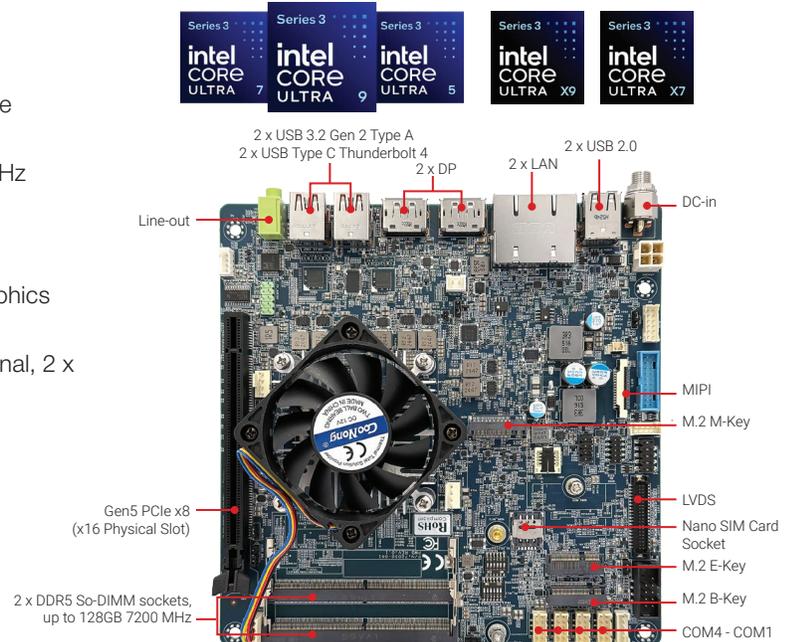# MX-PTL

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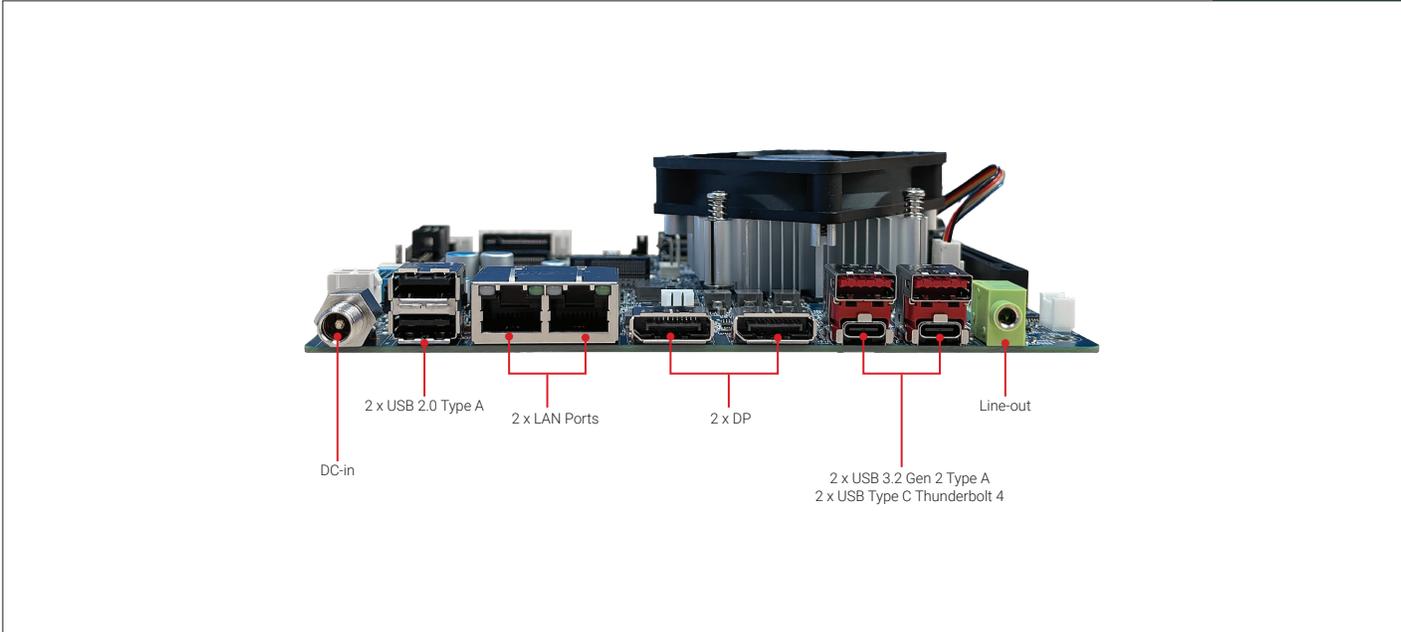

