

2023 - 2024

# ARM-BASED PLATFORM



[www.vecow.com](http://www.vecow.com)

Vecow

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*Everyone deserves a better system...*

# Vecow at a Glance

Founded in 2010, Vecow is a team of embedded experts and we aim to be your trusted embedded business partner. Vecow is committed to designing, developing, producing, and supplying high quality AIoT solutions with trusted reliability, advanced technology, and innovative concepts. Our products include: AI-ready Inference Systems, AI Computing Systems, Fanless Embedded Systems, Vehicle Computing Systems, Robust Computing Systems, Single Board Computers, Multi-Touch Computers/Displays, Frame Grabbers, Embedded Peripherals and Design & Manufacturing Services for Machine Vision, Autonomous Vehicle, Smart Robotics, Digital Rail, Public Security, Transportation & V2X, Smart Factory, Deep Learning, and any Edge AI applications.

## Autonomous Vehicle



Making driving safer and greener while delivering higher traffic efficiency and connection.

## Smart Robotics



Enabling the evolution of industry towards smarter, safer, and more efficient factories.

## Digital Rail



Making your rail journey safer, more enjoyable and connected through digital rail.

# Your Trusted Embedded Business Partner



## Smart **Edge AI** Solution Services

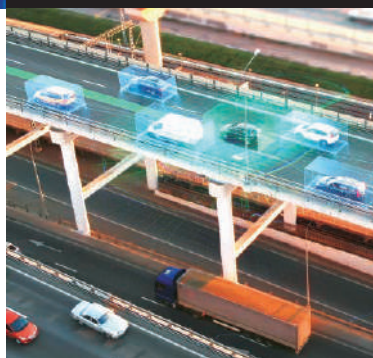
An Intelligent Future Made Possible

### Public Security



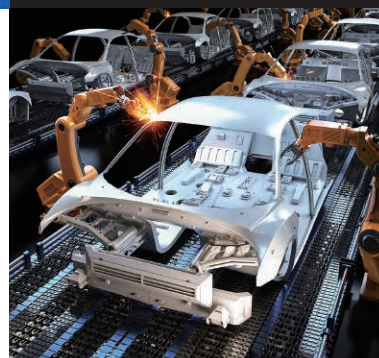
Building a safer, more comfortable for better living from contact-free technologies.

### Transportation & V2X



Delivering safe, robust, reliable, and efficient transportation management.

### Smart Factory



Accelerating the performance operations across machines and utilizing AI tools for digital factory.

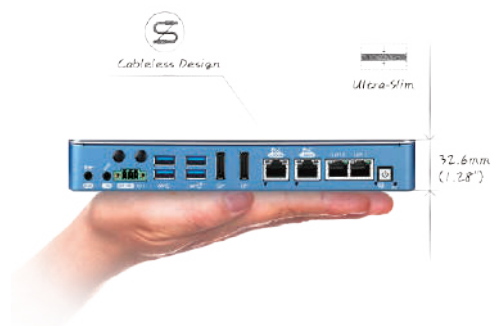
# Core Competencies

With seasoned edge computing professionals, leading integrated product features, flexible tailor-made services and one-stop comprehensive solution, Vecow serves trusted products and services to make AI-oriented IoT infrastructure and performance-driven edge computing applications possible.



## Leading Expertise

Vecow is a team of experienced embedded computing experts in product planning, design & development, manufacturing, sales & marketing and after service field. We target the latest performance-driven computing solution to make your real-time edge AI applications possible anytime anywhere. With years of embedded domain know-how learning from worldwide successful projects, we study, plan, design, produce, and fine-tune our deliveries armed with top-tier performance and optimized user's experiences for Machine Vision, Autonomous Vehicle, Smart Robotics, Digital Rail, Public Security, Transportation & V2X, Smart Factory, Deep Learning, and any Edge AI applications.

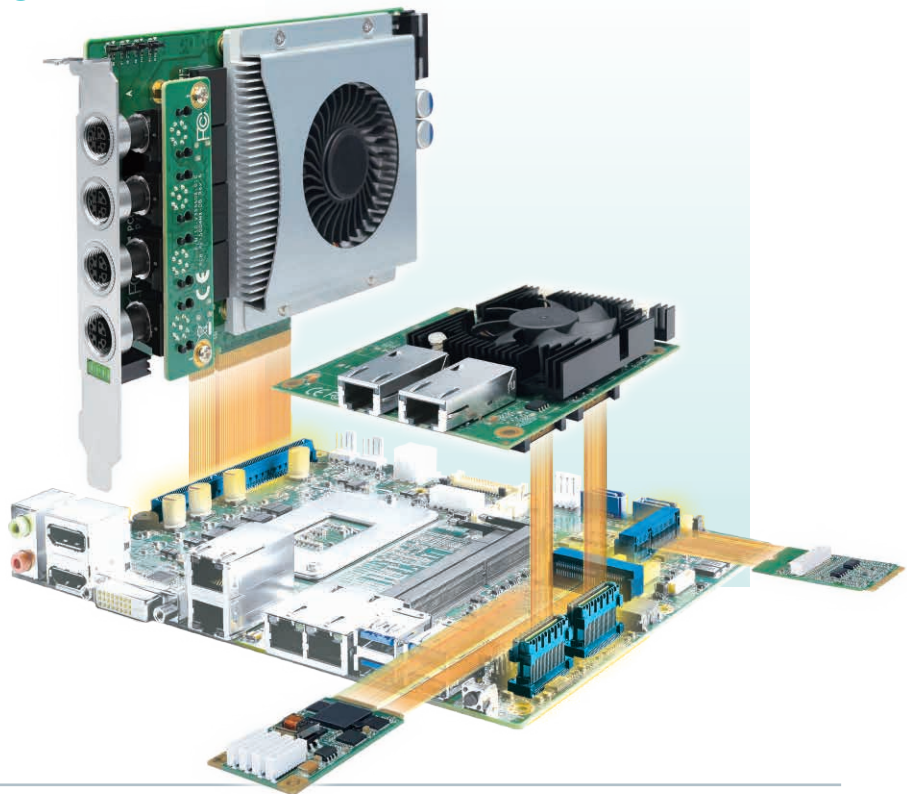
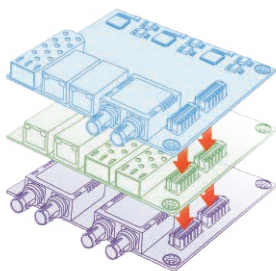


## Compact Design

Charactered with system-oriented features, such as fanless design, wide-range operating temperature, workable wide-range power input, smart circuit protection, user-friendly feature, cable-less & all-in-one single-board design, small form factor, and leading system performance, Vecow embedded computers are compact integrated and highly-reliable engines to meet various requirements of performance-driven vertical applications even in harsh environments.

## Easy Customization

Based on Vecow original design concepts, standard product deliveries, new solution features, and any of our technical achievements, we are willing to carry out innovative ideas with new extension delivery for you. Seasoned Vecow Design & Manufacturing Service team offers quality and professional tailor-made service to you with well-organized project status, less project design, research & development efforts, reduced total cost of project ownership (TCO) and even faster time-to-market.



**Top Tier Ecosystem**

## Flexible Teamwork

Vecow manages close relationship with our business partners to maintain our technical footprint, supplier management and new business opportunities. Our in-house embedded expertise covers product planning & management, hardware design & engineering, BIOS engineering, software design & engineering, mechanical engineering, design quality assurance, product manufacturing, procurement management, production management, quality assurance, field application engineering and after services. Supported by world-leading ecosystem and skillful embedded expertise, Vecow delivers one-stop integrated, speedy, quality and flexible solutions to meet your project requirements.

Compact and Performance-Driven

# NVIDIA Jetson Solutions

## In-Vehicle Computing

- Video encoding up to 4K60 and decoding up to 8K30
- Isolated CAN-FD and digital input output enable secure communications
- 8 GMSL automotive cameras for long distance with low latency
- In-band and out-of-band management for remote device control



## Jetson AGX Computing Systems

### Jetson AGX Orin



#### EAC-5000

- Up to 275 TOPS AI performance
- 8 GMSL, 2 GigE RJ45 (M12 X-coded)
- 1 PCIe x8 slot for 10GigE/PoE/USB Card

### Jetson AGX Xavier



#### EAC-3000

- Up to 32 TOPS AI performance
- 8 GMSL, 5 GigE LAN with 4 PoE+
- 4 USB 3.1, 2 Digital Display



Serves Flexible Configurations & Features In-Vehicle Ready Functions



aiixon

Allied Vision

e-con Systems  
Think Camera, Think e-con.

EDOM  
TECHNOLOGY CO., LTD.

oToBrite



## Autonomous Mobile Robot

- GMSL, MIPI CSI-2, USB and PoE+ wide variety of cameras
- Multiple M.2 expansion slots for flexible configurations
- Ruggedized USB and M12 X-coded to prevent loosening
- NVIDIA ISSAC and Deepstream SDK for robotics applications

## Jetson NX Computing Systems

### Jetson Orin NX



#### EAC-6000

- Up to 100 TOPS AI performance
- 4 GMSL/ MIPI CSI-2/ PoE+ RJ45 LAN
- 2 COM, 2 M.2 Key B expansions

### Jetson Xavier NX



#### EAC-2000

- Up to 21 TOPS AI performance
- 4 GMSL, 4 GigE with 2 PoE+, 4 USB 3.1
- 2 COM, 1 CAN, M.2 expansions

# Target SDGs

Dozens of countries have put forward “2050 Net-Zero Emissions” declarations and actions. To achieve net zero, companies can adopt demonstrated emission reduction measures to target emissions across their value chain and invest in innovative zero-carbon technologies. VHub ESG Solutions for Smart Factory help accelerate the transformation of manufacturing industries and bring competitiveness and environmental sustainability to meet the “Net-Zero” policy. Vecow VHub ESG solutions adopt digital technologies such as IoT Technology, Vision AI and AutoML.

Facility Management



Workforce Management



## Environment Monitoring

Combining intelligent sensors and the Vecow EMS solution provides real-time energy status, analyzes data, alerts, and predicts maintenance for the OT devices.



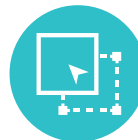
## Dynamic Analysis

Optimized using vision AI software tools in RTSP/ONVIF, the Vecow VHub AI Developer Premium creates efficient ways for production line and enhances productivity.



## Health Care

AI-powered smart cameras with OpenVINO and integrating Vecow Fever Scan Solutions, a contactless technology, factories can ensure workplace safety, hygiene and greater efficiency.



## M2M DAQ

To minimize the energy demands of Edge devices, Vecow Edge Gateway supports IOtech, a software-based solution, and provides AI performance, making the digital factory possible.



## AI Data Analysis



Anomaly Detection



Parameter Optimization



Power Consumption Prediction



Resource Optimization

VHub ESG Solutions provide various AI tools to predict equipment maintenance schedule and optimize production capacity through facility parameters like water, oil and power at the edge. It helps the manufacturing industry improve the process, product quality and reduce costs.



| Protocol & SDKs               |                         |
|-------------------------------|-------------------------|
| Vision AI Development         | Machine & Sensor DAQ    |
| <br>TCP/IP    OpenVINO        | <br>Modbus    Bluetooth |
|                               |                         |
| Reliable Ecosystem & Partners |                         |

## Recommend AIoT Solution

| Inference Platform  |  |
|---|--|
| <br><b>VAC-1100</b> <ul style="list-style-type: none"> <li>Foxconn Cortex-A53 Server-grade Computing</li> <li>Compact Hailo-8™ AI Accelerator, up to 26 TOPS</li> </ul> | <br><b>EAC-3000</b> <ul style="list-style-type: none"> <li>Small form factor, max 32 TOPS AI performance</li> <li>5 GigE LAN with 4 PoE+, 2 CAN Bus support</li> <li>Flexible Data-rate</li> </ul> |
| Edge Gateway  |  |
| <br><b>AIC-100</b> <ul style="list-style-type: none"> <li>NXP i.MX6ULL Arm Cortex-A7 Platform</li> <li>512MB SDRAM, 512MB Flash</li> </ul>                              | <br><b>EIC-2000</b> <ul style="list-style-type: none"> <li>NXP i.MX 8M Plus Arm Cortex-A53 Platform</li> <li>Embedded Neural Processing Unit, max 2.3 TOPS AI performance</li> </ul>               |

Target SDGs

# Energy Management

With the post-pandemic and the global environment facing many uncertainties and challenges, solution featuring energy-efficient with low-power computation plays a role in helping manufacturing industries to achieve digital transformation.

Vecow VHub Energy Management Solution Service provides a smart power management platform by one-stop solution. VHub EMS delivers real-time power consumption analysis to monitor operating status, alert trouble issues and even predict maintenance schedule.



## Platform Functions



### Real-time Dashboard

Real-time information for total energy usage and highlight abnormal devices.



### Carbon Emission Ranking

Precise reports for analyzing the carbon emission factor in company.



### Power Usage Analysis

Real-time power usage chart to calculate the power expansion.



### Alarm Notification

Multiple abnormal setting and notifications to prevent power lost.

## Feature Highlights



### Easy Installation

- Wireless Clamp Sensor
- Non-Stop Operation



### GUI Management

- Versatile Charts & Reports
- Real-time Analyzer



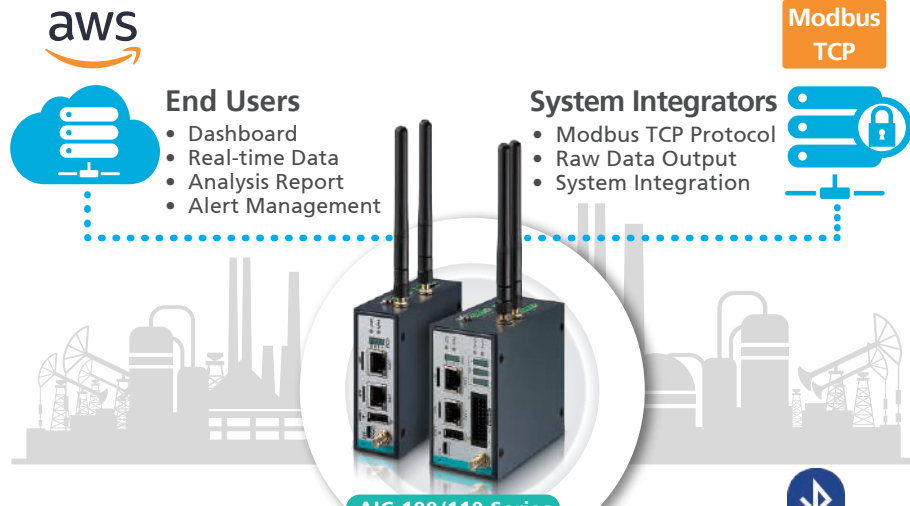
### Alert Monitoring

- Multiple Menu Setting
- APP Notification



### Integrated Platform

- Multiple Remote Devices
- Cross Factory Areas



## Recommend IoT Data Solution





### Edge Gateway









### AIC-100 Rugged Embedded System

- NXP i.MX6ULL Arm Cortex-A7 Platform
- 512MB SDRAM, 512MB Flash
- 2 LAN, 1 USB 2.0, 2 COM RS-232/485, 1 Micro SD, 1 Mini PCIe
- DC 9V to 50V, Compact & Fanless, -25°C to 70°C Operation

# Edge AI Computing

| Series                 |                    | NVIDIA Jetson Platform  |   |   |   |
|------------------------|--------------------|---|---|---|---|
| Model No.              |                    | EAL-1000  | EAC-5000  | EAC-3000/3000F  | EAC-6000  |
| Product Image          |                    |  |  |  |  |
| System                 | CPU                | Up to 24-core Arm® Cortex® -A78AE v8.2 64-bit CPU                                 | Up to 12-core Arm® Cortex® -A78AE v8.2 64-bit CPU                                 | 8-core NVIDIA Carmel ARM® v8.2 64-bit CPU   | Up to 8 core A78AE CPU, 2.0 GHz   |
|                        | GPU                | Up to 4096-core NVIDIA Ampere™ architecture GPU with up to 128 Tensor Cores       | Up to 2048-core NVIDIA Ampere™ architecture GPU with 64 Tensor Cores              | 512-cores NVIDIA Volta™ GPU with 64 Tensor cores                                    | Up to 1024 NVIDIA Ampere™ architecture GPU with 32 Tensor Cores                     |
|                        | AI Accelerator     | Up to 4x NVDLA Engines  | 2x NVDLA Engines  | 2x NVDLA Engines  | Up to 2x NVDLA Engines  |
|                        | Memory             | Up to 128GB LPDDR5 DRAM   | Up to 64GB LPDDR5 DRAM  | Up to 64GB LPDDR4x DRAM   | Up to 16GB LPDDR5 DRAM  |
|                        | eMMC               | 128GB   | 64GB  | 64GB  | NA  |
|                        | Ethernet           | NA  | RealTek RTL8211F, Intel® I210   | Microchip LAN7800, Intel® I210  | Intel® I210   |
|                        | OS Support         | Linux Ubuntu 20.04  | Linux Ubuntu 20.04  | Linux Ubuntu 18.04  | Linux Ubuntu 20.04  |
| Graphics               | Video Encode       | - HEVC : 2x4K @60<br>- H.264 : 1x4K @60   | - HEVC : 2x4K @60<br>- H.264 : 1x4K @60   | - HEVC : 4x4K @60<br>- H.264 : 4x4K @60   | -HEVC: 1x 4K @60<br>-H.264: 1 x 4K @60  |
|                        | Video Decode       | - HEVC : 1x8K @30<br>- H.264 : 1x4K @60   | - HEVC : 1x8K @30<br>- H.264 : 1x4K @60   | - HEVC : 2x8K @30<br>- H.264 : 4x4K @60   | -HEVC: 1x 8K @30<br>-H.264: 1 x 4K @60  |
| Camera                 | GMSL               | NA  | 8   | 8   | 4 (Optional)  |
| Display I/O            | Digital Display    | 2 (1 Internal)  | 1   | 2   | 1   |
| I/O Interface          | Serial             | 2 RS232/422/485   | 2 RS232/422/485   | 2 RS-232/422/485  | 2 RS 232/422/485  |
|                        | USB 3.0/3.1/3.2    | 1 USB 3.0, 1 USB Type C   | 5   | 4   | 3   |
|                        | USB 2.0            | 2 USB 2.0   | 1 (Micro USB w/ OTG)  | 1 (Micro USB w/ OTG)  | 1 (Micro USB w/ OTG)  |
|                        | GigE LAN           | 1   | 2   | 5 (4 w/ PoE*)   | 4 (4 w/ PoE++)  |
|                        | PoE LAN            | NA  | NA  | 4 (IEEE 802.3at)  | 4 (IEEE 802.3at, Optional)  |
|                        | M12                | NA  | 2 (X-coded, Optional)   | NA  | 4 (X-coded, Optional)   |
|                        | CAN Bus            | 2 CAN-FD  | 2 CAN-FD (Isolated)   | 2 CAN-FD (Isolated)   | 1 CAN-FD (Optional)   |
|                        | Audio              | NA  | NA  | NA  | NA  |
|                        | Isolated DIO/ GPIO | NA  | 16 (8 DI, 8 DO)   | NA  | 6 GPIO (Optional)   |
|                        | Console            | 1 (Micro USB)   | 1 (Micro USB)   | 1 (Micro USB)   | 1 (Micro USB)   |
| Storage                | SATA III           | NA  | NA  | NA  | NA  |
|                        | M.2                | 1 Key M 2280  | 2 Key M 2280  | 1 Key M 2280  | 1 Key M 2280  |
|                        | Micro SD           | 1   | 1   | 1   | NA  |
| Expansion              | Mini PCIe          | NA  | NA  | NA  | NA  |
|                        | SIM Card           | 1 (External)  | 2 (External)  | 2 (External)  | 2 (External)  |
|                        | M.2                | - 1 Key B 3042/3052<br>- 1 Key E 2230   | - 1 Key B 3042/3052<br>- 1 Key E 2230   | - 1 Key B 3042/3052<br>- 1 Key E 2230   | - 2 Key B 3042/3052<br>- 1 Key E 2230   |
|                        | SUMIT              | NA  | NA  | 1 (Optional)  | NA  |
| Power                  | Input              | DC-in 12V to 24V  | DC-in 9V to 50V   | DC-in 9V to 50V   | DC-in 9V to 50V   |
|                        | Connector          | Terminal Block  | Terminal Block  | Terminal Block  | Terminal Block  |
|                        | Ignition Control   | Yes (SW IGN)  | Yes (SW IGN)  | Yes (SW IGN)  | Yes (SW IGN)  |
|                        | Remote Switch      | Yes   | Yes   | Yes   | Yes   |
| Dimensions (W x L x H) |                    | 260 x 197 x 81.5 mm (10.2" x 7.8" x 3.2")   | 260 x 182 x 70 mm (10.2" x 7.2" x 2.7")   | 213 x 150 x 60 mm (8.4" x 5.9" x 2.4")  | 170 x 118 x 65 mm (6.7" x 4.6" x 2.6")  |
| Weight                 |                    | 4.5 kg (9.9 lb)   | 3.8 kg (8.4 lb)   | 2.4 kg (5.3 lb)   | 1.5 kg (3.3 lb)   |
| Mounting               |                    | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   |
| Operating Temperature  |                    | -20°C to 55°C (-4°F to 131°F)   | -20°C to 70°C (-4°F to 158°F)   | -20°C to 70°C (-4°F to 158°F)   | -20°C to 70°C (-4°F to 158°F)   |
| Storage Temperature    |                    | -40°C to 85°C (-40°F to 185°F)  | -40°C to 85°C (-40°F to 185°F)  | -40°C to 85°C (-40°F to 185°F)  | -40°C to 85°C (-40°F to 185°F)  |
| Humidity               |                    | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   |
| Vibration              |                    | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  |
| Shock                  |                    | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  |
| Certification          |                    | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   |

|   |   | RISC/Edge AI Computing  |   |   |   |
|---|---|---|---|---|---|
| EAC-2100  | EAC-2000  | EIC-2000  | EIC-1000  | VAC-1100  | VAC-1000  |
|  |  |  |  |  |  |
| 6-core NVIDIA Carmel ARM® v8.2 64-bit CPU   | 6-core NVIDIA Carmel ARM® v8.2 64-bit CPU   | NXP i.MX8M Plus Arm® Quad-core Cortex®-A53  | Rockchip RK3399 Arm® Dual-core Cortex-A72 + Quad-core Cortex-A53                  | Foxconn FXN3102 Arm® 24-core Cortex-A53 Processor                                   | Foxconn FXN3102 Arm® 24-core Cortex-A53 Processor                                   |
| 384-core NVIDIA Volta™ GPU with 48 Tensor Cores                                   | 384-core NVIDIA Volta™ GPU with 48 Tensor Cores                                   | GC7000UL  | ARM Mali-T860MP4  | NA  | NA  |
| 2x NVDLA Engines  | 2x NVDLA Engines  | NN Accel, Max 2.3 TOPS  | NA  | Hailo-8™ AI Processor, Max 26 TOPS  | Lightspeur® 2801S, Max 5.6 TOPS   |
| Up to 16GB LPDDR4x DRAM   | Up to 16GB LPDDR4x DRAM   | 4GB LPDDR4 SDRAM  | 2GB DDR3L SDRAM   | 16GB DDR4 with ECC  | 16GB DDR4 with ECC  |
| 16GB  | 16GB  | 32GB  | 32GB  | 64GB  | 64GB  |
| Intel® I350   | Intel® I350   | Realtek RTL8211F  | RealTek RTL8211E  | Realtek RTL8211F  | Realtek RTL8211F  |
| Linux Ubuntu 18.04  | Linux Ubuntu 18.04  | Ubuntu 20.04  | Linux Debian 9.0, Android 7.1   | Linux Ubuntu 18.04  | Linux Ubuntu 18.04  |
| - HEVC : 2x 2K @60<br>- H.264 : 2x 2K @60   | - HEVC : 2x 2K @60<br>- H.264 : 2x 2K @60   | - HEVC : 1080p @60<br>- H.264 : 1080p @60   | - H.264 : 1080p @30   | NA  | NA  |
| - HEVC : 2x 4K @30<br>- H.264 : 2x 2K @60   | - HEVC : 2x 4K @30<br>- H.264 : 2x 2K @60   | - HEVC : 1080p @60<br>- H.264 : 1080p @60   | - HEVC : 1080p @60<br>- H.264 : 1080p @60   | NA  | NA  |
| 4   | NA  | NA  | NA  | NA  | NA  |
| 1   | 1   | 1   | 1   | NA  | NA  |
| 2 RS-232/485  | 2 RS-232/485  | 2 RS-232/422/485  | 2 RS-232/422/485  | NA  | NA  |
| 4   | 4   | 2   | 1   | 2   | 2   |
| 1 (Micro USB w/ OTG)  | 1 (Micro USB w/ OTG)  | NA  | 1 (Internal)  | NA  | NA  |
| 4 (2 w/ PoE*)   | 4 (2 w/ PoE*)   | 2   | 1   | 2   | 2   |
| 2 (IEEE 802.3at)  | 2 (IEEE 802.3at)  | NA  | NA  | NA  | NA  |
| NA  | NA  | NA  | NA  | NA  | NA  |
| 1 CAN Bus   | NA  | 2 (Optional)  | NA  | NA  | NA  |
| NA  | NA  | 1 Mic-in, 1 Line-out  | 1 Mic-in, 1 Line-out  | NA  | NA  |
| NA  | NA  | 4 (Optional)  | NA  | NA  | NA  |
| 1 (Micro USB)   | 1 (Micro USB)   | 1 (Micro USB)   | NA  | 1 (Micro USB)   | 1 (Micro USB)   |
| NA  | NA  | NA  | NA  | 1   | 1   |
| 1 Key M 2280  | 1 Key M 2280  | NA  | NA  | 1 Key M 2280  | 1 Key M 2280  |
| 1   | 1   | 1   | 1   | NA  | NA  |
| NA  | NA  | 1   | 1   | NA  | NA  |
| 1 (External)  | 1 (External)  | 2   | 1   | NA  | NA  |
| - 1 Key B 3042/3052<br>- 1 Key E 2230   | - 1 Key B 3042/3052<br>- 1 Key E 2230   | 1 Key B 3042/3052   | NA  | NA  | NA  |
| NA  | NA  | NA  | NA  | NA  | NA  |
| DC-in 9V to 50V   | DC-in 9V to 50V   | DC-in 9V to 55V   | DC-in 9V to 55V   | DC-in 9V to 55V   | DC-in 9V to 55V   |
| Terminal Block  | Terminal Block  | Terminal Block  | Terminal Block  | Terminal Block  | Terminal Block  |
| NA  | NA  | NA  | NA  | NA  | NA  |
| NA  | NA  | NA  | NA  | NA  | NA  |
| 150 x 106 x 62 mm<br>(5.9" x 4.2" x 2.4")   | 150 x 106 x 50 mm<br>(5.9" x 4.2" x 2.0")   | 130 x 78.5 x 42 mm<br>(5.1" x 3.1" x 1.7")  | 136 x 110 x 47 mm<br>(5.4" x 4.3" x 1.8")   | 170 x 118 x 40 mm<br>(6.7" x 4.6" x 1.6")   | 170 x 118 x 40 mm<br>(6.7" x 4.6" x 1.6")   |
| 1.3 kg (2.9 lb)   | 1.2 kg (2.6 lb)   | 0.5 kg (1.1 lbs)  | 0.4 kg (0.9 lb)   | 0.9 kg (2.0 lb)   | 0.9 kg (2.0 lb)   |
| Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   |
| -20°C to 65°C (-4°F to 149°F)   | -20°C to 70°C (-4°F to 158°F)   | -25°C to 70°C<br>(-13°F to 158°F)   | 0°C to 70°C<br>(32°F to 158°F)  | -40°C to 70°C<br>(-40°F to 158°F)   | -40°C to 70°C<br>(-40°F to 158°F)   |
| -40°C to 85°C (-40°F to 185°F)  | -40°C to 85°C (-40°F to 185°F)  | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)   |
| 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   |
| MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  |
| MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  |
| CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   | CE, FCC, EN50155, EN50121-3-2   |

