


# MZ1-10ADP


AI Inference/ Machine Learning/ Deep Learning  
**Rugged GPU Computing System**  
 Supports Intel® Raptor Lake-S / Alder Lake-S Core-i processor up to 125W

## Introduction


- Supports Intel® Raptor Lake-S 13th/Alder Lake-S 12th Core-i processor (Up to 125W)
- Support 2 x DDR5 SO-DIMM (Up to 64GB)
- HDMI, DisplayPort, VGA, Dual 2.5G LAN
- Support 10 x USB, 4 x RS232, and 32-bit DIO
- 9~48V Wide Power Range




intel  
**CORE**  
i3




intel  
**CORE**  
i5




intel  
**CORE**  
i7




intel  
**CORE**  
i9




**NVIDIA**  
CERTIFIED




EMPOWERED BY  
**HAILO**




8KV/15KV  
High ESD protection




All Solid Capacitor



USB3.2 Gen2



Power Ignition




PCI EXPRESS Gen 4



## I/O Interface

### Front I/O




- 6 x SMA hole with cap
- 32-bit DIO
- Power button
- 2-pin Remote Power on/off
- Line-out & Mic-in
- 4 x USB3.2 & 2 x 2.5G LAN
- 3 x RS232
- 1 x RS232/422/485
- Display & USB3.2
- HDMI & USB3.2
- Door#1: PCIe X16/ X8
- Door#2: PCIe
- Door#3: PCIe X4
- Door#4: Empty
- Door#5: Blank or PCIe X8
- Door#6: PCIe X1
- Door#7: Empty
- VGA

### Rear I/O



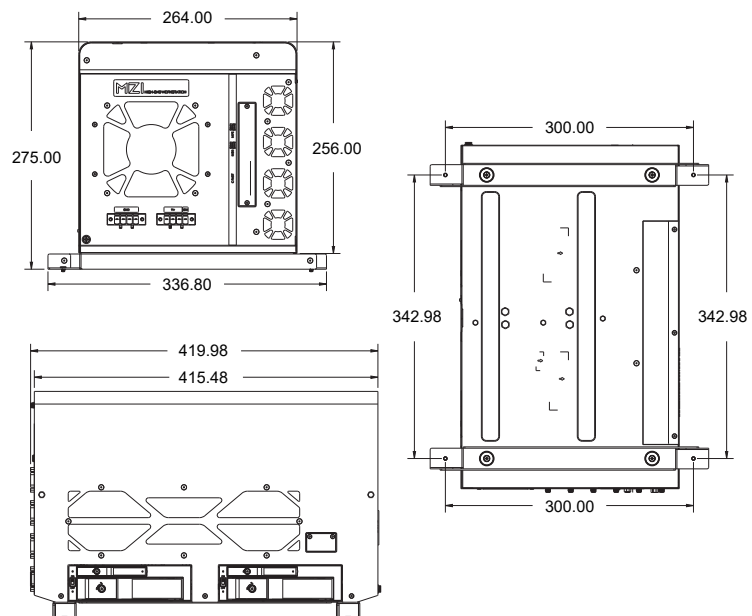
- 4 x SIM slot
- CFlash slot
- 2 x 4-pin Terminal Block Power CON

