aetina

Edge Al Solutions 2022

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About Aetina

Founded in Taiwan in 2012, Aetina gained reinvestment from Innodisk Corporation in 2013. Aetina makes high-performance GPGPU and Edge AI computing solutions for embedded and smart applications. With continuous focus and development on highly reputed GPU-accelerated computing products and edge computing platforms, Aetina has expanded into more edge computing markets, including edge AI systems for robotics, drones, industrial inspection, medical imaging, automation, gaming, and deep learning. In the era of AloT, Aetina plays a pivotal role in providing edge computing solutions and integration, helping Edge AI developers with data acceleration, collection, analysis, and other AI functions. To help developers build AI projects and implement a comprehensive service, Aetina is committed to hardware and software integration with a complete value-added ecosystem. Besides, a set of software development tools called Aetina Intelligent Management (AIM) make it guicker to develop innovative ideas in the future. Long-term support is the core commitment of Aetina. By close technical partnership, Aetina provides trusted hardware and firmware customization services to help customers release products on time and on budget.



Milestone





Business Commitment

Aetina is a professional AI service company that focuses on industrial AI. We try to concretize AI and inspire more innovative ideas for AI market.



Al is developing at a fast pace, and edge computing is to make Al closer to humans. Aetina established the vision of becoming top embedded Edge Al computing solution provider since edge computing has played an important role in AloT market.



Connecting to partners makes Aetina stronger in the AloT market. To help anyone get into the edge Al industry, Aetina built a robust ecosystem at the edge to strengthen integral Al capability.

YOUR IDEAL CHOICE



Edge Al Win-Win Solutions

For the blooming AloT generation, everyday things are getting smarter. Cloud computing changes the face of our world. 5G communication connects everything in a faster and stronger way. Edge computing changes the vision from the device, enabling local processing and low latency. Nowadays, investors and application developers are finding the way to access this field and seek the most convenient and the most budget-friendly way to reach their goals. Aetina understands customer requests well and goes deep into the industrial field. Aetina works closely with clients to ensure that we develop and implement technical innovations that best suit their target markets.

Our products are compatible with various applications, including automation, security, medical, retail, gaming, and transportation. We also offer tailored products to suit demanding working conditions and temperatures. Aetina targets strategic AI-acceleration applications at the edge by offering a series from **edge computing device** to **AI inference platform** to support enterprise deployment.



Automation

GPU-accelerated AI computing solutions that embrace the highest level of reliability to maximize accuracy, quality, and productivity in the factory.



Security

Reliable edge AI computing solutions that work 24/7 to collect, inspect and analyze images and video, in the air, streets, buildings, and public spaces.



Transportation

Connect the hardware and software portfolios for high performance and low energy consumption products for a better and safer traffic environment.



Medical

Combine the high resolution graphics and deep-learning capabilities for stable, robust, and easy-to-deploy medical computing products, smoothing their challenges at the front end.



Provide a unique, seamless, and smart shopping experience to support retail market with various easy-to-deploy, operational, and customizable computing products.



Gaming

Support gaming machine suppliers and system integrators with graphics cards and AI acceleration products in long-run supply.

Chained Up Hardware & Software Pro-AI Service

Aetina Intelligent Management

Aetina Intelligent Management (AIM) is made to form a comprehensive solution, delivering innovative service in the AI market. With the ambition to contribute thoughtful and advanced AI service, Aetina professionally serves customers, including AI project evaluation, development, deployment, monitoring, and management. AIM springs up to push the expert-level service through the platform, framework, app, and cloud.





EdgeEye is Aetina's browser-accessed management platform that allows you to monitor your edge devices for better stability and reliability.



EdgeStore is a one-stop service related algorithm when contributing to the smart application.



EdgeDeploy is a device deployment assistant that helps construct AI architecture quickly.



Customization Service

Three Service Levels Cater to Every Requirement



Pure-Custom Level Service

From concept, manufacturing to after-sales service, Aetina provides complete customized design support into every phase of the product life cycle. Design covers initial specifications, document support, research, schematic review, circuit layout, BIOS customization, debug & analysis, validation & testing, manufacturing management, schedule control, and warranty service.



Semi-Custom Level Service

Customers can have customized I/O, BIOS and schematics based on Aetina's various form factors of graphics modules and boards. Aetina keeps providing all necessary information with customers, ensuring products are in line with their needs and vertical applications.



Minor-Custom Level Service

To gain more flexibility and productivity, customers can easily, quickly request minor configuration changes in Aetina's standard products. This level saves on total cost and development time, and speeds up product time to market.

Aetina Ecosystem

Stepping into next-generation AI, all industries are trying to integrate AI into their applications. However, it always costs money and takes time, not to mention the massive amount of potential difficulties along the way. Support from the AI computing platform provider is a good start, but other partners who have the same goals as Aetina are critical.

Therefore, Aetina delivers many examples of AI applications, which helps the AI developers to explore more ideas to upgrade the equipment on their own. As a market driver in AIoT, Aetina is willing to give you an easy start and widen the AI entrance for all.

Meet our Ecosystem Partners

Instead of endlessly searching for trustworthy partners on your own, Aetina has already vetted reliable partners for you!



Industry Applications The Visual Core of

5G networking is promising for IoT, and it represents more than just a new era of higher-speed wireless. It includes trillions of sensors, devices, and machines leveraging AI and running connected data autonomously from the data center to the edge. Both **Fog Computing** and **Edge Computing** are the two ideal technologies to push analyzed data and intelligence with low latency, making data-driven decisions faster to prosper various intelligent applications of smart cities.



The SMART CITY

Aetina is dedicated to offering industrial edge AI solutions, including GPU and AI acceleration modules, edge computing devices, embedded platforms, and server-grade AI inference platforms. All the computing nodes that reside at the edge of the network are not only the hubs for aggregating data from vast sensors but also powerful processors to process real-time application requests.



Edge AI computing platforms for space-constrained operations



Small form factor modules leveraging new tech of GPU and AI for applications that require high-performance in limited space

Automated Textile Inspection Cuts TCO





Traditional machines use manual inspection of fabrics, which have been unable to process different fabrics with higher precision.

🐼 Solution

The textile company combines Jetson AI edge platform and the accumulated big data in the past as the basis for research and development. They developed a fast and accurate AI automated fabric inspection system that is compatible with existing inspection machines.

Recommended Products



Comprehensive I/O Expansion Capability



3D Visual-Guided System Enhances Calibrate Operation





Challenge

It's time-consuming to bundle up the cameras, sensors and AI computing platform with the robotics and soothe the software compatibility issue.



Aetina and its eco-partner unveil the 3D Vision Platform bundled package to provide hardware and software-ready, Issac certified algorithms integrated to help clients build the 3D applications powered by Jetson-based AI computing platforms with shortening time-to-market.

Recommended Products



AN810-XNX

High Performance Expandable



Smart Patrol Empowers Real-time Decision Making





Challenge

The traditional execution of public safety lacks efficiency and mobility because public safety executives tend to search suspicious people with the naked eye.



Aetina collaborated with partners to build smart patrol solution by integrating panoramic cameras, edge AI platform, identity management, and license plate recognition software. The solution helped public safety executives easily grasp real-time image detection and analysis on patrol.

Recommended Products

M3T3000-QN/M3T5000-WN

M3T5000-WN

Industrial Compact MXM Modules



M3T3000-QN



AIP-FH31-A Series

Expandable AI Inference Platform



Traffic Flow System Enables Fast Vehicle Recognition





Traffic management needs to ensure the mobility on the road and flow of the traffic. Real-time control and prediction are the first step to smarter transportation management.



Aetina edge AI platform integrated with YUAN's capture module and deep learning SDK, which reducing the load of video decoding, letting the GPU focus on AI computing and providing quick recognition of vehicle and traffic flow.

Recommended Products

AN310-TX2

MIPI And CSI Camera Supported Embedded Platform



Smart Street Lighting Offers Better Reliability



Challenge

A pilot project was coordinated by Taipei City PMO, and Smart Street Lighting was expected to provide for lighting, safety warning, traffic counting, parking space detection, and environment sensing through the configuration of various sensors.



Aetina's palm-size and fanless Mini series-M1 comes with Powered Device (PD) function, which can receive electricity from Ethernet equipment without an adapter. For smart street lighting, the PD function from M1 makes installation simple and reduces TCO as scaling up networks. Besides, M1 reduces the risk such as power outage, electric overload, and potential equipment damage.

Recommended Products



DeviceEdge Mini Series-M1

Compact Edge Computing Deployment With PD Support



Self-Driving Wheelchair Keeps Elders Away From Harm





As population is aging, nursing workforce becomes limited, especially challenging long-term care facilities.



Aetina and its eco-partner streamline the issue with a powerful Jetson-based edge AI platform and 5G function fitted onto an electric self-driving wheelchair. We created a car-like autonomous robot and assists the wheelchair in recognizing the dangerous environment and escaping harmful situations with 5G super-speed wireless data transfer.

Recommended Products

as*

AX720-X32

Embedded Platform With 5G&10GigE LAN Support



Fall Detection System Ensures Immediate Alarm



Challenge

Very often there are not enough healthcare providers to take care of patients, especially during the pandemic. Long Term Care (LTC) residents, high risk infected people who live together, need more caution to avoid cluster infection. This is where AI and the Internet of Medical Things can shine. The combination of medical devices such as wearable technologies and computer networks that are connected through the internet provide real-time interaction between care providers and patients.

🛞 Solution

One of our customers' POC is used in hospitals and LTC facilities. Combining Aetina's product – DeviceEdge along with Jetson NX module and the wireless cameras, our customer put the edge devices in LTC houses to help caregivers easily take care of the elders. Together with the customer's trained AI model to detect the movements, pose and determine if they're in danger, as well as detect dangerous areas and sound an alarm.

Recommended Products



DeviceEdge Mini Series-M2

Compact Edge Computing Box With 2xPSE



Epidemic Prevention Solution Allows Quick Detection





A full blown epidemic puts tremendous strain on the medical workforce. The most general treatment for infectors is isolation, social distancing, and self-defense, such as wearing a facemask. It is challenging to execute effective prevention methods with limited human resources.



The Aetina AN110-NAO edge computing platform powers a smart sensor with higher AI performance and warning function for detection. Aetina offers it in a small and compact package with common I/Os and complete BSP support, allowing clients to build one single device quickly and efficiently.

Recommended Products



AN110-NAO

Small, Smart Vision Computing Platform



Automated Self-Checkout Realizes New Shopping Experience





Retailers are facing rapid growth demands of digitalization and intelligent deployment but there are challenges of limited space, latency when connecting to cloud databases, and high-temperatures in greasy and harsh environments.



Aetina Jetson-based edge AI platform combined the visual identification and AI algorithm as a small and reliable computing and recognition host at the front line. It provides retailers a flexible and quick deployment for an auto-checkout system, lifts the check-out efficiency and user experience.

Recommended Products

AN110-XNX

Small Form Factor Features High Performance



Intelligent Video Analytics **Facilitate Retail Operation**





Challenge

For retailers who want to drive revenue growth and provide a better shopping experience, understanding customer behavior is essential. Al applications with image analysis can assist retailers in improving the display, real-time business campaigns through understanding of buyer traffic, length of stay, and demographics data. They are seeking high-performance and easy-to-use AI equipment.



Aetina Jetson-based edge AI platform combined the visual identification and AI algorithm as a small and reliable computing and recognition host at the front line. It provides retailers a ready-to-deploy, easy-to-use AI device to generate in-store data from points of sale, cameras, and sensors, providing customer demographics and determining high- and low-traffic store aisles, customer stay time, and the number of unique visitors. Assisting retailers speed up in-depth understanding of customer behaviors and increase overall sales.

Recommended Products



DeviceEdge Mini Series-M2

Compact Edge Computing Box With 2xPSE



Intelligent Warehouse Optimizes Inventory Management





Logistics and warehouse management require highly efficient and accurate optimized workflows in inventory, shipment, and distribution. Order and inventory data must be tracked in real-time.



AGVs are equipped with Aetina's edge AI computing platform and up to six sets of MIPI long-distance camera modules, providing instant image recognition and comparison. When combined with Aetina Intelligent Management, it can achieve remote monitoring and management for the AGV system and equipment.

Recommended Products

AX720-X32

Embedded Platform With 5G&10GigE LAN Support



Interactive Video Wall Upgrades for Personalized Advertising





Challenge

Video Walls are the most immersive visual for in-store sales, and 8/10 customers admit to entering a store because digital signage caught their attention. Retailers are revving up to utilize AI technology, co-creation for customization, extended shopping service and personalized experience.



Aetina's all-in-one M3 player is flexible enough to deploy as a 4x4 or 8x2 large video wall with Ultra HD 8K video playback. Programming with Aetina DeviceEdge platform with AI visual recognition technology to generate gender, age, style and demographic data in order to conduct visitor preference products that may appeal to them.

Recommended Products



Smart Drone Expands Efficiency Of Patrol Search





Challenge

Transmission towers are hard to reach, and patrol drones could help that situation. Yet, there are still challenges for the drone. The drone needs to take pictures and process them with intensive vision computing. At the same time, the drone has to perform AI inference to avoid danger. It needs high AI computing performance. Last, the drone must be small to move smoothly and fly.



By leveraging a wide array of sensors and drones, vital data can be collected and processed. A smart drone can perform patrol work 24/7 to keep the equipment well maintained. Using Aetina's edge computing platform with high-definition image detection through broadband and high-speed wireless connectivity allows early detection of signs and warnings.

Recommended Products

AN510-TX2

Small and Low Power Envelope



Self-Driving Cars Accelerate Delivery Time



\rm Challenge

Al equipment uses the power of machine vision and machine learning to perform automated transportation, delivery, and logistic services by self-driving cars, increasing the efficiency of distribution and fulfilling the omnichannel experience in an environmentally friendly and intelligent way. Processing real-time environmental sensor data and navigation require a heavy computing workload and huge memory capacity.

Solution

Deploy GPU-accelerated AI at the edge to provide advanced computing performance for self-driving cars. Aetina DeviceEdge M3 is a palm-size, and 9 USB port equipped AI edge computing device, harnessing power from NVIDIA Jetson SoM to perform up to 21 TOPs AI performance. It also has 128GB NVMe SSD high-capacity storage for large images and video data backup and storage.

