Lenovo® ThinkPad T450s

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ThinkPad T450s Platform Specifications

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics
i5-5200U			2.2 GHz	2.7 GHz	3MB		
i5-5300U	2	4	2.3 GHz	2.9 GHz	3MB	DDR3L-1600	Intel HD Graphics 5500
i7-5600U			2.6 GHz	3.2 GHz	4MB		

Graphics	Intel HD Graphics 5500 in processor, supports external analog monitor via VGA and digital monitor via Mini DisplayPort; supports three independent displays; Max resolution: 3840x2160@60Hz (DP via mDP cable); 1920x1200@60Hz (VGA)
Chipset Memory	Intel SoC (System on Chip) platform 20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Display	*Some:* 14.0" (355mm) HD+ (1600x900), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 400:1 contrast ratio *Some:* 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS
Multi-touch *(opt)*	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits
Storage	*Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, removable, upgradable *Some:* HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, removable, upgradable, Shock Mounted Hard Drive, Active Protection System™ *Some:* SSHD with 8GB NAND flash memory
M.2 SSD *(opt)*	Single-sided M.2 SSD, via M.2 card slot
Optical	None
Ethernet	*Non-vPro model:* Intel Ethernet Connection I218-V (Clarkville) *vPro model:* Intel Ethernet Connection I218-LM (Clarkville)
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4]	*One of the following, configurable by model:* • 11b/g/n, ThinkPad 11b/g/n, 2x2, Wi-Fi + Bluetooth combo adapter, M.2 card • 11ac, Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT adapter, M.2 card
WWAN *(optional)*	*One of the following, configurable by model:* • Wireless WAN upgradable • Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card
SIM card *(opt)*	AT&T® or Verizon® LTE (4G), contract required with service provider
Dimensions[3]	*14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm *14.0" Touch (WxDxH):* 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm

Weight[2]			
Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material	*Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum

Smart card reader	*Optional:* Smart card reader
Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)
Camera	HD720p resolution, low light sensitive, fixed focus
Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
ThinkEngine	Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures
vPro *(optional)*	Intel vPro Technology
Fingerprint reader	*Optional:* Fingerprint reader on the keyboard bezel, swipe sensor
Internal battery	*Optional:* Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*
External battery	Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*

Max battery life[10]			
Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter
Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64 • Lenovo Solution Center • Lenovo SHAREit • ThinkVantage Product Recovery • Rescue and Recovery™ • ThinkVantage System Update • PC Device Stage • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Norton™ Internet Security (30 days of virus definitions)
	Some: Windows 8.1 64-bit *Some:* Windows 8.1 Pro 64-bit *Some:* Windows 10 Pro 64 • Lenovo Solution Center • Lenovo SHAREit • Lenovo REACHit • Lenovo Companion • Microsoft Office preloaded; purchase a product key to activate • Norton Internet Security (30 days of virus definitions, Win8 w/o i5/i7 model) • McAfee® LiveSafe™ (30-day trial, Win8 i5/i7 and Win10 model)
Limited warranty[12]	*One of the following, configurable by model:* • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service[24] • 3-year/1-yr battery limited onsite service, OID (Onsite International Delivery)
Mil-Spec test	MIL-STD-810G military certification
Environment	EPEAT™ Gold (US) or EPEAT Silver (WE); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant

ThinkPad T450s 20BX (TopSeller)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BX001PUS	i5-5200U	No	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	1-depot	No	01/15
20BX0015US	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX0016US	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX0017US	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX0018US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX0019US	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001AUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001DUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001EUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001HUS	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001JUS	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001KUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001NUS	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	128G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001BUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001CUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001FUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX001LUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BX003SUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 DG Win7	3-depot	No	08/15
20BX003TUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 DG Win7	3-depot	No	08/15
20BX003PUS	i5-5200U	No	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win10 DG Win7	1-depot	No	08/15
20BX003QUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 DG Win7	3-depot	No	08/15
20BX003RUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 DG Win7	3-depot	No	08/15

- *For detailed platform specifications, please see* [ThinkPad T450s Platform Specifications](#) *sheet*

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics — Intel HD Graphics 5500 in processor

Chipset — Intel SoC (System on Chip) platform

Memory — 20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket

Display
Some: 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS
Multi-touch (opt) — Capacitive-type multi-touch, supports 10-finger gesture, 264 nits

Storage
Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
Some: SSHD with 8GB NAND flash memory
M.2 SSD (opt) — Single-sided M.2 SSD, via M.2 card slot
Optical — None

