i>Some:</i> 11a/b/g/n and WiMAX wireless, PCle Half Mini Card, Intel Centrino Advanced-N + WiMAX 6250, 2x2 AGN + 1x2 WiMAX	
Gobi™ 2000	<i>Some:</i> Wireless WAN, Qualcomm chipset, PCle Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider	
Carrier	<i>Some:</i> AT&T®, contract required with service provider	
Modem	None	
Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> Bluetooth 2.1 wireless Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack	
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	ThinkPlus™.22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information

US models announced May 4, 2010; previous models on April 6 or April 13, 2010

< US models withdrawn effective August 2010

ThinkPad® Edge 15" 0301 (Intel) - TopSeller (Windows 7) - July 2010

Personal Systems Reference (PSREF)

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Screen type	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Avail date
0301-DBU	i3-370M	2.40		2GB	15.6" HD		250G 5400	Intel 1000			Matte black			6	Pro 64	Jul 10
0301-DCU	i3-370M	2.40		4GB	15.6" HD		320G 7200	Intel 1000			Matte black	Fing	Blue	6	Pro 64	Jul 10
0301-DDU	i3-370M	2.40		4GB	15.6" HD		320G 7200	Intel 1000	Gobi 2000	AT&T ²³	Matte black	Fing	Blue	6	Pro 64	Jul 10
0301-DEU	i3-370M	2.40		4GB	15.6" HD		320G 7200	Intel 1000			Glossy red	Fing	Blue	6	Pro 64	Jul 10
0301-ECU	i3-370M	2.40		4GB	15.6" HD	Glossy	250G 5400	Intel 1000			Matte black			4	Home P	Jul 10
0301-EDU	i3-370M	2.40		4GB	15.6" HD		500G 7200	Intel 1000			Glossy black	Fing	Blue	6	Pro 64	Jul 10
0301-EEU	i3-350M	2.26		4GB	15.6" HD		500G 7200	Intel 1000			Glossy black	Fing	Blue	6	Pro 64	Jul 10
0301-EFU	i3-370M	2.40		2GB	15.6" HD		250G 5400	Intel 1000			Glossy black			6	Home P	Jul 10
0301-EGU	i3-370M	2.40		3GB	15.6" HD		320G 7200	Intel 1000			Glossy red		Blue	6	Home P	Jul 10
0301-EHU	i5-450M	2.40	2.66	4GB	15.6" HD		500G 5400	Intel 1000			Glossy black	Fing	Blue	6	Pro 64	Jul 10
0301-EJU	i5-450M	2.40	2.66	4GB	15.6" HD		500G 7200	Intel 1000			Glossy black	Fing	Blue	6	Pro 64	Jul 10
0301-EMU	i3-350M	2.26		2GB	15.6" HD		250G 5400	Intel 1000	Gobi 2000	AT&T	Glossy black			6	Pro 32	Jul 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3 processor i3-350M or i3-370M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-450M with dual-core, DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache										Preloaded operating system²⁰ - Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 32 - Some: Genuine Windows 7 Professional 64					
Memory	2GB, 3GB, or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available										Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch					
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB⁸ (5400 rpm), 320GB (7200 rpm), or 500GB (5400 or 7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™															
Widescreen display	Some: 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (395mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio															
Camera	Camera on top of screen, 2.0-megapixel, fixed focus															
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536@75Hz; 1920x1080 (HDMI port)															
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch															
ThinkLight™	None															
Dimensions ³ Weight ² Case color	15.6W" (WxDxH): 14.96" x 9.72" x 1.27-1.48"; 380 x 247mm x 32.3-37.5mm <i>4-cell:</i> from 5.32 lb (2.42kg); <i>6-cell:</i> from 5.50 lb (2.50kg); <i>9-cell:</i> from 5.89 lb (2.67kg) Matte black (top), glossy black (top), or glossy red (top), trimmed with a thin silver band (side); black bottom															
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic															
Battery - type ³⁷ Battery - life ¹⁰	Lithium Ion 4-cell or 6-cell <i>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr															
Chipset ExpressCard/34 Multicard Reader Ports	Mobile Intel HM55 Express Chipset One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)															
PCIe Mini Card Intel 1000 Gobi™ 2000	Two PCI Express Mini Card slots 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Some: Wireless WAN, Qualcomm chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, contract required with service provider															
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Some: AT&T®, contract required with service provider None Some: Bluetooth 2.1 wireless Realtek® RTL8111DL Gigabit Network Connection None High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/mono digital microphone, combo audio/mic jack Power-on password, hard disk password, supervisor password, security keyhole															
Security Security chip Fingerprint reader	None None Some: UPEK Fingerprint reader on palm rest, swipe sensor															
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available															

See footnotes for important warranty information

US models announced July 6, 2010

0301-DEU model withdrawn effective October 2010

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(LDN1-5) July 2010

Type-model	Processor	GHz	Max turbo (GHz)	Memory	Wide-screen display	Disk SATA GB ³ rpm	PCIe Mini Card 802.11	PCIe Mini Card WWAN	Carrier	Top color	Finger print reader	Blue-tooth	Battery cells	Preload	Avail date
0301-JDU	i5-480M	2.66	2.93	<i>4GB</i>	15.6" HD	320G 7200	Intel 1000	None	None	Matte black	Fing	Blue	6	Pro 64	Jan 11
0301-JAU	i3-390M	2.66		<i>4GB</i>	15.6" HD	320G 7200	Intel 1000	None	None	Matte black	Fing	Blue	6	Pro 64	Jan 11
0301-J9U	i3-390M	2.66		2GB	15.6" HD	250G 5400	Intel 1000	None	None	Matte black			6	Pro 64	Jan 11
0301-K3U	i3-390M	2.66		4GB	15.6" HD	500G 5400	Intel 1000	None	None	Matte black			6	Home P	Jan 11
0301-Q2U	i3-380M	2.53		2GB	15.6" HD	250G 5400	11b/g/n	None	None	Matte black			6	Pro 64	Jan 11

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles Intel® Core™ i3 processor i3-380M or i3-390M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Hyper-Threading technology; 3MB cache or Intel Core i5 processor i5-480M with dual-core , DMI (Direct Media Interface), integrated DDR3 memory controller (up to 1066MHz), Intel Turbo Boost, Hyper-Threading technology; 3MB cache		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch	
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket 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 via 800-426-7378 ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB ⁸ (5400 rpm), 320GB (7200 rpm), or 500GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™			
Widescreen display	15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio			
Camera	Camera on top of screen, 2.0-megapixel, fixed focus			
Integrated graphics	Intel HD Graphics in processor, external analog monitor support via VGA DB-15 connector and digital monitor support via HDMI™ (supporting HDCP to output protected content); supports dual independent display; <i>Max external resolution:</i> 2048x1536@75Hz; 1920x1080 (HDMI port)			
Keyboard	6-row, spill-resistant, multimedia Fn keys			
TrackPoint®	TrackPoint® pointing device, Internet Scroll Bar ¹³			
Touch pad	UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch			
ThinkLight™	None			
Dimensions ³	15.6W" (WxDxH): 14.96" x 9.72" x 1.27-1.48"; 380 x 247mm x 32.3-37.5mm			
Weight ²	<i>4-cell:</i> from 5.32 lb (2.42kg); <i>6-cell:</i> from 5.50 lb (2.50kg); <i>9-cell:</i> from 5.89 lb (2.67kg)			
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>4-cell:</i> up to 2.9 hr; <i>6-cell:</i> up to 4.5 hr			
Chipset	Mobile Intel HM55 Express Chipset			
ExpressCard/34	One ExpressCard/34			
Multicard Reader	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H)			
Ports	Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)			
PCIe Mini Card	Two PCI Express Mini Card slots			
11b/g/n	<i>Some:</i> 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card			
Intel 1000	<i>Some:</i> 11b/g/n wireless ⁴ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2			
WWAN upg	None			
Modem	None			
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless			
Ethernet	Realtek® RTL8111DL Gigabit Network Connection			
Intel AMT	None			
Audio support	High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 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:</i> UPEK Fingerprint reader on palm rest, swipe sensor			
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available			

See footnotes for important warranty information
US models announced January 11, 2011

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(LDN1-7) January 2011

Type-model	Proc- essor	GHz	Memory	Wide- screen display	Screen type	Camera	Disk SATA GB ⁸ rpm	PCIe Mini Card 802.11	Top color	Finger print reader	Blue- tooth	Bat- tery cells	Preload	Avail date
0302-44U	P340	2.20	2GB	15.6" HD		2.0M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Sep 10
0302-45U	P540	2.40	2GB	15.6" HD		2.0M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Sep 10
0302-4LU	P840	1.90	4GB	15.6" HD	Glossy	0.3M	500G 5400	11b/g/n	Glossy black	None	None	6	Home P	Jan 11
0302-54U	P560	2.50	2GB	15.6" HD		2.0M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Mar 11
0302-55U	P360	2.30	2GB	15.6" HD		2.0M	320G 7200	11b/g/n	Matte black	None	None	6	Pro 64	Mar 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Sophisticated design with quality, durability and reliability for SMB customers; two spindles AMD® Athlon™ II Dual-Core Mobile Processor P340 or P360 with dual-core , virtualization technology, integrated DDR3 memory controller, and 1MB L2 cache or AMD Turion™ II Dual-Core Mobile Processor P540 or P560 with dual-core , virtualization technology, integrated DDR3 memory controller, and 2MB L2 cache or AMD Phenom™ II Triple-Core Mobile Processor P840 with triple-core , virtualization technology, integrated DDR3 memory controller, and 1.5MB L2 cache		Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Home Premium 64 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 320GB⁸ (7200 rpm) or 500GB (5400 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, Active Protection System™		
Widescreen display	<i>Some:</i> 15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio <i>Some:</i> 15.6" (395mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio		
Camera	Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus		
Integrated graphics	ATI™ Radeon™ HD 4250 graphics , in RS880M, 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> 2456x1536@60Hz		
Keyboard TrackPoint® Touch pad	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ UltraNav™, wide touch pad below keyboard, Tap Zones, multi-touch		Supports ThinkVantage® technologies
ThinkLight™	None		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 via 800-426-7378
Dimensions ³ Weight ² Case color	15.6W" (WxDxH): 14.96" x 9.72" x 1.27-1.48"; 380 x 247mm x 32.3-37.5mm <i>4-cell:</i> from 5.40 lb (2.45kg); <i>6-cell:</i> from 5.58 lb (2.53kg); <i>9-cell:</i> from 5.95 lb (2.70kg) Matte black (top) or glossy black (top), trimmed with a thin silver band (side); black bottom		
Case material	Acrylonitrile-Butadiene-Styrene (ABS) plastic		
Battery - type ³⁷ Battery - life ¹⁰	Lithium Ion 6-cell <i>4-cell:</i> up to 2.6 hr; <i>6-cell:</i> up to 4 hr; <i>9-cell:</i> up to 6 hr		
Chipset ExpressCard/34 Multicard Reader Ports	AMD RS880M Chipset , SB820M south bridge One ExpressCard/34 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) Three USB 2.0 (one powered), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)		ThinkPlus™. ²² 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
PCIe Mini Card 11b/g/n Modem Bluetooth™ Ethernet Audio support	One PCI Express Half Mini Card slot 11b/g/n wireless ⁴ , ThinkPad 11b/g/n, PCIe Half Mini Card None None Realtek® RTL8111DL Gigabit Network Connection High Definition (HD) Audio, Realtek ALC269 codec / stereo speakers, 1.5 watt x 2/ mono digital microphone, combo audio/mic jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole None None		
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available		

See footnotes for important warranty information

US models announced March 1, 2011; previous models on September 28, 2010 or January 11, 2011

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(LDN1-6) March 2011

Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann	06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann	06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann	06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann	06/23/09
1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	55Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	55Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB Port Replicator with Digital Video	45K1610	ann	07/28/09

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336		
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann	11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann	11/25/08
Lenovo Optical Mouse A6010 (black)	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B (black)	55Y9360		

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann	10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann	10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann	10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	ann	01/05/06
⁴⁵ Only compatible with the integrated graphics models.			

ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters*Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493*

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com**Carrying Cases**

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Topload Case	43R2476	ann	05/13/08
ThinkPad Business Backpack	43R2482	ann	05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann	05/13/08
ThinkPad Executive Leather Case	43R2480	ann	05/13/08

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

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad SL410



Lenovo ThinkPad SL410



Lenovo ThinkPad SL410



Lenovo ThinkPad SL410



Lenovo ThinkPad SL410 buttons



Lenovo ThinkPad SL410 lights

ThinkPad® SL410 2842 (GMA) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Proc- essor	GHz	Memory	Wide- screen display	CCFL or LED	Screen type	Cam- era	Integrated graphics	Disk SATA GB ³ rpm	SATA optical	Mini PCIe 802.11 wireless	Mini PCIe WWAN	Blue- tooth	Finger print reader	Bat- tery cells	Preload	Avail date
⌘ 2842-F7U	T6570	2.10	2GB	14.0" HD	LED	Glossy	2.0M	GMA	250G 5400	DVD±RW	* Intel 1000	None			6	Pro 32	Jan 10
⌘ 2842-F8U	T6570	2.10	3GB	14.0" HD	LED	Glossy	2.0M	GMA	320G 7200	DVD±RW	* Intel 1000	None			6	Pro 32	Jan 10
⌘ 2842-F9U	T6670	2.20	4GB	14.0" HD	LED	Glossy	2.0M	GMA	320G 7200	DVD±RW	* Intel 1000	None	Blue	Fing	6	Pro 64	Jan 10
⌘ 2842-K3U	T6670	2.20	2GB	14.0" HD	LED	Glossy	0.3M	GMA	250G 5400	DVD±RW	* Intel 1000	None			6	Pro 64	Sep 10
⌘ 2842-K4U	T6670	2.20	3GB	14.0" HD	LED	Glossy	0.3M	GMA	500G 7200	DVD±RW	* Intel 1000	None			6	Pro 64	Sep 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Core™ 2 Duo processor T6570 or T6670 with dual-core, 800MHz system bus, and 2MB L2 cache	Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Microsoft Office 2010 preloaded; purchase product key to activate • Adobe® Reader® • Adobe Flash® Player • Roxio® Creator® Business Edition (DVD±RW) Supports ThinkVantage® technologies 65-watt (GMA graphics) 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 via 800-426-7378 ThinkPlus™.22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976 Post-warranty annual maintenance agreements at lenovo.com/thinkplus/warranty
Memory	2GB, 3GB, or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB ⁸ (5400 rpm), 320GB (7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™	
Widescreen display Camera	14.0" (355mm) HD (1366x768) color, VibrantView (glossy), LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus	
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GM45, HDMI port supporting HDCP to output protected content; <i>Max external resolution:</i> 2048x1536 @ 75Hz (VGA DB-15 port); 1920x1080 (HDMI port)	
Keyboard TrackPoint® Touch pad	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch	
Lighting FX	Illuminated power button	
Dimensions ³ Weight ² Case color Case material Battery - type ³⁷ Battery - life ¹⁰	<i>4/6-cell 14.0W" (WxDxH):</i> 13.54" x 9.17" x 1.26–1.42"; 344mm x 233mm x 32–36mm <i>4-cell:</i> starting at 4.59 lb (2.08kg); <i>6-cell:</i> starting at 5.1 lb (2.3kg) ThinkPad Matte Black Scratch-resistant ABS plastic Lithium Ion 6-cell <i>6-cell:</i> up to 4.0 hr; <i>9-cell:</i> up to 6 hr	
Chipset	Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, ethernet MAC), LPC bus (IT8752) One slot (ExpressCard/34)	
ExpressCard Multicard Reader PC Card Smart Card Read Ports	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) None None Three USB 2.0, one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)	
Mini PCI Express Intel 1000 WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	One Mini PCI Express slot 11b/g/n wireless ⁴ , Mini PCIe adapter, Intel Centrino® Wireless-N 1000, 1x2 None None <i>Some:</i> Bluetooth 2.1 wireless, LED indicator Realtek RTL8111DL Gigabit Network Connection, PHY, PCIe x1 None High Definition (HD) Audio, ALC269Q codec / stereo speakers, 1.5 watt / speaker volume up, down and mute buttons / mono microphone, mic mute button, mic input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole	
Security Security chip Fingerprint reader	None None <i>Some:</i> Fingerprint reader on palm rest, swipe sensor	
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available	

See footnotes for important warranty information * Intel Centrino® processor technology

⌘ US models announced September 28, 2010; previous models on December 15, 2009

⌘ US models withdrawn effective December 2010 or January 2011

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Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann 06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann 06/23/09
1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann 03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25-Pack)	57Y4415	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25-Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

Storage and removable storage

SL410/510 500GB Disk SATA 3G/s (5400 rpm)	43N3422	ann 10/22/09
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
USB Port Replicator with Digital Video	45K1610	ann 07/28/09

Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336	
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Preferred Pro USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann 01/22/08
Lenovo Optical Mouse A6010 (black)	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B (black)	55Y9360	

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann 10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann 10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann 10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann 09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696	
⁴⁵ Only compatible with the integrated graphics models.		
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann 09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann 09/22/09

More info at www.lenovo.com/support/poweradapters*Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493*

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

More information at www.lenovopowertips.com**Carrying Cases**

<i>Up to 14" widescreen models:</i>		
ThinkPad 14W Case Sleeve	57Y4294	ann 03/16/10
<i>Up to 15.4" widescreen models:</i>		
ThinkPad 15W Case Sleeve	51J0477	ann 08/18/09
Lenovo Business Messenger Case	51J0475	ann 08/18/09
Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance Backpack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08

<i>Up to 15.6" widescreen models:</i>		
Wenger Backpack for Lenovo	57Y4271	ann 01/07/10
Wenger Slim Case for Lenovo	57Y4272	ann 01/07/10
Wenger Deluxe Slim Case for Lenovo	57Y4273	ann 01/07/10

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

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

Monitor Accessories⁴⁶

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad SL accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide

ThinkPad®



Lenovo® ThinkPad SL510



Lenovo ThinkPad SL510



Lenovo ThinkPad SL510



Lenovo ThinkPad SL510



Lenovo Essential Notebook Stand
45J9292



ThinkPad SL510 Touchpad

ThinkPad® SL510 2847 (GMA) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	proc- essor	GHz	Memory	Wide- screen display	CCFL or LED	Screen type	Cam- era	Inte- grated graphics	Disk SATA GB ⁸ rpm	SATA optical	Mini PCIe 802.11 wireless	Mini PCIe WWAN	Blue- tooth	Finger print reader	Bat- tery cells	Preload	Avail date
2847-2KU	T5870	2.00	2GB	15.6"	HD	LED		GMA	160G 5400	DVD±RW *	Intel 5100 ²⁸				6	Pro 32	Oct 09
2847-2LU	T5870	2.00	4GB	15.6"	HD	LED	2.0M	GMA	250G 5400	DVD±RW *	Intel 5100		Blue		6	Home P	Oct 09
2847-2QU	P8700	2.53	4GB	15.6"	HD	LED	2.0M	GMA	320G 5400	DVD±RW *	Intel 5100		Blue	Fing	6	Pro 64	Oct 09
2847-6GU	T6670	2.20	2GB	15.6"	HD	LED	2.0M	GMA	250G 5400	DVD±RW *	WiMAX				6	Pro 32	Nov 09
2847-6HU	T6670	2.20	3GB	15.6"	HD	LED	2.0M	GMA	250G 5400	DVD±RW *	Intel 5100	Verizon ¹⁶			6	Pro 32	Nov 09
2847-9VU	T6570	2.10	4GB	15.6"	HD	LED	Glossy	2.0M	GMA	320G 7200	DVD±RW *	Intel 1000 ²⁸	Blue		6	Home P	Jan 10
2847-9YU	T6670	2.20	4GB	15.6"	HD	LED	2.0M	GMA	320G 7200	DVD±RW *	Intel 1000		Blue	Fing	6	Pro 64	Jan 10
2847-9UU	T6570	2.10	2GB	15.6"	HD	LED	2.0M	GMA	250G 5400	DVD±RW *	Intel 1000				6	Pro 32	Jan 10
2847-9XU	T6570	2.10	3GB	15.6"	HD	LED	2.0M	GMA	320G 7200	DVD±RW *	Intel 1000				6	Pro 32	Jan 10
2847-9ZU	T6670	2.20	3GB	15.6"	HD	LED	2.0M	GMA	320G 7200	DVD±RW *	Intel 1000	AT&T ²³			6	Pro 32	Jan 10
2847-AZU	T6570	2.10	2GB	15.6"	HD	LED	Glossy	2.0M	GMA	250G 5400	DVD±RW *	Intel 1000			6	Home P	Apr 10
2847-CZU	T6670	2.20	2GB	15.6"	HD	LED	0.3M	GMA	250G 5400	DVD±RW *	Intel 1000				6	Pro 64	Sep 10
2847-D2U	T6670	2.20	3GB	15.6"	HD	LED	0.3M	GMA	500G 7200	DVD±RW *	Intel 1000				6	Pro 64	Sep 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Core™ 2 Duo processor T5870, T6570, or T6670 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core 2 Duo processor P8700 with dual-core, Intel HD Boost, 1066MHz system bus, and 3MB L2 cache											Preloaded operating system ²⁰					
Memory	2GB, 3GB, or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available											- Some: Genuine Windows® 7 Home Premium 64 - Some: Genuine Windows 7 Professional 32 - Some: Genuine Windows 7 Professional 64					
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 160GB ⁸ (5400 rpm), 250GB (5400 rpm), 320GB (5400 or 7200 rpm), or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™											Preloaded applications ¹⁴ (only some listed)					
Widescreen display	Some: 15.6" (395mm) HD (1366x768) color, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 15.6" (395mm) HD (1366x768) color, VibrantView (glossy), LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio											• Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Microsoft Research AutoCollage Touch • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)					
Camera	Some: camera on top of screen, 0.3-megapixel or 2.0-megapixel, fixed focus																
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD), in GM45, HDMI port supporting HDCP to output protected content Max external resolution: 2048x1536@75Hz (VGA DB-15 port); 1920x1080 (HDMI port)																
Keyboard TrackPoint® Touch pad	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch illuminated power button																
Lighting FX																	
Dimensions ³ Weight ² Case Battery - type ³⁷ Battery - life ¹⁰	4/6-cell 15.6W" (WxDxH): 14.9" x 9.72" x 1.26–1.42"; 380 x 247mm x 32–36mm 4-cell: starting at 5.17 lb (2.35kg); 6-cell: starting at 5.64 lb (2.56kg) Color: ThinkPad Matte Black; Material: Scratch-resistant ABS plastic Lithium Ion 6-cell 6-cell: up to 4.0 hr; 9-cell: up to 6 hr											Supports ThinkVantage® technologies					
Chipset	Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, ethernet MAC), LPC bus (IT8752) One slot (ExpressCard/34)											65-watt (GMA graphics) AC adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant RoHS-compliant					
ExpressCard Multicard reader PC Card Smart Card read Ports	7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) None None Three USB 2.0, one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free support during the warranty period ¹² via 800-426-7378					
Mini PCI Express	One or two Mini PCI Express slots Some: 11b/g/n wireless ⁴ , Mini PCIe adapter, Intel Centrino® Wireless-N 1000, 1x2 Some: 11a/b/g/n wireless, Mini PCIe adapter, Intel WiFi Link 5100, 1x2 (Shirley Peak) Some: 11a/b/g/n and WiMAX wireless, Mini PCIe adap, Intel WiMAX/WiFi Link 5150, 1x2 (300Mbps) WiFi + 1x2 WiMAX (Echo Peak)											ThinkPlus™.22 1-year LOR ²⁴ 9x5 NBD 45K5968					
Intel 1000 ²⁸ Intel 5100 ²⁸ WiMAX	Some: Wireless WAN, Qualcomm Gobi 1000 chipset, Mini PCIe adpdr, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS, service contract required with Verizon® Some: Wireless WAN, Ericsson chipset, Mini PCIe adapter and SIM, GPRS/WCDMA/HSPA, GPS, service contract required with AT&T®											ThinkPlus 2-year LOR 9x5 NBD 45K5969					
Verizon ¹⁶ AT&T ²³												ThinkPlus 3-year LOR 9x5 NBD 45K5970					
Modem	None											ThinkPlus 4-year LOR 9x5 NBD 45K5973					
Bluetooth™	Some: Bluetooth 2.1 wireless, LED indicator											ThinkPlus 5-year LOR 9x5 NBD 45K5975					
Ethernet	Realtek® RTL8111DL Gigabit Network Connection, PHY, PCIe x1											ThinkPlus 2-year P&L P/U Depot 45K5971					
Intel AMT	None											ThinkPlus 3-year P&L P/U Depot 45K5972					
Audio support	High Definition (HD) Audio, ALC269Q codec / stereo speakers, 1.5 watt / speaker volume up, down and mute buttons / mono microphone, mic mute button, mic input jack, headphone jack											ThinkPlus 4-year P&L P/U Depot 45K5974					
Security	Power-on password, hard disk password, supervisor password, security keyhole											ThinkPlus 5-year P&L P/U Depot 45K5976					
Security chip	None											Post-warranty annual maintenance agreements at					
Fingerprint reader	Some: Fingerprint reader on palm rest, swipe sensor											lenovo.com/thinkplus/warranty					
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available																

See footnotes for important warranty information

* Intel Centrino® processor technology

US models announced September 28, 2010;

Intel Centrino 2 processor technology

previous models on October 22, November 17, or December 15, 2009, or April 6, 2010

US models withdrawn effective February or December 2010 or January 2011

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(TOP1-3) October 2010

Type-model	proc- essor	GHz	Memory	Wide- screen display	CCFL or LED	Cam- era	Inte- grated graphics	Disk SATA GB ⁸ rpm	SATA optical	Mini PCIe 802.11 wireless	Mini PCIe WWAN	Blue- tooth	Finger print reader	Bat- tery cells	Preload	Avail date
2847-DJU	T6670	2.20	4GB	15.6" HD	LED	0.3M	GMA	500G 7200	DVD±RW	* 11n ²⁸	None	None	None	6	Home P	Jan 11
2847-DKU	T6670	2.20	2GB	15.6" HD	LED	0.3M	GMA	250G 5400	DVD±RW	* Intel 1000 ²⁸	None	None	None	6	Home P	Jan 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Processor	Intel® Core™ 2 Duo processor T6670 with dual-core, 800MHz system bus, and 2MB L2 cache											Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 64				
Memory	2GB or 4GB std / 8GB max ⁷ / PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available											Preloaded applications¹⁴ (only some listed) • Rescue and Recovery™ • Access Connections™ • Password Manager • ThinkVantage Power Manager • ThinkVantage System Update • ThinkVantage Toolbox • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD±RW)				
SATA DVD±RW SATA disk	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable, tray-in 250GB⁸ (5400 rpm) or 500GB (7200 rpm) / SATA 3.0Gb/s, 2.5" wide, 9.5mm high, removable, upgradable, ThinkPad Shock Mounted Hard Drive, Active Protection System™															
Widescreen display Camera	15.6" (395mm) HD (1366x768) color , anti-glare, LED backlight , 220 nits, 16:9 aspect ratio, 500:1 contrast ratio Camera on top of screen, 0.3-megapixel, fixed focus															
Integrated graphics	Intel Graphics Media Accelerator 4500MHD (GMA 4500MHD) , in GM45, HDMI port supporting HDCP to output protected content <i>Max external resolution:</i> 2048x1536@75Hz (VGA DB-15 port); 1920x1080 (HDMI port)															
Keyboard TrackPoint® Touch pad	6-row, ThinkVantage button, spill-resistant, multimedia Fn keys, Windows and App keys TrackPoint® pointing device, Internet Scroll Bar ¹³ , magnifying glass UltraNav™, wide touch pad below keyboard, Tap Zones, scrolling regions label, multi-touch															
Lighting FX	Illuminated power button											Supports ThinkVantage® technologies				
Dimensions ³ Weight ² Case Battery - type ³⁷ Battery - life ¹⁰	<i>4/6-cell 15.6W" (WxDxH):</i> 14.9" x 9.72" x 1.26–1.42"; 380 x 247mm x 32–36mm <i>4-cell:</i> starting at 5.17 lb (2.35kg); <i>6-cell:</i> starting at 5.64 lb (2.56kg) <i>Color:</i> ThinkPad Matte Black; <i>Material:</i> Scratch-resistant ABS plastic Lithium Ion 6-cell <i>6-cell:</i> up to 4.0 hr; <i>9-cell:</i> up to 6 hr											65-watt (GMA graphics) 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 via 800-426-7378				
Chipset	Mobile Intel GM45 Express Chipset (Graphics Memory Controller Hub), ICH9M I/O Controller Hub (SATA 3.0Gb/s, USB 2.0, PCI Express® 1.1, PCI 2.3, ethernet MAC), LPC bus (IT8752)															
ExpressCard Multicard reader PC Card Smart Card read Ports	One slot (ExpressCard/34) 7-in-1 reader (MMC, Memory Stick, Mem Stick Pro, SD, SDHC, XD, XD Type H) None None Three USB 2.0, one eSATA/USB combo port, external monitor (VGA DB-15, HDMI), ethernet (RJ-45)											ThinkPlus™, 22 1-year LOR ²⁴ 9x5 NBD 45K5968 ThinkPlus 2-year LOR 9x5 NBD 45K5969 ThinkPlus 3-year LOR 9x5 NBD 45K5970 ThinkPlus 4-year LOR 9x5 NBD 45K5973 ThinkPlus 5-year LOR 9x5 NBD 45K5975 ThinkPlus 2-year P&L P/U Depot 45K5971 ThinkPlus 3-year P&L P/U Depot 45K5972 ThinkPlus 4-year P&L P/U Depot 45K5974 ThinkPlus 5-year P&L P/U Depot 45K5976				
Mini PCI Express 11n ²⁸ Intel 1000 ²⁸ WWAN upg Modem Bluetooth™ Ethernet Intel AMT Audio support	One Mini PCI Express slot <i>Some:</i> 11b/g/n wireless ⁴ , Mini-PCIe Adapter II <i>Some:</i> 11b/g/n wireless, Mini PCIe adapter, Intel Centrino® Wireless-N 1000, 1x2 None None None None Realtek® RTL8111DL Gigabit Network Connection, PHY, PCIe x1 None High Definition (HD) Audio, ALC269Q codec / stereo speakers, 1.5 watt / speaker volume up, down and mute buttons / mono microphone, mic mute button, mic input jack, headphone jack Power-on password, hard disk password, supervisor password, security keyhole															
Security Security chip Fingerprint reader	None None None															
Limited warranty ¹²	1-year - depot repair service / service upgrades ²² available											agreements at lenovo.com/thinkplus/warranty				

