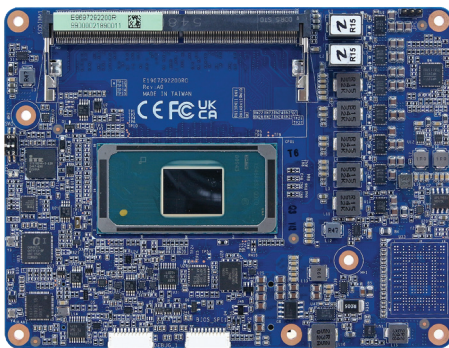




# ESM-PTL

Type 6 COM Express Module built with Intel® Core™ Ultra Series 3 Processor



## Features

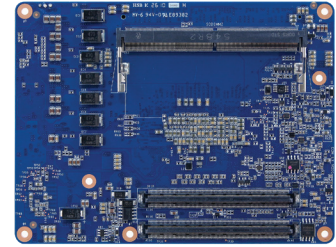
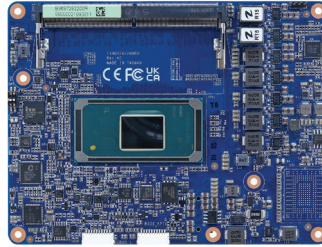
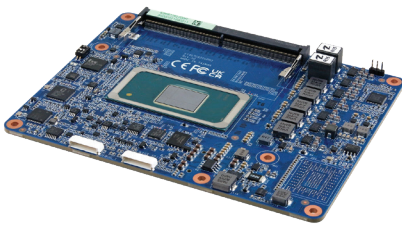
- Onboard Intel® Core™ Ultra Series 3 Processors (formerly Panther Lake-H/U platform), up to 16 Cores, 4.8 GHz (15W to 45W Base Power)
- Integrated Intel® AI Boost NPU for advanced edge AI workloads
- Form Factor: COM Express Rev. 3.1 Type 6 Basic
- Dual-Channel DDR5 SO-DIMM up to 96GB (7200MHz / 6400MHz)
- Intel® Xe LPG Graphics (up to 128EUs) supporting Quad Independent Displays and 8K resolution
- Expansion: Flexible PCIe Gen 4 bifurcation (up to PEG x8 or 2x x4) with NVMe and Intel® VMD support
- High-Speed I/O: Up to 2x USB4, 3x USB 3.2 Gen 2, and Intel® I226-LM 2.5GbE LAN
- Security & Management: Onboard TPM 2.0 with Intel® vPro and iAMT 12.0 support (select SKU)
- Rugged Design: +9V~+19V wide power input; Extended Temperature SKUs available (-40°C to 85°C)
- *Product coming soon, subject to change without notice*

