

## OVERVIEW



1. SD card reader	5. Power connector
2. USB 3.2 Gen 1	6. 2x Thunderbolt 4
3. USB 3.2 Gen 1 (Always On)	7. HDMI 2.0 / 2.1
4. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)

Notes:

- Nano-SIM card slot on the right side (not shown on the sample product above)

## PERFORMANCE

### Processor

#### Processor Family

11th Generation Intel® Core™ i7 / i9 Processor

#### Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i7-11800H	8	16	2.3GHz	4.6GHz	24MB	DDR4-3200	Intel UHD Graphics
Core i7-11850H	8	16	2.5GHz	4.8GHz	24MB	DDR4-3200	Intel UHD Graphics
Core i9-11950H	8	16	2.6GHz	5.0GHz	24MB	DDR4-3200	Intel UHD Graphics

### Operating System

#### Operating System

- Windows® 10 Home 64
- Windows 10 Pro 64
- Linux
- Ubuntu Linux
- No operating system

### Graphics

#### Graphics

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12
NVIDIA® GeForce® RTX™ 3050 Ti	Discrete	4GB GDDR6	DirectX 12
NVIDIA GeForce RTX 3060	Discrete	8GB GDDR6	DirectX 12
NVIDIA GeForce RTX 3070	Discrete	8GB GDDR6	DirectX 12
NVIDIA GeForce RTX 3080	Discrete	16GB GDDR6	DirectX 12

### Monitor Support

#### Monitor Support

Supports up to 4 independent displays via native display and 3 external monitors; supports external monitors via HDMI® (up to 4K@60Hz) or Thunderbolt™ (up to 5K@60Hz)

### Chipset

#### Chipset

Intel WM590 chipset

### Memory

#### Max Memory<sup>[1]</sup>

Up to 64GB DDR4-3200

#### Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

#### Memory Type

DDR4-3200

#### 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

- Model with Intel UHD Graphics or RTX 3050 Ti Graphics:  
up to two drives, 2x M.2 2280 SSD

# ThinkPad X1 Extreme Gen 4

- M.2 2280 SSD up to 2TB
- RAID 0/1 support
- Model with RTX 3060/3070/3080 Graphics:  
one drive, up to 2TB M.2 2280 SSD

## Storage Slot<sup>[1]</sup>

- Model with Intel UHD Graphics or RTX 3050 Ti Graphics: two M.2 slots
  - One M.2 2280 PCIe Gen 3x4 slot, supports M.2 2280 SSD
  - One M.2 2280 PCIe Gen 4x4 slot, supports M.2 2280 SSD
- Model with RTX 3060/3070/3080 Graphics: one M.2 slot
  - One M.2 2280 PCIe Gen 4x4 slot, supports M.2 2280 SSD

## Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal2
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal2

## RAID<sup>[2]</sup>

RAID 0/1 support

Notes:

1. M.2 PCIe Gen 4 SSD in the M.2 PCIe Gen 3 slot is downgraded to PCIe Gen 3 performance
2. Both SSD drives work at PCIe Gen 3 performance in RAID mode

## Removable Storage

### Optical

None

### Card Reader

SD card reader, supports UHS-II SD card

## Multi-Media

### Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

### Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

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

- Dual array microphone, far-field
- No microphone

### Camera<sup>[2]</sup>

- 1080p, with privacy shutter, fixed focus
- IR & 1080p hybrid, with privacy shutter, fixed focus
- No camera

Notes:

1. No microphone is for special bid only
2. No camera is for special bid only

## Battery

### Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

### Max Battery Life<sup>[1]</sup>

MobileMark® 2018: 10.7 hr

JEITA 2.0: 12.8 hr

Notes:

1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, and/or JEITA 2.0 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.

