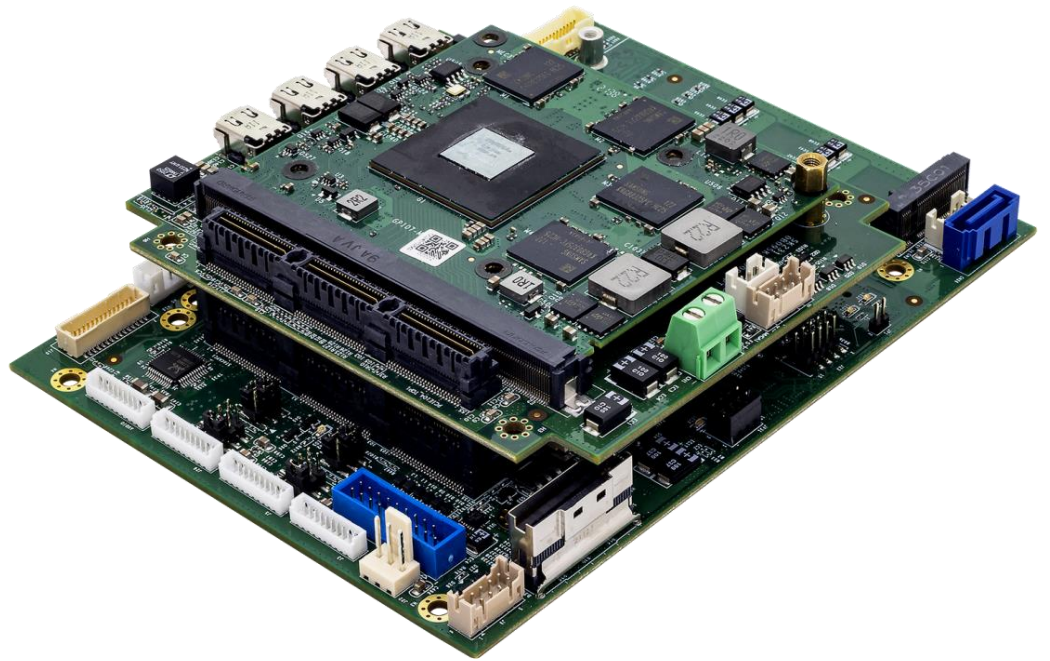




PCIe/104 – RH

PCIe/104 Processing Unit

Intel 13th Raptor Lake (H)



- *PCI/104 Express Type2 Slot for Open Modular Architecture*
- *Standard MXM Type 3.1 Support NVIDIA QUADRO®GPU*
- *Intel 13th Raptor Lake-H Core-I Processor*
- *Multi-Expansions include Dual Mini PCIe Express Slots*
- *GPU can be targeted for 4 Mini Display port outputs*
- *Extreme Temperature Support -40 to 85°C*

Specifications

System

CPU Options	Intel® Core™ i7-13800HRE 45W Raptor Lake 13th Gen, 14C , Freq. 2.5 /5.0 GHz, 24MB cache Intel® Core™ i7-13800HE 45W Raptor Lake 13th Gen, 14C , Freq. 2.5 /5.0 GHz, 24MB cache
GPU Options	NVIDIA® RTX 2000 Ada, 56.5W, 8GB GDDR6, 3,072 CUDA Cores NVIDIA® RTX 3500 Ada, 110W, 12GB GDDR6, 5,120 CUDA Cores NVIDIA® RTX 5000 Ada, 115W, 16GB GDDR6, 9,728 CUDA Cores
Memory	DDR5 5200MHz SO-DIMM up to 96GB
MXM Carrier	SK232

Expansion

MiniPCIe Expansion	1x Full-size mini PCIe 1 1x Full-size mini PCIe 2
PCIe/104 Expansion(Type2)	2x PCIe x4 ; 4x PCIe x1
M.2	1x M.2 2280, PCIe x4
SlimSAS	1x SlimSAS 8i connector

Storage

SATAIII	1x SATAIII
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Display

Mini DP	4x Mini Display Port outputs from GPU
VGA	1x VGA from GPU (SK231)(Option)
LVDS	1x Dual channel 18/24bit LVDS

Ethernet

Ethernet	Intel® I226-LM GbE LAN (10/100/1000Mbit /2.5G) Ethernet ports
Ethernet	GbE LAN from CPU module

I/O

USB	2x USB 3.0 2x USB2.0
COM Port	2x RS232/422/485

DIO	4x DI/ 4x DO
LPC	1x 10Pin
Audio	1x Line-out, 1x Mic-In

Power System

Input Power	9V~36V DC-IN 12V DC-IN for CPU FAN
Input Power by MXM carrier board	12V DC-IN for GPU FAN

