

ThinkPad®



Lenovo® ThinkPad T420



Lenovo ThinkPad T420



Lenovo ThinkPad T420



Lenovo ThinkPad T420



ThinkPad triple external monitor configuration  
using NVIDIA's Optimus technology



Lenovo ThinkPad T420

# ThinkPad® T420 4177 (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
4177-25G	i5-2410M	2GBx1	14.0" HD	720p	320G 5400	TP 11b/g/n	WWAN upg	Modem	None	BT	6	No	Pro 64	02/11

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

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64 <b>Ready to install applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>● Rescue and Recovery™</li><li>● Access Connections™</li><li>● Fingerprint Software (fingerprint models)</li><li>● Password Manager (fingerprint models)</li><li>● ThinkVantage® System Update</li><li>● ThinkVantage Power Manager</li><li>● ThinkVantage Toolbox</li><li>● Lenovo® SimpleTap</li></ul> <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"><li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li><li>● Adobe® Reader®</li><li>● Skype™ for Windows</li><li>● Windows Live™ Essentials</li><li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li><li>● Corel® WinDVD® (DVD±RW)</li><li>● Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>● Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	8GB max <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical Ultrabay 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	
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup> Weight <sup>2</sup>	<b>14.0W" (WxDxH):</b> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg)	
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic	
Battery - type Battery - life <sup>10</sup>	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery as 2nd battery <i>6-cell (57Whr):</i> up to 9.0 hr; <i>9-cell (94Whr):</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30 hr	
Chipset	<b>Mobile Intel QM67 Express Chipset</b>	
ExpressCard Smart Card read Multicard reader Ports	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 PCIe WLAN <sup>4</sup> PCIe WWAN Carrier Modem IEEE 1394 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 56K V.92 modem None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None 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 None	
Limited Warranty <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information  
WE model(s) announced February 22, 2011  
WE model(s) withdrawn effective December 2012

©Lenovo  
(G-NZ3-1) February 2013

# ThinkPad® T420 4178 (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Modem	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
4178-B9G	i5-2430M	4GBx1	14.0" HD	720p	500G 7200	Intel 1000	WWAN upg	None	None	Finger	BT	6	No	Pro 64	10/11
4178-83G	i5-2410M	2GBx2	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	Modem	Finger	BT	6	No	Pro 64	03/11
4178-BAG	i3-2350M	4GBx1	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	None	Finger	BT	6	No	Pro 64	10/11
4178-84G	i3-2310M	2GBx2	14.0" HD	720p	320G 7200	Intel 1000	WWAN upg	None	Modem	Finger	BT	6	No	Pro 64	03/11
4178-CJG	i5-2450M	4GBx1	14.0" HD	720p	500G 7200	Intel 1000	WWAN upg	None	None	Finger	BT	6	No	Pro 64	01/12

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

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i3-2310M processor (dual-core, 2.10GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i3-2350M processor (dual-core, 2.30GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), HT technology <b>Intel Core i5-2410M processor (dual-core, 2.30GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology <b>Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo® SimpleTap  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets														
Optical Ultrabay 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														
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm														
Weight <sup>2</sup>	<b>4-cell:</b> from 4.65 lb (2.11kg); <b>6-cell:</b> from 4.84 lb (2.20kg); <b>9-cell:</b> from 5.22 lb (2.37kg)														
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 as 2nd battery														
Battery - life <sup>10</sup>	<b>6-cell (57Whr):</b> up to 9.0 hr; <b>9-cell (94Whr):</b> up to 15.0 hr; <b>9-cell plus Slice battery:</b> up to 30 hr														
Chipset	<b>Mobile Intel QM67 Express Chipset</b>														
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														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2														
PCIe WWAN	Wireless WAN upgradable														
Carrier	None														
Modem	<i>Some:</i> 56K V.92 modem														
IEEE 1394	None														
Bluetooth™	Bluetooth 3.0 wireless, LED indicator														
Ethernet	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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip														
Limited Warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available														

See footnotes for more detailed information

WE model(s) announced March 1 or October 4, 2011, or January 17, 2012

WE model(s) withdrawn effective December 2012

©Lenovo

(G-NZ3-2) February 2013

# ThinkPad® T420 4178 (Optimus) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>5</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Modem	Smart Card Reader	Finger print reader	Battery Intel cells vPro	Preload	Ann Date (mm/yy)
4178-B8G	i5-2430M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	Ericsson	select	None	None	Finger	6 No	Pro 64	10/11
4178-82G	i5-2410M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	Ericsson	select	Modem	None	Finger	6 No	Pro 64	03/11
4178-CHG	i5-2450M	4GBx1	14.0" HD+	720p	500G 7200	Intel 1000	Ericsson	select	None	Smart	Finger	6 No	Pro 64	01/12

