



MITAC COMPUTING TECHNOLOGY CORP.

Embedded System

MZ1-10ADP

Revolutionize Your Edge AI with Our Workstation for Inference and Model Training

Our Revolution Edge AI Workstation enables advanced inference and model training capabilities, revolutionizing your edge AI. On-premise ML offers 24/7 calculation capacity and lower latency, and sensitive data can be stored and secured on-site, ensuring regulatory compliance.



Extreme Edge AI Inference

- Extreme Performance
- Highly Efficient
- Low Latency



On-premise Edge Model Training

- Data Privacy
- Low latency
- No intermittent connectivity



Supporting Intel® 12th Gen (Alder Lake-S)/13th (Raptor Lake-S) Core™ Processors - Up to 125W

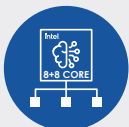
intel®

12th Gen
Alder Lake-S Core™ Processors

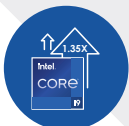
13th Gen
Raptor Lake-S Core™ Processors

Support

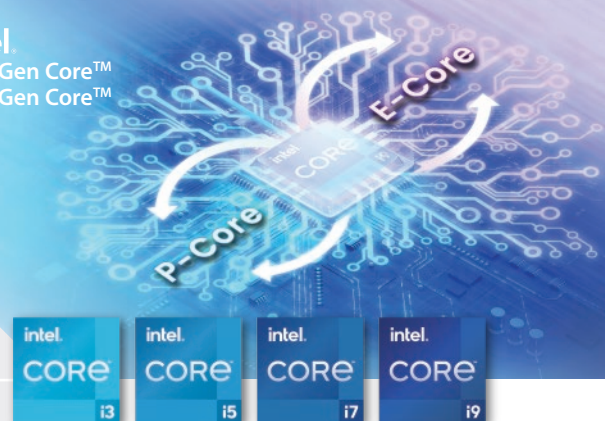
intel.
12th Gen Core™
13th Gen Core™



The 1st desktop processor with Intel new hybrid technology 8+8 cores to intelligently allocate resource.



1.35X Performance Gen-to-Gen Improvement, and Efficiency optimization for machine vision. Lower latency with lower power consumption.



Born for Matching Ultra-High Performance GFX & AI Cards

Maximum
GFX Card Dimensions

358 mm × 150 mm × 4 Slots

LEADTEK

NVIDIA

HAILO

actina

SUPPORTS **ALL**
the GPU &
AI Cards in the Market

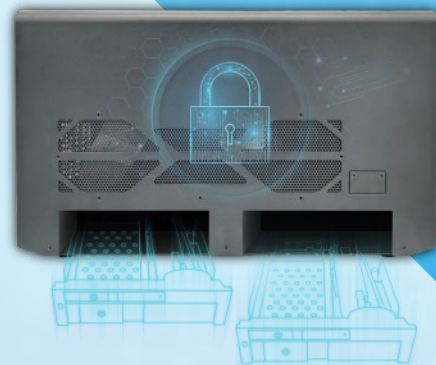




MITAC COMPUTING TECHNOLOGY CORP.

I Hot Swappable and Lockable HDD Tray

- Hot Swappable Design with Door Key for Data Protection
- Support Dual 2.5" HDD and Dual 3.5" HDD tray



I Dedicated Designed Cooling Airflow

- Embedded Aluminum Extrusion Thermal Heatsink to Concentrate Airflow from **4 x CPU Fan**
- Side Chassis with Venting Holes in Mesh Type for Cold Air Inlet to **233CFM System Fan**



I High Speed and Reliable Networking for seamless connection



Intel LAN Inside



Dual 2.5G LAN



5G



WiFi6



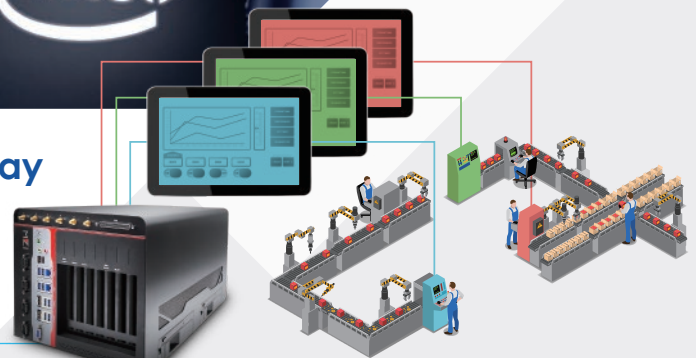
I Supporting High Resolution Triple Display

Supports triple independent displays (DP + HDMI + VGA). The HDMI & DisplayPort up to 4K high resolution. The enhanced visual quality responses the demand of being high precise.