1 Edge AI Computing

2 IoT Gateway

3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# EAC-5000

NVIDIA® Jetson AGX Orin™ Embedded AI Computing System



## Features

- Advanced NVIDIA® Jetson AGX Orin™ platform delivers up to 275 TOPS AI performance
- The latest NVIDIA Ampere™ architecture, featuring with 2048 NVIDIA® CUDA® cores and 64 Tensor cores
- Supports 8 GMSL 1/2 automotive cameras with Fakra-Z connectors
- 1 PCIe Gen4 x8 expansion slot supports optional multiple 10GigE/PoE LAN/USB connections
- 2 Isolated CAN Bus support Flexible Data-rate, 2 COM RS-232/422/485
- 2 GigE LAN, 5 USB 3.1, 1 Digital Display supports 8K60
- Supports device remote management by Allxon
- DC 9V to 50V wide range power input, Ignition Power Control



## Specifications

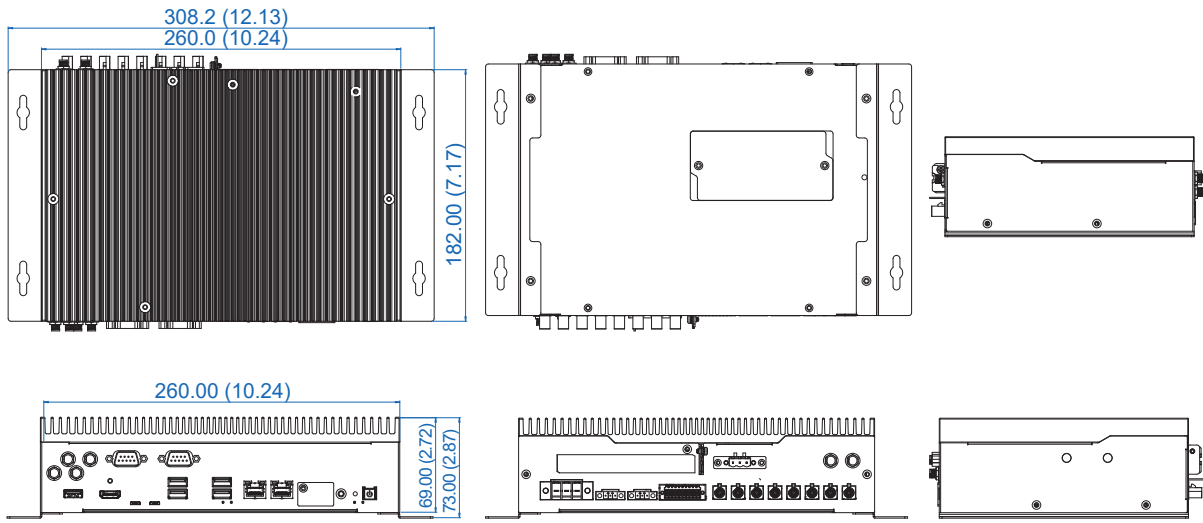
| System                |   |
|-----------------------|---|
| <b>CPU</b>            | EAC-5000-R32 : 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU<br>EAC-5000-R64 : 12-core Arm® Cortex®-A78AE v8.2 64-bit CPU   |
| <b>GPU</b>            | EAC-5000-R32 : 1792-core NVIDIA Ampere™ architecture GPU with 56 Tensor Cores<br>EAC-5000-R64 : 2048-core NVIDIA Ampere™ architecture GPU with 64 Tensor Cores            |
| <b>DL Accelerator</b> | 2x NVDLA Engines  |
| <b>Memory</b>         | EAC-5000-R32 : 1 32GB LPDDR5 DRAM<br>EAC-5000-R64 : 1 64GB LPDDR5 DRAM  |
| <b>OS</b>             | Linux Ubuntu 20.04 with JetPack   |
| I/O Interface         |   |
| <b>USB</b>            | <ul style="list-style-type: none"> <li>▪ 1 USB 3.1 Gen 2, supports up to 10Gbp</li> <li>▪ 4 USB 3.1, support up to 5Gbps</li> </ul>                                       |
| <b>Serial</b>         | 2 COM RS-232/422/485  |
| <b>CAN Bus</b>        | 2 Isolated CAN Bus support CAN FD   |
| <b>DIO</b>            | 16 Isolated DIO (8 DI, 8 DO)  |
| <b>Micro USB</b>      | <ul style="list-style-type: none"> <li>▪ 1 Micro USB console debug port</li> <li>▪ 1 Micro USB OS flash port</li> </ul>   |
| <b>Button</b>         | <ul style="list-style-type: none"> <li>▪ 1 Power Button</li> <li>▪ 1 Force Recovery Button</li> <li>▪ 1 Reset Button</li> </ul>   |
| <b>LED</b>            | Power, HDD, 2 User Programmable   |
| <b>SIM</b>            | 2 SIM Card Socket   |
| <b>Antenna</b>        | 6 Antenna for WIFI/4G/5G/LTE/GPRS/UMTS  |
| Expansion             |   |
| <b>PCIe Slot</b>      | 1 PCIe Gen4 x8 Slot   |
| <b>M.2</b>            | <ul style="list-style-type: none"> <li>▪ 1 M.2 Key B Socket (3042/3052)</li> <li>▪ 1 M.2 Key E Socket (2230)</li> </ul>   |
| Graphics              |   |
| <b>Interface</b>      | 1 Digital Display, up to 8K60   |
| <b>Video Encode</b>   | EAC-5000-R32 : 1x 4K @60, 3x 4K @30, 6x 1080p @60, 12x 1080p @30 (HEVC)<br>EAC-5000-R64 : 2x 4K @60, 4x 4K @30, 8x 1080p @60, 16x 1080p @30 (HEVC)                        |
| <b>Video Decode</b>   | EAC-5000-R32 : 1x 8K @30, 2x 4K @60, 4x 4K @30, 9x 1080p @60, 18x 1080p @30 (HEVC)<br>EAC-5000-R64 : 1x 8K @30, 3x 4K @60, 7x 4K @30, 11x 1080p @60, 22x 1080p @30 (HEVC) |

| Camera                        |   |
|-------------------------------|---|
| <b>GMSL</b>                   | 8 Fakra-Z connectors for GMSL 1/2 automotive cameras  |
| Storage                       |   |
| <b>M.2</b>                    | 2 M.2 Key M Socket (2280)   |
| <b>eMMC</b>                   | 1 eMMC 5.1, 64GB  |
| <b>SD</b>                     | 1 Micro SD (External)   |
| Ethernet                      |   |
| <b>LAN 1 to LAN 2</b>         | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector (Optional X-coded M12 Connector)                       |
| Power                         |   |
| <b>Power Input</b>            | DC 9V to 50V  |
| <b>Power Interface</b>        | 3-pin Terminal Block : V+, V-, Frame Ground   |
| <b>Ignition Control</b>       | 16-mode Software Ignition Control   |
| <b>Remote Switch</b>          | 3-pin Remote Switch Terminal Block  |
| <b>OOB Management</b>         | Remote Power On/Off and Remote Reset Control (Optional)   |
| Mechanical                    |   |
| <b>Dimensions (W x L x H)</b> | 260 mm x 182 mm x 69 mm (10.23" x 7.16" x 2.72")  |
| <b>Weight</b>                 | 3.8 kg (8.39 lb)  |
| <b>Mounting</b>               | <ul style="list-style-type: none"> <li>▪ Wallmount</li> <li>▪ DIN Rail and VESA Mount (Optional)</li> </ul> |
| Environment                   |   |
| <b>Operating Temp.</b>        | <b>30W TDP Mode</b> : -20°C to 70°C (-4°F to 158°F)<br><b>MAXN TDP Mode</b> : -20°C to 55°C (-4°F to 131°F) |
| <b>Storage Temp.</b>          | -40°C to 85°C (-40°F to 185°F)  |
| <b>Humidity</b>               | 5% to 95% Humidity, non-condensing  |
| <b>Relative Humidity</b>      | 95% @70°C   |
| <b>Shock</b>                  | Operating, MIL-STD-810G, Method 516.7, Procedure I  |
| <b>Vibration</b>              | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4  |
| <b>EMC</b>                    | CE, FCC, EN50155, EN50121-3-2   |

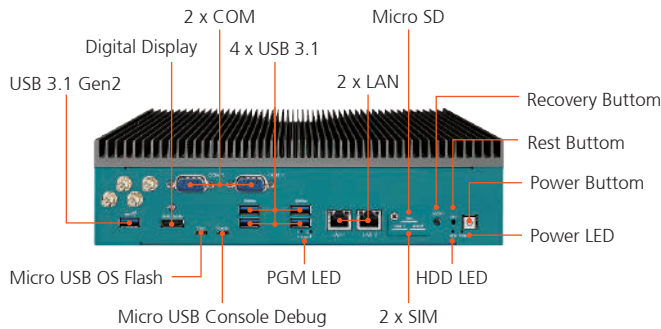


# Dimensions

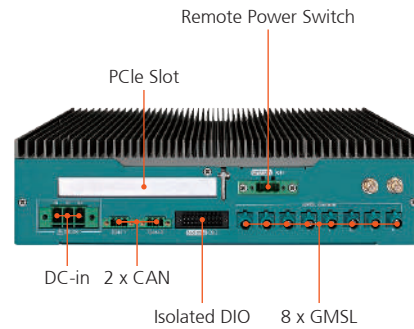
Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

| Model Name   | Platform        | RAM  | LAN | USB 3.1 | Serial | Iso. CAN | Iso. DIO | PCIe Slot | GMSL | SIM | M.2 |
|--------------|-----------------|------|-----|---------|--------|----------|----------|-----------|------|-----|-----|
| EAC-5000-R32 | Jetson AGX Orin | 32GB | 2   | 5       | 2      | 2        | 16       | 1         | 8    | 2   | 4   |
| EAC-5000-R64 |                 | 64GB |     |         |        |          |          |           |      |     |     |

### Accessories

|                             |   |
|-----------------------------|---|
| <b>PWA-160WB-WT</b>         | 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>PWA-180WB</b>            | 180W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block                                  |
| <b>PWA-280WB-WT</b>         | 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>VESA Mount</b>           | VESA Mounting Kit   |
| <b>DIN-RAIL</b>             | DIN Rail and VESA Mounting Kit  |
| <b>GMSL Camera Kit</b>      | GMSL Camera with Fakra-Z connector  |
| <b>M.2 Storage Module</b>   | M.2 Key M/Key B PCIe Storage Module   |
| <b>5G Module</b>            | 5G Module with Antenna  |
| <b>4G Module</b>            | 4G/GPS Module with Antenna  |
| <b>WiFi &amp; Bluetooth</b> | WiFi & Bluetooth Module with Antenna  |
| <b>OOB Module</b>           | On-board Out-of-Band Management Module  |

1 Edge AI Computing

2 IoT Gateway

3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# EAC-3000/3000F

NVIDIA® Jetson AGX Xavier™ Edge AI Computing System



## Features

- Compact NVIDIA® Jetson AGX Xavier™ supports workstation-grade up to 32 TOPS AI performance with rich AI tools and workflows
- NVIDIA Volta architecture with 512 NVIDIA® CUDA® cores and 64 Tensor cores
- DC 9V to 50V wide range power input, Ignition Power Control
- 5 GigE LAN with 4 PoE+, 4 USB 3.0, 2 Digital Display
- Supports 8 GMSL2 automotive cameras with Fakra-Z
- 2 CAN Bus support Flexible Data-rate, 2 COM RS-232/422/485
- M.2 supports 5G/4G/LTE/WiFi/BT/GPS
- Support 24/7 secure remote monitoring, control, and OTA deployment empowered by Allox



## Specifications

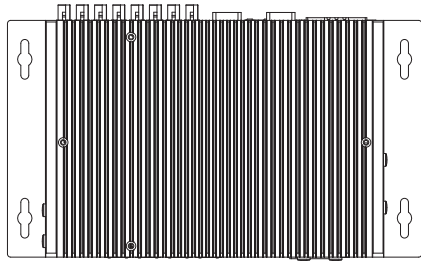
| System         |   |
|----------------|---|
| CPU            | 8-core NVIDIA Carmel ARM® v8.2 64-bit CPU   |
| GPU            | NVIDIA Volta architecture with 512 NVIDIA® CUDA® cores and 64 Tensor cores  |
| DL Accelerator | 2x NVDLA Engines  |
| Memory         | 1 LPDDR4x DRAM, Up to 64GB  |
| OS             | Linux Ubuntu 18.04 with JetPack   |
| I/O Interface  |   |
| USB            | 4 USB 3.0 Type A  |
| Serial         | 2 COM RS-232/422/485  |
| CAN Bus        | 2 CAN Bus support CAN FD (Optional Isolation)   |
| Micro USB      | <ul style="list-style-type: none"> <li>▪ 1 Micro USB console debug port</li> <li>▪ 1 Micro USB OS flash port</li> </ul>   |
| Button         | <ul style="list-style-type: none"> <li>▪ 1 Power Button</li> <li>▪ 1 Force Recovery Button</li> <li>▪ 1 Reset Button</li> </ul>   |
| LED            | Power, HDD, 2 User Programmable   |
| SIM            | 2 SIM Card Socket   |
| Antenna        | 6 Antenna for WiFi/4G/5G/LTE/GPRS/UMTS  |
| Expansion      |   |
| M.2            | <ul style="list-style-type: none"> <li>▪ 1 M.2 Key B Socket (3042/3052)</li> <li>▪ 1 M.2 Key E Socket (2230)</li> </ul>   |
| Graphics       |   |
| Interface      | 2 Digital Display, up to 4Kx2K @30Hz  |
| Video Encode   | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 4x4K @60, 8x4K @30, 16x1080p @60, 32x1080p @30</li> <li>▪ H.264 : Up to 4x4K @60, 8x4K @30, 14x1080p @60, 30x1080p @30</li> </ul> |
| Video Decode   | <ul style="list-style-type: none"> <li>▪ HEVC : 2x8K @30, 6x4K @60, 12x4K@30, 26x1080p @60, 52x1080p @30</li> <li>▪ H.264 : 4x4K @60, 8x4K @30, 16x1080p @60, 32x1080p @30</li> </ul>   |
| Camera         |   |
| GMSL           | 8 Fakra-Z connectors for GMSL 1/GMSL 2 automotive cameras   |

| Storage           |  |
|-------------------|--|
| M.2               | 1 M.2 Key M Socket (2280)  |
| eMMC              | 1 eMMC 5.1, 32GB   |
| SD                | 1 Micro SD (External)  |
| Ethernet          |  |
| LAN 1             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| PoE               |  |
| LAN 2 to LAN 5    | IEEE 802.3at (25.5W/48V) GigE PoE+ LAN, RJ45 Connector   |
| Power             |  |
| Power Input       | DC 9V to 50V   |
| Power Interface   | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Ignition Control  | 16-mode Software Ignition Control  |
| Remote Switch     | 3-pin Remote Switch Terminal Block   |
| Mechanical        |  |
| Dimensions        | 212.6mm x 149.0mm x 60.4mm (8.37" x 5.87" x 2.38")   |
| Weight            | 2.4 kg (5.29 lb)   |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount</li> <li>▪ DIN Rail Mount (Optional)</li> </ul>                                 |
| Environment       |  |
| Operating Temp.   | <b>30W TDP Mode</b> : -20°C to 70°C (-4°F to 158°F), Fanless<br><b>MAX TDP Mode</b> : -20°C to 70°C (-4°F to 158°F), with Fan Sink |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)   |
| Humidity          | 5% to 95% Humidity, non-condensing   |
| Relative Humidity | 95% @70°C  |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| EMC               | CE, FCC, EN50155, EN50121-3-2  |

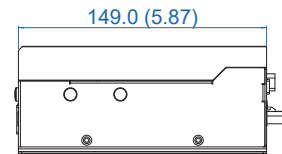
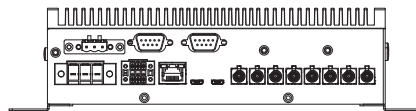
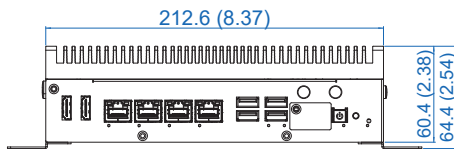
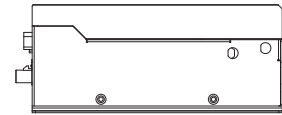
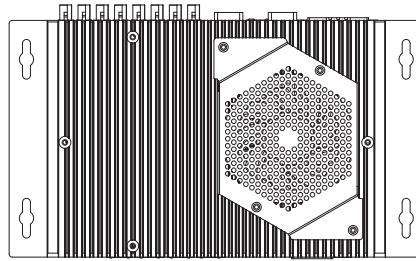
# Dimensions

Unit : mm/ inch

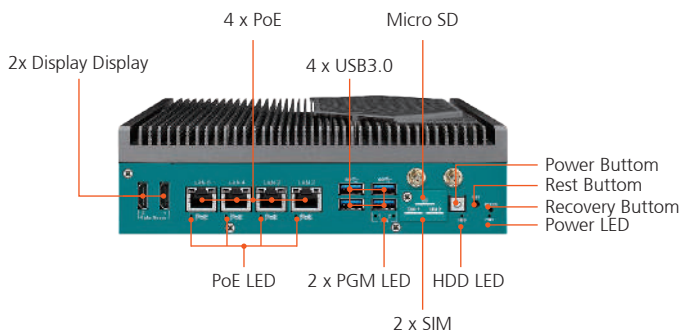
EAC-3000



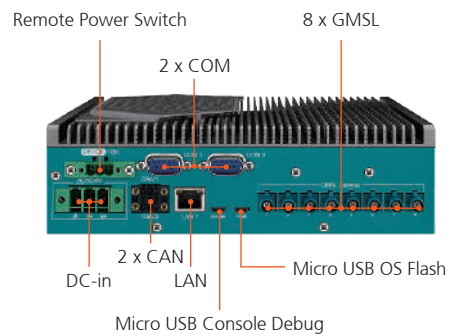
EAC-3000F



## Front I/O



## Rear I/O



## Order Information

| Model Name   | Platform          | RAM  | LAN | PoE+ | USB 3.0 | M.2 | Serial | SIM | CAN | GMSL |
|--------------|-------------------|------|-----|------|---------|-----|--------|-----|-----|------|
| EAC-3000-R64 | Jetson AGX Xavier | 64GB | 5   | 4    | 4       | 3   | 2      | 2   | 2   | 8    |
| EAC-3000-R32 |                   | 32GB |     |      |         |     |        |     |     |      |

### Accessories

|                    |   |
|--------------------|---|
| PWA-160WB-WT       | 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| PWA-180WB          | 180W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block                                  |
| PWA-280WB-WT       | 280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| VESA Mount         | VESA Mounting Kit   |
| DIN-RAIL           | DIN Rail and VESA Mounting Kit  |
| GMSL Camera Kit    | GMSL Camera with Fakra-Z connector  |
| M.2 Storage Module | M.2 Key M/Key B PCIe Storage Module   |
| 5G Module          | 5G Module with Antenna  |
| 4G Module          | 4G/GPS Module with Antenna  |
| WiFi & Bluetooth   | WiFi & Bluetooth Module with Antenna  |

1 Edge AI Computing

2 IoT Gateway

3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# EAC-2100

NVIDIA® Jetson Xavier™ NX Edge AI Computing System



## Features

- Small form factor NVIDIA® Jetson Xavier™ NX supports up to 21 TOPS AI performance
- Advanced NVIDIA Volta™ architecture with 384 NVIDIA® CUDA® cores and 48 Tensor cores
- 4 GigE LAN with 2 PoE+, 4 USB 3.1, 1 Digital Display
- Supports 4 GMSL2 automotive cameras with Fakra-Z
- M.2 for 5G/4G/LTE/WiFi/BT/GPRS/UMTS
- Storage : M.2 PCIe NVMe SSD, External Micro SD
- DC 9V to 50V wide range power input
- Support 24/7 secure remote monitoring, control, and OTA deployment empowered by Allxon



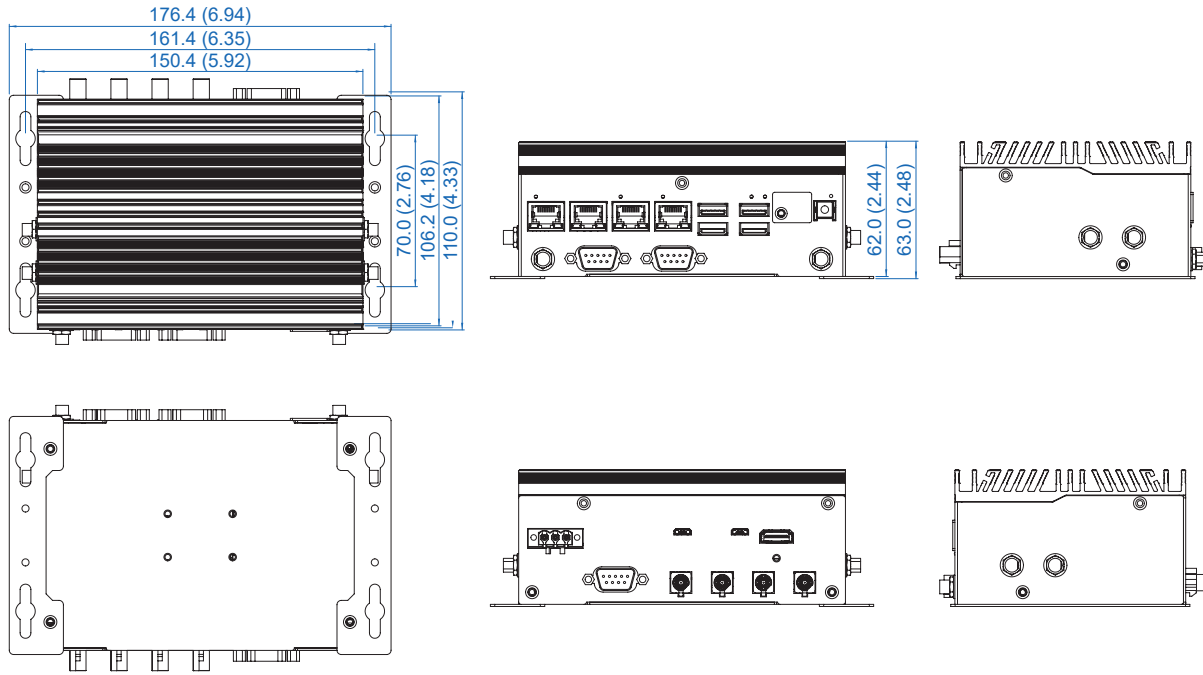
## Specifications

| System         |   |
|----------------|---|
| CPU            | 6-core NVIDIA Carmel ARM® v8.2 64-bit CPU   |
| GPU            | 384-core NVIDIA Volta™ GPU with 48 Tensor Cores   |
| DL Accelerator | 2x NVDLA Engines  |
| Memory         | 1 LPDDR4x DRAM, 8GB   |
| OS             | Linux Ubuntu 18.04 with JetPack   |
| I/O Interface  |   |
| USB            | 4 USB 3.1 Type A  |
| Serial         | 2 COM RS-232/485  |
| CAN Bus        | 1 CAN Bus 2.0 A/B   |
| Micro USB      | <ul style="list-style-type: none"> <li>▪ 1 Micro USB console debug port</li> <li>▪ 1 Micro USB OS flash port</li> </ul>   |
| Button         | <ul style="list-style-type: none"> <li>▪ 1 User-Define Button</li> <li>▪ 1 Force Recovery Button</li> </ul>   |
| LED            | 2 PoE, 2 User Programming   |
| SIM            | 1 Nano SIM Card Socket  |
| Antenna        | 6 Antenna for 5G/WiFi/4G/LTE/GPRS/UMTS  |
| Expansion      |   |
| M.2            | <ul style="list-style-type: none"> <li>▪ 1 M.2 Key B Socket (3042/3052)</li> <li>▪ 1 M.2 Key E Socket (2230)</li> </ul>   |
| Graphics       |   |
| Interface      | 1 Digital Display, up to 3840 x 2160 @60Hz  |
| Video Encode   | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 2x2160p @60, 4x2160p @30, 10x1080p @60, 22x1080p @30</li> <li>▪ H.264 : Up to 2x2160p @60, 4x2160p @30, 10x1080p @60, 20x1080p @30</li> </ul>               |
| Video Decode   | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 2x4320p @30, 6x2160p @60, 12x2160p @30, 22x1080p @60, 44x1080p @30</li> <li>▪ H.264 : Up to 2x2160p @60, 6x2160p @30, 10x1080p @60, 22x1080p @30</li> </ul> |
| Camera         |   |
| GMSL           | 4 Fakra-Z connectors for GMSL 1/2 automotive cameras  |