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

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2410M processor (dual-core, 2.30GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i5-2430M processor (dual-core, 2.40GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.0GHz), HT technology <b>Intel Core i5-2450M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.10GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Rescue and Recovery™</li><li>● Access Connections™</li><li>● Fingerprint Software (fingerprint models)</li><li>● Password Manager (fingerprint models)</li><li>● ThinkVantage® System Update</li><li>● ThinkVantage Power Manager</li><li>● ThinkVantage Toolbox</li><li>● Lenovo® SimpleTap</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li><li>● Adobe® Reader®</li><li>● Skype™ for Windows</li><li>● Windows Live™ Essentials</li><li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li><li>● Corel® WinDVD® (DVD±RW)</li><li>● Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>● Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	8GB max <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay 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		
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 3000</b> in processor, and <b>NVIDIA NVS™ 4200M</b> , PCI Express® x16, <b>1GB</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup> Weight <sup>2</sup> Case material	<i>14.0W"</i> (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life <sup>10</sup>	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery as 2nd battery <i>6-cell (57Whr):</i> up to 8.8 hr; <i>9-cell (94Whr):</i> up to 14.7 hr; <i>9-cell plus Slice battery:</i> up to 29.5 hr		
Chipset	<b>Mobile Intel QM67 Express Chipset</b>		
ExpressCard Smart Card read Multicard reader Ports	One slot (ExpressCard/34) <i>Some:</i> Smart Card reader 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 PCIe WLAN <sup>4</sup> PCIe WWAN	Two PCI Express Mini Card slots 11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2 Wireless WAN, Ericsson F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS		
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	User selectable, contract required with service provider <i>Some:</i> 56K V.92 modem None Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 None 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		
Limited Warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available		

See footnotes for more detailed information

WE model(s) announced March 1 or October 4, 2011, or January 17, 2012

WE model(s) withdrawn effective December 2012

©Lenovo

(G-NZ3-3) February 2013



**ThinkPad® T420 4179 - withdrawn**

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
4179-GEG	i5-2520M	2GBx2	14.0" HD	No	320G 7200	Intel 1000	WWAN upg	None	1394	None	BT	6	No	Pro 64	03/11

- *Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	Premiere performance; two spindles <b>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Rescue and Recovery™</li><li>● Access Connections™</li><li>● Fingerprint Software (fingerprint models)</li><li>● Password Manager (fingerprint models)</li><li>● ThinkVantage® System Update</li><li>● ThinkVantage Power Manager</li><li>● ThinkVantage Toolbox</li><li>● Lenovo® SimpleTap</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li><li>● Adobe® Reader®</li><li>● Skype™ for Windows</li><li>● Windows Live™ Essentials</li><li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li><li>● Corel® WinDVD® (DVD±RW)</li><li>● Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>● Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	8GB max <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical Ultrabay 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	
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	None	
Graphics	<b>Intel HD Graphics 3000</b> 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>Max external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint®	7 row, 89-key, ThinkVantage® button, spill-resistant, multimedia Fn keys TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight <sup>2</sup>	<b>4-cell:</b> from 4.65 lb (2.11kg); <b>6-cell:</b> from 4.84 lb (2.20kg); <b>9-cell:</b> from 5.22 lb (2.37kg)	
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 as 2nd battery	
Battery - life <sup>10</sup>	<b>6-cell (57Whr):</b> up to 9.0 hr; <b>9-cell (94Whr):</b> up to 15.0 hr; <b>9-cell plus Slice battery:</b> up to 30 hr	
Chipset	<b>Mobile Intel QM67 Express Chipset</b>	
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	
PCIe WLAN <sup>4</sup>	11b/g/n wireless, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
PCIe WWAN	Wireless WAN upgradable	
Carrier	None	
Modem	None	
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, 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 <sup>12</sup>	<b>1-year</b> - depot repair service / service upgrades <sup>22</sup> available	