See footnotes for important warranty information
US models announced January 11, 2011

* Intel Centrino® processor technology
✦ Intel Centrino 2 processor technology

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Memory

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann	06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann	06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann	06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann	06/23/09
4GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3708	ann	06/23/09
1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann	03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25-Pack)	57Y4415	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann	03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25-Pack)	57Y4416	ann	03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann	03/02/10

Storage and removable storage

SL410/510 500GB Disk SATA 3G/s (5400 rpm)	43N3422	ann	10/22/09
USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann	01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann	01/05/10

ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann	05/12/09
USB Port Replicator with Digital Video	45K1610	ann	07/28/09

Keyboard

TrackPoint Cap Collection	73P2698	ann	12/16/03
USB Numeric Keypad	33L3225	ann	05/01/00
Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Lenovo Mini Wireless Keyboard N5901 ⁵² (blk)	57Y6336		
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann	09/15/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.			
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Preferred Pro USB Fingerprint Keyboard	73P4730	ann	02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann	03/24/09

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann	08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann	06/04/02
ThinkPad Bluetooth Laser Mouse	41U5008	ann	01/22/08
Lenovo Optical Mouse A6010 (black)	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B (black)	55Y9360		

Security

Kensington® MicroSaver® Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

Multimedia

ThinkPad In-Ear Headphones with mic	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

Modem

USB 2.0 Lenovo Modem	43R1814	ann	02/26/08
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Batteries³⁷

ThinkPad Battery 25 (4-cell)	51J0498	ann	10/22/09
ThinkPad Battery 25+ (6-cell)	51J0499	ann	10/22/09
ThinkPad Battery 25++ (9-cell)	51J0500	ann	10/22/09
ThinkPad External Battery Charger ⁴⁴	40Y7625	ann	09/20/05

⁴⁴ Requires the *ThinkPad 90W AC Adapter*

40Y7659 or the adapter provided with the system.

More information at www.lenovo.com/alldaycomputing

ThinkPad 65W AC Adapter ⁴⁵	40Y7696		
⁴⁵ Only compatible with the integrated graphics models.			
ThinkPad 90W AC Adapter	40Y7659	ann	09/20/05
ThinkPad 65W AC Adapter with USB Hub	57Y4600	ann	09/07/10
90W Ultraslim AC/DC Combo Adapter	41R4493	ann	09/22/09

More info at www.lenovo.com/support/poweradapters*Charging tips for 90W Ultraslim AC/DC Combo Adapter 41R4493*

• iPod and iPhone Charge Tip (L10a)	41R4481	ann	12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann	01/06/09

More information at www.lenovopowertips.com**Carrying Cases***Up to 15.6" widescreen models:*

ThinkPad 15W Case Sleeve	51J0477	ann	08/18/09
Lenovo Business Messenger Case	51J0475	ann	08/18/09
Lenovo Messenger Max	41U5253	ann	05/01/07
Lenovo Performance Backpack	41U5254	ann	05/01/07
ThinkPad Business Backpack	43R2482	ann	05/13/08

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

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann	06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann	10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann	11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann	10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann	10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann	10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann	10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann	06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann	09/17/08

Monitor Accessories⁴⁶

ThinkVision USB Soundbar	40Y7616	ann	08/23/05
ThinkVision Soundbar	45K1263	ann	09/16/08
Kensington MicroSaver Cable Lock	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock	45K1620	ann	09/30/08
Lenovo Security Cable Lock	57Y4303	ann	08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann	09/22/09

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on ThinkPad SL accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/notebookaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide

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.

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 been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

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.

³⁷ **Battery:** The ThinkPad Edge and ThinkPad SL series do not support batteries that are not genuine Lenovo-made or authorized. These systems will continue to boot, but may not charge unauthorized batteries.

Warning: Lenovo has no responsibility for the performance or safety of unauthorized batteries, and provides no warranties for failures or damage arising out of their use.

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U.S.A.

March 2011
slbook.pdf



Personal Systems Reference Lenovo® ThinkCentre TopSeller™ Desktops

March 2011 - Version 395

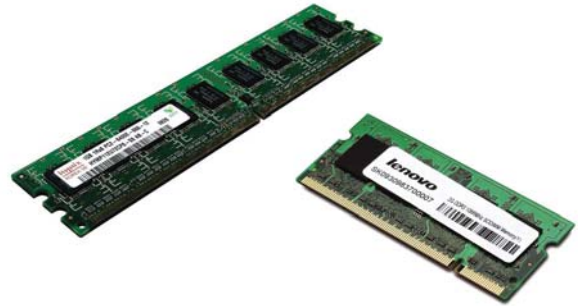


Lenovo ThinkCentre M91p
(Small and Tower Form Factors)

Visit www.lenovo.com/psref for the latest version



Kensington® MicroSaver® Cable Lock
73P2582
Kensington Twin Head Cable Lock
45K1620



1GB PC3-8500 DDR3 UDIMM 45J5434
2GB PC3-8500 DDR3 UDIMM 45J5435
1GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3706
2GB PC3-8500 DDR3 Low-Halogen SODIMM 55Y3707
(UDIMM for SFF, Tower only; SODIMM for Eco USFF only)



NVIDIA® GeForce® 310 DMS59 (2-DVI, 2-VGA)
57Y4167



Lenovo® USB-to-DVI Monitor Adapter
45K5296



Ultralim Wireless Keyboard and Mouse
57Y4700



Lenovo Laser Mouse (USB)
41U3074



Lenovo ThinkCentre M58 Eco Ultra Small



Lenovo ThinkCentre M58 Eco Ultra Small
with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre M58 Small



Lenovo ThinkCentre M58 Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M58 Tower



Lenovo ThinkCentre M58 Tower
with dual Lenovo ThinkVision monitors

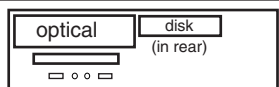
Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58	8820-AQU	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Jan 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 3-year limited warranty¹**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket			Eco Ultra Small optical disk																					
Implementation	Processor in LGA775 socket																								
Memory	2GB std, 8GB max ^a , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk																					
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			Slot 1: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 10.8" W X 9.4" D X 3.1" H • 275mm W X 238mm D X 80mm H • 9.2 lb (4.2 kg) in maximum configuration • Hinged toolless cover for easy serviceability • Toolless disk and optical drive removal • Toolless systemboard retention • System floor stand for vertical orientation																					
SATA disk	250GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without diskette, keyboard • Individual USB port disablement																					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support																								
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																								
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar																								
eSATA port	None																								
Diskette drive	None			Supports ThinkVantage® technologies																					
Media reader	None																								
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																								
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																								
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																								
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																								
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																								
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																								
Speaker	One internal speaker for business audio																								
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																								
Intel AMT	None			EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant																					
Modem	None																								
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																								
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			Limited Warranty ¹ ➤ 3-year parts and labor ➤ International Warranty Service⁹ ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ➤ ThinkPlus services at lenovo.com/thinkplus/warranty ➤ Post warranty maintenance services available ➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																								
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU																								
Preloaded operating system²⁰ - Genuine Windows® 7 Professional 32																									
Preloaded applications⁵ (only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Online Data Backup • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW)																									
Accessories <table><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>Lenovo Vertical PC and Monitor Stand II</td><td>41R4474</td></tr><tr><td>ThinkCentre Ultra Small Under Desk Mount</td><td>40Y8625</td></tr><tr><td colspan="2">More accessories on O-M58 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>				500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	Lenovo Vertical PC and Monitor Stand II	41R4474	ThinkCentre Ultra Small Under Desk Mount	40Y8625	More accessories on O-M58 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories			
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																								
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More accessories on O-M58 sheet																									
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Other accessories at lenovo.com/accessories																									

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58	8910-AQU	2x3	Pentium E5400	2.70	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	8910-B4U	2x3	Pentium E5700	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Oct 10
M58	8910-ARU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	8910-AUU	2x3	Core 2 Quad Q9500	2.83	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Mar 10
M58	8910-ASU	2x3	Core 2 Duo E7500	2.93	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 64	None	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Pentium® Processor E5400 or E5700 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q9500 with quad-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket						Small				
Implementation	2GB or 4GB std, 16GB max⁸, PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available						Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation			
Memory											
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										
SATA disk	250GB or 320GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts						Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without diskette, keyboard • Serial port I/O control • Individual USB port disablement				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support										
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar										
eSATA port	One external SATA (eSATA) port										
Diskette drive	None										
Media reader	None										
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)						Supports ThinkVantage® technologies				
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0										
Intel AMT	None										
Modem	None										
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo						GREENGUARD® certified RoHS-compliant				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs										
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Online Data Backup • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW)							Accessories 1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 - Super Multi-Burner DL DVD±RW SATA Drive 41N5620 - DisplayPort to Single-link DVI-D Cable 45J7915 - DisplayPort to VGA Monitor Cable 57Y4393 - NVIDIA® Quadro® 256MB NVS 290 43R1765 - More accessories on O-M58 sheet - Acc Guide in pdf lenovo.com/accessoriesguide - Other accessories at lenovo.com/accessories				
							Limited Warranty¹ ⇨ 3-year parts and labor ⇨ International Warranty Service⁹ ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇨ ThinkPlus services at lenovo.com/thinkplus/warranty ⇨ Post warranty maintenance services available ⇨ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378				

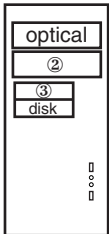
See footnotes for important warranty information

¹⁴ US model announced September 28, 2010; previous models on January 12 or February 23, 2010

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	Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
	M58	9960-ALU	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
ES	M58	9960-APU	4x4	Core 2 Quad Q9500	2.83	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Mar 10
ES	M58	9960-AMU	4x4	Core 2 Duo E7500	2.93	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 64	None	Mar 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Quad Processor Q9500 with quad-core, 1333MHz system bus, and 6MB L2 cache		Tower • Business black color; metal case • 6.9" W X 17.3" D X 15.8" H • 175mm W X 440mm D X 402mm H • 24.2 lb (11.0 kg) in max configuration • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention 
Implementation	Processor in LGA775 socket		
Memory	2GB or 4GB std , 16GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		
SATA disk	250GB or 320GB , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs		
Preloaded operating system²⁰			
- <i>Some:</i> Genuine Windows® 7 Professional 32			
- <i>Some:</i> Genuine Windows 7 Professional 64			
Preloaded applications⁵ (only some listed)			
• Rescue and Recovery™			
• Password Manager			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Lenovo Online Data Backup			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
Accessories			
1GB PC3-8500 DDR3 UDIMM 45J5434			
2GB PC3-8500 DDR3 UDIMM 45J5435			
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675			
DisplayPort to Single-link DVI-D Cable 45J7915			
DisplayPort to VGA Monitor Cable 57Y4393			
NVIDIA® Quadro® 256MB NVS 290 43R1765			
NVIDIA Quadro 256MB NVS 295 45K1669			
More accessories on O-M58 sheet			
Acc Guide in pdf lenovo.com/accessoriesguide			
Other accessories at lenovo.com/accessories			
Security			
• Security chip (see information on left)			
• One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® MicroSaver® cable)			
• Power-on password			
• Administrator password			
• Hard disk password (user and master)			
• Boot sequence control			
• Boot without diskette, keyboard			
• Serial port I/O control			
• Individual USB port disablement			
Supports ThinkVantage® technologies			
GREENGUARD® certified RoHS-compliant			
Limited Warranty¹			
⇒ 3-year parts and labor			
⇒ International Warranty Service ⁹			
⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)			
⇒ Onsite service upgrade options (in eligible locations): ⁷			
• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)			
• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)			
• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)			
• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)			
• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)			
⇒ ThinkPlus services at lenovo.com/thinkplus/warranty			
⇒ Post warranty maintenance services available			
⇒ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378			

See footnotes for important warranty information

ES US models announced February 23, 2010; previous model on January 12, 2010

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(MLAN4-25) March 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58p	9961-ALU	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Pro 32	No	Jan 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 3-year limited warranty¹**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

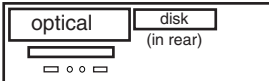
Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		Eco Ultra Small optical disk		
Implementation	Processor in LGA775 socket				
Memory	2GB std , 8GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3		
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500) , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		• Business black color; metal case • 10.8" W X 9.4" D X 3.1" H • 275mm W X 238mm D X 80mm H • 9.2 lb (4.2 kg) in maximum configuration • Hinged toolless cover for easy serviceability • Toolless disk and optical drive removal • Toolless systemboard retention • System floor stand for vertical orientation		
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without diskette, keyboard • Individual USB port disablement		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar				
eSATA port	None		Supports ThinkVantage® technologies		
Diskette drive	None				
Media reader	None				
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	Intel Active Management Technology (iAMT)				
Modem	None		Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo				
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU				
Preloaded operating system²⁰		Accessories			
- Genuine Windows® 7 Professional 32		500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
Preloaded applications⁵ (only some listed)		1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
• Rescue and Recovery™		Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
• Password Manager		DisplayPort to Single-link DVI-D Cable 45J7915			
• ThinkVantage System Update		DisplayPort to VGA Monitor Cable 57Y4393			
• ThinkVantage Power Manager		Lenovo Vertical PC and Monitor Stand II 41R4474			
• ThinkVantage Toolbox		ThinkCentre Ultra Small Under Desk Mount 40Y8625			
• Lenovo Online Data Backup		More accessories on O-M58 sheet			
• Norton™ Internet Security 2011 (30 days of virus definitions)		Acc Guide in pdf lenovo.com/accessoriesguide			
• Adobe® Reader®		Other accessories at lenovo.com/accessories			
• Adobe Flash® Player					
• Microsoft Office 2010 preloaded; purchase product key to activate					
• Roxio® Creator® Business Edition (DVD±RW)					
• Roxio MyDVD® (DVD±RW)					