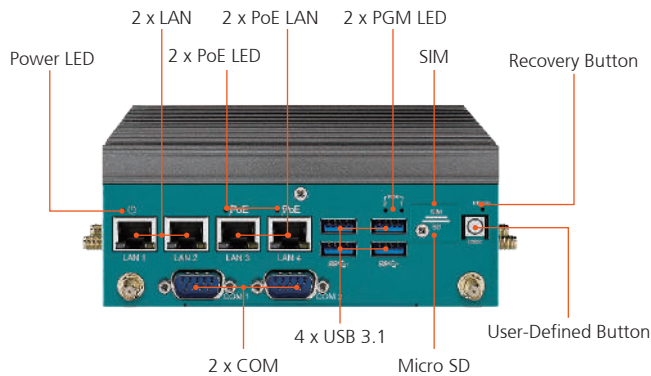
| Storage           |  |
|-------------------|--|
| M.2               | 1 M.2 Key M Socket (2280)  |
| eMMC              | 1 eMMC 5.1, 16GB   |
| SD                | 1 Micro SD (External)  |
| Ethernet          |  |
| LAN 1             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| LAN 2             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| PoE               |  |
| LAN 3             | IEEE 802.3at (25.5W/48V) GigE PoE+ LAN, RJ45 Connector   |
| LAN 4             | IEEE 802.3at (25.5W/48V) GigE PoE+ LAN, RJ45 Connector   |
| Power             |  |
| Power Input       | DC 9V to 50V   |
| Power Interface   | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Mechanical        |  |
| Dimensions        | 150.4mm x 106.2mm x 62.0mm (5.92" x 4.18" x 2.44")   |
| Weight            | 1.3 kg (2.9 lb)  |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul> |
| Environment       |  |
| Operating Temp.   | 15W TDP : -20°C to 60°C (-4°F to 140°F)<br>10W TDP : -20°C to 65°C (-4°F to 149°F)                                     |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)   |
| Humidity          | 5% to 95% Humidity, non-condensing   |
| Relative Humidity | 95% @70°C  |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| EMC               | CE, FCC, EN50155, EN50121-3-2  |

## Dimensions

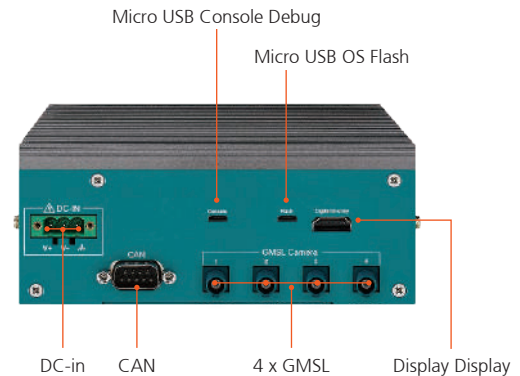
Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

| Model Name | Platform         | LAN | PoE+ | USB 3.1 | M.2 | Serial | SIM | GMSL | CAN |
|------------|------------------|-----|------|---------|-----|--------|-----|------|-----|
| EAC-2100   | Jetson Xavier NX | 4   | 2    | 4       | 3   | 2      | 1   | 4    | 1   |

## Accessories

|                             |   |
|-----------------------------|---|
| <b>PWA-120W1</b>            | 120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block                                  |
| <b>PWA-160W-WT</b>          | 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>             | DIN Rail Kit  |
| <b>GMSL Camera Kit</b>      | GMSL Camera with Fakra-Z connector  |
| <b>M.2 Storage Module</b>   | M.2 Key M/Key B PCIe Storage Module   |
| <b>5G Module</b>            | 5G Module with Antenna  |
| <b>4G Module</b>            | 4G/GPS Module with Antenna  |
| <b>WiFi &amp; Bluetooth</b> | WiFi & Bluetooth Module with Antenna  |

1 Edge AI Computing

2 IoT Gateway

3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# EAC-2000

NVIDIA® Jetson Xavier™ NX Edge AI Computing System



## Features

- Small form factor NVIDIA® Jetson Xavier™ NX supports up to 21 TOPS AI performance
- Advanced NVIDIA Volta™ architecture with 384 NVIDIA® CUDA® cores and 48 Tensor cores
- Fanless -20°C to 70°C operation
- 4 GigE LAN with 2 PoE+, 4 USB 3.1, 1 Digital Display
- M.2 for 5G/4G/LTE/WiFi/BT/GPRS/UMTS
- Storage : M.2 PCIe NVMe SSD, External Micro SD
- DC 9V to 50V wide range power input
- Support 24/7 secure remote monitoring, control, and OTA deployment empowered by Allxon



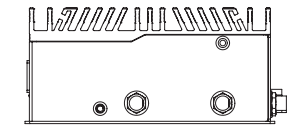
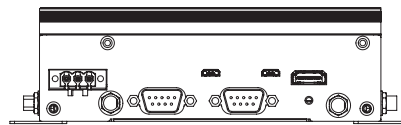
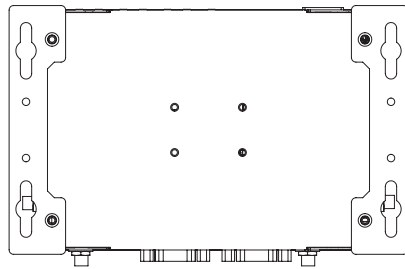
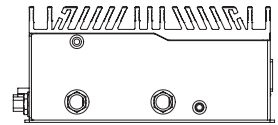
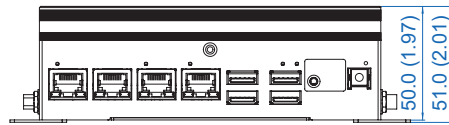
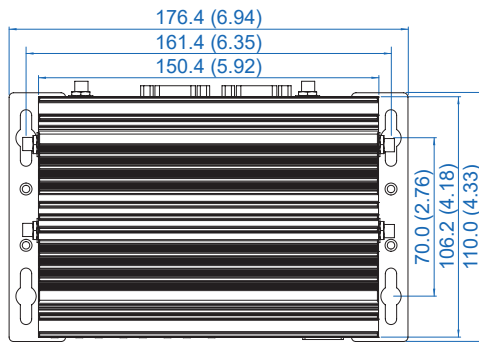
## Specifications

| System         |   |
|----------------|---|
| CPU            | 6-core NVIDIA Carmel ARM® v8.2 64-bit CPU   |
| GPU            | 384-core NVIDIA Volta™ GPU with 48 Tensor Cores   |
| DL Accelerator | 2x NVDLA Engines  |
| Memory         | 1 LPDDR4x DRAM, 8GB   |
| OS             | Linux Ubuntu 18.04 with JetPack   |
| I/O Interface  |   |
| USB            | 4 USB 3.1 Type A  |
| Serial         | 2 COM RS-232/485  |
| Micro USB      | <ul style="list-style-type: none"> <li>▪ 1 Micro USB console debug port</li> <li>▪ 1 Micro USB OS flash port</li> </ul>   |
| Button         | <ul style="list-style-type: none"> <li>▪ 1 User-Define Button</li> <li>▪ 1 Force Recovery Button</li> </ul>   |
| LED            | 2 PoE, 2 User Programming   |
| SIM            | 1 Nano SIM Card Socket  |
| Antenna        | 6 Antenna for 5G/WiFi/4G/LTE/GPRS/UMTS  |
| Expansion      |   |
| M.2            | <ul style="list-style-type: none"> <li>▪ 1 M.2 Key B Socket (3042/3052)</li> <li>▪ 1 M.2 Key E Socket (2230)</li> </ul>   |
| Graphics       |   |
| Interface      | 1 Digital Display, up to 3840 x 2160 @60Hz  |
| Video Encode   | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 2x2160p @60, 4x2160p @30, 10x1080p @60, 22x1080p @30</li> <li>▪ H.264 : Up to 2x2160p @60, 4x2160p @30, 10x1080p @60, 20x1080p @30</li> </ul>               |
| Video Decode   | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 2x4320p @30, 6x2160p @60, 12x2160p @30, 22x1080p @60, 44x1080p @30</li> <li>▪ H.264 : Up to 2x2160p @60, 6x2160p @30, 10x1080p @60, 22x1080p @30</li> </ul> |
| Storage        |   |
| M.2            | 1 M.2 Key M Socket (2280)   |
| eMMC           | 1 eMMC 5.1, 16GB  |
| SD             | 1 Micro SD (External)   |

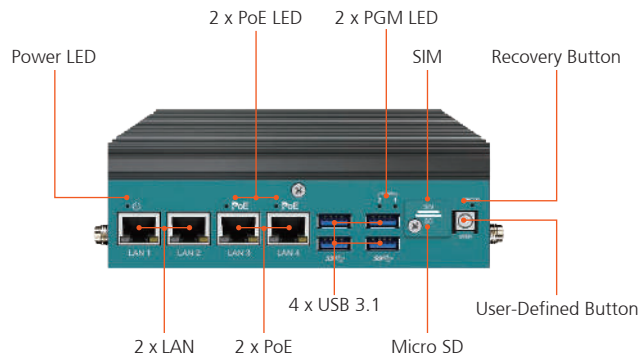
| Ethernet          |  |
|-------------------|--|
| LAN 1             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| LAN 2             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| PoE               |  |
| LAN 3             | IEEE 802.3at (25.5W/48V) GigE PoE+ LAN, RJ45 Connector   |
| LAN 4             | IEEE 802.3at (25.5W/48V) GigE PoE+ LAN, RJ45 Connector   |
| Power             |  |
| Power Input       | DC 9V to 50V   |
| Power Interface   | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Mechanical        |  |
| Dimensions        | 150.4mm x 106.2mm x 50.0mm (5.92" x 4.18" x 1.97")   |
| Weight            | 1.2 kg (2.6 lb)  |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul> |
| Environment       |  |
| Operating Temp.   | 15W TDP : -20°C to 65°C (-4°F to 149°F)<br>10W TDP : -20°C to 70°C (-4°F to 158°F)                                     |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)   |
| Humidity          | 5% to 95% Humidity, non-condensing   |
| Relative Humidity | 95% @70°C  |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| EMC               | CE, FCC, EN50155, EN50121-3-2  |

## Dimensions

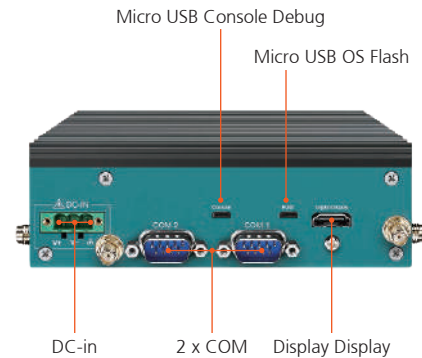
Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

| Model Name | Platform         | LAN | PoE+ | USB 3.1 | M.2 | Serial | SIM |
|------------|------------------|-----|------|---------|-----|--------|-----|
| EAC-2000   | Jetson Xavier NX | 4   | 2    | 4       | 3   | 2      | 1   |

## Accessories

|                             |   |
|-----------------------------|---|
| <b>PWA-120W1</b>            | 120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block                                  |
| <b>PWA-160W-WT</b>          | 160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>             | DIN Rail Kit  |
| <b>GMSL Camera Kit</b>      | GMSL Camera with Fakra-Z connector  |
| <b>M.2 Storage Module</b>   | M.2 Key M/Key B PCIe Storage Module   |
| <b>5G Module</b>            | 5G Module with Antenna  |
| <b>4G Module</b>            | 4G/GPS Module with Antenna  |
| <b>WiFi &amp; Bluetooth</b> | WiFi & Bluetooth Module with Antenna  |

1 Edge AI Computing

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4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# EIC-2000

NXP i.MX 8M Plus Edge AI Computing System



## Features

- Industrial-grade NXP i.MX 8M Plus Quad Core Arm Cortex-A53 Processor, embedded Neural Processing Unit, up to 2.3 TOPS AI performance
- Supports up to 3840 x 2160 4K UHD
- 2 GigE LAN with 1 TSN supported
- 2 SIM sockets for multiple WiFi/BT/5G/4G/LTE/GPRS/UMTS
- Optional 4-bit GPIO and 2 CAN Bus supports Flexible Data-rate
- 9V to 55V wide range DC Power Input
- Fanless -25°C to 70°C



## Specifications

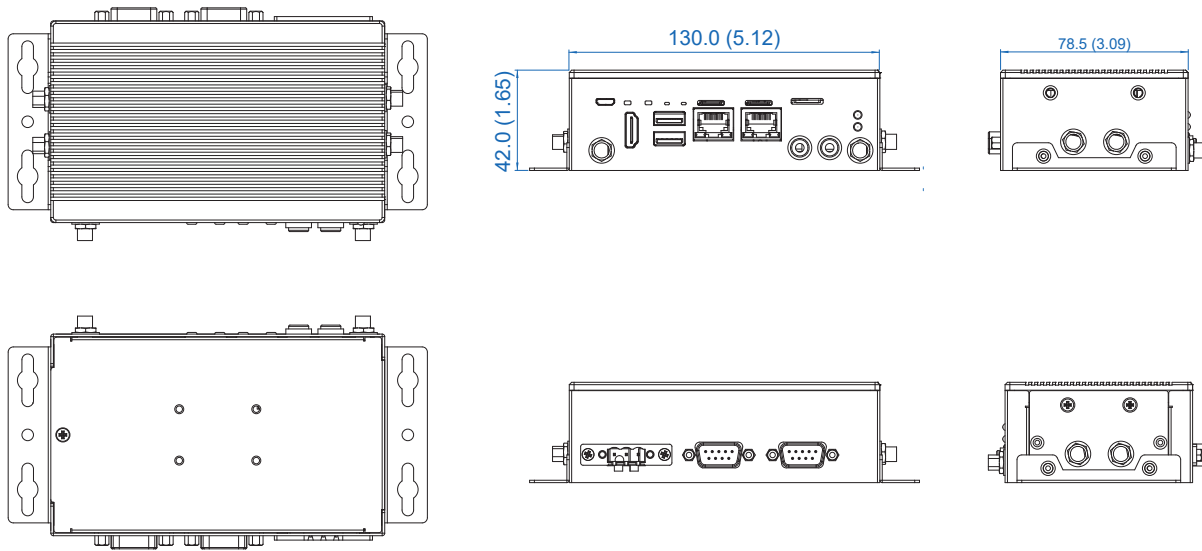
| System        |   |
|---------------|---|
| CPU           | NXP i.MX 8M Plus Quad Core Arm Cortex-A53 processor   |
| Memory        | 1 LPDDR4 SDRAM, 4GB   |
| OS            | Ubuntu 20.04 LTS  |
| I/O Interface |   |
| USB           | 2 USB 3.0 Type A  |
| Serial        | 2 COM RS-232/422/485  |
| GPIO          | 4-bit GPIO (Optional)   |
| CAN Bus       | 2 CAN Bus support CAN FD (Optional)   |
| Micro USB     | 1 Micro USB console debug port  |
| Button        | <ul style="list-style-type: none"> <li>▪ 1 User-define Button</li> <li>▪ 1 Reset Button</li> </ul>            |
| LED           | Power, Ready, 2 WLAN  |
| SIM           | 2 Nano SIM Card Socket  |
| Antenna       | 6 Antenna for WiFi/BT/5G/4G/LTE/GPRS/UMTS   |
| Expansion     |   |
| M.2           | 1 M.2 Key B Socket (3042/3052)  |
| Mini PCIe     | 1 Full-size Mini PCIe Socket  |
| Graphics      |   |
| Interface     | 1 Digital Display, up to 3840 x 2160 @30Hz  |
| Video Encode  | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 1080p @60</li> <li>▪ H.264 : Up to 1080p @60</li> </ul> |
| Video Decode  | <ul style="list-style-type: none"> <li>▪ HEVC : Up to 1080p @60</li> <li>▪ H.264 : Up to 1080p @60</li> </ul> |

| Storage           |  |
|-------------------|--|
| eMMC              | 1 eMMC, 32GB   |
| SD                | 1 Micro SD, supports SDHC (External)   |
| Ethernet          |  |
| LAN 1             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| LAN 2             | 10/100/1000 Base-T Ethernet GigE LAN supports TSN, RJ45 Connector  |
| Power             |  |
| Power Input       | DC 9V to 55V   |
| Power Interface   | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Mechanical        |  |
| Dimensions        | 130 mm x 78.5 mm x 42 mm (5.12" x 3.09" x 1.65")   |
| Weight            | 0.5 kg (1.1 lbs)   |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul> |
| Environment       |  |
| Operating Temp.   | -25°C to 70°C (-13°F to 158°F)   |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)   |
| Humidity          | 5% to 95% Humidity, non-condensing   |
| Relative Humidity | 95% @70°C  |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| EMC               | CE, FCC, EN50155, EN50121-3-2  |



# Dimensions

Unit : mm/ inch



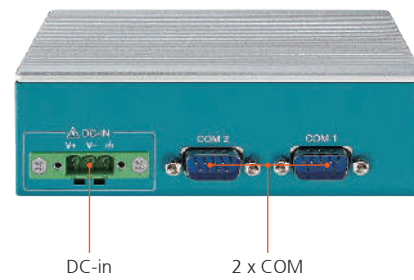
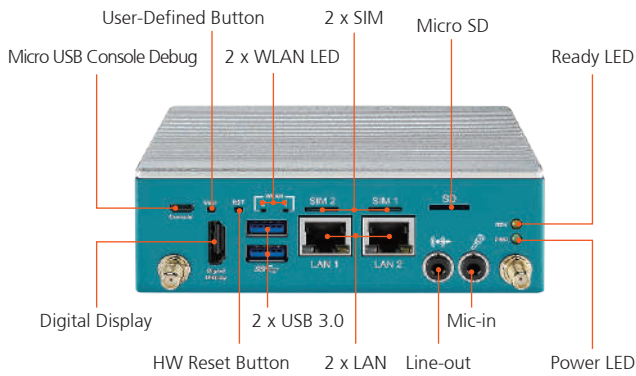
1 Edge AI Computing

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## Front I/O

## Rear I/O



4 Industrial Multi-Touch Computers

## Order Information

| Model Name | Platform         | LAN | USB 3.0 | Serial | Digital Display | M.2 | SIM |
|------------|------------------|-----|---------|--------|-----------------|-----|-----|
| EIC-2000   | NXP i.MX 8M Plus | 2   | 2       | 2      | 1               | 1   | 2   |

### Accessories

|                             |  |
|-----------------------------|--|
| <b>PWA-60WP3-WT</b>         | 60W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>PWA-60WP3-WT-12V</b>     | 60W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>             | DIN Rail Kit   |
| <b>5G Module</b>            | 5G Module with Antenna   |
| <b>4G Module</b>            | 4G/GPS Module with Antenna   |
| <b>WiFi &amp; Bluetooth</b> | WiFi & Bluetooth Module with Antenna   |

5 Embedded Peripherals

# EIC-1000

Arm-Based Rockchip Edge Computing System



## Features

- Rockchip Dual Cortex-A72, Quad Cortex-A53 Processor
- 2GB DDR3 SDRAM, 32GB eMMC, 1 External Micro SD Socket
- Pre-installed with Debian 9.0 or Android 7.1
- 1 Digital Display, up to 4K resolution
- 1 GigE LAN, 1 USB 3.1, 1 USB 2.0
- 2 COM RS-232/422/485, Audio Mic-in and Line-out
- 1 Half-size Mini PCIe for WiFi/Bluetooth
- DC 9V to 55V wide range power input
- Fanless, 0°C to 70°C Operating Temperature



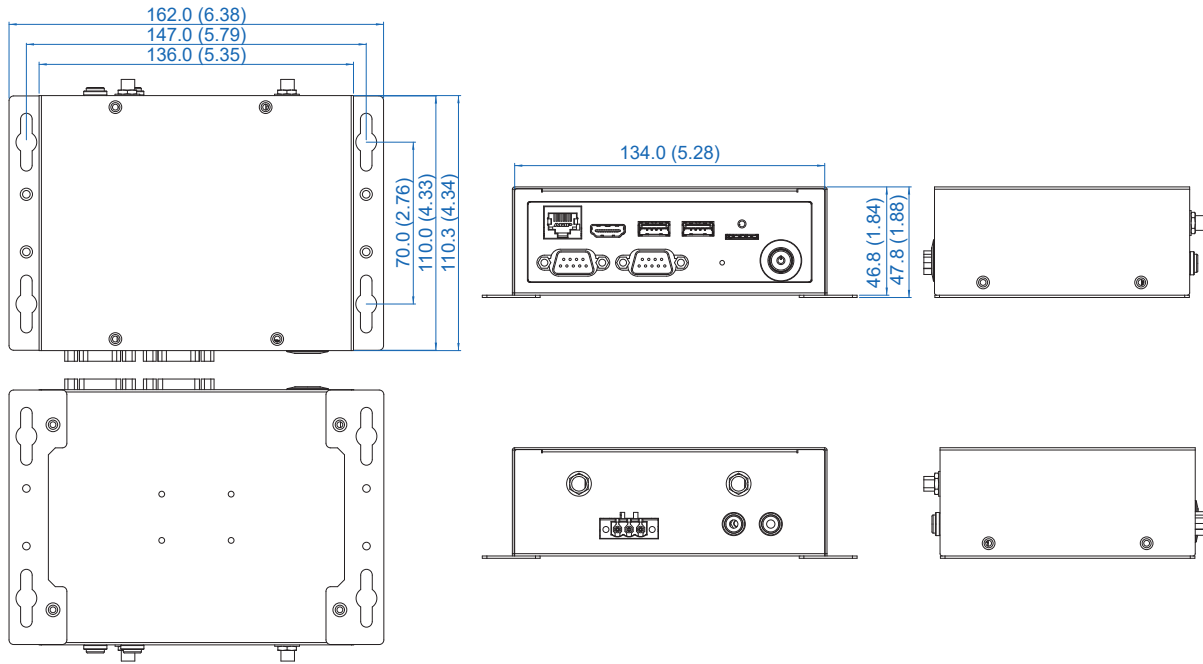
## Specifications

| System             |   |
|--------------------|---|
| CPU                | Rockchip RK3399 Arm Dual-core Cortex-A72 @2.0GHz + Quad-core Cortex-A53 @1.8GHz   |
| Memory             | 1 DDR3L 1066MHz SDRAM, 2GB  |
| OS                 | <ul style="list-style-type: none"> <li>▪ Android 7.1</li> <li>▪ Linux Debian 9.0</li> </ul>   |
| I/O Interface      |   |
| USB                | <ul style="list-style-type: none"> <li>▪ 1 USB 3.1 Type A</li> <li>▪ 1 USB 2.0 Type A</li> </ul>  |
| Serial             | 2 COM RS-232/422/485  |
| Button             | <ul style="list-style-type: none"> <li>▪ 1 Power Button</li> <li>▪ 1 Reset Button</li> </ul>  |
| Antenna            | 2 Antenna for WiFi/Bluetooth  |
| Expansion          |   |
| Mini PCIe          | 1 Half-size Mini PCIe Socket for PCIe Card  |
| Graphics           |   |
| Interface          | 1 Digital Display, up to 4Kx2K @60fps   |
| Graphics Processor | ARM Mali-T860MP4, AFBC supported  |
| Video Encode       | H.264/MVC/VP8 encoders by 1080p @30fps  |
| Video Decode       | <ul style="list-style-type: none"> <li>▪ H.264/H.265, 10bit, up to 4Kx2K @60fps</li> <li>▪ VP9, 8bit, up to 4Kx2K @60fps</li> <li>▪ MPEG-4/MPEG-2/VP8 up to 1080p @60fps</li> </ul> |
| Storage            |   |
| eMMC               | 1 eMMC, 32GB  |
| SD                 | 1 Micro SD (External)   |

