

MX-PTL

Mini ITX Motherboard built with the Intel® Core™ Ultra Processor Series 3 onboard



Features

- Intel® Core™ Ultra Series 3 Processor onboard, formerly the Panther Lake H Platform
- 2 x DDR5 SODIMM sockets support up to DDR5 7200 MT/s using CSODIMM modules; supports up to DDR5 6400 MT/s using SODIMM modules
- 1 x Gen5 PCIe x8 (x16 Physical Slot) (NOT available on processor SKUs with a 12 Xe-core GPU)
- 3 x M.2: E-Key, M-Key, B-Key
- Integrated Intel® Arc™ B390 GPU (X7/X9 series), Intel® Graphics (5/7/9 series)
- Supports 4 Independent Displays: 2 x DP, LVDS/eDP optional, 2 x Type C Thunderbolt 4
- 2 x USB Type C Thunderbolt 4
- Dual LAN: 2 x Intel® Ethernet Controller I226-LM
- 4 x COM Ports
- 12V~24V DC-In

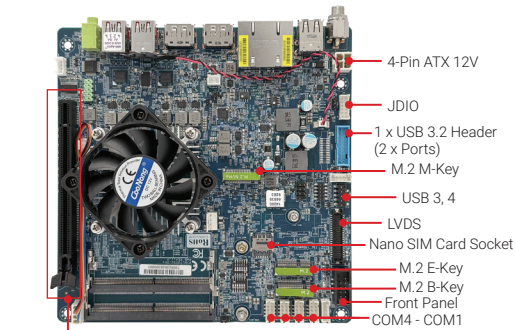
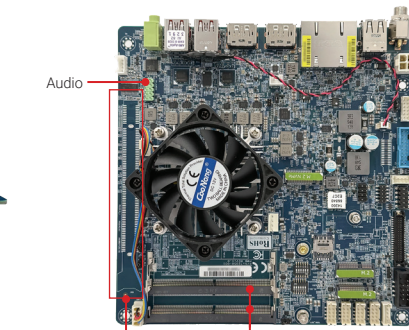
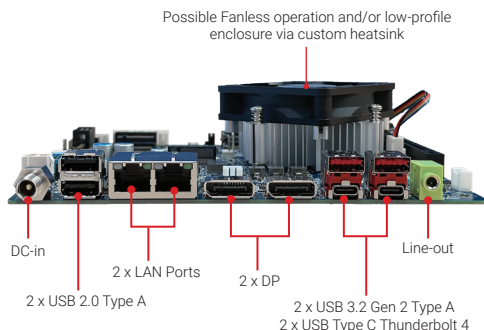
SPECIFICATIONS

System	
Processor	Intel® Core™ Ultra X7 Processor 368H, 18M Cache, up to 5.00 GHz with integrated Intel® Arc™ B390 GPU Intel® Core™ Ultra 7 Processor 356H, 18M Cache, up to 4.70 GHz with integrated Intel® Graphics
BIOS	256Mb SPI BIOS
Audio Codec	Realtek HD Audio Codec
TPM	TPM 2.0
Supported OS	Win 11 64-bit, Linux Ubuntu
System Memory	
Technology	DDR5, Dual Channel, supports SODIMM/CSODIMM
Socket	2 x 262-Pin SODIMM
Frequency	Intel® Core™ Ultra X7 368H and Intel® Core™ Ultra 7 356H Processor SKU: Support up to DDR5 7200 MT/s using CSODIMM modules. Support up to DDR5 6400 MT/s using SODIMM modules.
Max. Capacity	Intel® Core™ Ultra X7 368H and Core™ Ultra 7 356H: 128GB DDR5 SODIMM/CSODIMM (up to 64GB per DIMM)
Expansion Interfaces	
PCI Express	1 x PCIe Gen5 x8 expansion slot (x16 physical connector)* * PCIe expansion slot is NOT available on processor SKUs with a 12 Xe-core GPU.
M.2	1 x 2230 M.2 E-Key for CNVi (PCIe x1 Channel & USB Signal) 1 x 2280 & 2242 M.2 M-Key NVMe (with Gen 5 PCIe x4) 1 x 3042 M.2 B-Key + Nano SIM Socket (PCIe x2, USB 3.2 Signal)
Graphics	
Chipset	Intel® Arc™ B390 GPU / Intel® Graphics
Interface	2 x DisplayPort 2.1, 18/24-bits Dual Channel LVDS, optional eDP
Multi-Display	Supports 4 Independent Displays
Ethernet / LAN	
Controller	2 x Intel® Ethernet Controller I226-LM 10/100/1000/2.5G GbE
Connector	2 x RJ45 LAN