Supports ThinkVantage technologies  
*Integrated model:* 65W AC Adapter  
*Optimus™ model:* 90W AC Adapter  
ThinkPad Roll Cage (one-piece magnesium frame)  
EPEAT™ Gold rating  
ENERGY STAR® 5.0-compliant  
ROHS-compliant  
International Warranty Service<sup>17</sup>  
24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup>

See footnotes for more detailed information  
WE model(s) announced March 1, 2011  
WE model(s) withdrawn effective December 2012

©Lenovo  
(G-NZ3-4) February 2013

## ThinkPad® T420 4180 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>8</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Modem	IEEE 1394	Smart Card Reader	Finger print reader	Blue- tootch-cells	Bat- tery	Intel vPro	Global (G) P	Pre-load	Ann Date (mm/yy)
4180-PCG	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	1394	Smart	Finger	BT	6	vPro		Pro 64	04/11
4180-PBG	i5-2520M	4GBx1	14.0" HD	720p	320G 7200	Intel 6205	Ericsson	None	1394	Smart	Finger	BT	6	vPro		Pro 64	04/11
4180-PAG	i5-2520M	4GBx1	14.0" HD	720p	128G SSD	Intel 6205	WWAN upg	None	None	None	Finger	BT	6	vPro	G	Pro 64	04/11
4180-MNG	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	WWAN upg	None	1394	None	Finger	BT	6	vPro	G	Pro 64	02/11
4180-MBG	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	Modem	None	None	Finger	BT	6	vPro	G	Pro 64	02/11
4180-M9G	i5-2520M	2GBx1	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	Modem	None	None	None	BT	6	vPro		Pro 64	02/11
4180-63G	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	WWAN upg	None	1394	None	Finger	BT	6	vPro	G	Pro 64	02/11
4180-62G	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	1394	None	None	BT	6	vPro	G	Pro 64	02/11
4180-QFG	i5-2520M	4GBx1	14.0" HD	720p	160G SSD	Intel 6205	WWAN upg	None	None	None	Finger	BT	6	vPro	G	Pro 64	01/12

- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64 <b>Ready to install applications</b> <sup>14</sup> (only some listed) ● Rescue and Recovery™ ● Access Connections™ ● Fingerprint Software (fingerprint models) ● Password Manager (fingerprint models) ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Lenovo® SimpleTap  <b>Preloaded applications</b> <sup>14</sup> (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 <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical Ultrabay 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	
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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	<b>Intel HD Graphics 3000</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight <sup>2</sup>	<b>4-cell:</b> from 4.65 lb (2.11kg); <b>6-cell:</b> from 4.84 lb (2.20kg); <b>9-cell:</b> from 5.22 lb (2.37kg)	
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 as 2nd battery	
Battery - life <sup>10</sup>	<b>6-cell (57Whr):</b> up to 9.0 hr; <b>9-cell (94Whr):</b> up to 15.0 hr; <b>9-cell plus Slice battery:</b> up to 30 hr	
Chipset	<b>Mobile Intel QM67 Express Chipset</b>	
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	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	
PCIe WLAN <sup>4</sup>	11a/b/g/n <sup>28</sup> , PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Ericsson F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS	
Carrier	<i>Some:</i> User selectable, contract required with service provider	
Modem	<i>Some:</i> 56K V.92 modem	
IEEE 1394	<i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information

WE model(s) announced February 22, April 5, or April 19, 2011, or January 3, 2012

WE model(s) withdrawn effective December 2012

© enovo

(G-NZ3-5) February 2013

# ThinkPad® T420 4180 (Optimus) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>2</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery	Intel vPro	Global (G) GMP (P)	Pre-load	Ann Date (mm/yy)
4180-65G	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	BT	9	vPro	G	Pro 64	02/11
4180-64G	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	1394	None	BT	6	vPro	G	Pro 64	02/11