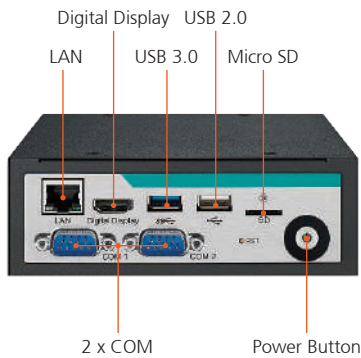
| Audio             |  |
|-------------------|--|
| Audio Codec       | Realtek ALC5640 low power stereo codec   |
| Audio Interface   | 1 Mic-in, 1 Line-out   |
| Ethernet          |  |
| LAN               | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector   |
| Power             |  |
| Power Input       | DC 9V to 55V   |
| Power Interface   | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Mechanical        |  |
| Dimensions        | 136.0mm x 110.0mm x 46.8mm (5.35" x 4.33" x 1.84")   |
| Weight            | 0.4kg (0.9 lb)   |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul> |
| Environment       |  |
| Operating Temp.   | 0°C to 70°C (32°F to 158°F)  |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)   |
| Humidity          | 5% to 95% Humidity, non-condensing   |
| Relative Humidity | 95% @70°C  |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| EMC               | CE, FCC, EN50155, EN50121-3-2  |

## Dimensions

Unit : mm/ inch



## Front I/O



## Rear I/O



## Order Information

| Model Name  | OS          | Platform | GigE LAN | USB 3.1 | USB 2.0 | Serial | Mini PCIe |
|-------------|-------------|----------|----------|---------|---------|--------|-----------|
| EIC-1000-DB | Debian 9.0  | Rockchip | 1        | 1       | 1       | 2      | 1         |
| EIC-1000-AD | Android 7.1 |          |          |         |         |        |           |

## Accessories

|                  |  |
|------------------|--|
| PWA-60WP3-WT     | 60W, 24V, 90V AC to 264V AC Power Adapter with 3-pin 3.5mm Terminal Block, Wide Temperature -30°C to +70°C |
| PWA-60WP3-WT-12V | 60W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C       |
| DIN-RAIL         | DIN Rail Kit   |
| WiFi & Bluetooth | WiFi & Bluetooth Module with Antenna   |

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5 Embedded Peripherals

# VAC-1100

24-core Foxconn Cortex-A53 MPU with Hailo AI Accelerator Card  
Arm-based Edge AI Computing System for Intelligent Surveillance



## Features

- 24-core Foxconn Cortex-A53 Server-grade Computing
- Advanced AI Accelerator supports up to 26 Tera-Operations Per Second (TOPS)
- 1 DDR4 2133MHz Memory with ECC, support up to 16GB
- 9V to 55V wide range DC Power Input
- 1 GigE LAN, 1 IPMI, 2 USB 3.0, 1 Micro USB
- M.2 Key M 2280 for PCIe NVMe SSD
- Support Cross-Platform IP video management system (VMS) for real-time public safety



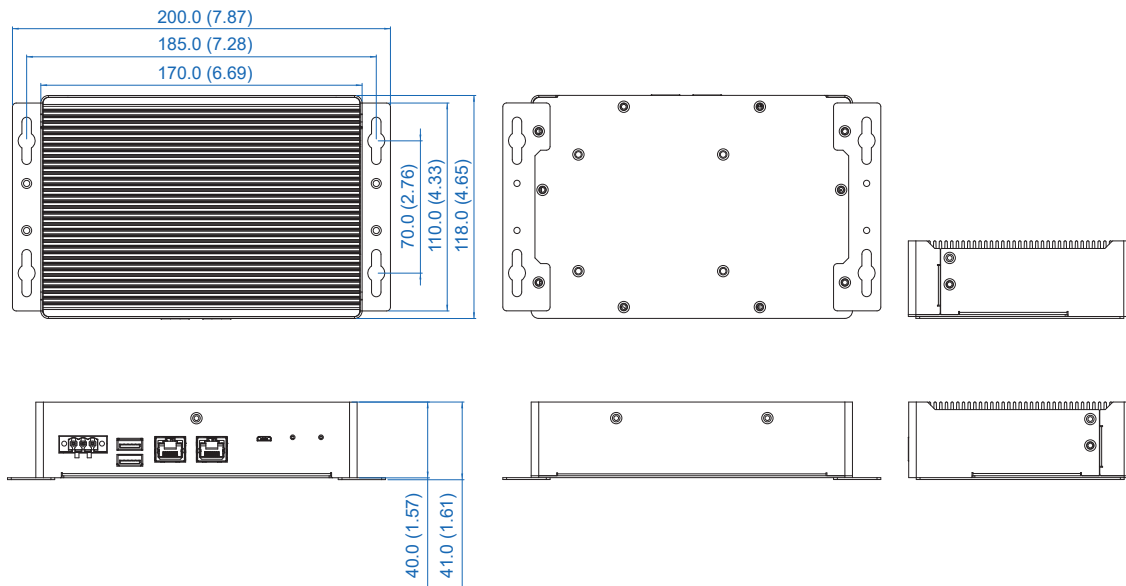
## Specifications

| System          |  |
|-----------------|--|
| Processor       | 24-core Arm Cortex-A53 Processor (Foxconn FXN3102)   |
| Memory          | 1 DDR4 2133MHz 16GB ECC SO-DIMM  |
| Flash           | 1 SPI Flash, 512MB   |
| EEPROM          | 1 SPI EEPROM, up to 512KB  |
| OS              | Ubuntu Server 18.04 LTS  |
| AI Accelerator  |  |
| Processor       | Hailo-8™ AI Processor, up to 26 TOPS   |
| Framework       | TensorFlow, ONNX   |
| I/O Interface   |  |
| USB             | 2 USB 3.0 Type A   |
| Micro USB       | <ul style="list-style-type: none"> <li>▪ 1 Micro USB console port for debug (External)</li> <li>▪ 1 Micro USB console port for firmware update (Internal)</li> </ul> |
| LED             | Power, SSD   |
| Storage         |  |
| SATA            | 1 SATA III (6Gbps)   |
| M.2             | 1 M.2 Key M Socket (2280, PCIe)  |
| eMMC            | 1 64GB eMMC, supports MMC4.41/HS200  |
| Ethernet        |  |
| LAN             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 connector   |
| IPMI            | 10/100/1000 Base-T Ethernet IPMI, RJ45 connector   |
| Power           |  |
| Power Input     | DC 9V to 55V   |
| Power Interface | 3-pin Terminal Block : V+, V-, Frame Ground  |

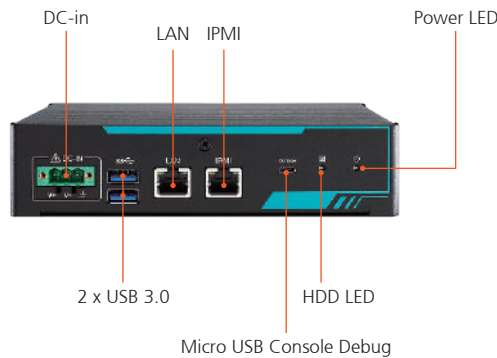
| Software Support  |  |
|-------------------|--|
| Operation System  | <ul style="list-style-type: none"> <li>▪ Ubuntu Server 18.04 LTS (Linux kernel 4.14.0)</li> <li>▪ Supports bootup from Flash drive / eMMC</li> <li>▪ Supports backup from Flash drive</li> <li>▪ File System : EXT4</li> </ul> |
| Toolchain         | gcc-linaro-6.4.1-2017.11-x86_64_aarch64-linux-gnu  |
| Script Language   | Python   |
| Mechanical        |  |
| Dimensions        | 170mm x 118mm x 40mm (6.7" x 4.6" x 1.6")  |
| Weight            | 0.9 kg (2.0 lb)  |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul>   |
| Environment       |  |
| Operating Temp.   | VAC-1100-W16E : -40°C to 70°C (-40°F to 158°F)<br>VAC-1100-16E : 0°C to 55°C (32°F to 131°F)   |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)   |
| Humidity          | 5% to 95% Humidity, non-condensing   |
| Relative Humidity | 95% @55°C  |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| EMC               | CE, FCC, EN50155, EN50121-3-2  |

## Dimensions

Unit : mm/ inch



## Front I/O



## Order Information

| Model Name    | CPU     | GigE LAN | IPMI | USB 3.0 | M.2 | SSD Bracket | AI Accelerator | RAM      |
|---------------|---------|----------|------|---------|-----|-------------|----------------|----------|
| VAC-1100-W16E | FXN3102 | 1        | 1    | 2       | 1   | 1           | Hailo          | 16GB, IT |
| VAC-1100-16E  | FXN3102 | 1        | 1    | 2       | 1   | 1           | Hailo          | 16GB, CT |

### Optional Software

|                       |  |
|-----------------------|--|
| <b>NX Witness VMS</b> | Network Optix IP Video Management System (VMS) and Video Surveillance Software |
|-----------------------|--|

### Accessories

|                           |  |
|---------------------------|--|
| <b>PWA-60WP3-WT</b>       | 60W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>PWA-60WP3-WT-12V</b>   | 60W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>           | DIN Rail Kit   |
| <b>M.2 Storage Module</b> | M.2 Key M PCIe Storage Module  |

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Edge AI Computing

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4

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5

Embedded Peripherals

# VAC-1000

24-core Foxconn Cortex-A53 MPU with Lightspeeur AI Accelerator Card  
Arm-based Edge AI Computing System for Intelligent Surveillance



## Features

- 24-core Foxconn Cortex-A53 Server-grade Computing
- Advanced AI Accelerator supports up to 5.6 Tera-Operations Per Second (TOPS)
- 1 DDR4 2133MHz Memory with ECC, support up to 16GB
- 9V to 55V wide range DC Power Input
- 1 GigE LAN, 1 IPMI, 2 USB 3.0, 1 Micro USB
- M.2 Key M 2280 for PCIe NVMe SSD
- Support Cross-Platform IP video management system (VMS) for real-time surveillance



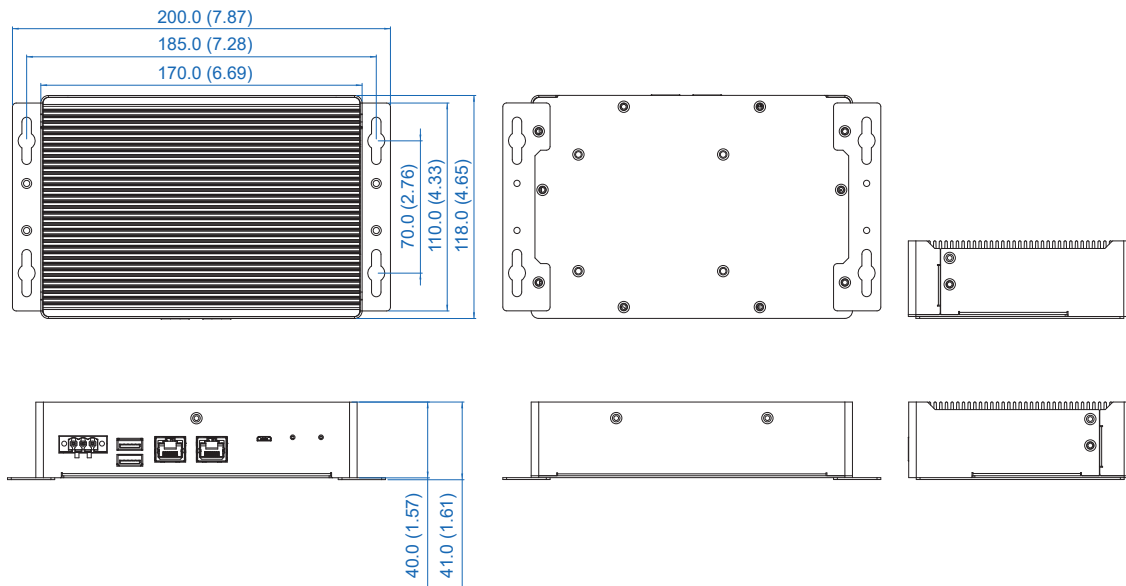
## Specifications

| System                 |  |
|------------------------|--|
| <b>Processor</b>       | 24-core Arm Cortex-A53 Processor (Foxconn FXN3102)   |
| <b>Memory</b>          | 1 DDR4 2133MHz 16GB ECC SO-DIMM  |
| <b>Flash</b>           | 1 SPI Flash, 512MB   |
| <b>EEPROM</b>          | 1 SPI EEPROM, up to 512KB  |
| <b>OS</b>              | Ubuntu Server 18.04 LTS  |
| AI Accelerator         |  |
| <b>Processor</b>       | Lightspeeur® 2801S Neural Accelerator, up to 5.6 TOPS  |
| <b>Framework</b>       | TensorFlow, Caffe, PyTorch   |
| I/O Interface          |  |
| <b>USB</b>             | 2 USB 3.0 Type A   |
| <b>Micro USB</b>       | <ul style="list-style-type: none"> <li>▪ 1 Micro USB console port for debug (External)</li> <li>▪ 1 Micro USB console port for firmware update (Internal)</li> </ul> |
| <b>LED</b>             | Power, SSD   |
| Storage                |  |
| <b>SATA</b>            | 1 SATA III (6Gbps)   |
| <b>M.2</b>             | 1 M.2 Key M Socket (2280, PCIe)  |
| <b>eMMC</b>            | 1 64GB eMMC, supports MMC4.41/HS200  |
| Ethernet               |  |
| <b>LAN</b>             | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 connector   |
| <b>IPMI</b>            | 10/100/1000 Base-T Ethernet IPMI, RJ45 connector   |
| Power                  |  |
| <b>Power Input</b>     | DC 9V to 55V   |
| <b>Power Interface</b> | 3-pin Terminal Block : V+, V-, Frame Ground  |

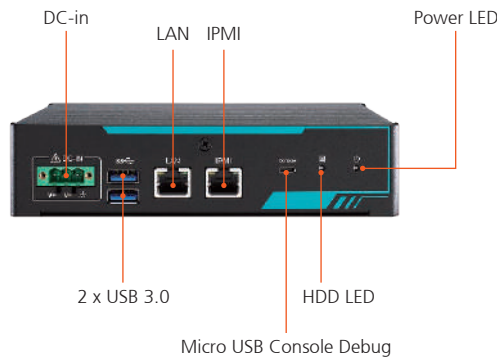
| Software Support         |  |
|--------------------------|--|
| <b>Operation System</b>  | <ul style="list-style-type: none"> <li>▪ Ubuntu Server 18.04 LTS (Linux kernel 4.14.0)</li> <li>▪ Supports bootup from Flash drive / eMMC</li> <li>▪ Supports backup from Flash drive</li> <li>▪ File System : EXT4</li> </ul> |
| <b>Toolchain</b>         | gcc-linaro-6.4.1-2017.11-x86_64_aarch64-linux-gnu  |
| <b>Script Language</b>   | Python   |
| Mechanical               |  |
| <b>Dimensions</b>        | 170mm x 118mm x 40mm (6.7" x 4.6" x 1.6")  |
| <b>Weight</b>            | 0.9 kg (2.0 lb)  |
| <b>Mounting</b>          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul>   |
| Environment              |  |
| <b>Operating Temp.</b>   | VAC-1000-W16E : -40°C to 70°C (-40°F to 158°F)<br>VAC-1000-16E : 0°C to 55°C (32°F to 131°F)   |
| <b>Storage Temp.</b>     | -40°C to 85°C (-40°F to 185°F)   |
| <b>Humidity</b>          | 5% to 95% Humidity, non-condensing   |
| <b>Relative Humidity</b> | 95% @55°C  |
| <b>Shock</b>             | Operating, MIL-STD-810G, Method 516.7, Procedure I   |
| <b>Vibration</b>         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4   |
| <b>EMC</b>               | CE, FCC, EN50155, EN50121-3-2  |

## Dimensions

Unit : mm/ inch



## Front I/O



## Order Information

| Model Name    | CPU     | GigE LAN | IPMI | USB 3.0 | M.2 | SSD Bracket | AI Accelerator | RAM      |
|---------------|---------|----------|------|---------|-----|-------------|----------------|----------|
| VAC-1000-W16E | FXN3102 | 1        | 1    | 2       | 1   | 1           | Lightspeur®    | 16GB, IT |
| VAC-1000-16E  | FXN3102 | 1        | 1    | 2       | 1   | 1           | Lightspeur®    | 16GB, CT |

### Optional Software

|                       |  |
|-----------------------|--|
| <b>NX Witness VMS</b> | Network Optix IP Video Management System (VMS) and Video Surveillance Software |
|-----------------------|--|

### Accessories

|                           |  |
|---------------------------|--|
| <b>PWA-60WP3-WT</b>       | 60W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>PWA-60WP3-WT-12V</b>   | 60W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>           | DIN Rail Kit   |
| <b>M.2 Storage Module</b> | M.2 Key M PCIe Storage Module  |

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Industrial IoT Gateway

# Connecting the World via Multiple Sensors





# IoT Gateway

| Series                 |                 | AIC-100   |   |   |   |
|------------------------|-----------------|---|---|---|---|
| Model No.              |                 | AIC-110   | AIC-110A  | AIC-100   | AIC-100A  |
| Product Image          |                 |  |  |  |  |
| System                 | CPU             | NXP i.MX6ULL Arm® Cortex®-A7  | NXP i.MX6ULL Arm® Cortex®-A7  | NXP i.MX6ULL Arm® Cortex®-A7  | NXP i.MX6ULL Arm® Cortex®-A7  |
|                        | Memory Type     | DDR3L SDRAM, Onboard  | DDR3L SDRAM, Onboard  | DDR3L SDRAM, Onboard  | DDR3L SDRAM, Onboard  |
|                        | Memory Capacity | 512MB   | 512MB   | 512MB   | 512MB   |
|                        | EEPROM          | 16KB  | 16KB  | 16KB  | 16KB  |
|                        | OS Support      | Linux Debian Stretch R01  | Linux Debian Stretch R01  | Linux Debian Stretch R01  | Linux Debian Stretch R01  |
| I/O Interface          | Serial          | 2 RS-232/485  | 2 RS-232/485  | 2 RS-232/485  | 2 RS-232/485  |
|                        | USB 2.0         | 1   | 1   | 1   | 1   |
|                        | LAN             | 2 (10/100Mbps)  | 2 (10/100Mbps)  | 2 (10/100Mbps)  | 2 (10/100Mbps)  |
|                        | CAN Bus         | 2   | 2   | NA  | NA  |
|                        | Isolated DIO    | 12 (8 DI, 4 DO)   | 12 (8 DI, 4 DO)   | NA  | NA  |
|                        | Console         | 1   | 1   | 1   | 1   |
| Storage                | NAND            | 512MB, On-board   | NA  | 512MB, On-board   | NA  |
|                        | eMMC            | NA  | 32GB, On-board  | NA  | 32GB, On-board  |
|                        | microSD         | 1 (External)  | 1 (External)  | 1 (External)  | 1 (External)  |
| Expansion              | Mini PCIe       | 1   | 1   | 1   | 1   |
|                        | SIM Card        | 1 (External)  | 1 (External)  | 1 (External)  | 1 (External)  |
| Power                  | Input           | DC-in 9V to 50V   | DC-in 9V to 50V   | DC-in 9V to 50V   | DC-in 9V to 50V   |
|                        | Connector       | Terminal Block  | Terminal Block  | Terminal Block  | Terminal Block  |
| Dimensions (W x L x H) |                 | 91 x 91 x 47 mm<br>(3.6" x 3.6" x 1.8")   | 91 x 91 x 47 mm<br>(3.6" x 3.6" x 1.8")   | 91 x 91 x 32 mm<br>(3.6" x 3.6" x 1.2")   | 91 x 91 x 32 mm<br>(3.6" x 3.6" x 1.2")   |
| Weight                 |                 | 0.4 kg (0.9 lb)   | 0.4 kg (0.9 lb)   | 0.4 kg (0.9 lb)   | 0.4 kg (0.9 lb)   |
| Mounting               |                 | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   | Wallmount, DIN Rail   |
| Operating Temperature  |                 | -25°C to 70°C<br>(-13°F to 158°F)   | -25°C to 70°C<br>(-13°F to 158°F)   | -25°C to 70°C<br>(-13°F to 158°F)   | -25°C to 70°C<br>(-13°F to 158°F)   |
| Storage Temperature    |                 | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)   |
| Humidity               |                 | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   | 5% to 95%, non-condensing   |
| Vibration              |                 | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  |
| Shock                  |                 | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  | MIL-STD-810G  |
| Certification          |                 | CE, FCC, EN50155,<br>EN50121-3-2  | CE, FCC, EN50155,<br>EN50121-3-2  | CE, FCC, EN50155,<br>EN50121-3-2  | CE, FCC, EN50155,<br>EN50121-3-2  |

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# AIC-110

Industrial-grade NXP i.MX6ULL Arm® Cortex®-A7 Processor  
Arm-based IoT Gateway



## Features

- Industrial-grade NXP i.MX6ULL Arm Cortex-A7 Processor
- 9V to 50V wide range DC Power Input
- Supports Node-RED browser-based flow editor
- 2 LAN, 1 USB 2.0, 2 COM RS-232/485
- 12-bit Isolated DIO (8 DI, 4 DO), 2 CAN Bus
- Mini PCIe with SIM socket for 4G/LTE/WiFi/BT/GPRS/UMTS
- Pre-installed with Debian Stretch R01
- Compact & Cableless design, Low Power Consumption



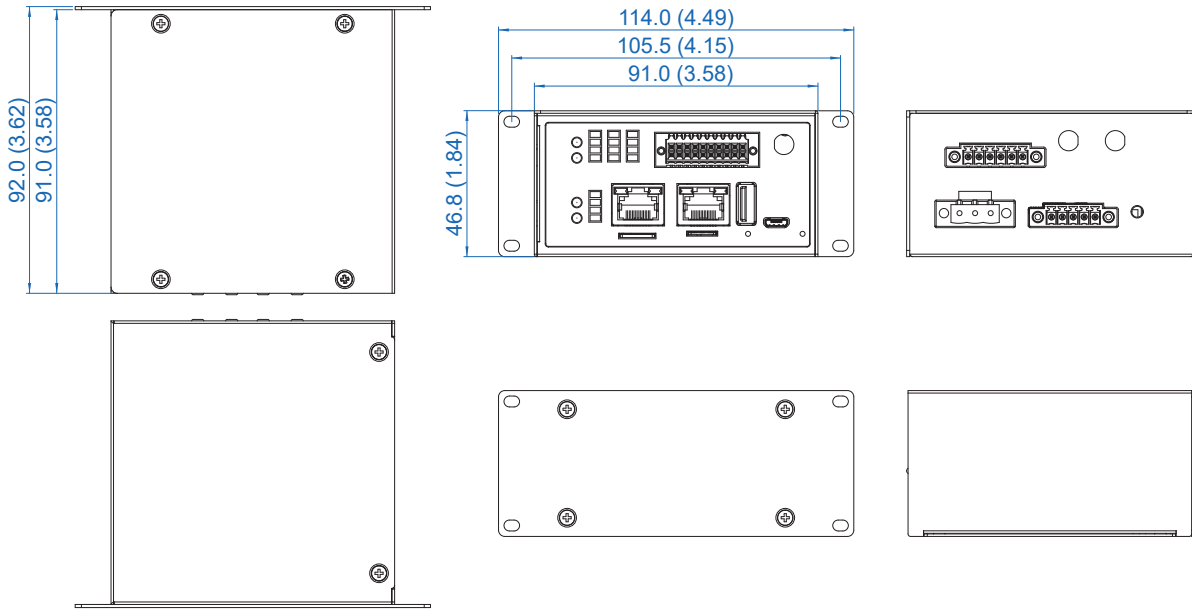
## Specifications

| System              |  |
|---------------------|--|
| Processor           | NXP i.MX6 ULL 900MHz Arm® Cortex®-A7 Processor   |
| Memory              | 1 DDR3L SDRAM, 512MB   |
| Flash               | AIC-110 : 1 NAND Flash, 512MB<br>AIC-110A : 1 eMMC, 32GB   |
| EEPROM              | 1 EEPROM, up to 16KB   |
| OS                  | Debian Stretch R01   |
| I/O Interface       |  |
| USB                 | 1 USB 2.0 Type A   |
| Serial              | 2 COM RS-232/485   |
| Isolated DIO        | 12 Isolated DIO : 8 DI, 4 DO   |
| CAN Bus             | 2 CAN Bus 2.0 A/B  |
| Console             | 1 Micro USB  |
| Button              | <ul style="list-style-type: none"> <li>▪ 1 User-define Button</li> <li>▪ 1 Reset Button</li> </ul> |
| SIM                 | 1 Nano SIM Card Socket   |
| LED                 | Power, Ready, Serial, CAN, DIO   |
| Antenna             | 3 Antenna for WiFi/4G/LTE/GPRS/UMTS/L0RaWAN  |
| Storage             |  |
| SD                  | 1 Micro SD Socket supports SDHC, up to 128GB (External)  |
| Ethernet            |  |
| LAN 1               | 10/100 Mbps Ethernet, RJ45 Connector   |
| LAN 2               | 10/100 Mbps Ethernet, RJ45 Connector   |
| Power               |  |
| Power Input         | DC 9V to 50V   |
| Power Interface     | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Typical Consumption | 12V DC @500mA  |

