

ThinkPad P51s Platform Specifications

Product Specifications Reference (PSREF)

Processor	6th Generation Intel® Core™ i7 Processor							Dimensions Weight	WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm					
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types		Processor Graphics	Models	4 + 3-cell	6-cell	4 + 6-cell	
	i7-6500U	2	4	2.5 GHz	3.1 GHz	4MB	DDR4-2133	Intel HD Graphics 520	Non-touch model	4.39 lb / 1.99 kg	4.80 lb / 2.18 kg	4.80 lb / 2.18 kg		
	i7-6600U			2.6 GHz	3.4 GHz	4MB			Multi-touch model	4.44 lb / 2.01 kg	4.85 lb / 2.20 kg	4.85 lb / 2.20 kg		
	or 7th Generation Intel Core i5 / i7 Processor							Case color	Black					
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Case material	Display cover: Glass-Fiber Reinforced Plastic (PPS); Bottom: Glass-Fiber Reinforced Plastic				
	i5-7300U	2	4	2.6 GHz	3.5 GHz	3MB	DDR4-2133	Intel HD Graphics 620	Smart card reader	Optional: Smart card reader				
	i7-7500U			2.7 GHz	3.5 GHz	4MB			Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I				
	i7-7600U			2.8 GHz	3.9 GHz	4MB			Ports	Three USB 3.1 Gen 1 (USB 3.0, one Always On), USB 3.1 Type-C Gen 2 / Thunderbolt 3, HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed				
Graphics	Intel HD Graphics 520 or 620 in processor and NVIDIA Quadro® M520, 2GB 2.5GHz GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 3840x2160@30Hz (HDMI)							WiGig dock (opt)	ThinkPad WiGig dock					
Chipset	Intel SoC (System on Chip) platform							Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter					
Memory	32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * System clocks down for processors with lower memory controller							Camera (optional)	720p: HD720p resolution, fixed focus IR & 720p: IR camera and HD720p camera (mutually exclusive with WiGig)					
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 72% gamut, 170° viewing angle							Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack					
Multi-touch (opt)	On-cell touch, supports 10-finger gesture (FHD only)							Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight					
Storage	System has one HDD slot or one M.2 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig							UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
Optical	None							Security	Power-on password, hard disk password, supervisor password, security keyhole					
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)							Security chip vPro (optional)	Discrete TPM 2.0, TCG Certified					
WLAN	One of the following, configurable by model (WiGig can coexist with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card • Intel Tri-Band Wireless-AC 18265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1, M.2 card							Fingerprint reader	Optional: Touch style match on chip fingerprint reader on the palm rest					
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS							NFC (optional)	Near Field Communication					
WWAN (optional)	One of the following, configurable by model (WWAN can coexist with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU), M.2 card (EMEA only)							Internal battery	Optional: Integrated Li-Polymer 4-cell (32Wh)					
SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card							External battery	Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh or 72Wh)					
								Max battery life (MobileMark® 2014)	Models	4 + 3-cell	6-cell 48Wh	6-cell 72Wh	4 + 6-cell 48Wh	4 + 6-cell 72Wh
									Max battery life	13.8 hr	12.5 hr	18.5 hr	20.0 hr	26.8 hr
									* Battery life varies significantly with settings, usage, & other factors					
								AC adapter	65W slim tip AC adapter or 65W USB Type-C AC adapter					
								Preload	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64	Some: Windows 10 Home 64 Some: Windows 10 Pro 64				
									• Lenovo Solution Center	• Lenovo Companion				
									• Lenovo PowerEngage	• Lenovo Setting				
									• ThinkVantage Product Recovery	• Microsoft Office preloaded; purchase a product key to activate				
									• ThinkVantage System Update					
									• Adobe® Reader®					
									• Microsoft® Office preloaded; purchase a product key to activate					
									• McAfee® LiveSafe™ (30-day trial)					
								Limited warranty	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					
								Mil-Spec test	MIL-STD-810G military testing					
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant					