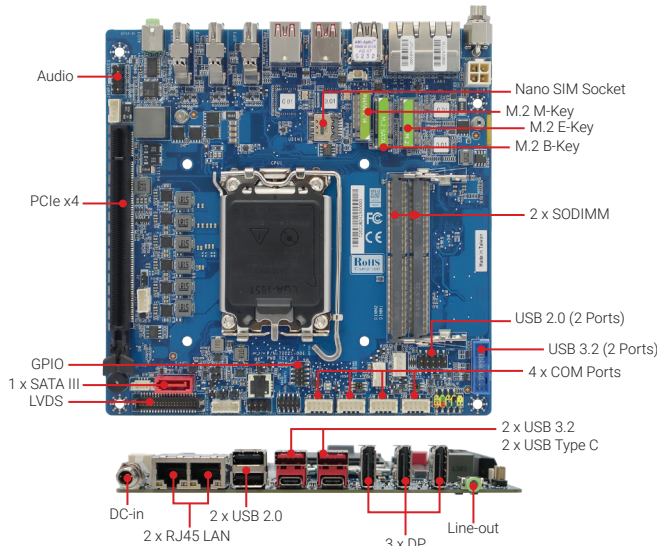




# MX-MTLPS

Thin Mini ITX Motherboard with LGA 1851 socket supports the Intel® Core™ Ultra Processor



## Features

- LGA 1851 socket supports Intel® Core™ Ultra Processor, formerly the Meteor Lake PS (MTL-PS) Platform
- The Intel® Core™ Ultra Processors combine AI-ready CPU, GPU and NPU delivering stunning graphics and AI focused performance for an edge AI applications
- Select Intel® Core™ Ultra 7 and Core™ Ultra 5 Processor with integrated Intel® ARC™ GPU
- Select Intel® Core™ Ultra 7 and Core™ Ultra 5 Processor supports Intel® vPro
- 2 x 262-pins DDR5-5600 SO-DIMM (Non-ECC) slots, up to 64GB (32GB maximum/slot)
- 1 x Gen4 PCIe x4, 3 x M.2 (E/M/B-Key)
- Dual 2.5 GbE Ethernet LAN ports
- Supports 4 Independent Displays
- 2 x USB Type C Thunderbolt 4
- 2 x USB 3.2 Gen 2, 2 x USB 3.2 Gen 1, 4 x USB 2.0
- 4 x COM Ports
- 12 - 24V wide range DC-in



## SPECIFICATIONS

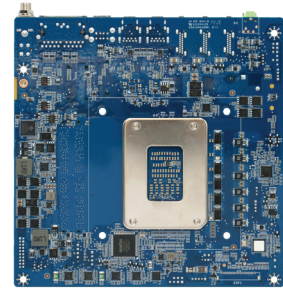
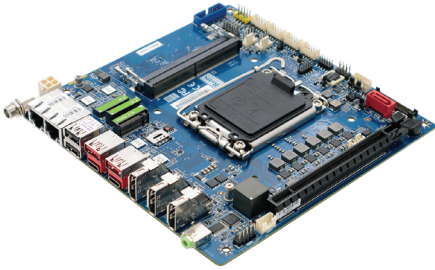


| System         |   |
|----------------|---|
| Processor      | LGA 1851 Socket supports Intel® Core Ultra 3/5/7 Processors, formerly Meteor Lake PS Platform, 15W/45W TDP  |
| Chipset        | SoC   |
| Memory         | 2 x 262-pins DDR5-5600 SO-DIMM (Non-ECC) slots, up to 64GB (32GB maximum/slot)  |
| BIOS           | 256Mb SPI BIOS  |
| I/O Chipset    | Nuvoton® NCT6126D   |
| Expansion      | 1 x Gen4 PCIe x4 (x16 Physical Slot)<br>1 x M.2 E-Key 2230 supports CNVi (PCIe Gen3 x 1, USB 2.0)<br>1 x M.2 M-Key 2280 Slot (PCIe Gen 4 x4)<br>1 x M.2 B-Key 2242 (PCIe Gen 2 x 1, SATA 3.0, USB 3.2 Gen1) |
| TPM            | TPM 2.0   |
| H/W Monitor    | Yes   |
| Watchdog Timer | 1 Sec ~ 255 Sec   |
| Supported OS   | Win 10, Win 11, Linux Ubuntu  |
| Graphics       |   |
| Chipset        | Integrated Intel® ARC™ GPU (CPU Dependent - 45W TDP)<br>Integrated Intel® Graphics (CPU Dependent - 15W TDP)  |
| Interface      | 3 x DisplayPort 1.4a @ 60Hz<br>18/24-bits Dual Channel LVDS, optional eDP   |
| Multi-Display  | Supports 4 Independent Displays   |
| Ethernet / LAN |   |
| Controller     | 2 x Intel® Ethernet Controller I226-LM  |
| Interface      | 2 x 10/100/1000/2.5G Base-Tx GbE Compatible   |
| Connector      | 2 x RJ45 LAN  |
| Audio          |   |
| Audio Codec    | Realtek HD Audio Codec  |
| Interface      | 1 x Line-out, 1 x Mic-in  |

