MX2-10ADP-D

Embedded System for GPU Computing
Supports Intel® Raptor Lake-S Refresh Core-i Processor up to 65W

Introduction

- AI Inference
- Intel® Raptor Lake-S Refresh 14th/Raptor Lake-S
- 13th/Alder Lake-S 12th Core-i processor (Up to 65W)
- Supports 2 x DDR5 SO-DIMM (Up to 96GB)
- HDMI, DisplayPort, VGA, 4 x 2.5G LAN
- Supports 8 x USB, 3 x RS232, and 8-bit DIO
- Supports PCIe Gen4 x16 + x1
- 9~48V Wide Power Range

intel CORE i3 | intel CORE i5 | intel CORE i7 | intel CORE i9 | EMPOWERED BY HAILO
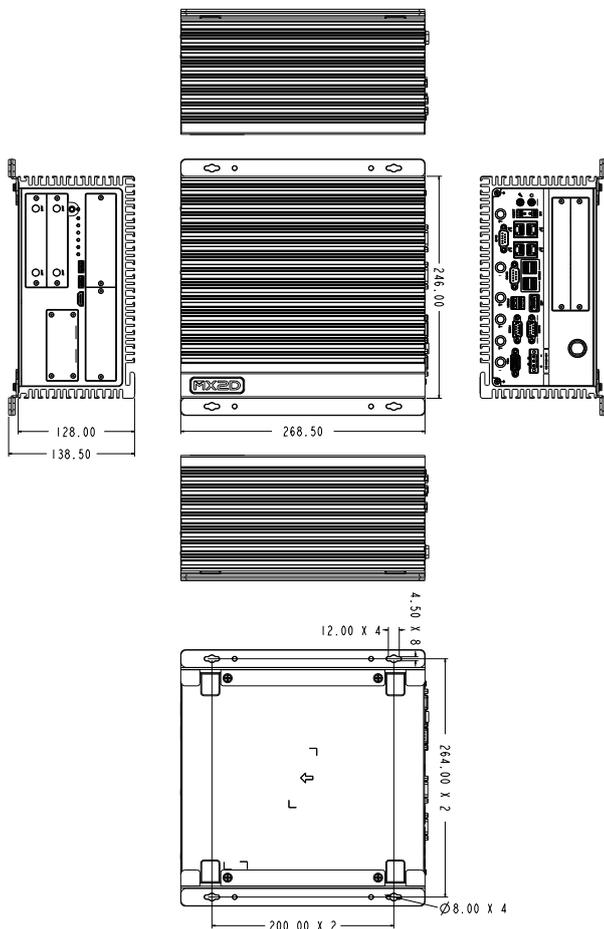
| Isolation I/O | Fanless Design | 8KV/15KV High ESD protection | 5G/50Grms High shock & vibration protection | LAN 2.5G 2.5G LAN | 9V-48V DC-in Wide Range DC-in |

Dimension (mm)

128.00
138.50
246.00
268.50

4.50
12.00 X 4 X 8
264.00 X 2
200.00 X 2
Ø8.00 X 4

Optional Peripheral

Model Number	Description
MS-48CDN-DT10	Xpansion Module with 4 x RS232 / 422 / 485, 8-bit Isolated DIDO (4 x DI, 4 x DO)
MS-04LAN-R10	Xpansion Module with 4 x Intel i210-IT Giga LAN, RJ45 Port
MS-04LAN-M10	Xpansion Module with 4 x Intel i210-IT Giga LAN, M12 Port
MS-04POE-R10	Xpansion Module with 4 x PoE+, Intel i210-IT Giga LAN, RJ45 Port
MS-04POE-M10	Xpansion Module with 4 x PoE+, Intel i210-IT Giga LAN, M12 Port
ME-02POE-R10	Xpansion Module with 2 x PoE +, Intel i210-IT Giga LAN, RJ45 Port
MS-26CAD-T10	Xpansion Module with 2 x CANBus 2.0B and 8-bit Isolated DIDO
MP-088RCN-P10	PCIe Riser Card with 2 x PCIe4.0 X8 Slots

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MiTAC
MITAC DIGITAL TECHNOLOGY CORP.