Recommended Products



DeviceEdge Mini Series-M3

Compact Edge Computing Box With 9xUSB



Edge AI Solutions



We Deliver Reliable Solutions that



Enable AI-Powered Edge Computing



Carrier Board and Platform Series

Aetina provides various ready-to-ship **carrier boards** and **platforms**. The full lineup includes cutting-edge AI processors and systems on modules (SoM) for edge computing. The NVIDIA[®] **Jetson™** series is known as a powerful yet low power-consumption edge computing platform, and is suitable for all sizes of AI applications. Its unprecedented processing power, incredible energy efficiency, and easily embeddable form factor are revolutionizing AIoT applications.







ystem Configuration Service Extension Peripher Integration Customized Design Service

Carrier Board

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Model Number	AN110	AN310	ACE-N510	ACE-N622	AX720	AN810
Module Support	NVIDIA Jetson Nano /Jetson Xavier NX	NVIDIA Jetson TX2	NVIDIA Jetson TX2	NVIDIA Jetson TX2	NVIDIA Jetson Xavier /Xavier 8GB	Jetson Xavier™ NX
Dimensions	87.4mm x 67.4mm	87mm x 70mm	87mm x 50mm	120mm x 120mm	131mm x 120mm	120mm x 120 mm
Weight	61g	68g	45g	113g	132g	131g
Expansion	1x M.2 E Key 2230	1x Full-Mini Card (PCle x1/ mSATA)	N/A	1x Full-Mini Card (PClex1 & USB2.0) 1x Full-Mini Card (PClex1 or mSATA)	1x M.2 M Key 2280 1x M.2 E Key 2230 1x Extension slot	1x M.2 M Key 2280 1x M.2 E Key 2230 1x M.2 B Key 3050
Video Interfaces	1x HDMI 1x eDP	1x HDMI	1x HDMI	1x HDMI	2x HDMI	1x HDMI
Audio	HDMI Integrated	HDMI Integrated	HDMI Integrated	HDMI Integrated 1x I2S interface	HDMI Integrated 1x I2S interface	HDMI Integrated 1x I2S interface
USB	USB3.2 Gen1 Type A (Hub mode) 1x USB2.0 Micro AB OTG	2x USB 3.2 Gen1 Type A 1x USB2.0 Micro AB OTG	2x USB3.2 Gen1 Type A 1x USB3.0 Micro AB OTG	2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB OTG	2x USB3.2 Gen1 Type A 1x USB3.2 Gen2 Type C 1x USB2.0 AB OTG	2x USB3.2 Gen1 Type A (Downgrade to USB2.0 when install M.2 B key) 1x USB2.0 Micro AB
Ethernet	1x RJ45 for GbE	1x RJ45 for GbE	1x RJ45 for GbE	1x RJ45 for GbE	2x RJ45 for GbE (1x Onboard, 2x Extension adapter)	1x GbE
Camera Inputs	1x 2-Lanes MIPI CSI-2 FPC 15pins 1x 4-Lanes MIPI CSI-2 FPC 36pins	6 x2-Lane MIPI CSI-2 (Extension board ACE-CAM6C) 3 x4-Lane MIPI CSI-2 (Extension board ACCS3-STD-AN00)	N/A	1x 2-Lanes MIPI CSI-2	6x 2-Lane MIPI CSI-2 (Extension board ACE-CAM6C)	6 x2-Lane MIPI CSI-2 (Extension board ACE-CAM6C) 3 x4-Lane MIPI CSI-2 (Extension board ACCS3-STD-AN00)
SD Card	1x MicroSD card slot	1x MicroSD card slot	1x MicroSD card slot	1x SD Card	1x MicroSD card slot	1x MicroSD Card
MISC. External Interfaces	1x System Control (PWR/RST/Recovery) 5x GPIO 1x R5232 2x UART (1x Debug UART) 1x I2C 1x SPI 1x 4-pin FAN connector	1x System Control (PWR/RST /Recovery/Sleep) 5x GPIO 2x CAN BUS 1x RS232 1x UART 1x I2C 1x 4-pin FAN connector	1x System Control (PWR/RST/Recovery /Sleep) 4x GPIO 2x CAN BUS 1x RS232 1x UART 1x 4-pin FAN connector	1x System Control (PWR/RST/Recovery/ Sleep) 4x GPIO 2x CAN BUS 1x RS232 1x UART 1x I2C(3.3V) 1x SPI(1.8V/3.3V) 1x SPI(1.8V/3.3V) 1x 12V output 1x 5V output 1x 5V output	1x System Control (PWR/RST/Recovery /Sleep botton) 5x GPIO 2x CAN BUS 1x RS232 3x UART 1x I2C(33V) 1x SPI(33V) 1x 4-pin FAN connector 1x 6-pin Power con- nector	1x System Control (PWR/RST/Recovery /Sleep) 5x GPIO 1x CAN BUS 3x I2C 1x SPI 2x UART(Debug) 1x FAN
Power Input	12V / 5A DC	9.0V ~ 19.6V / 5A DC	12V / 5A DC	12V ~ 19V / 5A DC	9.0V ~ 19.6V / 5A DC	12V ~ 19V DC
Operating Temperature	-40°C to +85°C	-40°C to +85°C	-20°C to +70°C	-20°C to +70°C	-25°C to +80°C	-40°C to +85°C

CIES OF THE OWNER

AN110

Carrier Board for NVIDIA[®] Jetson Nano[™] / Jetson Xavier[™] NX





I/O

Mass Storage	1x Micro SD card slot		
Video Interfaces	1x HDMI Type A		
	1x eDP (12V)		
LAN	1x RJ-45 (Internal)		
Expansion	1x 2-Lanes MIPI CSI-2 FPC 15pins		
	1x 4-Lanes MIPI CSI-2 FPC 36pins		
	1x M.2 E Key 2230		
USB	1x USB2.0 Micro AB		
	2x USB3.2 Gen1 Type A		
Serial	1x RS-232		
Others	1x Front Panel		
	1x 4-pin FAN connector		
	2x UART (1x debug UART)		
	5x GPIO		
	1x I2C		
	1x SPI		
	1x DC-in 12V (2 Pin Euroblock)		

Features

- Smallest design for NVIDIA Jetson Nano and Xavier NX Module
- Speficially designed for high performance and low-power envelope AI computing
- Support wide temperature from -40°C to 85°C
- Support 1x 2-Lanes/ 1x 4-Lanes MIPI camera for machine vision demands
- Ideal for general robotics, drone, smart cameras and modern AI devices of smart city

Mechanical and Environmental

Dimension	87.4 mm x 67.4 mm
Weight	61g
Power Input	12V / 5A DC
Operating Temperature	-40°C ~ +85°C (Standard Version)
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105 °C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

Ordering Information

Model Number	Description	
AN110-STD-AN00		

AN310 Multi MIPI Carrier Board for NVIDIA[®] Jetson[™] TX2



Features

- Configure up to 12x lanes of CSI connector
- Support up to 6x 2M cameras, 1080p 30 FPS
- Optimized extension capabilities increase system connectivity
- Support wide temperature from -40°C to 85°C
- Meet to multi-vision demands in drones, vehicles, robots, security, automation and edge devices

I/O

Mass Storage	1x Micro SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 for Gigabit Ethernet
Expansion	1x Full-Mini card (PCI Express x1 or mSATA)
	1x MIPI Interface connector (120 pin)
USB	1x USB2.0 Micro AB
	2x USB 3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	1x DC-in 5.5V~19.6V Euroblock connector (2 Pin)
	1x UART, 1x I2C, 5x GPIO,
	2x CAN Bus

Ordering Information

Model NumberDescriptionAN310-STD-AN00AN310 Carrier, Standard temp -40°C to +85°C

Certified MIPI Extension Modules

Model Number	Description
ACE-CAM6C	6x CSI-II Camera Carrier Board with FPC Connecto

Features



- Support up to 6x 2M camera modules
- Transmit by MIPI CSI-II interface
- Support FDP-Link III in-vehicle camera module

Model Number Description

ACCS3-STD-AN00 3x 4K or 6x FHD Extension Camera Module

Features

- Transmit by MIPI CSI-II interface
- Support 3x 4K camera modules

• Support FDP-Link III in-vehicle camera module

Mechanical and Environmental

Dimension	87 mm x 70 mm
Weight	68g
Power Input	9.0V~19.6V /5A DC
Operating Temperature	-40°C ~ +85°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
31-080000-0002	AN310 Cable kit
39-C13232-0001	TX1/TX2 Active Fan Sink
39-C24141-0000	TX1/TX2 Passive Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105 °C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

ACE-N510

Credit Card Size Carrier Board for NVIDIA[®] Jetson[™] TX2





I/O

Mass Storage	1x Micro SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 for Gigabit Ethernet
Expansion	-
USB	1x USB2.0 Micro AB
	2x USB 3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	1x UART
	4x GPIO
	1x DC-in 12V Power Jack
	2x CAN Bus

Features

- Smallest footrprint design for NVIDIA Jetson TX2 series
- Amiable for compute-intensive and low-power consumption Al applications
- Support extended temperature from -20°C to 70°C
- 1x HDMI, 2x CAN Bus, 1x Micro USB 2.0 OTG, 2x USB 3.0, 1x RS-232, 1x UART and 4x GPIO
- Ideal for space-constrained embedded edge computing, such as smart cameras, robots, drones, mobile medical devices

Mechanical and Environmental

Dimension	87 mm x 50 mm
Weight	45g
Power Input	12V/ 5A DC
Operating Temperature	-20°C ~ +70°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
31-080000-0000	ACE-N510 Cable kit
39-C13232-0001	TX1/TX2 Active Fan Sink
39-C24141-0000	TX1/TX2 Passive Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

Ordering Information

Model Number	Description
ACE-N510	ACE-N510 Carrier, Standard temp 0°C to +55°C
ACE-N510-B	ACE-N510 Carrier, Wide temp -20°C to +70°C

ACE-N622

Nano-ITX Carrier Board for NVIDIA[®] Jetson[™] TX2





- Nano-ITX form factor (120mm x 120mm)
- Two Full-Mini card for I/O extension flexibly and easily
- Support wide range of driver-ready extension I/O modules
- Compatible to Jetson TX2 series modules, specifically designed for high performance, low-power Edge AI computing



I/O

Mass Storage	1x Full size SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 for Gigabit Ethernet
Expansion	1x Full-Mini card (PCI Express x1 and USB2.0)
	1x Full-Mini card (PCI Express x1 or mSATA)
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	1x 4pin 12V DC Output
	1x 4pin 5V DC Output
	1x DC-in 12V~19V Power Jack
	1x UART / 1x I2C / 4x GPIO / 1x I2S / 1x SPI
	2x CAN Bus

Ordering Information

Model Number	Description
ACE-N622	ACE-N622 Carrier, Standard temp 0°C to +55°C
ACE-N622-B	ACE-N622 Carrier, Wide temp -20°C to +70°C

Accessory (Optional)

Model Number	Description
31-080000-0001	ACE-N622 Cable kit
39-C13232-0001	TX1/TX2 Active Fan Sink
39-C24141-0000	TX1/TX2 Passive Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

Mechanical and Environmental

Dimension	Nano-ITX 120 mm x 120 mm
Weight	113g
Power Input	12V~19V/ 5A DC
Operating Temperature	-20°C ~ +70°C (Standard Version)
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Certified Extension Modules

Model Number	Module Type Description	
TMPL-G201-C1	Dual Isolated LAN, 0°C to 70°C	
TMPL-G201-W1	Dual Isolated LAN WT, -40°C to 85°C	
TMPL-G2P1-C1	Dual Isolated PoE Module, Mounting hole,	
	4pin header, 0°C to 70°C	
TMPL-G2P1-W1	Dual Isolated PoE Module, Mounting hole,	
	4pin header, -40°C to 85°C	
TMPL-G2P1-C3	Dual Isolated PoE Module, Mounting hole,	
	DC Jack, 0°C to 70°C	
TMPL-G2P1-W3	Dual Isolated PoE Module, Mounting hole,	
	DC Jack, -40°C to 85°C	
TMU2-X1S1-W1	USB to Single Isolated RS-232, -40 °C to 85 °C	
TMU2-X2S1-W1	USB to Dual Isolated RS-232, -40°C to 85°C	
TMUC-B201-W1	USB to Dual Isolated CANbus 2.0B,-40°C to 85°C	
TMUI-0D01-W1	USB to 32bit Digital I/O Module, -40°C to 85°C	
TMPU-3401-C1	USB 3.0 (x4), 0°C to 70°C	
TMPU-3401-W1	USB 3.0 (x4), -40°C to 85°C	
DHMSR-B56D81BCBQC	mSATA 3IE2-P 256G SSD, 0°C to 70°C	

AX720 Multifunctional Carrier Board for NVIDIA[®] Jetson AGX Xavier™





I/O

Mass Storage	1x Micro SD card slot
Video Interfaces	2x HDMI Type A
LAN	1x RJ-45 (Internal)
	2x RJ-45 (by extension daughter board)
Expansion	1x 60 pin connector (PCIe x8)
	1x M.2 M Key 2280
	1x M.2 E Key 2230
	1x 120 pin connector (MIPI CSI-2 16Lanes)
USB	1x USB2.0 AB OTG
	1x USB3.2 Gen2 Type C
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	2x UART (1x debug UART)
	5x GPIO
	1x DC-in 9V~20V
	2x CAN
	3x UART/1x I2C/1x SPI

Ordering Information

Model NumberDescriptionAX720-STD-AN00AX720 Carrier, Standard temp -40°C to +85°C

Certified Communication Extension Module

Model Number	Description
ADM2B-720-NN05	Daughter board for AX720, support dual 10G
	and 4G/5G function 0°C to +55°C

Features

- NVIDIA Jetson AGX Xavier support
- Specifically designed for high-level inference performance at the edge
- Support wide temperature from -25°C to 80°C
- Flexibly extension module support 2x 10G LAN port and M.2 B key (3042/3050)
- Support up to 6x 2M cameras
- Ideal for industrial inspection, robots, medical imaging and deep learning

Mechanical and Environmental

Dimension	131 mm x 120 mm
Weight	132g
Power Input	9.0V~ 19.6V / 5A DC
Operating Temperature	-40°C ~ +85°C (Standard Version)
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
31-080000-0002	AX720 Cable kit
62-7CAM6C-5000	CA-A01 6x CSI-2 Camera Carrier
	Board with FPC
39-C16161-0001	AX720 Active Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0004	100-240V 120W Power Adapter
AN810

Optimal Expandability Carrier Board for NVIDIA[®] Jetson Xavier[™] NX





I/O

Mass Storage	1x Micro SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 for Gigabit Ethernet
Expansion	1x M.2 M Key 2280(PClex4/SATA)
	1x M.2 E Key 2230(USB2.0/PClex1)
	1x M.2 B Key 3050(USB3.1)
	1x MIPI CSI-2 Connector (120-pins)
	1x SIM slot
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	-
Others	1x Front Panel
	1x MIPI Interface connector
	1x DC-in 12V~19V (6 Pin Micro Fit)
	2x UART, 3x I2C, 5x GPIO, 1x SPI
	1x CAN Bus

Features

- On-board M.2 M key, B key, E key for full M.2 expansion capability
- High wireless communication capability through 4G/5G extension and SIM card slot
- Specifically designed for high performance and low-power envelope AI computing
- Support extended temperature from -40°C to 85°C (Only Motherboard)
- Suitable for general robotics, Drone, UAV, industrial inspection, medical imaging and deep learning

Mechanical and Environmental

Dimension	120 mm x 120 mm
Weight	131g
Power Input	12V~19V
Operating Temperature	-40°C ~ +85°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
32-010000-0005	US Power Cord SVT 18AWG Cable 1800mm
	Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G SL-6+SL-3
	Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter
39-C14328-0001	FANsink 5V 5500rpm 57.8*39*18mm

