ThinkPad X1 Carbon Gen 8 Platform Specifications

Product Specifications Reference (PSREF)

Processor

**10th Generation Intel® Core™ i5 / i7 Processor**

<table>
<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>4</td>
<td>8</td>
<td>1.6 GHz</td>
<td>4.2 GHz</td>
<td>6MB</td>
<td>LPDDR3-2133</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>i5-10310U</td>
<td>4</td>
<td>8</td>
<td>1.7 GHz</td>
<td>4.4 GHz</td>
<td>6MB</td>
<td>LPDDR3-2133</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>i7-10510U</td>
<td>8</td>
<td>8</td>
<td>1.8 GHz</td>
<td>4.9 GHz</td>
<td>8MB</td>
<td>LPDDR3-2133</td>
<td>Intel UHD Graphics</td>
</tr>
<tr>
<td>i7-10610U</td>
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</tr>
</tbody>
</table>

Graphics

Intel UHD Graphics in processor; supports external monitors via HDMI (up to 4K@24Hz) or Thunderbolt (5K@60Hz)

Chipset

Intel SoC (System on Chip) platform

Display

8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets

<table>
<thead>
<tr>
<th>Size</th>
<th>Resolution</th>
<th>Type</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&quot; FHD (1920x1080)</td>
<td>WVA Anti-glare</td>
<td>- 400 nits</td>
<td>16:9</td>
<td>800:1</td>
<td>72%</td>
<td>170°</td>
<td></td>
</tr>
<tr>
<td>14.0&quot; FHD (1920x1080)</td>
<td>WVA 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&quot; FHD (1920x1080)</td>
<td>WVA Anti-glare</td>
<td>Multi-touch</td>
<td>500 nits</td>
<td>16:9</td>
<td>1000:1</td>
<td>72%</td>
<td>170°</td>
</tr>
<tr>
<td>14.0&quot; WQHD (2560x1440)</td>
<td>WVA Anti-glare</td>
<td>- 300 nits</td>
<td>16:9</td>
<td>1000:1</td>
<td>72%</td>
<td>170°</td>
<td></td>
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<tr>
<td>14.0&quot; UHD (3840x2160)</td>
<td>WVA Glossy</td>
<td>- 500 nits</td>
<td>16:9</td>
<td>1500:1</td>
<td>90% DCI-P3</td>
<td>170°</td>
<td></td>
</tr>
</tbody>
</table>

*WQHD is NOT available in EMEA

Multi-touch (opt)

Capacitive-type multi-touch, supports 10-finger gesture, anti-reflection (AR) / anti-smudge (AS) coating

Storage

• 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

Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Adapter Gen 2

Ethernet

Native Ethernet Connection I219-V or I219-LM via optional ThinkPad Ethernet Extension Adapter Gen 2

WLAN + Bluetooth™

Intel Wi-Fi 6 AX201, Wi-Fi 2ax 802.11ax + Bluetooth 5.0

* Intel AX201 card supports BT5.1 but is limited to BT5.0 by Windows OS

WWAN (optional)

• Wireless WAN upgradeable
• Integrated Mobile Broadband 4G LTE, Quectel EM65CEFC, M.2 card
• 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 upgradeable

SIM card (opt)

• Nano-SIM card, Lenovo Connect 4 month, 4G LTE
• Gemalto eSIM

Media reader

None

Ports

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

* Depending on many factors, actual data transfer speed may be lower than theoretical speed

Monitor cable

Optional: Lenovo HDMI to VGA Monitor Adapter

Optional: ThinkPad Ethernet Extension Adapter Gen 2

Camera (optional)

HD720p camera with ThinkShutter camera privacy, fixed focus

Audio support

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

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, 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

• Firmware TPM 2.0 integrated in chipset
• 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-Polymer 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Max battery life

MobileMark™ 2014: 19.5 hr
MobileMark® 2018: 13.8 hr

AC adapter

• 45W USB-C AC adapter
• 65W USB-C AC adapter
• 65W USB-C slim AC adapter

Operating system

Windows® 10 Home 64
Windows 10 Pro 64

Limited warranty (optional)

• 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

Environment

EPEAT® Gold; ENERGY STAR® 8.0; TCO Certified; RoHS-compliant

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

Lenovo
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