

# **OVERVIEW**



1. Thunderbolt 4	5. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	6. Nano-SIM card slot *
3. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
4. HDMI 2.0	8. Kensington Nano Security Slot

## Notes:

• Ports with \* are only available on selected models



## **PERFORMANCE**

## **Processor**

### **Processor Family**

11th Generation Intel® Core™ i5 / i7 Processor

### Processor\*\*

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-1135G7	4	8	2.4GHz	4.2GHz	8MB	LPDDR4x-4266	Intel Iris® Xe Graphics
Core i5-1145G7	4	8	2.6GHz	4.4GHz	8MB	LPDDR4x-4266	Intel Iris Xe Graphics
Core i7-1165G7	4	8	2.8GHz	4.7GHz	12MB	LPDDR4x-4266	Intel Iris Xe Graphics
Core i7-1185G7	4	8	3.0GHz	4.8GHz	12MB	LPDDR4x-4266	Intel Iris Xe Graphics

## **Operating System**

## Operating System\*\*

- Windows® 11 Pro 64
- Windows 11 Home 64
- Windows 11 Home 64 Single Language
- Windows 11 DG Windows 10 Pro 64
- Windows 10 Pro 64
- Windows 10 Home 64
- Windows 10 Home 64 Single Language
- Fedora Linux
- Linux
- Ubuntu Linux
- · No operating system

## **Graphics**

## **Graphics**

Graphics	Туре	Memory	Key Features		
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1		

## **Monitor Support**

## Monitor Support[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

## Notes:

1. Refresh rates >60hz also supported, however max resolution will be limited.

## **Chipset**

### Chipset

Intel SoC (System on Chip) platform

## **Memory**

### Max Memory[1]

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

## **Memory Slots**

Memory soldered to systemboard, no slots, 8-channel

### **Memory Type**

LPDDR4x-4266



## Notes:

1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

## **Storage**

#### Storage Support[1]

One drive, up to 2TB M.2 2280 SSD

## **Storage Slot**

One M.2 2280 PCIe® Gen 4x4 slot, supports M.2 2280 SSD

#### Storage Type\*\*

Disk Type	Interface	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	Opal2
M.2 2280 SSD	PCIe NVMe, PCIe x4	Opal2

#### Notes:

1. The storage capacity supported is based on the test results with current Lenovo storage offerings. The system may support larger storage as the technology develops.

## **Removable Storage**

### **Optical**

None

#### **Card Reader**

No card reader

#### Multi-Media

### **Audio Chip**

High Definition (HD) Audio, Realtek® ALC3306 codec

### **Speakers**

Stereo speakers, 2W x2 woofers and 0.8W x2 tweeters, Dolby® Atmos®

### Microphone

Four microphones, quad-array, 360° far-field, Dolby Voice

#### Camera\*\*

- HD 720p, with privacy shutter, fixed focus
- IR & HD 720p hybrid, with privacy shutter, fixed focus

### **Battery**

#### **Battery**

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

## Max Battery Life[1]

MobileMark® 2014: 21.3 hr MobileMark 2018: 16.7 hr JEITA 2.0: 26.0 hr

#### Notes:

1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary and depends on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

## **Power Adapter**

### Power Adapter\*\*[1][2]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

# ThinkPad X1 Carbon Gen 9



- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

#### Notes:

- 1. AC adapter offerings depend on the country.
- 2. No power adapter is for special bid only.

## **DESIGN**

## **Display**

## **Display**\*\*[1][2]

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
14.0"	WUXGA (1920x1200)	None	IPS	400 nits	Anti- glare	16:10	1000:1	100% sRGB	170°	Low power, low blue light
14.0"	WUXGA (1920x1200)	Multi- touch	IPS	400 nits	Anti- glare	16:10	1000:1	100% sRGB	170°	Low power, low blue light
14.0"	WUXGA (1920x1200)	Multi- touch	IPS	500 nits	Anti- glare	16:10	1000:1	100% sRGB	170°	Low power, ThinkPad® Privacy Guard
14.0"	WQUXGA (3840x2400)	None	IPS	500 nits	Glossy	16:10	1500:1	100% DCI-P3	170°	Low blue light, DisplayHDR™ 400

