

ThinkPad P50 Platform Specifications

Product Specifications Reference (PSREF)

Processor	6th Generation Intel® Core™ i7 Processor or Intel Xeon® Processor E3 v5 Family							Smart card reader ExpressCard Media reader Ports	Optional: Smart card reader One slot (ExpressCard/34) 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Four USB 3.0 (one Always On), USB Type-C / Thunderbolt 3, Mini DisplayPort, HDMI, Ethernet (RJ-45), Dock connector									
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types			Processor Graphics								
	i7-6700HQ	4	8	2.6 GHz	3.5 GHz	6MB	DDR4-2133			Intel HD Graphics 530								
	i7-6820HQ			2.7 GHz	3.6 GHz	8MB				Intel HD Graphics P530								
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB												
E3-1535M v5	2.9 GHz			3.8 GHz	8MB													
Graphics	Intel HD Graphics 530 or P530 in processor and NVIDIA Quadro® M1000M (2GB or 4GB memory) or M2000M (4GB memory); supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; supports four independent displays; Max resolution: 3840x2160@60Hz (DisplayPort via Mini DisplayPort cable); 3840x2160@60Hz (Thunderbolt); 3840x2160@30Hz (HDMI)							Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight 3-button TrackPoint® pointing device and 3-button crystal silk surface multi-touch touchpad									
Chipset	Mobile Intel CM236 Chipset (Intel GL82CM236 PCH)							Security chip	Power-on password, hard disk password, supervisor password, security keyhole									
Memory	64GB max ⁷ / 2133MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets							Security chip ThinkEngine	Discrete TPM 1.2 TCG Certified and Firmware TPM 2.0 integrated in chipset Delivers improved thermal and power efficiency, up to 30 day standby, faster resume time, enhanced security, as well as anti-tampering measures									
Display	<i>Some:</i> 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 600:1 contrast ratio, 45% gamut, 160° viewing angle <i>Some:</i> 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% gamut, 178° viewing angle							vPro (optional) Fingerprint reader	Intel vPro Technology Touch style fingerprint reader on the palm rest									
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture, 220 nits							Color calibration	Optional: Pantone® color calibrator by X-Rite® color calibration sensor in palm rest									
Pen (optional)	ThinkPad Pen Pro, active pen for multi-touch display							Battery	Lithium Polymer 4-cell (66Wh) or 6-cell (90Wh)									
Storage	Up to 3 drives (two M.2 SSD and one HDD) <i>Some:</i> M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD) <i>Some:</i> M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) <i>Some:</i> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Shock Mounted Hard Drive, Active Protection System™							Max battery life ¹⁰ (MobileMark® 2014)	<table><tr><th>Model</th><th>4-cell</th><th>6-cell</th></tr><tr><td>Discrete Graphics</td><td>7.1 hr</td><td>9.7 hr</td></tr><tr><td>Hybrid Graphics</td><td>9.6 hr</td><td>13.2 hr</td></tr></table>	Model	4-cell	6-cell	Discrete Graphics	7.1 hr	9.7 hr	Hybrid Graphics	9.6 hr	13.2 hr
Model	4-cell	6-cell																
Discrete Graphics	7.1 hr	9.7 hr																
Hybrid Graphics	9.6 hr	13.2 hr																
Optical	None							AC adapter	170W AC adapter									
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)							Preload	<i>Some:</i> Genuine Windows® 7 Professional 64 <i>Some:</i> Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 - Lenovo Solution Center - Lenovo SHAREit - ThinkVantage Product Recovery - Rescue and Recovery™ - ThinkVantage System Update - Adobe® Reader® - Microsoft® Office preloaded; purchase a product key to activate - McAfee® LiveSafe™ (30-day trial)									
WLAN ⁴	11ac+BT, Intel Dual Band Wireless-AC 8260, 2x2, M.2 card								- Lenovo Solution Center - Lenovo SHAREit - ThinkVantage Product Recovery - Rescue and Recovery™ - ThinkVantage System Update - Adobe® Reader® - Microsoft® Office preloaded; purchase a product key to activate - McAfee® LiveSafe™ (30-day trial)									
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter								- Lenovo Solution Center - Lenovo SHAREit - ThinkVantage Product Recovery - Rescue and Recovery™ - ThinkVantage System Update - Adobe® Reader® - Microsoft® Office preloaded; purchase a product key to activate - McAfee® LiveSafe™ (30-day trial)									
WWAN (optional)	Wireless WAN, Sierra Wireless EM7455, Qualcomm® 4G LTE-Advanced/DC-HSPA+/HSPA+/HSPA/UMTS/GNSS, M.2 card																	
SIM card	Micro-SIM card slot																	
Dimensions ³	WxDxH: 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm WxDxH(Touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm																	
Weight ²	<table><tr><th>Models</th><th>4-cell</th><th>6-cell</th></tr><tr><td>Non-touch</td><td>5.6 lb / 2.55kg</td><td>5.9 lb / 2.67kg</td></tr><tr><td>Multi-touch</td><td>6.2 lb / 2.82kg</td><td>6.4 lb / 2.90kg</td></tr></table>							Models	4-cell	6-cell	Non-touch	5.6 lb / 2.55kg	5.9 lb / 2.67kg	Multi-touch	6.2 lb / 2.82kg	6.4 lb / 2.90kg	Limited warranty ¹²	One of the following, configurable by model: 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service²⁴ 3-year/1-yr battery limited onsite service, OID (Onsite International Delivery)
Models	4-cell	6-cell																
Non-touch	5.6 lb / 2.55kg	5.9 lb / 2.67kg																
Multi-touch	6.2 lb / 2.82kg	6.4 lb / 2.90kg																
Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum							Mil-Spec test	MIL-STD-810G military certification									
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; GREENGUARD®; RoHS-compliant									

Model	20EN003N++
Product	ThinkPad P50
Region	EMEA
Machine Type	20EN
TopSeller	TopSeller
Processor	Core i7-6700HQ (4C, 2.6 / 3.5GHz, 6MB)
vPro	No
Graphics	NVIDIA Quadro M1000M 4GB
Chipset	Intel CM236
Memory	8GBx1 non-ECC
Display	15.6" FHD (1920x1080) IPS
Multi-touch	None
Pen	None
Storage	256GB SSD M.2 Opal2
RAID	No
Optical	None
WLAN + Bluetooth	Intel 8260 ac, 2x2 + BT4.1
WWAN	None
SIM Card	None
Smart Card Reader	Smart Card Reader
Camera	720p
Keyboard	Backlit
Fingerprint Reader	Fingerprint Reader
Color Calibrator	None
Battery	6-cell (90Wh)
Power Adapter	170W
Operating System	Windows 10 Pro 64
Warranty	3-year, Onsite
Global	No
Ann Date (mm/yy)	07/16