Ethernet — Intel Ethernet Connection I218-V (*Non-vPro model*) or I218-LM (*vPro model*)
Bluetooth™ — Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter

WLAN[4]
11b/g/n+BT: ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card

WWAN (optional)
Upg: Wireless WAN upgradable
EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card

SIM card (opt) — AT&T® or Verizon® LTE (4G), contract required with service provider

Camera — HD720p resolution, low light sensitive, fixed focus
Audio support — HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3]
14.0" (WxDxH): 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm

Weight[2]

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material — *Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum

Smart card reader — *Optional:* Smart card reader
Media reader — 4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports — Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)

Keyboard — 6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™ — TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch

Security — Power-on password, hard disk password, supervisor password, security keyhole
Security chip — Trusted Platform Module, TCG 1.2-compliant
vPro (optional) — Intel vPro Technology
Fingerprint reader — *Optional:* Fingerprint reader on the keyboard bezel, swipe sensor

Internal battery — *Optional:* Integrated Li-Ion or Li-Polymer 3-cell (*23Wh*)
External battery — Li-Ion 3-cell (*23Wh*) or 6-cell (*48Wh or 72Wh*)
Max battery life[10]

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter — 45W AC adapter, 65W Slim AC adapter, or 65W AC adapter

Preload
Win8.1 / 10 DG Win7: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
Win8.1 64: Windows 8.1 64-bit
Win8.1 P64: Windows 8.1 Pro 64-bit
Win10 P64: Windows 10 Pro 64

Limited warranty[12] — 1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BX001GUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15
20BX001MUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15

- *For detailed platform specifications, please see* [ThinkPad T450s Platform Specifications](#) *sheet*

Processor	5th Generation Intel® Core™ i5 / i7 Processor				

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics — Intel HD Graphics 5500 in processor

Chipset — Intel SoC (System on Chip) platform
Memory — 20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket

Display — *Some:* 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS
Multi-touch *(opt)* — Capacitive-type multi-touch, supports 10-finger gesture, 264 nits

Storage — *Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
Some: SSHD with 8GB NAND flash memory
M.2 SSD *(opt)* — Single-sided M.2 SSD, via M.2 card slot
Optical — None

Ethernet — Intel Ethernet Connection I218-V *(Non-vPro model)* or I218-LM *(vPro model)*
Bluetooth™ — Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4] — *11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card

WWAN *(optional)* — *Upg:* Wireless WAN upgradable
EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card

SIM card *(opt)* — AT&T® or Verizon® LTE (4G), contract required with service provider

Camera — HD720p resolution, low light sensitive, fixed focus
Audio support — HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3] — *14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm

Weight[2]

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material — *Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum

Smart card reader — *Optional:* Smart card reader
Media reader — 4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports — Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)

Keyboard — 6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™ — TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch

Security — Power-on password, hard disk password, supervisor password, security keyhole
Security chip — Trusted Platform Module, TCG 1.2-compliant
vPro *(optional)* — Intel vPro Technology
Fingerprint reader — *Optional:* Fingerprint reader on the keyboard bezel, swipe sensor

Internal battery — *Optional:* Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*
External battery — Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*
Max battery life[10]

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter — 45W AC adapter, 65W Slim AC adapter, or 65W AC adapter

Preload — *Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
Win8.1 64: Windows 8.1 64-bit
Win8.1 P64: Windows 8.1 Pro 64-bit
Win10 P64: Windows 10 Pro 64

Limited warranty[12] — 1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

(STG2-2) © Lenovo

ThinkPad T450s 20BX (TopSeller) - Windows 10

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BX005DUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	No	09/15
20BX005FUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	512G SSD	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	No	09/15
20BX005GUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	No	09/15
20BX005CUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	No	09/15
20BX005EUS	i5-5200U	No	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	None	Finger	3+3	45W	Win10 P64	1-depot	No	09/15
20BX005HUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	No	09/15

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i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics	Intel HD Graphics 5500 in processor
Chipset	Intel SoC (System on Chip) platform
Memory	20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
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Multi-touch *(opt)*	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits
Storage	*Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
	Some: SSHD with 8GB NAND flash memory
M.2 SSD *(opt)*	Single-sided M.2 SSD, via M.2 card slot
Optical	None
Ethernet	Intel Ethernet Connection I218-V *(Non-vPro model)* or I218-LM *(vPro model)*
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4]	*11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
	7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card
WWAN *(optional)*	*Upg:* Wireless WAN upgradable
	EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card
SIM card *(opt)*	AT&T® or Verizon® LTE (4G), contract required with service provider
Camera	HD720p resolution, low light sensitive, fixed focus
Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3]	14.0" (WxDxH):	13.03" x 8.90" x 0.81";	331mm x 226mm x 20.65mm
	14.0" Touch (WxDxH):	13.03" x 8.90" x 0.90";	331mm x 226mm x 22.94mm

