ThinkPad P51s Platform Specifications

Product Specifications Reference (PSREF)

Processor	6th Generation Intel [®] Core™ i7 Processor	Dimensions	<i>WxDxH:</i> 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
110000001	Processor # of # of Base Max Turbo Cache Memory Processor Number Cores Threads Frequency Frequency Cache Memory Graphics	Weight	Models 4 + 3-cell 6-cell 4 + 6-cell Non-touch model 4.39 lb / 1.99 kg 4.80 lb / 2.18 kg 4.80 lb / 2.18 kg
	i7-6500U 2 4 2.5 GHz 3.1 GHz 4MB DDR4-2133 Intel HD Graphics i7-6600U 2 4 2.6 GHz 3.4 GHz 4MB DDR4-2133 Intel HD Graphics or 7th Generation Intel Core i5 / i7 Processor 520 10 10 10	Case color Case material	Multi-touch model 4.44 lb / 2.01 kg 4.85 lb / 2.20 kg 4.85 lb / 2.20 kg Black Display cover: Glass-Fiber Reinforced Plastic (PPS);
	Dreesser #st #st Dees Mey Turks Memory Dreesser		Bottom: Glass-Fiber Reinforced Plastic
	Processor # of # of Base Max fulbo Cache Types Processor Number Cores Threads Frequency Frequency Frequency Types Graphics 15-7300U 2.6 GHz 3.5 GHz 3MB Intel HD Graphics 17-7500U 2 4 2.7 GHz 3.5 GHz 4MB DDR4-2133 Intel HD Graphics	Smart card reade Media reader Ports	r <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I Three USB 3.1 Gen 1 (USB 3.0, one Always On),
	17-75000 2 4 2.7 GHz 3.9 GHz 4MB BDH4+2103 620 17-7600U 2.8 GHz 3.9 GHz 4MB 620 620		USB 3.1 Type-C Gen 2 / Thunderbolt 3, HDMI 1.4b, Ethernet (RJ-45), Dock connector
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;	Monitor cable (optional)	ThinkPad WiGig dock <i>HDMI to VGA:</i> Lenovo HDMI to VGA Monitor Adapter <i>USB-C to VGA:</i> Lenovo USB-C to VGA Adapter
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 3840x2160@30Hz (HDMI)	Camera (optional)	<i>J 720p:</i> HD720p resolution, fixed focus <i>IR & 720p:</i> IR camera and HD720p camera (mutually exclusive with WiGig)
Chipset Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets	Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack
Diamlari	* System clocks down for processors with lower memory controller	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
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 	Security Security chip vPro <i>(optional)</i>	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Multi-touch (opt) Storage	On-cell touch, supports 10-finger gesture (FHD only) System has one HDD slot or one M.2 2280 slot exclusively for storage	NFC (optional)	r Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication
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,	Internal battery External battery Max battery life (MobileMark [®] 2014)	Optional: Integrated Li-Polymer 4-cell (32Wh) Li-Polymer 3-cell (24Wh) or Li-Ion 6-cell (48Wh or 72Wh) 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
Optical	mutually exclusive with WWAN and WiGig None	AC adapter	65W slim tip AC adapter or 65W USB Type-C AC adapter
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	Preload	Windows® 7 Professional 64 preinstalledSome: Windows 10 Home 64through downgrade rights inSome: Windows 10 Pro 64Windows 10 Pro 64• Lenovo Companion
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		 Lenovo Solution Center Lenovo PowerEngage ThinkVantage Product Recovery ThinkVantage System Update Adobe® Reader® Microsoft® Office preloaded;
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		purchase a product key to activate • McAfee® LiveSafe™ (30-day trial)
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. 	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
	Intel XMM [™] 7160 (Fibocom L831-EAU), M.2 card (EMEA only)	Mil-Spec test	MIL-STD-810G military certification
SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	Environment	EPEAT™ Gold (US only); ENERGY STAR [®] 6.1; RoHS-compliant

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