

## OVERVIEW



1. Headphone / mic combo jack (3.5mm) (Note 2) *	6. 4x USB 3.2 Gen 1 (Note 2) *
2. HDMI 1.4	7. Power button
3. 1x CAN BUS and 1x DIO (4DIx4DO) (Note 2) *	8. 2x Serial (RS232 / RS422 / RS485) (Note 2) *
4. microSD card slot (Note 2) *	9. 2x GbE Ethernet (RJ-45, PoE)
5. Micro USB OTG (Note 2) *	10. Slim Tip AC-in or DC-in, AC is shown (Note 3) *

## Notes:

- Items with \* are only available on selected models
- Front ports (audio, microSD card slot, CAN BUS, DIO, micro USB, USB) and rear serial ports are not available for AWS Panorama models (MT 12AE, 12AF, and 12AR)
- Slim Tip AC connector is only for models with AC adapter. Optional DC-in connector is only for 1.6L wide voltage models

## PERFORMANCE

### SOM

#### SOM Processor\*\*

- Nvidia Jetson Xavier NX 8GB
  - 6-cores (3x dual-core CPU clusters), ARM v8.2 64-bit, 1.9GHz Max Frequency, 6MB L2 + 4MB L3 Cache
  - 384-core NVIDIA® Volta GPU with 48 Tensor Cores, 1.1GHz Max Frequency
  - 8 GB 128-bit LPDDR4x, 59.7GB/s
  - 16 GB eMMC 5.1
  - 21 TOPS AI Performance
- Nvidia Jetson Xavier NX 16GB
  - 6-cores (3x dual-core CPU clusters), ARM v8.2 64-bit CPU, 1.9GHz Max Frequency, 6MB L2 + 4MB L3 Cache
  - 384-core NVIDIA® Volta GPU with 48 Tensor Cores, 1.1GHz Max Frequency
  - 16 GB 128-bit LPDDR4x, 59.7GB/s
  - 16 GB eMMC 5.1
  - 21 TOPS AI Performance

### Operating System

#### Operating System\*\*[1]

- AWS Panorama SKU
  - Linux for Tegra (Ubuntu Desktop 18.04, kernel 4.9, Jetpack v4.4 SDK), with AWS Panorama, OTA
  - Linux for Tegra (Ubuntu Desktop 18.04, kernel 4.9, Jetpack v4.5.1 SDK), with AWS Panorama, OTA, available with OTA patch after December 2022<sup>[2]</sup>
- Generic SKU
  - Linux for Tegra (Ubuntu Desktop 20.04, kernel 5.10, Jetpack v5.0.2 SDK), with OTA, available after December 2022
  - Linux for Tegra (Ubuntu Desktop 20.04, kernel 5.10, Jetpack v5.1.1 SDK), with OTA, available after September 22nd, 2023

Notes:

[1] Linux for Tegra with AWS Panorama is for SE70 AWS version only, others are for SE70 Generic version.

[2] For AWS Panorama SKU, Jetpack v4.4 version can be update to v4.5.1 via optional OTA.

### Monitor Support

#### Monitor Support

Supports 1 display via onboard HDMI® 1.4

### Chipset

#### Chipset

Nvidia Jetson Xavier NX SOM (System on Module)

### Memory

#### Max Memory

- 8GB LPDDR4x memory on SOM, not upgradable (Nvidia Jetson Xavier NX 8GB models)
- 16GB LPDDR4x memory on SOM, not upgradable (Nvidia Jetson Xavier NX 16GB models)

#### Memory Type

128-bit LPDDR4x-1866

### Storage

#### Storage Support

Up to two drives, 16GB eMMC 5.1 on SOM + 1x M.2 SSD

- M.2 SSD up to 2TB

#### Storage Type\*\*\*

Disk Type	Interface
M.2 2230 SSD	PCIe® NVMe®, PCIe® 3.0
M.2 2280 SSD	PCIe® NVMe®, PCIe® 3.0

### Power Supply

**Power Supply\*\***

Power	Type	Efficiency	Key Features	Dimensions
65W	Adapter	89%	100-240V, 50/60Hz, wide temperature	129 x 53 x 30 mm, 1800 mm cable
DC-in connector <sup>[1]</sup>	Connector only	-	4 pin Phoenix connector, wide voltage 9-48V	-

Notes:

[1] DC-in connector is EOL

**DESIGN****Mechanical****Dimensions (WxDxH)<sup>[1]</sup>**

Models	Dimensions
1.6L models	191 x 128 x 65 mm (7.52 x 5.04 x 2.56 inches)

**Packaging Dimensions (WxDxH)**

260 x 160 x 260 mm (10.24 x 6.3 x 10.24 inches)

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

Models	Weight
1.6L models	1.857 kg (4.09 lbs)

**Packaging Weight**

1.6L models: 3.38 kg (7.45 lbs)

**Case Color**

Black

**Mounting\*\*\***

- VESA mount support on chassis (75x75mm / 100x100mm), screw kit included
- (Optional) ThinkEdge™ DIN rail mount kits

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 Gigabit Ethernet (Intel® Ethernet Controller I210-IT), 2x RJ-45, supports POE (802.3af, PSE 15.4W), supports Wake-on-LAN

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

- Intel® Wireless-AC 9260, Wi-Fi® 5, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 card
- Intel® Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 Card
- No WLAN and Bluetooth®

Notes:

[1] Intel® Wi-Fi® 6E AX210 can only support up to Wi-Fi® 6 on ThinkEdge™ SE70, Wi-Fi® 6E is not supported due to OS limitation.

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



## Bundled Accessories

### Bundled Accessories

IP51 dust cover kits

## 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 airflow 0.7m/s (for 1.6L models)
- Storage: IEC60068-2-1 Test A: Cold, IEC 60068-2-2 Test B: Dry heat, -40°C (-40°F) to 85°C (185°F)

#### Relative Humidity

- Relative humidity operating: IEC 60068-2-66 Damp heat, steady state 95%@40°C non-condensing
- Relative humidity storage: IEC 60068-2-66 Damp heat, steady state 90%@60°C

#### Shock Protection

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

#### Vibration Protection

IEC 60068-2-64, Vibration, Operating, 3Grms, random, 5 ~ 500Hz, 1hr/axis

#### MTBF Prediction

MTBF @60°C / @40°C

#### HALT

HALT testing methodology, LOL / UOL depends on real test result

#### Ingress Protection<sup>[1]</sup>

IP51

#### Flowing Mixed Gas Corrosion

IEC 60068-2-60, 25°C/75%RH Gas concentration: H<sub>2</sub>S/0.01ppm, SO<sub>2</sub>/0.2ppm, NO<sub>2</sub>/0.2ppm, Cl<sub>2</sub>/0.01ppm, 21days

Notes:

[1] Need optional IP51 Dust cover kits.

## CERTIFICATIONS

### Green Certifications

#### Green Certifications

- CEL
- JEL
- Low Halogen
- REACH
- RoHS compliant
- WEEE

### Other Certifications

#### EMC

- FCC for USA
- IC for Canada
- RCM for Australia / New Zealand
- VCCI for Japan
- BSMI for Taiwan
- CCC for China
- CE for Europe
- KCC for Korea

#### Safety

- Ukrsepro for Ukraine
- CM for Morocco

- CB for WW
- CCC for China
- CE LVD for Europe
- BIS for India
- EAC for Russia/Belarus/Kazakhstan/Armenia/Kyrgyzstan
- GS for Germany
- KEBS for Kenya
- KUCAS for Kuwait
- KVALITET for Serbia
- NOM-019 for Mexico
- NRTL (UL/cUL or cTUVus or ETL, cETL) for USA / Canada
- PSB for Singapore
- S mark for Argentina
- SABS for South Africa
- SIRC for Saudi Arabia
- SONCAP for Nigeria
- STZ for Uzbekistan
- TPBY for Belarus
- UKCA for United Kingdom

**RF**

- UKCA for United Kingdom
- WPC for India
- SRRC for China (upcoming)
- SUBTEL for Chile (upcoming)
- TELEC/JATE for Japan
- IC for Canada
- KCC for Korea
- NBTC for Thailand
- NCC for Taiwan
- NOM-208 for Mexico
- NTC for Philippines
- SDPPI for Indonesia
- SIRIM for Malaysia
- ANRT for Morocco
- CE-RED for Europe
- FCC for USA

**Other Certifications**

- AWS IoT Greengrass for generic version only
- AWS Panorama for AWS version only
- Microsoft® Azure for generic version only

- 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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