

# ThinkPad X1 Carbon (7<sup>th</sup> Gen) Platform Specifications

Product Specifications Reference (PSREF)

Processor	8th Generation Intel® Core™ i5 / i7 Processor									WWAN (optional) <i>One of the following, configurable by model:</i> • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics			
	i5-8265U	4	8	1.6 GHz	3.9 GHz	6MB	LPDDR3-2133	Intel UHD Graphics 620			
	i5-8365U			1.6 GHz	4.1 GHz	6MB					
	i7-8565U			1.8 GHz	4.6 GHz	8MB					
	i7-8665U			1.9 GHz	4.8 GHz	8MB					
	or 10th Generation Intel Core i5 / i7 Processor (NOT available in EMEA)										
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics			
	i5-10210U	4	8	1.6 GHz	4.2 GHz	6MB	LPDDR3-2133	Intel UHD Graphics			
	i7-10510U			1.8 GHz	4.9 GHz	8MB					
	i7-10710U	6	12	1.1 GHz	4.7 GHz	12MB					
Graphics	Intel UHD Graphics 620 or Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C / Thunderbolt; supports three independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@24Hz (HDMI)										
Chipset	Intel SoC (System on Chip) platform										
Memory	8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets										
Display	Size	Resolution	Type	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		
	14.0"	FHD (1920x1080) Multi-touch	IPS	Anti-reflection Anti-smudge	300 nits	16:9	700:1	72%	170°		
	14.0"	FHD (1920x1080) Low Power	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°		
	14.0"	FHD (1920x1080) ThinkPad Privacy Guard	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°		
	14.0"	WQHD (2560x1440)	IPS	Anti-glare	300 nits	16:9	700:1	72%	170°		
	14.0"	UHD (3840x2160) HDR 400, Dolby Vision™	IPS	Glossy	500 nits	16:9	1400:1	90%	170°		
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture (FHD only), anti-reflection (AR), anti-smudge coating										
Storage	One of the following, configurable by model: • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe 3.0 x 4 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4										
Optical	None										
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2										
WLAN + Bluetooth™	One of the following, configurable by model: • Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 (AX201 for 10th Gen processor only)										
	Smart card reader	None									
	Media reader	None									
	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed									
	Monitor cable	Optional: Lenovo HDMI to VGA Monitor Adapter									
	Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2									
	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® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / 4 array far-field microphones, headphone / microphone combo jack									
	Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight									
	UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad									
	Security	Power-on password, hard disk password, supervisor password, security keyhole									
	Security chip	Discrete TPM 2.0, TCG Certified									
	System Mgt (opt)	Intel vPro Technology									
	Fingerprint reader	Touch style match on chip fingerprint reader on the palm rest									
	NFC (optional)	Near Field Communication									
	Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter									
	Max battery life	MobileMark® 2014: 18.3 hr * Battery life varies significantly with settings, usage, & other factors									
	AC adapter	45W, 65W, or 65W slim USB-C AC adapter									
	Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64									
	Limited warranty	One of the following, configurable by model: • 1-year depot repair service • 1-year depot with 2-year system board 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; ENERGY STAR® 7.1; RoHS-compliant									

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

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