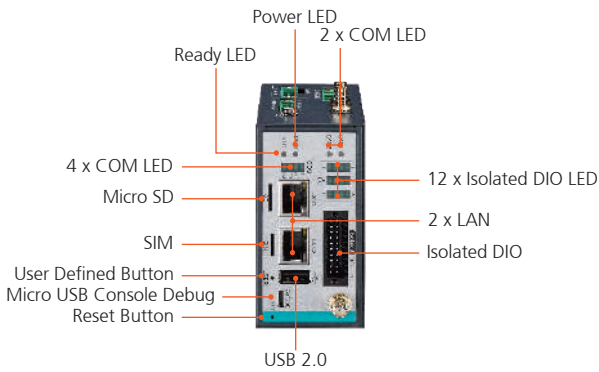
| Others            |   |
|-------------------|---|
| Watchdog Timer    | Reset : 0.5 to 128 sec./min. per step   |
| Software Support  |   |
| Operating System  | <ul style="list-style-type: none"> <li>▪ Debian Stretch R01, Linux Kernel 4.9.11</li> <li>▪ Supports bootup from SD Card/Nand Flash</li> <li>▪ Supports backup from SD Card</li> <li>▪ Filesystem : EXT4</li> </ul> |
| Toolchain         | gcc-linaro-6.3.1-2017.05-x86_64_arm-linux-gnueabi   |
| Script Language   | Python, NodeJS  |
| Mechanical        |   |
| Dimensions        | AIC-110/110A : 91mm x 91mm x 47mm (3.6" x 3.6" x 1.8")  |
| Weight            | 0.4 kg (0.9 lb)   |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul>  |
| Environment       |   |
| Operating Temp.   | -25°C to 70°C (-13°F to 158°F)  |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)  |
| Humidity          | 5% to 95% Humidity, non-condensing  |
| Relative Humidity | 95% @70°C   |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I  |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4  |
| EMC               | CE, FCC, EN50155, EN50121-3-2   |

# Dimensions

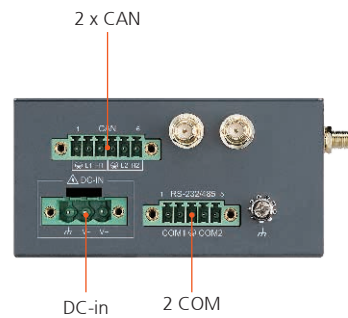
Unit : mm/ inch



## Front I/O



## Top I/O



## Order Information

| Model Name | CPU             | LAN | USB | Serial | SIM | CAN | Isolated DIO | Storage |
|------------|-----------------|-----|-----|--------|-----|-----|--------------|---------|
| AIC-110    | Arm® Cortex®-A7 | 2   | 1   | 2      | 1   | 2   | 12           | Flash   |
| AIC-110A   |                 |     |     |        |     | 2   | 12           | eMMC    |

### Accessories

|                             |  |
|-----------------------------|--|
| <b>PWA-12W-US1</b>          | 12W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block (US Type)                        |
| <b>PWA-12W-EU</b>           | 12W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block (EU Type)                        |
| <b>PWA-18W-WT</b>           | 18W, 12V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>             | DIN Rail Kit   |
| <b>TMK2-20P-100</b>         | Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm  |
| <b>TMK2-20P-500</b>         | Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm  |
| <b>TMB-TMBK-20P</b>         | Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting                        |
| <b>4G Module</b>            | Mini PCIe 4G/GPS Module with Antenna   |
| <b>WiFi &amp; Bluetooth</b> | WiFi & Bluetooth Module with Antenna   |
| <b>LoRaWAN Module</b>       | LoRaWAN Module with Antenna  |

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# AIC-100

Industrial-grade NXP i.MX6ULL Arm® Cortex®-A7 Processor  
Arm-based IoT Gateway



## Features

- Industrial-grade NXP i.MX6ULL Arm Cortex-A7 Processor
- 9V to 50V wide range DC Power Input
- Supports Node-RED browser-based flow editor
- 2 LAN, 1 USB 2.0, 2 COM RS-232/485
- Mini PCIe with SIM socket for 4G/LTE/WiFi/BT/GPRS/UMTS
- Pre-installed with Debian Stretch R01
- Compact & Cableless design, Low Power Consumption



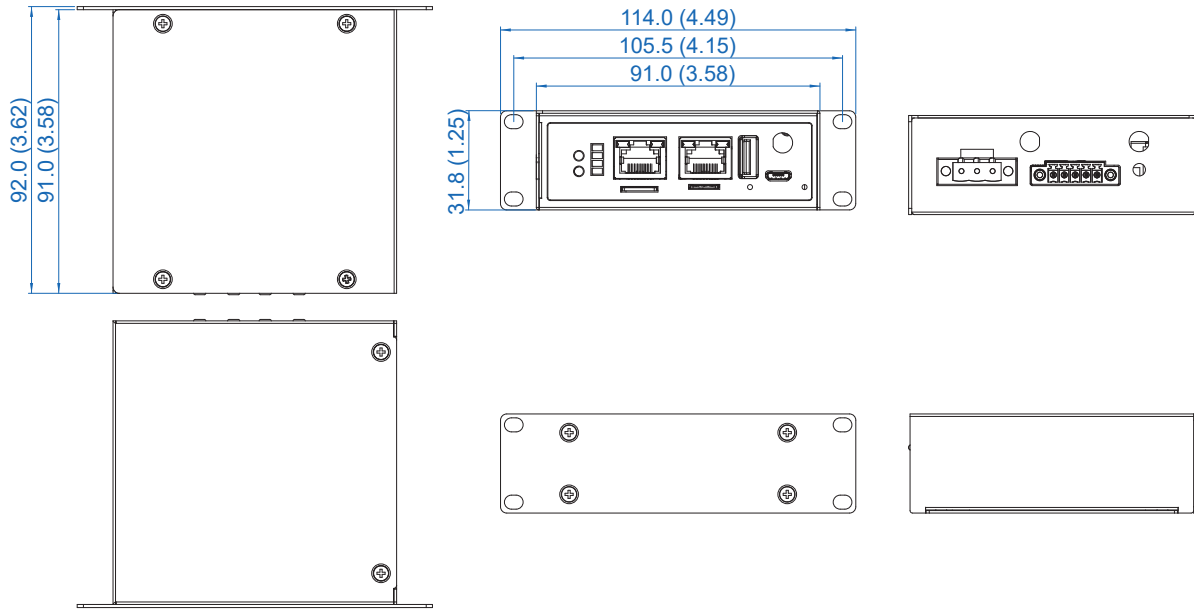
## Specifications

| System              |  |
|---------------------|--|
| Processor           | NXP i.MX6 ULL 900MHz Arm® Cortex®-A7 Processor   |
| Memory              | 1 DDR3L SDRAM, 512MB   |
| Flash               | <b>AIC-100</b> : 1 NAND Flash, 512MB<br><b>AIC-100A</b> : 1 eMMC, 32GB                             |
| EEPROM              | 1 EEPROM, up to 16KB   |
| OS                  | Debian Stretch R01   |
| I/O Interface       |  |
| USB                 | 1 USB 2.0 Type A   |
| Serial              | 2 COM RS-232/485   |
| Console             | 1 Micro USB  |
| Button              | <ul style="list-style-type: none"> <li>▪ 1 User-define Button</li> <li>▪ 1 Reset Button</li> </ul> |
| SIM                 | 1 Nano SIM Card Socket   |
| LED                 | Power, Ready, Serial, CAN, DIO   |
| Antenna             | 3 Antenna for WiFi/4G/LTE/GPRS/UMTS/LoRaWAN  |
| Storage             |  |
| SD                  | 1 Micro SD Socket supports SDHC, up to 128GB (External)  |
| Ethernet            |  |
| LAN 1               | 10/100 Mbps Ethernet, RJ45 Connector   |
| LAN 2               | 10/100 Mbps Ethernet, RJ45 Connector   |
| Power               |  |
| Power Input         | DC 9V to 50V   |
| Power Interface     | 3-pin Terminal Block : V+, V-, Frame Ground  |
| Typical Consumption | 12V DC @500mA  |

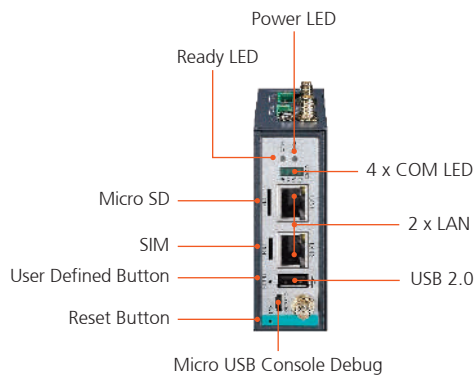
| Others            |   |
|-------------------|---|
| Watchdog Timer    | Reset : 0.5 to 128 sec./min. per step   |
| Software Support  |   |
| Operating System  | <ul style="list-style-type: none"> <li>▪ Debian Stretch R01, Linux Kernel 4.9.11</li> <li>▪ Supports bootup from SD Card/Nand Flash</li> <li>▪ Supports backup from SD Card</li> <li>▪ Filesystem : EXT4</li> </ul> |
| Toolchain         | gcc-linaro-6.3.1-2017.05-x86_64_arm-linux-gnueabi   |
| Script Language   | Python, NodeJS  |
| Mechanical        |   |
| Dimensions        | <b>AIC-100/100A</b> : 91mm x 91mm x 32mm (3.6" x 3.6" x 1.2")   |
| Weight            | 0.4 kg (0.9 lb)   |
| Mounting          | <ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (Optional)</li> </ul>  |
| Environment       |   |
| Operating Temp.   | -25°C to 70°C (-13°F to 158°F)  |
| Storage Temp.     | -40°C to 85°C (-40°F to 185°F)  |
| Humidity          | 5% to 95% Humidity, non-condensing  |
| Relative Humidity | 95% @70°C   |
| Shock             | Operating, MIL-STD-810G, Method 516.7, Procedure I  |
| Vibration         | Operating, MIL-STD-810G, Method 514.7, Procedure I, Category 4  |
| EMC               | CE, FCC, EN50155, EN50121-3-2   |

## Dimensions

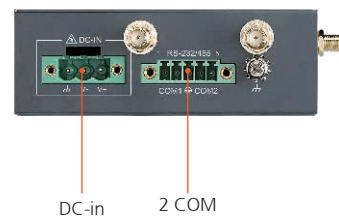
Unit : mm/ inch



## Front I/O



## Top I/O



## Order Information

| Model Name | CPU             | LAN | USB | Serial | SIM | CAN | Isolated DIO | Storage |
|------------|-----------------|-----|-----|--------|-----|-----|--------------|---------|
| AIC-100    | Arm® Cortex®-A7 | 2   | 1   | 2      | 1   | -   | -            | Flash   |
| AIC-100A   |                 |     |     |        |     | -   | -            | eMMC    |

## Accessories

|                             |  |
|-----------------------------|--|
| <b>PWA-12W-US1</b>          | 12W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block (US Type)                        |
| <b>PWA-12W-EU</b>           | 12W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block (EU Type)                        |
| <b>PWA-18W-WT</b>           | 18W, 12V, 85V AC to 264V AC Power Adaptor with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| <b>DIN-RAIL</b>             | DIN Rail Kit   |
| <b>TMK2-20P-100</b>         | Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm  |
| <b>TMK2-20P-500</b>         | Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm  |
| <b>TMB-TMBK-20P</b>         | Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting                        |
| <b>4G Module</b>            | Mini PCIe 4G/GPS Module with Antenna   |
| <b>WiFi &amp; Bluetooth</b> | WiFi & Bluetooth Module with Antenna   |
| <b>LoRaWAN Module</b>       | LoRaWAN Module with Antenna  |

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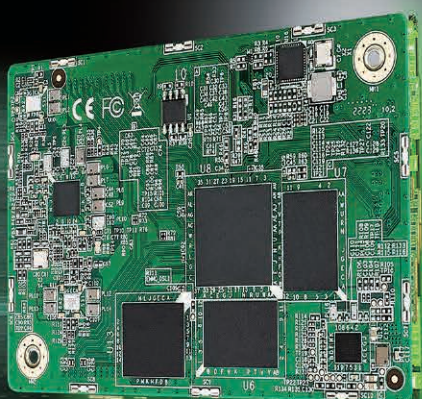
System on Module Solution

# Comprehensive & Flexible for Vertical Applications

Smart  
Camera



POS  
Kiosk






Digital  
Signage



AMR



# System On Module

| Series                |                    | ESOM  |  |   |
|-----------------------|--------------------|---|--|---|
| Model No.             |                    | ESOM-MT-1200  | ESOM-MT-500  | ESOM-MT-350   |
| Product Image         |                    |  |  |  |
| System                | Processor          | MediaTek Genio 1200 Arm Quad-core Cortex-A78 and Quad-core Cortex-A55             | MediaTek Genio 500 Arm Quad-core Cortex-A73 and Quad-core Cortex-A53               | MediaTek Genio 350 Arm Quad-core Cortex-A53   |
|                       | Memory             | 8GB LPDDR4X SDRAM   | 4GB LPDDR4 SDRAM   | 2GB LPDDR4 SDRAM  |
|                       | eMMC               | 64GB eMMC   | 16GB eMMC  | 16GB eMMC   |
|                       | OS                 | Linux Yocto 3.1, Android 11   | Linux Yocto 2.6, Android 10  | Linux Yocto 3.1, Android 10   |
| Graphics              | Graphics Processor | ARM Mali-G57  | ARM Mali-G72   | ARM Mali-G52  |
|                       | Video Encode       | - HEVC: 4K2K@60fps<br>- H.264: 4K2K@60fps   | H.264: 1080p@30fps   | HEVC: 1080p@60fps<br>H.264: 1080p@60fps   |
|                       | Video Decode       | - HEVC: 4K2K@90fps<br>- H.264: 4K2K@90fps   | HEVC: 1080p@30fps<br>H.264: 1080p@30fps  | HEVC: 1080p@60fps<br>H.264: 1080p@60fps   |
| Camera                | MIPI CSI           | 3   | 1  | 2   |
|                       | ISP                | - Single 48MP @30fps<br>- Dual 16MP @30fps  | - Single 25MP @30fps<br>- Dual 16MP @30fps   | Single 13MP @30fps  |
| Display Interface     | Digital Display    | 2 (1 TX, 1 RX)  | 1  | 1   |
|                       | DisplayPort        | 1   | NA   | NA  |
|                       | eDP                | 1   | NA   | NA  |
|                       | MIPI DSI           | 1   | 1  | 1   |
| Wireless              | Wi-Fi              | NA  | NA   | 2T2R 802.11ac   |
|                       | Bluetooth          | NA  | NA   | BT 5.0  |
| Wireless              | PCIe               | 1 PCIe x2   | NA   | NA  |
|                       | USB 3.0/3.1/3.2    | 2   | NA   | NA  |
|                       | USB 2.0            | 2   | 1  | 2   |
|                       | UART               | 3   | 2  | 2   |
|                       | SDIO               | 1   | 1  | 1   |
|                       | SPI                | 2   | 1  | 1   |
|                       | I2C                | 2   | 6  | 5   |
|                       | Audio              | 1 Mic-in, 1 Line-out  | 1 Mic-in, 1 Line-out   | 2 Mic-in, 1 HP-out  |
|                       | PWM                | 2   | 2  | 2   |
|                       | ADC                | NA  | 1  | 1   |
|                       | GPIO               | 8   | 12   | 14  |
| Power                 | Input              | DC-in 4.2V  | DC-in 4.2V   | DC-in 4.2V  |
| Dimensions (W x L)    |                    | 82 x 55 mm<br>(3.2" x 2.2")   | 70 x 55 mm<br>(2.8" x 2.2")  | 60 x 45 mm<br>(2.4" x 1.8")   |
| Operating Temperature |                    | -40°C to 85°C<br>(-40°F to 185°F)   | 0°C to 60°C<br>(32°F to 140°F)   | -40°C to 85°C<br>(-40°F to 185°F)   |
| Storage Temperature   |                    | -40°C to 85°C<br>(-40°F to 185°F)   | -40°C to 85°C<br>(-40°F to 185°F)  | -40°C to 85°C<br>(-40°F to 185°F)   |
| Humidity              |                    | 5% to 95%, non-condensing   | 5% to 95%, non-condensing  | 5% to 95%, non-condensing   |
| Certification         |                    | CE, FCC   | CE, FCC  | CE, FCC   |

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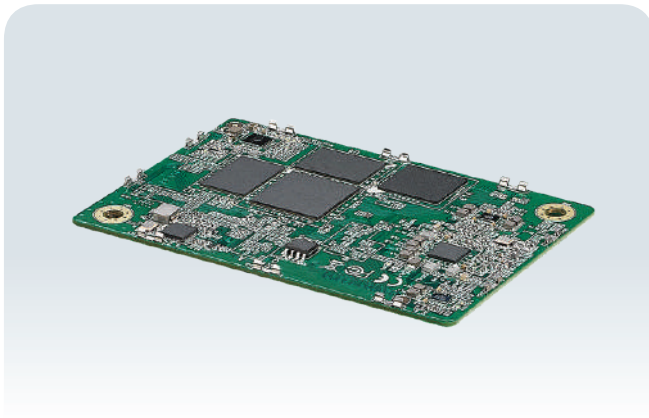
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# ESOM-MT-1200

MediaTek Genio 1200 System on Module

MediaTek  
Genio



## Features

- Octa-core MediaTek Genio 1200 processor with quad Cortex-A78 and quad Cortex-A55, 4.8 AI TOPS
- Integrated Mali-G57 GPU and H.265/H.264 4K video decoding
- Onboard 8GB LPDDR4X memory and 64GB eMMC
- Support 2 4-lane MIPI CSI-2 camera with internal ISP for dual 16MP
- Support 2 Digital Display, 1 DP, 1 eDP and 1 4-lane MIPI DSI, 4K resolution
- Supports 1 PCIe x2, 2 USB 3.0, 1 Gigabit Ethernet
- Supports Android 11 and Yocto 3.1 operating system



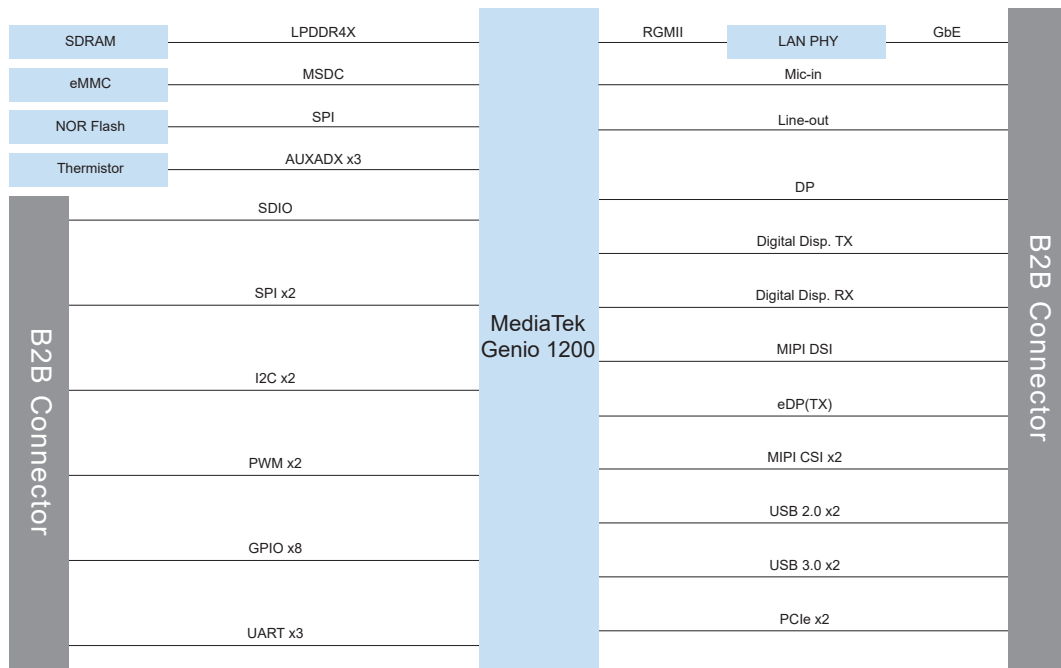
## Specifications

| System             |  |
|--------------------|--|
| Processor          | MediaTek Genio 1200 Processor with Quad-core Cortex-A78 @2.2GHz and Quad Cortex-A55 @2.2GHz  |
| Memory             | 8GB LPDDR4X SDRAM  |
| eMMC               | 64GB eMMC  |
| Flash              | 8Mb NOR Flash  |
| OS                 | <ul style="list-style-type: none"> <li>▪ Android 11</li> <li>▪ Linux Yocto 3.1</li> </ul>  |
| I/O Interface      |  |
| Internal I/O       | 4 board to board Connector   |
| Graphics           |  |
| Graphics Processor | <ul style="list-style-type: none"> <li>▪ ARM Mali-G57 high-performance GPU</li> <li>▪ 3D graphics accelerator capable of processing 17600M pixel/sec @ 880MHz</li> <li>▪ Graphics engine supporting OpenGL® ES 3.2, OpenCL 2.2, and Vulkan 1.1 hardware acceleration</li> </ul>  |
| Video              | <ul style="list-style-type: none"> <li>▪ Video Encode:                             <ul style="list-style-type: none"> <li>- HEVC: 4K2K@60fps</li> <li>- H.264: 4K2K@60fps</li> </ul> </li> <li>▪ Video Decode:                             <ul style="list-style-type: none"> <li>- HEVC: 4K2K@90fps</li> <li>- H.264: 4K2K@90fps</li> </ul> </li> </ul> |
| Display            | Supports dual independent display: <ul style="list-style-type: none"> <li>▪ 1 Digital Display TX: 4K @60Hz</li> <li>▪ 1 Digital Display RX: 4K @60Hz</li> <li>▪ 1 DisplayPort TX: 4K @60Hz</li> <li>▪ 1 eDP : 4K @60Hz</li> <li>▪ 1 MIPI DSI: 4K @60Hz</li> </ul>  |
| Camera             | <ul style="list-style-type: none"> <li>▪ Two 4-lane MIPI CSI-2</li> <li>▪ Integrated image signal processor supports single 48MP @30fps or dual 16MP @30fps</li> </ul>   |
| Audio              |  |
| Audio Interface    | Mic-in, Line-out   |

| Ethernet              |   |
|-----------------------|---|
| LAN                   | 10/100/1000 Mbps Ethernet LAN by Realtek RTL8211F |
| Power                 |   |
| Power Input           | 4.2V DC-in  |
| Expansion             |   |
| PCIe                  | 1 PCIe Gen3 x2                                    |
| USB                   | 2 USB 3.0<br>2 USB 2.0                            |
| UART                  | 1 4-wire UART<br>2 2-wire UART                    |
| SDIO                  | 1 SDIO  |
| SPI                   | 2 SPI   |
| I2C                   | 2 I2C   |
| PWM                   | 2 PWM   |
| GPIO                  | 8 GPIO  |
| Mechanical            |   |
| Dimensions (W x L)    | 82 mm x 55 mm                                     |
| Environment           |   |
| Operating Temperature | -40°C to 85°C                                     |
| Storage Temperature   | -40°C to 85°C                                     |
| Humidity              | 5% to 95% Humidity, Non-condensing                |
| Relative Humidity     | 95% at 85°C                                       |
| EMC                   | CE, FCC   |

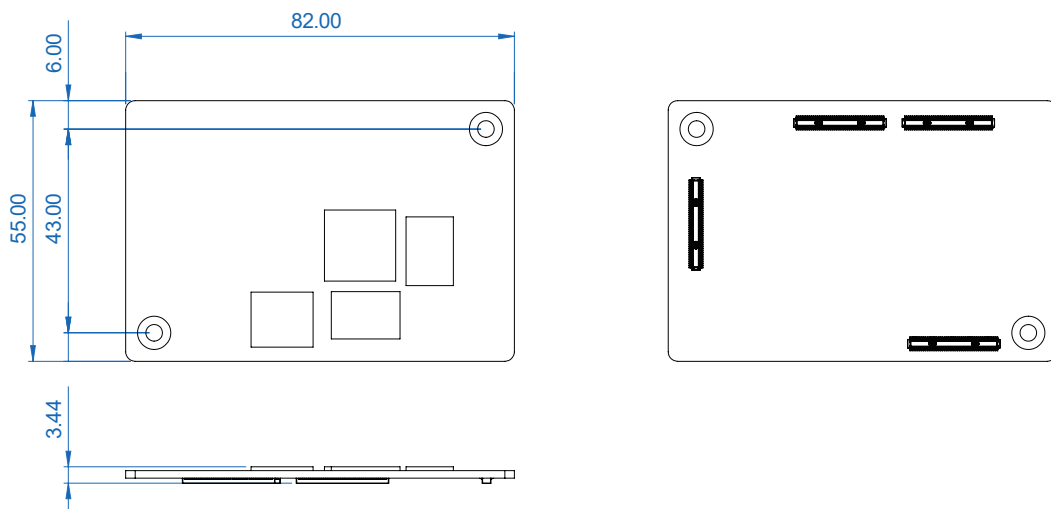


## Block Diagram



## Dimension

Unit : mm/ inch



## Order Information

|                         |  |
|-------------------------|--|
| <b>ESOM-MT-1200</b>     | System on Module with MediaTek Genio 1200 octa-core Processor, 8GB LPDDR4 SDRAM, 64GB eMMC |
| <b>ESOM-MT-1200-EV</b>  | MediaTek Genio 1200 SOM Evaluation Kit   |
| <b>ESOM-MT-1200-EVP</b> | MediaTek Genio 1200 SOM Evaluation Kit Plus  |

