



Lenovo® ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s



Lenovo ThinkPad T431s with  
ThinkPad Mini Dock Series 3 with USB 3.0 - 90W  
433715U

# ThinkPad T431s 20AA (TopSeller) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB <sup>2</sup> rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Smart Card Reader	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
20AA000E++	i7-3687U	4+4GB	14.0" HD+	240G FDE SSD	Backlit	Intel 6235 <sup>28</sup>	Ericsson	selectable	None	iAMT	vPro	Win7 Pro64	03/13
20AA0012++	i7-3687U	4+4GB	14.0" HD+	240G FDE SSD	Backlit	Intel 6235	Ericsson	selectable	None	iAMT	vPro	Win7 Pro64	03/13
20AA0014++	i5-3337U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	None	No	Win7 Pro64	03/13
20AA0015++	i5-3337U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	None	No	Win7 Pro64	03/13
20AA0016++	i5-3337U	4GB	14.0" HD+	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	None	No	Win7 Pro64	03/13
20AA0018++	i5-3437U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win7 Pro64	03/13
20AA0019++	i5-3437U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win7 Pro64	03/13
20AA001A++	i5-3437U	4GB	14.0" HD+	500G 7200	Backlit	Intel 6235	24GB SSD	None	Smart	iAMT	vPro	Win7 Pro64	03/13
20AA001C++	i7-3687U	4+4GB	14.0" HD+	240G FDE SSD	Backlit	Intel 6235	Ericsson	selectable	None	iAMT	vPro	Win8 Pro64	03/13
20AA001D++	i7-3687U	4+4GB	14.0" HD+	240G FDE SSD	Backlit	Intel 6235	Ericsson	selectable	None	iAMT	vPro	Win8 Pro64	03/13
20AA001F++	i5-3337U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	None	No	Win8 Pro64	03/13
20AA001G++	i5-3337U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	None	No	Win8 Pro64	03/13
20AA001H++	i5-3337U	4GB	14.0" HD+	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	None	No	Win8 Pro64	03/13
20AA001K++	i5-3437U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win8 Pro64	03/13
20AA001L++	i5-3437U	4GB	14.0" HD+	180G SSD	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win8 Pro64	03/13
20AA001M++	i5-3437U	4GB	14.0" HD+	500G 7200	Backlit	Intel 6235	24GB SSD	None	Smart	iAMT	vPro	Win8 Pro64	03/13

Country Code"+": AT (Austria), FR (France), GB (Germany w/ English OS), GE (Germany w/ German OS), IV (Israel), IW (Iceland), IX (Italy), MB (Belgium), MD (Denmark), MH (Netherlands), ML (Luxembourg), MN (Norway), MS (Sweden), MZ (Switzerland), NX (Netherlands), PG (Portugal), SP (Spain), UK (United Kingdom)

Note: models listed above might not be available in all WE countries

Positioning Processor	<i>Thin and light enterprise-class Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology								<b>Preloaded operating system<sup>20F</sup></b> - Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit - Some: Windows 8 Pro 64-bit				
Memory	12GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket								<b>Preloaded applications<sup>5</sup></b> (only some listed)				
Optical SATA disk	None Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™								- <b>Windows 7 models</b> • Lenovo® Message Center Plus • ThinkVantage Product Recovery • Access Connections™ • ThinkVantage Power Manager • Lenovo SimpleTap • Adobe® Reader®				
M.2 SSD	Some: M.2 Solid State Drive (SSD), via M.2 Card slot								- <b>Windows 8 models</b> • Lenovo Support • Lenovo Companion • Lenovo QuickLaunch				
Widescreen display Camera	<b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio HD720p resolution, low light sensitive, face tracking, fixed focus								- <b>All models</b> • Lenovo Solution Center • Password Manager • ThinkVantage System Update • Fingerprint Software (fingerprint models) • Lenovo Cloud Storage by SugarSync • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions) • Skype™ • AccuWeather • Amazon Kindle • Intel AppUp® • Nitro Pro • PC Device Stage • Evernote				
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution: 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)</i>								Supports ThinkVantage® technologies				
Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch None								45-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified 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>				
Dimensions <sup>3</sup> Weight <sup>2</sup> Case color Case material	<b>14.0W" (WxDxH):</b> 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm <b>3-cell:</b> from 3.6 lb (1.63kg) Graphite Black <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Base:</i> Magnesium alloy												
Battery - type Battery - life <sup>10</sup>	Integrated Li-Polymer 3-cell (47Whr), HW Authentication <i>MobileMark® 2007:</i> Windows 7: up to 9.0 hr <i>MobileMark 2012:</i> Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr												
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel QM77 Express Chipset</b> None Some: Smart Card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), Dock connector												
PCIe WLAN <sup>4</sup> PCIe WWAN SIM card Bluetooth™ Ethernet Intel AMT Audio support	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter Some: Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 Card Some: User selectable, contract required with service provider Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Some: Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack												
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on the keyboard bezel, 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 available												

