

AI

# MegaEdge Series

Optimized x86 Architectures for Next-Level AI Inference

# Evoke Edge AI Speed and Energy with Ultimate Flexibility

Aetina MegaEdge is a series of expandable AI inference platforms, that can flexibly be integrated into a wide range of AI-related solutions to run AI inference tasks via rich I/O interfaces that support various types of peripherals, including sensors, cameras, monitors, robotic arms and so on.

To satisfy different deployment needs, Aetina rolled out MXM series, PCIe series and M.2 series for MegaEdge. These product lineups enable the seamless addition of GPU computing power or AI-enhanced performance, bringing versatile AI acceleration. Above all, all series help users complete AI projects easily, targeting a broad range of AI applications, including smart city, factory, retail, healthcare, security, banking, greenhouse farming and so forth.



## Why Aetina MegaEdge

### ◆ Worry-free from Reliability

Providing high reliability and optimized performance with pattern thermal design and vigorous shock and vibration testing, avoiding downtime and hassles.

### ◆ Optimal Heterogeneous Computing Solutions

MegaEdge delivers diverse heterogeneous computing solutions, fusing CPU, GPU, and ASIC synergy for targeted computing excellence, and offering various extension along with GPU/AI Accelerator modules for varying AI project demands.

### ◆ Simplified Fleet Management

MegaEdge supports EdgeEye, Aetina's cloud management platform, which serves as a unified platform to help clients efficiently and systematically manage edge devices.

### ◆ AI-enabled Turnkey Solutions

By collaborating with Aetina's ecosystem partners, MegaEdge provides vertical, application-specific solutions. These comprehensive end-to-end offerings help developers and application integrators accelerate the time-to-market for AI deployment.

## Product Highlights

### ◆ Maximum Storage Capacity

Up to 4x 2.5" SATAIII SSD with seamless swappable and installation.

### ◆ Rich Accessible Front- I/Os

Available wide range of I/O interfaces for high-speed networking and connectivity.



### ◆ Flexible Expansion Capability

Providing an abundance of PCIe/MXM/M.2 expansion slots allowing for versatile functionality options.

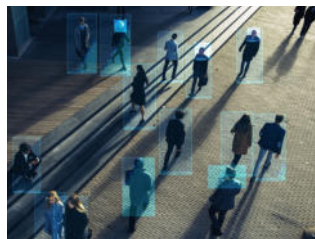
### ◆ Out-of-Band Management

Built-in with Out of Band embedded module makes remote power on/off/reset possible even if the system crashes.

## Targeted Applications



Roadside Vehicle Monitoring



AI Surveillance



AI Defect Inspection



Medical Diagnostics

**MXM Series**

**AIP-SQ67**



## Enriched Edge Inference & Data Connectivity

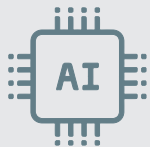
MegaEdge AIP-SQ67 is an expandable AI inference platform that gives AI developers and system integrators superior graphics and edge AI capabilities. Benefiting from 12/13th Gen Intel Core™ processors and one extension AI accelerator MXM module slot built for boosting superlative AI acceleration, driving massive performance-driven tasks with up to 65W TDP. Low power profiles also reduce power consumption, which can help developers meet AI-multitasking and product sustainability goals.

### ◆ Features

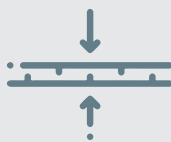
- Lift AI performance with extended MXM module via MXM PCIe Gen4 x16 slot
- Intel 12/13th Gen Core™ i7/i5 processor, up to TDP 65W
- Support dual 2.5" SATA III SSD swappable hard drive bay
- Up to five DisplayPort (DP++) for high resolution video display
- Two M.2 M-Key slots enabling 2280 NVMe/SATA
- Built in Out-of-Band (OOB) module to execute remote maintenance

### ◆ Unleash AI Brilliance with MXM Module

Equipped with an extended MXM GPU for top-tier AI processing that allows advanced sophisticated AI applications right at the edge, experiencing rapid, insightful, and smart AI decision making where it matters most.