Weight[2]			
Models	*No + 3-cell*	*3-cell + 3-cell*	*3-cell + 6-cell*
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material	*Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum
Smart card reader	*Optional:* Smart card reader
Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
vPro *(optional)*	Intel vPro Technology
Fingerprint reader	*Optional:* Fingerprint reader on the keyboard bezel, swipe sensor
Internal battery	*Optional:* Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*
External battery	Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*

Max battery life[10]			
Models	*3-cell + 3-cell*	*3-cell + 6-cell 48Wh*	*3-cell + 6-cell 72Wh*
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter
Preload	*Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
	Win8.1 64: Windows 8.1 64-bit
	Win8.1 P64: Windows 8.1 Pro 64-bit
	Win10 P64: Windows 10 Pro 64
Limited warranty[12]	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BW0004US	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW0006US	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW0009US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW000BUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW000CUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW000AUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW000HUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15
20BW000JUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-depot	No	01/15

- *For detailed platform specifications, please see [ThinkPad T450s Platform Specifications](#) sheet*

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics — Intel HD Graphics 5500 in processor

Chipset — Intel SoC (System on Chip) platform

Memory — 20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket

Display — *Some:* 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS

Multi-touch *(opt)* — Capacitive-type multi-touch, supports 10-finger gesture, 264 nits

Storage — *Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
Some: SSHD with 8GB NAND flash memory

M.2 SSD *(opt)* — Single-sided M.2 SSD, via M.2 card slot

Optical — None

Ethernet — Intel Ethernet Connection I218-V (*Non-vPro model*) or I218-LM (*vPro model*)

Bluetooth™ — Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter

WLAN[4] — *11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card

WWAN *(optional)* — *Upg:* Wireless WAN upgradable
EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card

SIM card *(opt)* — AT&T® or Verizon® LTE (4G), contract required with service provider

Camera — HD720p resolution, low light sensitive, fixed focus

Audio support — HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3] — *14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm

Weight[2]

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material — *Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum

Smart card reader — *Optional:* Smart card reader

Media reader — 4-in-1 reader (MMC, SD, SDHC, SDXC)

Ports — Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)

Keyboard — 6-row, spill-resistant, multimedia Fn keys, optional LED backlight

UltraNav™ — TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch

Security — Power-on password, hard disk password, supervisor password, security keyhole

Security chip — Trusted Platform Module, TCG 1.2-compliant

vPro *(optional)* — Intel vPro Technology

Fingerprint reader — *Optional:* Fingerprint reader on the keyboard bezel, swipe sensor

Internal battery — *Optional:* Integrated Li-Ion or Li-Polymer 3-cell (23Wh)

External battery — Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)

Max battery life[10]

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter — 45W AC adapter, 65W Slim AC adapter, or 65W AC adapter

Preload — *Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
Win8.1 64: Windows 8.1 64-bit
Win8.1 P64: Windows 8.1 Pro 64-bit
Win10 P64: Windows 10 Pro 64

Limited warranty[12] — 1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

ThinkPad T450s 20BW (Windows 8)

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BW0007US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-depot	No	01/15

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics	Intel HD Graphics 5500 in processor
Chipset	Intel SoC (System on Chip) platform
Memory	20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Display	*Some:* 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS
Multi-touch *(opt)*	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits
Storage	*Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
	Some: SSHD with 8GB NAND flash memory
M.2 SSD *(opt)*	Single-sided M.2 SSD, via M.2 card slot
Optical	None
Ethernet	Intel Ethernet Connection I218-V (*Non-vPro model*) or I218-LM (*vPro model*)
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4]	*11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
	7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card
WWAN *(optional)*	*Upg:* Wireless WAN upgradable
	EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card
SIM card *(opt)*	AT&T® or Verizon® LTE (4G), contract required with service provider
Camera	HD720p resolution, low light sensitive, fixed focus
Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3]	*14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
	14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm
Weight[2]	

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material	*Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum
Smart card reader	*Optional:* Smart card reader
Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
vPro *(optional)*	Intel vPro Technology
Fingerprint reader	*Optional:* Fingerprint reader on the keyboard bezel, swipe sensor
Internal battery	*Optional:* Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*
External battery	Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*
Max battery life[10]	

