

OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	6. Kensington Security Slot
2. SD card reader	7. Power connector
3. HDMI	8. Thunderbolt 4
4. 2x USB 3.2 Gen 1	9. Smart card reader *
5. Ethernet (RJ-45)	

- Notes:
- Ports with \* are only available on selected models
  - Nano-SIM card slot on the rear side (not shown on the sample product above)

## PERFORMANCE

### Processor

#### Processor Family

12th Generation H series Intel® Core™ i5 / i7 / i9 processor, supports processors up to 14 cores; up to 5 GHz

#### Processor\*\*<sup>[1]</sup>

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-12500H	12 (4 P-core + 8 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.5GHz / E-core 3.3GHz	18MB	DDR5-4800	Intel Iris® Xe Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel Iris Xe Graphics
Core i7-12800H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.7GHz	24MB	DDR5-4800	Intel Iris Xe Graphics
Core i9-12900H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.8GHz	24MB	DDR5-4800	Intel Iris Xe Graphics

#### Notes:

1. Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD 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
- Ubuntu Linux LTS
- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- No operating system

### Graphics

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

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® T600 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12
NVIDIA T1200 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12
NVIDIA RTX A2000 Laptop GPU	Discrete	4GB GDDR6	35W	Dynamic Boost 2.0, DirectX 12

#### Notes:

1. Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

### Monitor Support

#### Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x3200@60Hz (Thunderbolt or USB-C® to DP)

### Chipset

#### Chipset

Intel SoC (System on Chip) platform

### Memory

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

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800 non-ECC

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<sup>[1]</sup>

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 4TB, 2TB each
- RAID 0/1 support

Storage Slot

Two M.2 slots

- Two M.2 2280 PCIe® Gen 4x4 slots, support M.2 2280 SSD

Storage Type

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

RAID

RAID 0/1 support

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

SD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

- Dual array microphone, far-field, Dolby Voice
- No microphone

Camera\*\*

- IR & HD 720p hybrid, with privacy shutter, fixed focus
- Front HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 68Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

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

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- No power adapter

Notes:

- AC adapter offerings depend on the country.

DESIGN

Display

Display<sup>\*\*[1]</sup>

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
15.6"	FHD (1920x1080)	None	IPS	300 nits	Anti-glare	16:9	1200:1	100% sRGB	170°	DC dimming
15.6"	FHD (1920x1080)	None	IPS	300 nits	Anti-glare	16:9	800:1	45% NTSC	170°	DC dimming
15.6"	FHD (1920x1080)	Multi-touch	IPS	300 nits	Anti-glare	16:9	800:1	45% NTSC	170°	DC dimming
15.6"	UHD (3840x2160)	None	IPS	600 nits	Anti-glare	16:9	1400:1	100% Adobe® RGB	170°	Dolby Vision™, DisplayHDR™ 400, optional X-Rite® Pantone® Factory Color Calibration, DC dimming

Color Calibration

- X-Rite Pantone factory color calibration (selected UHD display)
- No color calibration

Touchscreen

- On-cell touch, supports 10-point touch (FHD models only)
- Non-touch

Notes:

- 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>

Input Device

Keyboard

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

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad

Mechanical<sup>[1]</sup>

Dimensions (WxDxH)

366.5 x 250 x 22.7 mm (14.43 x 9.84 x 0.89 inches)

Weight

Models	Weight
Model with integrated graphics	Starting at 2.096 kg (4.62 lbs)
Model with discrete graphics	Starting at 2.226 kg (4.91 lbs)

Case Color

Black

**Case Material**

PC + ABS (top), PC + ABS (bottom)

**Notes:**

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

## CONNECTIVITY

### Network

**Ethernet\*\***

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), supports Wake-on-LAN

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

- Qualcomm® NFA-725A Wi-Fi® 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1

**WWAN\*\***

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- No support

**SIM Card**

- Gemalto eSIM card (physical)
- No SIM card in box

**NFC**

No support

**Notes:**

1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitation

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

**Standard Ports**

- 2x USB 3.2 Gen 1 (one Always On)
- 1x Thunderbolt 4 / USB 4 40Gbps (support data transfer, Power Delivery 3.0, and DisplayPort™ 1.4)
- 1x HDMI, up to 4K/60Hz
- 1x SD card reader
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector

**Optional Ports**

- 1x Smart card reader
- 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, or USB-A.

For more compatible docking solutions, please visit [Docking for ThinkPad® P15v Gen 3 \(Intel\)](#)

### Monitor Cable

**Monitor Cable**

- (Optional) Lenovo USB-C to DisplayPort Adapter
- (Optional) Lenovo HDMI to VGA Monitor Adapter
- (Optional) Lenovo USB-C to VGA Adapter

## SECURITY & PRIVACY

### Security

**Security Chip\*\***

- Discrete TPM 2.0, TCG certified
- Firmware TPM 2.0 integrated in SoC

**Physical Locks**

Kensington® Security Slot, 3 x 7 mm

**Smart Card Reader**

- Smart card reader
- No smart card reader

**Fingerprint Reader**

Touch style fingerprint reader on palm rest, match-on-chip

**BIOS Security**

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

**Other Security**

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

## MANAGEABILITY

### System Management

**System Management\*\*<sup>[1]</sup>**

- Intel vPro Enterprise
- Intel vPro Essentials
- Non-vPro

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**Notes:**

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

## SERVICE

### Warranty

**Base Warranty\*\*<sup>[1]</sup>**

- 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

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**Notes:**

1. More information of warranty policy, please access <https://pcsupport.lenovo.com/warranty>

## ENVIRONMENTAL

### Sustainability

**Material**

90% recycled and/or sustainable packaging

**Operating Environment****Temperature<sup>[1]</sup>**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -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).

**CERTIFICATIONS****Green Certifications****Green Certifications**

- EPEAT™ Gold
- ENERGY STAR® 8.0
- TCO Certified 9.0
- RoHS compliant

**Other Certifications****Mil-Spec Test**

MIL-STD-810H military test passed

**ISV Certifications****ISV Certifications**

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with \*\* means that only one offering listed under the feature is configured on selected models.
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