



PCIe/104 – IL

PCIe/104 Processing Unit

Intel Ice Lake (D)



- *PCIe/104 Express Type2 Slot for Open Modular Architecture*
- *Standard MXM Type 3.1 Support NVIDIA QUADRO® GPU*
- *Intel® Ice Lake Xeon-D1700 LCC series Processor*
- *Multi-Expansions include Dual Mini PCIe Express Slots*
- *Extreme Temperature Support -40°C to 85°C*
- *PCIe/104 Type 2 Expansion slot (2x PCIe Gen3 x4 + 4x PCIe Gen3 x1)*
- *1x M.2 2280 M-Key slot (PCIe Gen3 x4, NVMe)*
- *2x GbE RJ45*
- *9V~36V DC-IN*

Specifications

System

CPU Options	Intel® Xeon® D-1746TER 2.0/3.1GHz 15MB, 67W, 10C Intel® Xeon® D-1735TR 2.2/3.4GHz 15MB, 59W, 8C Intel® Xeon® D-1732TE 1.9/3.0GHz 15MB, 52W, 8C
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	DDR4 2666MHz SO-DIMM up to 96GB
MXM Carrier	SK231

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	2x GbE (one from CPU module; One from I210IT)
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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
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Power System

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

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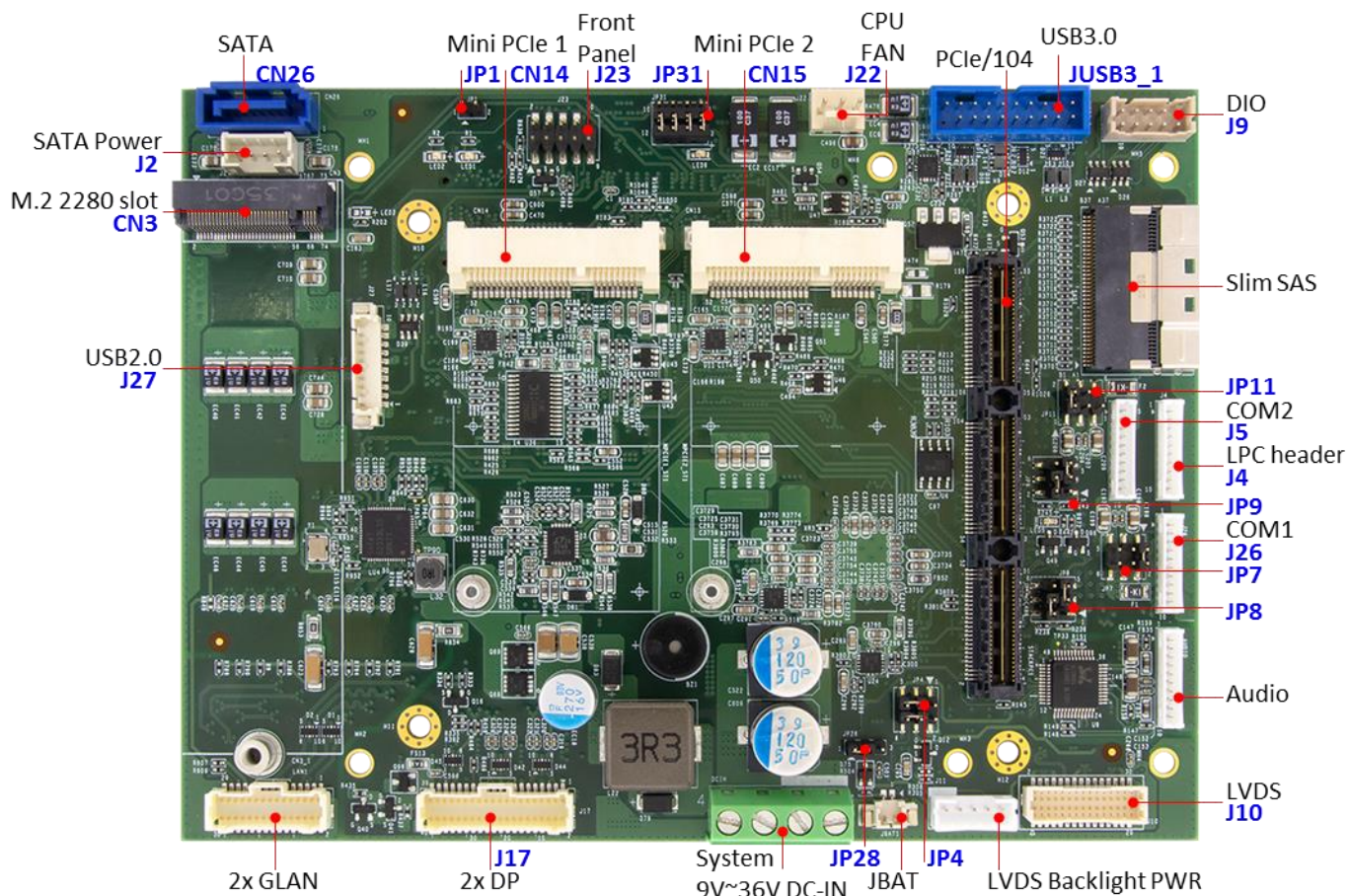
Standard Compliance