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter
Preload	*Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
	Win8.1 64: Windows 8.1 64-bit
	Win8.1 P64: Windows 8.1 Pro 64-bit
	Win10 P64: Windows 10 Pro 64
Limited warranty[12]	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BW007NUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	Yes	09/15
20BW007PUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	Yes	09/15
20BW007MUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win10 P64	3-depot	Yes	09/15

• *For detailed platform specifications, please see* [ThinkPad T450s Platform Specifications](#) *sheet*

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics	Intel HD Graphics 5500 in processor
Chipset	Intel SoC (System on Chip) platform
Memory	20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Display	*Some:* 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS
Multi-touch *(opt)*	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits
Storage	*Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
	Some: SSHD with 8GB NAND flash memory
M.2 SSD *(opt)*	Single-sided M.2 SSD, via M.2 card slot
Optical	None
Ethernet	Intel Ethernet Connection I218-V *(Non-vPro model)* or I218-LM *(vPro model)*
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4]	*11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
	7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card
WWAN *(optional)*	*Upg:* Wireless WAN upgradable
	EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card
SIM card *(opt)*	AT&T® or Verizon® LTE (4G), contract required with service provider
Camera	HD720p resolution, low light sensitive, fixed focus
Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3]	*14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
	14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm
Weight[2]	

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material	*Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum
Smart card reader	*Optional:* Smart card reader
Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
vPro *(optional)*	Intel vPro Technology
Fingerprint reader	*Optional:* Fingerprint reader on the keyboard bezel, swipe sensor
Internal battery	*Optional:* Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*
External battery	Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*
Max battery life[10]	

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter
Preload	*Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
	Win8.1 64: Windows 8.1 64-bit
	Win8.1 P64: Windows 8.1 Pro 64-bit
	Win10 P64: Windows 10 Pro 64
Limited warranty[12]	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit key-board	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BW0003US	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW0005US	i5-5300U	vPro	HD 5500	4+0GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW000EUS	i5-5300U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW000FUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW000GUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	No	180G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW0008US	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	500G 7200	16GB	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW000DUS	i7-5600U	vPro	HD 5500	4+4GB	14" FHD IPS	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15
20BW000LUS	i7-5600U	vPro	HD 5500	4+4GB	14" HD+	No	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 DG Win7	3-onsite OID	Yes	01/15

- *For detailed platform specifications, please see* <u>*ThinkPad T450s Platform Specifications*</u> *sheet*

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics	Intel HD Graphics 5500 in processor
Chipset	Intel SoC (System on Chip) platform
Memory	20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket
Display	*Some:* 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
	Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS
Multi-touch *(opt)*	Capacitive-type multi-touch, supports 10-finger gesture, 264 nits
Storage	*Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
	Some: SSHD with 8GB NAND flash memory
M.2 SSD *(opt)*	Single-sided M.2 SSD, via M.2 card slot
Optical	None
Ethernet	Intel Ethernet Connection I218-V (*Non-vPro model*) or I218-LM (*vPro model*)
Bluetooth™	Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4]	*11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
	7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card
WWAN *(optional)*	*Upg:* Wireless WAN upgradable
	EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card
SIM card *(opt)*	AT&T® or Verizon® LTE (4G), contract required with service provider
Camera	HD720p resolution, low light sensitive, fixed focus
Audio support	HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3]	*14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
	14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm
Weight[2]	

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material	*Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum
Smart card reader	*Optional:* Smart card reader
Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports	Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)
Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™	TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch
Security	Power-on password, hard disk password, supervisor password, security keyhole
Security chip	Trusted Platform Module, TCG 1.2-compliant
vPro *(optional)*	Intel vPro Technology
Fingerprint reader	*Optional:* Fingerprint reader on the keyboard bezel, swipe sensor
Internal battery	*Optional:* Integrated Li-Ion or Li-Polymer 3-cell (23Wh)
External battery	Li-Ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)
Max battery life[10]	

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter	45W AC adapter, 65W Slim AC adapter, or 65W AC adapter
Preload	*Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
	Win8.1 64: Windows 8.1 64-bit
	Win8.1 P64: Windows 8.1 Pro 64-bit
	Win10 P64: Windows 10 Pro 64
Limited warranty[12]	1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

See footnotes for more detailed information

Model	Processor	vPro	Graphics	Memory (soldered +DIMM)	Display	Multi-touch	Storage	M.2 SSD	WLAN & Bluetooth	WWAN	SIM card	Smart card reader	Cam-era	Backlit keyboard	Finger-print reader	Battery cells (int+ext)	Power adapter (watt)	Preload	Base warranty (year)	Global	Ann date (m/y)
20BW000KUS	i5-5300U	vPro	HD 5500	4+4GB	14" FHD IPS	MT	256G SSD Opal2	None	7265 ac+BT	Upg	None	None	720p	Backlit	Finger	3+3	45W	Win8.1 P64	3-onsite OID	Yes	01/15

