

# ThinkPad X1 Carbon Gen 8 20U9003VUS

## Product

ThinkPad X1 Carbon Gen 8

## Region

NA

## Country/Region

USA

## Machine Type

20U9

## TopSeller

TopSeller

## Processor

Intel Core i5-10210U (4C / 8T, 1.6 / 4.2GHz, 6MB)

## Graphics

Integrated Intel UHD Graphics

## Chipset

Intel SoC Platform

## Memory

8GB Soldered LPDDR3-2133

## Storage

256GB SSD M.2 2280 PCIe NVMe Opal2

## Display

14" FHD (1920x1080) IPS 400nits Anti-glare

## Touchscreen

None

## Ethernet

100/1000M via Optional Adapter

## Optical

None

## WLAN + Bluetooth

Intel AX201 11ax, 2x2 + BT5.0

## WWAN

None

## SIM Card

None

## Smart Card Reader

None

## Monitor Cable

None

## Case Material

Carbon Fiber (Top) + Magnesium Alloy (Bottom)

## Bundled Accessories

None

## Camera

720p with ThinkShutter

## Microphone

4x, 360°

## Color

Black, Paint

## Keyboard

Backlit, English

## Fingerprint Reader

Touch Style, Match-on-Chip

## NFC

None

## TPM

Discrete TPM 2.0

## Battery

Integrated 51Wh

## Power Adapter

65W USB-C

## System Management

None

## Operating System

Windows 10 Pro 64, English

## Bundled Software

None

## Base Warranty

3-year, Depot

## Bundled Service

None

## EAN / UPC / JAN

194778839396

## End of Support

2026-11-28

## Announce Date

2020-04-28

## Recommended Services

### Best

3Y Lenovo Protect (Premier Support + Keep Your Drive + Accidental Damage Protection + Sealed Battery) (5PS0N73216)

### Better

3Y Lenovo Support (Premier Support + Keep Your Drive + Sealed Battery) (5PS0N73159)

### Good

3Y Premier Support Upgrade from 3Y Depot/CCI (5WS0T36160)

## Notes:

**Battery life** is an estimated maximum. Actual battery life may vary based on many factors, including screen brightness, active applications, features, power management settings, battery age and conditioning, and other customer preferences.

## California Electronic Waste Recycling Fee

In California, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product. For more information, go to:

<https://www.calrecycle.ca.gov/Electronics/Consumer>

[WWW.LENOVO.COM](http://WWW.LENOVO.COM)

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# ThinkPad X1 Carbon Gen 8 Platform Specifications

Product Specifications Reference (PSREF)