ThinkCentre® M58p Small (9964) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
	M58p	9964-ABU	2x3 Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
	M58p	9964-ACU	2x3 Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
	M58p	9964-ADU	2x3 Core 2 Duo E8400	3.00	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 64	None	Mar 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or Intel Core 2 Quad Processor Q9400 with quad-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	Small  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation						
Implementation	Processor in LGA775 socket							
Memory	2GB or 4GB std, 16GB max⁸, PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available							
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display							
SATA disk	250GB or 320GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without diskette, keyboard • Serial port I/O control • Individual USB port disablement						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support							
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive							
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar							
eSATA port	One external SATA (eSATA) port							
Diskette drive	None							
Media reader	None							
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O							
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)							
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA							
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)							
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)							
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec							
Speaker	One internal speaker for business audio							
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0							
Intel AMT	Intel Active Management Technology (iAMT)							
Modem	None							
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant							
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo							
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs		GREENGUARD® certified RoHS-compliant					
Preloaded operating system²⁰			Accessories					
- <i>Some:</i> Genuine Windows® 7 Professional 32			1GB PC3-8500 DDR3 UDIMM			45J5434		
- <i>Some:</i> Genuine Windows 7 Professional 64			2GB PC3-8500 DDR3 UDIMM			45J5435		
Preloaded applications⁵ (only some listed)			500GB SATA 3.0Gb/s Disk (7200 rpm)			43R1990		
• Rescue and Recovery™			1TB SATA 3.0Gb/s Disk (7200 rpm)			45J7918		
• Password Manager			Super Multi-Burner DL DVD±RW SATA Drive			41N5620		
• ThinkVantage System Update			DisplayPort to Single-link DVI-D Cable			45J7915		
• ThinkVantage Power Manager			DisplayPort to VGA Monitor Cable			57Y4393		
• ThinkVantage Toolbox			NVIDIA® Quadro® 256MB NVS 290			43R1765		
• Lenovo Online Data Backup			More accessories on O-M58 sheet					
• Norton™ Internet Security 2011 (30 days of virus definitions)			Acc Guide in pdf lenovo.com/accessoriesguide					
• Adobe® Reader®			Other accessories at lenovo.com/accessories					
• Adobe Flash® Player								
• Microsoft Office 2010 preloaded; purchase product key to activate								
• Roxio® Creator® Business Edition (DVD±RW)								
• Roxio MyDVD® (DVD±RW)								

See footnotes for important warranty information

US model announced February 23, 2010; previous models on January 12, 2010

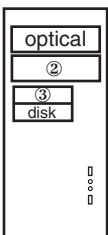
US model withdrawn effective April 2010

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(MLAN4-27) February 2010

ThinkCentre® M58p Tower (9965) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date																																			
M58p	9965-A9U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB ²	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10																																			
M58p	9965-ABU	4x4	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10																																			
M58p	9965-ACU	4x4	Core 2 Duo E8400	3.00	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 64	None	Mar 10																																			
• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology) • These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a 3-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																																																		
Positioning	Mainstream enterprise stability and manageability									Tower • Business black color; metal case • 6.9" W X 17.3" D X 15.8" H • 175mm W X 440mm D X 402mm H • 24.2 lb (11.0 kg) in max configuration • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention																																								
Processor	Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or Intel Core 2 Quad Processor Q9400 with quad-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache																																																	
Implementation	Processor in LGA775 socket																																																	
Memory	2GB or 4GB std, 16GB max ⁸ , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; Italics: standard memory in two sockets; two sockets available; Non-italics: standard memory in one socket; 3 sockets available																																																	
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display									Bay ① 5.25", 1.6" high, access, std optical			Bay ② 5.25", 1.6" high, access, open			Bay ③ 3.5", 1" high, access, open (reader/diskette)			Bay ④ 3.5", 1" high, no access, std disk																															
SATA disk	250GB or 320GB, SATA 3.0Gb/s 7200 rpm, vibration dampening									Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)			Slot 2: half-length, full-height, PCIe x1			Slot 3: half-length, full-height, 32-bit PCI 2.3			Slot 4: half-length, full-height, 32-bit PCI 2.3																															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support									Security • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® MicroSaver® cable) • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without diskette, keyboard • Serial port I/O control • Individual USB port disablement																																								
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																																																	
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar																																																	
eSATA port	None																																																	
Diskette drive	None									Supports ThinkVantage® technologies																																								
Media reader	None																																																	
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																																																	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																	
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)									GREENGUARD® certified RoHS-compliant																																								
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																																																	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																																																	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																																																	
Speaker	One internal speaker for business audio									Limited Warranty ¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																																								
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																																																	
Intel AMT	Intel Active Management Technology (iAMT)																																																	
Modem	None																																																	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																																	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo									Accessories <table><tr><td>1GB PC3-8500 DDR3 UDIMM</td><td>45J5434</td></tr><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td><td>45K1675</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>NVIDIA® Quadro® 256MB NVS 290</td><td>43R1765</td></tr><tr><td>NVIDIA Quadro 256MB NVS 295</td><td>45K1669</td></tr><tr><td colspan="2">More accessories on O-M58 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>															1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB NVS 295	45K1669	More accessories on O-M58 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories	
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Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																																																	
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs																																																	
Preloaded operating system²⁰				Accessories																																														
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- Some: Genuine Windows 7 Professional 64				2GB PC3-8500 DDR3 UDIMM				45J5435																																										
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				Blu-ray™ Burner SATA 1.5Gb/s Drive				45K1675																																										
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• Roxio MyDVD® (DVD±RW)																																																		

See footnotes for important warranty information

US model announced February 23, 2010; previous models on January 12, 2010

US model withdrawn effective April 2010

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(MLAN4-28) February 2010

Partial list of accessories supported on ThinkCentre M58 and M58p**Memory**

Eco Ultra Small 8820/7359/7637/9961/7479/6136 use notebook memory:

1GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3706	ann 06/23/09
1GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4385	ann 06/23/09
2GB PC3-8500 DDR3 Low-Halogen SODIMM	55Y3707	ann 06/23/09
2GB PC3-8500 DDR3 L-H SODIMM (25-Pack)	57Y4386	ann 06/23/09

Small 8910/7360/6258/7638/9964/7483/7220/6137/6234, and Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639 use desktop memory:

1GB PC3-8500 DDR3 UDIMM	45J5434	ann 11/18/08
1GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4421	ann 11/10/09
2GB PC3-8500 DDR3 UDIMM	45J5435	ann 11/18/08
2GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4422	ann 11/10/09

More information at

www.lenovo.com/support/desktopmemorycompatibility

Optical

All:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639 support:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann 03/31/09
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Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

Graphics

Small 8910/7360/6258/7638/9964/7483/7220/6137/6234 support Low Profile:

ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA® Quadro® 256MB NVS 290		
(2-DVI or 2-VGA via DMS59 dongles)	43R1765	ann 12/18/07

NVIDIA Quadro 512MB FX 380 LP		
(DP, DVI with a DVI to VGA converter)	57Y4396	ann 02/02/10
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10

NVIDIA GeForce 310 512MB DMS59		
(2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639 support 75 watts max:

ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA Quadro 256MB NVS 290	43R1765	ann 12/18/07
NVIDIA Quadro 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS450 (4-DP/4-DVI)	57Y4398	ann 01/19/10
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

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

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08

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

Multimedia

ThinkPad® In-Ear Headphones with mic⁶⁰ 57Y4488 ann 01/07/10
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Mounting Device

Eco Ultra Small 8820/7359/7637/9961/7479/6136 support under desk mounting device:

ThinkCentre Ultra Small Under Desk Mount	40Y8625	ann 09/06/05
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Monitors

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at www.lenovo.com/thinkvision

Monitor Accessories⁴⁶

Eco Ultra Small 8820/7359/7637/9961/7479/6136 support:

Lenovo Vertical PC and Monitor Stand II	41R4474	ann 01/27/09
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All:

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessories

Accessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre M70e Small and
Lenovo ThinkCentre M70e Tower



Lenovo ThinkCentre M70e Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M70e Small
with optional PS/2 keyboard and mouse ports



Lenovo ThinkCentre M70e Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M70e Tower
with optional PS/2 keyboard and mouse ports



Lenovo ThinkCentre M70e Tower

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
0809-C5U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB ²	DVD±RW	GMA	Pro 32	None	Aug 10
0809-B3U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0809-E6U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
0809-C6U	4x3	Core 2 Duo E8400	3.00	6MB	2	4GB	500GB	DVD±RW	GMA	Pro 64	None	Aug 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> Intel® Pentium® Processor E5500 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 with dual-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	Small disk optical Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed																
Implementation	Processor in LGA775 socket																	
Memory	2GB, 3GB, or 4GB std, 4GB max⁸, PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3																
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	• Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 99mm H • 14.5 lb (6.6 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation																
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening	Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement																
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																	
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																	
eSATA port	None																	
Diskette drive	None																	
Media reader	None																	
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																	
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																	
Speaker	One internal speaker for business audio																	
IEEE 1394	None																	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																	
Intel AMT	None																	
Modem	None																	
Security chip	None																	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																	
Power supply	240 watts, autosensing, active Power Factor Correction																	
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)			Accessories <table><tr><td>1GB PC3-8500 DDR3 UDIMM</td><td>45J5434</td></tr><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)</td><td>57Y4396</td></tr></table> More accessories on O-M70E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)
1GB PC3-8500 DDR3 UDIMM	45J5434																	
2GB PC3-8500 DDR3 UDIMM	45J5435																	
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																	
DisplayPort™ to Single-link DVI-D Cable	45J7915																	
DisplayPort to VGA Monitor Cable	57Y4393																	
ADD2 DVI-D Monitor Connection (HDCP)	43R1985																	
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397																	
NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396																	
		Supports ThinkVantage® technologies																
		GREENGUARD® certified RoHS-compliant																
		Limited Warranty¹ ⇨ 3-year parts and labor ⇨ International Warranty Service⁹ ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇨ ThinkPlus services at lenovo.com/thinkplus/warranty ⇨ Post warranty maintenance services available ⇨ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																

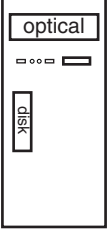
See footnotes for important warranty information

US model announced March 8, 2011; previous models on August 3, 2010

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Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Graphics	Win7 preload	Global Educ	Avail date
0806-C1U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB ²	None	DVD±RW		GMA	Pro 32	None	Aug 10
0806-B3U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0806-D2U	4x3	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	None	DVD±RW	Media	GMA	Pro 64	None	Mar 11
0806-C5U	4x3	Core 2 Duo E8400	3.00	6MB	2	4GB	500GB	None	DVD±RW		GMA	Pro 64	None	Aug 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value Intel® Pentium® Processor E5500 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache or Intel Core 2 Duo Processor E8400 with dual-core , 1333MHz system bus, and 6MB L2 cache	Tower • Business black color; metal case • 6.3" W X 16.6" D X 15.3" H • 160mm W X 422mm D X 388mm H • 20.7 lb (9.4 kg) in max configuration • Handle on top front • Highlighted optical drive button for easy access	
Implementation	Processor in LGA775 socket		
Memory	2GB, 3GB, or 4GB std. , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed	
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	Some: Single Slot SD Media Card Reader		
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64		Accessories 1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort™ to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 More accessories on O-M70E sheet	
Preloaded applications ⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)		Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	
		Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement	
		Supports ThinkVantage® technologies	
		GREENGUARD® certified RoHS-compliant	
		Limited Warranty ¹ ⇒ 3-year parts and labor ⇒ International Warranty Service® ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts ³ , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations): ⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day ¹⁴ toll-free support during the warranty period ¹ via 800-426-7378	

See footnotes for important warranty information

® US model announced March 8, 2011; previous models on August 3, 2010

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(MANL1-6) March 2011

Partial list of accessories supported on ThinkCentre M70e

Memory

1GB PC3-8500 DDR3 UDIMM	45J5434	ann 11/18/08
1GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4421	ann 11/10/09
2GB PC3-8500 DDR3 UDIMM	45J5435	ann 11/18/08
2GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4422	ann 11/10/09

More information at

www.lenovo.com/support/desktopmemorycompatibility

Optical

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10
⁵³ USB-only attach.		

Graphics

Small 0809/0822/0830/0833/0843 support Low Profile:

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA® Quadro® 512MB FX 380 LP (DP, DVI with a DVI to VGA converter)	57Y4396	ann 02/02/10
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 0806/0829/0832/0842 support:

DisplayPort to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphics card.More information at www.lenovo.com/support/graphiccards

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09
⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.		

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

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
ThinkPad® USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08

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

Multimedia

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.		

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.		

Monitors

Lenovo D186 Wide 18.5" Monitor	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at www.lenovo.com/thinkvisionMonitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre M75e Small and
Lenovo ThinkCentre M75e Tower



Lenovo ThinkCentre M75e Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M75e Small



Lenovo ThinkCentre M75e Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M75e Tower



Lenovo ThinkCentre M75e Tower

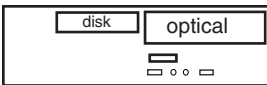
Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
4163-B2U	4x3	Sempron 145	2.80	1GB	250GB ²	DVD	None	3000	VGA, DVI-D	Prem 32	None	Oct 10
• This small and medium business (SMB) model is part of the US TopSeller™ Program • This model has a 1-year limited warranty¹ • This system is Microsoft® Office 2010 Product Key Ready (O10PKR)												
Positioning Processor	Essential business features, exceptional value AMD® Sempron™ Processor 145 with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache Processor in Socket AM3							Small disk optical				
Implementation												
Memory	1GB std , 16GB max ^a , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller							Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed				
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter							Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 99mm H • 14.9 lb (6.8 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation				
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts							Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710											
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive											
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors											
eSATA port	None											
Diskette drive	None											
Media reader	None											
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®											
Modem	None											
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo							Supports ThinkVantage® technologies				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo							GREENGUARD® certified RoHS-compliant				
Power supply	240 watts, autosensing, active Power Factor Correction											
Preloaded operating system²⁰ - Genuine Windows® 7 Home Premium 32			Accessories 1GB PC3-10600 DDR3 UDIMM 57Y4389 2GB PC3-10600 DDR3 UDIMM 57Y4390 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® Quadro® 512MB FX 380 LP 57Y4396 NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories			Limited Warranty¹ ➤ 1-year parts and labor ➤ International Warranty Service⁹ ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Onsite service upgrade options (in eligible locations):⁷ • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191) ➤ ThinkPlus services at lenovo.com/thinkplus/warranty ➤ Post warranty maintenance services available ➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						
Preloaded applications⁵ (only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate												

ThinkCentre® M75e Small (5042) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory ^a	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5042-A5U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5042-A6U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5042-A7U	4x3	Athlon II X4 640	3.00	4GB	500GB	DVD±RW	None	3000	VGA, DVI-D	Pro 64	None	Oct 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