• *For detailed platform specifications, please see* ThinkPad T450s Platform Specifications *sheet*

Processor	5th Generation Intel® Core™ i5 / i7 Processor

Processor	# of Cores	Base Frequency	Max Turbo Frequency	Cache	Memory Types
i5-5200U		2.2 GHz	2.7 GHz	3MB	
i5-5300U	2	2.3 GHz	2.9 GHz	3MB	DDR3L-1600
i7-5600U		2.6 GHz	3.2 GHz	4MB	

Graphics — Intel HD Graphics 5500 in processor

Chipset — Intel SoC (System on Chip) platform
Memory — 20GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, 4GB memory soldered to systemboard, one 204-pin SO-DIMM socket

Display — *Some:* 14.0" (355mm) HD+ (1600x900), 250 nits, 400:1 contrast ratio
Some: 14.0" (355mm) FHD (1920x1080), 300 nits, 700:1 contrast ratio, IPS
Multi-touch *(opt)* — Capacitive-type multi-touch, supports 10-finger gesture, 264 nits

Storage — *Some:* SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm or 9.5mm high, APS
Some: SSHD with 8GB NAND flash memory
M.2 SSD *(opt)* — Single-sided M.2 SSD, via M.2 card slot
Optical — None

Ethernet — Intel Ethernet Connection I218-V (*Non-vPro model*) or I218-LM (*vPro model*)
Bluetooth™ — Bluetooth 4.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter
WLAN[4] — *11b/g/n+BT:* ThinkPad 11b/g/n, 2x2, Wi-Fi + BT, M.2 card
7265 ac+BT: Intel Dual Band Wireless-AC 7265, 2x2, Wi-Fi + BT, M.2 card

WWAN *(optional)* — *Upg:* Wireless WAN upgradable
EM7345: Wireless WAN, Sierra Wireless EM7345, Intel 4G LTE/HSPA/GSM/GPRS/EDGE, GPS, M.2 card

SIM card *(opt)* — AT&T® or Verizon® LTE (4G), contract required with service provider

Camera — HD720p resolution, low light sensitive, fixed focus
Audio support — HD Audio, Realtek® ALC3232 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack

Dimensions[3] — *14.0" (WxDxH):* 13.03" x 8.90" x 0.81"; 331mm x 226mm x 20.65mm
14.0" Touch (WxDxH): 13.03" x 8.90" x 0.90"; 331mm x 226mm x 22.94mm
Weight[2]

Models	No + 3-cell	3-cell + 3-cell	3-cell + 6-cell
Non-touch	3.26 lb / 1.48 kg	3.49 lb / 1.59 kg	3.90 lb / 1.77 kg
Multi-touch	3.79 lb / 1.72 kg	4.02 lb / 1.82 kg	4.42 lb / 2.01 kg

Case material — *Display cover:* Carbon-Fiber Reinforced Plastic; *Bottom:* Magnesium/Aluminum

Smart card reader — *Optional:* Smart card reader
Media reader — 4-in-1 reader (MMC, SD, SDHC, SDXC)
Ports — Three USB 3.0 (one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector (integrated models only)

Keyboard — 6-row, spill-resistant, multimedia Fn keys, optional LED backlight
UltraNav™ — TrackPoint® pointing device and buttonless glass surface touchpad, multi-touch

Security — Power-on password, hard disk password, supervisor password, security keyhole
Security chip — Trusted Platform Module, TCG 1.2-compliant
vPro *(optional)* — Intel vPro Technology
Fingerprint reader — *Optional:* Fingerprint reader on the keyboard bezel, swipe sensor

Internal battery — *Optional:* Integrated Li-Ion or Li-Polymer 3-cell *(23Wh)*
External battery — Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*
Max battery life[10]

Models	3-cell + 3-cell	3-cell + 6-cell 48Wh	3-cell + 6-cell 72Wh
Battery life	10.16 hr	14.9 hr	19.9 hr

AC adapter — 45W AC adapter, 65W Slim AC adapter, or 65W AC adapter

Preload — *Win8.1 / 10 DG Win7:* Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 8.1 Pro 64-bit or Windows 10 Pro 64
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Limited warranty[12] — 1-year depot / 3-year (1-yr battery) depot / 3-year (1-year battery) onsite / 3-year (1-year battery) onsite, OID

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