See footnotes for more detailed information

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(G-ST1-2) August 2013

# ThinkPad T431s 20AA (TopSeller) - Onsite - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB <sup>5</sup> rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	SIM card	Smart Card Reader	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
20AA002A++	i7-3687U	4+4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235 <sup>28</sup>	Ericsson	selectable	None	iAMT	vPro	Win7 Pro64	06/13
20AA002B++	i5-3437U	4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win8 Pro64	06/13
20AA002C++	i5-3437U	4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win7 Pro64	06/13
20AA002H++	i5-3337U	4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	Smart	None	No	Win8 Pro64	06/13
20AA002J++	i5-3337U	4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	Smart	None	No	Win7 Pro64	06/13
20AA002P++	i5-3437U	4GB	14.0" HD+	256G SSD OPAL	None	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win7 Pro64	06/13
20AA002Q++	i5-3437U	4GB	14.0" HD+	256G SSD OPAL	None	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win8 Pro64	06/13
20AA002T++	i5-3437U	4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win7 Pro64	06/13
20AA002U++	i5-3437U	4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	Smart	iAMT	vPro	Win8 Pro64	06/13
20AA002V++	i7-3687U	4+4GB	14.0" HD+	256G SSD OPAL	Backlit	Intel 6235	Ericsson	selectable	None	iAMT	vPro	Win8 Pro64	06/13

Country Code"+": AT (Austria), FR (France), GB (Germany w/ English OS), GE (Germany w/ German OS), IV (Israel), IW (Iceland), IX (Italy), MB (Belgium), MD (Denmark), MH (Netherlands), ML (Luxembourg), MN (Norway), MS (Sweden), MZ (Switzerland), NX (Netherlands), PG (Portugal), SP (Spain), UK (United Kingdom)

Note: models listed above might not be available in all WE countries

Positioning	<b>Thin and light enterprise-class Ultrabook™; one spindle</b>											
Processor	<b>Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology <b>Intel Core i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology <b>Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology											
Memory	12GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket											
Optical	None											
SATA disk	<i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/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, Shock Mounted Hard Drive, Active Protection System™											
M.2 SSD	None											
Widescreen display	<b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio											
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus											
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)											
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight											
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch											
ThinkLight™	None											
Dimensions <sup>3</sup>	<b>14.0W"</b> (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm											
Weight <sup>2</sup>	<b>3-cell:</b> from 3.6 lb (1.63kg)											
Case color	Graphite Black											
Case material	<i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Base:</i> Magnesium alloy											
Battery - type	Integrated Li-Polymer 3-cell (47Whr), HW Authentication											
Battery - life <sup>10</sup>	<i>MobileMark® 2007:</i> Windows 7: up to 9.0 hr <i>MobileMark 2012:</i> Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr											
Chipset	<b>Mobile Intel QM77 Express Chipset</b>											
ExpressCard	None											
Smart Card read	<i>Some:</i> Smart Card reader											
Multicard reader	4-in-1 reader (MMC, SD, SDHC, SDXC)											
Ports	Two USB 3.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), Dock connector											
PCIe WLAN <sup>4</sup>	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter											
PCIe WWAN	Wireless WAN, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 Card											
SIM card	User selectable, contract required with service provider											
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter											
Ethernet	Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1											
Intel AMT	<i>Some:</i> Intel Active Management Technology (iAMT)											
Audio support	HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack											
Security	Power-on password, hard disk password, supervisor password, security keyhole											
Security chip	Trusted Platform Module, TCG 1.2-compliant											
Fingerprint reader	AuthenTec fingerprint reader on the keyboard bezel, 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 available											

**Preloaded operating system<sup>20F</sup>**  
*- Some:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit  
*- Some:* Windows 8 Pro 64-bit

**Preloaded applications<sup>5</sup>** (only some listed)

- **Windows 7 models**
  - Lenovo® Message Center Plus
  - ThinkVantage Product Recovery
  - Access Connections™
  - ThinkVantage Power Manager
  - Lenovo SimpleTap
  - Adobe® Reader®
- **Windows 8 models**
  - Lenovo Support
  - Lenovo Companion
  - Lenovo QuickLaunch
- **All models**
  - Lenovo Solution Center
  - Password Manager
  - ThinkVantage System Update
  - Fingerprint Software (fingerprint models)
  - Lenovo Cloud Storage by SugarSync
  - Microsoft® Office preloaded; purchase a product key to activate
  - Norton™ Internet Security (30 days of virus definitions)
  - Skype™
  - AccuWeather
  - Amazon Kindle
  - Intel AppUp®
  - Nitro Pro
  - PC Device Stage
  - Evernote