Mechanical and Environment

Dimensions	148mm x 110mm
Operating Temperature	0°C to 55°C -40°C to 85°C (By Option)
Storage Temperature	-40 to 85°C
Relative Humidity	10% to 90%, non-condensing

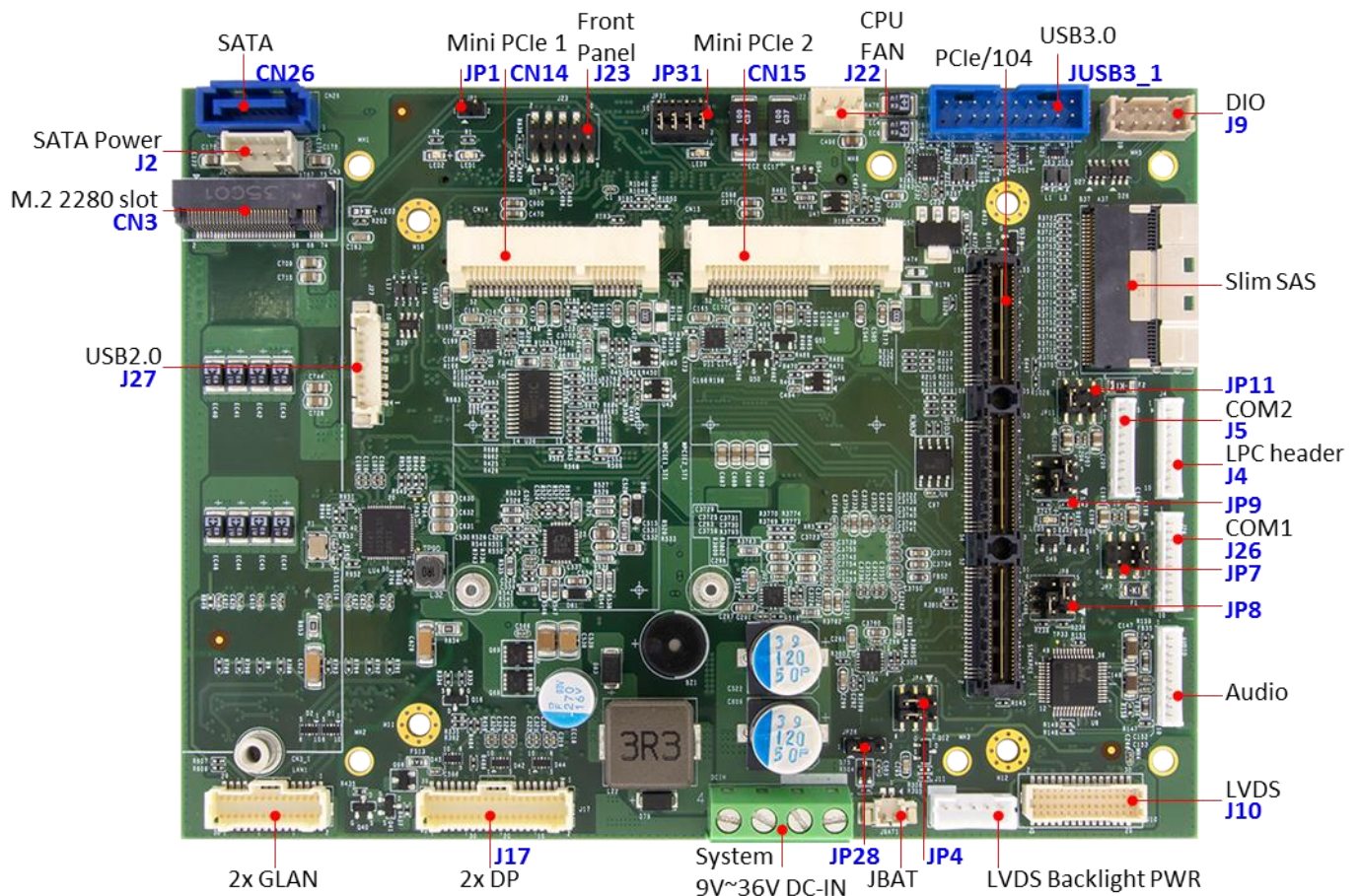
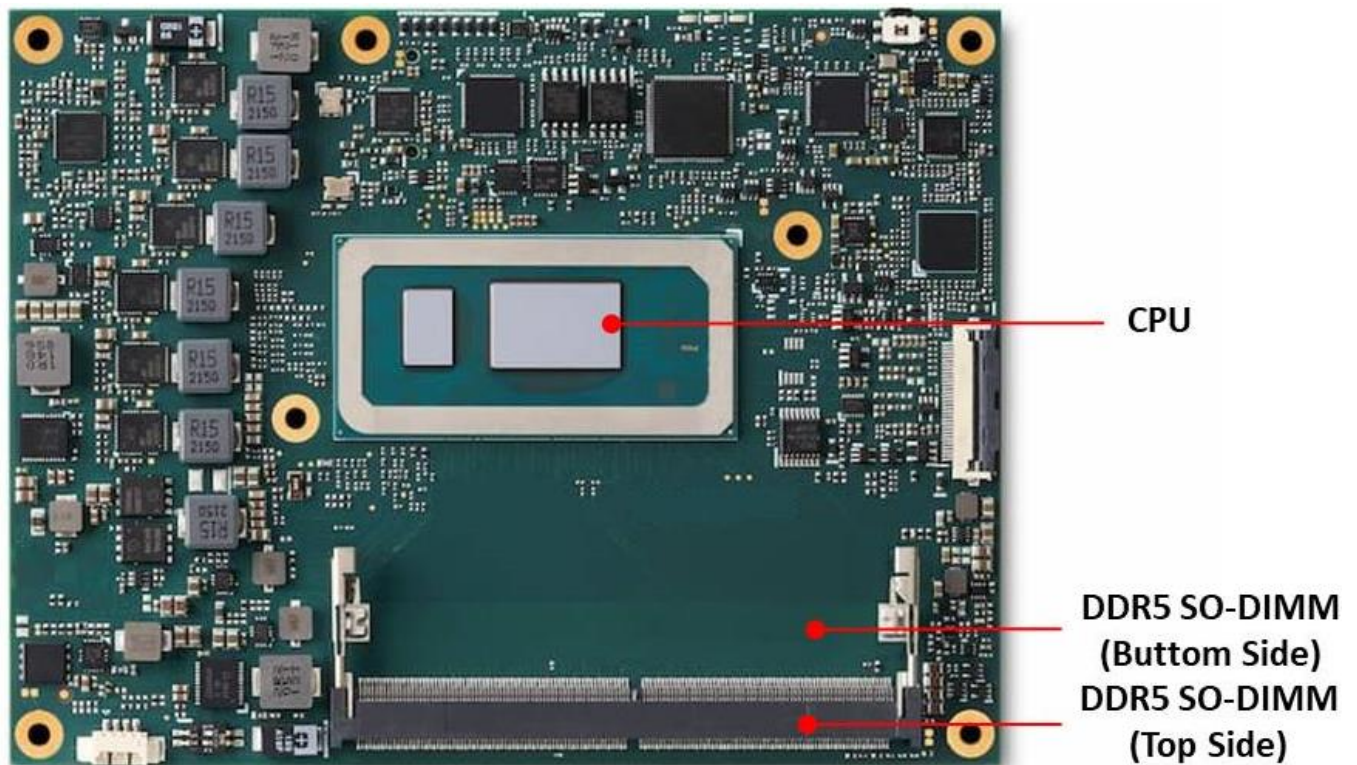
Standard Compliance