## SPECIFICATIONS

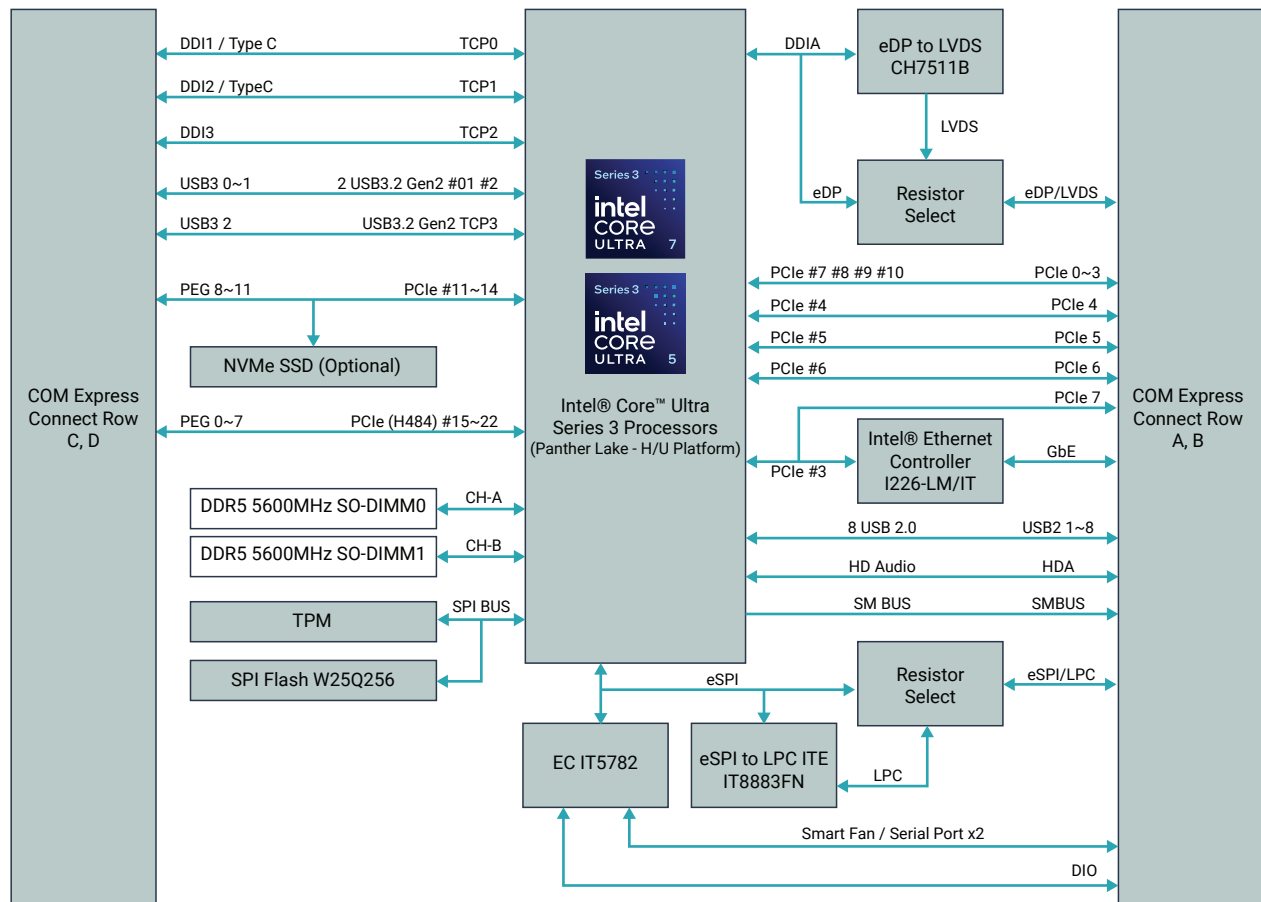
System	
	Onboard Intel® Core™ Ultra Series 3 Processors (formerly Panther Lake-H/U platform)
	H-Series (Intel® Core™ Ultra H484) – 16 Cores, High Performance: Intel® Core™ Ultra 7 Processor 366H: vPro Supported   18M Cache   2.0 GHz Base, up to 4.80 GHz Intel® Core™ Ultra 7 Processor 356H: Non-vPro   18M Cache   1.9 GHz Base, up to 4.70 GHz Intel® Core™ Ultra 5 Processor 336H: vPro Supported   18M Cache   1.9 GHz Base, up to 4.60 GHz
CPU	U-Series (Intel® Core™ Ultra H404) – 8 Cores, Power Efficient: Intel® Core™ Ultra 7 Processor 365: vPro Supported   12M Cache   2.4 GHz Base, up to 4.80 GHz Intel® Core™ Ultra 7 Processor 355: Non-vPro   12M Cache   2.3 GHz Base, up to 4.70 GHz Intel® Core™ Ultra 5 Processor 325: Non-vPro   12M Cache   2.1 GHz Base, up to 4.50 GHz Note: Select SKUs require MOQ/BTO.
System Memory	2 x 262-Pin DDR5 SO-DIMM up to 96GB (7200/6400MHz for H404 SKU; 7200MHz for H484 SKU)
BIOS	AMI uEFI BIOS, 256 Mbit SPI Flash ROM
I/O Chipset	EC iTE IT5782
Audio	Intel® HD Audio
Storage	1 x NVMe (Optional)
Watchdog Timer	H/W Reset, 1Sec. ~ 65535Sec. and 1Sec./Step
H/W Status Monitor	Monitoring System Temperature Voltage and FAN Status with Auto Throttling Control
Expansion	PCIe: Up to 8 x PCIe Gen4 lanes (Configuration varies by SKU) PEG: * Up to 1 x PEG x8 Gen4 (Configure to 2 x4, H484 SKUs only) 1 x PEG x4 Gen4
TPM	Onboard TPM 2.0 (Optional)
OS Support	Windows 11 64-bit, Linux
Display	
Chipset	Intel® Xe LPG
Resolution	Up to 3 x DDI Port Support Configurable HDMI/DisplayPort 1 x LVDS: 1920 x1200@60Hz (Default) Or optional 1 x eDP 1.4b: up to 4K
Multi-Display	Supports 4 Independent Displays
Ethernet	
Chipset	Standard Temp. SKU: Intel® I226-LM Ethernet Controller (2.5GbE) Wide Temp. SKU: Intel® I226-IT Ethernet Controller (2.5GbE)
Interface	10/100/1000/2500 Base-Tx GbE compatible
I/O	
USB	Up to 2 x USB4 (shared with DDI), 3 x USB 3.2 Gen2, 8 x USB 2.0
Serial & I/O	2 x UART (TX/RX), 8-bit GPIO
Control Bus	I2C, SMBus, SPI, LPC
Mechanical, Power, and Environment	
Power	+9V~+19V Wide Range Power Input
Power Mode	AT/ATX
Operating Temperature	Standard Temp.: 0°C ~ 60°C (32~140°F) with 0.5m/s Air Flow Extend Temp.: -40°C ~ 85°C (-40~185°F) with 0.5m/s Air Flow for extend Temp CPU SKU
Storage Temp.	-40°C ~ 75°C (-40°F ~ 167°F)
Op. Humidity	40°C @ 95% Relative Humidity, Non-condensing
Form Factor	COM Express Rev. 3.1 Type 6 COM Express Module
Regulatory Compliance	Compliant to CE, FCC Class B, RoHS Compliant
Dimensions	4.92" x 3.74" (125mm x 95mm)
Weight	0.44lbs (0.2kg)

\* All product specifications and images are subject to change without notice. Last update: 02/10/2025

# SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



# BLOCK DIAGRAM



# ORDERING INFORMATION

Model Name	Description
ESM-PTL series	Product coming soon. Please contact <a href="mailto:BCMSales@bcmcom.com">BCMSales@bcmcom.com</a>



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