Supports ThinkVantage® technologies

45-watt AC adapter  
 EPEAT™ Silver rating  
 ENERGY STAR® 5.0-compliant  
 GREENGUARD® certified  
 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

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# ThinkPad T431s 20AC

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Wide-screen display	Disk SATA GB <sup>9</sup> rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/SSD	Finger print reader	Blue-tooth	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Preload	Ann Date (mm/yy)
20AC000A++	i5-3437U	4GB	14.0" HD+	500G 7200	Backlit	Intel 6235 <sup>28</sup>	24GB	Finger	BT	3	vPro	G	Win8 Pro64	03/13

Country Code "++": AT (Austria), FR (France), GB (Germany w/ English OS), GE (Germany w/ German OS), IV (Israel), IW (Iceland), IX (Italy), MB (Belgium), MD (Denmark), MH (Netherlands), ML (Luxembourg), MN (Norway), MS (Sweden), MZ (Switzerland), NX (Netherlands), PG (Portugal), SP (Spain), UK (United Kingdom)  
 Note: models listed above might not be available in all WE countries

Positioning Processor	<i>Thin and light enterprise-class Ultrabook™; one spindle</i> <b>Intel® Core™ i5-3437U processor (2 cores, 1.90GHz, 3MB cache), Intel HD Graphics 4000, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.90GHz), HT technology</b>		<b>Preloaded operating system</b> <sup>20F</sup> - Windows 8 Pro 64-bit  <b>Preloaded applications</b> <sup>5</sup> (only some listed)  - <b>Windows 7 models</b> <ul style="list-style-type: none"><li>• Lenovo® Message Center Plus</li><li>• ThinkVantage Product Recovery</li><li>• Access Connections™</li><li>• ThinkVantage Power Manager</li><li>• Lenovo SimpleTap</li><li>• Adobe® Reader®</li></ul> - <b>Windows 8 models</b> <ul style="list-style-type: none"><li>• Lenovo Support</li><li>• Lenovo Companion</li><li>• Lenovo QuickLaunch</li></ul> - <b>All models</b> <ul style="list-style-type: none"><li>• Lenovo Solution Center</li><li>• Password Manager</li><li>• ThinkVantage System Update</li><li>• Fingerprint Software (fingerprint models)</li><li>• Lenovo Cloud Storage by SugarSync</li><li>• Microsoft® Office preloaded; purchase a product key to activate</li><li>• Norton™ Internet Security (30 days of virus definitions)</li><li>• Skype™</li><li>• AccuWeather</li><li>• Amazon Kindle</li><li>• Intel AppUp®</li><li>• Nitro Pro</li><li>• PC Device Stage</li><li>• Evernote</li></ul> Supports ThinkVantage® technologies  45-watt AC adapter EPEAT™ Silver rating ENERGY STAR® 5.0-compliant GREENGUARD® certified 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>
Memory	12GB max <sup>7</sup> / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket		
Optical SATA disk	None <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/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, Shock Mounted Hard Drive, Active Protection System™		
M.2 SSD	M.2 Solid State Drive (SSD), via M.2 Card slot		
Widescreen display	<b>14.0"</b> (355mm) <b>HD+ (1600x900) color</b> , anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio		
Camera	HD720p resolution, low light sensitive, face tracking, fixed focus		
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)		
Keyboard UltraNav™ ThinkLight™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch None		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case color Case material	<i>14.0W" (WxDxH):</i> 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm <i>3-cell:</i> from 3.6 lb (1.63kg) Graphite Black <i>Display cover:</i> Carbon-fiber / Glass-fiber hybrid; <i>Base:</i> Magnesium alloy		
Battery - type Battery - life <sup>10</sup>	Integrated Li-Polymer 3-cell (47Whr), HW Authentication <i>MobileMark® 2007:</i> Windows 7: up to 9.0 hr <i>MobileMark 2012:</i> Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr		
Chipset ExpressCard Smart Card read Multicard reader Ports	<b>Mobile Intel QM77 Express Chipset</b> None None 4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.0 (one powered), VGA DB-15, Mini DisplayPort, ethernet (RJ-45), Dock connector		
PCIe WLAN <sup>4</sup> PCIe WWAN SIM card Bluetooth™ Ethernet Intel AMT Audio support	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter None None Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1 Intel Active Management Technology (iAMT) HD Audio, Realtek® ALC3202 codec, Dolby® Home Theater® v4 / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader on the keyboard bezel, 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

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