1 Edge AI Computing

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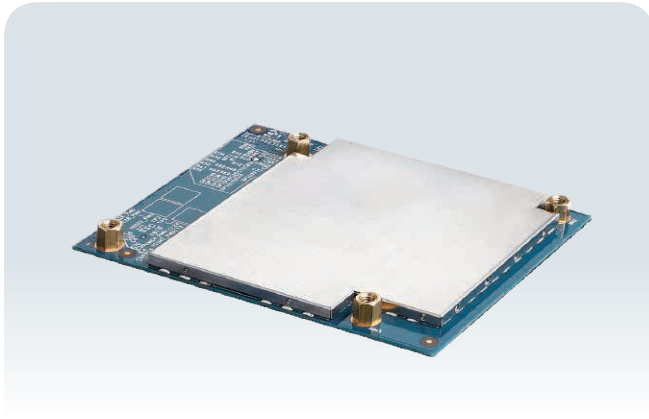
3 System On Module (SOM)

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# ESOM-MT-500

Arm-Based MediaTek Genio 500 System on Module



## Features

- Octa-core MediaTek Genio 500 processor with quad Cortex-A73 and quad Cortex-A53
- Integrated Mali-G72 GPU and H.265/H.264 FHD video decoding
- Onboard 4GB LPDDR4 memory and 16GB eMMC
- Support 4-lane MIPI CSI-2 camera with internal ISP, Full HD Resolution
- Support Digital Display and 4-lane MIPI DSI, Full HD Resolution
- Supports Android 10 and Yocto 2.6 operating system

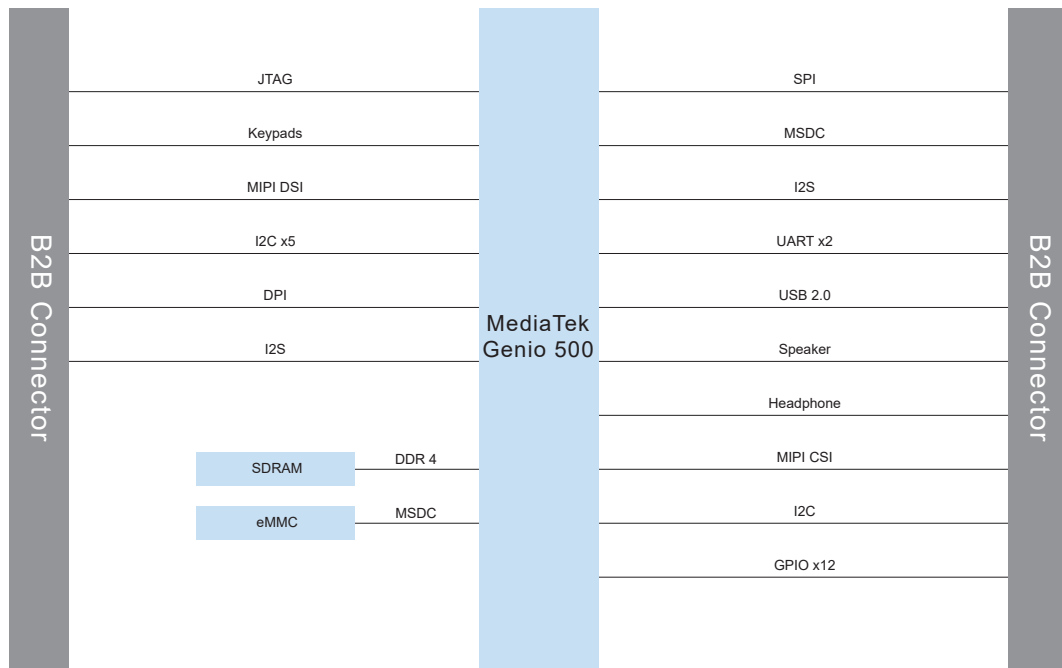


## Specifications

| System             |  |
|--------------------|--|
| Processor          | MediaTek Genio 500 Processor with Quad-core Cortex-A73 @2.0GHz and Quad Cortex-A53 @2.0GHz   |
| Memory             | 4GB LPDDR4 SDRAM   |
| eMMC               | 16GB eMMC  |
| OS                 | <ul style="list-style-type: none"> <li>▪ Android 10</li> <li>▪ Linux Yocto 2.6</li> </ul>  |
| I/O Interface      |  |
| Internal I/O       | 2 board to board Connector   |
| Graphics           |  |
| Graphics Processor | <ul style="list-style-type: none"> <li>▪ ARM Mali-G72 high-performance GPU</li> <li>▪ 3D graphics accelerator capable of processing 2400M pixel/sec @ 800MHz</li> <li>▪ Graphics engine supporting OpenGL® ES 3.0, OpenCL ES 1.1, and Vulkan 1.0 hardware acceleration</li> </ul>  |
| Video              | <ul style="list-style-type: none"> <li>▪ Video Encode:                             <ul style="list-style-type: none"> <li>- H.264: 1080p@30fps</li> </ul> </li> <li>▪ Video Decode:                             <ul style="list-style-type: none"> <li>- HEVC: 1080p@30fps</li> <li>- H.264: 1080p@30fps</li> </ul> </li> <li>▪ Vision DSP : Supports Cadence Tensilica Vision P6 dual-core @500MHz</li> </ul> |
| Display            | <ul style="list-style-type: none"> <li>▪ Digital Display : up to 1920 x 1080</li> <li>▪ MIPI DSI : up to 1920 x 1080</li> </ul>  |
| Camera             | <ul style="list-style-type: none"> <li>▪ 4-lane MIPI CSI-2</li> <li>▪ Integrated image signal processor supports 25MP</li> </ul>   |
| Audio              |  |
| Audio Codec        | MediaTek MT6358  |
| Audio Interface    | Mic-in, Line-out   |

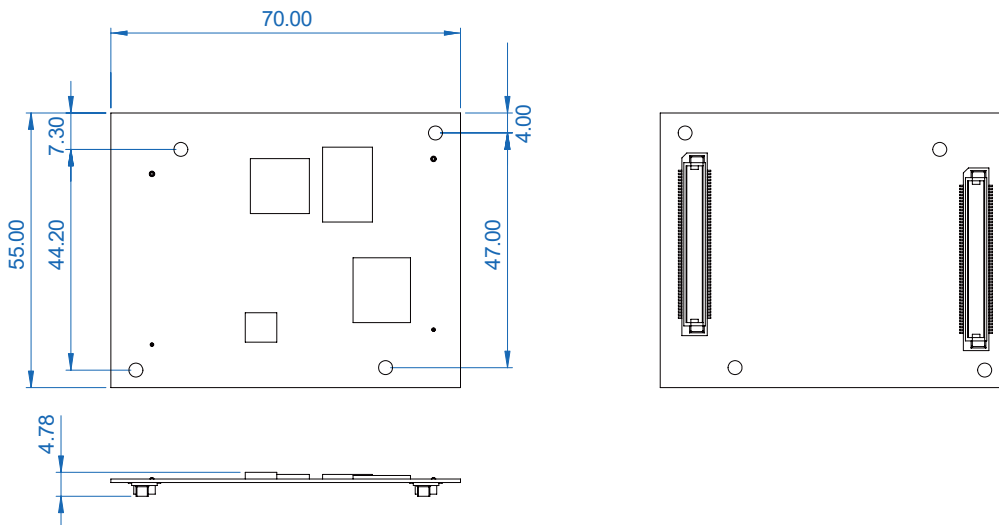
| Expansion             |                                    |
|-----------------------|------------------------------------|
| USB                   | 1 USB 2.0                          |
| UART                  | 2 UART (2-wire)                    |
| SPI                   | 1 SPI                              |
| I <sup>2</sup> C      | 6 I <sup>2</sup> C                 |
| GPIO                  | 12 GPIO                            |
| Power                 |                                    |
| Power Input           | 4.2V DC-in                         |
| Mechanical            |                                    |
| Dimensions (W x L)    | 70mm x 55mm (2.76" x 2.17")        |
| Environment           |                                    |
| Operating Temperature | 0°C to 60°C                        |
| Storage Temperature   | -40°C to 85°C                      |
| Humidity              | 5% to 95% Humidity, Non-condensing |
| Relative Humidity     | 95% at 60°C                        |
| EMC                   | CE, FCC                            |

## Block Diagram



## Dimension

Unit : mm/ inch



## Order Information

|                        |   |
|------------------------|---|
| <b>ESOM-MT-500</b>     | System on Module with MediaTek Genio 500 octa-core Processor, 4GB LPDDR4 SDRAM, 16GB eMMC |
| <b>ESOM-MT-500-EV</b>  | MediaTek Genio 500 SOM Evaluation Kit   |
| <b>ESOM-MT-500-EVP</b> | MediaTek Genio 500 SOM Evaluation Kit Plus  |

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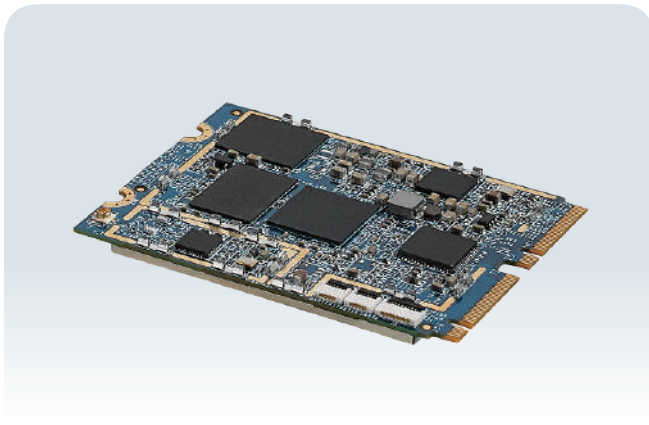
3 System On Module (SOM)

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# ESOM-MT-350

Arm-Based MediaTek Genio 350 System on Module



## Features

- Quad-core MediaTek Genio 350 processor with quad Arm Cortex-A53 @2.0GHz
- Integrated Mali-G52 GPU and H.265/H.264 FHD video decoding
- Onboard Dual-band 802.11ac Wi-Fi with Bluetooth 5.0
- Onboard 2GB LPDDR4 memory and 16GB eMMC
- Support 4-lane MIPI CSI-2 camera with internal ISP, Full HD Resolution
- Support Digital Display and 4-lane MIPI DSI, Full HD Resolution
- Supports Android 10 and Yocto 3.1 operating system

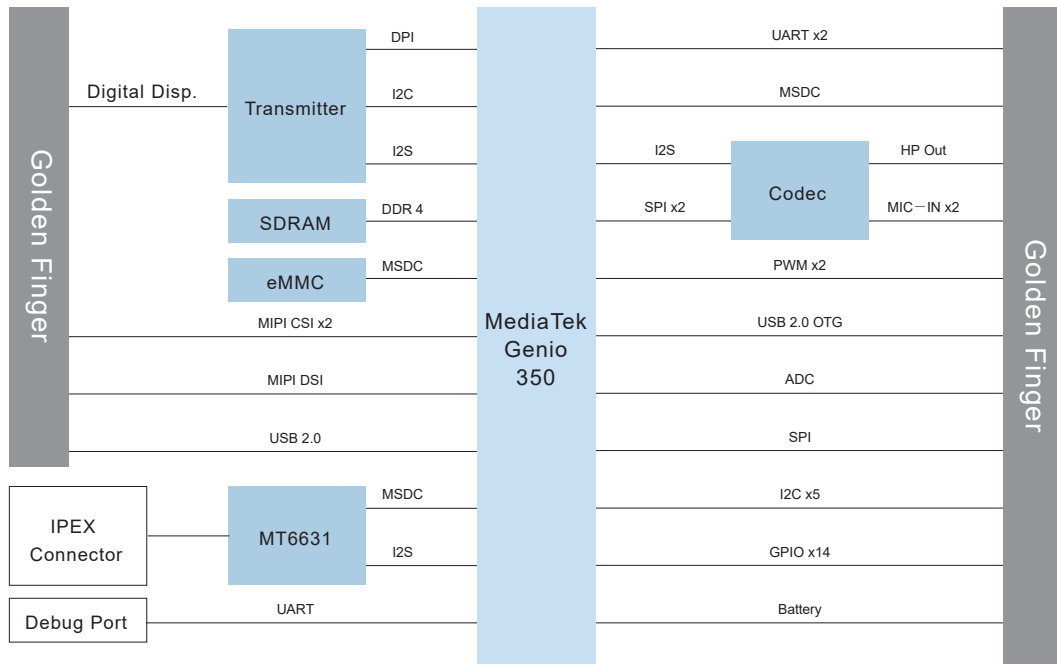


## Specifications

| System             |   |
|--------------------|---|
| Processor          | MediaTek Genio 350 Processor with Quad-core Cortex-A53 @2.0GHz  |
| Memory             | 2GB LPDDR4 SDRAM  |
| eMMC               | 16GB eMMC   |
| OS                 | <ul style="list-style-type: none"> <li>▪ Android 10</li> <li>▪ Linux Yocto 3.1</li> </ul>   |
| I/O Interface      |   |
| External I/O       | <ul style="list-style-type: none"> <li>▪ 1 IPEX Connector</li> <li>▪ 1 Debug Console Port</li> </ul>  |
| Internal I/O       | 2 M.2 Golden Finger   |
| Graphics           |   |
| Graphics Processor | <ul style="list-style-type: none"> <li>▪ ARM Mali-G52 high-performance GPU</li> <li>▪ 3D graphics accelerator processing 1600M pixel/sec @800MHz</li> <li>▪ Graphics engine supporting OpenGL® ES 3.2, OpenCL ES 2.0, and Vulkan 1.1 hardware acceleration</li> </ul>   |
| Video              | <ul style="list-style-type: none"> <li>▪ Video Encode:                             <ul style="list-style-type: none"> <li>- HEVC: 1080p@60fps</li> <li>- H.264: 1080p@60fps</li> </ul> </li> <li>▪ Video Decode:                             <ul style="list-style-type: none"> <li>- HEVC: 1080p@60fps</li> <li>- H.264: 1080p@60fps</li> </ul> </li> <li>▪ Vision DSP : Supports Cadence Tensilica Vision P6 and HiFi4</li> </ul> |
| Display            | <ul style="list-style-type: none"> <li>▪ Digital Display : up to 1920 x 1080</li> <li>▪ 4-lane MIPI DSI : up to 1920 x 1080</li> </ul>  |
| Camera             | <ul style="list-style-type: none"> <li>▪ Dual 4-lane MIPI CSI-2</li> <li>▪ Integrated image signal processor supports 13MP</li> </ul>   |
| Audio              |   |
| Audio Codec        | MediaTek MT6390/6357  |
| Audio Interface    | 2 Mic-in, 1 Headphone-out   |

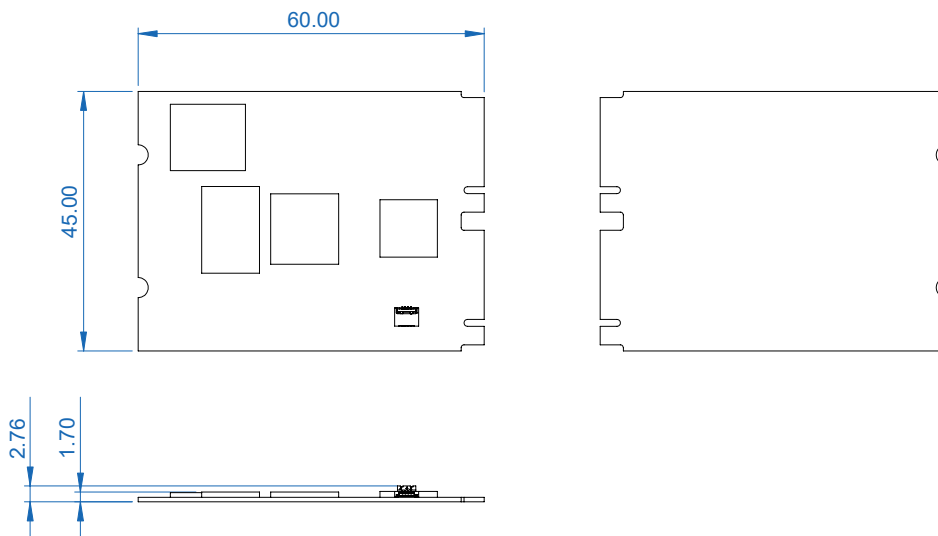
| Expansion             |   |
|-----------------------|---|
| USB                   | <ul style="list-style-type: none"> <li>▪ 1 USB 2.0 Host</li> <li>▪ 1 USB 2.0 OTG</li> </ul>   |
| UART                  | 2 UART (2-wire)   |
| SPI                   | 1 SPI   |
| I <sup>2</sup> C      | 5 I <sup>2</sup> C  |
| GPIO                  | 14 GPIO   |
| MSDC                  | 1 MSDC  |
| ADC                   | 1 ADC   |
| PWM                   | 2 PWM   |
| Battery Gauge         | 1 Battery Gauge   |
| Wireless              |   |
| Wi-Fi & BT            | <ul style="list-style-type: none"> <li>▪ MediaTek MT6631</li> <li>▪ Dual band (2.4GHz &amp; 5GHz ) single stream Wi-Fi 802.11 a/b/g/n/ac RF</li> <li>▪ Bluetooth 5.0</li> </ul> |
| Power                 |   |
| Power Input           | 4.2V DC-in  |
| Mechanical            |   |
| Dimensions (W x L)    | 60 mm x 45 mm (2.36" x 1.77")   |
| Environment           |   |
| Operating Temperature | -40°C to 85°C   |
| Storage Temperature   | -40°C to 85°C   |
| Humidity              | 5% to 95% Humidity, Non-condensing  |
| Relative Humidity     | 95% at 85°C   |
| EMC                   | CE, FCC   |

## Block Diagram



## Dimension

Unit : mm/ inch



## Order Information

|                       |   |
|-----------------------|---|
| <b>ESOM-MT-350</b>    | System on module with MediaTek Genio 350 Quad-core Processor, 2GB LPDDR4 SDRAM, 16GB eMMC |
| <b>ESOM-MT-350-EV</b> | MediaTek Genio 350 SOM Evaluation Kit   |

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Industrial Multi-Touch Computers

# Reliable & User-friendly All-in-one Solution



# MTA-1010W

10.1" Fanless Multi-Touch Computer with NXP i.MX8M Plus Arm Quad Cortex-A53 Processor



## Features

- NXP i.MX8M Plus Arm Quad Cortex-A53 Processor
- 10.1" 1280 x 800 TFT LCD, 350 nits Luminance
- 10-point Projected Capacitive Multi-touch Screen
- 2.3 AI TOPS, Ubuntu 20.04 Support
- 1 4K60 Digital Display, Audio Mic-in & Line-out
- 2 GigE LAN, 2 USB 3.1, 2 RS-232/422/485
- M.2 Key B, Mini PCIe support dual 5G/4G/Wi-Fi/BT
- Optional 2 CAN-FD and 4 GPIO expansion
- Fanless Design, -20°C to 70°C operating temperature
- 9V to 55V wide range DC power input



## Specifications

| Panel                           |  |
|---------------------------------|--|
| Panel Type                      | WSVGA TFT LED LCD  |
| Size                            | 10.1"  |
| Max. Resolution                 | 1280 x 800   |
| Display Color                   | 16.7M  |
| Brightness (cd/m <sup>2</sup> ) | 350  |
| View Angle (H/V)                | 85/85/85/85  |
| Contrast Ratio                  | 800:1  |
| Touch Screen                    |  |
| Touch Screen Type               | 10-point Projected Capacitive  |
| Control Interface               | USB Type   |
| System                          |  |
| Processor                       | NXP i.MX8M Plus Arm® Quad-core Cortex®-A53   |
| Memory                          | 4GB LPDDR4 SDRAM   |
| I/O Interface                   |  |
| Serial                          | 2 RS-232/422/485   |
| USB                             | 2 USB 3.0  |
| LED                             | Power, RDY, 2 WLAN   |
| Display                         | 1 Digital Display, up to 3840 x 2160 @30Hz   |
| Micro USB                       | Micro USB console debug port   |
| Button                          | <ul style="list-style-type: none"> <li>▪ 1 User-define Button</li> <li>▪ 1 Reset Button</li> </ul> |
| Audio                           | Mic-in, Line-out   |
| GPIO                            | 4-bit GPIO (Optional)  |
| SIM                             | 2 (External)   |

| Expansion              |   |
|------------------------|---|
| Mini PCIe              | 1 Full-size Mini PCIe Socket  |
| Storage                |   |
| eMMC                   | 1 eMMC, 32GB  |
| SD                     | 1 Micro SD, supports SDHC (External)  |
| Ethernet               |   |
| LAN 1                  | 10/100/1000 Base-T Ethernet GigE LAN, RJ45 Connector  |
| LAN 2                  | 10/100/1000 Base-T Ethernet GigE LAN supports TSN, RJ45 Connector                               |
| Power                  |   |
| Power Input            | DC 9V to 55V  |
| Power Interface        | 3-pin Terminal Block (V+/V-/GND)  |
| Software Support       |   |
| OS                     | Ubuntu 20.04 LTS  |
| Mechanical             |   |
| Dimensions (W x H x D) | 256.5mm x 178.3mm x 69.1mm (10.10" x 7.02" x 2.72")   |
| Weight                 | 1.85 kg (4.08 lb)   |
| Mounting               | <ul style="list-style-type: none"> <li>▪ Panel Mount</li> <li>▪ VESA Mount (75 x 75)</li> </ul> |
| Environment            |   |
| Operating Temperature  | -20°C to 70°C (-4°F to 158°F)   |
| Storage Temperature    | -30°C to 80°C (-22°F to 176°F)  |
| Humidity               | 5% to 95% Humidity, non-condensing  |
| Relative Humidity      | 95% @60°C   |
| EMC                    | CE, FCC   |

## Order Information

|           |   |
|-----------|---|
| MTA-1010W | 10.1" Fanless Multi-Touch Computer with NXP i.MX8M Plus, 2 GigE, 2 USB, 2 COM, DC 9V to 55V |
|-----------|---|

### Accessories

|                  |  |
|------------------|--|
| PWA-60WP3-WT     | 60W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |
| PWA-60WP3-WT-12V | 60W, 12V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C |

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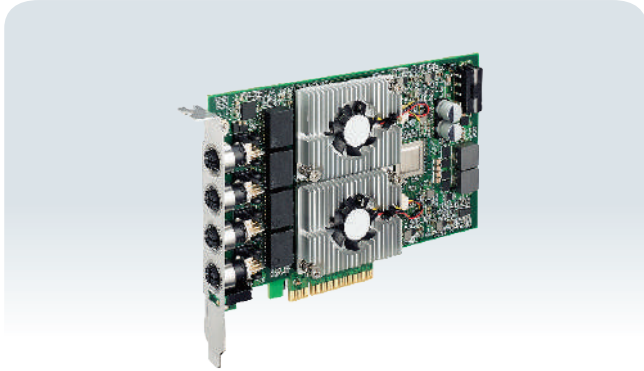
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## PCIe Card

# PE-8004MX (M12)

4-port X-coded M12 10GigE PoE+ Card



### Features

- 4-port Independent 10GigE LAN
- PCI Express x8 interface
- Power over Ethernet (PoE+), rugged X-coded M12 connectors, up to 25.5W Power Output at 48V DC per port
- 0°C to 50°C Operating Temperature



### Specifications

| Ethernet              |  |
|-----------------------|--|
| Power Requirement     | PCI Express x8   |
| LAN Controller        | Intel® Ethernet Controller X710-AT2  |
| LAN Controller Qty    | 2  |
| Data Rate             | 10Gbps/*5Gbps/*2.5Gbps/1Gbps/100Mbps (*Linux only)   |
| Number of Port        | 4  |
| Connector             | 8-pin X-coded M12 Connector  |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ Up to 25.5W Power Output @48V DC per port</li> <li>▪ 4 LED for PoE On/Off Mode</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| Mechanical            |  |
| Dimensions (W x L)    | 168mm x 105mm (6.6" x 4.1")  |
| Bracket               | Full height  |
| Environment           |  |
| Operating Temperature | 0°C to 50°C with fan (32°F to 122°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

### Order Information

|           |  |
|-----------|--|
| PE-8004MX | 4-port 10GigE PoE+ M12 X-coded LAN Card with Intel® X710-AT2 Controllers |
|-----------|--|

# PE-6004

4-port 2.5GigE PoE+ Card



### Features

- 4-port independent 2.5GigE LAN
- PCI Express x4 interface
- Power over Ethernet (PoE+), up to 25.5W Power Output at 48V DC per port
- -25°C to 60°C Operating Temperature



### Specifications

| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x4   |
| Controller            | Intel® Ethernet Controller I225-LM   |
| Controller Qty        | 4  |
| Data Rate             | 2.5Gbps/1Gbps/100Mbps/10Mbps   |
| Number of Port        | 4  |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ 4 RJ45 Connector</li> <li>▪ 4 LED for PoE On/Off Mode</li> <li>▪ Up to 25.5W Power Output at 48V DC per port</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| Mechanical            |  |
| Dimension (W x L)     | 167.7mm x 111.1mm (6.60" x 4.38")  |
| Bracket               | Full height  |
| Environment           |  |
| Operating Temperature | -25°C to 60°C with air flow (-40°F to 140°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

### Order Information

|         |   |
|---------|---|
| PE-6004 | Intel® I225 4-CH PCI Express Card with 2.5GigE PoE+ |
|---------|---|