Display Port 1.4
4K@60Hz

HDMI 2.0b
4K@60Hz

VGA
FHD@60Hz



I Advanced Power Protection



Total System Power Budget 1500W



Wide Power Range 9V~48V



Protection

- Reverse Power Input Protection
- Over Voltage Protection: 58V
- Over Current Protection: 75A
- ESD Protection: +/-15kV (air), +/-8kV (contact)
- Surge Protection: 3kW

I Industrial-grade Design

6X longer lifespan

Different from Electrolytic Capacitors, with a service life of longevity, stability, and reliability, our server motherboards are built with Solid Capacitors.

Operation Lifetime



Solid Capacitor



Electrolytic Capacitor

6X



Longer
Life Time



Increased
Stability



Increased
Reliability



No Exploding
Capacitors



Better Overclocking
Performance



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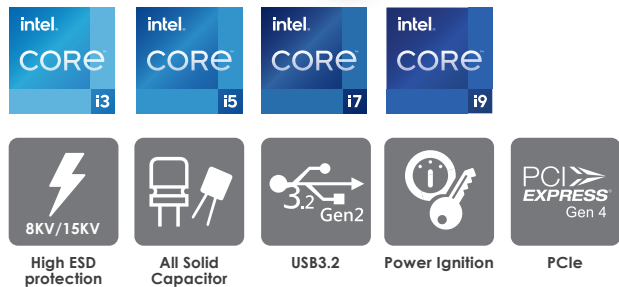
MZ1-10ADP

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



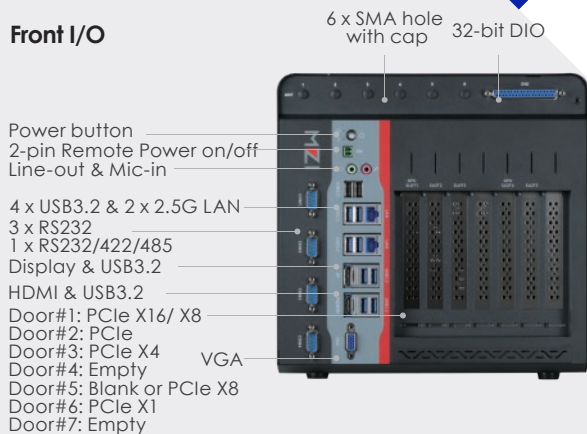
Introduction

- 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



I/O Interface

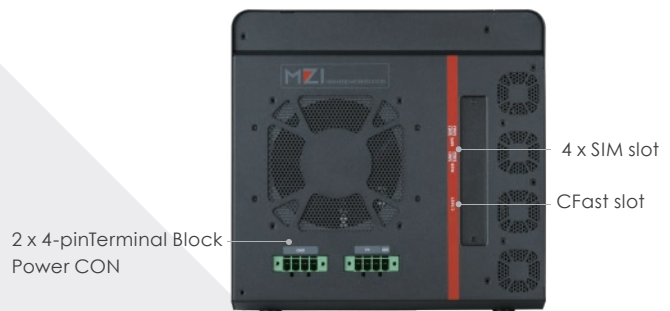
Front I/O



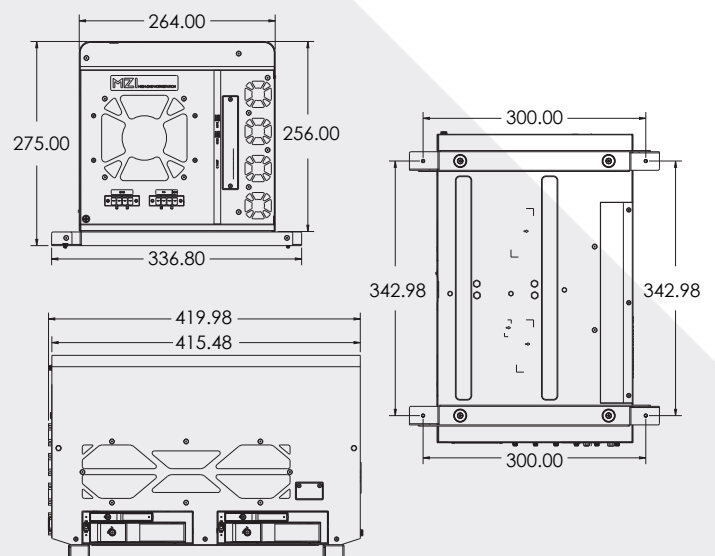
Side I/O



Rear I/O



Dimension (mm)



Optional Peripheral

MS-01IGN-S10



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

I Fan Embedded System

MZ1-10ADP

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. 64 GB (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
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



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