Ordering Information

Model Number	Description
AN810-STD-AN00	AN810 Carrier including I/O Cables,
	Standard temp -40°C to +85°C

	p.40	p.41	p.42
Model Number	AN110-NAO	AN110-XNX	AN310-TX2
NVIDIA Jetson Module Pre-integrated	NVIDIA [®] Jetson Nano™	NVIDIA® Jetson Xavier™ NX	NVIDIA [®] Jetson™ TX2
Al Performance	0.5 TFLOPS (FP16)	14 TOPS (INT8) at 10W 21 TOPS (INT8) at 15W	1.3 TFLOPS (FP16)
CPU	Quad-core ARM Cortex A57 MPCore processor	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6NB L2 +4MB L3	Dual-core Denver 2 64-bit CPU quad-core ARM A57 complex
GPU	NVIDIA Maxwell™ 128 CUDA cores	NVIDIA Volta™ 384 CUDA cores and 48 Tensor cores	NVIDIA Pascal™ 256 CUDA cores
Memory	4GB LPDDR4 64-bit	8GB LPDDR4x 128-bit	8GB LPDDR4 128-bit
Networking	10/100/1000 BASE-T Ethernet	10/100/1000 BASE-T Ethernet	10/100/1000 BASE-T Ethernet,WLAN
Display	1x HDMI Type A 1x eDP	1x HDMI Type A 1x eDP	1x HDMI Type A
Storage	16GB eMMC 5.1 Flash 1x Micro SD card slot	16GB eMMC 5.1 Flash 1x Micro SD card slot	32GB eMMC 5.1 Flash 1x Micro SD card slot
Expansion	1x M.2 E Key 2230 1x 2-Lanes MIPI CSI-2 FPC 15 pins 1x 4-Lanes MIPI CSI-2 FPC 36 pins	1x M.2 E Key 2230 1x 2-Lanes MIPI CSI-2 FPC 15 pins 1x 4-Lanes MIPI CSI-2 FPC 36 pins	1x Full-Mini Card (PCle x1/ mSATA) 1x MIPI Interface connector (120 pins)
USB	2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB	2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB	2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB
MISC. External Interfaces	1x Front Panel 5x GPIO 1x RS232 2x UART (1x Debug UART) 1x I2C 1x SPI 1x 4-pin FAN connector	1x Front Panel 5x GPIO 1x RS232 2x UART (1x Debug UART) 1x I2C 1x SPI 1x 4-pin FAN connector	1x Front Panel 5x GPIO 2x CAN BUS 1x RS232 1x UART 1x I2C 1x 4-pin FAN connector
Power Input	12V / 5A DC	12V / 5A DC	9.0V~ 19.6V / 5A DC
Dimensions	87.4mm x 67.4mm x46mm	87.4mm x 67.4mm x48.1mm	87mm x 70mm x 45.82mm
Weight	144g	136g	223g
Operation Temperature	- 20°C to +55°C	- 20°C to +55°C	-25°C to +80°C

		0/5	246
AN510-TX2	AN622-TX2	AX720-X32	AN810-XNX
NVIDIA® Jetson™ TX2	NVIDIA [®] Jetson™ TX2 series	NVIDIA® Jetson AGX Xavier™	NVIDIA® Jetson Xavier™ NX
1.3 TFLOPS (FP16)	1.3 TFLOPS (FP16)	11 TFLOPS (FP16) 32 TOPS (INT8)	14 TOPS (INT8) 10W 21 TOPS (INT8) 15W
Dual-core Denver 2 64-bit CPU quad-core ARM A57 complex	Dual-core Denver 2 64-bit CPU quad-core ARM A57 complex	8-core ARM v8.2 64-bit CPU 8MB L2 + 4MB L3	6-core NVIDIA Carmel ARM®v8.2 64-bit CPU 6MB L2 + 4MB L3
NVIDIA Pascal™ 256 CUDA cores	NVIDIA Pascal™ 256 CUDA cores	NVIDIA Volta™ 512 CUDA cores and 64 Tensor cores	NVIDIA Volta™ 384 CUDA cores and 48 Tensor cores
8GB LPDDR4 128-bit	8GB LPDDR4 64-bit	32GB LPDDR4x 256-bit	8GB LPDDR4x 128-bit
10/100/1000 BASE-T Ethernet, WLAN	10/100/1000 BASE-T Ethernet,WLAN	10/100/1000 RGMII Gigabit Ethernet	10/100/1000 BASE-T Ethernet
1x HDMI Type A	1x HDMI Type A	2x HDMI Type A	1x HDMI Type A
32GB eMMC 5.1 Flash 1x Micro SD card slot	32GB eMMC 5.1 Flash 1x Full size SD card slot	32GB eMMC 5.1 Flash 1x Micro SD card slot	16GB eMMC 5.1 Flash 1x Micro SD card slot
N/A	1x Full-Mini Card (PClex1 & USB2.0) 1x Full-Mini Card (PClex1 or mSATA) 1x 2-Lanes MIPI CSI-2	1x M.2 M Key 2280 1x M.2 E Key 2230 1x Extension slot 1x MIPI CSI-2 Connector 120 pins	1x M.2 M Key 2280 1x M.2 E Key 2230 1x M.2 B Key 3050 1x MIPI CSI-2 Connector 120 pins 1x SIM Slot
2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB	2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB	2x USB3.2 Gen1 Type A 1x USB3.2 Gen2 Typc C 1x USB2.0 AB OTG	2x USB3.2 Gen1 Type A 1x USB2.0 Micro AB (OTG Only)
1x Front Panel 4x GPIO 2x CAN BUS 1x RS232 1x UART 1x 4-pin FAN connector	1x Front Panel 4x GPIO/ 2x CAN BUS 1x RS232 / 1x UART 1x I2C(3.3V) 1x SPI(1.8V/3.3V) / 1x I2S 1x 4-pin FAN connector 1x 12V DC output 1x 5V DC output	1x Front Panel 5x GPIO 2x CAN BUS 1x RS232 3x UART 1x I2C 1x SPI 1x 4-pin FAN connector	1x Front Panel 1x Power button/ Reset Button 5x GPIO 1x CAN BUS 2x UART 3x I2C 1x SPI
12V / 5A DC	12V ~ 19V / 5A DC	9.0V~ 19.6V / 5A DC	Wide Input 12V ~ 19V DC
187mm x 50mm x 45.82mm	120mm x 120mm x 45.72mm	131mm x 120mm x 63.47mm	120mm x 120mm x 47.98mm
200g	268g	636g	189g
-20°C to +70°C	-20°C to +70°C	-25°C to +80°C	-20°C to +70°C

AN110-NAO

NVIDIA[®] Jetson Nano[™] Edge AI Computing Platform



Features

- NVIDIA[®] Jetson Nano™ SoM
- Amiable for compute-intensive and low-power consumption Al applications
- Drive 472 GFLOPs computaional performance at just 5 Watts
- On-board 2x FPC connector to support driver-ready MIPI CSI camera modules
- Support extended temperature from -20°C to 55°C
- Ideal for general robotics, drone, smart cameras and edge AI devices of smart city



System Specifications

CPU	NVIDIA® Jetson Nano™
	Quad-core ARM Cortex / A57 MPCore processor
GPU	NVIDIA Maxwell™ GPU architecture with
	128 CUDA cores
Al Performance	0.5 TFLOPS (FP16)
System Memory	4GB LPDDR4 64-bit
Storage	16GB eMMC 5.1 Flash
	1x micro SD card slot
Video Interfaces	1x HDMI Type A
	1x eDP (12V)
LAN	1x RJ-45 (Internal)
Expansion	1x 2-Lanes MIPI CSI-2 FPC 15 pins
	1x 4-Lanes MIPI CSI-2 FPC 36 pins
	1x M.2 E Key 2230
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Other I/O Port	1x Front Panel
	1x 4-pin FAN connector
	2x UART (1x debug UART)
	5x GPIO
	1x I2C
	1x SPI
	1x DC-in 12V (2 Pin Euroblock)

Mechanical and Environmental

Dimension	87.4 x 67.4 x 28.7mm (w/o heatsink)
	87.4 x 67.4 x 46mm (with heatsink)
Weight	86g (w/o heatsink)
	144g (with heatsink)
Power Input	12V / 5A DC
Operating Temperature	-20°C ~ +55°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105 °C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter
39-C23314-0000	Passive Heat Sink
39-C13232-0003	Fan-Sink

Ordering Information

Model Number	Description
AN110-NAO-EN02	AN110+Nano Module+Heat-sink+I/O Cables+Power Adapter+US Power Cord, -20°C to +55°C
AN110-NAO-EN03	AN110+Nano Module+Heat-sink+I/O Cables+Power Adapter+EU Power Cord, -20°C to +55°C
AN110-NAO-EN70	AN110+Nano Module+Fanless Chassis + Power Adapter, -20°C to +55°

AN110-XNX

NVIDIA[®] Jetson Xavier NX[™] Edge AI Computing Platform



Features

- NVIDIA[®] Jetson Xavier NX[™] SoM
- Up to 21 TOPS AI performance for GPU-accelerated applications
- 2x FPC connector to support Full HD or 4K MIPI CSI camera modules
- Support extended temperature from -20°C to 55°C
- Suitable for NVR (Single Machine), smart gateway and edge Al devices of smart city



System Specifications

CPU	NVIDIA® Jetson Xavier NX™
	6-core NVIDIA Carmel ARM®v8.2
	64-bit CPU 6MB L2 + 4MB L3
GPU	NVIDIA Volta™ GPU architecture with
	384 CUDA cores and 48 Tensor cores
Al Performance	14 TOPS (INT8) 10W
	21 TOPS (INT8) 15W
System Memory	8GB LPDDR4x 128-bit
Storage	16GB eMMC 5.1 Flash
	1x micro SD card slot
Video Interfaces	1x HDMI Type A
	1x eDP (12V)
LAN	1x RJ-45 (Internal)
Expansion	1x 2-Lanes MIPI CSI-2 FPC 15 pins
	1x 4-Lanes MIPI CSI-2 FPC 36 pins
	1x M.2 E Key 2230
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Other I/O Port	1x Front Panel
	1x 4-pin FAN connector
	2x UART (1x debug UART)
	5x GPIO
	1x I2C
	1x SPI
	1x DC-in 12V (2 Pin Euroblock)

Ordering Information

Model Number	Description
AN110-XNX-EN02	AN110+Xavier NX Module+Fan-sink+Power Adapter+US Power Cord, -20°C to +55°C
AN110-XNX-EN03	AN110+Xavier NX Module+Fan-sink+Power Adapter+EU Power Cord, -20°C to +55°C

Mechanical and Environmental

Dimension	87.4 x 67.4 x 30.1mm (w/o fan)
	87.4 x 67.4 x 48.1mm (with fan)
Weight	86g (w/o fan)
	136g (with fan)
Power Input	12V / 5A DC
Operating Temperature	-20°C ~ +55°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105 °C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter
39-C14328-0001	Fan-Sink

AN310-TX2 NVIDIA[®] Jetson[™] TX2 Edge AI Computing Platform



Features

- NVIDIA[®] Jetson™ TX2 SoM
- Designed specifically for surrounded multi-view applications
- Support 6x 2M cameras, 1080p 30 FPS
- Highly On-board 1x Full Mini card and 1x CSI connector
- Support wide temperature from -25°C to 80°C
- Meet to multi-vision demands in drones, vehicles, robots, security, automation and edge devices



System Specifications

CPU	NVIDIA [®] Jetson™ TX2
	Dual-core Denver 2 64-bit CPU
	Quad-core ARM A57 complex
GPU	NVIDIA Pascal™ GPU architecture with
	256 CUDA cores
Al Performance	1.3 TFLOPS (FP16)
System Memory	8GB LPDDR4 128-bit
Storage	32GB eMMC 5.1 Flash
	1x micro SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 (Internal)
Expansion	1x Full-Mini card (PCI Express x1 or mATA)
	1x MIPI Interface connector (120 pins)
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Other I/O Port	1x Front Panel
	1x 4-pin FAN connector
	1x DC-in 5.5V~19.6V Euroblock connector (2 Pins)
	1x UART, 1x I2C, 5x GPIO,
	2x CAN Bus

Ordering Information

Model Number	Description
AN310-TX2-FN01	AN310 Carrier with Jetson TX2 module, Standard temp -25°C to +80°C
AN310-TX2-FN02	AN310+TX2 Module+Fan+Cable Kit+Power Adapter and US Power Cord, -25°C to +80°C
AN310-TX2-FN03	AN310+TX2 Module+Fan+Cable Kit+Power Adapter and EU Power Cord, -25°C to +81°C

Mechanical and Environmental

Dimension	87 x 70 x 31.82mm (w/o fan)
	87 x 70 x 45.82mm (with fan)
Weight	128g (w/o fan)
	223g (with fan)
Power Input	9.0V ~ 19.6V /5A DC
Operating Temperature	-25°C ~ +80°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
62-7CAM6C-5000	CA-A01 6x CSI-2 Camera Carrier
	Board with FPC
31-080000-0002	AN310 Cable kit
39-C13232-0001	TX1/TX2 Active Fan Sink
39-C24141-0000	TX1/TX2 Passive Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

AN510-TX2 NVIDIA[®] Jetson[™] TX2 Edge AI Computing Platform



Features

- NVIDIA[®] Jetson™ TX2 SoM
- The smallest and slim platform for Jetson TX2 to drive 1.3 TFLOPS AI performance
- Amiable for compute-intensive and low-power consumption AI applications
- Support extended temperature from -20°C to 70°C
- Ideal for space-constrained AI edge computing, such as smart camera, robotic, drone, mobile medical device



System Specifications

CPU	NVIDIA® Jetson™ TX2
	Dual-core Denver 2 64-bit CPU
	Quad-core ARM A57 complex
GPU	NVIDIA Pascal™ GPU architecture with
	256 CUDA cores
Al Performance	1.3 TFLOPS (FP16)
System Memory	8GB LPDDR4 128-bit
Storage	32GB eMMC 5.1 Flash
	1x micro SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 (Internal)
Expansion	-
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	1x UART
	4x GPIO
	1x DC-in 12V Power Jack
	2x CAN Bus
	2x CAN Bus

Mechanical and Environmental

Dimension	87 x 50 x 31.82mm (w/o fan)
	87 x 50 x 45.82mm (with fan)
Weight	105g (w/o fan)
	200g (with fan)
Power Input	12V/ 5A DC
Operating Temperature	-20°C ~ +70°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
31-080000-0000	ACE-N510 Cable kit
39-C13232-0001	TX1/TX2 Active Fan Sink
39-C24141-0000	TX1/TX2 Passive Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

Ordering Information

Model Number	Description
AN510-TX2-NN01	ACE-N510 Carrier with Jetson TX2 module, Standard temp 0°C to +55°C
AN510-TX2-BN01	ACE-N510 Carrier with Jetson TX2 module, Wide temp -20°C to +70°C
AN510-TX2-NN02	ACE-N510+TX2 Module+Fan+Cable Kit+Power Adapter and Power Cord, 0°C to +55°C
AN510-TX2-BN02	ACE-N510+TX2 Module+Fan+Cable Kit+Power Adapter and Power Cord, -20°C to +70°C
AN510-TX2-NN03	ACE-N510+TX2 Module+Fan+Cable Kit+Power Adapter and EU Power Cord, 0°C to +55°C
AN510-TX2-BN03	ACE-N510+TX2 Module+Fan+Cable Kit+Power Adapter and EU Power Cord, -20°C to +70°C

AN622-TX2

NVIDIA[®] Jetson[™] TX2 Edge AI Computing Platform



Features

- NVIDIA[®] Jetson™ TX2 SoM
- High AI performance driven for high-speed visual and AI application
- On-board 1x HDMI, 2x CAN Bus, 4x GPIO, 1x RS232, 1xI2C and 2x Full-Mini Cards
- Support extended temperature from -20°C to 70°C
- Support a vast array of driver-ready extension peripheral AVL list
- Ideal for IVA, security, autonomous robotics and intelligent automation



System Specifications

CPU	NVIDIA® Jetson™ TX2
	Dual-core Denver 2 64-bit CPU
	Quad-core ARM A57 complex"
GPU	NVIDIA Pascal™ GPU architecture with
	256 CUDA cores
Al Performance	1.3 TFLOPS (FP16)
System Memory	8GB LPDDR4 128-bit
Storage	32GB eMMC 5.1 Flash
	1x Full size SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45 (Internal)
Expansion	1x Full-Mini card (PCI Express x1 and USB2.0)
	1x Full-Mini card (PCI Express x1 or mSATA)
USB	1x USB2.0 Micro AB
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	1x 4-pin 12V DC Output /1x 4-pin 5V DC Output
	1x DC-in 12V~19V Power Jack / 1x UART / 1x I2C
	4x GPIO / 1x I2S / 1x SPI / 2x CAN Bus