- A depot repair service 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Rescue and Recovery™</li><li>● Access Connections™</li><li>● Fingerprint Software (fingerprint models)</li><li>● Password Manager (fingerprint models)</li><li>● ThinkVantage® System Update</li><li>● ThinkVantage Power Manager</li><li>● ThinkVantage Toolbox</li><li>● Lenovo® SimpleTap</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li><li>● Adobe® Reader®</li><li>● Skype™ for Windows</li><li>● Windows Live™ Essentials</li><li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li><li>● Corel® WinDVD® (DVD±RW)</li><li>● Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>● Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	8GB max <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical Ultrabay 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	
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 3000</b> in processor, and <b>NVIDIA NVS™ 4200M</b> , PCI Express® x16, <b>1GB</b> 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>Max external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)	
Keyboard TrackPoint®	7 row, 89-key, ThinkVantage® button, spill-resistant, multimedia Fn keys	
Touchpad	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass	
ThinkLight™	UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch Illuminates the keyboard to improve visibility in low-light conditions	
Dimensions <sup>3</sup>	<i>14.0W" (WxDxH):</i> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight <sup>2</sup>	<i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg)	
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 as 2nd battery	
Battery - life <sup>10</sup>	<i>6-cell (57Whr):</i> up to 8.8 hr; <i>9-cell (94Whr):</i> up to 14.7 hr; <i>9-cell plus Slice battery:</i> up to 29.5 hr	
Chipset	<b>Mobile Intel QM67 Express Chipset</b>	
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	
PCIe WLAN <sup>4</sup>	11a/b/g/n <sup>28</sup> , PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
PCIe WWAN	Wireless WAN upgradable	
Carrier	None	
Modem	None	
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, 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 <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information  
 WE model(s) announced February 22, 2011  
 WE model(s) withdrawn effective December 2012

©Lenovo  
 (G-NZ3-6) February 2013



# ThinkPad® T420 4236 (Onsite) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/mSATA	Carrier	Modem	IEEE 1394	Smart Card Reader	Finger-print reader	Bat-tery cells	Intel vPro	Global (G) (P)	Pre-load	Ann Date (mm/yy)
4236-PAG	i5-2520M	4GBx1	14.0" HD	720p	128G SSD	Intel 6205	upg	None	None	None	None	Finger	6	vPro	G P	Pro 64	04/11
4236-P3G	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	Ericsson	select	Modem	None	None	Finger	6	vPro	G P	Pro 64	03/11
4236-NUG	i5-2520M	4GBx1	14.0" HD	720p	500G 7200	Intel 6205	upg	None	None	1394	None	Finger	6	vPro	G P	Pro 64	02/11
4236-MBG	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	Modem	None	None	Finger	6	vPro	G P	Pro 64	02/11
4236-NHG	i5-2540M	4GBx1	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	Modem	None	None	Finger	6	vPro	G P	Pro 64	02/11
4236-63G	i5-2540M	2GBx2	14.0" HD+	720p	320G 7200	Intel 6205	upg	None	None	1394	None	Finger	6	vPro	G P	Pro 64	02/11
4236-62G	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	upg	None	None	1394	None	None	6	vPro	G P	Pro 64	02/11
4236-N5G	i5-2540M	4GBx1	14.0" HD	720p	250G 5400	Intel 6205	upg	None	Modem	None	None	Finger	6	vPro		Pro 64	02/11
4236-N3G	i5-2520M	4GBx1	14.0" HD	No	320G 7200	Intel 6205	upg	None	Modem	None	Smart	Finger	6	vPro		Pro 64	02/11
4236-N2G	i5-2540M	4GBx1	14.0" HD	720p	320G 5400	Intel 6205	Ericsson	select	Modem	None	None	Finger	6	vPro		Pro 64	02/11
4236-QFG	i5-2520M	4GBx1	14.0" HD	720p	160G SSD	Intel 6205	upg	None	None	None	None	Finger	6	vPro	G P	Pro 64	01/12
4236-PGG	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6300	Ericsson	select	None	None	None	Finger	6	vPro		Pro 64	08/11
Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Access Connections™ • Fingerprint Software (fingerprint models) • Password Manager (fingerprint models) • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo® SimpleTap					
Memory	8GB max <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<b>Preloaded applications<sup>14</sup></b> (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)					
Optical Ultrabay 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																
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus																
Camera	<i>Some:</i> HD720p resolution, wider view angle, low light sensitive, fixed focus																
Graphics	<b>Intel HD Graphics 3000</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup>	<b>14.0W" (WxDxH):</b> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm																
Weight <sup>2</sup>	<b>4-cell:</b> from 4.65 lb (2.11kg); <b>6-cell:</b> from 4.84 lb (2.20kg); <b>9-cell:</b> from 5.22 lb (2.37kg)																
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 as 2nd battery																
Battery - life <sup>10</sup>	<b>6-cell (57Whr):</b> up to 9.0 hr; <b>9-cell (94Whr):</b> up to 15.0 hr; <b>9-cell plus Slice battery:</b> up to 30 hr																
Chipset	<b>Mobile Intel QM67 Express Chipset</b>																
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	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																
PCIe WLAN <sup>4</sup>	<i>Some:</i> 11a/b/g/n <sup>28</sup> , 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																
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Ericsson F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS																
Carrier	<i>Some:</i> User selectable, contract required with service provider																
Modem	<i>Some:</i> 56K V.92 modem																
IEEE 1394	<i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)																
Bluetooth™	Bluetooth 3.0 wireless, LED indicator																
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup>, 8 am - 5 pm, Mon - Fri coverage excluding public and national holidays. Calls received after 3 pm will require an additional next business day for service dispatch / service upgrades<sup>22</sup> available</b>																

