

# 2024 PRODUCT CATALOG

# AIOT SOLUTIONS

THE TRUSTED INNOVATION PARTNER



[www.a4eon.com](http://www.a4eon.com)

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# About AAEON

## The Trusted Innovation Partner

We have the drive to provide innovative, trusted solutions tailored to benefit our customers.



Established in 1992, AAEON stands at the forefront of industrial IoT and AI Edge solutions, renowned for its commitment to continual innovation. As a leading designer and manufacturer, AAEON specializes in delivering reliable, high-quality computing platforms and offers comprehensive OEM/ODM services on a global scale. Collaborating with businesses, AAEON goes beyond providing individual platforms, extending its expertise to offer end-to-end solutions that prioritize technological innovation and design excellence, fostering a reputation for delivering a trusted, customer-centric, and high standard of service.

Working closely with premier chip designers, AAEON ensures the creation of stable and reliable platforms, showcasing an innovative approach to product development and operational flexibility that solidifies its standing as a provider synonymous with demonstrated quality and dependability. The experienced engineering team at AAEON has played a pivotal role in assisting numerous companies worldwide, guiding them through product launches with solutions tailored to their specific needs. AAEON's customer-centric approach is underscored by expedited, localized technical support and meticulous attention to detail, reinforcing its dedication to delivering unparalleled service.

## AAEON Core Values

### Innovation:

**Technological Innovation** – continually seeking to bring new and exciting technologies to market for our customers

**Product Innovation** – evolving with our customer's needs to maximize the utility of embedded solutions

**Innovative Business Model** – maintaining a worldwide community model for peer-to-peer collaboration and expert technical support

### Trusted Quality:

**Design Quality** – rigorously monitoring standards to ensure continual improvement

**Advanced Manufacturing** – integrating AI, automation, and new technologies into our processes

**Higher Standard Of Service** – building industry trust in our abilities through external endorsements from premier organizations

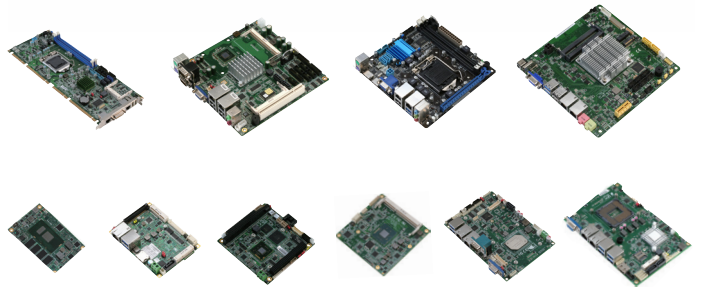
### Flexibility:

**Low Total Cost Of Ownership (TCO)** – adopting a modular design process for streamlined customization to lower the cost of entry

**Fast Service** – faster troubleshooting for issue resolution, straightforward after-sales care

**Customer Focus** – provide localized solutions for even the most complex customer needs through regional RD & design center





## System Level Products

AAEON is committed to delivering high-quality intelligent system products, such as Rugged Panel PCs, Expandable Industrial Computers, Full HD Infotainment Displays, Rugged Tablets, Embedded PCs and related accessories, for use in all aspects of sectors including Digital Signage, Transportation, Industrial Automation, Healthcare, Hospitality, Harbor/Marine, Military/Government, Public Safety and Energy.

AAEON has the capability to customize services for a range of embedded computers and system products according to customer requirements and specifications. To help large customers with volume production, AAEON also provides an end-to-end Design Manufacturing Service (DMS) that begins with design and goes through to contract manufacturing. Quality assurance of our system products ensures excellent product performance and is the key to our success and growing global customer base.

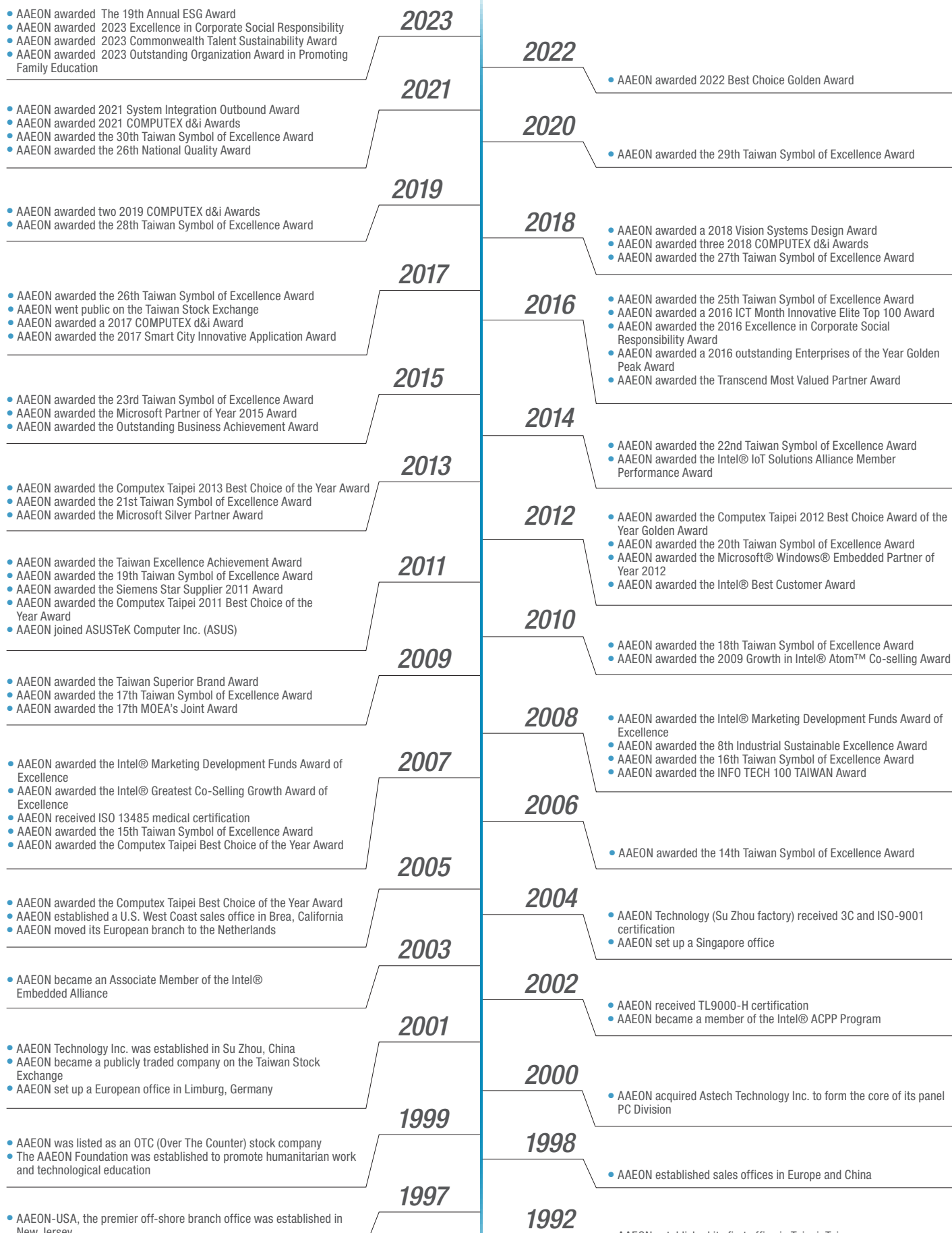
## Board Level Products

Embedded boards are the beating heart of every computer system. AAEON offers a diverse range of different embedded boards to consolidate your systems. Our products include Compact Boards, 3.5" Sub-Compact Boards, EPIC boards, PICO-ITX boards, COM Express Modules, de next boards, PC/104 Modules, RISC Gateway Boards, and full-sized & half-sized SBCs.

With the advent of the fourth industrial revolution, more commonly known as Industry 4.0, the optimization of automation processes and productivity is becoming more relevant than ever before. Embedded single boards provide an easily configurable and efficient solution to consolidating industrial platforms and infrastructure in fields such as smart cities, smart building management, smart transportation, energy-efficient grids, POS and digital signage, and the medical industry.

AAEON's boards are designed for superior environmental resilience. The WiTAS (Wide Temperature Assurance Services) line can be used within a temperature range of -40°C~85°C and is specifically built to combat harsh environments, operating at peak efficiency in both bitterly cold and blisteringly hot spaces. Our WiTAS products are also ideal for IoT uses and are designed for minimum maintenance and

# Milestones





A member of the ASUS Group: A strong high-tech conglomerate

**ASUS Technology and Financing**

**AAEON Design Flexibility and Domain Know-how**



## OEM/ODM Capability

The OEM/ODM service has been a key factor in AAEON's phenomenal growth over the past 10 years. AAEON offers design services for full custom requirements as well as modification services for its off-the-shelf products. Whatever you need, AAEON has the experience and expertise to help you create or modify products to perfectly fit your requirements.

# Core Competence

## Product Innovation

AAEON's integration expertise is integral to product designs that have the most desirable built-in features, saving customers valuable design and customization time. AAEON's OEM/ODM capabilities help us meet customers' exact specifications and requirements. In addition, AAEON has invested aggressively in R&D capabilities and will continue to do so to maintain a competitive advantage for new designs. In cooperation with premier technology vendors, AAEON participates in vendor early access programs to provide the latest technology to its customers.

## Market Focus

AAEON has established a worldwide reputation for exceptional domain know-how. This expertise has enabled AAEON to secure a solid position in Machine and Factory Automation, as well as the Chemical Industry. Additionally, AAEON's cutting edge products meet the specific requirements of the Digital Signage, Transportation, Industrial Automation, Medical, Harbor/Marine, Military/Government, Public Safety and Energy sectors.

## R&D Strength

AAEON takes great pride in its World Class R&D aptitudes. With more than 20% of AAEON's workforce employed in R&D and 10% of annual sales revenue invested in this field, AAEON is prepared to handle the most demanding designs based on the latest technologies. With our strong background in innovation, AAEON has been granted a raft of design patents around the world.

## Design Capability

From our core competence of single board computer design, AAEON has expanded its capabilities to award-winning Panel PC System Design, BIOS Engineering with multi-vendor expertise, Mechanical Design, Peripheral Device Design, Design Verification and in-house EMI/EMC Debugging.

## Manufacturing Capability

AAEON has manufacturing facilities located in Taipei, Taiwan and Suzhou, China. To become the leading supplier of Industrial Computers, AAEON has created manufacturing facilities with flexible layouts and expansion capabilities to easily address the demand for increased production capacity. Drawing upon the skills of its professional and experienced personnel to develop an efficient production system, AAEON has the ability to respond rapidly to customer requests for standard or customized IPC products.



# Quality Assurance

AAEON's Quality Assurance Closed Loop Feedback System provides solid and consistent feedback through the design, manufacturing and service stages to ensure continuous progress and meet customer expectations. The three stages of the Quality Assurance System are Design Quality Assurance (DQA), Manufacturing Quality Assurance (MQA) and Service Quality Assurance (SQA).

## DQA

Design Quality Assurance starts at the conceptual stage of a project and covers the product development stage to ensure the utmost quality throughout the process. AAEON's safety and environmental test labs ensure our products meet the requirements of CE/UL/FCC/CCC standards. All AAEON products go through an extensive and comprehensive test plan for compatibility, function, performance and usability. Therefore, AAEON customers can always expect to receive well-designed, high-quality products.

## MQA

Manufacturing Quality Assurance is carried out in accordance with ISO 9001, ISO 13485, ISO 14001 certification standards. All AAEON products are built using production and quality testing equipment in a static-free environment. Additionally, these products go through rigorous tests on the production line and dynamic aging in the burn-in room. AAEON's Total Quality Control (TQC) program includes Incoming Quality Control (IQC), In-Process Quality Control (IPQC) and Final Quality Control (FQC). Periodic training, auditing and facility calibration are strictly implemented to ensure all quality standards are followed to meet customers' requirements. The Quality Control Team constantly communicates with R&D to improve product performance and compatibility.

## SQA

Service Quality Assurance includes technical support and a repair service. With SQA, AAEON can serve its customers and also receive their feedback and work with R&D and Manufacturing to strengthen AAEON's response time in resolving customer concerns and improve service levels.

## Technical Support

The backbone of customer support is a team of professional Application Engineers who provide customers with real-time technical support. Their expertise is shared through internal knowledge management and links to the website for online nonstop service and solutions.

## Repair Service

With an efficient eRMA system and RMA service policy, AAEON's RMA Team is able to ensure prompt, high-quality product repair and replacement services with a short turnaround time.

## Quality Certification



AAEON has acquired many official certifications to maintain its quality system.

ISO 9001: 2015	QMS
ISO 13485: 2016	Medical Devices-QMS
ISO 14001: 2015	EMS
ISO 27001: 2013	ISMS
3C:	China Compulsory Certification
CE/FCC:	All AAEON products undergo and meet CE and FCC test standards which prove their design quality and integrity



# AAEON.AI

Connecting You **AI**  
with AI at the Edge



## Introduction

To keep ahead of the ever-growing markets and demand for AI hardware solutions, AAEON is pleased to announce our new webpage, AAEON.ai. AAEON.ai offers developers and systems integrators a centralized resource for finding the latest AI edge computing technology from AAEON.

Market analysts have consistently pointed to expanded growth and deployment of Industry 4.0 technologies, especially AI edge computing, in various vertical markets. AAEON.ai collects all of AAEON's rugged, compact, industrial grade AI edge solutions in one convenient location. From boards and systems to AI accelerator modules, AI developers and systems integrators can easily find the platforms that meet their project, budget and performance needs. AAEON.ai will also feature solutions partners, allowing visitors to connect with local vendors and software providers, and building an AI ecosystem designed to make creating and deploying AI applications easier than ever. Visitors to AAEON.ai will also have a chance to learn about the latest news and browse a library of application stories and white papers of real-world applications using AAEON technology.



**Visit AAEON.ai today and explore the latest in AI Edge technology from AAEON!**



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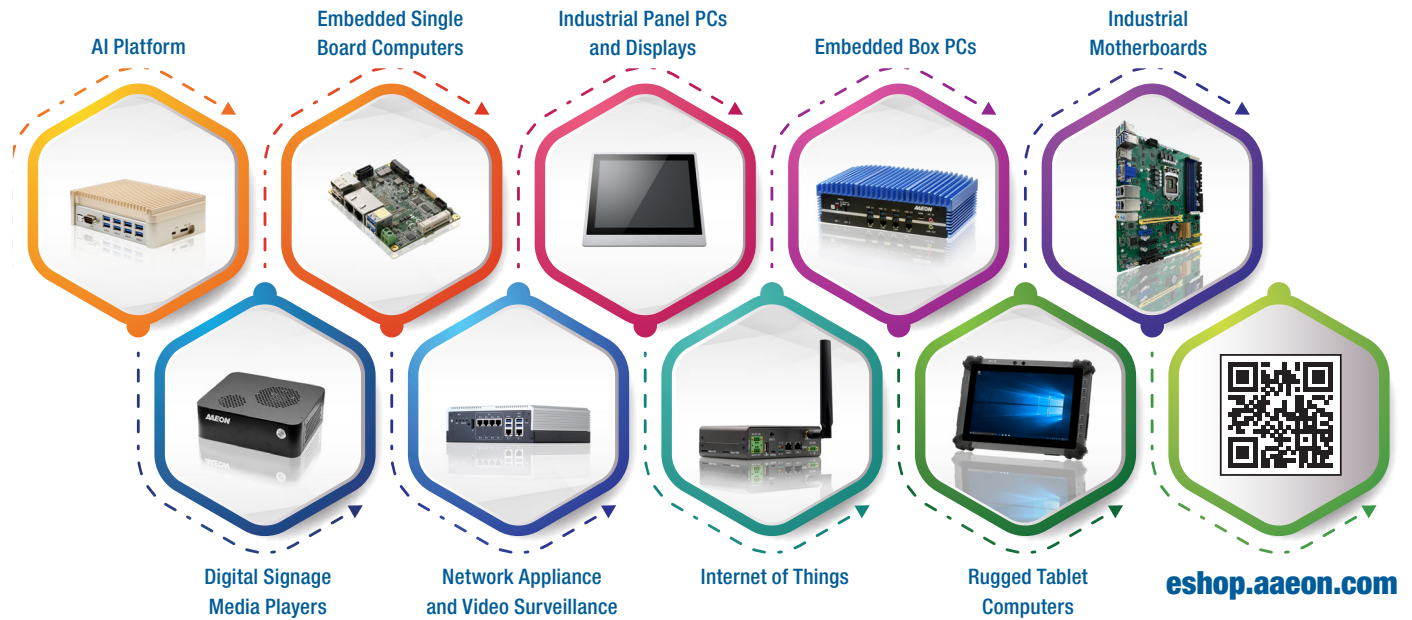
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### BOXER-8256AI



- HDMI x 4 for Video Input 1.4
- HDMI x 2 for Video Display 2.0
- USB Type A x 3 for USB 3.2 Gen 1
- DB9 for RS-232/422/485 (By switch) and CANbus x1
- RJ-45 x 1 for GbE LAN
- M.2 M-Key (PCIEx4)
- M.2 B-Key (PCIEx2 and USB 3.0)

### BOXER-8652AI



- NVIDIA® Jetson Orin™ NX
- 8GB LPDDR5
- Supports M.2 E-Key x 1, M.2 B-Key x 1, M.2 M-Key x 1
- Supports DB-9 x 1 for CANBus
- Supports GbE LAN x 2

### BOXER-8240AI



- Powered by NVIDIA Jetson AGX Xavier
- PoE x 4/ CANBUS/ 40-Pin/ RS-485/ M.2
- M.2 2280 with NVMe/ SATA drive bay

### BOXER-8651AI



- NVIDIA® Jetson Orin NX
- Expansion: M.2 2230 E-Key x 1, M.2 3052 B-Key x 1
- USB 3.2 Gen 2 (Type-A) x 2 & USB 2.0 (Type-A) x 2
- COM, DIO, CANBus
- Operating Temperature: -5°F~ 131°F (-15°C ~ 55°C)

### BOXER-8621AI



- NVIDIA® Jetson Orin Nano™
- Expansion: M.2 2230 E-Key x 1, M.2 3052 B-Key x 1
- USB 3.2 Gen 2 (Type-A) x 2 & USB 2.0 (Type-A) x 2
- COM, DIO, CANBus
- Operating Temperature: -5°F~ 140°F (-15°C ~ 60°C)

### BOXER-8646AI



- NVIDIA® Jetson AGX Orin™
- PoE/PSE GbE LAN x 12
- 10G LAN x 1 and Giga LAN x 1
- Multi-expansion: M.2 E Key / M.2 B Key / M.2 M Key
- CANBus / COM / DIO

### BOXER-8640AI



- NVIDIA® Jetson AGX Orin™
- PoE/PSE 802.3af x 4 (Max. 60W)
- RS-232/422/485 x 1, CANBus x 1
- 40-pin Header, Mic-in/Line-out
- M.2 2230 E-Key, M.2 2280 M-Key, 2.5" SATA Drive Bay

### BOXER-8332AI-CFL



- Built in NVIDIA T4 x1
- Intel Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x2 for Dual Display
- Support C246 PCH/ PCIe4
- Single Power Input (for both System & one Graphics Card)



## Industrial Automation



### BOXER-6406-ADN



- Intel Atom® x7211E and Intel® Processor N-series Processors (formerly Alder Lake-N)
- DDR5 4800Mhz SODIMM
- 2.5GbE x 2
- M.2 2280 M-Key x 1, M.2 2230 E-Key x 1
- USB 3.2 Gen 2 x 2 (Type-A)
- Onboard TPM 2.0

### BOXER-6645-ADS



- Intel 12th/13th Gen Desktop Processor
- Built-in high performance Intel Iris Xe Graphic Engine
- Dual-Channel DDR5 SODIMM, Total max. 64GB
- Support Quadruple Independent Display (HDMI x 2, DP x 2)

### BOXER-6617-ADN



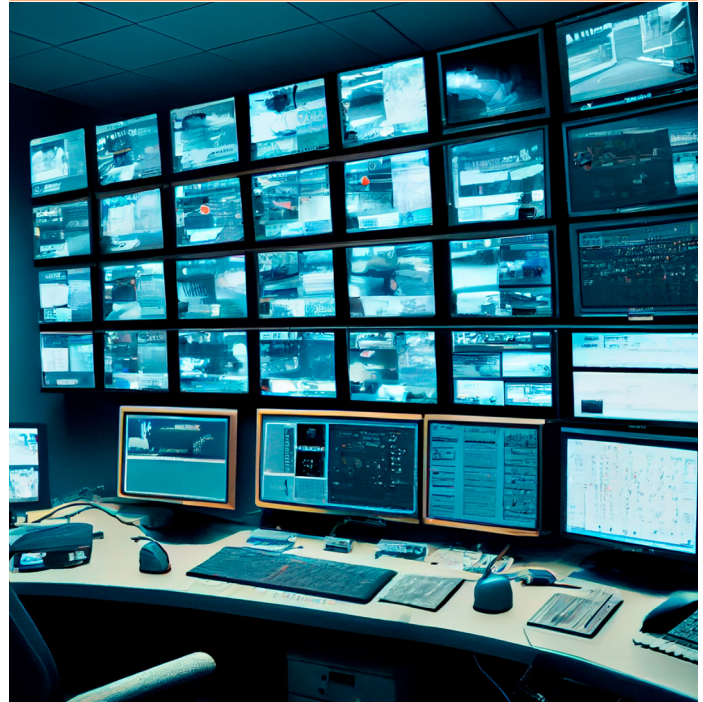
- Intel® Core™ i3 Processor N/Intel® Atom® Processor X/Intel® Processor N-series SoC (formerly Alder Lake-N)
- DDR5 4800MHz SODIMM x 1
- 2.5GbE x 2
- M.2 2280 M-Key/M.2 2230 E-Key

### BOXER-6646-ADP



- 12th Gen Intel® Core™ i7/i5/i3 Processor SoC
- Dual-Channel DDR5 SODIMM slot
- Support Multi-LAN including 2.5GbE Ethernet
- Support M.2 2280 M Key High speed NVMe SSD

## Video Surveillance



### VPC-5620S



- Multi-PoE & Fanless Appliance
- Supporting up to 64 GB DDR4 2400 SDRAM x 2
- DP x 1, HDMI x 1
- RS232/422/485 COM port x 2 (Isolated by BOM option), USB3.0 port x 4
- GigE connector x 5 (PoE x 4, GigE x 1), up to 8 PoE ports (by project base)
- DC 12-24V power Input, Industrial config.; DC 10~36V, In-vehicle config
- 8 bits DIO ( Isolated 4DI & 4DO / 8DI/ 8DO by BOM option)
- Wide Temperature: -20°C ~ 70°C

