



COMHA-300

COM-HPC Motherboard

KEY FEATURES

- Intel® Core™ Ultra Series 3 Processors (Panther Lake-H)
- 2 x 262-pin SO-DIMM DDR5 7200 MHz, up to 128GB (64GB per DIMM), supports In-Band ECC
- 1 x PCIe x8 (Gen5) (support by H484 CPU only), 1 x PCIe x4 (Gen5), 1 x PCIe x4 (Gen4), 3 x PCIe x1 (Gen4), 2 x USB4/Thunderbolt™ 4, 2 x USB 3.2 Gen2, 8 x USB 2.0, 2 x UART, 1 x SSD 1TB (optional)
- 1 x Intel 2.5 Gigabit LAN
- Supports Quad display, 2 x DDI, 2 x TBT, 1 x LVDS or eDP
- Supports Intel® vPro, VMD RAID 0/1/5/10
- Supports Intel Functional Safety(FUSA) at the edge
- ATX: 12V±5%/5Vsb±5%
- AT: 8~20V±5%/5Vsb±5%

SPECIFICATIONS

Form Factor

Dimensions	COM HPC Size A Module (3.7-in x 4.7-in x 0.59-in, 9.5 cm x 12 cm x 1.5 cm)
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Processor System

CPU	Intel® Core™ Ultra Series 3 Processors (Panther Lake-H) *All CPU sku can support In-Band ECC.
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR5 7200 MHz
Capacity	128 GB (64GB per DIMM)
Socket	2 x 262-pin SO-DIMM

Graphics

Controller	Intel® Graphics
HDMI	HDMI 2.1 Max resolution up to 4096 x 2160@60Hz
DisplayPort	DisplayPort 1.4a Max resolution up to 4096 x 2304@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz (Connector shared with eDP)
eDP	Max resolution up to 1920 x 1080@60Hz (Connector shared with LVDS)
eDP	eDP 1.4b Max resolution up to 4096 x 2304@60Hz (optional)
MultiDisplay	Quad display

Expansion Slot

PCIe	1 x PCIe x8 (Gen5) (support by H484 CPU only) 1 x PCIe x4 (Gen5) 1 x PCIe x4 (Gen4) 3 x PCIe x1 (Gen4)
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Ethernet

Controller/ Speed	Intel® I226LM with 10/100/1000/2500 Mbps
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I/O

HDMI	DDI0 support HDMI DDI1 support HDMI
DisplayPort	TBT0/1 support DP
USB	2 x USB4/Thunderbolt™ 4 2 x USB 3.2 Gen2 8 x USB 2.0
COM	2 x UART ports
GPIO	6 x GPI, 6 x GPO
LVDS	1 (Connector with LVDS/eDP signal, switch by BIOS)
eDP	1 (optional)
FUSA header	1

Storage

SSD	onboard SSD (PCIe x4), up to 1TB (optional)
RAID	PCIe: Intel® VMD RAID 0/1/5/10

Power Requirements

Input PWR	ATX: 12V±5%/5Vsb±5% AT: 8~20V±5%/5Vsb±5%
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	-20°C ~ 70°C -40° C ~ 85° C (HRE/RE sku only)
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90% (non-condensing)
Storage Humidity	5% ~ 90% (non-condensing)