Key Features

- Intel® Core™ Ultra Series 3 Processor onboard, formerly the Panther Lake H Platform
- 2 x DDR5 So-DIMM sockets support up to 128GB 7200 MHz
- 1 x Gen5 PCIe x8 (x16 Physical Slot)
- 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

Product Specifications

System	
Processor	Intel® Core™ Ultra Series 3 Processors, formerly Panther Lake H Platform, up to 65W TDP: Intel Core Ultra X9 Processor 388H, 18M Cache, up to 5.10 GHz Intel Core Ultra 9 Processor 386H, 18M Cache, up to 4.90 GHz Intel Core Ultra X7 Processor 368H, 18M Cache, up to 5.00 GHz Intel Core Ultra 7 Processor 366H, 18M Cache, up to 4.80 GHz Intel Core Ultra 7 Processor 365, 12M Cache, up to 4.80 GHz Intel Core Ultra X7 Processor 358H, 18M Cache, up to 4.80 GHz Intel Core Ultra 7 Processor 356H, 18M Cache, up to 4.70 GHz Intel Core Ultra 7 Processor 355, 12M Cache, up to 4.70 GHz Intel Core Ultra 5 Processor 338H, 18M Cache, up to 4.70 GHz Intel Core Ultra 5 Processor 336H, 18M Cache, up to 4.60 GHz Intel Core Ultra 5 Processor 335, 12M Cache, up to 4.60 GHz Intel Core Ultra 5 Processor 325, 12M Cache, up to 4.50 GHz Note: Select SKUs require MOQ/BTO.
Memory	2 x DDR5 So-DIMM sockets support up to 128GB 7200 MHz Max
BIOS	256Mb SPI BIOS
Audio Codec	Realtek HD Audio Codec
TPM	TPM 2.0
Supported OS	Win 11 64-bit Linux Ubuntu

Display	
Chipset	Integrated Intel® Xe3 Graphic
Display Output	2 x DisplayPort 2.1 (HBR3) 18/24-bits Dual Channel LVDS, optional eDP
Multi-Display	Supports 4 Independent Displays

Expansion Interfaces	
PCI Express	1 x Gen5 PCIe x8 (x16 Physical Slot) (H484 CT & H404 ET Only)
M.2	1 x 2230 M.2 E-Key with CNVi Support (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 with Nano SIM Socket (with PCIe x2, & USB 3.2 Signal)

Ethernet	
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

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 Ports	
Display	1 x 2 LANE MIPI-CSI Connectors 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 Port	2 x RS-232/422/485 Header (COM1/ COM2) (RS485, RS422 up to 10Mbps) 2 x RS-232 Header (COM3, COM4) 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

Product Photo

2 x USB 2.0 Type A

DC-in

2 x LAN Ports

2 x DP

Line-out

2 x USB 3.2 Gen 2 Type A
2 x USB Type C Thunderbolt 4

Mechanical, Power, and Environment	
Power Requirement	12V~24V DC-In
Operating Temperature	0°C to 60°C (32°F ~ 140°F)
Storage Temperature	-20°C ~ 80°C (-4°F ~ 176°F)
Operating Humidity	5% ~ 90% Relative Humidity, Non-condensing
Cooling Design	Active CPU Cooler (Optional Passive Cooler for Under 15W TDP)
Form Factor	Mini ITX
Dimensions	6.7" x 6.7" (170mm x 170mm)
Weight	4.85lbs (2.2 kg)
Regulatory Compliance	FCC Class B/CE RoHS and REACH Compliant
Weight	0.88 lbs (0.4 KG)

Ordering Information

Part No.	Description
MX-PTL	Mini-ITX with Intel® Core™ Ultra Processor Series 3. Please contact BCMSales@bcmcom.com
Accessory Included	1 x SATA Power Cable for Two Devices, 1 x Full Height I/O Shield, 1 x Low-profile I/O Shield

BCM ADVANCED RESEARCH
Intel Prestige Partner - Builder
11 Chrysler, Irvine, CA 92618 | (949)470-1888
BCMSales@bcmcom.com | www.bcmcom.com