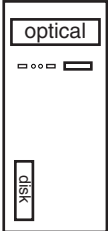
Positioning Processor	Essential business features, exceptional value AMD® Athlon™ II X2 Processor B22 with dual-core , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or AMD Athlon II X4 Processor 640 with quad-core , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3		Small 	
Implementation	Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed	
Memory	2GB, 3GB, or 4GB std, 16GB max ^a , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		• Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 99mm H • 14.9 lb (6.8 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation	
Graphics	ATI™ Radeon™ 3000, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter		Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement	
SATA disk	320GB or 500GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		Supports ThinkVantage® technologies	
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		GREENGUARD® certified RoHS-compliant	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Modem	None			
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	240 watts, autosensing, active Power Factor Correction			
Preloaded operating system ²⁰		Accessories		
- Some: Genuine Windows® 7 Professional 32		1GB PC3-10600 DDR3 UDIMM		57Y4389
- Some: Genuine Windows 7 Professional 64		2GB PC3-10600 DDR3 UDIMM		57Y4390
Preloaded applications ⁵ (all OSes; only some listed)		Super Multi-Burner DL DVD±RW SATA Drive		41N5620
• Rescue and Recovery™		DisplayPort™ to Single-link DVI-D Cable		45J7915
• Password Manager		NVIDIA® Quadro® 512MB FX 380 LP	57Y4396	
• ThinkVantage System Update		NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	
• ThinkVantage Power Manager		NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167	
• ThinkVantage Toolbox		More accessories on O-M75E sheet		
• Norton™ Internet Security 2011 (30 days of virus definitions)		Acc Guide in pdf lenovo.com/accessoriesguide		
• Adobe® Reader®		Other accessories at lenovo.com/accessories		
• Skype™ for Windows				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Corel® Burn.Now™ (DVD±RW)				
• Corel DVD MovieFactory® (DVD±RW)				

See footnotes for important warranty information
 US models announced September 21, 2010

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 (ASPN1-2) October 2010

ThinkCentre® M75e Tower (4162) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

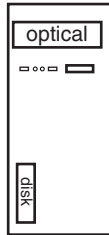
Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date	
4162-A3U	4x3	Sempron 145	2.80	1GB	250GB ²	None	DVD	None	3000	VGA, DVI-D	Prem 32	None	Oct 10	
• This small and medium business (SMB) model is part of the US TopSeller™ Program • This model has a 1-year limited warranty¹ • This system is Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	<i>Essential business features, exceptional value</i> AMD® Sempron™ Processor 145 with single-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache Processor in Socket AM3							Tower • Business black color; metal case • 6.3" W X 16.6" D X 15.3" H • 160mm W X 422mm D X 388mm H • 21.2 lb (9.6 kg) in max configuration • Handle on top front • Highlighted optical drive button for easy access 			Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length,full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length,full-height, PCIe 2.0 x1 Slot 3: half-length,full-height, PCIe 2.0 x1 Slot 4: half-length,full-height, 32-bit PCI 2.3			
Implementation														
Memory	1GB std, 16GB max⁸, UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller													
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter													
SATA disk	250GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts							Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710													
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive													
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors							Supports ThinkVantage® technologies						
eSATA port	None													
Diskette drive	None													
Media reader	None							GREENGUARD® certified RoHS-compliant						
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)							Limited Warranty ¹ ⇒ 1-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	One internal speaker for business audio													
IEEE 1394	None							Accessories 1GB PC3-10600 DDR3 UDIMM 57Y4389 2GB PC3-10600 DDR3 UDIMM 57Y4390 - DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 - DisplayPort™ to Single-link DVI-D Cable 45J7915 - NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 - NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 - More accessories on O-M75E sheet - Acc Guide in pdf lenovo.com/accessoriesguide - Other accessories at lenovo.com/accessories						
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®													
Modem	None													
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant							Preloaded applications ⁵ (only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate						
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, manual switch													

See footnotes for important warranty information
US model announced September 28, 2010

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(ASP1-8) November 2010

Type-model	Slot x bay	Processor	GHz	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5041-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB ²	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5041-A2U	4x3	Phenom II X2 B53	2.80	3GB	320GB	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5041-A3U	4x3	Athlon II X4 640	3.00	4GB	500GB	None	DVD±RW	None	3000	VGA, DVI-D	Pro 64	None	Oct 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> AMD® Athlon™ II X2 Processor B22 with dual-core , integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or AMD Phenom™ II X2 Processor B53 with dual-core , integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or AMD Athlon II X4 Processor 640 with quad-core , integrated 1333 MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3	Tower • Business black color; metal case • 6.3" W X 16.6" D X 15.3" H • 160mm W X 422mm D X 388mm H • 21.2 lb (9.6 kg) in max configuration • Handle on top front • Highlighted optical drive button for easy access 												
Implementation														
Memory	2GB, 3GB, or 4GB std , 16GB max ⁸ , UDIMM, PC3-10600 1333MHz DDR3* , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length,full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length,full-height, PCIe 2.0 x1 Slot 3: half-length,full-height, PCIe 2.0 x1 Slot 4: half-length,full-height, 32-bit PCI 2.3												
Graphics	ATI™ Radeon™ 3000 , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter													
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts													
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar													
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	AMD 760G Chipset with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	One internal speaker for business audio													
IEEE 1394	None													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®													
Modem	None													
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, manual switch													
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSeS; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)		Accessories <table><tr><td>1GB PC3-10600 DDR3 UDIMM</td><td>57Y4389</td></tr><tr><td>2GB PC3-10600 DDR3 UDIMM</td><td>57Y4390</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)</td><td>57Y4167</td></tr></table> More accessories on O-M75E sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort™ to Single-link DVI-D Cable	45J7915	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167
1GB PC3-10600 DDR3 UDIMM	57Y4389													
2GB PC3-10600 DDR3 UDIMM	57Y4390													
Super Multi-Burner DL DVD±RW SATA Drive	41N5620													
DisplayPort™ to Single-link DVI-D Cable	45J7915													
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397													
NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167													
		Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378												

Partial list of accessories supported on ThinkCentre M75e

Memory

1GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4389	ann 01/12/10
1GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4419	ann 01/12/10
2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10

More information at

www.lenovo.com/support/desktopmemorycompatibility

Optical

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10
⁵³ USB-only attach.		

Graphics

Small 4163/5042/5046/5054/5062/5058/5064 support Low Profile:

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
NVIDIA® Quadro® 512MB FX 380 LP		
(DP, DVI with a DVI to VGA converter)	57Y4396	ann 02/02/10
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59		
(2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 4162/5041/5044/5053/5061/5057/5063 support:

DisplayPort to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphics card.More information at www.lenovo.com/support/graphiccards

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
ThinkPad® USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09

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

Multimedia

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
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⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Monitors

Lenovo D186 Wide 18.5" Monitor	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at www.lenovo.com/thinkvisionMonitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre M90/M90p Eco USFF



Lenovo ThinkCentre M90/M90p Eco USFF



Lenovo ThinkCentre M90/M90p SFF



Lenovo ThinkCentre M90/M90p SFF
with ThinkVision L2251x (2578-HB6)



Lenovo ThinkCentre M90/M90p Tower



Lenovo ThinkCentre M90/M90p Tower

Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3244-A8U	1x2	Core i3-530	2.93	2	2GB	250GB ^b	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 10
3244-B4U	1x2	Core i3-550	3.20	2	2GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Jan 11

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core. Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache		Eco Ultra Small optical disk □ ○ □																	
Implementation	Processor in LGA1156 socket																			
Memory	2GB std, 8GB max, PC3-10600 1333MHz DDR3, two 204-pin SODIMM sockets (notebook); <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 11.0" W X 9.4" D X 3.1" H • 279mm W X 238mm D X 79mm H • 9.2 lb (4.2 kg) in maximum configuration • Hinged toolless cover for easy serviceability • Toolless disk and optical drive removal • System floor stand for vertical orientation																	
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display																			
DP dongle	None		Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Individual USB port disablement Environmental Features • EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • GREENGUARD® certified • RoHS-compliant Supports ThinkVantage® technologies Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																	
SATA disk	250GB or 320GB, SATA 3.0Gb/s 7200 rpm																			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical																			
eSATA port	None																			
Diskette drive	None																			
Media reader	None																			
Chipset	Intel Q57 Express Chipset, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	Internal speaker for business audio																			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®																			
Intel AMT	None																			
Modem	None																			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU																			
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)			Accessories <table><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>Lenovo Vertical PC and Monitor Stand II</td><td>41R4474</td></tr><tr><td>ThinkCentre Ultra Small Under Desk Mount</td><td>40Y8625</td></tr><tr><td>More accessories on O-M90 sheet</td><td></td></tr></table> Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	Lenovo Vertical PC and Monitor Stand II	41R4474	ThinkCentre Ultra Small Under Desk Mount	40Y8625	More accessories on O-M90 sheet	
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																			
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																			
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Lenovo Vertical PC and Monitor Stand II	41R4474																			
ThinkCentre Ultra Small Under Desk Mount	40Y8625																			
More accessories on O-M90 sheet																				

See footnotes for important warranty information

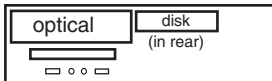
® US model announced December 28, 2010; previous model on March 2, 2010

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(MELB1-24) January 2011

Type-model	Slot x bay	Processor	GHz	Cores	Memory ⁸	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3245-A9U	2x3	Core i3-530	2.93	2	2GB	250GB ²	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 10
3245-B3U	2x3	Core i3-530	2.93	2	4GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Mar 10
3245-B7U	2x3	Core i3-550	3.20	2	2GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Dec 10
3245-B1U	2x3	Core i5-750	2.66	4	3GB	500GB	DVD±RW	310	VGA, DP	ES50	None	Pro 32	None	Mar 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core , Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 Processor i5-750 with quad-core , Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket								Small						
Implementation	Processor in LGA1156 socket								Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 (75w max) Slot 2: Low Profile, 32-bit PCI 2.3						
Memory	2GB, 3GB, or 4GB std , 16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available								• Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless system board retention • System floor stand for vertical orientation						
Graphics	<i>Some:</i> Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display <i>Some:</i> NVIDIA® GeForce® 310 , PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts								Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement						
DP dongle	None								Environmental Features • EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • GREENGUARD® certified • RoHS-compliant Supports ThinkVantage® technologies						
SATA disk	250GB, 320GB, or 500GB , SATA 3.0Gb/s 7200 rpm														
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical														
eSATA port	None														
Diskette drive	None														
Media reader	None														
Chipset	Intel Q57 Express Chipset , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O								Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®														
Intel AMT	None														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo														
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction														
Preloaded operating system²⁰			Accessories												
- <i>Some:</i> Genuine Windows® 7 Professional 32			1GB PC3-10600 DDR3 UDIMM 57Y4389												
- <i>Some:</i> Genuine Windows 7 Professional 64			2GB PC3-10600 DDR3 UDIMM 57Y4390												
			500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990												
			1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918												
			Super Multi-Burner DL DVD±RW SATA Drive 41N5620												
			DisplayPort to Single-link DVI-D Cable 45J7915												
			DisplayPort to VGA Monitor Cable 57Y4393												
			NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397												
			NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396												
			More accessories on O-M90 sheet												
			Acc Guide in pdf lenovo.com/accessoriesguide												
			Other accessories at lenovo.com/accessories												
Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)															

See footnotes for important warranty information

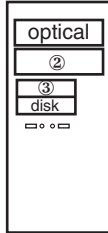
® US model announced November 30, 2010; previous models on March 2, 2010

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(MELB1-25) December 2010

ThinkCentre® M90 Tower (3246) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory ^a	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3246-B1U	4x4	Core i3-530	2.93	2	2GB	250GB ²	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 10
3246-B2U	4x4	Core i5-750	2.66	4	3GB	500GB	None	DVD±RW	310	VGA, DP	ES50	None	Pro 32	None	Mar 10
3246-B4U	4x4	Core i3-530	2.93	2	4GB	320GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Mar 10
3246-B9U	4x4	Core i3-550	3.20	2	2GB	320GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Dec 10
• The most powerful, stable, and manageable desktop with next generation Intel platform • These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a 3-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)															
Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core, Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 Processor i5-750 with quad-core, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket									Tower • Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 24.2 lb (11.0 kg) in max configuration • Handle on top front • Power button on top handle • Toolless cover removal • Tilted front I/O for easy access • Toolless disk, optical drive removal • Toolless adapter retention 					
Implementation															
Memory	2GB, 3GB, or 4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available									Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk					
Graphics	<i>Some:</i> Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ conn, supports dual independent display <i>Some:</i> NVIDIA® GeForce® 310, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts									Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3					
DP dongle	None									Security • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement					
SATA disk	250GB, 320GB, or 500GB, SATA 3.0Gb/s 7200 rpm									Environmental Features • EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • GREENGUARD® certified • RoHS-compliant					
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical														
eSATA port	None														
Diskette drive	None														
Media reader	None														
Chipset	Intel Q57 Express Chipset, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®														
Intel AMT	None														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, 85% PSU														
Preloaded operating system²⁰															
- <i>Some:</i> Genuine Windows® 7 Professional 32															
- <i>Some:</i> Genuine Windows 7 Professional 64															
Preloaded applications⁵ (all OSes; only some listed)															
• Rescue and Recovery™															
• Password Manager															
• ThinkVantage System Update															
• ThinkVantage Power Manager															
• ThinkVantage Toolbox															
• Norton™ Internet Security 2011 (30 days of virus definitions)															
• Adobe® Reader®															
• Adobe Flash® Player															
• Skype™ for Windows															
• Microsoft Office 2010 preloaded; purchase product key to activate															
• Corel® Burn.Now™ (DVD±RW)															
• Corel DVD MovieFactory® (DVD±RW)															
Accessories															
1GB PC3-10600 DDR3 UDIMM 57Y4389															
2GB PC3-10600 DDR3 UDIMM 57Y4390															
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990															
1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918															
Super Multi-Burner DL DVD±RW SATA Drive 41N5620															
DisplayPort to Single-link DVI-D Cable 45J7915															
DisplayPort to VGA Monitor Cable 57Y4393															
NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397															
More accessories on O-M90 sheet															
Acc Guide in pdf lenovo.com/accessoriesguide															
Other accessories at lenovo.com/accessories															
Limited Warranty¹															
⇒ 3-year parts and labor															
⇒ International Warranty Service⁹															
⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)															
⇒ Onsite service upgrade options (in eligible locations):⁷															
• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)															
• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)															
• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)															
• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)															
• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)															
⇒ ThinkPlus services at lenovo.com/thinkplus/warranty															
⇒ Post warranty maintenance services available															
⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378															

See footnotes for important warranty information

® US model announced November 30, 2010; previous models on March 2, 2010

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(MELB1-26) December 2010

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory ^a	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3257-A5U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB ²	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Mar 10
3257-A9U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Dec 10