Ordering Information

Model Number	Description
AN622-TX2-NN01	ACE-N622 Carrier with Jetson TX2 module, Standard temp 0°C to +55°C
AN622-TX2-BN01	ACE-N622 Carrier with Jetson TX2 module, Wide temp -20°C to +70°C
AN622-TX2-NN02	ACE-N622+TX2 Module+Fan+Cable Kit+Power Adapter and Power Cord, 0°C to +55°C
AN622-TX2-BN02	ACE-N622+TX2 Module+Fan+Cable Kit+Power Adapter and Power Cord, -20°C to +70°C
AN622-TX2-NN03	ACE-N622+TX2 Module+Fan+Cable Kit+Power Adapter and EU Power Cord, 0°C to +55°C
AN622-TX2-BN03	ACE-N622+TX2 Module+Fan+Cable Kit+Power Adapter and EU Power Cord, -20°C to +70°C

Mechanical and Environmental

Dimension	120 x 120 x 31.72mm (w/o fan)
	120 x 120 x 45.72mm (with fan)
Weight	173g (w/o fan)
	268g (with fan)
Power Input	12V ~ 19V/ 5A DC
Operating Temperature	-20°C ~ +70°C (Standard Version)
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
31-080000-0001	ACE-N622 Cable kit
39-C13232-0001	Active Fan Sink
39-C24141-0000	Passive Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Adapter

AX720-X32

NVIDIA[®] Jetson AGX Xavier[™] Edge AI Computing Platform



Features

- NVIDIA® Jetson AGX Xavier™ SoM
- 512-core of NVIDIA Volta CUDA cores and 64 Tensor cores
- Support up to 6x 2M cameras modules
- Support extension module for 2x 10G LAN port and M.2 B key (3042/3050)
- Support wide temperature from -25°C to 80°C
- Ideal for industrial inspection, robots, medical imaging and deep learning



System Specifications

CPU	NVIDIA® Jetson AGX Xavier™
	8-core ARM v8.2 64-bit CPU
	8MB L2 + 4MB L3
GPU	NVIDIA Volta™ GPU architecture with
	512 CUDA cores
Al Performance	11 TFLOPS (FP16) / 32 TOPS (INT8)
System Memory	32GB LPDDR4x 256-bit
Storage	32GB eMMC 5.1 Flash
	1x micro SD card slot
Video Interfaces	2x HDMI Type A
LAN	1x RJ-45 (Internal)
	2x RJ-45 (by extension daughter board)
Expansion	1x Extension slot
	1x M.2 M Key 2280
	1x M.2 E Key 2230
	1x MIPI CSI-2 Connector
	(120 pins, support up to 16 lanes)
USB	1x USB2.0 AB OTG
	1x USB3.2 Gen2 Type C
	2x USB3.2 Gen1 Type A
Serial	1x RS-232
Others	1x Front Panel
	1x 4-pin FAN connector
	1x DC-in 9V~20V
	2x UART (1x debug UART)
	5x GPIO / 2x CAN Bus
	3x UART / 1x I2C / 1x SPI

Ordering Information

Model Number	Description
AX720-X32-FN02	AX720+Xavier Module (32GB)+FAN+Cable Kit+
	Power Adapter & US Power Cord,-25°C to +80°C
AX720-X32-FN03	AX720+Xavier Module (32GB)+FAN+Cable Kit+
	Power Adapter & EU Power Cord, -25°C to +80°C

Mechanical and Environmental

Dimension	131 x 120 x 38.47mm (w/o fan)
	131 x 120 x 63.47mm (with fan)
Weight	418g (w/o fan)
	636g (with fan)
Power Input	9.0V ~ 19.6V / 5A DC
Operating Temperature	-25°C ~ +80°C (Standard Version)
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
31-080000-0002	AX720 Cable kit
62-7CAM6C-5000	CA-A01 6x CSI-2 Camera Carrier
	Board with FPC
39-C16161-0001	AX720 Active Heat Sink
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm2/3G
	SL-6+SL-3 Cable 1800mm Black
53-0F0000-0004	100-240V 120W Power Adapter

Certified Communication Extension Module

Model Number	Module Type Description
ADM2B-720-NN05	Daughter board for AX720,
	support dual 10G and 4G/5G
	function 0°C to +55°C

AN810-XNX

NVIDIA[®] Jetson Xavier NX[™] Edge AI Computing Platform



Features

- NVIDIA[®] Jetson Xavier NX[™] SoM
- Flexibly support full M.2 expansion capabilities
- High wireless communication capability through 4G/5G extension and SIM card slot
- Specifically designed for high performance and low-power envelope AI computing
- Support extended temperature from -20°C to 70°C
- Ideal for smart automation, UAV, industrial inspection, medical imaging and edge AI devices



System Specifications

CPU	NVIDIA® Jetson Xavier NX™
	6-core NVIDIA Carmel ARM®v8.2
	64-bit CPU 6MB L2 + 4MB L3
GPU	NVIDIA Volta™ GPU architecture with
	384 CUDA cores and 48 Tensor cores
Al Performance	14 TOPS (INT8) 10W
	21 TOPS (INT8) 15W
System Memory	8GB LPDDR4 128-bit
Storage	16GB eMMC 5.1 Flash
	1x micro SD card slot
Video Interfaces	1x HDMI Type A
LAN	1x RJ-45
Expansion	1x M.2 M Key 2280 (PClex4/SATA)
	1x M.2 E Key 2230 (USB2.0/PClex1)
	1x M.2 B Key 3050 (USB3.1)
	1x MIPI CSI-2 Connector (120 pins)
	1x SIM slot
USB	1x USB2.0 Micro AB (OTG only)
	2x USB3.2 Gen1 Type A
Serial	-
Others	1x Front Panel
	1x MIPI Interface connector
	1x DC-in 12V~19V (6 Pin Micro Fit)
	2x UART, 3x I2C, 5x GPIO, 1x SPI
	1x CAN Bus

Ordering Information

Model Number	Description
AN810-XNX-BN01	AN810 Carrier + NX Module including I/O Cables, Standard temp -20°C to +70°C
AN810-XNX-BN02	AN810+NX Module+FAN-sink+I/O Cables+Power Adapter+US Power Cord, -20°C to +70°C
AN810-XNX-BN03	AN810+NX Module+FAN-sink+I/O Cables+Power Adapter+EU Power Cord, -20°C to +70°C

Mechanical and Environmental

Dimension	120 x 120 x 29.98mm (w/o fan)
	120 x 120 x 47.98mm (with fan)
Weight	139g (w/o fan)
	189g (with fan)
Power Input	12V ~ 19V
Operating Temperature	-20°C ~ +70°C
Operating Humidity	10% ~ 90%
Storage Temperature	-40°C ~ +125°C

Accessory (Optional)

Model Number	Description
32-010000-0005	US Power Cord SVT 18AWG
	Cable 1800mm Black 105°C
32-010000-0006	EU Power Cord H05VV-F 0.75mm
	2/3G SL-6+SL-3 Cable 1800mm Black
53-0F0000-0002	100-240V 60W 12V 5A Power Adapter
39-C14328-0001	FANsink 5V 5500rpm 57.8*39*18mm



DeviceEdge

Aetina DeviceEdge Series helps customers develop AI projects quicker and easier than expected. The core value of the **DeviceEdge** Series is to provide customers with well-thought options. Meanwhile, DeviceEdge has designed an exclusive patent button – iTons, which is opening up to lighten edge AI market and will be more customized AI-enabled functions in the future.







xible Processor Choices

Space-saving Desig

Remote Monitor Software

Mini Series	
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		p.50	
Featured Model	DeviceEdge Mini Series-M1		
Model Number	AIE-CO11	AIE-CN11	AIE-CT41
Module Option	NVIDIA® Jetson Nano™	NVIDIA® Jetson Xavier™ NX	NVIDIA [®] Jetson TX2™ NX
CPU	Quad-core ARM Cortex-A57 MPCore processor	6-core NVIDIA Carmel ARM [®] v8.2 64-bit CPU 6MB L2 + 4MB L3	Dual-core NVIDIA Denver 2 64-bit CPU and quad-core Arm [®] Cortex [®] -A57 MPCore processor complex
GPU	NVIDIA Maxweli™ GPU with 128 CUDA [®] cores	NVIDIA Volta™ GPU with 384 CUDA® cores and 48 Tensor Cores	NVIDIA Pascal™ GPU with 256 CUDA® cores
Al Performance	0.5 TFLOPS (FP16) at 5-10W	14 TOPS (INT8) at 10W 21 TOPS (INT8) at 15W	1.33 TFLOPS at 7.5-15W
System Memory	4 GB 64-bit LPDDR4	8 GB 128-bit LPDDR4	4 GB 128-bit LPDDR4
Storage		16GB eMMC 5.1 Flash	
Display	1x HC	MI 1.4 with Micro HDMI D-Type conr	ector
Audio	HDMI Integrated		
LAN	2	2x RJ-45 for GbE (1 for PoE PD 802.3 a	t)
Expansion	1x M.2 M-key 2242 : NVMe 128G SSD (build-in) 1x M.2 E-key 2230 : WiFi/BT function		
USB	2x USB 3.2 Gen1 Type A / 1x USB Type-C (OTG only)		
MISC. External Interfaces	1x AI button (iTons) 1x Power button 1x DB15 female connector (5x GPIO, 1x UART, 1x I2C, 1x CAN bus) 1x Recovery button 1x Reset button 2x Antenna (optional)		
Power Input	DC-in 12V~24V (DC Jack 4pin)		
Dimension		132.6 x 88.7 x 63.55mm (WxDxH)	
Mounting		VESA	
Net Weight		970g	
Operating Temperature		-20°C ~ +50°C	
Operating Humidity		10% ~ 90%	
Storage Temperature		-40°C~ +85°C	
Certification	CE / FCC		
Operating System	Ubuntu 18.04		

Coming soon

CE / FCC

Ubuntu 18.04



CE / FCC

Ubuntu 18.04

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DeviceEdge Mini Series-M2		12	DeviceEdge Mini Series-M3
AIE-CO12	AIE-CN12	AIE-CT42	AIE-CN13
NVIDIA® Jetson Nano™	NVIDIA® Jetson Xavier™ NX	NVIDIA® Jetson TX2™ NX	NVIDIA® Jetson Xavier™ NX
Quad-core ARM Cortex-A57 MPCore processor	6-core NVIDIA Carmel ARM [®] v8.2 64-bit CPU 6MB L2 + 4MB L3	Dual-core NVIDIA Denver 2 64-bit CPU and quad-core Arm [®] Cortex [®] -A57 MPCore processor complex	6-core NVIDIA Carmel ARM [®] v8.2 64-bit CPU 6MB L2 + 4MB L3
NVIDIA Maxwell™ GPU with 128 CUDA [®] cores	NVIDIA Volta™ GPU with 384 CUDA® cores and 48 Tensor Cores	NVIDIA Pascal™ GPU with 256 CUDA [®] cores	NVIDIA Volta™ GPU with 384 CUDA® cores and 48 Tensor Cores
0.5 TFLOPS (FP16) at 5-10W	14 TOPS (INT8) at 10W 21 TOPS (INT8) at 15W	1.33 TFLOPS at 7.5-15W	14 TOPS (INT8) at 10W 21 TOPS (INT8) at 15W
4 GB 64-bit LPDDR4	8 GB 128-bit LPDDR4	4 GB 128-bit LPDDR4	8 GB 128-bit LPDDR4
	16GB eMMC 5.1 Flash		16GB eMMC 5.1 Flash
1x HDMI 1.	4 with Micro HDMI D-Ty	pe connector	1x HDMI 1.4 with Micro HDMI D-Type connector
	HDMI Integrated		HDMI Integrated
3x RJ-45 for Gb	E (2 for PoE PSE 802.3 af,	, total power: 15W)	1x RJ-45 for GbE
1x M.2 M-key 2242 : NVMe 128G SSD (build-in) 1x M.2 E-key 2230 : WiFi/BT function		SD (build-in) unction	1x M.2 M-key 2242 : NVMe 128G SSD (build-in) 1x M.2 E-key 2230 : WiFi/BT function
2x USB 3.2 G	Gen1 TypeA / 1x USB Typ	e-C (OTG only)	9x USB 3.2 Gen1 TypeA / 1x USB Type-C (OTG only)
	1x Al button (iTons)		1x Al button (iTons)
1x Power button			1x Power button
1x DB15 female co	nnector (5x GPIO, 1x UAF	RT, 1x I2C, 1x CAN bus)	1x DB15 female connector (5x GPIO, 1x UART, 1x I2C, 1x CAN bus)
	1x Recovery button		1x Recovery button
	1x Reset button		1x Reset button
	2x Antenna (optional))	2x Antenna (optional)
C	DC-in 12V~24V (DC Jack 4	lpin)	DC-in 12V~24V (DC Jack 4pin)
132.6 x 88.7 x 63.55mm (WxDxH)		(DxH)	132.6 x 88.7 x 63.55mm (WxDxH)
	VESA		VESA
	970g		970g
	-20°C ~ +50°C		-20°C ~ +50°C
	10% ~ 90%		10% ~ 90%
-40°C~ +85°C			-40°C~ +85°C

DeviceEdge Mini Series-M1

Fanless Edge AI Computing Device Supports Powered Device(PD)



Features

- Simultaneously support NVIDIA[®] Jetson Nano[™], Xavier[™] NX and Jetson TX2[™] NX
- Tiny, fanless, high performance and low-power consumption
- Smart button for one-key recovery function
- Real-time monitoring for status of device through the AIM (Aetina Intelligent Management)
- Simplify installation with Powered Device(PD) support

Accessory (Optional)

Model Number	Description
53-0G8265-0000	WiFi Bluetooth Module Dual Band Wireless-AC w/l-
	PEX MHF4 COAXIAL and 3DBI Antenna Cable 0~80°C

Ordering Information

Model Number	Description
AIE-CN11-A0	AIE-CN11 Fanless system with Jetson Xavier NX
	including DB15 Cable, 128G SSD, -20°C to +50°C
AIE-CO11-A0	AIE-CO11 Fanless system with Jetson Nano
	including DB15 Cable, 128G SSD, -20°C to +50°C
AIE-CT41-A0	AIE-CT41 Fanless system with Jetson TX2 NX
	including DB15 Cable, 128G SSD, -20°C to +50°C

Model Number	AIE-CO11	AIE-CN11	AIE-CT41
Module Option	NVIDIA [®] Jetson Nano™	NVIDIA [®] Jetson Xavier NX™	NVIDIA [®] Jetson TX2™ NX
Storage	16GB eMMC 5.1 Flash		
Display	1x HDMI 1.4 with Micro HDMI D-Type connector		
Audio	HDMI Integrated		
LAN		2x RJ-45 for GbE (1 for PoE PD 802.3 at)	
Expansion	1x M.2 M-key 2242 : NVMe 128G SSD (build-in) 1x M.2 E-key 2230 : WiFi/BT function		
USB	2x USB 3.2 Gen1 Type A / 1x USB Type-C (OTG only)		
	1x Al button (iTons)	/ 1x Power button / 1x Recovery butto	on / 1x Reset button
MISC. External Interfaces	1x DB15 fema	ale connector (5x GPIO, 1x UART, 1x I2C	, 1x CAN bus)
		2x Antenna (optional)	
Power Input	DC-in 12V~24V (DC Jack 4pin)		
Dimension	132.6 x 88.7 x 63.55mm (WxDxH)		
Mounting	VESA		
Net Weight	970g		
Operating Temperature	-20°C ~ +50°C		
Operating Humidity	10% ~ 90%		
Storage Temperature		-40°C ~ +85°C	
Certification		CE / FCC	
Operating System	Ubuntu 18.04		