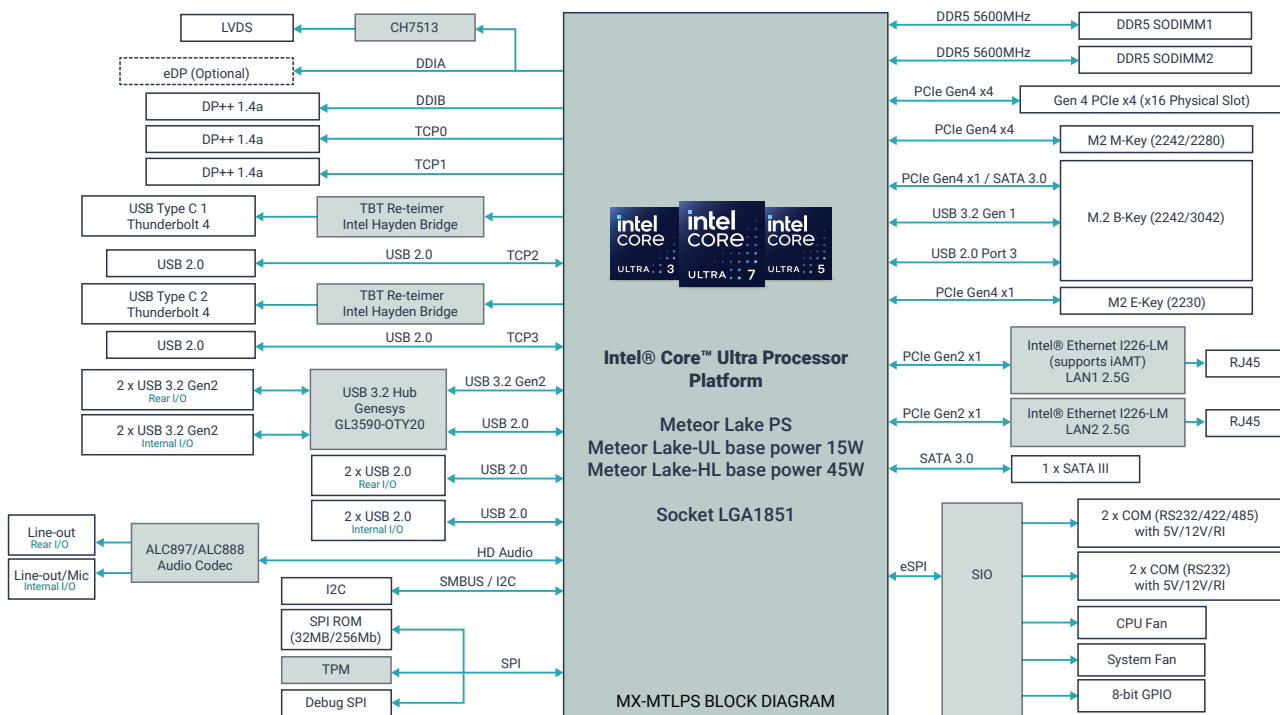
| External I/O Ports                 |  |
|------------------------------------|--|
| Display                            | 3 x DisplayPorts (DP++)  |
| USB                                | 2 x USB 3.2 Gen 2 Type A, 2 x USB 2.0 Type A<br>2 x USB Type C Thunderbolt 4 |
| LAN                                | 2 x RJ45 LAN   |
| Audio                              | Line-out   |
| Power Input                        | 1 x Barrel Type DC-in Connector  |
| Internal I/O Connectors            |  |
| Display                            | 1 x LVDS Header<br>1 x eDP Header (Optional)                                 |
| USB                                | 1 x USB 3.2 Gen 1 Header (2 Ports)<br>1 x USB 2.0 Header (2 Ports)           |
| COM/Serial Port                    | 2 x RS-232/422/485 Headers<br>2 x RS-232 Headers                             |
| SATA                               | 1 x SATA III   |
| Additional I/O                     | 1 x 8-bits GPIO Header<br>1 x I <sup>2</sup> C, 4-pin DC-in Connector        |
| Mechanical, Power, and Environment |  |
| Power                              | 12V-24V Wide Range DC-In   |
| Operating Temp                     | 0°C to 60°C (32°F ~ 140°F)   |
| Storage Temp                       | -20°C ~ 80°C (-4°F ~ 176°F)  |
| OP Humidity                        | 5% ~ 90% Relative Humidity, Non-condensing                                   |
| Cooling Design                     | Optional Passive Heatsink (15W CPU only)                                     |
| Regulatory Compliance              | FCC Class B/CE<br>RoHS Compliant   |
| Form Factor                        | Mini ITX   |
| Dimensions                         | 6.7" x 6.7" (170mm x 170mm)  |
| Weight                             | 0.88 lbs (0.4 KG)  |

\* All product specifications and images are subject to change without notice. Last update: 05/14/2024

## SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



## BLOCK DIAGRAM



## ORDERING INFORMATION

| Model Name   | CPU/CPU Socket  | Memory / Storage    | LAN            | Low Profile I/O | Power Input  |
|--------------|---|---------------------|----------------|-----------------|--------------|
| MX-MTLPS     | LGA 1851  | 2 x SO-DIMM sockets | 2 x 2.5GbE LAN | Yes             | DC-in 12-24V |
| Model Name   | Description   |                     |                |                 |              |
| 183000000006 | 2.00mm pitch 12" length serial cable                                    |                     |                |                 |              |
| 182437200040 | 2.54mm pitch 14" length dual port USB 2.0 cable w/ full height bracket  |                     |                |                 |              |
| 182000000073 | 2.00mm pitch 19.7" length dual port serial cable w/ full height bracket |                     |                |                 |              |

## PACKING LIST

- ✓ 1 x MX-MTLPS Motherboard
- ✓ 1 x SATA Power Cable
- ✓ 1 x Full Height I/O Shield
- ✓ 1 x Low-profile I/O Shield



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