### VPC-5600S



- In-Vehicle Network Video Recorder Platform
- Fanless System
- 260-pin Dual-Channel DDR4 2133 MHz SODIMM x 2 up to 16 GB
- Intel® Integrated Graphics Engine Supports Dual Display by HDMI x 1, DP x 1
- Realtek® Ethernet Connection x 6 w/ 4-port PoE

### VPC-3350S



- Mobile Network Video Recorder Platform
- Fanless System
- 204-pin Single Channel DDR3L 1866 MHz SODIMM up to 8 GB
- Intel® Integrated Graphics Engine Supports Two Display by HDMI x 1, DP x 1
- Intel® Ethernet Connection x 5 Ports (including 4 x PoE Ports)
- Full Mini-PCIe Socket x 2 (USB + PCIe); (Support up to Mini-PCIe Socket x 4 - Optional)



# Applications

## Machine Vision



### BOXER-6839



- Intel® 6th Core-i Desktop processor
- Mini-Card Slot x 2 (USB & PCIe Signal)
- PCIe [x1] + PCIe [x4]
- LAN x 3
- 34bit DIO
- Dual 2.5" Drive Bay Support

### BOXER-6639M



- Intel® 6th Core-i Desktop processor
- Mini-Card Slot x 2 (USB & PCIe Signal)
- LAN x 7 or LANx3 + PoE x4
- 34bit DIO
- Dual 2.5" Drive Bay Support

### BOXER-6843-ADS



- 12th/13th Generation Intel® Core™/Celeron® Processor G Serie
- DDR5 U-DIMM x 4
- HDMI x 2 + DP x 2
- PCIe [x16] + PCIe [x4] or Dual PCIe [x8] (in [x16] slot) + PCIe [x4]
- Supports Dual Graphics Cards with Dual Power Inputs
- Support NVIDIA L4

## Robotics



### UP Squared Pro 7000 Edge



- Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3-N305 Processor (formerly Alder Lake-N)
- Onboard LPDDR5 Memory up to 16GB
- Onboard eMMC Storage up to 64GB
- 2.5GbE x 2 (Intel®i226-IT)
- USB 3.2 x 3 (Type A x 2, Type C x 1)
- 40 pin GPIO x 1
- DP 1.2 x 1 / DP 1.4a x 1 / HDMI 2.0b

### UP Element i12 Edge



- 12th generation Intel® Core™ i3-1215U / i5-1235U / i7-1255U / Celeron® 7305 Processor SoC
- LPDDR5 memory 8GB/16GB/32GB
- Isolation 16pin GPIO connector x 1
- Support 5G via M.2 3052
- Support AI Accelerator via M.2 2280
- Built-in WiFi 6E & Bluetooth (with CE-RED certified)

### UP Xtreme i12 Edge



- 11th generation Intel Core™ i7/i5/i3/Celeron Processor SoC
- DDR4 SO-DIMM Slot x 2 (up to 64GB)
- 16pin GPIO connector x 1
- Support 5G via M.2 3052/ WiFi 6
- Support AI Accelerator via M.2 2280· Support 5G via M.2 3052/ WiFi 6
- Support AI Accelerator via M.2 2280





## IoT Gateway



### UP-GWS01



- Intel® Cherry Trail x5-Z8350 SoC
- On board DDR3L 4GB memory
- 32GB eMMC storage
- 1x Giga LAN, 4x USB 2.0, 1xUSB 3.0,1x HDMI
- Optimized Fan-less Cooling Design
- Smallest Gateway system of Intel solution

### UPS-GWS01



- Intel® Pentium® N4200/ Celeron® N3350 Processor SoC
- Onboard LPDDR4 Memory, eMMC Storage
- Gigabit LAN x 2
- HDMI x 1, DP x 1
- USB 3.0 x 3, USB 3.0 OTG x 1

### SRG-IMX8P



- NXP i.MX8M Plus Quad Cortex-A53 1.6 GHz RISC Processor
- Onboard LPDDR4 2GB / eMMC 16GB (Optional 4GB RAM/ eMMC 32GB)
- HDMI 2.0a
- GbE x 2
- USB 3.0 x 2, Full size mPCIe x 2, CAN-FD x 2 CH, Micro SD Card Slot x 1, RTC, TPM 2.0
- Wide DC Input 9~36V
- Wide Temperature -20 °C ~ 70 °C

## Smart Retail



### UP 7000 Edge



- Intel® Processor N-series
- Onboard LPDDR5 Memory, up to 8GB
- Onboard eMMC Storage, up to 64GB
- 1Gigabit LAN x 1
- HDMI 1.4b x 1
- USB 3.2 Gen 2 (Type-A) x 3, 10-pin USB 2.0 x 2/ UART x 1

### UP Squared i12 Edge



- 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- Up to 16GB Onboard LPDDR5
- Up to 128GB Onboard SSD
- M.2 2230 E-Key/M.2 2280 M-Key/SATA 6Gb/s x 1
- 1GbE x 2
- HDMI 1.4b x 1, DP 1.2 x 1, DP 1.4a via USB Type-C x 1
- USB 3.2 x 3 (Type A x 2, Type C x 1)

### UP Xtreme 7100 Edge



- Intel® Processor N-series and Intel® Core™ i3-N305 Processor SoC
- Low power consumption
- 2.5GbE x 2 (Intel® I226-IT)
- 2-channel CAN 2.0B x 1
- Watchdog timer, Onboard TPM 2.0
- DIO/GPIO via Terminal Block
- Cable-free design
- Wide 9V~36V power input
- Fanless design

## IoT Introduction

AAEON IIoT is committed to the development and application of Industry 4.0 solutions in an IoT context, bringing customers a sustainable, connected and personal experience. Our services include smart city applications, intelligent fleet management and transportation solutions, smart agriculture network systems, and automation optimization platforms. We integrate versatility and flexibility in our solutions, customizing each and every one of our cases, and our systems are designed to integrate seamlessly into existing frameworks, lowering costs and enhancing efficiency. For end customers, the convenience of our designs facilitate easy operation and maintenance, eliminating bottlenecks and achieving maximum performance. As a committed service provider for smart city applications, our first priority is the development of safe, sustainable and reliable solutions. Our portfolio includes services in building management, logistics, fleet management, and agriculture, and we aim to provide for and consolidate a safer, globally connected and sustainable world.

## IoT Solutions



## Industry 4.0:

In a broader context, smart automation will facilitate the manufacturing process in becoming more cost effective, enhancing output and product quality and quantity. By collecting, collating and analyzing vast swathes of data, factories will be able to adapt to, and even predict future market trends, anticipating the needs of the customer.

## Smart Logistics:

AAEON has optimized an asset tracking and maintenance system to rise to the challenges posed by the ever-changing landscape of the logistics industry by developing the CANBUS, a sensor which monitors tire wear and pressure, braking systems and engine output, and provides a real-time GPS tracking system which will be able to pinpoint the exact location of the car at any given time or location.



## Building Management:

AAEON provides a centralized management system for smart thermostats, ventilation, humidity and lighting control, which will be able to detect the number of people in each room of a building, and adjust environment settings accordingly to accommodate the current occupants, offering maximum energy efficiency management.

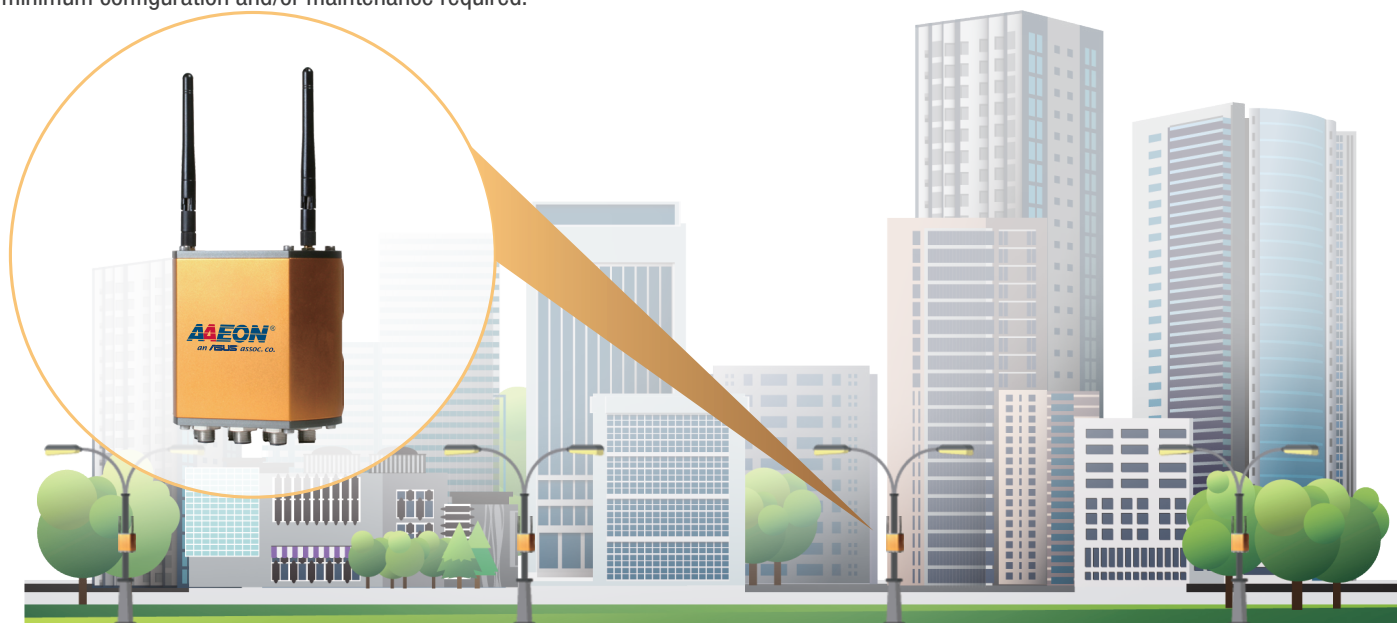
## Smart City:

AAEON's Smart City Vision is to connect and improve the quality of communities through a tech-based, sustainable network aimed at eliminating factors that cause physical harm to the human body and immune system. Smart-city information and technology will enhance citizens' quality of life, as well as the infrastructure and socio-economic framework of the city.

## AirBox

AAEON's AirBoxes are an integral part of a smart-city embedded air-sensory network, collecting and relaying real-time environmental data to city agencies and the public. In the short term, the AirBox will enable long-distance data transmission and low-energy consumption by optimizing and enhancing the transition from episodic to continual data collection and assimilation, while in the long term, it will facilitate the development of a globally connected and sustainable network.

The second generation of Airboxes is designed to be fully customizable and easily integrated with existing frameworks and architecture, with minimum configuration and/or maintenance required.