Extended AI Power



Thin & Robust



Ready-to-Use



Conformal Coating

**M.2 Series**

**AIP-CR68**



## Highly Efficient & Low Latency Visual Recognition

The AIP-CR68 delivers efficient, reliable, and zero-noise operation. By integrating the Hailo-8™ M.2 AI accelerator card, it significantly enhances AI visual recognition performance and inference efficiency, while also offering high expandability and reasonable total cost. It is the optimal solution for achieving cost-effective, flexible deployment of various Edge AI applications.

### ◆ Features

- Built in Hailo-8™ AI accelerator for increased Edge AI computing power
- Intel 13th Gen Core™ i9/i7/i5 processor, up to TDP 35W
- Optional PSE support dual IP camera for image capture
- 2x M.2 M-Key slots support for 2280 NVMe, enabling to support dual M.2 AI accelerator
- Built in Out-of-Band (OOB) module to execute remote maintenance

### ◆ Empower Edge Intelligence with M.2 Acceleration

Boost your AI edge with the AIP-CR68's M.2 acceleration. This sleek yet robust addition is highlighted to unlock advanced AI applications at the edge and drive your AI initiative forward.



Neural Network



Reliability



Cost Efficiency



Low-power Consumption



## PCIe Series **AIP-FR68**

# Scale Out Model Training & Enterprise AI

MegaEdge AIP-FR68 provides unparalleled AI performance and acts as an AI workstation designed to meet state-of-the-art edge AI technology. Certified for NVIDIA NCS (NVIDIA Certified System), the AIP-FR68 has integrated the power of Intel 13<sup>th</sup> Gen Core processors and NVIDIA Data Center PCIe AI cards. This x86 edge AI workstation is crafted for the most challenging AI tasks, operating seamlessly and reliably even under intensive workloads.

### ◆ Features

- Support dual passive NVIDIA A30 GPU cards, providing superior localized AI model training
- NCS certification approved with NVIDIA RTX A6000 and NVIDIA RTX 6000 Ada GPU
- Intel 13<sup>th</sup> Gen Core™ i9/i7/i5/i3 processor, TDP up to 65W
- Pre-installed NVIDIA AI Workbench Software tool
- Drive breakthrough AOI AI defect detection with Metropolis for Factories
- Built in Out-of-Band (OOB) module to execute remote maintenance

### ◆ Obtain AI Surge with NVIDIA RTX Power

Achieve AI excellence with AIP-FR68, featuring NVIDIA RTX GPUs for unmatched computing prowess. Equipped with NVIDIA RTX™ A6000 or 6000 Ada GPU and even dual passive NVIDIA A30 GPUs, ensures optimal and intensive AI training and edge computing tasks.