Standard Compliance	CE/FCC
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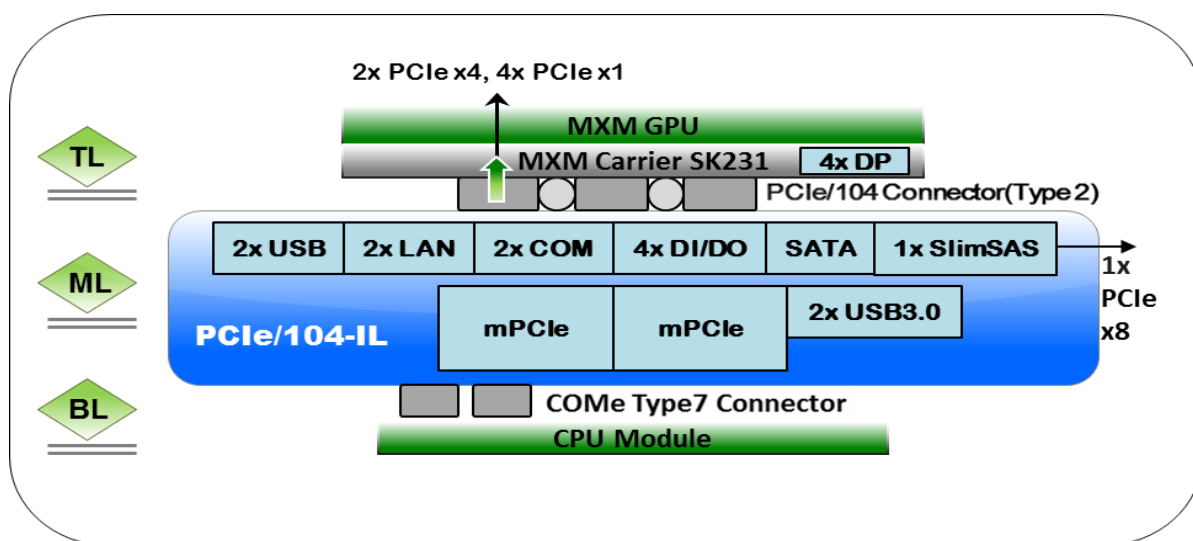
OS

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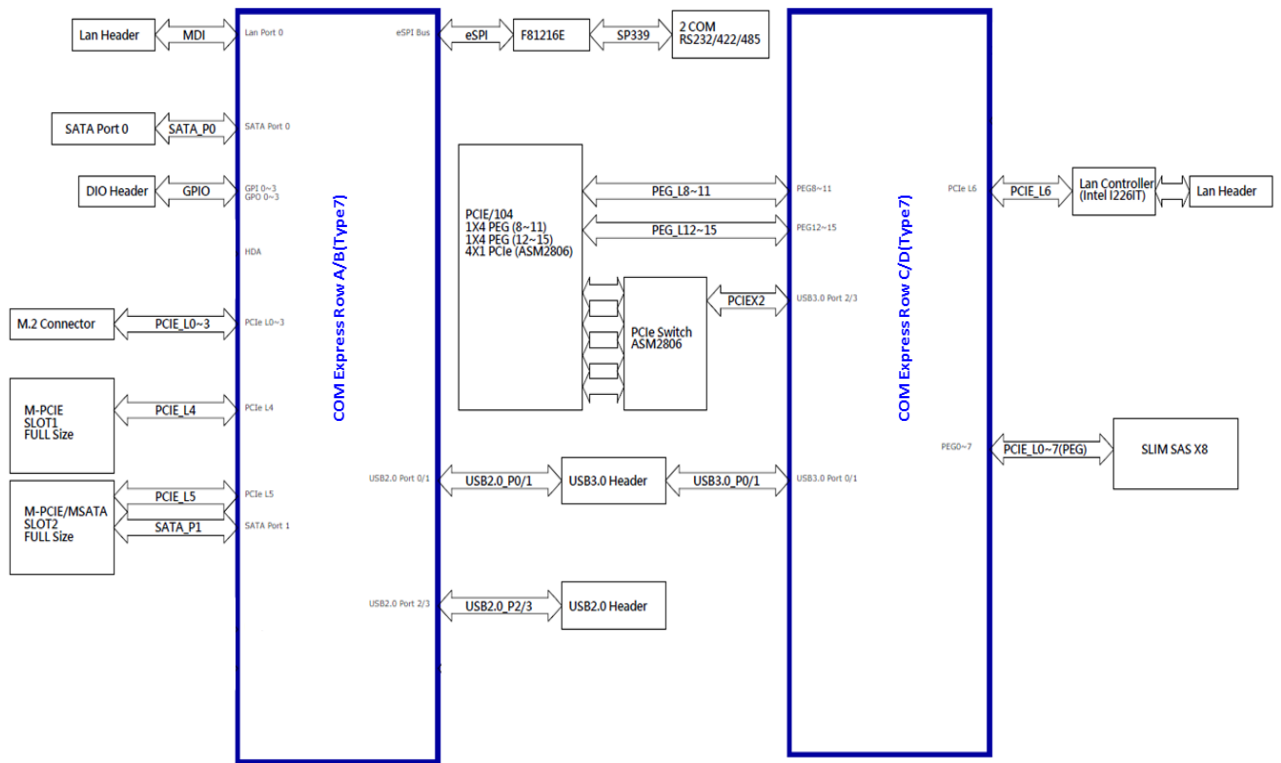
I/O Placement



Stack Concept



Block Diagram



Ordering Information

Model Name Spec	PCIe104-IL-P1A50	PCIe104-IL-S1A50	PCIe104-IL-PSA50
CPU	Intel® Xeon® D-1700 processor		
GPU	MXM 5000ADA		
RAM	DDR4 SO-DIMM up to 96GB		
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