- **Next generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

* For more information on Lenovo Secure Managed Client, see lenovo.com/acc

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5 Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket	Eco Ultra Small optical disk □ ○ □ Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 11.0" W X 9.4" D X 3.1" H • 279mm W X 238mm D X 79mm H • 9.2 lb (4.2 kg) in maximum configuration • Hinged toolless cover for easy serviceability • Toolless disk and optical drive removal • System floor stand for vertical orientation														
Implementation																
Memory	3GB std , 8GB max, PC3-10600 1333MHz DDR3 , two 204-pin SODIMM sockets (notebook); <i>Italics: standard memory in both sockets; no sockets available</i>															
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 1277MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display															
DP dongle	None															
SATA disk	500GB , SATA 3.0Gb/s 7200 rpm															
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical															
eSATA port	None															
Diskette drive	None															
Media reader	None															
Chipset	Intel Q57 Express Chipset , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec															
Speaker	Internal speaker for business audio															
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®															
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)															
Modem	None															
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo															
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU															
Preloaded operating system ²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications ⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)		Accessories <table><tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr><tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>Lenovo Vertical PC and Monitor Stand II</td><td>41R4474</td></tr><tr><td>ThinkCentre Ultra Small Under Desk Mount</td><td>40Y8625</td></tr></table> More accessories on O-M90 sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	Lenovo Vertical PC and Monitor Stand II	41R4474	ThinkCentre Ultra Small Under Desk Mount	40Y8625
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990															
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DisplayPort to Single-link DVI-D Cable	45J7915															
DisplayPort to VGA Monitor Cable	57Y4393															
Lenovo Vertical PC and Monitor Stand II	41R4474															
ThinkCentre Ultra Small Under Desk Mount	40Y8625															
		Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Individual USB port disablement														
		Environmental Features • EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • GREENGUARD® certified • RoHS-compliant														
		Supports ThinkVantage® technologies														
		Limited Warranty ¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378														

See footnotes for important warranty information

® US model announced November 30, 2010; previous model on March 2, 2010

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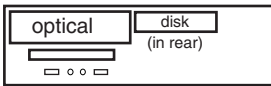
ThinkCentre® M90p Small (3269) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3269-A6U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB ²	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Mar 10
3269-B5U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Dec 10
3269-A8U	2x3	Core i5-650	3.20	3.46	2	4GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Mar 10
3269-B1U	2x3	Core i7-870	2.93	3.60	4	4GB	500GB	DVD±RW	310	VGA, DP	ES50	vPro	Pro 64	None	Oct 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

* For more information on Lenovo Secure Managed Client, see lenovo.com/acc

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> Intel® Core™ i5 Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i7 Processor i7-870 with quad-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket	Small  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 (75w max) Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless system board retention • System floor stand for vertical orientation
Implementation		
Memory	3GB or 4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available	
Graphics	<i>Some:</i> Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 1277MB[3GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display <i>Some:</i> NVIDIA® GeForce® 310, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts	
DP dongle	None	
SATA disk	320GB or 500GB, SATA 3.0Gb/s 7200 rpm	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	Intel Q57 Express Chipset, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®	
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)	
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction	

Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30-day) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)	Accessories <table> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td><td>57Y4389</td></tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td><td>57Y4390</td></tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr> <tr> <td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr> <tr> <td>NVIDIA® GeForce® 512MB 310 (DP, VGA)</td><td>57Y4397</td></tr> <tr> <td>NVIDIA Quadro® 512MB FX380 LP (DP, DVI)</td><td>57Y4396</td></tr> </table> More accessories on O-M90 sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396
1GB PC3-10600 DDR3 UDIMM	57Y4389																		
2GB PC3-10600 DDR3 UDIMM	57Y4390																		
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NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397																		
NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396																		

Security

- Security chip (see information on left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Serial port I/O control
- Individual USB port disablement

Environmental Features

- EPEAT™ Gold rating
- ENERGY STAR® 5.0-compliant
- GREENGUARD® certified
- RoHS-compliant

Supports ThinkVantage® technologies

Limited Warranty¹

- **3-year parts and labor**
- **International Warranty Service®**
- **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- **Onsite service upgrade options (in eligible locations):⁷**
 - **3-year LOR 9x5, 4 hour response** (ThinkPlus™ part number 41C9192)
 - **3-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9193)
 - **4-year LOR 9x5, Next Business Day** (ThinkPlus part number 41C9194)
 - **4-year LOR 9x5, 4 hour response** (ThinkPlus part number 41C9195)
 - **4-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9196)
- **ThinkPlus services at lenovo.com/thinkplus/warranty**
- **Post warranty maintenance services available**
- **24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378**

See footnotes for important warranty information

US model announced November 30, 2010; previous models on March 2 or September 28, 2010

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Personal Systems Reference (PSREF)

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(MELB1-29) December 2010

Partial list of accessories supported on ThinkCentre M90 and M90p**Memory***Eco Ultra Small 3244/3692/3257/3853/5296 use notebook memory:*

1GB PC3-10600 DDR3 L-H SODIMM	55Y3709	ann 03/02/10
1GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4415	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 L-H SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 L-H SODIMM	55Y3711	ann 03/02/10

*Small 3245/5485/3269/5536/5864, and**Tower 3246/5474/3282/5498/5852 use desktop memory:*

1GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4389	ann 01/12/10
1GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4419	ann 01/12/10
2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06
Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann 03/31/09

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

⁵³ USB-only attach.**Graphics***Small 3245/5485/3269/5536/5864 support Low Profile:*

NVIDIA® Quadro® 256MB NVS 290 (2-DVI or 2-VGA via DMS59 dongles)	43R1765	ann 12/18/07
NVIDIA Quadro 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB FX 380 LP (DP, DVI with a DVI to VGA converter)	57Y4396	ann 02/02/10
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 3246/5474/3282/5498/5852 support 75 watts max:

NVIDIA Quadro 256MB NVS 290	43R1765	ann 12/18/07
NVIDIA Quadro 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS450 (4-DP/4-DVI)	57Y4398	ann 01/19/10
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
UltraSlim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08

More information at www.lenovo.com/support/mice**Multimedia**ThinkPad In-Ear Headphones with mic⁶⁰ 57Y4488 ann 01/07/10
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Security**

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Mounting Device***Eco Ultra Small 3244/3692/3257/3853/5296 support under desk mounting device:*

ThinkCentre Ultra Small Under Desk Mount	40Y8625	ann 09/06/05
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Monitors

Lenovo D186 Wide 18.5" Monitor	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at www.lenovo.com/thinkvision**Monitor Accessories⁴⁶***Eco Ultra Small 3244/3692/3257/3853/5296 support:*

Lenovo Vertical PC and Monitor Stand II	41R4474	ann 01/27/09
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All:

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre M90z with Frame Stand



Lenovo ThinkCentre M90z with Height Adjustable Stand Option 57Y4351
(57Y4351 is not compatible to Multi-touch models)



Tool-Less Back Cover Removal



Handle



Dual Independent Display with Optional Lenovo ThinkVision Monitor
and Lenovo Ultralim Wireless Keyboard/Mouse Kit (57Y4700)

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Integrated graphics	SATA disk	SATA optical	PCle Mini Card 802.11	Stand type	Intel vPro	Win7 preload	Global Educ	Avail date
3429-A1U	G6950	2.80	2GBx1	23.0" Full HD		Intel HD	320GB ²	DVD±RW	Intel 1000	Frame		Pro 32	None	Jun 10
3429-A2U	i3-530	2.93	2+1GB	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Frame		Pro 32	None	Jun 10
3429-D6U	G6960	2.93	2GBx1	23.0" Full HD	2.0M	Intel HD	320GB	DVD±RW	Intel 1000	Frame		Pro 64	None	Jan 11
3429-D3U	i3-550	3.20	2+1GB	23.0" Full HD	2.0M	Intel HD	320GB	DVD±RW	Intel 1000	Frame		Pro 64	None	Dec 10
3429-A3U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Frame	vPro	Pro 64	None	Jun 10
• Best space saving solution & excellent cable management • These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a 3-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	All-In-One PC for the enterprise Intel® Pentium® Processor G6950 or G6960 with dual-core, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, and 3MB cache or Intel Core™ i3 Processor i3-530 or i3-550 with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket								All-In-One All: • Business black color • Handle in rear • Support VESA mount (100mm) • Tool-less back cover, disk, optical drive, memory removal Model(s) with Frame stand: • 22" W X 4.29" D X 17.4" H • 560mm W X 109mm D X 443mm H • 23.6 lb (10.7 kg) in maximum configuration Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)					
Implementation														
Memory	2GB, 3GB, or 4GB std, 8GB max ³ , PC3-10600 1333MHz DDR3*, dual-channel capable, two 204-pin SODIMM sockets (notebook) * System automatically clocks down for processors with 1066MHz DDR3 memory controller													
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one DisplayPort™ connector, supports dual independent display								Security • Security chip (see information left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard, mouse • Individual USB port disablement					
DP dongle	None													
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color, anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector													
Multi-touch	None													
Camera	Some: Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch													
SATA disk	320GB or 500GB, SATA 3.0Gb/s, 3.5" wide, 7200 rpm													
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high													
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB													
Ports	Rear: four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector Side: two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) One PCI Express Mini Card slot 11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2								Supports ThinkVantage® technologies					
PCle Mini Card	None								• EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • TCO Certified Edge • GREENGUARD® certified • RoHS-compliant					
Intel 1000 Bluetooth™	None													
Ethernet	One gigabit ethernet port, Intel 82578DM													
Audio	High Definition (HD) Audio, Realtek® ALC269 codec													
Speaker	Two internal speakers (2watt x 2)													
IEEE 1394	None								Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service® ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378					
Intel AMT	vPro model(s): Intel Active Management Technology 6.0 (Intel AMT 6.0)													
Modem	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
Preloaded operating system ²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64					Accessories 2GB PC3-10600 DDR3 SODIMM 55Y3710 - ThinkCentre M90z Height Adjustable Stand 57Y4351 - More accessories on O-M90Z sheet - Acc Guide in pdf lenovo.com/accessoriesguide - Other accessories at lenovo.com/accessories									
Preloaded applications ⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton Internet Security 2011 (30-day) • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)														

See footnotes for important warranty information

US model announced January 4, 2011; previous models on May 11 or November 30, 2010

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	Integrated graphics	SATA disk	SATA optical	PCle Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global Educ	Avail date
0870-A3U	i3-530	2.93	2GBx1	23.0" Full HD	2.0M	Intel HD	320GB ²	DVD±RW	Intel 1000			Pro 32	None	Jun 10
0870-A4U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Media	vPro	Pro 32	None	Jun 10
0870-A6U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000		vPro	Pro 64	None	Dec 10
• Best space saving solution & excellent cable management • These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a 3-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)														
Positioning Processor	<i>All-In-One PC for the enterprise</i> Intel® Core™ i3 Processor i3-530 with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or Intel Core i5 Processor i5-650 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket							All-In-One • Business black color • 22" W X 4.57" D X 17.4" H • 560mm W X 116mm D X 443mm H • 25.3 lb (11.5 kg) in maximum configuration • Handle in rear • Support VESA mount (100mm) • Tool-less back cover, disk, optical drive, memory removal • Frame stand						
Implementation								Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)						
Memory	2GB or 4GB std, 8GB max ⁸ , PC3-10600 1333MHz DDR3 , dual-channel capable, two 204-pin SODIMM sockets (notebook)													
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one DisplayPort™ connector, supports dual independent display													
DP dongle	None													
Widescreen	23.0" (584.2mm) Full HD 1080p (1920x1080) TFT color , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector													
Multi-touch	Supports Multi-touch function													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off													
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm													
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high													
eSATA port	None													
Diskette drive	None													
Media reader	Some: Single Slot SD Media Card Reader													
Chipset	Intel Q57 Express Chipset Platform Controller Hub (PCH) for SATA, ethernet, and USB													
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express Mini Card slot													
Intel 1000	11b/g/n wireless ¹³ , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Intel 82578DM													
Audio	High Definition (HD) Audio, Realtek® ALC269 codec													
Speaker	Two internal speakers (2watt x 2)													
IEEE 1394	None													
Intel AMT	<i>vPro model(s):</i> Intel Active Management Technology 6.0 (Intel AMT 6.0) <i>Non-vPro model(s):</i> None													
Modem	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
Preloaded operating system²⁰ - Some: Genuine Windows® 7 Professional 32 - Some: Genuine Windows 7 Professional 64				Accessories 2GB PC3-10600 DDR3 SODIMM 55Y3710 More accessories on O-M90Z sheet Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories										
Preloaded applications⁵ (only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Message Center Plus • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)														
Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378														

See footnotes for important warranty information

US model announced November 30, 2010; previous models on May 11, 2010

Partial list of accessories supported on ThinkCentre M90z AIO

Memory

1GB PC3-10600 DDR3 SODIMM	55Y3709	ann 03/02/10
1GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4415	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

www.lenovo.com/support/desktopmemorycompatibility

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

⁵³ USB-only attach.

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
UltraSlim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards

Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07

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

Multimedia

ThinkPad® In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Stand

ThinkCentre M90z Height Adjustable Stand ⁵⁹	57Y4351	ann 05/04/10
ThinkCentre Extend Arm ⁵⁷	57Y4352	ann 07/06/10

⁵⁷ Compatible when ThinkCentre Extend Arm is desk (clamp)

mounted only, wall mount is not supported.

⁵⁹ Not compatible to Multi-touch models.

Monitors

Lenovo D186 Wide 18.5" Monitor ⁶¹	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor ⁶¹	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor ⁶¹	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor ⁶¹	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor ⁶¹	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor ⁶¹	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor ⁶¹	4420HB2	ann 09/17/08

⁶¹ Requires a DisplayPort Monitor Cable (DisplayPort to Single-Link DVI-D or DisplayPort to VGA Analog).More information at www.lenovo.com/thinkvisionMonitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre M91p
Small and Tower



Lenovo ThinkCentre M91p Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M91p Small



Lenovo ThinkCentre M91p Small
with Lenovo ThinkVision monitor



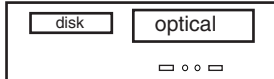
Lenovo ThinkCentre M91p Tower



Lenovo ThinkCentre M91p Tower

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4480-A4U	4x2	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-A5U	4x2	Core i7-2600	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B1U	4x2	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

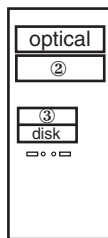
Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> Intel® Core™ i5-2400 Processor (4 cores/ 4 threads , 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores/ 8 threads , 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)		
Implementation	Processor in LGA1155 socket		Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies		
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display				
DP dongle	None				
Disk	SATA 6.0Gb/s 7200 rpm				
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1				
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar				
eSATA port	None				
Media reader	None				
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec				
Speaker	Internal speaker for business audio				
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®				
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)				
Modem	None				
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		Security • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) • Power-on password • Hard disk password • Boot sequence control • Boot without keyboard and mouse • Serial port I/O control • Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo				
Floor Stand	System floor stand for vertical orientation				
Power supply	240 watts, autosensing, 85% PSU				
Machine	• Business black color; metal case • 13.3" W X 14.5" D X 3.9" H • 337mm W X 369mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk and optical drive removal • Toolless adapter retention				
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk				
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3				
					
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available				For compatible accessories, please go to O-M91P sheet; For warranty upgradable options, Please go to S-TC sheet

ThinkCentre® M91p Tower (7052) - TopSeller

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory ^a	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
7052-A7U	4x4	Core i5-2400	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-A8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	HD 5450	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise Intel® Core™ i5-2400 Processor (4 cores/ 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Intel Core i7-2600 Processor (4 cores/ 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket		Preloaded operating system Genuine Windows® 7 Professional 64 Preloaded applications (only some listed) ● Rescue and Recovery™ ● Password Manager ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW)	
Implementation				
Memory	16GB max, UDIMM, PC3-10600 1333MHz DDR3 , four 240-pin DIMM sockets			
Graphics	<i>Some:</i> Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Some:</i> AMD Radeon™ HD 5450 , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; works along with Intel HD Graphics 2000 to support four independent monitors			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	Intel Q67 Express Chipset Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
Machine	● Business black color; metal case ● 6.9" W X 17.4" D X 16.3" H ● 175mm W X 442mm D X 414mm H ● 24.2 lb (11.0 kg) in maximum configuration ● Handle on top front ● Power button on top handle ● Toolless cover removal ● Tilted front I/O for easy access ● Toolless disk, optical drive removal ● Toolless adapter retention			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, std open Bay 3: 3.5", 1" high, access, open (reader) Bay 4: 3.5", 1" high, no access, std disk			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
Limited Warranty	3-years, limited onsite service , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		Security ● Security chip (see information on left) ● One lock to secure both cover and entire system to fixed object: -Padlock loop (in rear for opt padlock) -Security slot (in rear for optional Kensington® MicroSaver® cable) ● Power-on password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Serial port I/O control ● Individual USB port disablement EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M91P sheet; For warranty upgradable options, please go to S-TC sheet	

See footnotes for important warranty information
US models announced March 1, 2011

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(MAST1-4) March 2011

Partial list of accessories supported on ThinkCentre M91p Small and Tower**Memory***Small 4518/4480/7033, and**Tower 4524/7052/7034 use desktop memory:*

1GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4389	ann 01/12/10
1GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4419	ann 01/12/10
2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical***All:*

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Tower 4524/7052/7034 support:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann 03/31/09
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Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10
⁵³ USB-only attach.		