## Atlas, Connecting Smart Cities across the Globe

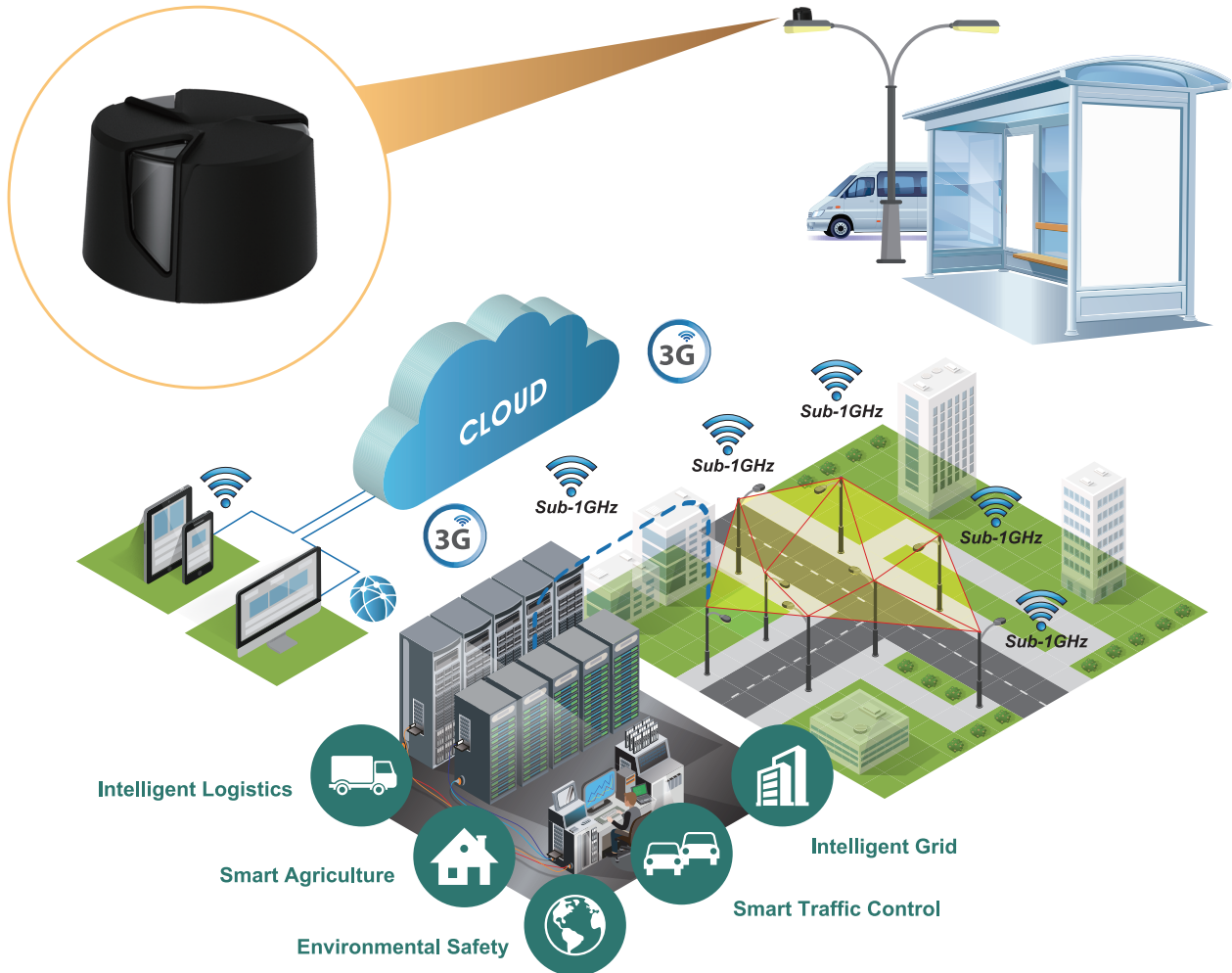
AAEON Atlas, powered by Intel® Movidius™ Myriad™ X vision processing unit (VPU). The Intel® Movidius™ Myriad™ X provides a low-power, high-performance solution for on-device AI inference. Atlas is compatible with the Intel® Distribution of OpenVINO™ toolkit, which includes built-in features such as model optimization, hardware acceleration and more designed to maximize the capabilities of the Intel® Movidius™ Myriad™ X VPU. Atlas is a powerful edge node that consolidates data streams from smart lighting, environmental monitoring, and video analytics. This AI Enabled Smart Device integrated with Camera, Air Sensing and Management System which works at the edge to allow city administrators to create a connected data hub.

Atlas can be deployed in a wide range of edge computing applications. As an edge gateway, Atlas can connect with up to 1000 smart street lighting controller or other IoT devices through proprietary wireless Sub-GHz, providing building blocks for Smart City solution deployment. With license plate recognition AI inference, Atlas can power applications such as Smart Street Parking or detecting traffic violations or accidents. With traffic and congestion monitoring, Atlas can optimize traffic signals in real time to help improve traffic flow. Atlas can also anonymously detect pedestrians in crowd control and flow monitoring applications.



## Smart Street Light

AAEON's smart street light is designed to be one of the core features of IoT-based urban infrastructure, which utilizes smart technology to conserve and optimize energy efficiency, while eliminating emissions and the consumption of harmful gases. Each street light draws its energy source from a solar panel embedded at the top of the lamppost. The lampposts are integrated with the city's public WiFi network and are equipped with sensors that detect and collect detailed information on aerosols and then send these statistics back to a centralized cloud. All historical data is open sourced and can be accessed and downloaded by the general public.



  
**Sub-1GHz**


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**Wireless Communication**










Low data cost, Low power consumption, Digital Sensory Network, Low signal interface

  
**Centralized Management**

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**Centralized Management**

Scheduled dimming, Early problem detection, Low maintenance, Improved efficiency

  
**Energy Saving Report**

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**Energy Saving Report**




Reality vs Expectations, Justified investment

# Design Manufacturing Service

Design Manufacturing Service (DMS) offers exceptional end-to-end services from product conceptualization, product development to manufacturing and service programs. All services are linked together through a comprehensive process and closely monitored by dedicated professionals to guarantee the highest level in product quality, reliability and durability.

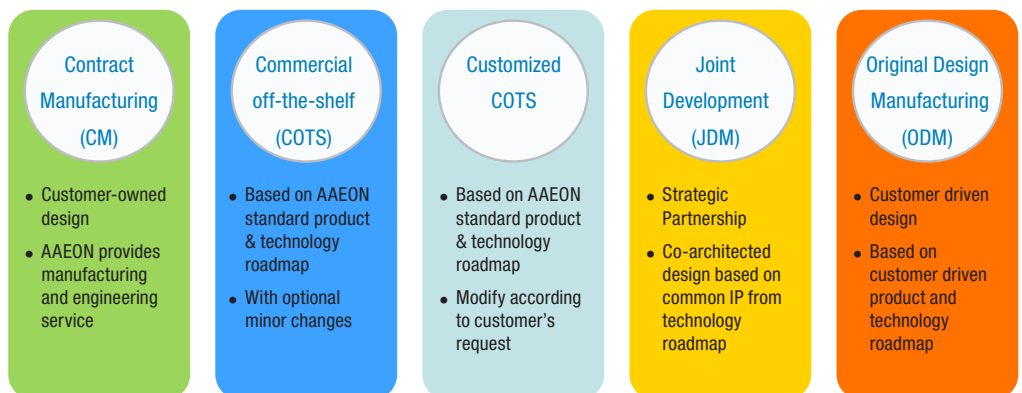
## Collaboration Models



Customers can consign to AAEON the manufacturing of their existing products, customize existing AAEON COTS products, or joint develop new products with the expertise of a dedicated project team that oversees the project from product conceptualization to on-time delivery of the goods. AAEON DMS handles Large-volume as well as Low-Volume-High-Mix projects, satisfying the need of our customers for every kind of computing platform requirements.

## Areas of Expertise

- Retail
- Transportation
- Energy
- Automation
- Medical and Healthcare
- Networking



# Wide Temperature Assurance Service (WiTAS)

## Wide Temperature Embedded Computing

Applications of embedded computing systems continue to improve the quality and convenience of our lives. As the global population increases, there are greater demands on resources, and the need for automation and computing capability in remote regions will grow. To address a demand for computers that operate in extreme environments, platforms must follow design methodologies for wide temperature range use. In addition, testing and product qualification must follow more stringent criteria to assure continuous operation. As the core of any embedded system, the CPU board plays perhaps the most critical role and, therefore, requires careful design and validation for wide temperature capabilities.

AAEON has been designing and manufacturing quality embedding products for over two decades. Our accumulated experience in all aspects of the embedded electronics market puts us in a strong position to develop wide temperature CPU boards and systems.

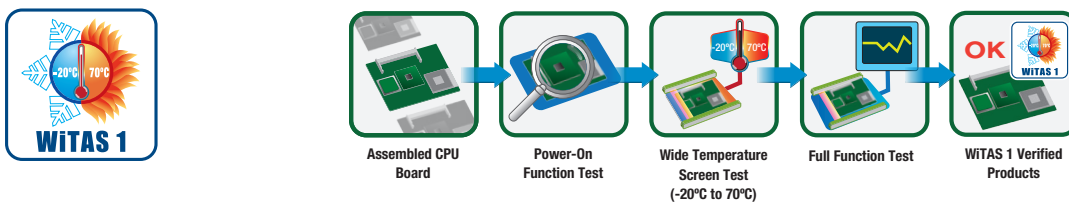
AAEON's WiTAS (Wide Temperature Assurance Service) program produces boards in two temperature range categories:

-20°C to 70°C (-4°F ~ 158°F) = WiTAS 1

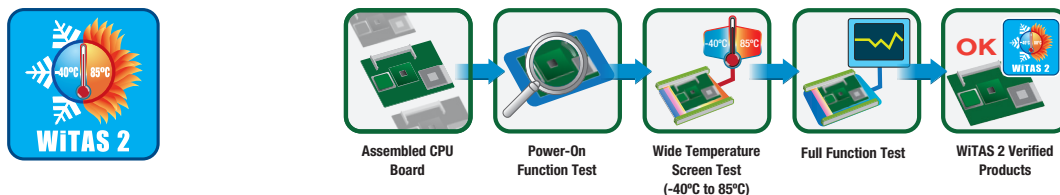
-40°C to 85°C (-40°F ~ 185°F) = WiTAS 2

## Processes for WiTAS Production

### WiTAS 1 Production



### WiTAS 2 Production



Boards that pass -20°C to 70°C (-4°F ~ 158°F) thermal tests are given a WiTAS 1 designation, and boards that endure -40°C to 85°C (-40°F ~ 185°F) tests are assigned a WiTAS 2 designation, as part of AAEON's special service assurance of wide temperature durability and reliability. This, in conjunction with the use of durable components throughout the duration of testing, allows AAEON to enhance the longevity of its boards and systems.

## Application

Applications for WiTAS CPU boards can be found in a range of industries and markets:

- Transportation: Trains, Ships, Airplanes and Traffic Surveillance Systems
- Factory Automation: Power Stations, Steel Manufacturing
- Military: Field Electronic Devices, Controllers
- Energy: Windmill Controllers, Solar Energy Controllers
- Environmental: Climate, Water, Air Quality
- Anti-dust, Fanless Applications: Medical, Chemical and Pharmaceutical Factories



# AAEON's Embedded OS Solution

AAEON provides Embedded OS Solutions to customers who are in need of OS customization. AAEON's Embedded OS Solutions are designed to shorten times to market and save our customers' time and R&D resources.