#### **Touchscreen**

- · Capacitive-type on-cell multi-touch, supports 10-point touch
- Non-touch

## Notes:

1. 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

2. In marketing terms, WUXGA is FHD+ and WQUXGA is UHD+.

## **Input Device**

## Keyboard

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

## **Keyboard Backlight**

LED backlight

### UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad

## **Mechanical**<sup>®</sup>

## Dimensions (WxDxH)

315 x 221.6 x 14.9 mm (12.4 x 8.72 x 0.59 inches)

### Weight

Starting at 1.133 kg (2.49 lbs)

#### Case Color\*\*

- Black, paint
- Black, weave

## **Case Material**

Carbon fiber (top), magnesium alloy (bottom)

## Notes:

1. The system dimensions and weight vary depending on configurations.



## CONNECTIVITY

### **Network**

#### Ethernet[1]

No Ethernet

WLAN + Bluetooth®[2][3]

Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1

#### WWAN\*\*

- Wireless WAN upgradable to 4G (with antenna ready)
- · Quectel EM120R-GL, 4G LTE CAT12, M.2 card
- Quectel EM120R-GL, 4G LTE CAT12, M.2 card, with embedded eSIM functionality
- Qualcomm® Snapdragon™ X55 5G Sub-6 GHz Modem-RF System, M.2 card, with embedded eSIM functionality
- No support

#### SIM Card

- Gemalto eSIM card (physical)
- No SIM card inbox

#### NEC

- · Near Field Communication
- No support

#### Notes:

- 1. Ethernet support via optional Lenovo USB-C to Ethernet Adapter
- 2. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation
- 3. Wi-Fi 6 full features might be limited by country-level restrictions.

#### Ports<sup>[1]</sup>

#### **Standard Ports**

- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x HDMI 2.0
- 1x Headphone / microphone combo jack (3.5mm)

#### **Optional Ports**

1x Nano-SIM card slot (WWAN support models)

### Notes:

1. The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed. USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s

## **Docking**

## Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit Docking for ThinkPad X1 Carbon Gen 9

## **Monitor Cable**

#### **Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

## SECURITY & PRIVACY

## Security

## **Security Chip**



Discrete TPM 2.0, TCG certified

#### **Physical Locks**

Kensington® Nano Security Slot

#### **Smart Card Reader**

No smart card reader

### **Fingerprint Reader**

Touch style fingerprint reader on power button, match-on-chip

### **BIOS Security**

- · Power-on password
- · Supervisor password
- NVMe password
- Self-healing BIOS

### **Other Security**

- · Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- (Optional) Human Presence Detection

## **MANAGEABILITY**

## **System Management**

### System Management[1]

- Intel vPro
- Non-vPro

#### Notes:

1. Intel vPro offers a superset of DASH's defined capabilities.

## **SERVICE**

# Warranty

## Base Warranty\*\*[1][2]

- 1-year depot service
- 1-year depot with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service
- No base warranty

## Notes:

- 1. More information of warranty policy, please access https://pcsupport.lenovo.com/warranty
- 2. No base warranty is for special bid only.

## **ENVIRONMENTAL**

# **Operating Environment**

## Temperature[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

#### **Humidity**

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

## Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)



Notes:

1. When you charge the battery, its temperature must be no lower than 10°C (50°F).

## **ACCESSORIES**

## **Bundled Accessories**

#### **Bundled Accessories**

- · Lenovo USB-C to Ethernet Adapter
- None

## **CERTIFICATIONS**

## **Green Certifications**

### **Green Certifications**

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

### Other Certifications

## **Mil-Spec Test**

MIL-STD-810H military test passed

#### **Other Certifications**

- (Optional) Intel Evo<sup>™</sup> Platform
- TÜV Rheinland® Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)
- (Optional) TÜV Rheinland Low Blue Light
- Feature with \*\* means that only one offering listed under the feature is configured on selected models.
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