Packing List

Model Number	Description
32-050000-0025	I/O CABLE DB15(MALE) TO 2.54mm HOUSING
	UART+I2C+GPIO+CANBUS UL1007#26 200mm
32-050000-0021	HDMI Type-D Male to Type-A Female
	Cable 100mm +/-10mm Black
25 040000 0001	
35-0A0000-0001	Mounting Bracket 118*118*2.5mm AL5052 Gray
32-010000-0005	Mounting Bracket 118*118*2.5mm AL5052 Gray
32-010000-0005 32-010000-0006	Mounting Bracket 118*118*2.5mm AL5052 Gray
32-010000-0001 32-010000-0005 32-010000-0006 53-0F0000-0003	Mounting Bracket 118*118*2.5mm AL5052 Gray US/EU Power Cord Power Adapter 90~264V 60W 12V 5A
32-010000-0005 32-010000-0006 53-0F0000-0003	Mounting Bracket 118*118*2.5mm AL5052 Gray US/EU Power Cord Power Adapter 90~264V 60W 12V 5A Black -30~70°C

DeviceEdge Mini Series-M2

Fanless Edge AI Computing Device Supports 2xPSE



Features

- Simultaneously support NVIDIA[®] Jetson Nano[™], Xavier[™] NX and Jetson TX2[™] NX
- Tiny, fanless, high performance and low-power consumption
- Smart button for one-key recovery function
- Real-time monitoring for status of device through the AIM (Aetina Intelligent Management)
- Support 2xPOE camera via 2xPSE

Accessory (Optional)

Model Number	Description
53-0F0000-0003	Power Adapter 90~264V 60W 12V 5A BLACK -30~70°0
53-0G8265-0000	WiFi Bluetooth Module Dual Band Wireless-AC w/I-
	PEX MHF4 COAXIAL and 3DBI Antenna Cable 0~80°C

Ordering Information

Model Number	Description
AIE-CN12-A0	AIE-CN12 Fanless system with Jetson Xavier NX
	including DB15 Cable, 128G SSD, -20°C to +50°C
AIE-CO12-A0	AIE-CO12 Fanless system with Jetson Nano
	including DB15 Cable, 128G SSD, -20°C to +50°C
AIE-CT42-A0	AIE-CT42 Fanless system with Jetson TX2 NX
	including DB15 Cable, 128G SSD, -20°C to +50°C

Model Number	AIE-CO12	AIE-CN12	AIE-CT42
Module Option	NVIDIA [®] Jetson Nano™	NVIDIA [®] Jetson Xavier NX™	NVIDIA [®] Jetson TX2™ NX
Storage		16GB eMMC 5.1 Flash	
Display	1x HDMI 1.4 with Micro HDMI D-Type connector		
Audio	HDMI Integrated		
LAN	3x RJ-4	3x RJ-45 for GbE (2 for PoE PSE 802.3 af, total power: 15W)	
Expansion	1x M.2 M-key 2242 : NVMe 128G SSD (build-in) 1x M.2 E-key 2230 : WiFi/BT function		
USB	2x L	JSB 3.2 Gen1 TypeA / 1x USB Type-C (OTG c	only)
	1x AI button (iTons)	/ 1x Power button / 1x Recovery butto	on / 1x Reset button
MISC. External Interfaces	1x DB15 fema	ale connector (5x GPIO, 1x UART, 1x I2C,	, 1x CAN bus)
		2x Antenna (optional)	
Power Input	DC-in 12V~24V (DC Jack 4pin)		
Dimension	132.6 x 88.7 x 63.55mm (WxDxH)		
Mounting	VESA		
Net Weight	970g		
Operating Temperature	-20°C ~ +50°C		
Operating Humidity	10% ~ 90%		
Storage Temperature		-40°C ~ +85°C	
Certification	CE / FCC		
Operating System	Ubuntu 18.04		

Packing List

Model Number	Description
32-050000-0025	I/O CABLE DB15(MALE) TO 2.54mm HOUSING
	UART+I2C+GPIO+CANBUS UL1007#26 200mm
32-050000-0021	HDMI Type-D Male to Type-A Female
	Cable 100mm +/-10mm Black
35-0A0000-0001	Mounting Bracket 118*118*2.5mm AL5052 Gray
32-010000-0005	LIS/ELL Power Cord
32-010000-0006	US/EUTOWCI COID
53-0F0000-0003	Power Adapter 90~264V 60W 12V 5A
	Black -30~70°C

DeviceEdge Mini Series-M3

Fanless Edge AI Computing Device Supports 9x USB



Features

- Tiny, fanless, high performance and low-power consumption
- Smart button for one-key recovery function
- Real-time monitoring for status of device through the AIM (Aetina Intelligent Management)
- Support 9x USB
- Suitable for various image recognition and detection applications

Packing List

Model Number	Description
32-050000-0025	I/O CABLE DB15(MALE) TO 2.54mm HOUSING
	UART+I2C+GPIO+CANBUS UL1007#26 200mm
32-050000-0021	HDMI Type-D Male to Type-A Female
	Cable 100mm +/-10mm Black
35-0A0000-0001	Mounting Bracket 118*118*2.5mm AL5052 Gray
32-010000-0005	LIS/ELL Power Cord
32-010000-0006	
F2 0F0000 0003	
53-0F0000-0003	Power Adapter 90~264V 60W 12V 5A

Accessory (Optional)

Model Number	Description
53-0F0000-0003	Power Adapter 90~264V 60W 12V 5A BLACK -30~70°C
53-0G8265-0000	WiFi Bluetooth Module Dual Band Wireless-AC w/l-
	PEX MHF4 COAXIAL and 3DBI Antenna Cable 0~80°C

Ordering Information

Model Number	Description
AIE-CN13-A0	AIE-CN13 Fanless system with Jetson Xavier NX
	including DB15 Cable, 128G SSD, -20°C to +50°C

Model Number	AIE-CN13		
Module Option	NVIDIA [®] Jetson Xavier NX™		
Storage	16GB eMMC 5.1 Flash		
Display	1x HDMI 1.4 with Micro HDMI D-Type connector		
Audio	HDMI Integrated		
LAN	1x RJ-45 for GbE		
Expansion	1x M.2 M-key 2242 : NVMe 128G SSD (build-in) 1x M.2 E-key 2230 : WiFi/BT function		
USB	9x USB 3.2 Gen1 TypeA / 1x USB Type-C (OTG only)		
	1x Al button (iTons) / 1x Power button / 1x Recovery button / 1x Reset button		
MISC. External Interfaces	1x DB15 female connector (5x GPIO, 1x UART, 1x I2C, 1x CAN bus)		
	2x Antenna (optional)		
Power Input	DC-in 12V~24V (DC Jack 4pin)		
Dimension	132.6 x 88.7 x 63.55mm (WxDxH)		
Mounting	VESA		
Net Weight	970g		
Operating Temperature	-20°C ~ +50°C		
Operating Humidity	10% ~ 90%		
Storage Temperature	-40°C ~ +85°C		
Certification	CE / FCC		
Operating System	Ubuntu 18.04		



MegaEdge

Aetina **MegaEdge** series has high computing efficiency in a compact form factor to power heterogeneous processing and bring AI to the edge. It combines an excellent CPU and GPU to provide a diverse architecture to the system developers and integrators. With the optimized AI computing performance and massive networking capabilities, MegaEdge accelerates local AI inference and real-time intelligence services.







iversified System I/O

ability Indu

Inference Platform	
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AIP-SQ37-A Series	P.55
AIP-FH31-A Series	P.56
AIP-FQ47-B Series	P.57







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Model 1	Number	AIP-SQ37-A1	AIP-SQ37-A2		AIP-FH31-A2	AIP-FQ47-B1		
	CPU	Intel® 9th Gen Core™ i5 processor	Intel [®] 9th Gen Core™ i7 processor	Intel® 8th/9th Gen Core™ i5 processor	Intel® 8th/9th Gen Core™ i7 processor	Intel® 10th Gen Core™ i5 processor	Intel® 10th Gen Core™ i7 processor	
Processor	Contrat	Intel® coffee lake-S		Intel [®] cof	fee lake-S	Intel [®] coffee lake-S		
	TOD	65W/		LGA		LGAIISI		
TDP		20	VV	05	ovv	00	65W	
Motherboard	Chipset	Intel®	Q370	Intel® H310 Ex	press Chipset	Intel® Q470E E	(press Chipset	
Motherboard-	lechnology	Up To DDR4 2666		Up To DDR4 2666 / 2400		Up To DDR4 3200		
Memory	Max. Capacity	32GB		32GB		32GB		
	Socket	2x 260-p	in DIMM	2x 260-p	oin DIMM	2х 260-р	n DIMM	
Graphics	Controller	Intel [®] Integra	ited Graphics	Intel [®] Integra	ated Graphics	Intel® Integra	ted Graphics	
	Interface	10/100/1000 Mbps		10/100/1000 Mbps		10/100/1000 Mbps		
Ethernet	Controller	2x Gb	E LAN	4x Gb	E LAN	4x Gb	LAN	
	Connector	2x F	3]45	4x F	RJ45	4x R	J45	
	Max Data Transfer Rate	6G	b/s	6G	b/s	6GI	o/s	
Storage	M.2	1x M.2 M key slot, SATA interface fo	support PCIe *4+ r NVME,Size 2280	(C	C	J	
Storage	SATA III SSD	2x 2.5" SATA	III SSD/HDD	3x SATA 6 (Support 2.5	Gb/s port 5" HDD/SSD)	4x SATA 6 (Support 2.5	Gb/s port " HDD/SSD)	
	RAID	RAID 0	/ RAID 1	RAID 0	/ RAID 1	RAID 0 ,	RAID 1	
	VGA	()	1x \	/GA	1x V	GA	
	DVI-D	()	1x D	1x DVI-D		/I-D	
	Display Port	()	1x DP		1x DP		
Front I/O	Ethernet	0		4x RJ45		4x RJ45		
	USB	0		4x USB3.2 Gen1 , 4 x USB2.0		4x USB3.2 , 6 x USB2.0		
	Audio	0		3x Audio Jacks (Line in, Line out & Mic in)		3x Audio Jacks (Line in, Line out & Mic in) 2x COM (RS-232/422/485 and RI/5V/12V) 2 x COM (RS-232)		
	COM	0		2x COM (RS-232/422/485 and RI/5V/12V) 2 x COM (RS-232)				
	Antenna	0		2x External Antenna (optional)		2x External Ante	enna (optional)	
	Display Port	2 Ports (1 for C	PU, 1 for GPU)	(D	C)	
	Ethernet	2x RJ45 LAN conne Speed LED 10-Off / 100	ctor, Act/Link LED, D-Green / 1000-Yellow		0	C)	
	USB	6x USB3.2 Gen2 2x USB2.0		0		0		
Rear I/O	Audio	1x Audio jacks, support Line out/Mic		0		0		
Rear I/O CAN 2x CAN Bus I		CAN Bus DB-9(Optional) 0		C	0			
	COM	2x COM(RS232)						
	DIO	1x [010	0		0		
Watchdog	Output	H/W Reset		0		0		
Timer	Internal	1~65,535	sec/min	(0		0	
Power	Power ON mode	But	ton	0		0		
Requirement	Vollage	4 pin DIN	Jack (19V)	DC in +24V~36V (full Range)		DC in +24V~36	V (full Range)	
	Operating Temperature	0°C to	9 40°C	-20°C to 50°C (w/o GPU)		-20°C t	o 50°C	
Physical	Humidity	5% ~ 90%		0-90% (noncondensing)		0-90% (noncondensing)		
Characteristics	Dimension	264.3mm(W)x158.2	!mm(H)x210mm(D)	146(W)x224(H)x343(D) mm		166.3(W)x224(H)x368(D) mm		
	Net Weight	3.5	kg	5.8kg		TBD		
	MXM	1 x MXM Slot (Type B plus)		N/A		N/A		
	M.2	1x M.2 B key slot		1x M.2	1x M.2 E Key		1x M.2 E Key	
Expansion Slot	miniPCle	1x Mini PCIE Full slot		1x Mini-PCle slot (PCleX1 + USB2.0) with SIM Slot		1x Mini-PCle slot (PCleX1 + USB2.0)		
	PCIe			1x PCle x1 (Gen3 x1) ,	1x PCle x16 (Gen3 x16)	1x PCle x4 (Gen3 x1) ,	1x PCle x16 (Gen3 x16)	

* Product Specifications are subject to change without prior notice

AIP-SQ37-A Series

Expandable AI Inference Platform with Expansion Kit of Discrete Graphics



Preliminary

Processor

Intel[®] 9 th Gen Core[™] **i5** processor in LGA1151 Socket, TDP under 65W ***AIP SQ37 A1** Intel[®] 9 th Gen Core[™] **i7** processor in LGA1151 Socket, TDP under 65W ***AIP SQ37 A2** Intel[®] Q370 Chipset

System Memory Support

2x DDR4 SO-DIMM sockets, Max. Capacity 32 GB Support Dual Channel DDR4 2666 MHz

Storage

2x 2.5" SATAIII SSD/HDD 1 x M.2 M key slot, support PCIe x4 for NVME, Size 2280

Rear I/O

2x Display Port Ports (1 for CPU, 1 for GPU)
2x USB2.0 Gen2
6x USB3.1 Gen2
2x Audio jacks, support Line out/Mic
1x DCIN Jack (12 ~19V)
3x DI/3x DO
2x GbE RJ45 LAN
Dr. COM Derts (DC 222)

2x COM Ports (RS-232)

Operating Temperature

 $0^{\circ}\text{C} \sim +50^{\circ}\text{C}$ (With Expansion Kit)

Features

- Support Intel 9th Gen. Core i5/i7 processors, TDP under 65W
- Intel Q370 Chipset
- Integrated 1x MXM slot to support Type B MXM module, enhancing computing power
- Support 2x 2.5" SATAIII SSD/HDD
- Dual Channel DDR4, 2x SO-DIMMs up to 32GB
- 3xDI, 3x DO, 1x M.2 M-Key, 1x M.2 B-Key
- 1x Full-size mini PCIe support PCIe x1 and USB 2.0
- 2x GbE LAN Ports
- 2x COM Ports
- 8x USB Ports

Expansion Slots

1 x MXM Slot (Type B plus)

1x Mini PCIE Full slot, support PCIe x1 + USB 2.0 interface

1 x M.2 B key slot, support PCIe x2 + USB 3.0(Colay PCIE ,Default PCIE) interface for 3/4/5G module (3042/3052) & 2280

Dimension

244(W)x146(H)x343(D) mm

Net Weight

3.5kg

AIP-FH31-A Series

Expandable AI Inference Platform with Expansion Kit of Discrete Graphics



Features

- Support Intel 9th/8th Gen. Core i7/i5 processors, max TDP 65W
- Intel H310 Chipset
- Integrated Intel HD Graphics :1x DVI-D, 1x VGA, 1x DP, 2x independent display outputs
- Innodisk 1TB M.2 SATA SSD
- Dual Channel DDR4, 2x SO-DIMMs
- 1x M.2 M-Key , 1x M.2 E-Key
- 1x Full-Size mini PCIe with SIM Slot
- 4x GbE LAN Ports
- 4x COM Ports
- 8x USB Ports

Processor

Intel® 9th/8th Gen Core ™ i5 processor in LGA1151 Socket ,

TDP under 65W *AIP-FH31-A1

Intel® 9th/8th Gen Core ™ i7 processor in LGA1151 Socket,

TDP under 65W *AIP-FH31-A2

Intel® H310 Chipset

System Memory Support

2x DDR4 SO-DIMM sockets, Max. Capacity 32 GB Support Dual Channel DDR4 2666/2400 MHz

Storage

3x 2.5" HDD/SSD (SATA 6Gb/s) 1x 2280 M.2 M-Key (SATA 6Gb/s)