### Side I/O



- 2 x 2.5" HDD Tray
- + 2 x 3.5" HDD Tray

## Dimension (mm)



## Optional Peripheral

MS-01IGN-S10



Vehicle Power Ignition Card,  
 12V/24V and Power ON/OFF Timing Selectable



## MZ1-10ADP Fan Embedded System

SYSTEM	
CPU	13th/12th Gen Intel® Raptor Lake-S/Alder Lake-S Core i9/i7/i5/i3/Celeron/Pentium (Up to 125W)
Chipset	Intel® R680E
System Memory	DDR5 4800MHz, 2 x 262-pin SO-DIMM, Max. 64GB(Non-ECC/ECC)
Graphics	Intel® UHD Graphics
Display Interface	VGA, DisplayPort 1.4, HDMI 2.0b
Storage Slot	1 x mSATA 1 x M.2 B Key 2280/2260/2242 Slot 2 x Hot Swappable 2.5" HDD Tray (support 7-9.5mm height) 2 x Hot Swappable 3.5" HDD Tray 1 x CFAST slot / 1 x M.2 M Key 2280/2262/2242 SSD slot *4 x SATA, 2 x M.2 SATA, and 1 x mSATA, all these 7 SATA ports can be configured in SATA RAID 0/1/5/10.
Ethernet	1 x Intel® I225-LM 2.5GbE LAN + 1 x Intel® I225-V 2.5GbE LAN
Audio	Realtek® ALC888S
I/O Chipset	Nuvoton NCT6126D
TPM	Nuvoton NPCT750AAAYX TPM2.0
Expansion Slot	1 x M.2 3052 / 3042 / 2242 / 2260 / 2280 B key (USB3.0 , SATAIII, PCIeX1) w/ SIM slot / 1 x M.2 2230/ 2242 / 2260 / 2280 M key (PCIeX4 NVME, SATAIII) / 1 x M.2 2230 E key (CNVi , PCIeX1, USB 2.0) / 1 x Mini PCIe Full size (USB2.0 / SATAIII / PCIeX1) / 1 x Mini PCIe Full size (USB2.0 / PCIeX1) / #1: 1 x PCIe X16 (Gen4) or PCIe X8 (Gen4) #2: 1 x PCIe X4 in PCIe X16 physical connector (Gen4) #3: 1 x PCIe X4 in PCIe X16 physical connector (Gen4) #4: 1 x PCIe X8 in PCIe X16 physical connector (Gen4 x8 = Gen3 x16 Bandwidth) #5: 1 x PCIe X1 in open ended connector (Gen3)
Indicator	Power Button, Power LED, HDD LED
Internal I/O	1 X USB3.2 Gen1 Type A/ 1 X USB2.0 Type A
FRONT I/O	1 x HDMI 2.0b/ 1 X DP1.4/ 1X VGA 1 x 2-pin Terminal Block Remote Power on / off 3 X RS232/ 1 X RS232/ 422/ 485/ 4 X USB3.2 Gen2/ 4 X USB3.2 Gen1 6 x SMA hole with rubber cap / 1 x DB37 connector for 32 bit DIO 1 X Mic-in/ 1 X Line-out
REAR I/O	2 x 4-pin Terminal Block Power Input 2 x SIM slot to M.2 B Key slot 2 x SIM slot to mPCIe slot 1 x CFAST slot
Internal Speaker	1 x Buzzer
POWER REQUIREMENT	
Power Input	9~48V Wide Range DC Input w/ dual Terminal Block Connectivity
MECHANICAL	
Thermal Design	Fan
Mounting	Wallmount
Dimension	264mm(W) x 415mm(D) x 256(H)
Material	Top cover: Aluminum Alloy, Bezel and chassis: Steel
ENVIRONMENTAL	
Operating Temperature	-40°C ~ 70°C (w/ 35W CPU, w/o GPU card) -40°C ~ 60°C (w/ 65W CPU, w/o GPU card) / -40°C ~ 50°C (w/ 80W CPU, w/o GPU card) -40°C ~ 40°C (w/ 125W CPU, w/o GPU card) *Max OT limit -10°C w/ dual GPU card / with 0.7m/s Air Flow and Wide Temperature Memory/Storage *Please consult with your sales contact window about the Operating Temperature of GPU Card Configurations
Storage Temperature	-40 ~ 85°C (-40 ~185°F)
Storage Humidity	10% ~ 95% @85°C non-condensing
Humidity	264mm(W) x 415mm(D) x 256(H)
Vibration Resistance	MIL-STD-810H, Follow Method 514.8C-I Category 4 for Truck
Shock Resistance	MIL-STD-810H 516.8 procedure I - functional shock, Operating 20G, 11ms (Follow IEC 60068-2-27 half sine)
Certification	264mm(W) x 415mm(D) x 256(H)
OS	
Thermal Design	Windows® 10/ 11 64-bit, Linux (support by request)

\*with 0.7m/s Air Flow and Wide Temperature Memory/Storage

### Ordering Information

Model Number	Power	AC to DC PSU
MZ1-10ADP-R680E	9~48V DC-in w/ Terminal Block Connectivity	No PSU & no power cord
MZ1-10ADP-R680E-AC300		1. 24V/300W AC Adaptor 2. EU + US AC power cord
MZ1-10ADP-R680E-AC1000		1. 48V/1000W Power Supply (External) 2. DC to DC power cable 3. DC to AC - EU + US power cord

### Packing List

#### Packing

- 1 x MZ1-10ADP
- 1 x Wall Mount Bracket
- 1 x 2-pin Terminal Block Male Connector
- 2 x 4-pin Terminal Block Power Connector

Rugged

Fanless

Fanned

Rackmount