# PE-5004

4-port 10GigE PoE\* Card



## Features

- 4-port independent 10GigE PoE\* LAN
- PCI Express x8 interface
- Power over Ethernet (PoE\*), up to 25.5W Power Output at 48V DC per port
- -25°C to 55°C Operating Temperature



## Specifications

| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x8   |
| Controller            | Intel® Ethernet Controller XL710   |
| Controller Qty        | 1  |
| PHY                   | Intel® X557  |
| PHY Qty               | 1  |
| Data Rate             | 10Gbps/1Gbps/100Mbps   |
| Number of Port        | 4  |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ 4 RJ45 Connector</li> <li>▪ 4 LED for PoE On/Off Mode</li> <li>▪ Up to 25.5W Power Output at 48V DC per port</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| Mechanical            |  |
| Dimensions (W x L)    | 168mm x 111mm (6.6" x 4.4")  |
| Bracket               | Full height  |
| Environment           |  |
| Operating Temperature | -25°C to 55°C with air flow (-40°F to 131°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

## Order Information

|         |   |
|---------|---|
| PE-5004 | Intel® XL710 4-CH PCI Express Card with 10GigE PoE* |
|---------|---|

# PE-5002

2-port 10GigE PoE\* Card



## Features

- 2-port independent 10GigE PoE\* LAN
- PCI Express x4 interface
- Power over Ethernet (PoE\*), up to 25.5W Power Output at 48V DC per port
- -25°C to 60°C Operating Temperature



## Specifications

| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x4   |
| Controller            | Intel® Ethernet Controller X550-AT2  |
| Controller Qty        | 1  |
| Data Rate             | 10Gbps/*5Gbps/*2.5Gbps/1Gbps/100Mbps (*Linux only)   |
| Number of Port        | 2  |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ 2 RJ45 Connector</li> <li>▪ 2 LED for PoE On/Off Mode</li> <li>▪ Up to 25.5W Power Output at 48V DC per port</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| Mechanical            |  |
| Dimension (W x L)     | 168mm x 111mm (6.6" x 4.4")  |
| Bracket               | Full height  |
| Environment           |  |
| Operating Temperature | -25°C to 60°C with air flow (-40°F to 140°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

## Order Information

|         |  |
|---------|--|
| PE-5002 | Intel® X550-AT2 2-CH PCI Express Card with 10GigE PoE* |
|---------|--|

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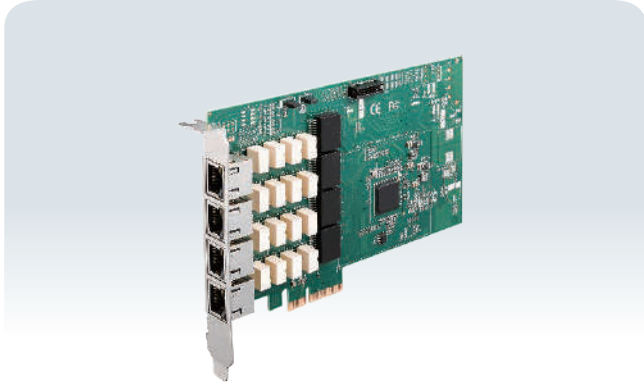
3 System On Module (SOM)

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# PE-3014

4-port Gigabit LAN Bypass Card



## Features

- 4-port Independent Gigabit Ethernet
- All-in-one, fully-integrated single-chip GigE switching solution with lower power consumption
- Supports dual hardware LAN Bypass mode
- Optional supports rugged M12 connections
- -25°C to 70°C Operating Temperature



## Specifications

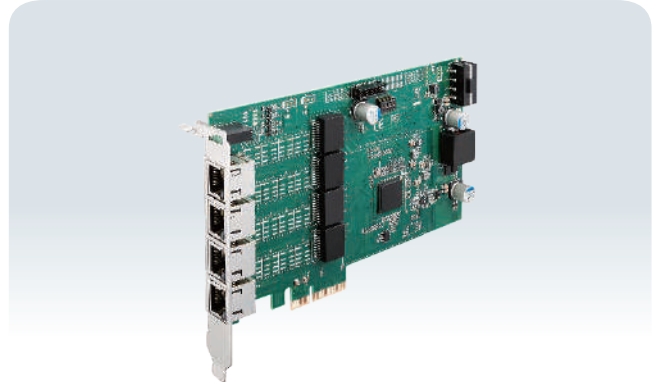
| Ethernet               |  |
|------------------------|--|
| Interface              | PCI Express x4   |
| Controller             | Intel® Ethernet Controller I350  |
| Controller Qty         | 1  |
| Data Rate              | 10/100/1000 Mbps   |
| Number of Port         | 4  |
| Connector              | <ul style="list-style-type: none"> <li>▪ 8-pin RJ45</li> <li>▪ A-coded M12 (Optional)</li> </ul> |
| Jumbo Frame            | Up to 9728 byte  |
| Link Aggregation (LAG) | Present  |
| Mechanical             |  |
| Dimensions (W x L)     | 168mm x 121mm (6.6" x 4.8")  |
| Bracket                | Full height  |
| Environment            |  |
| Operating Temperature  | -25°C to 70°C (-13°F to 158°F)   |
| Storage Temperature    | -40°C to 85°C (-40°F to 185°F)   |
| Humidity               | 5% to 95% Humidity, non-condensing   |

## Order Information

|         |   |
|---------|---|
| PE-3014 | Intel® I350 4-CH PCI Express Card with advanced 2-pair LAN Bypass |
|---------|---|

# PE-3004

4-port Gigabit PoE+ Card



## Features

- 4-port Independent Gigabit Ethernet
- Power over Ethernet (PoE+), up to 25.5W Power Output at 48V DC per port
- Optional supports rugged M12 connections
- -25°C to 70°C Operating Temperature



## Specifications

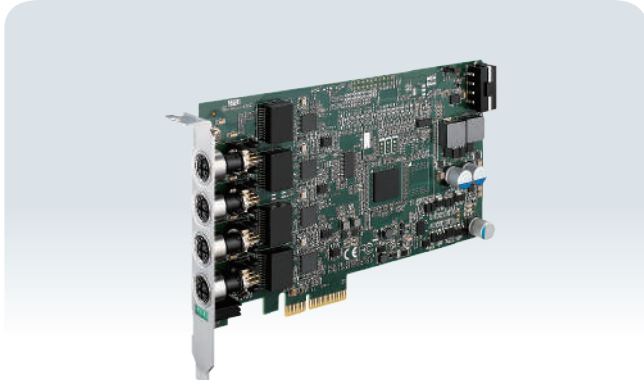
| Ethernet              |   |
|-----------------------|---|
| Interface             | PCI Express x4  |
| Controller            | Intel® Ethernet Controller I350   |
| Controller Qty        | 1   |
| Data Rate             | 10/100/1000 Mbps  |
| Number of Port        | 4   |
| Connector             | <ul style="list-style-type: none"> <li>▪ 8-pin RJ45</li> <li>▪ A-coded M12 (Optional)</li> </ul>  |
| PoE Standard          | IEEE 802.3at compliant  |
| Power Requirement     |   |
| Output                | <ul style="list-style-type: none"> <li>▪ 4 RJ45 PoE Port</li> <li>▪ 4 A-coded M12 PoE Port (Optional)</li> <li>▪ Up to 25.5W Power Output at 48V DC per port</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector   |
| Mechanical            |   |
| Dimension (W x L)     | 168mm x 121mm (6.6" x 4.8")   |
| Bracket               | Full height   |
| Environment           |   |
| Operating Temperature | -25°C to 70°C (-13°F to 158°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Humidity              | 5% to 95% Humidity, non-condensing  |

## Order Information

|         |   |
|---------|---|
| PE-3004 | Intel® I350 4-CH PCI Express Card with PoE+ |
|---------|---|

# PE-2004MX (M12)

4-port X-coded M12 GigE PoE+ Card



## Features

- 4 independent GigE LAN
- PCI Express x4 interface
- Power over Ethernet (PoE+), rugged X-coded M12 connectors, up to 25.5W Power Output at 48V DC per port
- -25°C to 70°C Operating Temperature



## Specifications

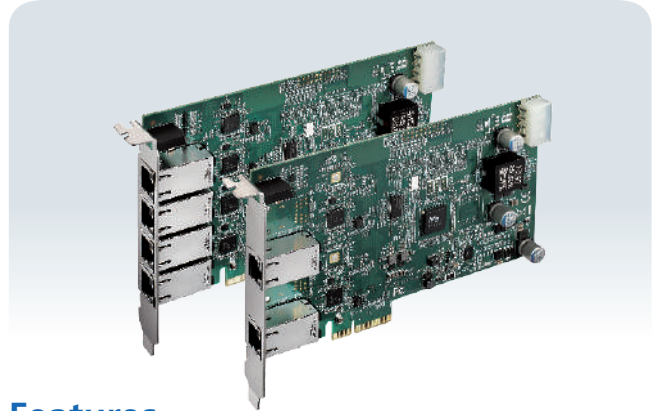
| Ethernet              |  |
|-----------------------|--|
| Power Requirement     | PCI Express x4   |
| LAN Controller        | Intel® Ethernet Controller I210  |
| LAN Controller Qty    | 4  |
| Data Rate             | 1Gbps/ 100 /10 Mbps  |
| Number of Port        | 4  |
| Connector             | 8-pin X-coded M12 Connector  |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ Up to 25.5W Power Output @48V DC per port</li> <li>▪ 4 LED for PoE On/Off Mode</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| Mechanical            |  |
| Dimensions (W x L)    | 168mm x 105mm (6.6" x 4.1")  |
| Bracket               | Full height  |
| Environment           |  |
| Operating Temperature | -25°C to 70°C (-13°F to 158°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

## Order Information

|           |  |
|-----------|--|
| PE-2004MX | 4-port GigE PoE+ M12 X-coded LAN Card with Intel® I210 Controllers |
|-----------|--|

# PE-2002/2004

2/ 4-port GigE PoE+ Card



## Features

- 2/ 4 Independent Gigabit LAN
- PCI Express x4 Interface
- Power over Ethernet (PoE+), Up to 25.5W Power Output at 48V DC per port
- -25°C to 70°C Operating Temperature



## Specifications

| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x4   |
| Controller            | <ul style="list-style-type: none"> <li>▪ 2 Intel® I210 Gigabit LAN (PE-2002)</li> <li>▪ 4 Intel® I210 Gigabit LAN (PE-2004)</li> </ul>   |
| Data Rate             | 10/ 100/ 1000 Mbps (Vary by attached Ethernet device)  |
| Connector             | 8-pin RJ45   |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ 2 PoE ports, up to 25.5W Power Output at 48V DC per port (PE-2002)</li> <li>▪ 4 PoE ports, up to 25.5W Power Output at 48V DC per port (PE-2004)</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| DIO                   | 16 Isolated DIO : 8 DI, 8 DO (Optional)  |
| Mechanical            |  |
| Dimension (W x D x H) | 168mm x 121mm x 21mm (6.6" x 4.8" x 0.8")  |
| Environment           |  |
| Operating Temperature | -25°C to 70°C (-13°F to 158°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |

## Order Information

|         |  |
|---------|--|
| PE-2004 | Intel® I210 4-CH PCI Express PoE+ Card |
| PE-2002 | Intel® I210 2-CH PCI Express PoE+ Card |

1 Edge AI Computing

2 IoT Gateway

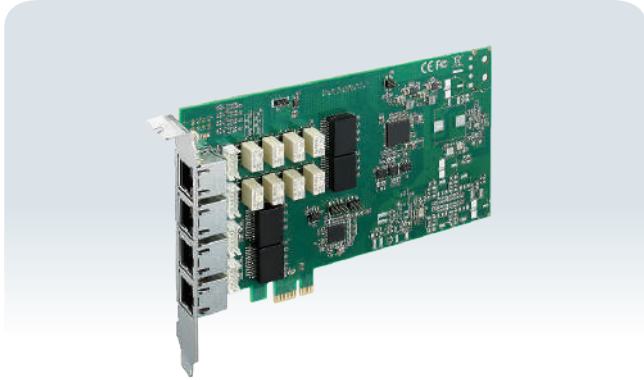
3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# SE-1014

4-port RJ45 LAN Switch Card with LAN Bypass



## Features

- Full-featured LAN functions, up to 1000Mbps data rate
- All-in-one, fully-integrated single-chip GigE switching solution with lower power consumption
- Supports hardware LAN Bypass mode
- -40°C to 85°C Operating Temperature



## Specifications

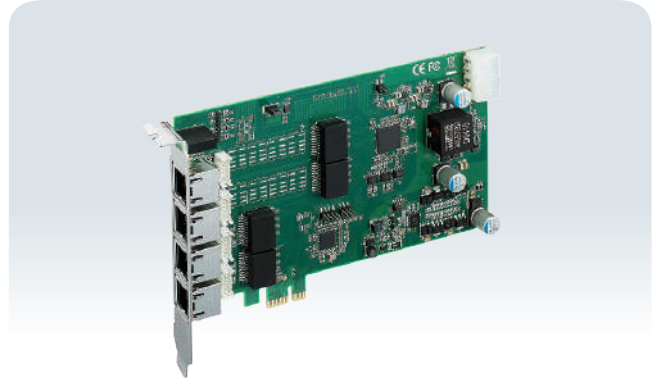
| Ethernet              |                                    |
|-----------------------|------------------------------------|
| Interface             | PCI Express x1                     |
| Controller            | Intel® Ethernet Controller I210    |
| Controller Qty        | 1                                  |
| Data Rate             | 10/100/1000 Mbps                   |
| Number of Port        | 4                                  |
| Connector             | 8-pin RJ45                         |
| Mechanical            |                                    |
| Dimensions (W x L)    | 168mm x 121mm (6.6" x 4.8")        |
| Bracket               | Full height                        |
| Environment           |                                    |
| Operating Temperature | -40°C to 85°C (-40°F to 185°F)     |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)     |
| Humidity              | 5% to 95% Humidity, non-condensing |

## Order Information

|         |  |
|---------|--|
| SE-1014 | 4-port RJ45 PCI Express LAN Switch Card with advanced LAN Bypass |
|---------|--|

# SE-1004

4-port RJ45 LAN Switch Card with PoE+



## Features

- Full-featured LAN functions, up to 1000Mbps data rate
- IEEE 802.3at Power over Ethernet (PoE+) compliant
- All-in-one, fully-integrated single-chip GigE switching solution with lower power consumption
- -40°C to 85°C Operating Temperature



## Specifications

| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x1   |
| Controller            | Intel® Ethernet Controller I210  |
| Controller Qty        | 1  |
| Data Rate             | 10/100/1000 Mbps   |
| Number of Port        | 4  |
| Connector             | 8-pin RJ45   |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Requirement     |  |
| Output                | <ul style="list-style-type: none"> <li>▪ 4 RJ45 PoE Port</li> <li>▪ Up to 25.5W Power Output at 48V DC per port</li> </ul> |
| Power Connector       | 1 4-pin 12V Power Connector  |
| Mechanical            |  |
| Dimensions (W x L)    | 168mm x 121mm (6.6" x 4.8")  |
| Bracket               | Full height  |
| Environment           |  |
| Operating Temperature | -40°C to 85°C (-40°F to 185°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

## Order Information

|         |   |
|---------|---|
| SE-1004 | 4-port RJ45 PCI Express LAN Switch Card with PoE+ |
|---------|---|

# LE-1055

Low Profile 2-port 10 GigE LAN Card



## Features

- 10Gbps data rate
- IEEE 802.3an Fast Ethernet standard compliant
- Low Profile and Full Height form factors available
- -40°C to 55°C Operating Temperature



## Specifications

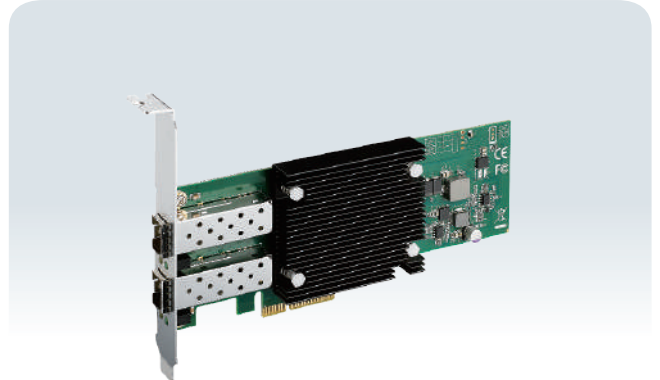
| Ethernet              |   |
|-----------------------|---|
| Interface             | PCI Express x4  |
| Controller            | Intel® Ethernet Controller X550-AT2   |
| Controller Qty        | 2   |
| Data Rate             | 10Gbps/5Gbps/2.5Gbps/1Gbps/100Mbps  |
| Number of Port        | 2   |
| Connector             | 8-pin RJ45  |
| Mechanical            |   |
| Dimensions (W x L)    | 168mm x 121mm (6.6" x 4.8", PCIe low profile)   |
| Bracket               | <ul style="list-style-type: none"> <li>▪ Full height</li> <li>▪ Low profile (Optional)</li> </ul> |
| Environment           |   |
| Operating Temperature | -40°C to 55°C (-40°F to 131°F, with Fan)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Humidity              | 5% to 95% Humidity, non-condensing  |

## Order Information

|         |  |
|---------|--|
| LE-1055 | 2-port 10 GigE LAN Card with Intel® X550-AT2 Controllers |
|---------|--|

# FE-1071

Low Profile 2-port 10 GigE SFP+ Card



## Features

- 10Gbps data rate
- IEEE 802.3 Fast Ethernet over optical fiber standard compliant
- Low Profile and Full Height form factors available
- -40°C to 55°C Operating Temperature



## Specifications

| Ethernet              |   |
|-----------------------|---|
| Interface             | PCI Express x4  |
| Controller            | Intel® Ethernet Controller X710-BM2   |
| Controller Qty        | 2   |
| Data Rate             | 10Gbps  |
| Number of Port        | 2   |
| Connector             | SFP+  |
| Mechanical            |   |
| Dimensions (W x L)    | 168mm x 64mm (6.6" x 2.5", PCIe low profile)  |
| Bracket               | <ul style="list-style-type: none"> <li>▪ Full height</li> <li>▪ Low profile (Optional)</li> </ul> |
| Environment           |   |
| Operating Temperature | -40°C to 55°C (-40°F to 131°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Humidity              | 5% to 95% Humidity, non-condensing  |

## Order Information

|         |   |
|---------|---|
| FE-1071 | 2-port 10 GigE SFP+ LAN Card with Intel® X710-BM2 Controllers |
|---------|---|

1 Edge AI Computing

2 IoT Gateway

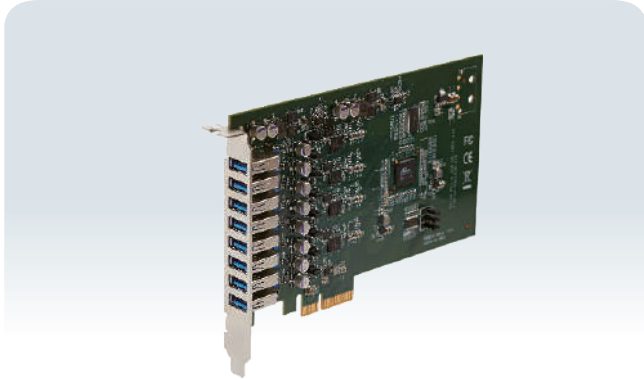
3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# UE-1008

8-port USB Card



## Features

- 4 Independent USB 3.0 controllers
- 8 USB 3.0 ports
- PCI Express x4 Interface



## Specifications

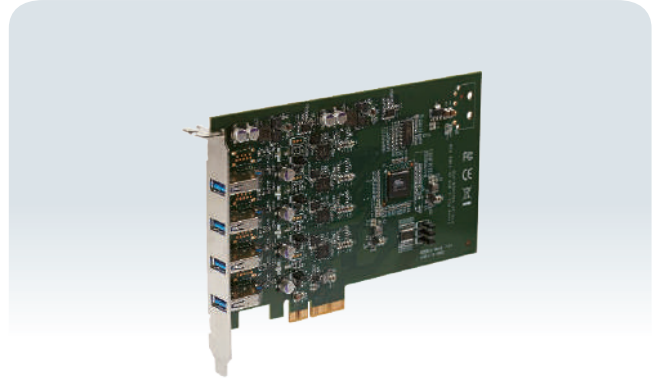
| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x4   |
| Controller            | 4 Renesas $\mu$ PD720202 Host Controller   |
| Connector             | 8 USB 3.0 Type-A Connector   |
| Current Protection    | User-configurable 900mA/1500mA per port current limit (Jumper)   |
| Data Rate             | <ul style="list-style-type: none"><li>▪ Super Speed (5Gbps)</li><li>▪ High Speed (480Mbps)</li><li>▪ Full Speed (12Mbps)</li><li>▪ Low Speed (1.5Mbps)</li></ul> |
| Mechanical            |  |
| Dimensions (W x L)    | 168mm x 121mm (6.6" x 4.8")  |
| Environment           |  |
| Operating Temperature | 0°C to 70°C (32°F to 158°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

## Order Information

|         |  |
|---------|--|
| UE-1008 | 8-port USB 3.0 Host Adapter with 4 Independent USB 3.0 Controllers |
|---------|--|

# UE-1004

4-port USB Card



## Features

- 4 Independent USB 3.0 controllers
- 4 USB 3.0 ports
- PCI Express x4 Interface



## Specifications

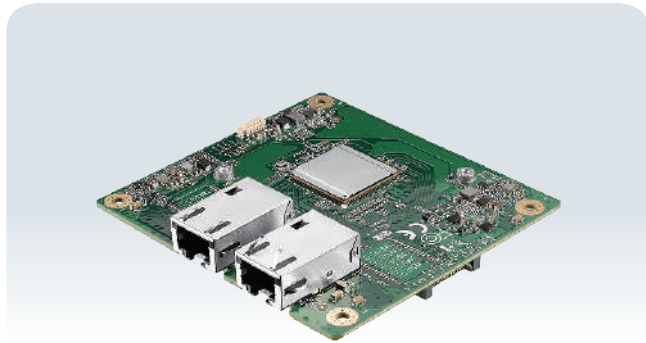
| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x4   |
| Controller            | 4 Renesas $\mu$ PD720202 Host Controller   |
| Connector             | 4 USB 3.0 Type-A Connector   |
| Current Protection    | User-configurable 900mA/1500mA per port current limit (Jumper)   |
| Data Rate             | <ul style="list-style-type: none"><li>▪ Super Speed (5Gbps)</li><li>▪ High Speed (480Mbps)</li><li>▪ Full Speed (12Mbps)</li><li>▪ Low Speed (1.5Mbps)</li></ul> |
| Mechanical            |  |
| Dimensions (W x L)    | 168mm x 121mm (6.6" x 4.8")  |
| Environment           |  |
| Operating Temperature | 0°C to 70°C (32°F to 158°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |

## Order Information

|         |  |
|---------|--|
| UE-1004 | 4-port USB 3.0 Host Adapter with 4 Independent USB 3.0 Controllers |
|---------|--|

# SUMIT Card LSM-X710-AT2

SUMIT Card with 2 10GigE LAN



## Features

- Intel® X710-AT2 10GBASE-T controller
- IEEE 802.3an Fast Ethernet standard compliant
- -25°C to 50°C Operating Temperature



## Specifications

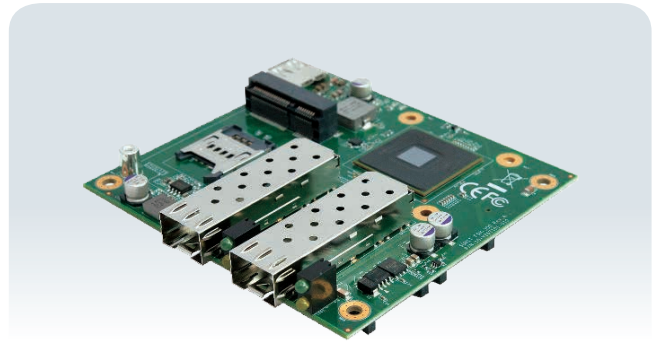
| Ethernet              |                                       |
|-----------------------|---------------------------------------|
| Controller            | Intel® Ethernet Controller X710-AT2   |
| Controller Qty        | 1                                     |
| Data Rate             | 10Gbps/ 5Gbps/ 2.5Gbps/ 1Gbps/100Mbps |
| I/O Interface         |                                       |
| Bus Type              | SUMIT B                               |
| LAN                   | 2 RJ45 Connector                      |
| Mechanical            |                                       |
| Dimensions (W x L)    | 90mm x 96mm (3.5" x 3.8")             |
| Weight                | 150 g                                 |
| Environment           |                                       |
| Operating Temperature | -25°C to 50°C (-13°F to 122°F)        |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)        |
| Humidity              | 5% to 95% Humidity, non-condensing    |

## Order Information

|              |   |
|--------------|---|
| LSM-X710-AT2 | SUMIT (PCIe) Expansion Card with 2 10G RJ45 LAN |
|--------------|---|

# FSM-710-BM2

SUMIT Card with 2 10GigE SFP+ Fiber LAN



## Features

- Intel® X710-BM2 10Gigabit Ethernet Controller
- IEEE 802.3 Fast Ethernet over optical fiber standard compliant
- SIM Card Socket for 3G/ 4G/ LTE/ WiFi/ GPRS/ UMTS
- -25°C to 55°C Operating Temperature