## Windows® Embedded Products

 Windows 10 IoT

**Windows 10 IoT Enterprise LTSC**  
1607/1809/ 2021

 Windows Embedded 8

Windows Embedded 8.1  
Industry

Windows Embedded 8  
Standard

Windows Embedded 8.1  
Pro

Windows Embedded 8.1  
Handheld

 Windows Embedded 7

Windows Embedded  
Enterprise 7

Windows Embedded  
POSReady 7

Windows Embedded  
Standard 7

## AAEON Embedded OS Solution

Chipset	Windows® Embedded Standard 2009	Windows® Embedded Standard 7	Windows® Embedded 8 Standard	Windows® 10 IoT Enterprise
Intel® 7th KabyLake (Q170/H110/C236)	—	—	—	✓
Intel® 6th SkyLake (Q170/H110/C236)	—	✓	✓	✓
Intel® 5th Broadwell (5010U/5350U/5650U/D1548/D1518)	—	✓	✓	✓
Intel® 4th Haswell (QM87/Q87/H81)	—	✓	✓	—
Intel® 3rd IvyBridge (QM77/Q77/HM76/B75)	✓	✓	✓	—
Intel® 2nd SandyBridge (QM67/Q67/H61/QM57/Q57)	✓	✓	✓	—
Intel® ApolloLake (N4200/N3350/E3930/E3940/E3950)	—	✓	✓	✓
Intel® Braswell (N3060/N3160/X5-E8000/N3710)	—	✓	✓	✓
Intel® Baytrail (J1900/N2000/E3800)	—	✓	✓	—
Intel® TunnelCreek (E620/E640/E660/E680)	✓	✓	—	—
Intel® Pinewview (N450/D410/D510/D525/N455/D425)	✓	✓	—	—
Intel® Cedarview (D2550/N2800/N2600)	✓	✓	—	—
AMD Geode (LX700/LX800/LX900)	—	✓	—	—
AMD T56N/T40R/T40E/T16R	✓	✓	✓	—

Note 1: Former Windows® Embedded XP

Note 2: Former Windows® Embedded



ES France - Mobilité & Systèmes Embarqués  
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 80  
Fax. 01 47 01 16 22



e-mail : mse@es-france.com  
Site Web : www.es-france.com



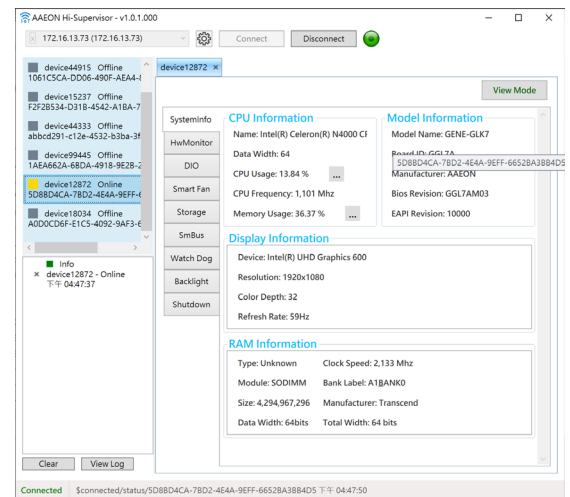
# AAEON's Embedded OS Solution/Hi-Supervisor

## Embedded OS Main Features

OS Family	Windows® Embedded Standard	Windows® Embedded POS Ready	Windows® Embedded Enterprise
Features	Full Customization	Simple Installation	Full Function
Windows® Product Sku	Windows® Embedded Standard 2009 Windows® Embedded Standard 7 Windows® Embedded Standard 8	WEPOS 1.1 POSReady 7 POSReady 2009 Windows® Embedded Industry 8.1 Pro Retail	Windows® 7 Professional Windows® 8.1 Professional Windows® 10 IoT Enterprise LTSC 1607/1809/ 2021
CPU Type	x86	x86	x86
Development Tool	Customization Image	CD Installation	CD Installation
Development Time	Short	None	None
Maintenance Cost	Middle	Low	Low
Embedded Features	Custom Shell/ EWF/ FBWF/ USB Boot/ HORM	Custom Shell/ FBWF/ USB Boot	Standard Shell/ UWF

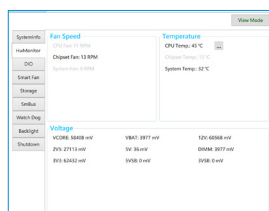
## AAEON Hi-Supervisor

Hi-Supervisor is a remote hardware monitor application for Windows based on MQTT protocol. This software allows users to get device status and set device configurations like GPIO, Fan, Watch Dog Timer, SMBus, .., etc. It supports remote reboot and shutdown, too. Hi-Supervisor supports AAEON Windows platforms which support Hi-Safe. Users can set warning thresholds to acknowledge users abnormal conditions by e-mail.

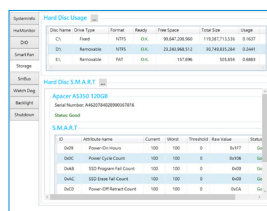


## Hi-Supervisor Advantages

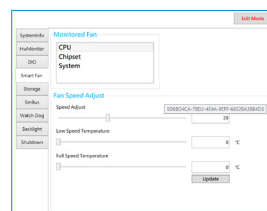
- ▶ Support Hi-Safe full functions remotely
- ▶ Customized support
- ▶ Support Azure IoT Central



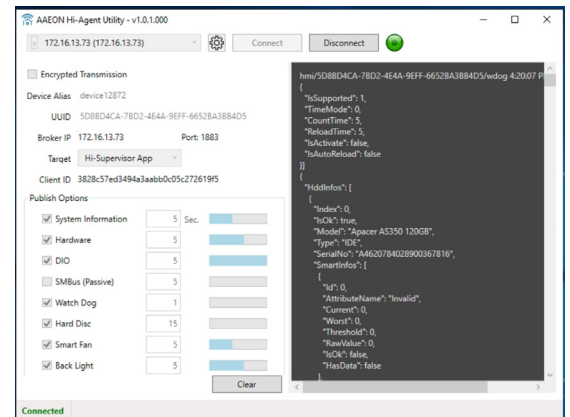
**Hardware Monitor:**  
Retrieves fan, temperature and voltage data



**Hard Disk:**  
obtain hard disk S.M.A.R.T information



**Remote Control Fan**

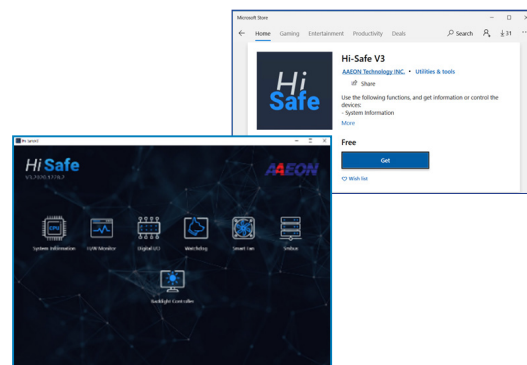


# AAEON Hi-Safe

Hi-Safe is a powerful, free program which provides SDKs for systems and UIs running Microsoft® Windows® operating systems. Hi-Safe controls system hardware by utilizing the Windows Management Interface, providing a safe and standard interface for Windows machines. Hi-Safe allows end users to easily develop their own UI software to monitor vital system components such as the processor, RAM and display. It also provides interface and functionality for Hardware Monitor, Digital I/O, Watchdog timer, Smart Fan settings, SM Bus, and backlight controller for LVDS and eDP. With the SDK user interface, no coding is needed, and customers can create their own user interface by using the function codes provided by AAEON. Customers can download the Hi-Safe V3 application directly from the Microsoft Store.

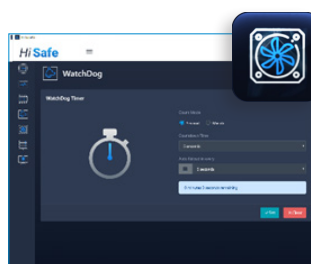
## Hi-Safe V3 Advantages

- ▶ Modern and Flexible User Interface
- ▶ Easy and Friendly to Use
- ▶ Safe Operation Control for Windows



### System Information:

Receives CPU, display and RAM information



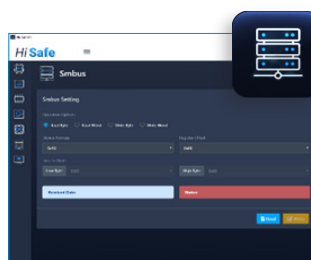
### Smart Fan:

Supports multi-stage adjustment of temperature and speed controls



### Hardware Monitor:

Receives super I/O, fan, temperature and voltage data



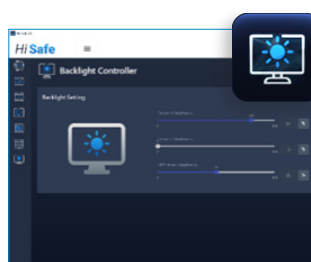
### SM Bus:

Reads and writes to SMBus device and detects SMBus base address automatically



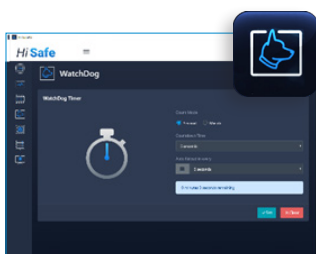
### DIO:

Obtains DIO information: sets the pin direction and pin data



### Backlight Controller:

Controls LVDS or eDP display



### Watchdog:

Sets the system reboot timer

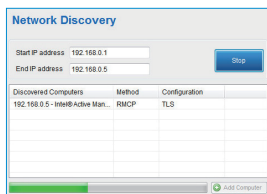


Hi-Manager is a tool based on the Intel® Active Management Technology 12.0 (iAMT 12.0) and has backward compatibility with earlier versions of iAMT. This allows users to locate all iAMT devices within the intranet, power On/Off target devices remotely, set power On/Off scheduling, arrange device groupings for better management, offer event logs and timer settings to wake up devices at specified times, recover systems that have crashed from virtual CD-ROM, remote KVM management and access to target device hardware information for asset management. Hi-Manager can be installed on all AAEON platforms and can remotely manage AAEON client devices that use Intel® M67/ Q77/ QM77/ HM76/ B75A/Q87/QM87/QM170/Q370/C246 chipsets and run Microsoft® Windows® XP, Windows® 7, and Windows® 10 Operating Systems.