<b>Processor</b> 10th Generation Intel® Core™ i5 / i7 Processor											<b>Dimensions</b> <i>WxDxH (Privacy Guard):</i> 12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4mm <i>WxDxH (other model):</i> 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.9mm <b>Weight</b> <i>Privacy Guard model:</i> starting at 2.66 lb / 1.21 kg; <i>Other model:</i> starting at 2.4 lb / 1.09 kg																																																													
<table border="1"> <thead> <tr> <th>Processor Number</th> <th># of Cores</th> <th># of Threads</th> <th>Base Frequency</th> <th>Max Turbo Frequency</th> <th>Cache</th> <th>Memory Types</th> <th>Processor Graphics</th> </tr> </thead> <tbody> <tr> <td>i5-10210U</td> <td rowspan="4">4</td> <td rowspan="4">8</td> <td>1.6 GHz</td> <td>4.2 GHz</td> <td>6MB</td> <td rowspan="4">LPDDR3-2133</td> <td rowspan="4">Intel UHD Graphics</td> </tr> <tr> <td>i5-10310U</td> <td>1.7 GHz</td> <td>4.4 GHz</td> <td>6MB</td> </tr> <tr> <td>i7-10510U</td> <td>1.8 GHz</td> <td>4.9 GHz</td> <td>8MB</td> </tr> <tr> <td>i7-10610U</td> <td>1.8 GHz</td> <td>4.9 GHz</td> <td>8MB</td> </tr> </tbody> </table>											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	i5-10310U	1.7 GHz	4.4 GHz	6MB	i7-10510U	1.8 GHz	4.9 GHz	8MB	i7-10610U	1.8 GHz	4.9 GHz	8MB	<b>Case color</b> Black paint or black weave <b>Case material</b> <i>Display cover:</i> Carbon Fiber; <i>Bottom:</i> magnesium alloy																																	
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<b>Graphics</b> Intel UHD Graphics in processor; supports up to 3 independent displays via native display and two external monitors; supports external monitors via HDMI (up to 4K@24Hz) or Thunderbolt (5K@60Hz)											<b>Smart card reader</b> None <b>Media reader</b> None <b>Ports</b> Two USB 3.2 Gen 1 (one Always On), two USB 3.2 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 <i>* Depending on many factors, actual data transfer speed may be lower than theoretical speed</i>																																																													
<b>Chipset</b> Intel SoC (System on Chip) platform <b>Memory</b> 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets											<b>Monitor cable</b> Lenovo HDMI to VGA Monitor Adapter <b>Bundled Accy</b> <i>Optional:</i> ThinkPad Ethernet Extension Adapter Gen 2																																																													
<b>Display</b> <table border="1"> <thead> <tr> <th>Size</th> <th>Resolution</th> <th>Type</th> <th>Surface</th> <th>Touch</th> <th>Brightness</th> <th>Aspect Ratio</th> <th>Contrast Ratio</th> <th>Color Gamut</th> <th>Viewing Angle</th> </tr> </thead> <tbody> <tr> <td>14.0"</td> <td>FHD (1920x1080)</td> <td>IPS</td> <td>Anti-glare</td> <td>-</td> <td>400 nits</td> <td>16:9</td> <td>800:1</td> <td>72%</td> <td>170°</td> </tr> <tr> <td>14.0"</td> <td>FHD (1920x1080)</td> <td>IPS</td> <td>Anti-glare</td> <td>Multi-touch</td> <td>400 nits</td> <td>16:9</td> <td>700:1</td> <td>72%</td> <td>170°</td> </tr> <tr> <td>14.0"</td> <td>FHD (1920x1080) ThinkPad Privacy Guard</td> <td>IPS</td> <td>Anti-glare</td> <td>Multi-touch</td> <td>500 nits</td> <td>16:9</td> <td>1500:1</td> <td>72%</td> <td>170°</td> </tr> <tr> <td>14.0"</td> <td>WQHD (2560x1440)</td> <td>IPS</td> <td>Anti-glare</td> <td>-</td> <td>300 nits</td> <td>16:9</td> <td>1000:1</td> <td>72%</td> <td>170°</td> </tr> <tr> <td>14.0"</td> <td>UHD (3840x2160) HDR 400, Dolby Vision™</td> <td>IPS</td> <td>Glossy</td> <td>-</td> <td>500 nits</td> <td>16:9</td> <td>1500:1</td> <td>90% DCI-P3</td> <td>170°</td> </tr> </tbody> </table>											Size	Resolution	Type	Surface	Touch	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	14.0"	FHD (1920x1080)	IPS	Anti-glare	-	400 nits	16:9	800:1	72%	170°	14.0"	FHD (1920x1080)	IPS	Anti-glare	Multi-touch	400 nits	16:9	700:1	72%	170°	14.0"	FHD (1920x1080) ThinkPad Privacy Guard	IPS	Anti-glare	Multi-touch	500 nits	16:9	1500:1	72%	170°	14.0"	WQHD (2560x1440)	IPS	Anti-glare	-	300 nits	16:9	1000:1	72%	170°	14.0"	UHD (3840x2160) HDR 400, Dolby Vision™	IPS	Glossy	-	500 nits	16:9	1500:1	90% DCI-P3	170°	<b>Camera (optional)</b> • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus <b>Audio support</b> HD Audio, USI 4551-513711-00 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack	
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<b>Multi-touch (opt)</b> Capacitive-type multi-touch, supports 10-finger gesture, anti-reflection (AR) / anti-smudge (AS) coating											<b>Keyboard</b> 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, LED backlight <b>UltraNav™</b> TrackPoint® pointing device and buttonless glass surface multi-touch touchpad																																																													
<b>Storage</b> <ul style="list-style-type: none"> <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>											<b>Security</b> Power-on password, hard disk password, supervisor password, security keyhole <b>Security chip</b> <ul style="list-style-type: none"> <li>• Firmware TPM 2.0 integrated in chipset</li> <li>• Discrete TPM 2.0 TCG Certified</li> </ul>																																																													
<b>Optical</b> None											<b>System Mgt (opt)</b> Intel vPro Technology <b>Fingerprint reader</b> Touch style match on chip fingerprint reader on the palm rest <b>NFC (optional)</b> Near Field Communication																																																													
<b>Ethernet</b> Native Intel Ethernet Connection I219-V ( <i>Non-vPro</i> ) or I219-LM ( <i>vPro</i> ) via optional ThinkPad Ethernet Extension Adapter Gen 2											<b>Battery</b> Integrated Li-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter <b>Max battery life</b> <i>MobileMark® 2014:</i> 19.5 hr <i>MobileMark 2018:</i> 13.8 hr <i>* Battery life varies significantly with hardware configurations, settings, usage, &amp; other factors</i>																																																													
<b>WLAN + Bluetooth™</b> Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 <i>* Intel AX201 card supports BT5.1 but is limited to BT5.0 by Windows OS</i>											<b>AC adapter</b> <ul style="list-style-type: none"> <li>• 45W USB-C AC adapter</li> <li>• 65W USB-C AC adapter</li> <li>• 65W USB-C slim AC adapter</li> </ul>																																																													
<b>WWAN (optional)</b> <ul style="list-style-type: none"> <li>• Wireless WAN upgradable</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></li> </ul>											<b>Operating system</b> <ul style="list-style-type: none"> <li>• Windows® 10 Home 64</li> <li>• Windows 10 Pro 64</li> </ul>																																																													
<b>SIM card (opt)</b> <ul style="list-style-type: none"> <li>• Gemalto eSIM Card</li> <li>• Nano-SIM card, Lenovo Connect 4 month, 4G LTE</li> </ul>											<b>Limited warranty (optional)</b> <ul style="list-style-type: none"> <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> <li>• 1-year + 2-year depot repair service</li> <li>• 1-year + 2-year limited onsite service</li> <li>• 3-year/1-yr battery depot repair service</li> <li>• 3-year/1-yr battery limited onsite service</li> </ul>																																																													
<b>Mil-Spec test</b> MIL-STD-810G military testing											<b>Environment</b> EPEAT™ Gold; ENERGY STAR® 8.0; RoHS-compliant																																																													

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

Lenovo  
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