Front I/O

1x Power Switch/ Power/ HDD LED
3x Audio Jacks (Realtek ALC269, Line in/Line out/Mic in)
1x Display Port/1x DVI-D/1x VGA
(Intel® HD Graphics, 2 independent display outputs)
2x COM Ports (RS-232/422/285 & RI/5V/12V)
2x COM Ports (RS-232)
4x RJ45 LAN Ports(1x Intel® I219V and 3x Intel® I211AT)
4x USB 3.0
4x USB 2.0
1x 4-pin Terminal Block
2x External Antenna Hole (Optional)

Operating Temperature

-20°C ~ +60°C (With Expansion Kit)

Expansion Slots

1x M.2 E-Key
1x Full-size miniPCle with SIM slot
1x PCle x1 (Gen3 x1)
1x PCle x16 (Gen3 x16)

Power Supply

+12V~48V DC (Full Range)

Dimension

146(W)x224(H)x343(D) mm

Net Weight

5.8kg

AIP-FQ47-B Series

Expandable AI Inference Platform with Expansion Kit of Discrete Graphics



Features

- Support Intel 10th Gen. Core i7/i5 processors, max TDP 65W
- Intel Q470E Chipset
- Integrated Intel HD Graphics :1x DVI-D, 1x VGA, 1x DP, 3x independent display outputs
- Dual Channel DDR4, 2x SO-DIMMs
- 1x M.2 M-Key , 1x M.2 E-Key
- 4x GbE LAN Ports
- 4x COM Ports
- 10x USB Ports
- Support full length Graphic card RTX-3090

Processor

Intel® 10th Gen Core™ i5 processor in LGA1151 Socket, TDP under 65W ***AIP-FQ47-B1**

Intel® 10th Gen Core™ i7 processor in LGA1151 Socket,

TDP under 65W *AIP-FQ47-B2

Intel® Q470E Chipset

System Memory Support

2x DDR4 SO-DIMM sockets, Per DIMM Max. Capacity 32 GB Support Dual Channel 3200 MHZ

Storage

4x 2.5" HDD/SSD (SATA 6Gb/s) 1 x 2280 M.2 M-Key (SATA 6Gb/s)

Front I/O

1x Power Switch/ Power/ HDD LED
3x Audio Jacks (Realtek ALC269, Line in/Line out/Mic in)
1x Display Port/1x DVI-D/1x VGA
(3 independent display outputs)
2x COM Ports (RS-232/422/485 & RI/5/12V)
2x COM Ports (RS-232)
4x RJ45 LAN Ports(1x Intel® I219V and 3x Intel® I211AT)
4x USB 3.2
6x USB 2.0
1x 4-pin Terminal Block
2x External Antenna Holes (Optional)

Operating Temperature

-20°C ~ 50°C (With Expansion Kit)

Expansion Slots

1x 2230 M.2 E-Key
1x Full-size miniPCle with SIM slot
1x PCle x4 (Gen3 x1)
1x PCle x16 (Gen3 x16)
Auto switch 1 x PCle x16 or 2 x PCle x 8

Power Supply

+12V~48V DC (Full Range)

Dimension

166.3(W)x 224(H)x 368(D) m

Net Weight

TBD



SuperEdge

Aetina **SuperEdge** series is the advanced, scalable, and AI compute-accelerated platform certified by NVIDIA NCS2.5-Ready - a series with security, scalability, and functionality that's performance validated. It's backed by comprehensive AI software and tools from the NCS catalog, giving developers the confidence to pull and run the latest software containers for AI to faster time-to-solution.







ning S

igurability NCS2.5-R

AIS-D422-A1

P.59

AIS-D422-A1

AI Training Platform Barebone -Up to 2x GPUs



NVIDIA-Certified Systems (NCS) 2.5

Processor

Intel® Xeon® processor D-2146NT, CPU TDP support 80W 8 Cores, 16 Threads

System Memory

Up to 512GB DDR4 ECC LRDIMM
Up to 256GB DDR4 ECC RDIMM
4 DIMM slots
2666/2400/2133MHz ECC DDR4 L/RDIMM,operating speed up to 2400MHz
DIMM sizes: 128GB, 64GB, 32GB, 16GB
Memory Voltage: 1.2V

Standard I/O

4x SATA 3 ports with Internal 2.5" drive bays(support RAID 0,1,5,10)
9x RJ45 for GbE9
(8x 1GbE with Intel I350-AM4/8x 1GbE with Intel I350-AM4)
2x RJ-45 for 10 GbE
2x 10G SFP+ LAN ports9(Dual 10G SFP+ via SoC)
1x RJ45 Dedicated IPMI LAN port99
(IPMI 2.0 with virtual media over LAN and KVM-over-LAN support)
2x USB3.0
2x USB2.0
1x VGA(VGA via Aspeed AST2500 BMC)
1x COM via RJ45

Operating Temperature

0°C ~ +50°C

Operating Humidity

8% ~ 90%

Features

- Multi-Access Edge Computing (MEC)
- IPMI 2.0 with Virtual Media over LAN
- Single Socket P (LGA 3647) Supports 2nd Gen
- Intel® Xeon® Scalable processor
- 6 DIMMs; up to 1.5TB 3DS ECC
- DDR4-2933MHz RDIMM/LRDIMM
- 2 PCI-E 3.0 x16 or 2 PCI-E 3.0 x8 + 1 PCI-E 3.0 x16 (FH3/4L) slots
- 4 Internal 2.5" drive bays
- M.2: 1 M-Key 2280/22110
- 2 10GBase-T ports with Intel X722 + X557
- 1 VGA, 1 COM, 4 USB 3.0, 2 USB 2.0 Specifically

Expansion Slots

2x PCIe 3.0 x16 or 2x PCIe 3.0 x8, 1x PCIe 3.0 x16

1x M.2 M-Key, 2280/22110

1x M.2 E-Key, 2230

1x M.2 B-Key, 3042

Power Supply

600W AC multi output power supply w/ PFC AC 100-240V, 50-60Hx, 7.5-3.1Amp

Dimension

267(W)x109(H)x406(D) mm

Gross Weight

10.43kg

Management

Intel® Node Manager IPMI 2.0 NMI

SUM

Watch Dog

SuperDoctor® 5

Al and GPU Module



High Utilization and Increased



Compute Parallelism



Small Form Factor Module

Aetina provides a variety of **small form factor modules** that feature compact architecture, targeting applications that usually require high performance computing and limited space. It includes **M.2 modules, Mini PCIe** (mPCIe) modules, **Mobile PCIe Modules (MXM),** expansion kits, and one-stop thermal service. They are designed to fit into existing edge devices and embedded systems for real-time and low power consumption deep neural network inference for a broad range of market segments.







e-Stop Thermal Service

Energy Efficier

Diversified Form Factor

MXM Module

Selection Guid	le	P.64
M3P1000-LN		P.66
M3T1000-PN		P.67
M3T3000-QN		P.68
M3T5000-WN		P.69

Expansion Kit

AIB-SQ37-A1	P.70
DEV-MXM-6DP	P.71
DEV-MXM-4H	P.71

One-Stop Thermal Service

As Embedded MXM module dimensions are inconsistent in the market, it's inconvenient for users to customize heat dissipation design to avoid the occurrence of high temperature failure especially when developing high performance computing applications in smart medical and factory automation. To improve the situation, Aetina has a one-stop thermal design service that includes standard heat spreaders, optional semi sinks, and customized coolers. Five advantages are highlighted below.

- Increase the dissipation area for each IC component
- Reduce overheating issues for both GPU and memory
- High-watt heat spreader is made of copper, and low-watt one is aluminum
- Easy assembly
- Save extra jiq cost







		p.68	p.70
Model Number		M3P1000-LN	M3T1000-PN
Form Factor		MXM 3.1 , Type A	MXM 3.1, Type A
	Engine Core	NVIDIA Quadro P1000	NVIDIA Quadro T1000
Engine	GPU Architecture	NVIDIA Pascal	NVIDIA Turing
	NVIDIA CUDA Cores	512	896
	Graphics Clock (Base/Boost)	1354/1392 MHz	1395/1455 MHz
	Performance	1.8 TFLOPS	2.6 TFLOPS SP Peak
	Memory Size	4GB GDDR5	4GB GDDR6
Memory	Memory Clock	6.0 Gbps	12.0 Gbps
Memory	Memory Interface Width	128-bit	128-bit
	Memory Bandwidth	96 GB/sec	192 GB/sec
	DirectX	12	12
ADI	OpenGL	4.5	4.6
AFI	OpenCL	1.2	1.2
	CUDA Compute Capability	6.1	7.5
Software Operation System	Operation System	Windows 7 -10	Windows 10 64-bit
	Operation System	Linux	Linux 64-bit
	Max. Displays per Board	4	4
Max. Digital Display Display Max. Analog Display	up to 7680x4320	up to 7680x4320	
	Max. Analog Display	Not Support	Not Support
	Outputs	DisplayPort 1.4	DisplayPort 1.4
Power	Max. Board Power Consumption	47 W	50 W
Mochanical	Dimensions	82 x 70 mm	82 x 70 mm
Mechanical	Weight	32.5g	33g
Thermal	Cooling	N/A	N/A
Temperature	Operation (Standard)	0~+55°C	0~+55°C
	Standard Temp. (0 ~ 55°C)	M3P1000-LN	M3T1000-PN
Environment	Wide Temp. (-40 ~ 85°C)	M3P1000-LN-A	M3T1000-PN-A
Environment	Extended Temp. (-40 ~ 70°C)	N/A	N/A
	Coating	M3P1000-LN-C	M3T1000-PN-C





p.71 M3T3000-QN	p.72 M3T5000-WN
MXM 3.1 , Type B	MXM 3.1 , Type B+
NVIDIA Quadro RTX3000	NVIDIA Quadro RTX5000
NVIDIA Turing	NVIDIA Turing
1920	3072
945/1380 MHz	1035/1530 MHz
5.3 TFLOPS SP Peak	9.4 TFLOPS SP Peak
6GB GDDR6	16GB GDDR6
14.0 Gbps	14.0 Gbps
192-bit	256-bit
336 GB/sec	448 GB/sec
12	12
4.6	4.6
1.2	1.2
7.5	7.5
Windows 10 64-bit	Windows 10 64-bit
Linux 64-bit	Linux 64-bit
4	4
up to 7680x4320	up to 7680x4320
Not Support	Not Support
DisplayPort 1.4	DisplayPort 1.4
80 W	110 W
82 x 105 mm	82 x 110 mm
65g	71.5g
N/A	N/A
0 ~ + 55°C	0 ~ + 55°C
M3T3000-QN	M3T5000-WN
N/A	N/A
M3T3000-QN-H	N/A
M3T3000-QN-C	M3T5000-WN-C

M3P1000-LN

NVIDIA Quadro® MXM 3.1 Type A graphics module



Features

- Type A and small footprint design
- 4GB on board memory and 96 GB/sec memory bandwidth
- Up to 4 independent displays at the same time
- OpenCL 1.2, OpenGL 4.5, DirectX 12, Vulkan compatible
- Gold finger 30µ" enhanced high stability and quality signals
- 5-year longevity support

GPU Engine Specs

GPU	NVIDIA Quadro P1000
NVIDIA CUDA Cores	512
Graphics Clock (Base/Boost)	1354/1392 MHz
Floating Point Performance	1.8 TFLOPS

Memory Specs

Memory Size	4GB GDDR5
Memory Clock	6.0 Gbps
Memory Interface Width	128-bit
Memory Bandwidth	96 GB/sec

Thermal and Power Specs

Thermal	None
Max. Board Power Consumption	47 W
Supplementary Power Connectors	None

Dimensions

Form Factor	MXM graphics module
	version 3.1, Type A
Dimensions	82 x 70 mm
Weight	32.5g

1. Windows10 requires November 2015 update or newer

2. 7680x4320 60Hz RGB 8-bit with dual-DisplayPort connector

7680x4320 60Hz YUV420 8-bit with one DisplayPort1.3 connector 3. DisplayPort 1.2 Certified and DisplayPort 1.3/1.4 Ready

Ordering Information

Model Number	Description
M3P1000-LN	MXM3.1 Type A, NVIDIA Quadro P1000, 4GB GDDR5, 0°C to +55°C
M3P1000-LN-A	MXM3.1 Type A, NVIDIA Quadro P1000, 4GB GDDR5, -40°C to +85°C

Feature Support

Bus Type	MXM 3.1 (PCI Express 3.0 support)
OpenGL	4.5
OpenCL	1.2
DirectX	12 API
CUDA Compute Capability	6.1
Support Technologies	NVIDIA CUDA, GPU Boost, Battery
	Boost, OpenCL, PhysX, Direct Compute
Operation System	Windows 7 -10 ¹
	Linux

Display Support

Max. Displays per Board	4
Max. Analog Display Support	Not Support
Max. Digital Display support ²	up to 7680x4320
LCD-eDP 1.4	Not Support
DisplayPort Multimode ³	up to 7680x4320
HDMI 2.0b	support
H.264, HEVC, MPEG2	support
1080p video decoder	

M3T1000-PN

NVIDIA Quadro® MXM 3.1 Type A graphics module



Features

- NVIDIA Quadro T1000 embedded graphics based on NVIDIA Turing architecture
- 896 CUDA cores, 4GB GDDR6 memory
- 2.6 TFLOPS peak FP32 performance
- Support up to 4 DisplayPort 1.4 displays
- Support CUDA Compute version 7.5, OpenCL

GPU Engine Specs

GPU Architecture	NVIDIA Turing™ TU117
NVIDIA CUDA Cores	896
Graphics Clock (Base/Boost)	1395/1455 MHz
Floating Point Performance	2.6 TFLOPS SP Peak

Memory Specs

Memory Size	4GB GDDR6
Memory Clock	12.0 Gbps
Memory Interface Width	128-bit
Memory Bandwidth	192 GB/sec

Mechanical and Environmental

Form Factor	MXM graphics module
	version 3.1, Type A
Dimensions (mm)	82 x 70 mm
Weight	33g
Operation Temperature (Standard)	0 to +55°C
Operation Humidity	5% to 90%
Operation Temperature (Optional)	-40 to +85°C

Ordering Information

Model Number	Description
M3T1000-PN	MXM3.1 Type A, NVIDIA Quadro T1000, 4GB GDDR6, 0°C to +55°C
M3T1000-PN-A	MXM3.1 Type A, NVIDIA Quadro T1000, 4GB GDDR6, -40°C to +85°C

Feature Support

Bus Type	PCI Express 3.0
OpenGL	4.6
Vulkan	1.1 API
OpenCL	1.2
DirectX	12
CUDA Compute Capability	7.5
Operation System	Windows 10 64-bit
	Linux 64-bit

Display Support

Max. Displays per Board	4
Max. Digital Resolution	7680x4320

Power

Max. Board Power Consumption 50 W

M3T3000-QN

NVIDIA Quadro® MXM 3.1 Type B graphics module



Features

- Powered by NVIDIA Quadro RTX 3000
- 1920 CUDA cores, 30 RT cores and 240 Tensor cores
- 6GB GDDR6 192-bit with 336 GB/s
- Support up to 4 DisplayPort 1.4 displays
- NVIDIA GPUDirect, CUDA Compute version 7.5, Vulkan 1.1 support

GPU Engine Specs

GPU	NVIDIA Turing™ TU106
NVIDIA CUDA Cores	1920
Graphics Clock (Base/Boost)	945/1380 MHz
Floating Point Performance	5.3 TFLOPS SP Peak

Memory Specs

Memory Size	6GB GDDR6
Memory Clock	14.0 Gbps
Memory Interface Width	192-bit
Memory Bandwidth	336 GB/sec