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08
ThinkPad USB Laser Mouse	41U3074	ann 12/15/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic ⁶⁰	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.		

Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.		

Monitors

Lenovo D186 Wide 18.5" Monitor	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at www.lenovo.com/thinkvision**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre A70 Small and
Lenovo ThinkCentre A70 Tower



Lenovo ThinkCentre A70 Tower
with Lenovo ThinkVision monitor



Lenovo ThinkCentre A70 Small



Lenovo ThinkCentre A70 Small
with Lenovo ThinkVision monitor



Lenovo ThinkCentre A70 Tower



Lenovo ThinkCentre A70 Small

ThinkCentre® A70 Small (7844) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ^a	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
A70	7844-D4U	4x2	Celeron E3300	2.50	1MB	2	1GB	320GB ²	DVD	GMA	Pro 32	None	Aug 10
A70	7844-C1U	4x2	Pentium E5500	2.80	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7844-B4U	4x2	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7844-P9U	4x2	Celeron E3400	2.60	1MB	2	2GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7844-P8U	4x2	Pentium E5800	3.20	2MB	2	4GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7844-P7U	4x2	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	DVD±RW	GMA	Pro 64	None	Mar 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty¹
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Quality, reliability, and security for small/medium businesses Intel® Celeron® Processor E3300 or E3400 with dual-core , 800MHz system bus, and 1MB L2 cache or Intel Pentium® Processor E5500 or E5800 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache		Small disk (in rear) optical																										
Implementation	Processor in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk																										
Memory	1GB, 2GB, or 4GB std , 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Slot 1: Low Profile, PCI Express x16 (45w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, PCI Express x1 Slot 4: Low Profile, 32-bit PCI 2.3																										
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		• Business black color; metal case • 13.1" W X 14.5" D X 3.8" H • 333mm W X 368mm D X 97mm H • 18.7 lb (8.5 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation																										
SATA disk	320GB or 500GB , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Boot sequence control • Serial port I/O control • USB port disablement																										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																												
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive																												
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																												
eSATA port	None		Supports ThinkVantage® technologies																										
Diskette drive	None																												
Media reader	None																												
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																												
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		RoHS-compliant																										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																												
Speaker	None																												
IEEE 1394	None																												
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL		RoHS-compliant																										
Intel AMT	None																												
Modem	None																												
Security chip	None																												
Keyboard	Lenovo Slim USB Keyboard (USB connector), black, Lenovo® logo																												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		Limited Warranty¹ ⇒ 1-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																										
Power supply	180 watts, universal, manual switch																												
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64		Accessories <table><tr><td>1GB PC3-8500 DDR3 UDIMM</td><td>45J5434</td></tr><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td><td>41N5618</td></tr><tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr><tr><td>DisplayPort™ to Single-link DVI-D Cable</td><td>45J7915</td></tr><tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr><tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr><tr><td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td><td>57Y4397</td></tr><tr><td>NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)</td><td>57Y4396</td></tr><tr><td colspan="2">More accessories on O-A70 sheet</td></tr><tr><td colspan="2">Acc Guide in pdf lenovo.com/accessoriesguide</td></tr><tr><td colspan="2">Other accessories at lenovo.com/accessories</td></tr></table>			1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort™ to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396	More accessories on O-A70 sheet		Acc Guide in pdf lenovo.com/accessoriesguide		Other accessories at lenovo.com/accessories		
1GB PC3-8500 DDR3 UDIMM	45J5434																												
2GB PC3-8500 DDR3 UDIMM	45J5435																												
DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618																												
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																												
DisplayPort™ to Single-link DVI-D Cable	45J7915																												
DisplayPort to VGA Monitor Cable	57Y4393																												
ADD2 DVI-D Monitor Connection (HDCP)	43R1985																												
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397																												
NVIDIA Quadro® 512MB FX 380 LP (DP,DVI)	57Y4396																												
More accessories on O-A70 sheet																													
Acc Guide in pdf lenovo.com/accessoriesguide																													
Other accessories at lenovo.com/accessories																													
Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)																													

See footnotes for important warranty information

US models announced February 8, 2011; previous models on August 3, 2010

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(TIJN1-1) February 2011

ThinkCentre® A70 Tower (7099) - TopSeller (Windows 7)

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory ⁸	SATA disk	2nd Disk Bay	SATA optical	Graphics	Win7 preload	Global Educ	Avail date			
A70	7099-E6U	4x2	Pentium E5500	2.80	2MB	2	3GB	320GB ²	None	DVD±RW	GMA	Prem 32	None	Aug 10			
A70	7099-C2U	4x2	Celeron E3300	2.50	1MB	2	1GB	320GB	None	DVD	GMA	Pro 32	None	Aug 10			
A70	7099-B8U	4x2	Pentium E5500	2.80	2MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 32	None	Aug 10			
A70	7099-A5U	4x2	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 32	None	Aug 10			
A70	7099-U3U	4x2	Celeron E3400	2.60	1MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 64	None	Mar 11			
A70	7099-E5U	4x2	Pentium E5500	2.80	2MB	2	4GB	500GB	None	DVD±RW	GMA	Pro 64	None	Aug 10			
A70	7099-U2U	4x2	Pentium E5800	3.20	2MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 64	None	Mar 11			
A70	7099-U1U	4x2	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	None	DVD±RW	GMA	Pro 64	None	Mar 11			
• These small and medium business (SMB) models are part of the US TopSeller™ Program • These models have a 1-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																	
Positioning	Quality, reliability, and security for small/medium businesses								Tower • Business black color; metal case • 6.3" W X 14.0" D X 15.4" H • 160mm W X 355mm D X 392mm H • 23.1 lb (10.5 kg) in max configuration • Non-slip designed handle on top front • Power button on top handle • Highlighted optical drive button for easy access optical disk Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCI Express x16 (45w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, PCI Express x1 Slot 4: half-length, full-height, 32-bit PCI 2.3								
Processor	Intel® Celeron® Processor E3300 or E3400 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Pentium® Processor E5500 or E5800 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache																
Implementation	Processor in LGA775 socket																
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max ⁸ , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available																
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500), integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter																
SATA disk	320GB or 500GB, SATA 3.0Gb/s 7200 rpm, vibration dampening								Security • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Boot sequence control • Serial port I/O control • USB port disablement								
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max ⁴ Drive																
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar																
eSATA port	None																
Diskette drive	None																
Media reader	None																
Chipset	Intel G41 Express Chipset (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)								Supports ThinkVantage® technologies								
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																
Speaker	None																
IEEE 1394	None								RoHS-compliant								
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL																
Intel AMT	None																
Modem	None																
Security chip	None																
Keyboard	Lenovo Slim USB Keyboard (USB connector), black, Lenovo® logo								Limited Warranty¹ ⇒ 1-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378								
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																
Power supply	180 watts, universal, manual switch																
Preloaded operating system ²⁰				Accessories													
- <i>Some:</i> Genuine Windows® 7 Home Premium 32				1GB PC3-8500 DDR3 UDIMM				45J5434									
- <i>Some:</i> Genuine Windows 7 Professional 32				2GB PC3-8500 DDR3 UDIMM				45J5435									
- <i>Some:</i> Genuine Windows 7 Professional 64				DVD-ROM DL SATA 1.5Gb/s 16-48X Max				41N5618									
				Super Multi-Burner DL DVD±RW SATA Drive				41N5620									
				DisplayPort™ to Single-link DVI-D Cable				45J7915									
				DisplayPort to VGA Monitor Cable				57Y4393									
				ADD2 DVI-D Monitor Connection (HDCP)				43R1985									
				NVIDIA® GeForce® 310 512MB (DP, VGA)				57Y4397									
				More accessories on O-A70 sheet													
Preloaded applications ⁵ (all OSes; only some listed)				Acc Guide in pdf lenovo.com/accessoriesguide													
• Rescue and Recovery™				Other accessories at lenovo.com/accessories													
• Password Manager																	
• ThinkVantage System Update																	
• ThinkVantage Power Manager																	
• ThinkVantage Toolbox																	
• Norton™ Internet Security 2011 (30 days of virus definitions)																	
• Adobe® Reader®																	
• Adobe Flash® Player																	
• Skype™ for Windows																	
• Microsoft Office 2010 preloaded; purchase product key to activate																	
• Corel® Burn.Now™ (DVD±RW)																	
• Corel DVD MovieFactory® (DVD±RW)																	

See footnotes for important warranty information

® US models announced February 8, 2011; previous models on August 3, 2010

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(TIJN1-2) February 2011

Partial list of accessories supported on ThinkCentre A70

Memory

1GB PC3-8500 DDR3 UDIMM	45J5434	ann 11/18/08
1GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4421	ann 11/10/09
2GB PC3-8500 DDR3 UDIMM	45J5435	ann 11/18/08
2GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4422	ann 11/10/09

More information at

www.lenovo.com/support/desktopmemorycompatibility**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max ⁴	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive ⁵³	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10
⁵³ USB-only attach.		

Graphics

Small 7844 support Low Profile:

DisplayPort™ to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA® Quadro® 512MB FX 380 LP		
(DP, DVI with a DVI to VGA converter)	57Y4396	ann 02/02/10
NVIDIA GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59		
(2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 7099 support 75 watts max:

DisplayPort to Single-link DVI-D Cable ⁵⁰	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable ⁵⁰	57Y4393	ann 08/04/09
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

⁵⁰ Attaches to the ThinkCentre compatible DisplayPort graphics card.More information at www.lenovo.com/support/graphiccards**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.More information at www.lenovo.com/support/keyboards**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08

More information at www.lenovo.com/support/mice**Multimedia**

ThinkPad In-Ear Headphones with mic⁶⁰ 57Y4488 ann 01/07/10
⁶⁰ Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

Modem

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.		

Monitors

Lenovo D186 Wide 18.5" Monitor	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at www.lenovo.com/thinkvision**Monitor Accessories⁴⁶**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock ⁵⁶	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.More information at www.lenovo.com/support/monitoraccessories

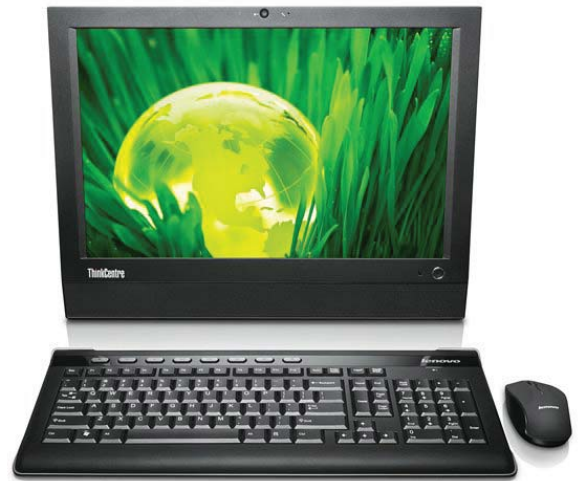
For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

Other accessories at www.lenovo.com/accessoriesAccessories Guide pdf at www.lenovo.com/accessoriesguide



Lenovo ThinkCentre A70z All-In-One
(Wireless keyboard & mouse
on selected models only)