## Specifications

| Ethernet              |   |
|-----------------------|---|
| Controller            | Intel® Ethernet Controller X710-BM2   |
| Data Rate             | 10Gbps  |
| I/O Interface         |   |
| Bus Type              | <ul style="list-style-type: none"> <li>▪ FSM-710-BM2 : SUMIT B</li> <li>▪ FSM-710-BM2-E : SUMIT A, B</li> </ul> |
| LAN                   | 2 10GBASE SFP+ Fiber Connector  |
| Mini PCIe             | 1 Full-size Mini PCIe Socket  |
| SIM Card              | 1 SIM Card Socket (Internal, optional supports External I/O Type)   |
| USB                   | 1 USB 2.0 Connector   |
| Mechanical            |   |
| Dimensions (W x L)    | 90mm x 96mm (3.5" x 3.8")   |
| Weight                | 160 g   |
| Environment           |   |
| Operating Temperature | -25°C to 55°C (-13°F to 131°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Humidity              | 5% to 95% Humidity, non-condensing  |

## Order Information

|               |  |
|---------------|--|
| FSM-710-BM2   | SUMIT (PCIe) Expansion Card with 2 10GigE SFP+ LAN                                       |
| FSM-710-BM2-E | SUMIT (PCIe) Expansion Card with 2 10GigE SFP+ LAN, 1 Mini PCIe, 1 SIM Socket, 1 USB 2.0 |

1 Edge AI Computing

2 IoT Gateway

3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# LSM-200

SUMIT Card with 3-port 2.5G LAN



## Features

- Intel® Ethernet Controller I225
- 3 independent LAN ports support 2.5Gbps
- -25°C to 70°C Operating Temperature
- SUMIT A, B Interface



## Specifications

| Ethernet              |   |
|-----------------------|---|
| LAN Controller        | Intel® I225 Gigabit Ethernet Controller |
| Controller Qty        | 3                                       |
| Data Rate             | 2.5Gbps/1Gbps/100Mbps/10Mbps            |
| I/O Interface         |   |
| Bus Type              | SUMIT A, B                              |
| LAN                   | 3 RJ45 Connector                        |
| Mechanical            |   |
| Dimensions (W x L)    | 90.0mm x 96.0mm (3.54" x 3.78")         |
| Weight                | 145 g                                   |
| Environment           |   |
| Operating Temperature | -25°C to 70°C (-13°F to 158°F)          |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)          |
| Humidity              | 5% to 95% Humidity, non-condensing      |

## Order Information

|         |   |
|---------|---|
| LSM-200 | SUMIT (PCIe) Card with 3 Channel 2.5G LAN |
|---------|---|

# LSM-100

SUMIT Card with 3-port GigE LAN



## Features

- Intel® I210 Gigabit Ethernet Controller
- IEEE 802.3ab Gigabit Ethernet standard compliant
- 3 independent GigE LAN Connection
- -25°C to 85°C Operating Temperature
- SUMIT A, B Interface



## Specifications

| Ethernet              |   |
|-----------------------|---|
| Controller            | Intel® I210 Gigabit Ethernet Controller |
| Controller Qty        | 3                                       |
| Data Rate             | 1Gbps/ 100Mbps/ 10Mbps                  |
| I/O Interface         |   |
| Bus Type              | SUMIT A, B                              |
| LAN                   | 3 RJ45 Connector                        |
| Mechanical            |   |
| Dimensions (W x L)    | 90mm x 96mm (3.5" x 3.8")               |
| Weight                | 150 g                                   |
| Environment           |   |
| Operating Temperature | -25°C to 85°C (-13°F to 185°F)          |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)          |
| Humidity              | 5% to 95% Humidity, non-condensing      |

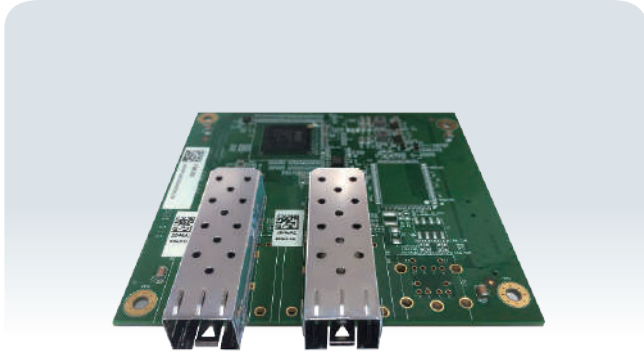
## Order Information

|           |   |
|-----------|---|
| LSM-100-3 | SUMIT (PCIe) Card with 3 Channel GigE LAN |
|-----------|---|



# FSM-200

SUMIT Card with 2 1000BASE SFP Fiber LAN



## Features

- Intel® I350 Gigabit Ethernet Controller
- IEEE 802.3 Fast Ethernet over optical fiber standard compliant
- Dual 100BASE-FX fiber ports



## Specifications

| Ethernet              |                                    |
|-----------------------|------------------------------------|
| Controller            | Intel® Ethernet Controller i350    |
| Controller Qty        | 1                                  |
| I/O Interface         |                                    |
| Bus Type              | SUMIT B                            |
| LAN                   | 2 1000BASE SFP Fiber Connector     |
| PS/2                  | 1 PS/2 KB/MS Connector (Optional)  |
| Mechanical            |                                    |
| Dimensions (W x L)    | 90mm x 96mm (3.5" x 3.8")          |
| Weight                | 150 g                              |
| Environment           |                                    |
| Operating Temperature | 0°C to 60°C (32°F to 140°F)        |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)     |
| Humidity              | 5% to 95% Humidity, non-condensing |

## Order Information

|         |   |
|---------|---|
| FSM-200 | SUMIT (PCIe) Expansion Card with 2 1000BASE SFP Fiber LAN |
|---------|---|

# FSM-100

SUMIT Card with 2 100BASE-FX GigE Fiber LAN



## Features

- Intel® 82574 Gigabit Ethernet Controller
- IEEE 802.3 Fast Ethernet over optical fiber standard compliant
- Dual 100BASE-FX fiber ports



## Specifications

| Ethernet              |   |
|-----------------------|---|
| Controller            | Intel® 82574L Gigabit Ethernet Controller |
| Controller Qty        | 2   |
| Data Rate             | 1Gbps                                     |
| I/O Interface         |   |
| Bus Type              | SUMIT A, B                                |
| LAN                   | 2 100BASE-FX Fiber Connector              |
| PS/2                  | 1 PS/2 KB/MS Connector (Optional)         |
| Mechanical            |   |
| Dimensions (W x L)    | 90mm x 96mm (3.5" x 3.8")                 |
| Weight                | 170 g                                     |
| Environment           |   |
| Operating Temperature | 0°C to 60°C (32°F to 140°F)               |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)            |
| Humidity              | 5% to 95% Humidity, non-condensing        |

## Order Information

|           |   |
|-----------|---|
| FSM-100FX | SUMIT (PCIe) Expansion Card with 2 100BASE-FX Fiber LAN, 1 PS/2 KB/MS |
|-----------|---|

1 Edge AI Computing

2 IoT Gateway

3 System On Module (SOM)

4 Industrial Multi-Touch Computers

5 Embedded Peripherals

# Mini PCIe Module DMX-110

Mini PCIe Digital I/O Card, 32-bit Isolated DIO



## Features

- 4KV Isolated Protection for each channel
- -40°C to 85°C Operating Temperature
- 32-bit Programmable signals
- 4 ports digital signal, each with 8-bit GPIO
- Onboard Interrupt supports Rising/Falling Edge
- Programmable Timer and Counter for status monitoring
- Isolated DIO Control : Sink Mode/Source Mode



## Specifications

| Ethernet  |   |
|---|---|
| Interface   | USB 2.0   |
| Number of port  | 4 (8-bit GPIO/each)   |
| Power Input   | 3.3V DC-in  |
| I/O Voltage   | 3.3V  |
| Isolated DIO Expansion Card (DMX-100-E)   |   |
| Number of port  | - Input : 2 (8-bit GPIO/each)<br>- Output : 1 with 16-bit Isolated DIO  |
| I/O Voltage   | - Sink Mode : 6V to 40V<br>- Source Mode : 6V to 48V  |
| Mechanical  |   |
| Dimensions (W x L)  | ▪ DMX-100-M : 30.0mm x 50.9mm<br>▪ DMX-100-E : 45.0mm x 55.0mm<br>▪ Cable Length : 250mm                              |
| Weight  | 160 g   |
| Environment   |   |
| Operating Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Humidity  | 5% to 95% Humidity, non-condensing  |
| Packing List  |   |
| - 1 DMX-100-M GPIO Card<br>- 4 Isolated DIO Cable<br>- 1 Screw Kit<br>- 2 Bracket | - 2 DMX-100-E Isolated DIO Expansion Card<br>- 2 Sink/Source Mode Control Cable<br>- 2 Terminal block 20-pin (2.54mm) |

## Order Information

|         |   |
|---------|---|
| DMX-110 | Mini PCIe 32-bit GPIO Card with Isolated DIO Expansion Card |
|---------|---|

# DMX-100

Mini PCIe Digital I/O Card, 32-bit GPIO



## Features

- -40°C to 85°C Operating Temperature
- 32-bit Programmable signals
- 4 ports digital signal, each with 8-bit GPIO
- Onboard Interrupt supports Rising/Falling Edge
- Programmable Timer and Counter for status monitoring



## Specifications

| Ethernet                     |   |
|------------------------------|---|
| Interface                    | USB 2.0   |
| Number of port               | 4 (8-bit GPIO/each)                                     |
| Power Input                  | 3.3V DC-in  |
| I/O Voltage                  | 3.3V  |
| Mechanical                   |   |
| Dimensions (W x L)           | ▪ DMX-100-M : 30.0mm x 50.9mm<br>▪ Cable Length : 250mm |
| Weight                       | 160 g   |
| Environment                  |   |
| Operating Temperature        | -40°C to 85°C (-40°F to 185°F)                          |
| Storage Temperature          | -40°C to 85°C (-40°F to 185°F)                          |
| Humidity                     | 5% to 95% Humidity, non-condensing                      |
| Packing List                 |   |
| - 1 Screw Kit<br>- 2 Bracket | - 1 DMX-100-M GPIO Card<br>- 4 GPIO Cable               |

## Order Information

|         |                            |
|---------|----------------------------|
| DMX-100 | Mini PCIe 32-bit GPIO Card |
|---------|----------------------------|

# SMX-200

Mini PCIe 4-port Isolated RS-232/422/485 Serial Card



## Features

- 4-port high-speed RS-232/422/485
- Each serial channel supports up to 2.5kV Isolation
- Up to 31.25Mbps super fast data transmission
- -40°C to 85°C Operating Temperature
- Interrupt Status Register for Performance Enhancement



## Specifications

| Ethernet                |   |
|-------------------------|---|
| Interface               | Mini PCIe   |
| Controller              | EXAR XR17V354   |
| Standard                | RS-232/422/485 (2.5kV Isolation)  |
| Number of Port          | 4   |
| Baud Rate               | Up to 921.6kbps   |
| FIFOs                   | 256 byte  |
| Flow Control            | CTS/RTS, Xon/Xoff   |
| Mechanical              |   |
| Dimensions (W x L)      | <ul style="list-style-type: none"> <li>▪ Mini Card : 30mm x 51mm</li> <li>▪ Cable Length : 260mm</li> </ul> |
| Weight                  | 145 g   |
| Environment             |   |
| Operating Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Storage Temperature     | -40°C to 85°C (-40°F to 185°F)  |
| Humidity                | 5% to 95% Humidity, non-condensing  |
| Packing List            |   |
| - 1 SMX-200 Serial Card | - 1 Screw Kit   |
| - 2 Cable Set           | - 2 Bracket   |
| - 1 Driver CD           |   |

## Order Information

|         |  |
|---------|--|
| SMX-200 | 4-port Isolated RS-232/422/485 Serial Card |
|---------|--|

# SMX-100

Mini PCIe 4-port RS-232/422/485 Serial Card



## Features

- 4 high-speed RS-232/422/485 ports
- Up to 31.25Mbps super fast data transmission
- -40°C to 85°C Operating Temperature
- 3kV ESD Protection
- Interrupt Status Register for Performance Enhancement



## Specifications

| Ethernet                |   |
|-------------------------|---|
| Interface               | Mini PCIe   |
| Chipset                 | EXAR XR17V354   |
| Standard                | RS-232/422/485  |
| Number of Port          | 4   |
| Baud Rate               | Up to 921.6kbps   |
| FIFOs                   | 256 byte  |
| Flow Control            | CTS/RTS, Xon/Xoff   |
| Mechanical              |   |
| Dimensions (W x L)      | <ul style="list-style-type: none"> <li>▪ Mini Card : 30mm x 51mm</li> <li>▪ Cable Length : 300mm</li> </ul> |
| Weight                  | 145 g   |
| Environment             |   |
| Operating Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Storage Temperature     | -40°C to 85°C (-40°F to 185°F)  |
| Humidity                | 5% to 95% Humidity, non-condensing  |
| Packing List            |   |
| - 1 SMX-100 Serial Card | - 1 Screw Kit   |
| - 2 Cable Set           | - 1 Bracket   |
| - 1 Driver CD           |   |

## Order Information

|         |                                   |
|---------|-----------------------------------|
| SMX-100 | 4-port RS-232/422/485 Serial Card |
|---------|-----------------------------------|

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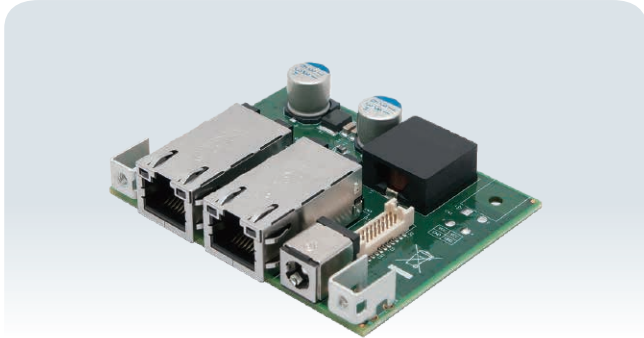
3 System On Module (SOM)

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# PMX-101

Mini PCIe 2-port PoE+ GigE Card with DC Jack



## Features

- 2 GigE LAN ports support IEEE 802.3at PoE+ with 12V to 24V Power Input
- -40°C to 85°C Operating Temperature
- IEEE 802.3, 802.3u and 802.3ab compliant



## Specifications

| Ethernet  |  |
|---|--|
| Interface   | PCI Express x1   |
| Controller  | Intel® I210 Gigabit LAN  |
| Data Rate   | 10/100/1000 Mbps   |
| Number of Port  | 2  |
| Connector   | 8-pin RJ45   |
| PoE Standard  | IEEE 802.3at compliant   |
| Power Requirement   |  |
| Input   | 12V to 24V, DC Jack  |
| Output  | Up to 25.5W Power Output at 48V DC per port  |
| Mechanical  |  |
| Dimensions (W x L)  | <ul style="list-style-type: none"> <li>▪ Mini Card : 30mm x 51mm</li> <li>▪ Daughter Card : 56mm x 61mm</li> <li>▪ Cable Length : 300mm</li> </ul> |
| Weight  | 145 g  |
| Environment   |  |
| Operating Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity  | 5% to 95% Humidity, non-condensing   |
| Packing List  |  |
| <ul style="list-style-type: none"> <li>- 1 Driver CD</li> <li>- 1 Screw Kit</li> <li>- 1 Bracket</li> </ul> | <ul style="list-style-type: none"> <li>- 1 PMX-100 PoE GigE Card</li> <li>- 1 RJ45 Daughter Card</li> <li>- 1 Connection Cable</li> </ul>          |

## Order Information

|         |  |
|---------|--|
| PMX-101 | Mini PCIe 2-port PoE+ GigE Card with DC Jack |
|---------|--|

# PMX-100

Mini PCIe 2-port PoE+ GigE Card



## Features

- 2 GigE LAN ports support IEEE 802.3at PoE+ with 12V to 24V DC Power Input
- -40°C to 85°C Operating Temperature
- IEEE 802.3, 802.3u and 802.3ab compliant



## Specifications

| Ethernet  |  |
|---|--|
| Interface   | PCI Express x1   |
| Controller  | Intel® I210 Gigabit LAN  |
| Data Rate   | 10/100/1000 Mbps   |
| Number of Port  | 2  |
| Connector   | 8-pin RJ45   |
| PoE Standard  | IEEE 802.3at compliant   |
| Power Requirement   |  |
| Input   | 12V to 24V   |
| Output  | Up to 25.5W Power Output at 48V DC per port  |
| Mechanical  |  |
| Dimensions (W x L)  | <ul style="list-style-type: none"> <li>▪ Mini Card : 30mm x 51mm</li> <li>▪ Daughter Card : 56mm x 61mm</li> <li>▪ Cable Length : 300mm</li> </ul> |
| Weight  | 145 g  |
| Environment   |  |
| Operating Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity  | 5% to 95% Humidity, non-condensing   |
| Packing List  |  |
| <ul style="list-style-type: none"> <li>- 1 Driver CD</li> <li>- 1 Screw Kit</li> <li>- 1 Bracket</li> </ul> | <ul style="list-style-type: none"> <li>- 1 PMX-100 PoE GigE Card</li> <li>- 1 RJ45 Daughter Card</li> <li>- 1 Connection Cable</li> </ul>          |

## Order Information

|         |                                 |
|---------|---------------------------------|
| PMX-100 | Mini PCIe 2-port PoE+ GigE Card |
|---------|---------------------------------|

# LMX-200

Mini PCIe 2-port Gigabit LAN Card



## Features

- 2 GigE LAN ports, up to 1Gbps data rate
- IEEE 802.3, 802.3u and 802.3ab compliant
- PCI Express x1 Interface
- -40°C to 85°C Operating Temperature



## Specifications

| Ethernet              |  |
|-----------------------|--|
| Interface             | PCI Express x1   |
| Chipset               | 2 Intel® I210 Gigabit LAN  |
| Data Rate             | 10/100/1000 Mbps   |
| Number of Port        | 2  |
| Connector             | 8-pin RJ45   |
| Mechanical            |  |
| Dimensions (W x L)    | <ul style="list-style-type: none"> <li>▪ Mini Card : 30mm x 51mm</li> <li>▪ Daughter Card : 50.5mm x 27.7mm</li> <li>▪ Cable Length : 300mm</li> </ul> |
| Weight                | 145 g  |
| Environment           |  |
| Operating Temperature | -40°C to 85°C (-40°F to 185°F)   |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |
| Packing List          |  |
| - 1 Driver CD         | - 1 LMX-200 Mini PCIe LAN Card   |
| - 1 Screw Kit         | - 1 RJ45 Connector Card  |
| - 1 Bracket           | - 1 Connection Cable   |

## Order Information

|                |                                   |
|----------------|-----------------------------------|
| <b>LMX-200</b> | Mini PCIe 2-port Gigabit LAN Card |
|----------------|-----------------------------------|

# UMX-100

Mini PCIe 2-port USB 3.0 Card



## Features

- 2 high-speed USB 3.0 ports, up to 5Gbps data rate
- USB 3.0 Rev. 1.0 compliant
- Intel® xHCI Rev. 1.0 compliant
- PCI Express x1 Interface
- -40°C to 85°C Operating Temperature



## Specifications

| Ethernet              |   |
|-----------------------|---|
| Interface             | Mini PCIe   |
| Controller            | Renesas μPD720202   |
| Standard              | USB 3.0 Rev. 1.0 compliant  |
| Number of Port        | 2   |
| Data Rate             | Up to 5Gbps   |
| Link Aggregation      | Present   |
| Connector             | 19-pin Header   |
| Mechanical            |   |
| Dimensions (W x L)    | <ul style="list-style-type: none"> <li>▪ Mini Card : 30mm x 51mm</li> <li>▪ Cable Length : 320mm</li> </ul> |
| Weight                | 152 g   |
| Environment           |   |
| Operating Temperature | -40°C to 85°C (-40°F to 185°F)  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)  |
| Humidity              | 5% to 95% Humidity, non-condensing  |
| Packing List          |   |
| - 1 Driver CD         | - 1 UMX-100 Mini PCIe USB Card  |
| - 1 Screw Kit         | - 1 Cable Set   |
| - 1 Bracket           |   |

## Order Information

|                |                           |
|----------------|---------------------------|
| <b>UMX-100</b> | Mini PCIe 2-port USB Card |
|----------------|---------------------------|

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3 System On Module (SOM)

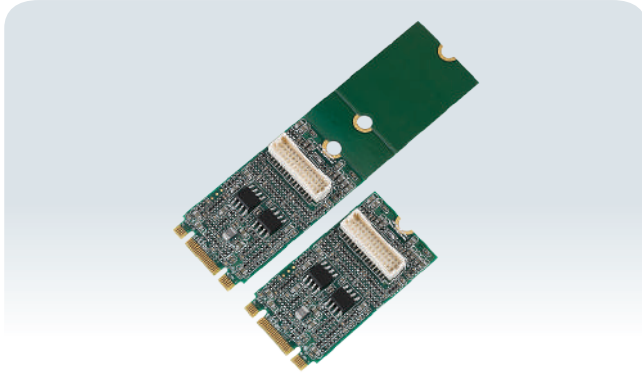
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# M.2 Module

## LMT-100P

M.2 2-port GigE LAN Card with PoE\*



### Features

- Intel® I210 Ethernet Controller supports 2-port independent GigE LAN
- IEEE 802.3at PoE\* with 12V to 24V Power Input
- Flexible supports M.2 Key B, Key M
- Foldable design supports multiple M.2 form factors : 2242, 2252, 2280
- -40°C to 85°C Operating Temperature



### Specifications

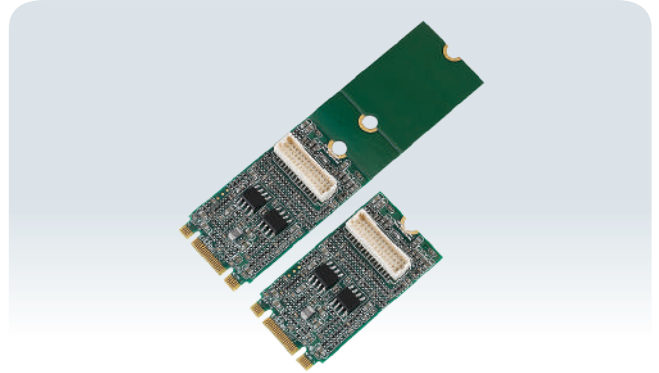
| Ethernet              |  |
|-----------------------|--|
| LAN Controller        | Intel® I210 Ethernet Controller  |
| Data Rate             | 1Gbps/100Mbps/10Mbps   |
| Connector             | 8-pin RJ45   |
| VLAN                  | 802.1Q VLAN supported  |
| Power Requirement     |  |
| PoE Standard          | IEEE 802.3at compliant   |
| Power Input           | 12V to 24V   |
| Power Output          | Up to 25.5W Power Output at 48V DC per port  |
| Mechanical            |  |
| Dimensions (W x L)    | <ul style="list-style-type: none"> <li>▪ M.2 Card : 22mm x 80mm (Foldable design for 22mm x 42mm or 22mm x 52mm)</li> <li>▪ Daughter Card for LMX-100 : 50.5mm x 27.7mm</li> <li>▪ Daughter Card for LMX-100P : 56mm x 61mm</li> <li>▪ Cable Length : 300mm</li> </ul> |
| Weight                | 145 g  |
| Environment           |  |
| Operating Temperature | -40°C to 85°C (-40°F to 185°F), with air flow  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |
| Packing List          |  |
| - 1 Driver CD         | - 1 M.2 LAN Card   |
| - 1 Screw Kit         | - 1 RJ45 I/O Card  |
| - 1 Bracket           | - 1 Connection Cable   |

### Order Information

|          |   |
|----------|---|
| LMT-100P | Intel® I210 M.2 2-port PoE* GigE LAN Card |
|----------|---|

# LMT-100

M.2 2-port GigE LAN Card



### Features

- Intel® I210 Ethernet Controller supports 2-port independent GigE LAN
- Flexible supports M.2 Key B, Key M
- Foldable design supports multiple M.2 form factors : 2242, 2252, 2280
- -40°C to 85°C Operating Temperature



### Specifications

| Ethernet              |  |
|-----------------------|--|
| LAN Controller        | Intel® I210 Ethernet Controller  |
| Data Rate             | 1Gbps/100Mbps/10Mbps   |
| Connector             | 8-pin RJ45   |
| VLAN                  | 802.1Q VLAN supported  |
| Mechanical            |  |
| Dimensions (W x L)    | <ul style="list-style-type: none"> <li>▪ M.2 Card : 22mm x 80mm (Foldable design for 22mm x 42mm or 22mm x 52mm)</li> <li>▪ Daughter Card for LMX-100 : 50.5mm x 27.7mm</li> <li>▪ Daughter Card for LMX-100P : 56mm x 61mm</li> <li>▪ Cable Length : 300mm</li> </ul> |
| Weight                | 145 g  |
| Environment           |  |
| Operating Temperature | -40°C to 85°C (-40°F to 185°F), with air flow  |
| Storage Temperature   | -40°C to 85°C (-40°F to 185°F)   |
| Humidity              | 5% to 95% Humidity, non-condensing   |
| Packing List          |  |
| - 1 Driver CD         | - 1 M.2 LAN Card   |
| - 1 Screw Kit         | - 1 RJ45 I/O Card  |
| - 1 Bracket           | - 1 Connection Cable   |

### Order Information

|         |                                      |
|---------|--------------------------------------|
| LMT-100 | Intel® I210 M.2 2-port GigE LAN Card |
|---------|--------------------------------------|

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