See footnotes for more detailed information

WE model(s) announced February 22, March 1, April 5 or August 2, 2011, or January 3, 2012  
 WE model(s) withdrawn effective December 2012

©Lenovo  
 (G-NZ3-7) February 2013



# ThinkPad® T420 4236 (Onsite) - November 2012 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	Modem	IEEE 1394	Finger print reader	Bat- tery cells	Intel vPro	Preload(mm/yy)	Ann Date
4236-QPG	i7-2640M	4GBx1	14.0" HD+	None	500G 7200	Intel 6205	Ericsson	select	None	1394	Finger	6	vPro	Pro 64	11/12
4236-QNG	i5-2540M	4GBx1	14.0" HD+	None	500G 7200	Intel 6205	WWAN upg	None	None	1394	Finger	6	vPro	Pro 64	11/12
4236-QMG	i5-2520M	4GBx1	14.0" HD+	None	500G 7200	Intel 6205	WWAN upg	None	None	1394	Finger	6	vPro	Pro 64	11/12

## • Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) ● Rescue and Recovery™ ● Access Connections™ ● Fingerprint Software (fingerprint models) ● Password Manager (fingerprint models) ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Lenovo® SimpleTap  <b>Preloaded applications<sup>14</sup></b> (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 <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	
Optical Ultrabay 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	
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 300:1 contrast ratio	
Camera	None	
Graphics	<b>Intel HD Graphics 3000</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup>	<i>14.0W"</i> (WxDxH): 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm	
Weight <sup>2</sup>	<i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg)	
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 as 2nd battery	
Battery - life <sup>10</sup>	<i>6-cell (57Whr):</i> up to 9.0 hr; <i>9-cell (94Whr):</i> up to 15.0 hr; <i>9-cell plus Slice battery:</i> up to 30 hr	
Chipset	<b>Mobile Intel QM67 Express Chipset</b>	
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	
PCIe WLAN <sup>4</sup>	11a/b/g/n <sup>28</sup> , PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2	
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Ericsson F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS	
Carrier	<i>Some:</i> User selectable, contract required with service provider	
Modem	None	
IEEE 1394	IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard)	
Bluetooth™	Bluetooth 3.0 wireless, LED indicator	
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, 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	UPEK Fingerprint reader on palm rest, swipe sensor, LED indicator, Power On Authentication, supports the security chip	
Limited Warranty <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding public and national holidays. Calls received after 3 pm will require an additional next business day for service dispatch / service upgrades <sup>22</sup> available	<b>Supports ThinkVantage technologies</b>  <i>Integrated model:</i> 65W AC Adapter <i>Optimus™ model:</i> 90W AC Adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>

See footnotes for more detailed information  
 WE model(s) announced November 20, 2012  
 WE model(s) withdrawn effective December 2012

©Lenovo  
 (G-NZ3-9) February 2013

# ThinkPad® T420 4236 (Optimus) - Onsite - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB <sup>3</sup> rpm	PCIe Mini Card WLAN	PCIe Mini Card WWAN/ mSATA	Carrier	IEEE 1394	Finger print reader	Blue-tooth	Bat-tery Intel vPro	Global (G) GMP (P)	Pre-load	Ann Date (mm/yy)
4236-PRG	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	Finger	BT	9 vPro	G P	Pro 64	11/11
4236-65G	i5-2540M	2GBx2	14.0" HD+	720p	500G 7200	Intel 6205	WWAN upg	None	1394	None	BT	9 vPro	G P	Pro 64	02/11
4236-64G	i5-2520M	2GBx2	14.0" HD	720p	320G 7200	Intel 6205	WWAN upg	None	1394	None	BT	6 vPro	G P	Pro 64	02/11
4236-PFG	i7-2640M	4GBx1	14.0" HD+	720p	500G 7200	Intel 6300	Ericsson	select	None	Finger	BT	9 vPro		Pro 64	08/11