# ThinkPad X1 Extreme Gen 4

## Power Adapter

### Power Adapter<sup>[1]</sup>

- 135W slim tip AC adapter
- 170W slim tip AC adapter
- 230W slim tip AC adapter

Notes:  
1. 135W for Intel UHD Graphics, 170W for RTX 3050 Ti Graphics, and 230W for RTX 3060/3070/3080 Graphics

## DESIGN

## Display

### Display<sup>[2]</sup>

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
16.0"	WQXGA (2560x1600)	None	IPS	400 nits	Anti-glare	16:10	1200:1	100% sRGB	170°	Low blue light
16.0"	WQUXGA (3840x2400)	None	IPS	600 nits	Anti-glare	16:10	1500:1	100% Adobe®	170°	Low blue light, Dolby Vision™, HDR 400
16.0"	WQUXGA (3840x2400)	Multi-touch	IPS	600 nits	Anti-reflection, Anti-smudge	16:10	1500:1	100% Adobe	170°	Low blue light, Dolby Vision, HDR 400

### Color Calibration

- X-Rite Pantone factory color calibration (WQUXGA display)
- No color calibration

### Touchscreen

- Capacitive-type 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, WQXGA is QHD+ and WQUXGA is UHD+  
WQXGA display comes with black paint top cover only  
WQUXGA display comes with black weave top cover only

## Input Device

### Pen

- Lenovo Precision Pen 2
- No pen (pen needs to be purchased separately)
- No support (non-touch display doesn't support pen input)

### 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

### Dimensions (WxDxH)

Models	Dimensions
Non-touch models	359.5 x 253.8 x 17.7 mm (14.15 x 9.99 x 0.7 inches)

Touch models	359.5 x 253.8 x 18.2 mm (14.15 x 9.99 x 0.72 inches)
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**Weight<sup>[1]</sup>**

Models	Weight
Non-touch models	1.81 kg (3.99 lbs)
Touch models	1.86 kg (4.1 lbs)

**Case Color**

- Black, paint
- Black, weave

**Case Material**

Carbon fiber hybrid (top), aluminium alloy (bottom)

**Notes:**

1. The system weight varies depending on configurations

**CONNECTIVITY****Network****Onboard Ethernet**

Ethernet support via optional Lenovo USB-C to Ethernet Adapter

**WLAN + Bluetooth<sup>[1]</sup>**

Intel Wi-Fi 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2

**WWAN<sup>[2]</sup>**

- Qualcomm® Snapdragon™ X55 5G Modem M.2 card - RF System with embedded eSIM functionality
- No support

**SIM Card**

No SIM card inbox

**NFC**

No support

**Notes:**

1. 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation  
Bluetooth 5.2 is supported with driver version 22.30 and later
2. WWAN is not available for the models with RTX 3060/3070/3080 graphics

**Ports<sup>[1]</sup>****Standard Ports<sup>[2]</sup>**

- 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™ 1.4)
- 1x SD card reader
- 1x headphone / microphone combo jack (3.5mm)
- 1x power connector

**Optional Ports**

- 1x Nano-SIM card slot (WWAN model)
- 1x HDMI 2.0 (model with integrated graphics)
- 1x HDMI 2.1 (model with discrete graphics)

**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: 40 Gbit/s;

FireWire 400: 400 Mbit/s;  
FireWire 800: 800 Mbit/s

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

## Monitor Cable

### Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to DisplayPort Adapter
- Lenovo USB-C to VGA Adapter
- No monitor cable

## SECURITY & PRIVACY

### Security

#### Security Chip

- Discrete TPM 2.0, TCG certified
- Firmware TPM 2.0 integrated in chipset
- Disabled (in some regions)

#### 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

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

#### Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

## MANAGEABILITY

### System Management

#### System Management

- Intel vPro Technology, DASH
- None

## SERVICE

### Warranty

#### Base Warranty<sup>[1]</sup>

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

#### Notes:

1. No base warranty is for special bid only

## ENVIRONMENTAL

### Operating Environment

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

- 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)
- Operating: 5°C (41°F) to 35°C (95°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
- RoHS compliant

### Other Certifications

#### Mil-Spec Test

Work in progress

LaptopVANG.com



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