Mechanical and Environmental

Form Factor	MXM graphics module	
	version 3.1, Type B	
Dimensions (mm)	82 x 105 mm	
Weight	65g	
Operation Temperature (Standard)	0 to +55°C	
Operation Humidity	5% to 90%	
Operation Temperature (Optional)	-40 to +70°C	

Ordering Information

Model Number	Description
M3T3000-QN	MXM3.1 Type B, NVIDIA Quadro RTX3000, 6GB GDDR6, 0°C to +55°C
M3T3000-QN-H	MXM3.1 Type B, NVIDIA Quadro RTX3000, 6GB GDDR6, -40°C to +70°C

M3T3000-QN-HC MXM3.1 Type B, NVIDIA Quadro RTX3000, 6GB GDDR6, -40°C to +70°C, COATING

Feature Support

Bus Type	PCI Express 3.0
OpenGL	4.6
Vulkan	1.1 API
OpenCL	1.2
DirectX	12
CUDA Compute Capability	7.5
Other Technology	Real-time ray-tracing
Operation System	Windows 10 64-bit
	Linux 64-bit

Display Support

Max. Displays per Board	4
Max. Digital Resolution	7680x4320

Power

Max. Board Power Consumption 80 W

M3T5000-WN

NVIDIA Quadro[®] MXM 3.1 Type B+ graphics module



Features

- Powered by NVIDIA Quadro RTX 5000
- 3072 CUDA cores, 48 RT cores and 384 Tensor cores
- 16GB GDDR6 256-bit with 448 GB/s
- Support up to 4 DisplayPort 1.4 displays
- NVIDIA GPUDirect, CUDA Compute version 7.5, Vulkan 1.1 support

GPU Engine Specs

GPU Architecture	NVIDIA Turing™ TU104
NVIDIA CUDA Cores	3072
Graphics Clock (Base/Boost)	1035/1530 MHz
Floating Point Performance	9.4 TFLOPS SP Peak

Memory Specs

Memory Size	16GB GDDR6
Memory Clock	14.0 Gbps
Memory Interface Width	256-bit
Memory Bandwidth	448 GB/sec

Mechanical and Environmental

Form Factor	MXM graphics module	
	version 3.1, Type B+	
Dimensions (mm)	82 x 110 mm	
Weight	71.5g	
Operation Temperature (Standard)	0 to +55°C	
Operation Humidity	5% to 90%	

Ordering Information

Model Number	Description
M3T5000-WN	MXM3.1 Type B+, NVIDIA Quadro RTX5000, 16GB GDDR6, 0°C to +55°C
M3T5000-WN-C	MXM3.1 Type B+, NVIDIA Quadro RTX5000, 16GB GDDR6, 0°C to +55°C, COATING

Feature Support

Bus Type	PCI Express 3.0
OpenGL	4.6
Vulkan	1.1 API
OpenCL	1.2
DirectX	12
CUDA Compute Capability	7.5
Other Technology	Real-time ray-tracing
Operation System	Windows 10 64-bit
	Linux 64-bit

Display Support

Max. Displays per Board	4
Max. Digital Resolution	7680x4320

Power

Max. Board Power Consumption 110 W

AIB-SQ37-A1

Plug-in-play test platform supports all Aetina embedded MXM 3.1 modules



Features

- Support Intel 8th Gen processor
- Support MXM module (Type-B)
- 2x DDR4 SO-DIMM 2666 MHz, expandable up to 32GB
- Support 2x DispalyPort and 1x LVDS/eDP
- 1x Mini-PCIe slot, support PCIe and USB interface
- 2x SATA III

Processor

Support Intel 8th Gen. processors
Support Socket LGA1151
TDP up to 95W
Intel® Q370 Chipset

System Memory Support

2x DDR4 SO-DIMM sockets, Max. Capacity 32 GB Support Dual Channel DDR4 2666 MHz

Graphics

Intel® Integrated Graphics or discrete GPU

Storage

2x SATAIII SSD/HDD

1 x M.2 M key slot, support PCIe *4+ SATA interface for NVME,Size 2280

Rear I/O

2x Display Port Ports (1 for CPU, 1 for GPU)
6x USB3.0
2x Audio jack, support Line out /Mic
2x GbE RJ45 LAN
1x DC-In power jack

Expansion Slots

2x USB2.0
2x CAN Bus DB-9 (Connecter)
2x COM (RS232)
1x DIO
1x MXM 3.1 slot
1x Mini PCIE Full slot, support PCIe + USB interface

1x M.2 M key 2280 slot, M.2 B key 3042/3052 slot

Power Supply

+19V DC

Dimension

170mmx188mmx1.5mm

Weight

357g

Operating Temperature

0°C ~ +60°C

Ordering Information

Model Number	Description
AIB-SQ37-A1	EIQ37-ANT, LGA1151(Coffee lake-S), DDR4 DIMM,
	DP*2(CPU & MXM), 330W PSU,0~60

DEV-MXM-6DP

Convert MXM slot into PCI Express x16 Gen3 slot



Features

- PCI Express x16 Gen3, which convert the MXM slot to a PCI Express slot
- 6x DisplayPort supported
- Compatible to Aetina Embedded MXM Module

Specifications

Bus Type

Display

Max. Displays per Board Video Output 6 6x DisplayPort

PCI Express 3.0 Slot to Host MXM 3.1 Slot to Device

Power

Supplementary Power Connectors 8-pin

DEV-MXM-4H

Convert MXM slot into PCI Express x16 Gen3 slot



Features

- Built based on PCI Express x16 Gen3, which convert the MXM slot to a PCI Express slot
- 4xHDMI supported
- Compatible to Aetina Embedded MXM Module

Specifications

Bus Type PCI Express 3.0 Slot to Host MXM 3.1 Slot to Device

Display

Max. Displays per Board	4
Video Output	4x HDMI

Power

Supplementary Power Connectors 8-pin

Mechanical & Environment

Dimensions (mm)	169 mm x 111.15 mm
Weight	109g
Operation Temperature(Standard)	0~+55°C

Ordering Information

Model Number	Description
DEV-MXM-4H	PCIE Carrier Board, MXM3.1, 4x HDMI, 0°C to +55°C

071

	Mechanical	& I	Enviror	nment
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Dimensions (mm)	236 mm x 164.8 mm
Weight	155g
Operation Temperature(Standard)	0~+55°C

Ordering Information

Model Number	Description
DEV-MXM-6DP	PCIE Carrier Board, MXM3.1, 6x DP, 0°C to +55°C



Rugged GPGPU Board

By following VITA standards, Aetina provides the widespread adoption of form factors to the embedded computing markets, an application area where mezzanine cards are frequently employed. With PCI Express support providing high flexibility for alternative I/O functions and more sophisticated performance, the Aetina Rugged series are perfect off-the-shelf expansion modules.







Conformal Co

Wide Temperature

VPX	
Selection Guide	P.73
V3T3000-QRC	P.74
V3T5000-WRC	P.75




		p	p# 5	
Model Number				
	Model Number	V3T3000-QRC	V3T5000-WRC	
Bus Type		PCI Express 3.0	PCI Express 3.0	
GPU Engine	GPU Architecture	NVIDIA Turing™ TU106 NVIDIA Quadro RTX 3000	NVIDIA Turing™ TU104 NVIDIA Quadro RTX 5000	
	NVIDIA CUDA Cores	1920	3072	
	Floating Point	5.3 TFLOPS SP Peak	9.4 TFLOPS SP Peak	
	Memory Size	6GB GDDR6	16GB GDDR6	
Mamani	Memory Clock	14 Gbps	14 Gbps	
Memory	Memory Interface Width	192-bit	256-bit	
	Memory Bandwidth	336 GB/sec	448 GB/sec	
	DirectX	12	12	
	OpenGL	4.6	4.6	
API	OpenCL	1.2	1.2	
	CUDA Compute Capability	7.5	7.5	
Operation System	Support OS	Windows 10 64-bit Linux 64-bit	Windows 10 64-bit Linux 64-bit	
	Max. Displays per Board	4	4	
Display	Max. Digital Resoultion	7680x4320	7680x4320	
	Display Interface	Four DisplayPort 1.4 outputs to VPX P2	Four DisplayPort 1.4 outputs to VPX P2	
Power	Board Power (TGP)	80 W	110 W	
Thermal	Cooling	Conduction Cooled	Conduction Cooled	
Therma VITA Standardsl	VITA Standards	VITA 46.0 VPX Base Standard VITA 46.4 PCI Express on VPX Fabric Connector VITA 65 OpenVPX Architecture Framework for VPX	VITA 46.0 VPX Base Standard VITA 46.4 PCI Express on VPX Fabric Connector VITA 65 OpenVPX Architecture Framework for VPX	
	Form Factor	3U VPX	3U VPX	
	Dimensions (mm)	100 x 160 mm	100 x 160 mm	
	Weight	983g	989.5g	
Mechanical & Environment	Operation Temperature (Standard)	0 to +55°C	0 to +55°C	
	Operation Humidity	Relative Humidity 5 to 90%	Relative Humidity 5 to 90%	
	Operation Temperature (Optional)	-40 to +71°C (at wedge lock)	N/A	
	Storage Temperature	-40 to +125°C Relative Humidity 5 to 95%	-40 to +125°C Relative Humidity 5 to 95%	

V3T3000-QRC

Powered by NVIDIA[®] Quadro RTX[™] 3000



Features

- Powered by NVIDIA Quadro RTX 3000
- 1920 CUDA cores, 30 RT cores and 240 Tensor cores
- 6GB GDDR6 192-bit with 336 GB/s
- Support up to 4 DisplayPort 1.4b displays
- NVIDIA GPUDirect, CUDA Compute version 7.5, Vulkan 1.1 support
- 5-year lifecycle availability

GPU Engine Specs

GPU Architecture	NVIDIA Turing™ TU106
NVIDIA CUDA Cores	1920
Floating Point Performance	5.3 TFLOPS SP Peak

Memory Specs

Memory Size	6GB GDDR6
Memory Clock	14.0 Gbps
Memory Interface Width	192-bit
Memory Bandwidth	336 GB/sec

Feature Support

Bus Type	PCI Express 3.0
OpenGL	4.6
OpenCL	1.2
DirectX	12
CUDA Compute Capability	7.5
Operation System	Windows 10 64-bit
	Linux 64-bit

VITA Standards

VITA Standards	VITA 46.0 VPX Base Standard
	VITA 46.4 PCI Express on VPX Fabric Connector
	VITA 65 OpenVPX Architecture Framework for VPX

Ordering Information

Model Number	Description
V3T3000-QRC	VPX3U, NVIDIA Quadro RTX3000, 6GB GDDR6,
	Conduction-cooled,0°C to +55°C (at Wedge-lock)
V3T3000-QRC-A	VPX3U, NVIDIA Quadro RTX3000, 6GB GDDR6,
	Conduction-cooled,-40 to +71°C (at wedge lock)

Display Support

Max. Displays per Board	4
Max. Digital Resoultion	7680x4320
Display Interface	Four DisplayPort 1.4 outputs to VPX P2

Mechanical and Environmental

Thermal	Conduction cooled
Board Power (TGP)	80 W
Form Factor	3U VPX
Dimensions (mm)	100 x 160 mm
Weight	983g
Operation Temperature (Standard)	0 to +55°C (at wedge lock)
Operation Humidity	Relative Humidity 5 to 90%
Operation Temperature (Optional)	-40 to +71°C (at wedge lock)
Storage Temperature	-40 to +125°C, Relative Humidity
	5 to 95%

V3T5000-WRC

Powered by NVIDIA[®] Quadro RTX[™] 5000



Features

- Powered by NVIDIA Quadro RTX 5000
- Maximum 3072 CUDA cores, 48 RT cores and 384 Tensor cores
- Up to 16GB GDDR6 256-bit with 448 GB/s
- Support up to 4 DisplayPort 1.4b displays
- NVIDIA GPUDirect, CUDA Compute version 7.5, Vulkan 1.1 support
- 5-year lifecycle availability

GPU Engine Specs

GPU Architecture	NVIDIA Turing™ TU104
NVIDIA CUDA Cores	3072
Floating Point Performance	9.4 TFLOPS SP Peak

Memory Specs

Memory Size	16GB GDDR6
Memory Clock	14.0 Gbps
Memory Interface Width	256-bit
Memory Bandwidth	448 GB/sec

Feature Support

Bus Type	PCI Express 3.0
OpenGL	4.6
OpenCL	1.2
DirectX	12
CUDA Compute Capability	7.5
Operation System	Windows 10 64-bit
	Linux 64-bit

VITA Standards

VITA Standards	VITA 46.0 VPX Base Standard
	VITA 46.4 PCI Express on VPX Fabric Connector
	VITA 65 OpenVPX Architecture Framework for VPX

Ordering Information

Model Number	Description
V3T5000-WRC	VPX3U, NVIDIA Quadro RTX5000, 16GB GDDR6,
	Conduction-cooled, 0°C to +55°C (at Wedge-lock)

Display Support

Max. Displays per Board	4
Max. Digital Resoultion	7680x4320
Display Interface	Four DisplayPort 1.4 outputs to VPX P2

Mechanical and Environmental

Thermal	Conduction cooled
Board Power (TGP)	110 W
Form Factor	3U VPX
Dimensions (mm)	100 x 160 mm
Weight	989.5g
Operation Temperature (Standard)	0 to +55°C (at wedge lock)
Operation Humidity	Relative Humidity 5 to 90%
Operation Temperature (Optional)	
Storage Temperature	-40 to +125°C, Relative Humidity
	5 to 95%

Multi-Display Series



Overcome Display Boundaries



Extend the Vision of the World



Multi-Display Graphics Card

The **MDS graphics series** enlarge your insight with an expanded display. Delivering high-resolution quality image and seamless multimedia experience across up to 12 displays based on one single GPU, the MDS graphics series are the ideal solution with flexibility, productivity and reliability for digital signage, display walls and other multiple display deployments in business, industry, enterprise and mission-critical environments.







oly Multi-Display

Two Ball Bearing

ESD-resistance Design

MDS Graphics Cards	
Selection Guide	P.79
M4-P107mDP	P.80
M9-P107	P.81
M12-P107	P.82

Model Numbe	er	p.80 M4-P107mDP	p.81 M9-P107	p.82 M12-P107
Bus Type		PCle 3.0 x 16	PCle 3.0 x 16	PCle 3.0 x 16
	GPU Architecture	NVIDIA Pascal	NVIDIA Pascal	NVIDIA Pascal
	Graphics Processing Unit	GeForce GTX 1050 Ti	GeForce GTX 1050 Ti	GeForce GTX 1050 Ti
Engine	NVIDIA CUDA Cores AMD Stream processors	768	768	768
	Graphics Clock	1290 MHz	1290 MHz	1290 MHz
	Floating Point	1.98 TFLOPS	1.98 TFLOPS	1.98 TFLOPS
	Memory Size	4GB GDDR5	4GB GDDR5	4GB GDDR5
Maman	Memory Clock	7.0 Gbps	7.0 Gbps	7.0 Gbps
Memory	Memory Interface Width	128-bit	128-bit	128-bit
	Memory Bandwidth	112 GB/sec	112 GB/sec	112 GB/sec
	DirectX	12 API	12 API	12 API
1.51	OpenGL	4.5	4.5	4.5
API	OpenCL	1.2	1.2	1.2
CUDA Compute Capability		6.1	6.1	6.1
		Windows 7 -10	Windows 7 -10	Windows 7 -10
Operation System	Support OS	Linux	Linux	Linux
	Max. Displays per Board	4	9	12
	Max. Digital Display	7680x4320	up to 5760x3240 (3x3 mode)	up to 5760x4320(3x4 mode)
Display	Max. Analog Display	N/A	N/A	N/A
	Outputs	4 mini DisplayPort 1.2	VHDCI to 9 DVI or	VHDCI to 12 DVI or
			VHDCI to 9 HDMI	VHDCI to 12 HDMI
Power	Max.Board Power Consumption	75W	75 W	75 W
Thormal	Cooling	Two-ball-bearing Fan	Two-ball-bearing Fan	Two-ball-bearing Fan
menndi	Slot Occupied	Single-slot	Two-slot	Two-slot
	Dimensions	169.57x68.9 mm	203.64x111.15 mm	203.64x111.15 mm
wechanical	Weight	174.2g	273.85g	273.9g
Environment	Operation Temperature	0°C~ +55°C	0°C~ +55°C	0°C~ +55°C

STOR .

