ThinkPad T590 Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor							

Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics
i5-8265U			1.6 GHz	3.9 GHz	6MB		
i5-8365U	4	8	1.6 GHz	4.1 GHz	6MB	DDR4-2400	Intel UHD Graphics
i7-8565U			1.8 GHz	4.6 GHz	8MB		
i7-8665U			1.9 GHz	4.8 GHz	8MB		

Graphics	Intel UHD Graphics in processor only or Intel UHD Graphics in processor and NVIDIA® GeForce® MX250, 2GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)

Chipset Memory	Intel SoC (System on Chip) platform 40GB or 48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket ** Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation*

Display										

Size	Resolution	Type	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle
15.6"	FHD (1920x1080)	WVA	Anti-glare	250 nits	16:9	700:1	45%	170°
15.6"	UHD (3840x2160) HDR, Dolby Vision™	WVA	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°

Multi-touch *(opt)*	On-cell touch, supports 10-finger gesture (FHD only)

Storage	• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4
Optical	None

Ethernet	*Non-vPro model:* Intel Ethernet Connection I219-V (Jacksonville) *vPro model:* Intel Ethernet Connection I219-LM (Jacksonville)

WLAN *(optional)* Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter

WWAN *(optional)*	*One of the following, configurable by model:* • 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*
SIM card *(opt)*	• Verizon LTE (US) SIM card • Gemalto eSIM

Dimensions	*WxDxH:* 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
Weight	*FHD model:* 3.87 lb / 1.75 kg; *UHD model:* 3.86 lb / 1.75 kg
Case color	Black
Case material	*Display cover:* PPS / 50% GF; *Bottom:* PA / 50% GF

Smart card reader	*Optional:* Smart card reader
Media reader	MicroSD card reader
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 / Thunderbolt 3 (with the function of PD and DP), 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 ** Depending on many factors, actual data transfer speed may be lower than theoretical speed*

Monitor cable *(optional)*	*HDMI to VGA:* Lenovo HDMI to VGA Monitor Adapter *USB-C to VGA:* Lenovo USB-C to VGA Adapter (NOT available in EMEA) *USB-C to DP:* Lenovo USB-C to DisplayPort Adapter (NOT available in EMEA)
Bundled Accy	None

Camera *(optional)*	*One of the following, configurable by model:*
	• HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone (for special bid model, microphone is optional), headphone / microphone combo jack

Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad

Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified (may be disabled in some region)
System Mgt *(opt)*	Intel vPro Technology
Fingerprint reader	*Optional:* Touch style match on chip fingerprint reader on the palm rest
NFC *(optional)*	Near Field Communication

Battery	Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Max battery life	*MobileMark® 2014:* 14.98 hr (9.5 hr for UHD model with discrete graphics) ** Battery life varies significantly with hardware configurations, settings, usage, & other factors*
AC adapter	• 45W USB-C AC adapter • 65W USB-C AC adapter • 65W USB-C slim AC adapter

Operating system	*Optional:* Windows® 10 Home 64 or Windows 10 Pro 64
Limited warranty	• 1-year depot repair service • 1-year depot with 2-year system board repair service • 1-year limited onsite service • 1-year + 2-year depot repair service • 1-year + 2-year limited onsite 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; ENERGY STAR® 7.1; TCO Certified; RoHS-compliant

Note: The specifications above may not be available in all regions and might change by regions.