Standard Compliance	CE/FCC
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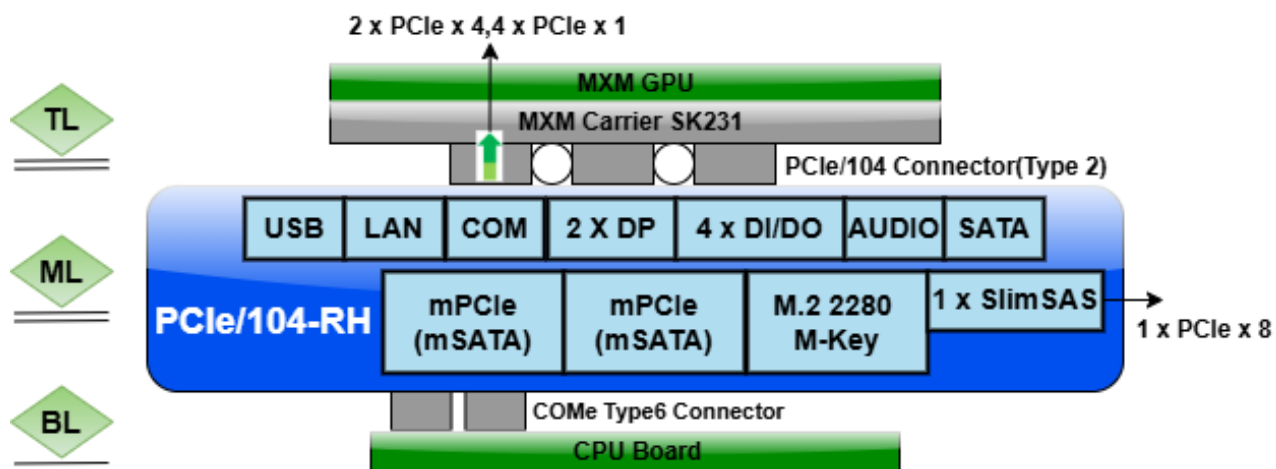
OS

OS Support	Windows®10 64bit Linux(Support by request)
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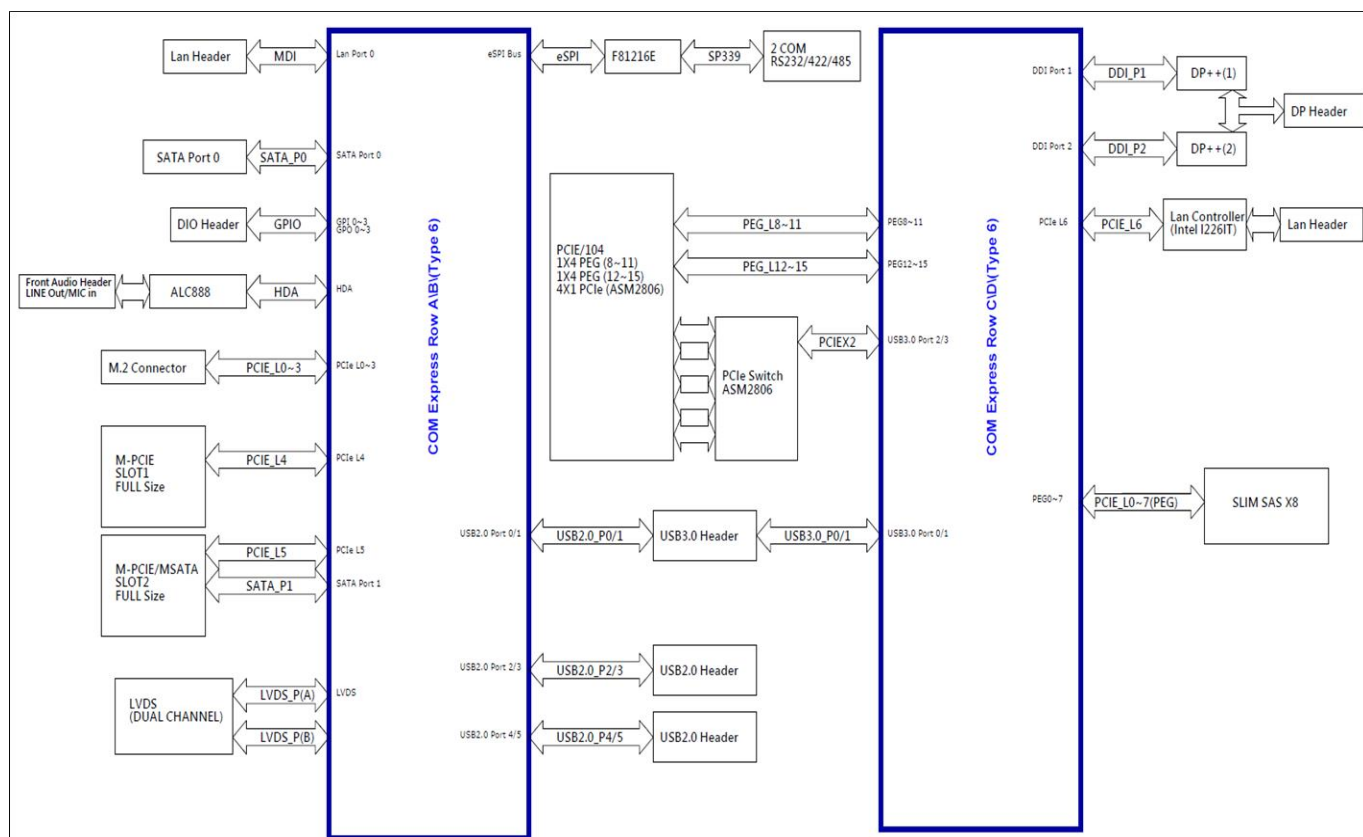
I/O Placement



Stack Concept



Block Diagram



Ordering Information

Model Name Spec	PCle104-RH-P1A50	PCle104-RH-S1A50	PCle104-RH-PSA50
CPU	13 th i7-13800HRE(45W)		
GPU	MXM 5000ADA		
RAM	DDR5 SO-DIMM up to 64GB		
Storage	512GB SATAIII		
Display	1 x LVDS ; 2 x DP from CPU ; 4 x miniDP from MXM Carrier		
I/O	2 x LAN ; 4 x USB ; 1 x AUDIO		
Operation Temp.	0°C to 55°C -40°C to 85°C (By Option)		
Payloads	2 (1CPU +1GPU)	2 (1CPU +1GPU)	3 (1CPU + 2GPU)
GPU(1) By PCIe/104	YES	N/A	YES
GPU(2) By SAS	N/A	YES	YES
Thermal Type	Conduction Cooled		
Thermal Phases	ATR - Double Sided Heat Dissipation	Shoe Box - One Side Heat Dissipation	Customized