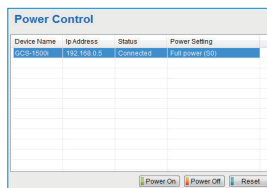


## Hi-Manager Advantages

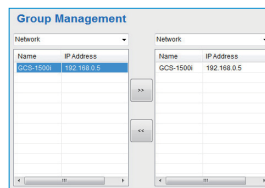
- ▶ Easy to use and build custom applications
- ▶ Supports AAEON products with iAMT
- ▶ In-depth technical support



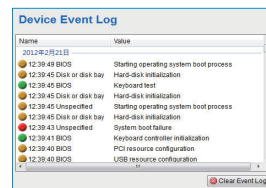
**Network Discovery:**  
AMT device discovery



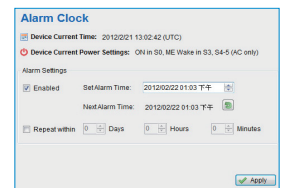
**Power Control:**  
Powers On/Off the target device



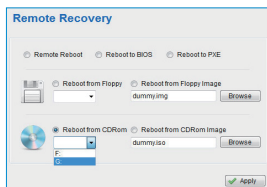
**Group Management:**  
Arrange devices in this function



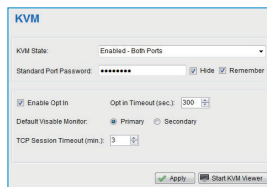
**Event Log:**  
Logs boot records of the selected device



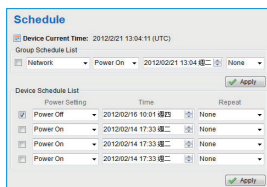
**Alarm Clock:**  
Sets timer to wake up a sleeping device



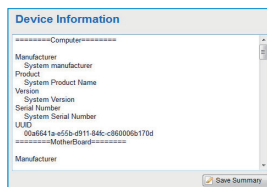
**Remote Recovery:**  
Mounts boot image or physical CD-Rom to target device



**KVM:**  
Controls remotely from the target device



**Schedule:**  
Schedules the power On/Off target devices



**Device Information:**  
Shows target device assets

## Intel® Active Management Technology Features

Intel® Chipset	M67/ Q77/ QM77/ HM76/ B75A/ Q87/ QM87/QM170/Q170/Q370/ Q470/C246
Intel® AMT Version	7.0/8.0/9.0/10.0/11.0/12.0/14.0
HW Inventory	✓
SW Inventory	✓
Power State Management	✓
System Defense	✓
Remote Configuration	✓
Remote Boot Option	✓
KVM Redirection	✓
KVM Remote Control	✓
ME Wake on LAN	✓
Proactive Security Block, HW-Based and Remote Management Recovery	✓
Host-Based Provisioning	✓
Enhanced System Defense Filters	✓

# AAEON BIOX

BIOX is a BIOS customization SaaS solution for AAEON products. Most field applications and deployments require BIOS customization for platforms and systems to meet a customer's requirements. Often this requires constant communication with vendors, possibly delaying deployment or slowing down maintenance. With BIOX, the end user can customize the BIOS on their own, anytime, in five simple steps, without the need to contact a service rep.

The screenshot displays the AAEON BIOX web interface. At the top, there's a header with 'Upload BIOS' and fields for 'Choose File' (UPA1AM39.bin), 'Upload BIOS File', 'Instance #' (636687212965856728), and 'Product Name' (UP-APL01). Below this is a sidebar with a tree view of BIOS settings: Setup, Main, Advanced, Chipset, Security, and Save & Exit. The main area is titled 'Edit Area' and shows 'Control Group Structure' with a table for '(Type.1) System Information' containing 'Product Name' and 'Number of null-terminated string.'. A central flow of five steps is highlighted: 1. Log-in SaaS (orange), 2. Upload BIOS (pink), 3. Select Customizable items (purple), 4. Apply (dark blue), and 5. Download New BIOS (teal). Below the flow, there's a 'Remarks for BIOS Modification' field, a 'Choose File' button, and a 'Create Custom BIOS' button. A note indicates 'Logo used: (1)800x60'. At the bottom, there's a 'Download BIOS' section with a 'Download BIOS File' button.

## BIOX Advantages

### Modern and Flexible User Interface

- ▶ Logo
- ▶ Boot Order
- ▶ Setup Values
- ▶ SMBIOS Strings
- ▶ Password Management

### Version Control Access

- ▶ Retrievable
- ▶ Re-customizable
- ▶ History Traceable



**AAEON Software Support Portal:**  
<https://aaeoncm.github.io/>



## AI@Edge Solutions

AAEON AI@Edge Solutions feature embedded platforms purpose-built for powering Artificial Intelligence and Edge Computing applications. Utilizing the latest edge SoCs and AI accelerators, these systems are available in a range of I/O configurations to provide maximum flexibility and compatibility for your project.



## RISC Gateway

AAEON's RISC gateway series focus on communication on multiple connectivity protocols, data mining/ collection, and edge computing in IoT environment. All series are equipped with Intel dual/quad core CPU, onboard memory, and eMMC as storage in a lightweight, palm-sized boxes. Due to variety of I/O interfaces such as HDMI, USB, COM port, Ideal applications from data collection to automation, smart retail, and smart city.



## Machine Vision Box PC

Featuring added connectivity for camera/lighting controls as well as robotic arms, AAEON's Machine Vision Box PCs are high-performance platforms that accelerate inspections and improve production efficiency.



## Fanless Embedded BOX PC

The BOXER Series is a full line of differently sized embedded controllers for use in the fields of transportation, entertainment, environmental and industrial facility monitoring, building automation and other relevant IPC areas.



## Expansion BOX PC

The BOXER-68 series are built to withstand the harsh environments of industrial workplaces, with wide operating voltage and temperature ranges. Furthermore, processor options range from 8th and 9th generation Intel Core, and Intel Xeon processors, ensuring the BOXER-68 Series can deliver the power for any application.



## Multi-PoE & Fanless Appliance

In addition to monitoring, recording and storing recorded videos, AAEON's Network Video Recorders are also equipped with media playback and vehicle power support and can also serve as WiFi hotspots.



## UP Series

All of the strength and utility of the UP board in compact industrial edge computing system form, the newest UP systems enable users to bring projects to market faster, without sacrificing quality. UP x86 industrial Edge systems ensure the key facets their board-level counterparts, such as the latest in Intel® processor and inference modelling platforms, are easily harnessed via precisely designed hardware, letting developers concentrate on implementing their ideas more efficiently.



# 01



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Site Web : [www.es-france.com](http://www.es-france.com)

# 01

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## *AI@Edge Solutions*



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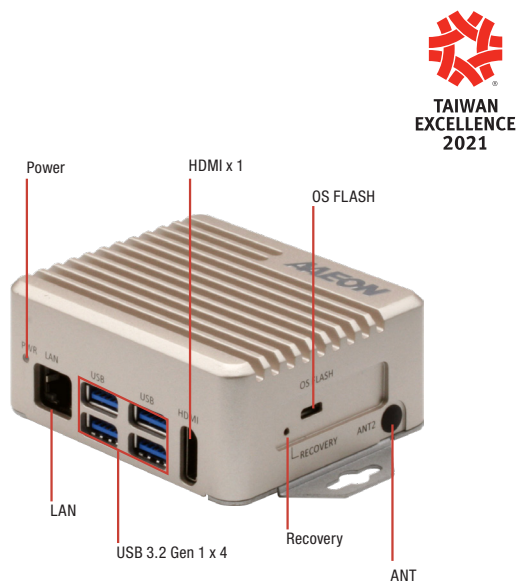


e-mail : [mse@es-france.com](mailto:mse@es-france.com)  
Site Web : [www.es-france.com](http://www.es-france.com)

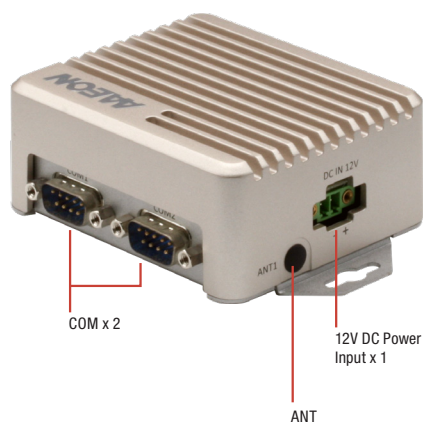
# BOXER-8221AI

AI@Edge Compact Fanless Embedded BOX PC with NVIDIA Jetson Nano

Front View



Rear View



## Features

- NVIDIA Jetson nano
- Quad core ARM A57 Processor
- 4GB LPDDR4 + 16GB Micro-SD or eMMC
- LAN x 1 + RS-232 x 2
- 12Vdc Power input



## Specifications

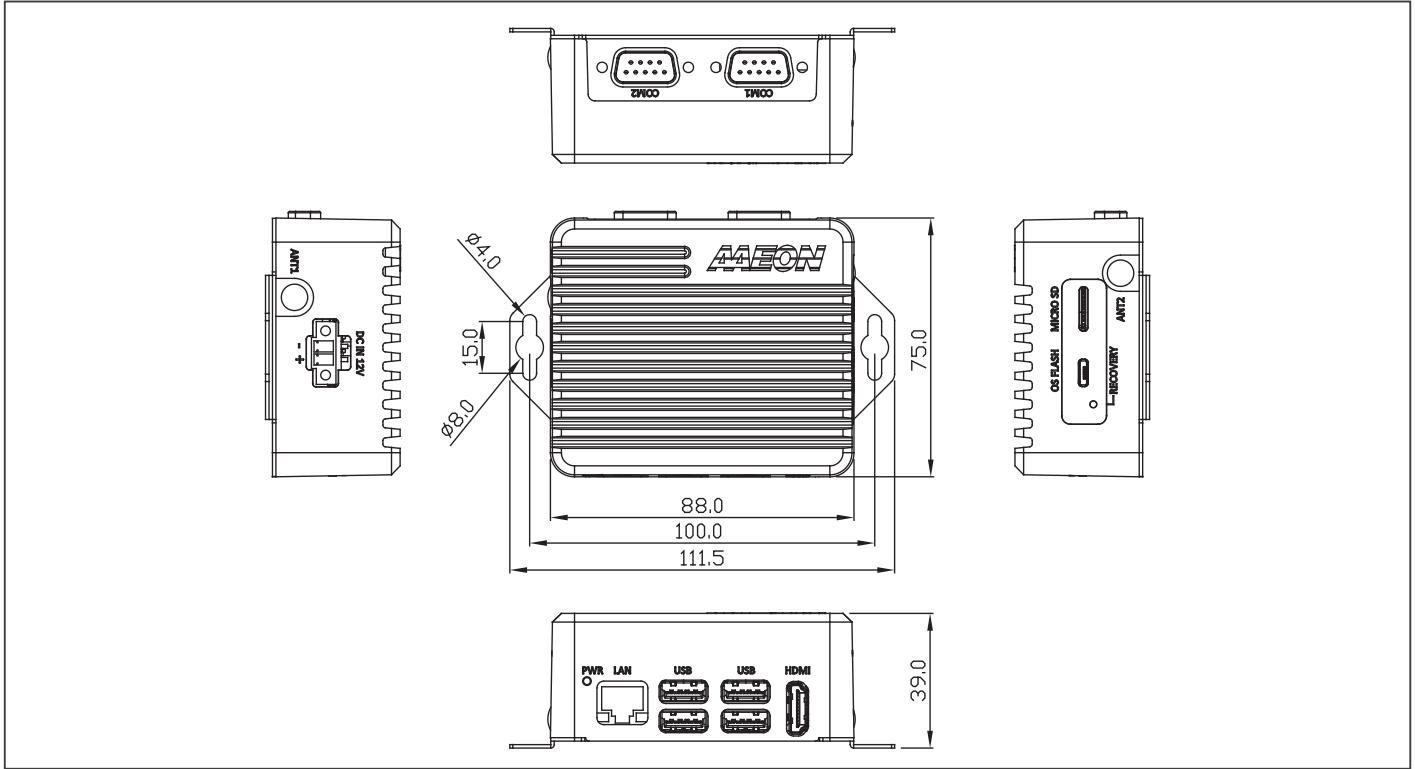
System	
AI Accelerator	NVIDIA Jetson Nano
CPU	Quad Core Arm® Cortex®-A57 MPCore Processor
System Memory	4GB LPDDR4
Storage Device	32GB Micro-SD (A version) or 16GB eMMC (B version)
Display Interface	HDMI 2.0
Ethernet	10/100/1000Base-TX x 1
I/O	USB 3.2 Gen 1 x 4 LAN x 1 RS-232 x 2 HDMI x 1 MicroSD x 1 DC Power Input x 1 Recovery Button x 1 Micro-USB for Flash OS x 1
Expansion	M.2 E-Key 2230 x 1(for WiFi)
Indicator	Power LED x 1
OS Support	Linux (AAEON ACLinux 4.9) Linux (NVIDIA Jetpack 4.5)
Power Supply	
Power Requirement	12Vdc w/ 2-pin terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	3.39" x 2.87" x 1.3" (88mm x 75mm x 39mm)
Gross Weight	1.10 lb (0.5 Kg)
Net Weight	0.66 lb (0.3 Kg)
Environmental	
Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C, according to IEC60068-2 with 0.5 m/s AirFlow)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – MicroSD or eMMC
Anti-Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	AI solution	LAN	USB	RS-232	Storage	Display	Mounting	Power	Operation temp.	Operation System
BOXER-8221AI-A2-1110	Jetson Nano	1	USB 3.2 Gen 1 x 4	2	32GB MicroSD x 1	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	-20°C ~ 50°C	ACLinux
BOXER-8221AI-B1-1111	Jetson Nano	1	USB 3.2 Gen 1 x 4	2	16GB eMMC MicroSD Slot x 1	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	-20°C ~ 50°C	ACLinux
BOXER-8221AI-A4-1110	Jetson Nano	1	USB 3.2 Gen 1 x 4	2	32GB MicroSD x 1	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	-20°C ~ 50°C	NVIDIA Jetpack 4.5
BOXER-8221AI-B3-1111	Jetson Nano	1	USB 3.2 Gen 1 x 4	2	16GB eMMC MicroSD Slot x 1	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	-20°C ~ 50°C	NVIDIA Jetpack 4.5
BOXER-8221AI-JP46E-B1-1111	Jetson Nano	1	USB 3.2 Gen 1 x 4	2	16GB eMMC MicroSD Slot x 1	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	-20°C ~ 50°C	NVIDIA Jetpack 4.6