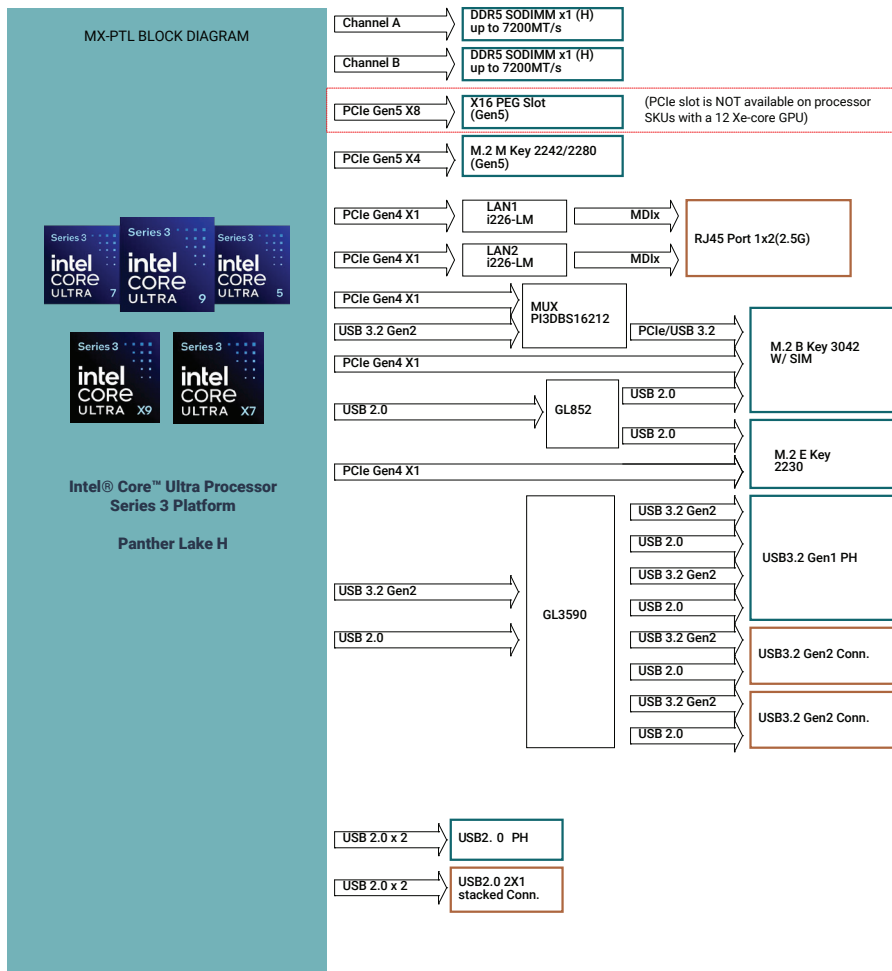
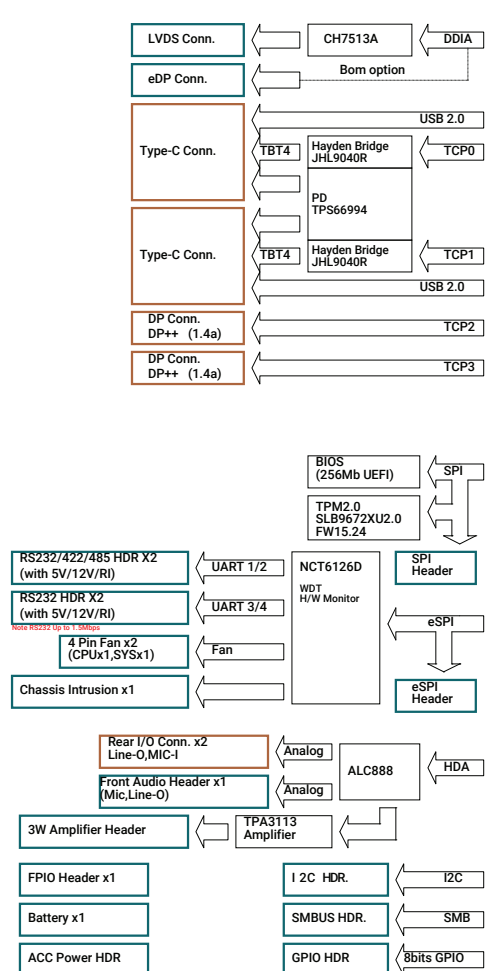
External I/O Ports	
Display	2 x DisplayPort++ (Vertical Connectors)
USB	2 x USB 3.2 Gen 2 Type A Connectors 2 x USB 2.0 Type A Connectors 2 x USB Type C Thunderbolt 4 Connectors
LAN	2 x RJ45
Audio	Line-out
DC-in	1 x Barrel Type DC-in Connector
Internal I/O Connectors	
Display	1 x LVDS Header, 1 x eDP Header (Optional)
USB	1 x USB 3.2 Header (2 x USB 3.2 Gen 1 Ports) 1 x USB 2.0 Header (2 x USB 2.0 Ports)
COM/Serial Port	2 x RS-232/422/485 Header (RS485, RS422 up to 10Mbps) 2 x RS-232 Header up to 1.5Mbps
GPIO	1 x 8 bits GPIO Header (4 In/4 Out)
DC-in	1 x 4-Pin DC-In Connector
MIO	1 x I2C Header, CPU Fan Header, System Fan Header, Front Audio Header, Front Panel Header, Amplifier Locking Type Header, CR2032 Wired Battery, Onboard Buzzer
Mechanical, Power, and Environment	
Power	12V~24V 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	Active CPU Cooler (Optional Passive Cooler for Under 15W TDP)
Regulatory Compliance	FCC Class B/CE RoHS and REACH 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: 08/31/2026

SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



BLOCK DIAGRAM



ORDERING INFORMATION

Model Name	CPU/CPU Socket	Memory / Storage	LAN	PCIe Slot	Power Input
MX368H (72051)	Intel® Core™ Ultra 7-368H Processor, 12Xe GPU	2 x SO-DIMM sockets	2 x 2.5GbE	No	DC-in 12-24V
MX356H (72052)	Intel® Core™ Ultra 7-356H Processor, 4Xe GPU	2 x SO-DIMM sockets	2 x 2.5GbE	1 x PCIe Gen5 x8 (x16 Physical slot)	DC-in 12-24V
Accessory Included	1 x SATA Power Cable for Two Devices, 1 x Full Height I/O Shield, 1 x Low-profile I/O Shield				



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