

OVERVIEW



1. 12-24V DC-in	5. 2x 2.5GbE Ethernet (RJ-45)
2. 1x USB-C (USB 10Gbps)	6. 1x Serial (RS232 / RS422 / RS485, BIOS auto select)
3. 3x USB-A (USB 5Gbps)	7. I/O expansion slot *
4. 1x USB-A (Hi-Speed)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE



Processor

Processor Family

Intel® Core™ 5 / 7 Processor (Series 1)

Processor**

Processor Name	Cores	Threads	Max Frequency	Cache	Processor Graphics
Core 5 120UL	10 (2 P-core + 8 E-core)	12	P-core 4.6GHz / E-core 3.4GHz	12MB Intel® Smart Cache	Intel® Graphics
Core 5 130UL	10 (2 P-core + 8 E-core)	12	P-core 4.7GHz / E-core 3.5GHz	12MB Intel® Smart Cache	Intel® Graphics
Core 7 150UL	10 (2 P-core + 8 E-core)	12	P-core 5GHz / E-core 3.7GHz	12MB Intel® Smart Cache	Intel® Graphics
Core 7 160UL	10 (2 P-core + 8 E-core)	12	P-core 5.2GHz / E-core 3.9GHz	12MB Intel® Smart Cache	Intel® Graphics

Operating System

Operating System**

- Windows® 11 IoT Enterprise LTSC 2024
- Ubuntu Linux
- No preload operating system

Graphics

Graphics

Graphics	Type	Memory	Max Resolution	Connector	Key Features
Intel® Graphics	Integrated	Shared	7680x4320@60Hz(USB-C®)	1x USB-C®	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via USB-C®

Chipset

Chipset

Intel® SoC (System on Chip) platform

Memory

Max Memory

Up to 32GB DDR5-5600

Memory Slots

One DDR5 SODIMM slot

Memory Type^[1]

DDR5-5600 SODIMM

Notes:

[1] Installed memory is actually DDR5-5600 but may run as DDR5-5200 depending on the memory support capability of Intel®.

Storage

Max Storage Support^[1]

Up to two drives, 1x M.2 SATA SSD + 1x M.2 SSD

- M.2 2280 SSD up to 2TB
- M.2 2242 SATA SSD up to 1TB

Storage Type



Disk Type	Interface	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4	Opal 2.0
M.2 2280 SSD	PCIe® NVMe®, PCIe® 5.0 x4 Performance	Opal 2.0
2.5" SATA SSD	SATA	-

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC888S-VD2-GR codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
150W	Adapter	89%	150W, for operating temperature 0-40°C 120W, for operating temperature 0-50°C
No power adapter	-	-	-

DESIGN

Display

Display

Size	Resolution	Touch	Brightness	Surface	Aspect Ratio	Viewing Angle (L/R/U/D)
21.5"	FHD (1920x1680)	Multi-touch	250nits	anti-fingerprint, anti-glare	16:9	85° / 85° / 85° / 85°

Touchscreen

Capacitive-type multi-touch, supports 10-point touch

Input Device

Keyboard

No keyboard

Mouse

No mouse

Mechanical

Dimensions (WxDxH)^[1]

538.05 × 341.05 × 64.0 mm (21.18 x 13.43 × 2.52 inches)

Packaging Dimensions (WxDxH)^{**}

- Models with Stand: 741 x 560 x 142 mm (29.17 x 22.05 x 5.59 inches)
- Models without Stand: 645 x 507 x 130 mm (25.39 x 19.96 x 5.12 inches)

Weight^[2]

Around 7.3 kg (16.09 lbs)

Packaging Weight^{**}

- Models with Stand: 11.4 kg (25.13 lbs)
- Models without Stand: 9.3 kg (20.50 lbs)

Case Color

Black

Expansion Slots

Three M.2 slots (Key E for WLAN, Key M for SSD, Key B for SATA SSD)

Mounting***

- None
- Supports VESA mount 75mm
- Wall Mount Bracket
- Monitor stand
- 21" Panel Mount

**Notes:**

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Dual 2.5GbE (Intel® Ethernet Controller I225-LM), 2x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth[®][1]

- Intel® Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3
- No WLAN and Bluetooth®

Notes:

[1] Wi-Fi® operation (including Wi-Fi® 6, Wi-Fi® 6E, Wi-Fi® 7, etc.) is subject to the regulatory requirements of each country. Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

Ports^[1]

Rear Ports

- 1x USB-C® (USB 10Gbps / 3.2 Gen 2) with Display Port 1.4
- 1x USB-A (Hi-Speed USB / USB 2.0)
- 3x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 1x 12-24V DC-in
- 1x Serial (RS232 / RS422 / RS485, BIOS auto select)

Optional Rear Ports

- None
- 2x Isolated RS-232 IET module
- 1x 12-bit GPIO + 1x 2-pin CAN bus IET module
- 4x USB-A (5Gbps / USB 3.2 Gen 1) IET module

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;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4® 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Thunderbolt™ 5: 80 Gbit/s (bidirectional), up to 120 Gbit/s in bandwidth boost mode for video-intensive applications.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

BIOS Security

- Administrator password
- Intel® BIOS guard
- Hard disk password
- Secure boot

**SERVICE****Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://support.lenovo.com/warrantylookup/warrantypolicy>.

OPERATING REQUIREMENTS**Operating Environment****Temperature**

- Operating: IEC60068-2-1 Test A: Cold, IEC 60068-2-2 Test B: Dry heat, -20°C (-4°F) to 60°C (140°F) with 0.7m/s air flow
- Storage: IEC60068-2-3 Test Ca: High temperature & Humidity storage, IEC60068-2-1 Test Ab: Cold, -20°C (-4°F) to 60°C (140°F)

Relative Humidity

- Relative humidity operating: IEC 60068-2-78 Test: Cab Damp heat, steady state 95% @ 40°C non-condensing
- Relative humidity storage: IEC 60068-2-78 Damp heat, steady state 90% @ 60°C

Shock Protection

shock, operating, 20G / 11ms, half sine

Vibration Protection

IEC 60068-2-64, Vibration, Operating, 2Grms, random, 5 ~ 500Hz, 0.5hr/axis

MTBF Prediction

MTBF @20°C

Ingress Protection

- Back cover: IP41
- Front panel: IP65

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

ErP Lot 6/26

Other Certifications**EMC**

Class A

Mil-Spec Test

MIL-STD-810H w-Change 1-2022 (Low Pressure [Altitude] 500.6, High Temperature 501.7, Low Temperature 502.7, Temperature Shock 503.7, Solar Radiation 505.7, Humidity 507.6, Sand and Dust 510.7, Vibration 514.8, Shock 516.8)

- Feature with ** means that only one option listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.

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