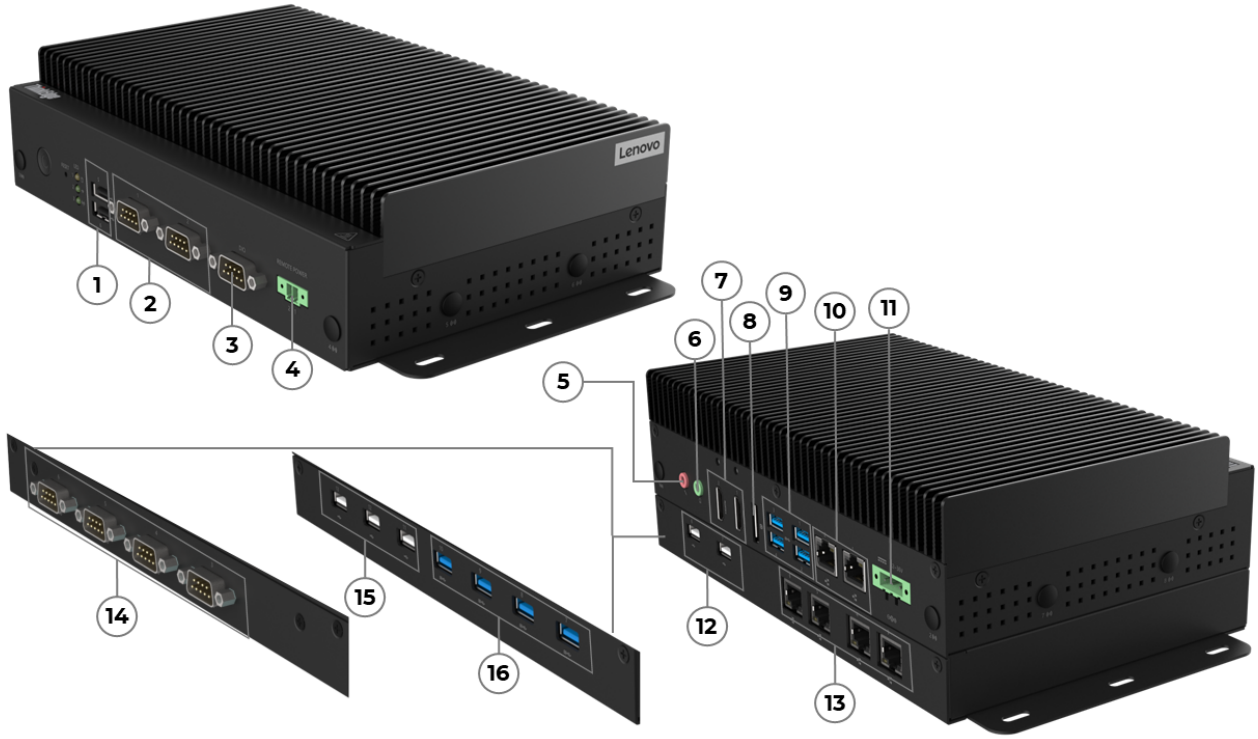
OVERVIEW



1. 2x USB-A (Hi-Speed USB / USB 2.0)	9. 4x USB-A (USB 5Gbps / USB 3.2 Gen 1)
2. 2x serial (RS232/RS422/RS485)	10. 2x 2.5GbE Ethernet (RJ-45)
3. 1x DIO (4DI / 4DO)	11. 1x WDC in 12~36V
4. 1x Remote power switch	12. 2x USB-A (Hi-Speed USB / USB 2.0) *
5. 1x line-out (3.5mm)	13. 4x GbE Ethernet (RJ-45) *
6. 1x microphone-in (3.5mm)	14. 4x serial (RS232 / RS422 / RS485) *
7. 2x HDMI 2.1 TMDS	15. 3x USB-A (Hi-Speed USB / USB 2.0) *
8. 1x DisplayPort++	16. 4x USB-A 3.2 (USB 5Gbps / USB 3.2 Gen 1) *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

- Intel® H Series Core Ultra 5 / 7 Processor (Series 2)
- Intel® H Series Core Ultra 5 Processor (Series 1)

