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

Product Specifications Reference (PSREF)

Processor	8th Generation Intel <sup>®</sup> Core™ i5 / i7 Processor										Dimensions	
	Proce Numb		f # of es Thread			Max Turbo Frequency	ache N	Memory Types		essor ohics	Weight	<i>WxDxH (other model):</i> 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.95mm <i>Privacy Guard model:</i> starting at 2.66 lb / 1.21 kg;
	i5-8265U i5-8365U i7-8565U i7-8665U		1	.6 GHz .8 GHz	4.1 GHz 6 4.6 GHz 8	MB MB MB MB	_PDDR3-2133	Intel UHD Graphics 620		Case color Case material	Other model: starting at 2.4 lb / 1.09 kg Black paint or black weave Display cover: Carbon Fiber; Bottom: magnesium alloy	
	or 10th Generation Intel Core i5 / i7 Processor (NOT available in EMEA)										Smart card reader Media reader	rNone None
	Proce Numb	of # of es Threa	ds Fr	equency I	requency		Memory Types	Processor Graphics		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),	
	i5-10210U         4         8           i7-10510U         6         12		1	.6 GHz .8 GHz .1 GHz	4.2 GHz         6MB           4.9 GHz         8MB           4.7 GHz         12MB		LPDDR3-2133	Intel UHD Graphics		Monitor cable	headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2	
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;											<ul> <li>I) One of the following, configurable by model:</li> <li>HD720p camera with ThinkShutter camera privacy, fixed focus</li> <li>IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3286 codec /</li> <li>Dolby® Atmos<sup>™</sup> speaker system, 2W x 2, 0.8 x 2 /</li> <li>four 360° far-field microphones, headphone / microphone combo jack</li> </ul>
Chipset Memory	Max resolution: 5K@60Hz (Thunderbolt); 4K@24Hz (HDMI) Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets										- Audio support	
Display	Size	Resolutior	ı	Туре	Surface	Brightness	Aspec Ratio	ct Contrast Ratio	Color Gamut	Viewing Angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	14.0" FHD (1920x1080) Multi-touch		IPS	Anti- reflection Anti- smudge	300 nits	16:9	700:1	72%	170°		Power-on password, hard disk password, supervisor password, security keyhole • Firmware TPM 2.0 integrated in chipset • Discrete TPM 2.0 TCG Certified	
	14.0"	14.0" FHD (1920x1080) Low Power		IPS	Anti-glare	400 nits	16:9	800:1	72%	170°		Discrete TPM 2.0 with L3 Security Support (special bid only)     * May be disabled in some region
	14.0"	FHD (1920x1080) 14.0" ThinkPad Privacy Guard		IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Fingerprint reader	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
	14.0"	14.0" WQHD (2560x1440 UHD (3840x2160)		) IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
	14.0"	14.0" HDR 400, Dolby Vision™		IPS	Glossy 500 nits		16:9	1400:1	90%	170°	Max battery life	MobileMark® 2014: 18.3 hr * Battery life varies significantly with settings, usage, & other factors
Multi-touch (opt)	Capacitive-type multi-touch, supports 10-finger gesture (FHD only), anti-reflection (AR) / anti-smudge (AS) coating One of the following, configurable by model:											<ul> <li>45W USB-C AC adapter</li> <li>65W USB-C AC adapter</li> <li>65W slim tip AC adapter</li> </ul>
Storage		f the follow 2280 SS				1:						Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	<ul> <li>M.2 2280 SSD / PCIe NVMe 3.0 x 4</li> <li>Intel Optane Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4</li> </ul>											<ul> <li>1-year depot repair service</li> <li>1-year depot with 2-year system board repair service</li> <li>1-year limited onsite service</li> </ul>
Optical	None											<ul> <li>1-year + 2-year depot repair service</li> <li>1-year + 2-year limited onsite service</li> </ul>
Ethernet	Native Intel Ethernet Connection I219-V ( <i>Non-vPro</i> ) or I219-LM ( <i>vPro</i> ) via optional ThinkPad Ethernet Extension Adapter Gen 2											<ul> <li>3-year/1-yr battery depot repair service</li> <li>3-year/1-yr battery limited onsite service</li> </ul>
WLAN + Bluetooth™	<ul> <li>One of the following, configurable by model:</li> <li>Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0</li> <li>Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 (AX201 for 10th Gen processor only and NOT available in AP)</li> </ul>										Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Gold; ENERGY STAR <sup>®</sup> 7.1; RoHS-compliant
SIM card (opt)	<ul> <li>Wireless WAN upgradable (special bid only)</li> <li>Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card</li> <li>Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card</li> <li><i>For non-WWAN model, it means the model is NOT WWAN upgradable</i> Nano-SIM card slot, optional Verizon LTE (US) SIM card</li> <li>cations above may not be available in all regions.</li> </ul>											Lenovc