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M4-P107mDP

Native 4x mini DisplayPort 1.2 for four displays simultaneously



Features

- Powered by NVIDIA GeForce GTX 1050 Ti
- Natively 4 mini DisplayPort 1.2 for four displays simultaneously
- Flexible single-slot, low-profile for space and power-constrained chassis
- 4 displays; support optimal resolution 7680x4320 at 60Hz

GPU Engine Specs

GPU	NVIDIA GeForce GTX 1050 Ti
NVIDIA CUDA Cores	768
Graphics Clock (Base/Boost)	1290 MHz
Floating Point Performance	1.98 TFLOPS

Memory Specs

Memory Size	4GB GDDR5
Memory Clock	7.0 Gbps
Memory Interface Width	128-bit
Memory Bandwidth	112 GB/sec

Feature Support

Bus Type	PCI Express 3.0 x16
OpenGL	4.5
DirectX	12 API
Operation System	Windows 7 - 10 ¹
	Linux

Ordering Information

Model Number	Description
M4-P107mDP	PCI-Express 16X, NVIDIA GeForce GTX 1050 Ti,
	4GB GDDR5, 0°C ~ +55°C
	Accessories: ATX bracket, mDP to DP cable x4 (Option

Thermal and Power Specs

Thermal	Two Ball Bearing Fan
Max. GPU Temperature	97°C
Max. Board Power Consumption	75 W
Min. System Power Requirement	300 W

Display Support

Max. Displays per Board	4
Max. Output Resolution Support ²	7680x4320
Display Outputs	4 x mini DisplayPort 1.2 ³

Dimensions

Form Factor	SFF=Small Form Factor (Low profile card)
Length	169.57 mm
Height	68.9 mm
Weight	174.2g
Width	Single-slot

1. Windows10 requires November 2015 update or newer

2. 7680x4320 60Hz RGB 8-bit with dual-DisplayPort connector 7680x4320 60Hz YUV420 8-bit with one DisplayPort1.3 connector

3. DisplayPort 1.2 Certified and DisplayPort 1.3/1.4 Ready

M9-P107

Drive up to 9 displays, ideal for 3x3 video wall



Features

- Powered by NVIDIA GeForce GTX 1050 Ti
- Single card, single GPU support up to 9 displays
- Semlesssly immersive imagery quality for 3x3 video wall
- Support 1920x1080 FHD per port through software
- Support EDID caching
- Ideal for wide screen advertising and digital signage

GPU Engine Specs

GPU	NVIDIA GeForce GTX 1050 Ti
NVIDIA CUDA Cores	768
Graphics Clock (Base/Boost)	1290 MHz
Floating Point Performance	1.98 TFLOPS

Memory Specs

Memory Size	4GB GDDR5
Memory Clock	7.0 Gbps
Memory Interface Width	128-bit
Memory Bandwidth	112 GB/sec

Feature Support

Bus Type	PCI Express 3.0 x16
OpenGL	4.5
DirectX	12 API
Operation System	Windows 7 - 101
	Linux

Dimensions

Form Factor	ATX
Length	203.64 mm
Height	111.15 mm
Weight	273.85g
Width	Two-slot

Ordering Information

Optional Accessorie	Description
Model Number	
M9-P107D	M9-P107 with VHDCI Cable to 3xDVI
M9-P107H	M9-P107 with VHDCI Cable to 3xHDMI
7W500000120	VHDCI Cable to 3xDVI
7W500000130	VHDCI Cable to 3xHDMI

Thermal and Power Specs

Thermal	Two Ball Bearing Fan
Max. GPU Temperature	97°C
Max. Board Power Consumption	75 W
Min. System Power Requirement	300 W

Display Support

Max. Displays per Board	9
Max. Output Resolution Support	5760x3240 (3x3 mode)
Display Outputs	9 Single Link DVI or HDMI
	(via 3x VHDCI to 3 DVI or HDMI cable

M12-P107 Drive up to 12 displays



Features

- Powered by NVIDIA GeForce GTX 1050 Ti
- Drive up to 12 displays in single card with single GPU
- Flexible displays configuration in clone or extended, portrait or landscape
- Support maximum 4x 4Kp30 video display
- Support EDID caching
- Ideal for wide screen advertising and digital signage

GPU Engine Specs

CPU	NVIDIA GeForce GTX 1050 Ti
NVIDIA CUDA Cores	768
Graphics Clock (Base/Boost)	1290 MHz
Floating Point Performance	1.98 TFLOPS

Memory Specs

Memory Size	4GB GDDR5
Memory Clock	7.0 Gbps
Memory Interface Width	128-bit
Memory Bandwidth	112 GB/sec

Feature Support

Bus Type	PCI Express 3.0 x16
OpenGL	4.5
DirectX	12 API
Operation System	Windows 7 - 10 ¹
	Linux

Dimensions

Form Factor	ATX
Length	203.64 mm
Height	111.15 mm
Weight	273.9g
Width	Two-slot

Ordering Information

Optional Accessorie	Description
Model Number	
M12-P107D	M12-P107 with VHDCI Cable to 3xDVI
M12-P107H	M12-P107 with VHDCI Cable to 3xHDMI
7W500000120	VHDCI Cable to 3xDVI
7W500000130	VHDCI Cable to 3xHDMI

Thermal and Power Specs

Thermal	Two Ball Bearing Fan
Max. GPU Temperature	97°C
Max. Board Power Consumption	75 W
Min. System Power Requirement	300 W

Display Support

Max. Displays per Board	12
Max. Output Resolution Support	5760x4320 (3x4 mode)
Display Outputs	12 Single Link DVI or HDMI
	(via 4x VHDCI to 3 DVI or HDMI cable)



Video Wall Product

The series supports multiple display output connections and a variety of display configurations with the highest quality, scalability, and flexibility. The **M3 Box** is a cost-effective and easy-to-use video wall splitter box, compatible with the content sources from various professional graphics cards or integrated GPUs. The **M3 Player** is a video wall controller with the hardware and software integrated for an all-in-one high-performance player, providing unprecedented 8K video decoding, display, and streaming with a powerhouse of discrete GPU super performance.







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M3 Box

Selection Gui	de ·····	P.84
MSP-DP24H		DQ5
		F.0J
MSP-DP28H		P.86
		D A -
M26-D638H		P.87

M3 Player

MDS-DP16H-20

P.88

		etino etino		et e
Model Number		p.85 MSB-DP24H	p.86 MSB-DP28H	р.87 МSB-DРЗ9Н
Operation Syste	em	Windows 10	Windows 10	Windows 10
	Max. Displays per Box	4	8	9
Display	Max. Digital Resolution	7680 x 1200	15360 x 1200	5760 x 3600
	Max. Analog Resolution	None	None	None
	Input	DP 1.4 x2	DP 1.4 x2	DP 1.4 x3
	Max. Digital Input Resolution per Port	3840x1200 @60Hz	7680x1200 @60Hz	5760x1200 @60Hz
Display	Outputs	HDMI 1.4 x 4	HDMI 1.4 x 8	HDMI 1.4 x 9
	Max. Digital Output Resolution per Port	1920x1200 @60Hz	1920x1200 @60Hz	1920x1200 @60Hz
Power	Power Consumption	10 W	15 W	15 W
rowei	Power Supply	5V 2A DC	5V 3A DC	5V 3A DC
Thermal	Cooling	Heat-Sink	Heat-Sink with Fan	Heat-Sink with Fan
	Dimensions (mm)	120.0mm (W) x 98.0mm (D) x 38.0mm (H)with Metal Case	175.0mm (W) x 105.0mm (D) x 38.0mm (H) with Metal Case	175.0mm (W) x 105.0mm (D) x 38.0mm (H) with Metal Case
	Weight	347g	589g	598g
Mechanical &	Operation Temperature (Standard)	0~+45°C	0~+45°C	0~+45°C
Environment	Operation Humidity	5 – 95% non-condensing	5 – 95% non-condensing	5 – 95% non-condensing
	Storage Temperature	20°C~65°C	20°C~65°C	20°C~65°C
	Form Factor	Low-profile metal case	Low-profile metal case	Low-profile metal case

MSB-DP24H

2xDP input to 4xHDMI output video splitter



Features

- 2xDP input to 4xHDMI output video splitter
- Maximum 7680x1200 high resolution, support 1920x1200 per port
- Support EDID caching
- Easy and quick installation without driver
- Passive cooling, low power consumption, low-profile metal case

Feature Support

Operation System

Display

Max. Displays per Box	4
Max. Digital Resolution	7680 x 1200
Max. Analog Resolution	None

Windows 10

I/O Interface

Input	DP 1.4 x2
Max. Digital Input Resolution per Port	3840x1200 @60Hz
Output	HDMI 1.4 x 4
Max. Digital Output Resolution per Port	1920x1200 @60Hz

Power

Power Consumption	10 W
Power Supply	5V 2A DC

Thermal

Cooling

Heat-Sink

Ordering Information

Model Number	Description
MSB-DP24H	4-displays, Multi-display Splitter Box,
	Input DP x 2 + Output HDMI x 4,
	0°C to +45°C
	Accessories: DP to DP cable x 2 +
	Adapter 5V 3A DC x1

Mechanical & Environment

Dimensions (mm)	120.0mm (W) x 98.0mm (D) x
	38.0mm (H) with Metal Case
Weight	347g
Operation Temperature(Standard)	0 ~ + 45°C
Operation Humidity	5 – 95% non-condensing
Storage Temperature	-20°C~65°
Form Factor	Low-profile metal case

MSB-DP28H

2x DP input to 8x HDMI output video splitter



Features

- 2xDP input to 8xHDMI output video splitter
- Maximum 15360x1200 high resolution, support 1920x1200 per port
- Support EDID caching
- Easy and quick installation without driver
- Active cooling, low power consumption, low-profile metal case

Feature Support

Operation System

Display

Max. Displays per Box	8
Max. Digital Resolution	15360 x 1200
Max. Analog Resolution	None

Windows 10

I/O Interface

Input	DP 1.4 x2
Max. Digital Input Resolution per Port	7680x1200 @60Hz
Output	HDMI 1.4 x 8
Max. Digital Output Resolution per Port	1920x1200 @60Hz

Power

Power Consumption	15 W
Power Supply	5V 3A DC

Thermal

Cooling

Heat-Sink with Fan

Ordering Information

Model Number	Description
MSB-DP28H	8-displays, Multi-display Splitter Box,
	Input DP x 2 + Output HDMI x 8,
	0°C to +45°C
	Accessories: DP to DP cable x 2 +
	Adapter 5V 3A DC x1

Mechanical & Environment

Dimensions (mm)	175.0mm (W) x 105.0mm (D) x
	38.0mm (H) with Metal Case
Weight	589g
Operation Temperature(Standard)	0~+45°C
Operation Humidity	5 – 95% non-condensing
Storage Temperature	-20°C~65°
Form Factor	Low-profile metal case

MSB-DP39H

3xDP input to 9xHDMI output video splitter



Features

- 3xDP input to 9xHDMI output video splitter
- Maximum 5760x3600 high resolution, support 1920x1200 per port
- Support EDID caching
- Easy and quick installation without driver
- Active cooling, low power consumption, low-profile metal case

Feature Support

Operation System	Windows 10
Max. Displays per Box	9
Max. Digital Resolution	5760 x 3600
Max. Analog Resolution	None

Mechanical & Environment

Dimensions (mm)	175.0mm (W) x 105.0mm (D) x
	38.0mm (H) with Metal Case
Weight	598g
Operation Temperature(Standard)	0 ~ + 45°C
Operation Humidity	5 – 95% non-condensing
Storage Temperature	-20°C~65°
Form Factor	Low-profile metal case

I/O Interface

Input	DP 1.4 x3
Max. Digital Input Resolution per Port	5760x1200 @60Hz
Output	HDMI 1.4 x 9
Max. Digital Output Resolution per Port	1920x1200 @60Hz

Power Consumption	15 W
Power Supply	5V 3A DC

Thermal

Cooling

Heat-Sink with Fan

Ordering Information

Model Number	Description
MSB-DP28H	9-displays, Multi-display Splitter Box,
	Input DP x 3 + Output HDMI x 9,
	0°C to +45°C
	Accessories: DP to DP cable x 3 +
	Adapter 5V 3A DC x1

MDS-DP16H-20

Drive up to 16 displays with single GPU, hardware and software integrated into video wall AIO player



System Specs

CPU	Intel 9th Generation Coffee lake i7-9750H
	6 Cores/12 Threads CPU, 12M cache
Chipset	Intel QM370
Memory	2 x SO-DIMM, 2x 8GB DDR4
Networking	2 x SO-1x Intel Wireless-AC 9462NGW
	M.2 2230 , BT5.0
	2x Realtek RTL8111H-CG Gigabit Ethernet
	controllerDIMM, 2x 8GB DDR4
Audio Codec	1x ALC892-GR 7.1+2 Channel high-definition
	audio CODEC
Mass Storage	1x M.2 SSD slot (PCIe x4,NVMe SATA III auto detect)
	1x 2.5″ SATAIII HDD/SSD bay

Graphics Specs

GPU	NVIDIA Discrete GPU
NVIDIA CUDA Cores	2304
Memory Size	8GB GDDR6
Memory Clock	14.0 Gbps
Memory Interface Width	256-bit

Display Support

Max. Displays	16
Max. Video Wall Resoultion	7680x4800 @60Hz (4 x 4 mode)
	15360x2400 @60Hz (2 x 8 mode)
Max. Displays Output per Port	HDMI14 1920x1200 @60Hz

Ordering Information

Model Number	Description
MDS-DP16H-20	Intel Core™ i7-9750H,2xSO-DIMM DDR4,
	Discrete GPU card,8GB GDDR6
	256-bits GPU card,16 x HDMI outputs,
	350W PSU , 0°C to +35°C

Features

- Powered by NVIDIA highly powerful discrete GPU
- Intel 9th gen. Coffee lake i7-9750H, 6 Cores/12 Threads CPU, 12M cache
- Drive up to 16 displays with single GPU, hardware and software integrated into video wall AIO player
- Max. 15360x2400 @60Hz (8x2) high resolution, support 1920x1200 per port
- High performance 8K video decoder engine
- Integrate signage software, editor schedule and remoted control
- Customized configuration to replace the original pre-sets, enabling faster setups

Mechanical & Environment

Operation System	Windows® 10 Pro pre-installed
Power Supply	19.5V / 350 W Power Supply
Dimensions (mm)	321.5(L) x 209.8(L) x 114.5(H) mm
	excluding mounting plate and
	protruded portion
Weight	protruded portion 5.8kg
Weight Operating Temperature	protruded portion 5.8kg 0 ~ + 35°C

I/O Interface

Video Outputs	16x HDMI + Console x 1
LAN	2x RJ45 for Gigabit LAN
	2x WiFi Antenna
USB	4x USB 3.0 Type-A
	4x USB 3.1 Type-A
Serial	1x D-Sub for RS-232
Audio	2x Microjack audio connectors for Mic / Line Out
LEDs	1x Power button with LED
	2x LEDs for HDD/WiFi

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