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics	NPU	Overall TOPS
Core Ultra 5 125H	14 (4 P-core + 8 E-core + 2 LP E-core)	18	P-core 1.2GHz / E-core 700MHz / LP E-core 700MHz	P-core 4.5GHz / E-core 3.6GHz / LP E-core 2.5GHz	18MB Intel® Smart Cache	Intel® Arc™ Graphics, up to 18 TOPS	Intel® AI Boost, up to 11 TOPS	Up to 33 TOPS
Core Ultra 5 235H	14 (4 P-core + 8 E-core + 2 LP E-core)	14	P-core 2.4GHz / E-core 1.8GHz / LP E-core 700MHz	P-core 5.0GHz / E-core 4.4GHz / LP E-core 2.5GHz	18MB Intel® Smart Cache	Intel® Arc™ 140T GPU, up to 74 TOPS	Intel® AI Boost, up to 13 TOPS	Up to 94 TOPS
Core Ultra 7 265H	16 (6 P-core + 8 E-core + 2 LP E-core)	16	P-core 2.2GHz / E-core 1.7GHz / LP E-core 700MHz	P-core 5.3GHz / E-core 4.5GHz / LP E-core 2.5GHz	24MB Intel® Smart Cache	Intel® Arc™ 140T GPU, up to 75 TOPS	Intel® AI Boost, up to 13 TOPS	Up to 97 TOPS

Operating System

Operating System**

- Windows® 11 IoT Enterprise LTSC 2024
- Ubuntu (Server) 26.04 LTS 64 Bit (kernel 7.0)
- Ubuntu Core 26 64 Bit (kernel 7.0)
- IGEL Linux OS12
- No preload operating system

Graphics

Graphics**

Graphics	Type	Memory	Max Resolution	Connector	Key Features
Integrated Intel® Arc™ Graphics	Integrated	Shared	4096x2304@60Hz(HDMI®), 4096x2304@60Hz(DP)	2x HDMI® TMDS, 1x DP++	DirectX® 12.2
Intel® Arc™ 140T GPU	Integrated	Shared	4096x2304@60Hz(HDMI®), 4096x2304@60Hz(DP)	2x HDMI® TMDS, 1x DP++	DirectX® 12.2

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (2x HDMI®, 1x DP++)

Chipset

Chipset

Intel® SoC (System on Chip) platform

Memory

Max Memory

- Wide Temperature (-20~60°C): Up to 64GB DDR5-5600 SODIMM
- Standard Temperature (0~50°C): Up to 96GB DDR5-5600 SODIMM

Memory Slots

Two DDR5 SODIMM slots, dual-channel capable

Memory Type**

- DDR5-5600 SODIMM

- DDR5-5600 SODIMM, wide temperature

Storage

Max Storage Support[1]

- Wide Temperature (-20~60°C):
  Up to two drives, 1x M.2 SATA SSD + 1x M.2 SSD
  - M.2 2280 SSD up to 1TB each
  - M.2 2242 SATA SSD up to 1TB each
- Standard Temperature (0~50°C):
  Up to two drives, 1x M.2 SATA SSD + 1x M.2 SSD
  - M.2 2280 SSD up to 2TB each
  - M.2 2242 SATA SSD up to 1TB each

Storage Type***

Disk Type	Interface	Security
M.2 2230 SSD	PCIe® NVMe®, PCIe® 3.0	-
M.2 2242 SSD, wide temperature	SATA 6Gb/s	-
M.2 2242 SSD	SATA 6Gb/s	-
M.2 2280 SSD, wide temperature	PCIe® NVMe®, PCIe® 4.0 x4	-
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

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

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 100W, for operating temperature -20~60°C
170W	Adapter	90%	100V - 240V
No power adapter	-	-	-

DESIGN

Mechanical

Dimensions (WxDxH)[1]

Models	Dimensions
Models without I/O Expansion Module	240 x 150 x 59 mm (9.45 x 5.91 x 2.32 inches)
Models with I/O Expansion Module	240 x 150 x 85 mm (9.45 x 5.91 x 3.35 inches)

Packaging Dimensions (WxDxH)**

- Models with I/O Expansion Module: 415 x 372 x 175 mm (16.34 x 14.65 x 6.89 inches)
- Models without I/O Expansion Module: 425 x 375 x 125 mm (16.73 x 14.76 x 4.92 inches)

Weight[2]

Models	Weight
Models with I/O expansion module	Around 2.8 kg (6.17 lbs)
Models without I/O expansion module	Around 2.4 kg (5.29 lbs)

Packaging Weight**

- Models with I/O Expansion Module: 4.4 kg (9.7 lbs)
- Models without I/O Expansion Module: Around 3.7 kg (8.16 lbs)

Case Color

Black

Expansion Slots

Three M.2 slots (Key E for WLAN, Key M for PCIe® 4.0 x4 NVMe® SSD, Key B for SATA SSD)[3]

Mounting**

- Default with wall mount
- DIN rail mount bracket kit
- None

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.