Unprecedented  
AI Performance



48GB GDDR6  
Memory



New-Gen CUDA  
Computing



Ultimate MLPerf  
Inference

# Selection Guide



\*Preliminary



Model Number	AIP-FR68	AIP-KQ67	AIP-SQ67	AIP-CR68
<b>CPU</b>	Intel 12/13th Core i5/i7/i9 Processor up to 65W	Intel 12/13th Core i5/i7/i9 Processor up to 65W	Intel 12/13th Core i5/i7 Processor up to 65W	Intel 12/13th Core i5/i7/i9 Processor up to 35W
<b>Chipset</b>	Intel R680E Chipset	Intel Q670E Chipset	Intel Q670E Chipset	Intel R680E Chipset
<b>GPU(Optional)</b>	PCIe 6000Ada/A6000/A5500/A5000/A4500/A4000/A3000/A2000/A30/A2/T4/L4	PCIe A6000/A5500/A5000/A4500/A4000/A3000/A2000/A2	MXM A1000/A2000/A4500/T1000/RTX5000	Hailo-8™ M.2 AI Acceleration Module
<b>Memory</b>	4 x DDR5 U-DIMM up to 128G Support 4400MHZ	4 x DDR5 U-DIMM up to 128GB (4000MHZ with 4 DIMM)	2 x DDR5 SO-DIMM up to 64G Support 4800MHZ	4 x DDR5 U-DIMM up to 128G Support 4400MHZ
<b>Storage</b>	4 x 2.5" SATAIII SSD (Support RAID 0/1/5/10) 1 x M.2 M-Key Slot, Support PCIe Gen 4 x4 for NVME/SATA, Size 2280 1 x M.2 M-Key Slot, Support PCIe Gen 4 x4 for NVME, Size 2280	2 x 2.5" SATAIII SSD 1 x M.2 M Key for NVME/SATA, Size 2280	2 x 2.5" SATAIII SSD 2 x M.2 M Key Slot, Support PCIe Gen 4 x4 for NVME/SATA, Size 2280	1 x 2.5" SATAIII SSD 1 x M.2 M-Key Slot, Support PCIe Gen 4 x4 for NVME/SATA, Size 2280 1 x M.2 M-Key Slot, Support PCIe Gen 4 x4 for NVME, Size 2280 (support M.2 AI accelerator)
<b>Front I/O</b>	8 x USB 3.2 Gen2 Type-A (10G) 1 x USB 3.2 Gen2 Type-C (20G) 3 x 2.5GbE LAN (RJ-45, 2 x support POE 802.3 at) 1 x 10GbE LAN (RJ-45) 1 x RS-485 (RJ-45) 2 x RS-232/422/485 (DB9) 1 x Line out 1 x Mic in 1 x 8bits GPIO (DB15) 2 x DP++1.4 1 x HDMI 2.0 1 x Power Button	1 x Power Button 2 x USB 2.0	6 x USB3.2 Gen2 Type-A(10G) 1 x USB3.2 Gen2 Type-C(20G) 5 x 2.5GbE LAN (RJ-45) 4 x RS-232/422/485 (DB9) 1 x 7bits GPIO(DB9) 1 x Power Button	8 x USB 3.2 Gen2 Type-A (10G) 1 x USB 3.2 Gen2 Type-C (20G) 3 x 2.5GbE LAN (RJ-45, 2 x support POE 802.3 at) 1 x 10GbE LAN (RJ-45) 1 x RS-485 (RJ-45) 2 x RS-232/422/485 (DB9) 1 x Line out 1 x Mic in 1 x 8bits GPIO (DB15) 2 x DP++1.4 1 x HDMI 2.0 1 x Power Button
<b>Rear I/O</b>	6 x SMA Antenna hole	6 x USB 3.2 Gen2 Type-A (10G) 1 x USB 3.2 Gen2 Type-C (20G) 3 x 2.5GbE LAN (RJ45) 1 x 10GbE LAN (RJ45) 2 x DP++1.4 1 x HDMI 2.1 3 x Jack support Line out/Line in/Mic in	5 x DP++ (HBR2) 1 x Line Out 1 x Mic in 2 x CAN Bus-Isolation 2.0B (optional) 2 x USB2.0 Type-A	6 x SMA Antenna hole
<b>Internal I/O</b>	N/A	N/A	N/A	N/A
