ThinkPad L450 Platform Specifications

Processor	Intel® Celeron® processor, 4th Generation Intel Core™ i5 Processor, or 5th Generation Intel Core i3 / i5 / i7 Processor							

Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics
Cel 3205U		2	1.5 GHz	-	2MB		Intel HD Graphics
i5-4300U			1.9 GHz	2.9 GHz	3MB		Intel HD Graphics 4400
i3-5005U	2	4	2 GHz	-	3MB	DDR3L-1600	
i5-5200U			2.2 GHz	2.7 GHz	3MB		Intel HD Graphics 5500
i5-5300U			2.3 GHz	2.9 GHz	3MB		
i7-5500U			2.4 GHz	3 GHz	4MB		

Graphics	Intel HD Graphics or Intel HD Graphics 4400 / 5500 in processor only, or Intel HD Graphics 5500 in processor and AMD Radeon™ R5 M240, 2GB memory (discrete models are only available in Western Europe); 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	Intel SoC (System on Chip) platform
Memory	16GB max[7] / PC3-12800 1600MHz DDR3L, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets
Display	*Some:* 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio *Some:* 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 700:1 contrast ratio, IPS
Multi-touch	None
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)*	M.2 Solid State Drive (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 • 11b/g/n, Intel Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card (WE only) • 11a/b/g/n, Intel Dual Band Wireless-N 7265, 2x2, Wi-Fi + BT, M.2 card (WE only) • 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, Ericsson® N5321, HSPA+ 21Mbps/GSM/GPRS/EDGE, GPS, M.2 card (WE only) • 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] **Weight[2]**	*14.0" (WxDxH):* 13.34" x 9.23" x 0.95"; 339mm x 235mm x 24.3mm

Models	3-cell	6-cell
Integrated	4.25 lb / 1.93 kg	4.43 lb / 2.01 kg
Discrete	4.30 lb / 1.95 kg	4.50 lb / 2.04 kg

Case material	PolyCarbonate/Acrylonitrile-Butadiene-Styrene (PC/ABS) plastic
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 *(optional)*	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
UltraNav™	TrackPoint® pointing device and buttonless Mylar 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
Battery type **Max battery life[10]**	Li-Ion 3-cell *(23Wh)* or 6-cell *(48Wh or 72Wh)*

Models	3-cell 23Wh	6-cell 48Wh	6-cell 72Wh
Integrated	5.2 hr	10.7 hr	16 hr
Discrete	5.1 hr	10.6 hr	15.9 hr

AC adapter	45W 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 • Lenovo REACHit • 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 Settings • 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; ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant