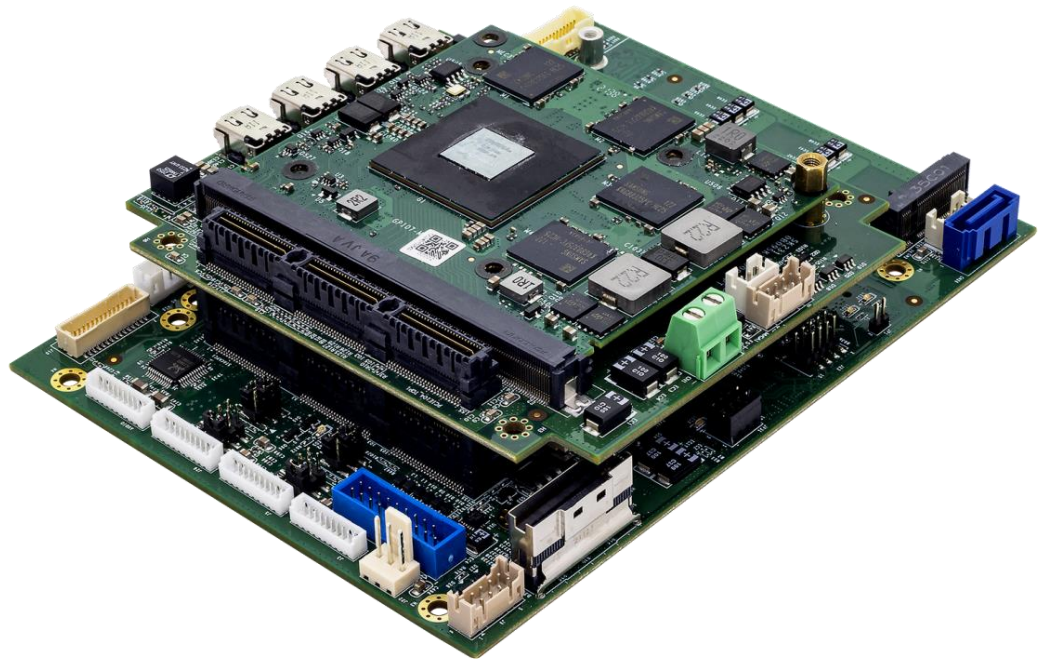




PCIe/104 – RH

**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
---------	------------

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

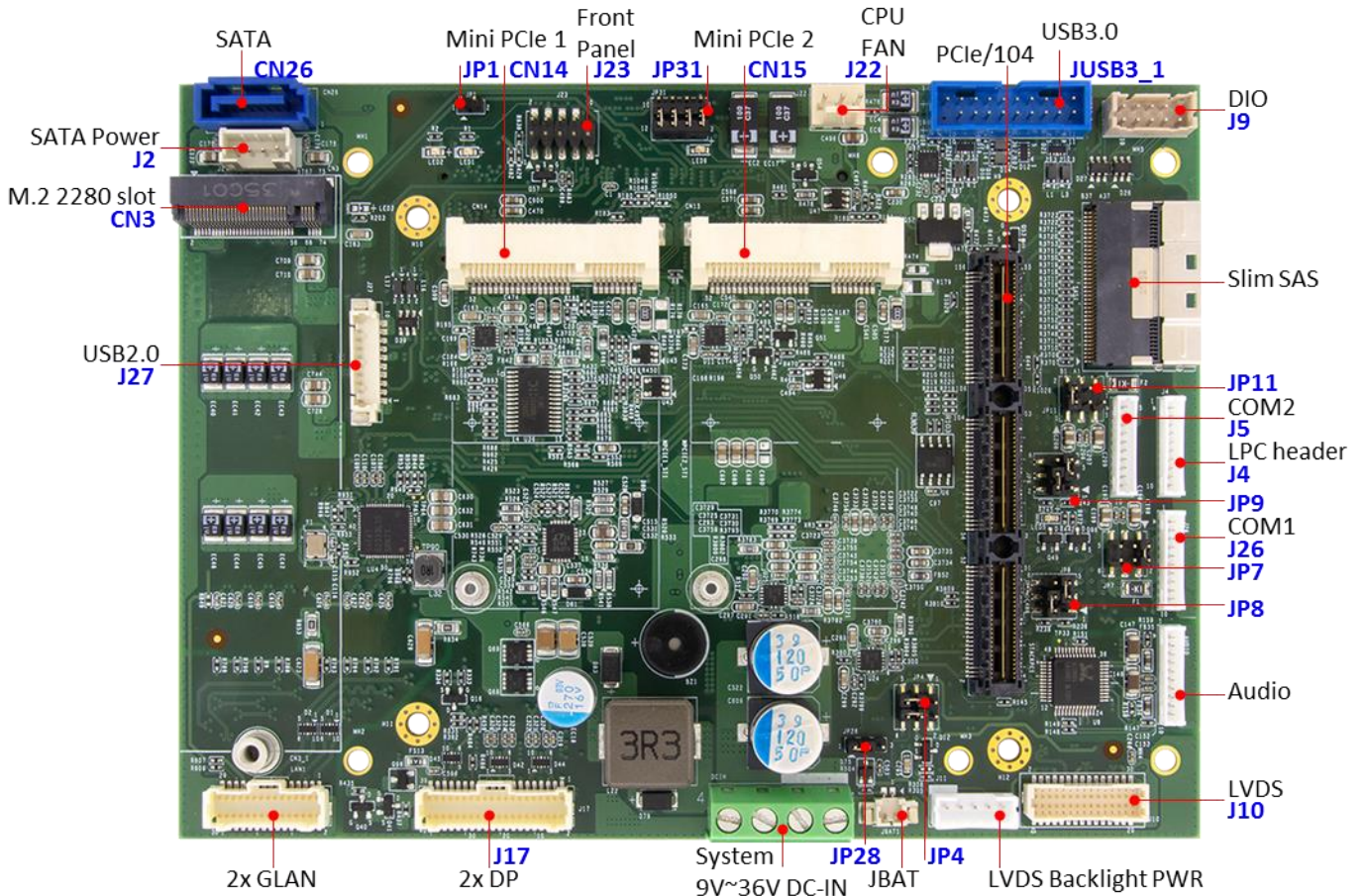
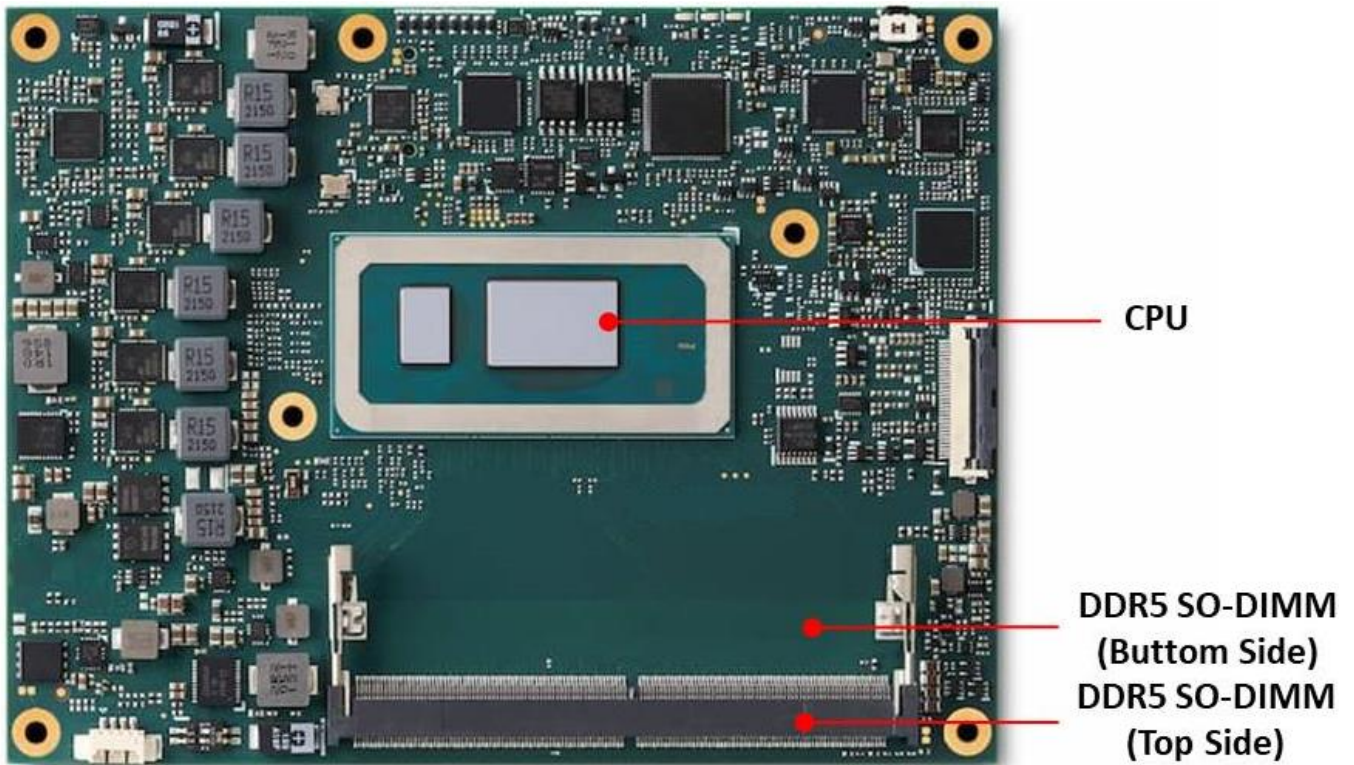
Standard Compliance

Standard Compliance	CE/FCC
---------------------	--------

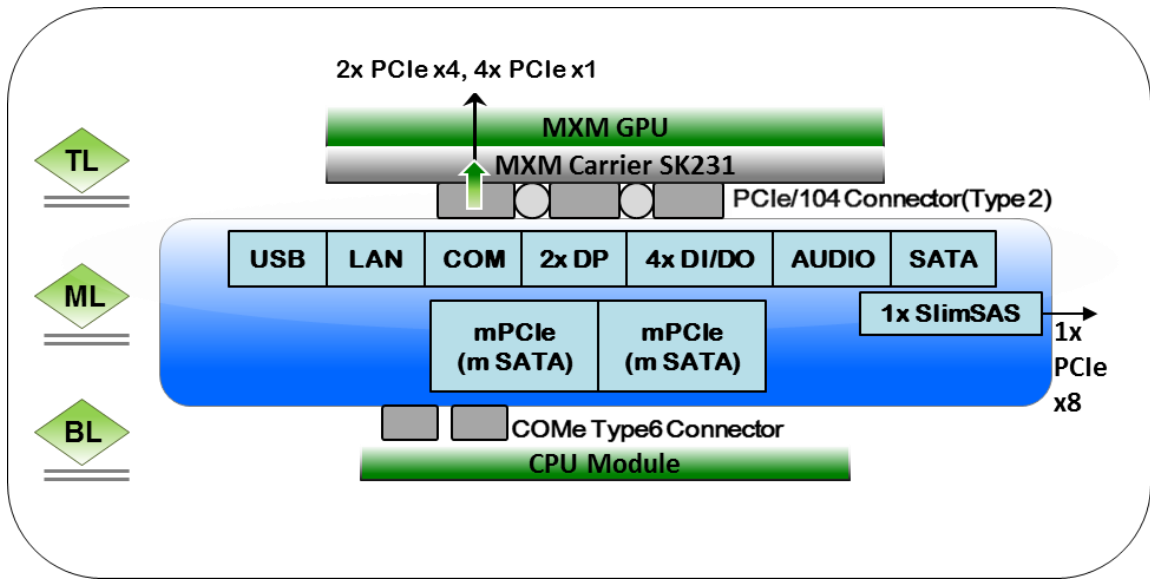
OS

OS Support	Windows®10 64bit Linux(Support by request)
------------	---

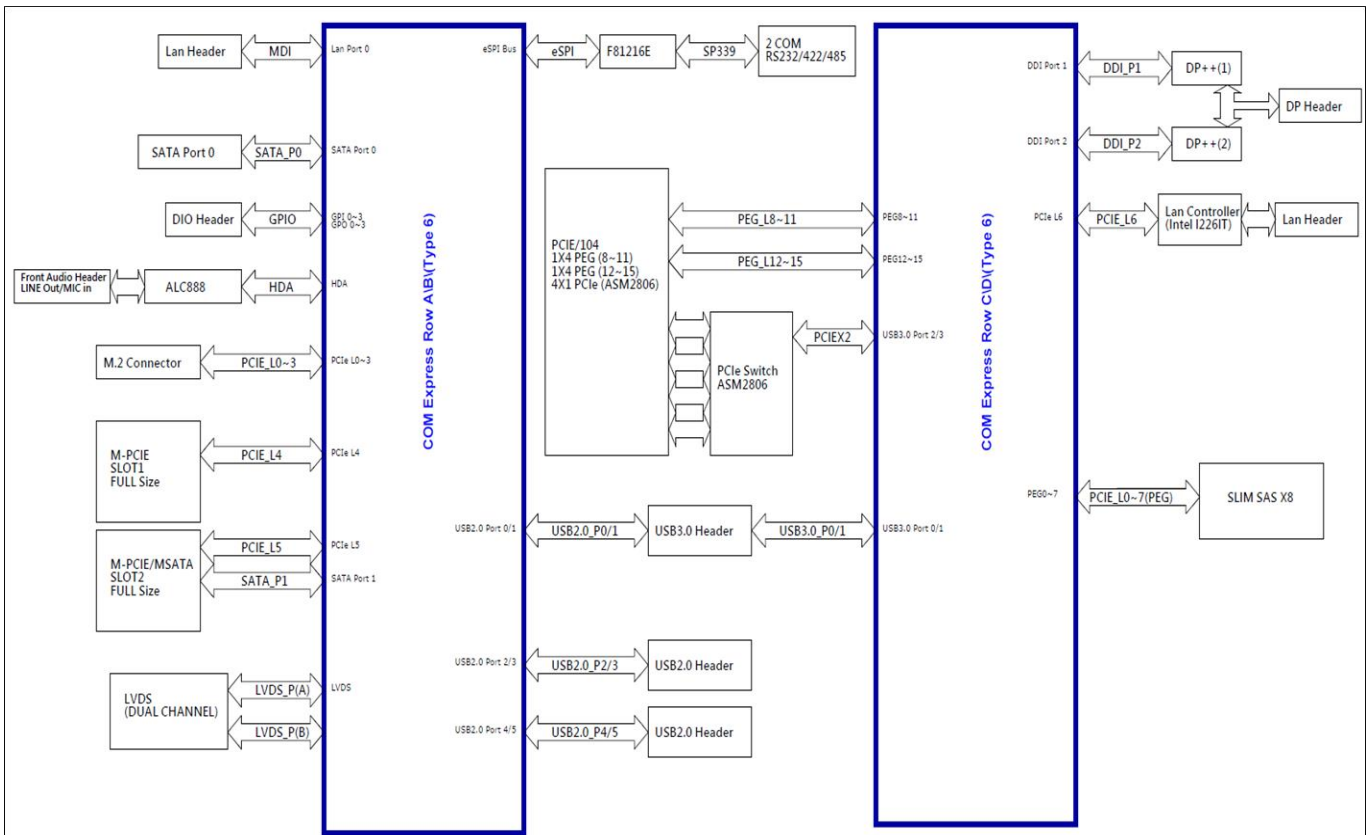
I/O Placement



Stack Concept



Block Diagram



Ordering Information

Model Name Spec	PCIe104-RH0120A	PCIe104-RH0135A	PCIe104-RH0150A
PCIe/104 Form Factor	Type2		
CPU	13 th i7-13800HRE(45W)		
RAM	DDR5 SO-DIMM up to 64GB		
LAN	2x GbE		
GPU	RTX 2000Ada	RTX 3500Ada	RTX 5000Ada
LVDS	1x LVDS		
DP	2x DP from CPU 4x mDP from MXM GPU		
SATA	1x SATAIII		
COM	2x RS232/422/485		
Power	System : 9V~36V DC-IN GPU : 12V DC-IN		
Operation Temp	0°C to 55°C -40°C to 85°C (By Option)		