ThinkPad T431s

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

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/ SSD	Finger print reader	Bat-tery cells	Intel AMT	Intel vPro	Preload	Ann Date (mm/yy)
20AA000SUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235[28]	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000TUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000KUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000JUS	i5-3337U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	None	No	Win7 Pro64	03/13
20AA000UUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000GUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	None	No	Win8 Pro64	03/13
20AA000PUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000QUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000VUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000LUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win8 Pro64	03/13
20AA000BUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	Finger	3	None	No	Win7 Pro64	03/13
20AA000MUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000RUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	03/13
20AA000HUS	i5-3337U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	Finger	3	None	No	Win8 Pro64	03/13
20AA000XUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	None	Intel 6235	24GB SSD	Finger	3	None	No	Win7 Pro64	03/13
20AA000NUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	None	Intel 6235	24GB SSD	Finger	3	iAMT	vPro	Win7 Pro64	04/13
20AA0032US	i7-3687U	4+4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	07/13
20AA002WUS	i7-3687U	4+4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	None	3	iAMT	vPro	Win7 Pro64	07/13
20AA0030US	i5-3437U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	Finger	3	iAMT	vPro	Win7 Pro64	07/13
20AA002YUS	i5-3337U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	None	3	None	No	Win7 Pro64	07/13
20AA0031US	i5-3337U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	None	3	iAMT	vPro	Win7 Pro64	07/13
20AA0034US	i5-3337U	4GB	14.0" HD+	720p	256G SSD OPAL	Backlit	Intel 6235	WWAN upg	Finger	3	None	No	Win7 Pro64	07/13
20AA001WUS	i5-3337U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	3	None	No	Win7 Pro64	07/13

Positioning	*Thin and light enterprise-class Ultrabook™; one spindle*
Processor	**Intel® Core™ i5-3337U processor (2 cores, 1.80GHz, 3MB cache)**, **Intel HD Graphics 4000**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (2.70GHz), HT technology **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 **Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache)**, **Intel HD Graphics 4000**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	12GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Optical	None
SATA disk	*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™
M.2 SSD	*Some:* M.2 Solid State Drive (SSD), via M.2 Card slot
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, 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	**Intel HD Graphics 4000** in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; *Maximum external resolution:* 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
Weight[2]	*3-cell:* from 3.6 lb (1.63kg)
Case color	Graphite Black
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Base:* Magnesium alloy
Battery - type	Integrated Li-Polymer 3-cell *(47Whr)*, HW Authentication
Battery - life[10]	*MobileMark® 2007:* *Windows 7:* up to 9.0 hr *MobileMark 2012:* *Windows 7:* up to 5.9 hr; *Windows 8:* up to 6.4 hr
Chipset	**Mobile Intel QM77 Express Chipset**
ExpressCard	None
Smart Card read	None
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[4]	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter
PCIe WWAN	*Some:* Wireless WAN upgradable
Carrier	None
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Ethernet	Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Intel AMT	*Some:* 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	*Some:* AuthenTec fingerprint reader on the keyboard bezel, 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

Preloaded operating system[20]
- *Some:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
- *Some:* Windows 8 Pro 64-bit

Preloaded applications[5] (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
- Skype™
- Amazon Kindle
- 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[17]
24 hour x 7 day[18] toll-free support during the warranty period[12]

For Lenovo service[22] upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/ SSD	Carrier	Finger print reader	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
20AC000PUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235[28]	WWAN upg	None	None	3	vPro	Win7 Pro64	03/13
20AC000FUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000MUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000EUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC0006US	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	None	3	vPro	Win8 Pro64	03/13
20AC0005US	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win8 Pro64	03/13
20AC000BUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000DUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000CUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000HUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000KUS	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000RUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win7 Pro64	03/13

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

Positioning	*Thin and light enterprise-class Ultrabook™; one spindle*
Processor	**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 **Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache)**, **Intel HD Graphics 4000**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	12GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Optical	None
SATA disk	*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™
M.2 SSD	*Some:* M.2 Solid State Drive (SSD), via M.2 Card slot
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, 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	**Intel HD Graphics 4000** in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; *Maximum external resolution:* 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
Weight[2]	*3-cell:* from 3.6 lb (1.63kg)
Case color	Graphite Black
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Base:* Magnesium alloy
Battery - type	Integrated Li-Polymer 3-cell *(47Whr)*, HW Authentication
Battery - life[10]	*MobileMark® 2007:* *Windows 7:* up to 9.0 hr *MobileMark 2012:* *Windows 7:* up to 5.9 hr; *Windows 8:* up to 6.4 hr
Chipset	**Mobile Intel QM77 Express Chipset**
ExpressCard	None
Smart Card read	None
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[4]	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter
PCIe WWAN	*Some:* Wireless WAN upgradable
Carrier	None
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Ethernet	Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Intel AMT	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	*Some:* AuthenTec fingerprint reader on the keyboard bezel, 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