SYSTEM

CPU	14th/13th/12th Gen Intel® Raptor Lake-S Refresh/Raptor Lake-S/Alder Lake-S Core i9/i7/i5/i3/Celeron/Pentium (Up to 65W) / *Please see the CPU Options in Docs / Manuals
Chipset	Intel® R680E
System Memory	DDR5 4800 MHz, 2 x 262-pin SO-DIMM, Max. 96 GB (Non-ECC/ECC)
Graphics	Intel® UHD Graphics
Display Interface	VGA, DisplayPort 1.4, HDMI 1.4
Storage Slot	2 x 2.5 HDD / SSD (1 w/ Removable HDD Bay, 1 w/ Internal HDD Bracket)
	1 x M.2 2280/2260/2242 NVMe / SATA SSD
	1 x M.2 2242/2260 SATA SSD, 1 x mSATA
Ethernet	4 x Intel® I226-LM 2.5G LAN *Optional 4 x PoE 802.3at Xpansion "MS-01PON-S10"
Audio	Realtek® ALC888
I/O Chipset	Nuvoton NCT6126D
TPM	Nuvoton NPCT760AABYX TPM2.0
Expansion Slot	1 x M.2 2230/ 2242 / 2260 / 2280 M key (PCIeX4 NVME, SATAIII)
	1 x M.2 3052 / 3042 / 2242 / 2260 B key (USB3.0 , SATAIII, PCIeX1) w/ 2 x SIM slot
	1 x M.2 2230 E key (CNVi , PCIeX1, USB 2.0)
	1 x mPCIe Full / Half size (USB2.0 / PCIeX1 / SATAIII)
	1 x PCIe 4.0 X16 slot
	1 x PCIe 4.0 X1 slot
Internal Speaker	1 x Buzzer
Indicator	DIO, LAN1~4 ACT, Power LED, HDD LED
Front I/O	1 x HDMI 1.4
	2 x USB 3.2 Gen2
	2 x SIM Card Slot w/ Cover
	1 x 2.5" SATAIII HDD / SSD Bay

Rear I/O			
4 x RJ-45		1 x Mic-in & 1 x Line-out	
6 x USB 3.2 Gen 2 (10 Gbps)		1 x PCIe X16 slot + 1 x PCIe X1 slot	
3 x RS232 / 422 / 485 (Support Power 5V / 12V)		1 x 2-pin Terminal Block Remote Power Reset	
1 x 8-bit GPIO (in DB9 Connector)		1 x 2-pin Terminal Block Remote Power on / off	
1 x DisplayPort 1.2		1 x 3-pin Terminal Block Power Input	
1 x VGA		6 x SMA Antenna (Optional for WiFi/LTE function)	

Hardware Monitor	Temperature Monitor, Voltage Monitor
Watchdog Timer	1~255 steps by software program

POWER REQUIREMENT

Power Input	9~48V Wide Range DC Input w/ Terminal Block Connectivity
Power Adapter	Optional 24V, 300W AC adapter (For AC SKU)

MECHANICAL

Thermal Design	Fanless w/o Venting Holes
	Options with 2 x Internal 40x40x20 System Fan (Supporting NVIDIA RTX A2000/RTX 4060 Graphic Cards)
Mounting	Wallmount
Dimensions (W x D x H)	10.6" x 9.7" x 5.0" (268 x 246 x 128 mm)
Weight	7.7kg (17 lb)

ENVIRONMENTAL

Operating Temperature	35W TDP Processor: -40°C to 70°C, with 0.7m/s Air Flow and Wide Temperature Memory/Storage
	65W TDP Processor: -40°C to 50°C, with 0.7m/s Air Flow and Wide Temperature Memory/Storage
Storage Temperature	-40 ~ 85°C (-40 ~185°F)
Operating Humidity	10% ~ 90% R/H (Non-condensing)
Vibration Resistance	Operating: 5Hz~500Hz / 5Grms / 3Axis (w/ SSD, according to IEC60068-2-64)
Shock Resistance	Operating: 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Certification	CE / FCC Class A

OS

OS Support	Windows® 10 64bit/Windows® 11 64bit, Linux (support by request)

Ordering Information

Model Number	Chipset	Thermal	Power	AC Adaptor	AC Adaptor
MX2-10ADP-D-FL	R680E	Fanless	PCIe Gen4 X16 + X1	9~48V Wide Rage DC Input w/ Terminal Block Connectivity	None
MX2-10ADP-D-FL-DX8	R680E	Fanless	PCIe Gen4 X8 + X8	9~48V Wide Rage DC Input w/ Terminal Block Connectivity	None
MX2-10ADP-D-FL-AC300	R680E	Fanless	PCIe Gen4 X16 + X1	9~48V Wide Rage DC Input w/ Terminal Block Connectivity	300W AC to DC Adaptor
MX2-10ADP-D-IF-AC300	R680E	2 x Internal System Fan for PCIe slots	PCIe Gen4 X16 + X1	9~48V Wide Rage DC Input w/ Terminal Block Connectivity	300W AC to DC Adaptor

Packing List

Packing

- 1 x Embedded System
- 1 x CPU Cooler (passive)
- 1 x Wall Mount Brackets
- 1 x 3 pin Terminal Block Power Connector
- 2 x 2 pin Terminal Block Male Connector
- 1 x 30 cm SATA & SATA PWR Y Cable (3rd SSD/HDD needs optional SATA Y cable)

Rugged
Fanless
Fanned
Rackmount