

ThinkPad L590 Platform Specifications

Product Specifications Reference (PSREF)

Processor	Intel® Celeron® Processor or 8th Generation Intel Core™ i3 / i5 / i7 Processor									Dimensions	<i>WxDxH:</i> 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm		
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Weight	Starting at 4.48 lb / 2.0 kg		
	Cel 4305U	2	2	2.2 GHz	-	2MB	DDR4-2133	Intel UHD Graphics 610		Case color	Black		
	i3-8145U	2	4	2.1 GHz	3.9 GHz	4MB	DDR4-2400	Intel UHD Graphics 620		Case material	PC/ABS plastic		
	i5-8265U	4	8	1.6 GHz	3.9 GHz	6MB				Smart card reader	<i>Optional:</i> Smart card reader		
	i5-8365U	4	8	1.6 GHz	4.1 GHz	6MB				Media reader	MicroSD card reader		
i7-8565U	4	8	1.8 GHz	4.6 GHz	8MB	Ports				Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole			
i7-8665U	4	8	1.9 GHz	4.8 GHz	8MB				* Depending on many factors, actual data transfer speed may be lower than theoretical speed				
Graphics	Intel UHD Graphics 610 or 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon 535, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)									Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
Chipset	Intel SoC (System on Chip) platform									Camera (optional)	One of the following, configurable by model:		
Memory	64GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2133MHz or 2400MHz due to Intel limitation									Audio support	HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
Display	Size	Resolution	Type	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Keyboard UltraNav™ 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	15.6"	HD (1366x768)	TN	Anti-glare	220 nits	16:9	500:1	45%	90°				
Multi-touch	None									Security Security chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology Fingerprint reader <i>Optional:</i> Touch style fingerprint reader on the palm rest NFC (optional) Near Field Communication			
Storage	<ul style="list-style-type: none"> HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 * Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter limitation												
Optane™ memory	<i>Optional:</i> Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2									Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
Optical	None									Max battery life	<i>MobileMark® 2014:</i> 12 hr * Battery life varies significantly with settings, usage, & other factors		
Ethernet	<i>Non-vPro model:</i> Intel Ethernet Connection I219-V (Jacksonville) <i>vPro model:</i> Intel Ethernet Connection I219-LM (Jacksonville)									AC adapter	45W, 65W, or 65W slim USB-C AC adapter		
WLAN + Bluetooth™ (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card (NOT available in EMEA) Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 									Operating system	<i>Optional:</i> Windows® 10 Home 64 or Windows 10 Pro 64		
WWAN (optional)	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable									Limited warranty	<i>One of the following, configurable by model:</i> <ul style="list-style-type: none"> 1-year depot repair service 3-year/1-yr battery depot repair service 		
SIM card	None									Mil-Spec test	MIL-STD-810G military testing		
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

Note: The specifications above may not be available in all regions.

Lenovo
October 2019