Lenovo ThinkCentre A70z All-In-One



Lenovo ThinkCentre A70z All-In-One



Lenovo ThinkCentre A70z All-In-One



ThinkCentre A70z Performance Stand
57Y4277



ThinkCentre Extend Arm
57Y4352

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Keyboard /Mouse	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date																																																																																																																								
0401-A2U	E3300	2.50	1GB	19.0" WXGA+		GMA X4500	320GB ²	DVD±RW		USB	ES50	Prem 32	None	Jun 10																																																																																																																								
0401-U1U	E3400	2.60	2GB	19.0" WXGA+		GMA X4500	320GB	DVD±RW		USB	ES50	Pro 64	None	Mar 11																																																																																																																								
0401-A3U	E5500	2.80	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW		USB	ES50	Pro 32	None	Jun 10																																																																																																																								
0401-D3U	E5500	2.80	3GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n ¹²	USB	ES50	Prem 32	None	Jun 10																																																																																																																								
0401-B6U	E5500	2.80	4GB	19.0" WXGA+	1.3M	GMA X4500	500GB	DVD±RW	11b/g/n	USB	ES50	Pro 32	None	Jun 10																																																																																																																								
0401-R6U	E5700	3.00	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Dec 10																																																																																																																								
0401-U2U	E5800	3.20	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB			USB	ES50	Pro 64	None	Mar 11																																																																																																																								
0401-U6U	E5800	3.20	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW		USB	ES50	Pro 64	None	Mar 11																																																																																																																								
0401-B7U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 32	None	Jun 10																																																																																																																								
0401-R7U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Dec 10																																																																																																																								
0401-R5U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	500GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Mar 11																																																																																																																								
0401-A5U	E7500	2.93	4GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	Wireless	ES50	Pro 64	None	Jun 10																																																																																																																								
0401-U3U	E7500	2.93	4GB	19.0" WXGA+	1.3M	GMA X4500	500GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Mar 11																																																																																																																								
• These small and medium business (SMB) models are part of the US TopSeller™ Program • Best space saving solution & excellent cable management • These models have a 1-year limited warranty¹ • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)																																																																																																																																						
Positioning Processor	All-In-One PC for business customers Intel® Celeron® Processor E3300 or E3400 with dual-core, 800MHz system bus, and 1MB L2 cache or Intel Pentium® Processor E5500, E5700, or E5800 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket								All-In-One • Business black color • 18.58" W X 2.87" D X 14.0" H • 472mm W X 73mm D X 356mm H • 17.6 lb (8 kg) in maximum configuration • Handle in rear • Support VESA mount (100mm) • Picture frame style metallic stand (Tilt 10°-35°)																																																																																																																													
Implementation									Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)																																																																																																																													
Memory	1GB, 2GB, 3GB, or 4GB std, 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available <i>Non-italics:</i> standard memory in one socket; one socket available																																																																																																																																					
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory, DirectX® 10								Security • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard, mouse • USB port disablement																																																																																																																													
SATA disk	320GB or 500GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm																																																																																																																																					
SATA DVD±RW	<i>Some:</i> DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable																																																																																																																																					
eSATA port	None																																																																																																																																					
Diskette drive	None																																																																																																																																					
Media reader	None																																																																																																																																					
Widescreen display	19.0" (482.6mm) WXGA+ (1440x900) TFT color , anti-glare, CCFL backlight, 300 nits, 16:10 aspect ratio, 1000:1 contrast ratio								Supports ThinkVantage® technologies																																																																																																																													
Camera	<i>Some:</i> Camera on top of screen, 1.3-megapixel, fixed focus, integrated microphone (mono), LED indicator																																																																																																																																					
Chipset	Intel G41 Express Chipset ; I/O Controller Hub 7 (ICH7)																																																																																																																																					
Ports	<i>Rear:</i> Three USB 2.0, serial (9-pin), ethernet (RJ-45) <i>Side:</i> Three USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																																																																																																					
Mini PCI Express	One Mini PCI Express slot																																																																																																																																					
11b/g/n ¹²	<i>Some:</i> 11b/g/n wireless ¹³ , Mini PCIe adapter, Broadcom® BCM43225								ENERGY STAR® 5.0-compliant RoHS-compliant																																																																																																																													
Audio	High Definition (HD) Audio, CONEXANT™ CX20582 codec								Limited Warranty¹ ➤ 1-year parts and labor ➤ International Warranty Service⁹ ➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ➤ Onsite service upgrade options (in eligible locations):⁷ • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953) ➤ ThinkPlus services at lenovo.com/thinkplus/warranty ➤ Post warranty maintenance services available ➤ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378																																																																																																																													
Speaker	Two internal speakers (2 watt x 2)																																																																																																																																					
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Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL																																																																																																																																					
Intel AMT	None																																																																																																																																					
Modem	None																																																																																																																																					
Security chip	None																																																																																																																																					
Keyboard	<i>Some:</i> Ultralim Wireless Keyboard (2.4GHz via USB receiver), black <i>Some:</i> Preferred Pro USB Keyboard (USB), 104-key, black, Lenovo® logo																																																																																																																																					
Mouse	<i>Some:</i> Ultralim Wireless Mouse (2.4GHz via USB receiver), 1000 dpi, black <i>Some:</i> Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																																																																																																																																					
Power supply	130 watts, autosensing, 85% PSU																																																																																																																																					
<table><tr><td colspan="5">Preloaded operating system²⁰</td><td colspan="5">Accessories</td><td colspan="5"></td></tr><tr><td colspan="5">- <i>Some:</i> Genuine Windows® 7 Home Premium 32</td><td colspan="5">1GB PC3-8500 DDR3 UDIMM</td><td colspan="5">45J5434</td></tr><tr><td colspan="5">- <i>Some:</i> Genuine Windows 7 Professional 32</td><td colspan="5">2GB PC3-8500 DDR3 UDIMM</td><td colspan="5">45J5435</td></tr><tr><td colspan="5">- <i>Some:</i> Genuine Windows 7 Professional 64</td><td colspan="5">ThinkCentre A70z Performance Stand</td><td colspan="5">57Y4277</td></tr><tr><td colspan="5"></td><td colspan="5">More accessories on O-A70Z sheet</td><td colspan="5"></td></tr><tr><td colspan="5"></td><td colspan="5">Acc Guide in pdf lenovo.com/accessoriesguide</td><td colspan="5"></td></tr><tr><td colspan="5"></td><td colspan="5">Other accessories at lenovo.com/accessories</td><td colspan="5"></td></tr><tr><td colspan="15">Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • Norton™ Internet Security 2011 (30-day) • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) </td></tr></table>															Preloaded operating system²⁰					Accessories										- <i>Some:</i> Genuine Windows® 7 Home Premium 32					1GB PC3-8500 DDR3 UDIMM					45J5434					- <i>Some:</i> Genuine Windows 7 Professional 32					2GB PC3-8500 DDR3 UDIMM					45J5435					- <i>Some:</i> Genuine Windows 7 Professional 64					ThinkCentre A70z Performance Stand					57Y4277										More accessories on O-A70Z sheet															Acc Guide in pdf lenovo.com/accessoriesguide															Other accessories at lenovo.com/accessories										Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • Norton™ Internet Security 2011 (30-day) • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)														
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- <i>Some:</i> Genuine Windows 7 Professional 32					2GB PC3-8500 DDR3 UDIMM					45J5435																																																																																																																												
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See footnotes for important warranty information

US model announced March 8, 2011; previous models on May 25, Jun 1, or Nov 30, 2010 or Feb 8, 2011

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(TYMA2-1) March 2011

Type-model	Proc- essor	GHz	Memory	Widescreen display	Camera (mega- pixel)	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Keyboard /Mouse	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
2565-A6U	E5500	2.80	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB ²	DVD±RW	11b/g/n ¹²	USB	ES50	Pro 32	None	Jun 10
2565-A7U	E7500	2.93	4GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Jun 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Best space saving solution & excellent cable management**
- **These models have a 3-year limited warranty¹**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>All-In-One PC for business customers</i> Intel® Pentium® Processor E5500 with dual-core , 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7500 with dual-core , 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket		All-In-One • Business black color • 18.58" W X 2.87" D X 14.0" H • 472mm W X 73mm D X 356mm H • 17.6 lb (8 kg) in maximum configuration • Handle in rear • Support VESA mount (100mm) • Picture frame style metallic stand (Tilt 10°-35°) Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)								
Implementation	Processor in LGA775 socket										
Memory	2GB or 4GB std, 4GB max ⁸ , PC3-8500 1066MHz DDR3 , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available <i>Non-italics:</i> standard memory in one socket; one socket available										
Graphics	Intel Graphics Media Accelerator X4500 (GMA X4500) , integrated graphics in G41, uses main memory, DirectX® 10		Security • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard, mouse • USB port disablement Supports ThinkVantage® technologies ENERGY STAR® 5.0-compliant RoHS-compliant Limited Warranty¹ ⇒ 3-year parts and labor ⇒ International Warranty Service⁹ ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations):⁷ • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959) ⇒ ThinkPlus services at lenovo.com/thinkplus/warranty ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day¹⁴ toll-free support during the warranty period¹ via 800-426-7378								
SATA disk	320GB , SATA 3.0Gb/s, 3.5" wide, 7200 rpm										
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable										
eSATA port	None										
Diskette drive	None										
Media reader	None										
Widescreen display	19.0" (482.6mm) WXGA+ (1440x900) TFT color , anti-glare, CCFL backlight, 300 nits, 16:10 aspect ratio, 1000:1 contrast ratio										
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, integrated microphone (mono), LED indicator										
Chipset	Intel G41 Express Chipset ; I/O Controller Hub 7 (ICH7)										
Ports	<i>Rear:</i> Three USB 2.0, serial (9-pin), ethernet (RJ-45) <i>Side:</i> Three USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Mini PCI Express	One Mini PCI Express slot										
11b/g/n ¹²	11b/g/n wireless ¹³ , Mini PCIe adapter, Broadcom® BCM43225										
Audio	High Definition (HD) Audio, CONEXANT™ CX20582 codec										
Speaker	Two internal speakers (2 watt x 2)										
IEEE 1394	None										
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	130 watts, autosensing, 85% PSU										
Preloaded operating system²⁰ - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64 Preloaded applications⁵ (all OSes; only some listed) • Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Online Data Backup • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)			Accessories <table><tr><td>1GB PC3-8500 DDR3 UDIMM</td><td>45J5434</td></tr><tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr><tr><td>ThinkCentre A70z Performance Stand</td><td>57Y4277</td></tr><tr><td colspan="2">More accessories on O-A70Z sheet</td></tr></table> Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	ThinkCentre A70z Performance Stand	57Y4277	More accessories on O-A70Z sheet	
1GB PC3-8500 DDR3 UDIMM	45J5434										
2GB PC3-8500 DDR3 UDIMM	45J5435										
ThinkCentre A70z Performance Stand	57Y4277										
More accessories on O-A70Z sheet											

See footnotes for important warranty information
US models announced June 1, 2010

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Partial list of accessories supported on ThinkCentre A70z AIO
Memory
AIO 1165 use desktop memory:

1GB PC2-6400 DDR2 UDIMM	41U2977	ann 09/26/06
1GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0549	ann 03/17/09
2GB PC2-6400 DDR2 UDIMM	41U2978	ann 01/08/08
2GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0550	ann 03/17/09

AIO 0401/2565 use desktop memory:

1GB PC3-8500 DDR3 UDIMM	45J5434	ann 11/18/08
1GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4421	ann 11/10/09
2GB PC3-8500 DDR3 UDIMM	45J5435	ann 11/18/08
2GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4422	ann 11/10/09

More information at

www.lenovo.com/support/desktopmemorycompatibility
Storage and removable storage

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse ⁵²	57Y4700	ann 09/15/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

⁵² Wireless via 2.4GHz technology using a micro-size USB receiver.

 More information at www.lenovo.com/support/keyboards
Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black ⁵²	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black ⁵²	51J0198	ann 11/25/08

 More information at www.lenovo.com/support/mice
Multimedia

ThinkPad® In-Ear Headphones with mic	57Y4488	ann 01/07/10
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Security

Kensington® MicroSaver® Cable Lock ⁵⁶	73P2582	ann 12/29/03
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

⁵⁶ Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

Stand

ThinkCentre A70z Performance Stand	57Y4277	ann 11/17/09
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

Monitor Accessories⁴⁶

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Kensington MicroSaver Cable Lock ⁵⁶	73P2582	ann 12/29/03
Lenovo Security Cable Lock	57Y4303	ann 08/24/10

⁴⁶ Compatible on selected Lenovo and ThinkVision monitors.

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

For more information on desktop accessories, please visit:

www.lenovo.com/support/accessories
www.lenovo.com/support/desktopaccessories
www.lenovo.com/support/security

 Other accessories at www.lenovo.com/accessories

 Accessories Guide pdf at www.lenovo.com/accessoriesguide

**Partial list of Lenovo® ThinkPlus Services⁷
for ThinkCentre desktops**

For more information see:

http://www.lenovo.com/services_warranty/us/en/index.html
ThinkPlus service upgrade options for ThinkCentre M series
ThinkCentre desktop with 1-year Onsite warranty
LOR = Lenovo Onsite Repair

1-year LOR 9x5 4-hour response	41C9189
2-year LOR 9x5 Next Business Day	41C9187
2-year LOR 9x5 4-hour response	41C9190
3-year LOR 9x5 Next Business Day	41C9188
3-year LOR 9x5 4-hour response	41C9191

ThinkCentre desktop with 3-year Onsite warranty
LOR = Lenovo Onsite Repair

3-year LOR 9x5 4-hour response	41C9192
3-year LOR 24x7 4-hour response	41C9193
4-year LOR 9x5 Next Business Day	41C9194
4-year LOR 9x5 4-hour response	41C9195
4-year LOR 24x7 4-hour response	41C9196

ThinkPlus service upgrade options for ThinkCentre A series
ThinkCentre desktop with 1-year Onsite warranty
LOR = Lenovo Onsite Repair

1-year LOR 9x5 4-hour response	45K5951
2-year LOR 9x5 Next Business Day	45K5949
2-year LOR 9x5 4-hour response	45K5952
3-year LOR 9x5 Next Business Day	45K5950
3-year LOR 9x5 4-hour response	45K5953

ThinkCentre desktop with 3-year Onsite warranty
LOR = Lenovo Onsite Repair

3-year LOR 9x5 4-hour response	45K5955
3-year LOR 24x7 4-hour response	45K5956
4-year LOR 9x5 Next Business Day	45K5957
4-year LOR 9x5 4-hour response	45K5958
4-year LOR 24x7 4-hour response	45K5959
5-year LOR 9x5 Next Business Day	45K5963

ThinkPlus Secure Business
Lenovo Online Data Backup

- Secure offsite data storage
- 256-bit Advanced Encryption System
- Data recovery or access in case of an unforeseen event
- Automatic, remote management
- Choose which business critical data to back up

1-year Lenovo Online Data Backup - 10GB	51J0787
1-year Lenovo Online Data Backup - 25GB	51J0795

ThinkPlus Priority Support for enterprise customers

- 9x5 next-business-day response Lenovo Onsite Repair
- 24x7 support with priority routing and advanced level technicians

ThinkCentre desktop with 1-year Onsite warranty

3-year Priority Support	45J9087
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ThinkCentre desktop with 3-year Onsite warranty

3-year Priority Support	45J9088
4-year Priority Support	45J9089
5-year Priority Support	45J9090
3-year Priority Support 4-hour response	45J9091
4-year Priority Support 4-hour response	45J9092
5-year Priority Support 4-hour response	45J9093

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.

- ¹ **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
- ² **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
- ³ **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.
- ⁴ **CD and DVD list** maximum rates; rates are variable and are often less than the maximum.
- ⁵ **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.

⁶ **Multi-Burner Plus** (part number 73P3305 or 73P3370) is a DVD±RW device that reads and writes to DVD-RAM, DVD-R, DVD-RW, DVD+R, and DVD+RW. It also reads and writes to CD-R and CD-RW media. 73P3370 also writes to DVD+R double layer media.

⁷ **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. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.

⁸ **Memory:** For PCs without a separate graphics card, memory supports both system and video. Accessible system memory may be up to 384MB less than the amount stated, depending on video mode.

⁹ **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.

¹⁰ **Modem speeds:** Public network download 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.

¹¹ **For combination drives,** maximum speeds only are given in the following order: CD read, CD write, CD re-write, DVD read.

¹² **The IEEE 802.11n specification (MIMO)** has been finalized and is currently in IEEE 802.11n-2009 release. The maximum speed depends on the access point device and the number of integrated antenna used for connection. An adapter with 11a/b, 11a/b/g, 11b/g/n, or 11a/b/g/n can communicate on any of its supported formats.

¹³ **Wireless capability:** Requires compatible wireless-enabled options sold separately.

¹⁴ **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.

¹⁵ **Update Connector** is available at no charge to registered customers during the limited warranty period. Line charges may apply.

¹⁶ **Embedded Security Subsystem** works with optional VPN software.

- ¹⁸ **Embedded Security Subsystem** may require download of client security software from the Web.
- ¹⁹ **Asset ID** allows system-specific information to be stored in a chip inside the system; it does not have any radio frequency support.
- 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.

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