<b>Expansion</b>	1x PCIe Gen4 x16 or Gen4 x8 (PCIe x16 slot) 1x PCIe Gen4 x8 (PCIe x16 slot) 1x PCIe Gen3 x4 (PCIe x4 slot) 1x PCIe Gen3 x4 (PCIe x16 slot) 1x PCIe Gen3 x1 (PCIe x1 slot) 1 x M.2 2230 E-Key 1 x M.2 3052 B-Key 1 x Nano SIM slot	1 x PCIe Gen5 x16 (PCIe x16 slot) 2 x PCIe Gen4 x4 (PCIe x4 slot) 1 x PCIe Gen3 x2 (PCIe x4 slot) 1 x M.2 2230 E-Key	1 x MXM Slot Gen4 x16 (Type B+)	1 x M.2 2230 E-Key 1 x M.2 3052 B-Key 1 x Nano SIM slot
<b>MISC. Function</b>	OOB (out of band), Built-in Innodisk – InnoAgent	N/A	OOB (out of band), Built-in Innodisk – InnoAgent	OOB (out of band), Built-in Innodisk – InnoAgent
<b>Power Consumption</b>	Full loading: up to 600 Watts	Full loading: up to 500/850 Watts	Full loading: up to 600 Watts	Full loading: up to 260 Watts
<b>Power Input / Connector</b>	DC-in 24 to 48VDC, 4-pin Terminal Block	AC-in 110-240VAC (FLEX ATX PSU)	DC-in 24VDC / 4-pin Terminal Block	DC-in 12~48VDC / 4-pin Terminal Block
<b>Dimension (W x D x H)</b>	340 x 213 x 279 mm	315 x 413 x 159mm	270 x 253 x 150 mm	340 x 86 x 253 mm
<b>Mounting</b>	Wallmount / Deskmount	N/A	Deskmount	Wallmount / Deskmount
<b>Net Weight</b>	11 Kg	10 kg	5.5 kg	5 Kg
<b>Vibration</b>	1Grms ,IEC60068-2-64,Random, 5 ~ 500 Hz ,1Hr / Axis (operation, w/o PCIe Card)	1Grms ,IEC60068-2-64,Random, 5 ~ 500 Hz ,1Hr / Axis (operation, w/o PCIe Card)	2Grms ,IEC60068-2-64,Random, 5 ~ 500 Hz ,1Hr / Axis (operation)	1Grms ,IEC60068-2-64,Random, 5 ~ 500 Hz ,1Hr / Axis (operation)
<b>Shock</b>	10G, IEC 60068-2-27, Half Sine, 11 ms Duration (operation, w/o PCIe Card)	10G, IEC 60068-2-27, Half Sine, 11 ms Duration (operation, w/o PCIe Card)	5G, IEC 60068-2-27, Half Sine, 11 ms Duration (operation)	10G, IEC 60068-2-27, Half Sine, 11 ms Duration (operation)
<b>Temperature</b>	Operating Temp. : 0°C ~ +50°C (32°F ~ 122°F) (w/o GPU) Operating Temp. : 0°C ~ +50°C (32°F ~ 122°F) (w/ 165W Passive GPU) Operating Temp. : 0°C ~ +40°C (32°F ~ 104°F) (w/ 300W Active GPU) Storage Temp. : -40°C ~ +85°C (-40°F ~ 185°F)	Operating Temp. : -10°C ~ +50°C , with 0.5m/s air flow Storage Temp. : -40°C ~ +85°C (-40°F ~ 185°F)	Operating Temp. : 0°C ~ +50°C (With MXM) Storage Temp. : -40°C ~ +85°C (-40°F ~ 185°F)	Operating Temp. : 0°C ~ +50°C (32°F ~ 122°F) Storage Temp. : -40°C ~ +85°C (-40°F ~ 185°F)
<b>Humidity</b>	95% @ 40°C Related Humidity (non-condensing)	95% @ 40°C Related Humidity (non-condensing)	95% @ 40°C Related Humidity (non-condensing)	95% @ 40°C Related Humidity (non-condensing)
<b>OS Support</b>	Windows 10 IOT LTSC / Windows 11 / Ubuntu 20.04/22.04	Windows 11 / Ubuntu 22.04	Windows 11 / Ubuntu 22.04	Windows 10 IOT LTSC / Windows 11 / Linux Ubuntu 20.04/22.04
<b>Certification</b>	CE / FCC Class A / UKCA / LVD / RoHS	CE / FCC Class A / UKCA / LVD / RoHS	CE / FCC Class A / UKCA / RoHS	CE / FCC Class A / UKCA / LVD / RoHS