[3] Gen 5 SSD on M.2 PCIe® 4.0 slot will run on PCIe® 4.0 protocols.

CONNECTIVITY

Network

Ethernet

Dual 2.5GbE, Intel® Ethernet Controller I226-IT, 2x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®[1]

- Intel® Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3, M.2 card
- 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]

Front Ports

- 2x USB-A (Hi-Speed USB / USB 2.0)
- 1x remote power switch
- 1x DIO (4DI / 4DO)
- 2x serial (RS232 / RS422 / RS485, BIOS & hardware jumper selectable)

Rear Ports

- 4x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 2x HDMI® 2.1 TMDS
- 1x Dual-Mode DisplayPort™ (DP++)
- 1x 12-36V WDC-in
- 1x line-out (3.5mm)
- 1x microphone-in (3.5mm)
- 2x 2.5GbE Ethernet (RJ-45)

Optional Rear Ports**

- 4x 1GbE RJ-45 + 2x USB-A (Hi-Speed USB / USB 2.0)
- 4x 1GbE RJ-45, with POE function + 2x USB-A (Hi-Speed USB / USB 2.0)
- 4x USB-A (USB 5Gbps / USB 3.2 Gen 1) + 3x USB-A (Hi-Speed USB / USB 2.0)
- 4x serial (RS232 / RS422 / RS485)
- None

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
- Hard disk password
- Secure boot
- More BIOS security features, please visit BIOS Simulator

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.

ACCESSORIES

Bundled Accessories

Bundled Accessories**

- IP50 dust shield 3.1L
- IP50 dust shield 2.1L
- None

OPERATING REQUIREMENTS

Operating Environment

Temperature

- Operating: IEC60068-2-1 Test Ab: Cold, IEC 60068-2-2 Test Bb: Dry heat, 0°C (32°F) to 50°C (122°F) with 0.7m/s air flow
- Operating: IEC60068-2-1 Test Ab: Cold, IEC 60068-2-2 Test Bb: Dry heat, -20°C (-4°F) to 60°C (140°F) with 0.7m/s air flow
- Storage: IEC60068-2-3 Test Ca: Damp heat, steady state, -30°C (-22°F) to 70°C (158°F)

Relative Humidity

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

Shock Protection

IEC 60068-2-27, shock, operating, 30G / 11ms, half sine

Vibration Protection

IEC 60068-2-64 Test Fh, Vibration, Operating, 2Grms, random, 5 ~ 500Hz, 1hr/axis

MTBF Prediction

MTBF @60°C

Ingress Protection

IP50 standard[1]

Notes:

[1] To support IP50, IP50 dust cover kits are needed.

CERTIFICATIONS

Green Certifications

Green Certifications

- GREENGUARD®
- REACH
- RoHS compliant
- TED (The ECO-declaration)
- WEEE

Other Certifications

EMC

- EMC CE / FCC Class A
- FCC for USA
- CE for Europe
- IC for Canada
- RCM for Australia / New Zealand
- VCCI for Japan
- BSMI for Taiwan
- KCC for Korea

Safety

- CB for WW
- NRTL (ETL, cETL) for USA / Canada
- EAC for Kazakhstan/Armenia/Kyrgyzstan
- Ukrsepro for Ukraine
- GS for Germany
- KUCAS for Kuwait
- KVALITET for Serbia
- NOM-019 for Mexico
- SABS for South Africa

RF

- CE for Europe
- SRRC for China
- SUBTEL for Chile
- UKCA for United Kingdom
- WPC for India
- NOM-208 for Mexico
- NTC for Philippines
- SDPPI for Indonesia
- SIRIM for Malaysia
- ANRT for Morocco

Other Certifications

- AWS IoT Greengrass Certified
- IGEL Certified
- Red Hat Enterprise Linux Certified
- Ubuntu Core Certified
- Ubuntu Server Certified

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude] 500.6, High Temperature 501.7, Low Temperature 502.7, Temperature Shock 503.7, Humidity 507.6, Sand and Dust 510.7, Vibration 514.8, Shock 516.8, Fungus 508.8, Solar Radiation 505.7)

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