- Some models are part of the Global Models Plus program with limited onsite service<sup>24</sup> 3-year limited warranty
- Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Premiere performance; two spindles</i> <b>Intel® Core™ i5-2520M processor (dual-core, 2.50GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.20GHz), HT technology <b>Intel Core i5-2540M processor (dual-core, 2.60GHz, 3MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-2640M processor (dual-core, 2.80GHz, 4MB Cache),</b> DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.50GHz), HT technology		<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Rescue and Recovery™</li><li>● Access Connections™</li><li>● Fingerprint Software (fingerprint models)</li><li>● Password Manager (fingerprint models)</li><li>● ThinkVantage® System Update</li><li>● ThinkVantage Power Manager</li><li>● ThinkVantage Toolbox</li><li>● Lenovo® SimpleTap</li></ul> <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"><li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li><li>● Adobe® Reader®</li><li>● Skype™ for Windows</li><li>● Windows Live™ Essentials</li><li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li><li>● Corel® WinDVD® (DVD±RW)</li><li>● Corel Burn.Now™ Lenovo Edition (DVD±RW)</li><li>● Corel DVD MovieFactory® Lenovo Edition (DVD±RW)</li></ul>
Memory	8GB max <sup>7</sup> / PC3-10600 1333MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets		
Optical Ultrabay 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		
Display	<i>Some:</i> <b>14.0"</b> (355mm) <b>HD (1366x768) color</b> , anti-glare, LED backlight, 200 nits, 16:9 aspect ratio, 300:1 contrast ratio <i>Some:</i> <b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , 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, <b>Intel HD Graphics 3000</b> in processor, and <b>NVIDIA NVS™ 4200M</b> , PCI Express® x16, <b>1GB</b> 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>Max 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 <sup>13</sup> , 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 <sup>3</sup> Weight <sup>2</sup> Case material	<i>14.0W" (WxDxH):</i> 13.4" x 9.17" x 1.18–1.20"; 340.5 x 233.0mm x 30.1–30.5mm <i>4-cell:</i> from 4.65 lb (2.11kg); <i>6-cell:</i> from 4.84 lb (2.20kg); <i>9-cell:</i> from 5.22 lb (2.37kg) <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Bottom:</i> Carbon-Fiber Reinforced Plastic		
Battery - type Battery - life <sup>10</sup>	Lithium Ion 4-cell, 6-cell, or 9-cell, supports optional Slice battery as 2nd battery <i>6-cell (57Whr):</i> up to 8.8 hr; <i>9-cell (94Whr):</i> up to 14.7 hr; <i>9-cell plus Slice battery:</i> up to 29.5 hr		
Chipset	<b>Mobile Intel QM67 Express Chipset</b>		
ExpressCard Smart Card read Multicard reader Ports	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 PCIe WLAN <sup>4</sup>	Two PCI Express Mini Card slots <i>Some:</i> 11a/b/g/n <sup>28</sup> , 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		
PCIe WWAN	<i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Ericsson F5521gw Mobile Broadband Module, PCIe Mini Card, GPRS/WCDMA/HSPA/HSPA+, GPS		
Carrier Modem IEEE 1394 Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, contract required with service provider None <i>Some:</i> IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) Bluetooth 3.0 wireless, LED indicator Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 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 <sup>12</sup>	<b>3-years/1-year battery, limited onsite service<sup>24</sup></b> , 8 am - 5 pm, Mon - Fri coverage excluding public and national holidays. Calls received after 3 pm will require an additional next business day for service dispatch / service upgrades <sup>22</sup> available		

| Supports ThinkVantage technologies | | |
| *Integrated model:* 65W AC Adapter *Optimus™ model:* 90W AC Adapter ThinkPad Roll Cage (one-piece magnesium frame) EPEAT™ Gold rating ENERGY STAR® 5.0-compliant ROHS-compliant International Warranty Service<sup>17</sup> 24 hour x 7 day<sup>18</sup> toll-free support during the warranty period<sup>12</sup> | | |

See footnotes for more detailed information

WE model(s) announced February 22, August 2, or November 1, 2011

WE model(s) withdrawn effective December 2012

©Lenovo

(G-NZ3-8) February 2013