## Packing List

- Wallmount Bracket x 2
- Power Connector x 1
- BOXER-8221AI

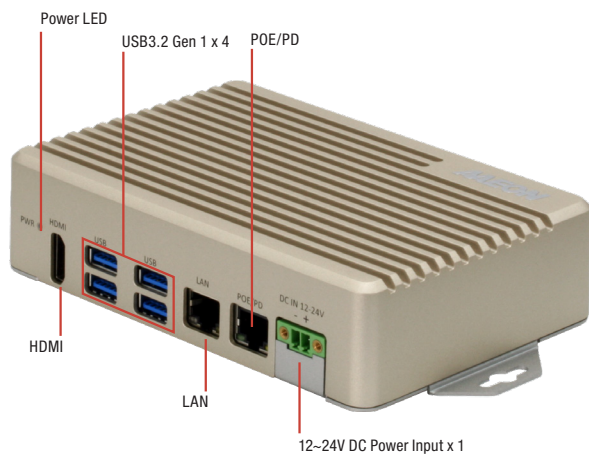
## Optional Accessories

- **1255300611**  
60W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)

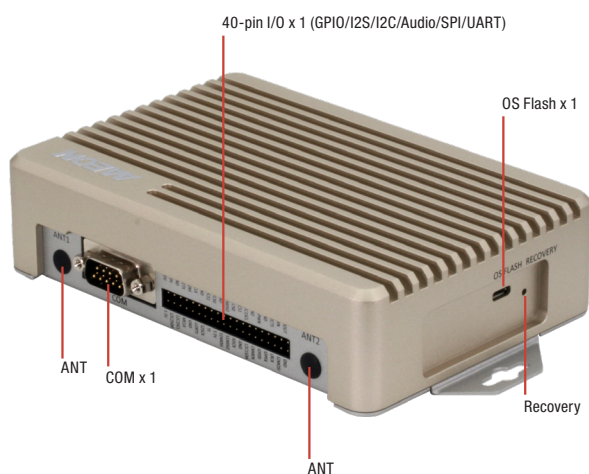
# BOXER-8222AI

AI@Edge Fanless Embedded Box PC with NVIDIA Jetson Nano, PD Port

Front View



Rear View



## Features

- NVIDIA Jetson Nano
- PoE/PD x 1
- 4GB LPDDR4 + 16GB eMMC
- USB 3.2 Gen 1 x 4
- M.2 E-key slot x 1 for WiFi function expansion
- DC 12 ~ 24V wide voltage power input
- Wide working temperature -10°C ~ 70°C



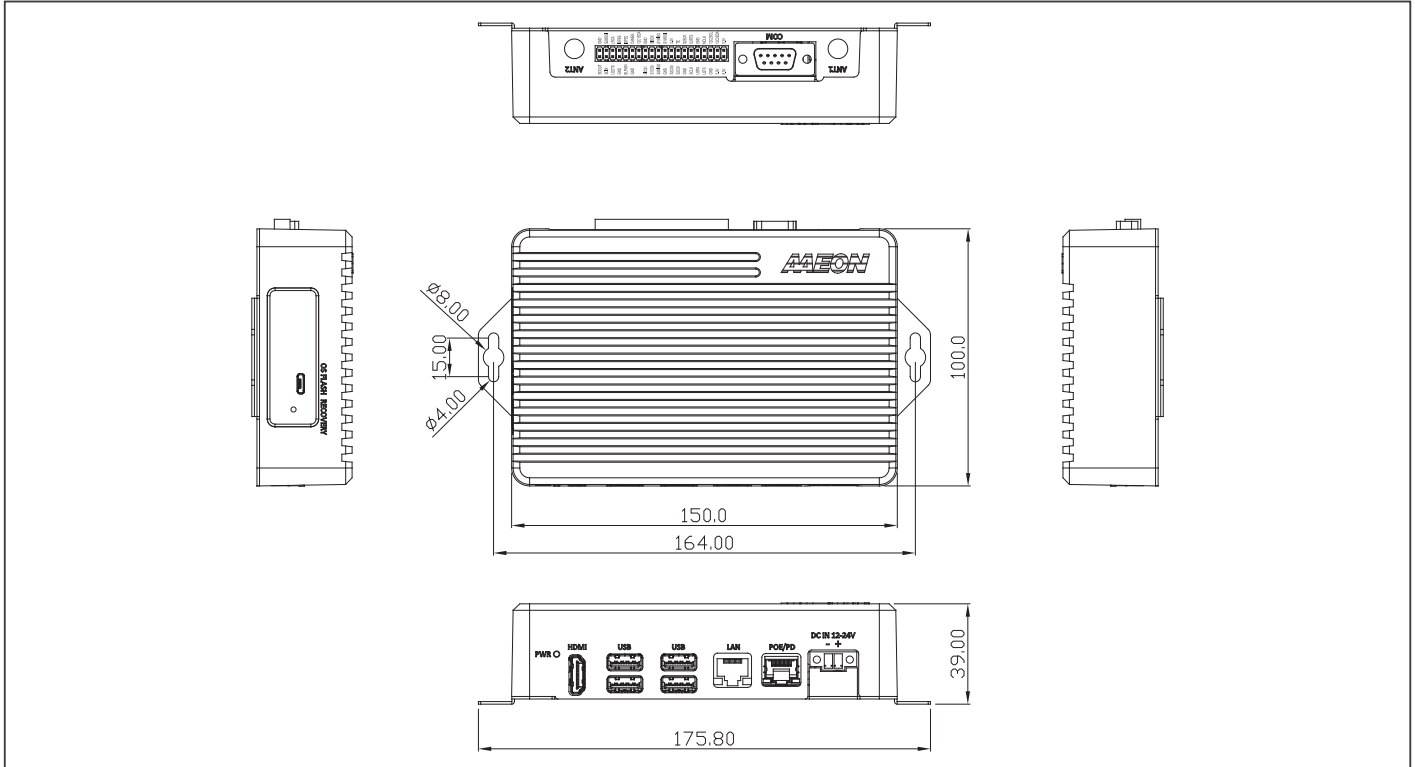
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Nano™
CPU	Quad Core Arm® Cortex®-A57 MPCore Processor
System Memory	4GB LPDDR4
Storage Device	16 GB eMMC Mini-Card (Full Size) x 1 (PCIe+SATA+USB)
Display Interface	HDMI 2.0 x 1
Ethernet	10/100/1000Base-TX x 2
I/O	USB 3.2 Gen 1 x 4 LAN x 1 PD x 1 (Powered Device) 40-pin I/O x 1 (GPIO/I2S/I2C/Audio/SPI/UART) RS-232 x 1 HDMI x 1 Mico-USB x 1 for Flash OS DC Power Input x 1 Recovery Button x 1 Micro-USB for Flash OS x 1
Expansion	Antenna x 2 M.2 2230 E Key x 1 (for Wi-Fi)
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 4.5 or above)
Power Supply	
Power Requirement	DC 12V~24V 2-pin terminal
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	6.92" x 3.94" x 1.54" (175.8 mm x 100.0 mm x 39.0 mm)
Gross Weight	2.31 lbs (1.05 kg)
Net Weight	1.28 lbs (0.58 kg)
Environmental	
Operating Temperature	14°F ~ 158°F (-10°C ~ 70°C, according to IEC60068-2 with 0.5 m/s AirFlow)
Storage Temperature	-40 °F ~ 176°F(-40°C ~ 80°C)
Storage Humidity	95% @ 40C, non-condensing
Anti-Vibration	Random, 3.5Grms, 5~500Hz
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232	I/O	STORAGE	EXPANSION	DISPLAY	MOUNTING	POWER	OPERATION TEMP	OPERATION SYSTEM
BOXER-8222AI-B3-1111	NVIDIA® Jetson Nano™	GbE PD x 1	GbE LAN x 1 USB 3.2 Gen 1 x 4	1	40-pin I/O 3.3V x 2 pin, 5.0V x 2 pin, GND x 8 pin, I2C x 2, SPI x 2, I2S x 1, UART x 1, GPIO x 4	16GB eMMC Mini-Card (Full Size) slot x 1	M.2 E-key 2230 slot x 1	HDMI x 1	Wallmount	DC 12V-24V	-10°C ~ 70°C with 0.5m/s airflow	NVIDIA Jetpack 4.5
BOXER-8222AI-JP46E-B1-1111	NVIDIA® Jetson Nano™	GbE PD x 1	GbE LAN x 1 USB 3.2 Gen 1 x 4	1	40-pin I/O 3.3V x 2 pin, 5.0V x 2 pin, GND x 8 pin, I2C x 2, SPI x 2, I2S x 1, UART x 1, GPIO x 4	16GB eMMC Mini-Card (Full Size) slot x 1	M.2 E-key 2230 slot x 1	HDMI x 1	Wallmount	DC 12V-24V	-10°C ~ 70°C with 0.5m/s airflow	NVIDIA Jetpack 4.6