Preloaded operating system[20]
- *Some:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
- *Some:* Windows 8 Pro 64-bit

Preloaded applications[5] (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
- Skype™
- Amazon Kindle
- 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[17]
24 hour x 7 day[18] toll-free support during the warranty period[12]

For Lenovo service[22] upgrade options, please go to QP-TA sheet

See footnotes for more detailed information

ThinkPad T431s 20AC (Onsite)

Type-model	Processor	Memory	Wide-screen display	Camera	Disk SATA GB[8] rpm	Backlit key-board	M.2 Card WLAN	M.2 Card WWAN/ SSD	Carrier	Finger print reader	Bat-tery cells	Intel vPro	Preload	Ann Date (mm/yy)
20AC0014US	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235[28]	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC0018US	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win8 Pro64	03/13
20AC000XUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	None	3	vPro	Win7 Pro64	03/13
20AC0016US	i7-3687U	4+4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win7 Pro64	03/13
20AC0010US	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000WUS	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	None	3	vPro	Win8 Pro64	03/13
20AC0012US	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	Finger	3	vPro	Win8 64	03/13
20AC001AUS	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC001CUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win7 Pro64	03/13
20AC000TUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win7 Pro64	03/13
20AC000VUS	i5-3437U	4GB	14.0" HD+	720p	500G 7200	Backlit	Intel 6235	24GB SSD	None	None	3	vPro	Win8 Pro64	03/13
20AC0013US	i5-3437U	4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 64	03/13
20AC001EUS	i7-3687U	4+4GB	14.0" HD+	720p	240G FDE SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13
20AC0019US	i7-3687U	4+4GB	14.0" HD+	720p	180G SSD	Backlit	Intel 6235	WWAN upg	None	Finger	3	vPro	Win8 Pro64	03/13

Positioning	*Thin and light enterprise-class Ultrabook™; one spindle*
Processor	**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 **Intel Core i7-3687U processor (2 cores, 2.10GHz, 4MB cache)**, **Intel HD Graphics 4000**, DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology
Memory	12GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Optical	None
SATA disk	*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™
M.2 SSD	*Some:* M.2 Solid State Drive (SSD), via M.2 Card slot
Widescreen display	**14.0"** (355mm) **HD+ (1600x900) color**, 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	**Intel HD Graphics 4000** in processor, supports external analog monitor via VGA DB-15 and digital monitor via Mini DisplayPort; supports dual independent display; *Maximum external resolution:* 2560x1600@60Hz (DisplayPort via optional Mini DP cable); 1920x1200@60Hz (single-link DVI-I via optional Mini DP cable); 2048x1536@75Hz (VGA)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and glass surface touchpad, integrated five buttons, multi-touch
ThinkLight™	None
Dimensions[3]	*14.0W" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
Weight[2]	*3-cell:* from 3.6 lb (1.63kg)
Case color	Graphite Black
Case material	*Display cover:* Carbon-fiber / Glass-fiber hybrid; *Base:* Magnesium alloy
Battery - type	Integrated Li-Polymer 3-cell *(47Whr)*, HW Authentication
Battery - life[10]	*MobileMark® 2007:* Windows 7: up to 9.0 hr *MobileMark 2012:* Windows 7: up to 5.9 hr; Windows 8: up to 6.4 hr
Chipset	**Mobile Intel QM77 Express Chipset**
ExpressCard	None
Smart Card read	None
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[4]	11a/b/g/n, M.2 Card, Intel Centrino® Advanced-N 6235, 2x2, Wi-Fi + BT combo adapter
PCIe WWAN	*Some:* Wireless WAN upgradable
Carrier	None
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
Ethernet	Intel 82579LM Gigabit Network Connection (Hanksville), PHY, PCIe x1
Intel AMT	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	*Some:* AuthenTec fingerprint reader on the keyboard bezel, swipe sensor, LED indicator, Power On Authentication, supports the security chip
Limited warranty[12]	**3-years**/1-year battery, **limited onsite service**[24], 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades[22] available

Preloaded operating system[20]
- *Some:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8 Pro 64-bit
- *Some:* Windows 8 64-bit
- *Some:* Windows 8 Pro 64-bit

Preloaded applications[5] (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
- Skype™
- Amazon Kindle
- 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[17]
24 hour x 7 day[18] toll-free support during the warranty period[12]

For Lenovo service[22] upgrade options, please go to QP-TA sheet

See footnotes for more detailed information