## Packing List

- Power Connector x 1
- BOXER-8222AI

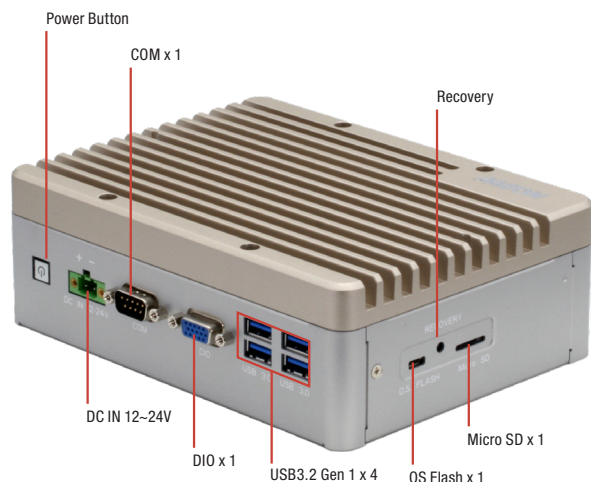
## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

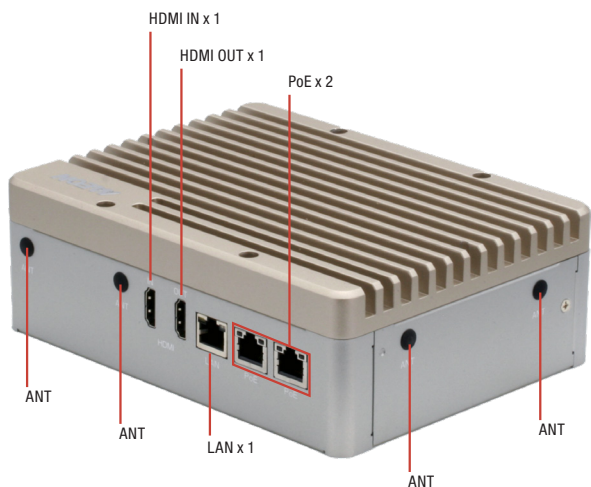
# BOXER-8223AI

AI@Edge Compact Fanless Embedded BOX PC with NVIDIA Jetson Nano

Front View



Rear View



## Features

- NVIDIA Jetson Nano
- 4GB LPDDR4
- 16GB eMMC + Micro SD card slot
- PoE/PSE GbE LAN x 2
- HDMI Input
- Digital I/O 13-channel
- Full-size Minicard x 1 w/ SIM Slot
- 12~24Vdc Power Input



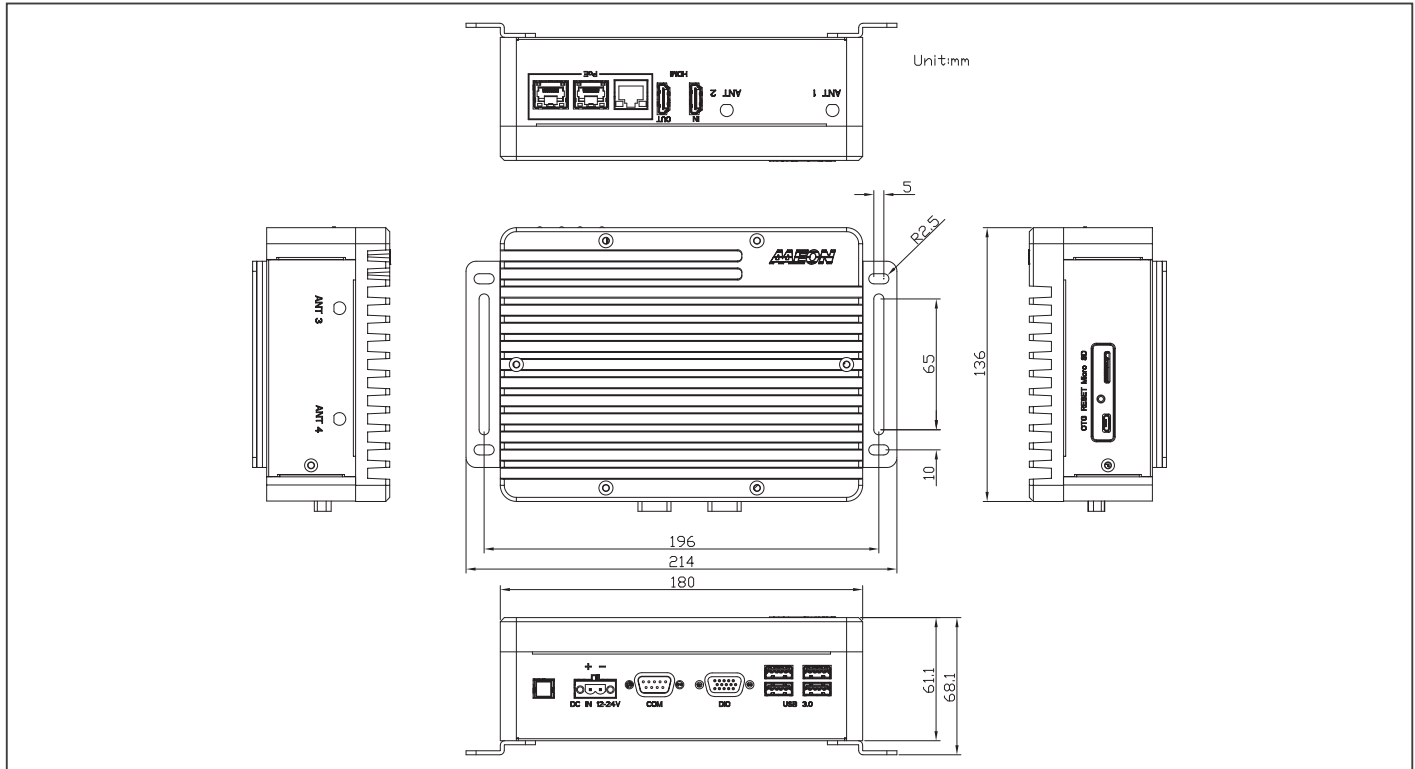
## Specifications

System	
AI Accelerator	NVIDIA Jetson Nano
CPU	Quad Core ARM® Cortex®-A57 MPCore Processor
System Memory	4GB LPDDR4
Storage Device	16GB eMMC + Micro SD card slot 2.5" SATA drive bay x 1
Display Interface	HDMI Type A 2.0 *1 (Output) HDMI Type A 1.4 *1 (Input)
Ethernet	POE PSE LAN x2 (802.3at)
I/O	USB Type A x 4 for USB 3.2 Gen1 GbE LAN with LED Indicator POE PSE LAN x2 (802.3at) DB-9 x 1 for RS-232/485 DB15 x 1 Female for 13 Channel DIO O.S Flash port x 1 Recovery port x1 Antenna opening x 2 HDMI Type A 2.0 *1 (Output) HDMI Type A 1.4 *1 (Input via MIPI CSI) Power bottom *1
Expansion	Minicard*1 w/ SIM slot M.2 E-Key 2230 x 1(for WiFi)
Indicator	Power LED x 1
OS Support	Nvidia Jetpack 4.5 or above
Power Supply	
Power Requirement	DC 12V~24V with 2-pin terminal block ATX mode
Mechanical	
Mounting	Wall mount kit (default)
Dimensions (W x D x H)	7.09" x 5.35" x 2.41" (180.0 mm x 136.0 mm x 61.1 mm)
Gross Weight	4.63 lbs. (2.1 kg)
Net Weight	2.87 lbs. (1.3 kg)
Environmental	
Operating Temperature	14°F ~ 158°F (-10°C ~ 70°C), with 0.5m/s airflow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 3 Grms, 5~500Hz
Anti-Shock	50G peak acceleration (11 msec. duration,eMMC)
Certification	CE / FCC class A / UKCA



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI ACCELERATOR	LAN	POE	USB	RS-232/485	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION TEMP	OPERATION SYSTEM
BOXER-8223AI-A3-1010	NVIDIA® Jetson Nano™	1	2	USB 3.2 Gen 1 x 4	1	16GB eMMC + MicroSD	HDMI IN x 1 HDMI OUT x 1	Wallmount	DC 12V~24V	-10°C ~ 70°C with 0.5m/s airflow	NVIDIA Jetpack 4.5
BOXER-8223AI-A3-1111	NVIDIA® Jetson Nano™	1	2	USB 3.2 Gen 1 x 4	1	16GB eMMC + MicroSD 2.5" SATA drive bay x 1	HDMI IN x 1 HDMI OUT x 1	Wallmount	DC 12V~24V	-10°C ~ 70°C with 0.5m/s airflow	NVIDIA Jetpack 4.5
BOXER-8223AI- JP46E-A1-1111	NVIDIA® Jetson Nano™	1	2	USB 3.2 Gen 1 x 4	1	16GB eMMC + MicroSD 2.5" SATA drive bay x 1	HDMI IN x 1 HDMI OUT x 1	Wallmount	DC 12V~24V	-10°C ~ 70°C with 0.5m/s airflow	NVIDIA Jetpack 4.6

## Packing List

- Power Connector
- BOXER-8223AI

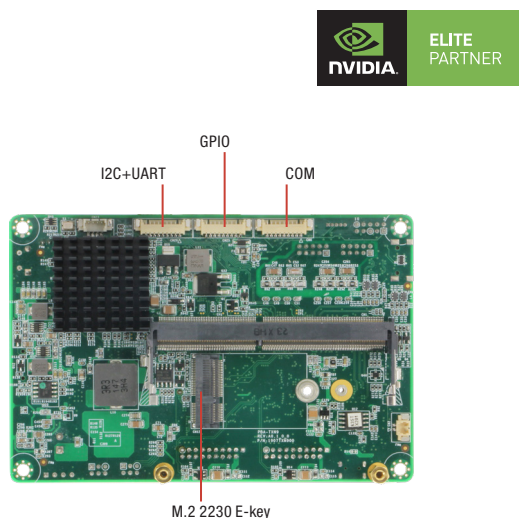
## Optional Accessories

- **1255X00035**  
120W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)

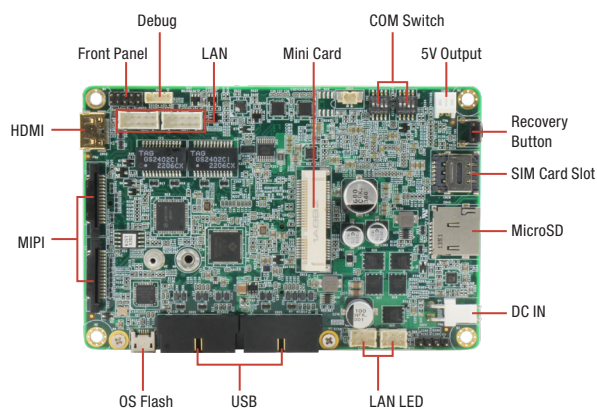
# BOXER-8224AI

AI@Edge Embedded System with NVIDIA® Jetson Nano™

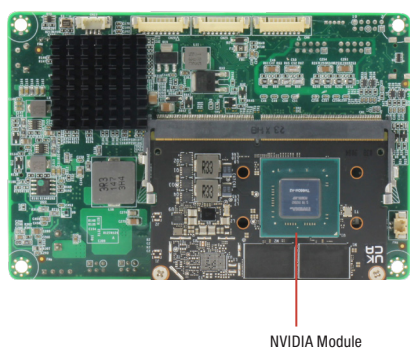
Front View



Rear View



Front View with Module



## Features

- NVIDIA® Jetson Nano™
- MIPI Connector x 2
- MicroSD x 1, Mini Card x 1, M.2 2230 E-Key x 1
- GbE LAN x 2, USB 3.2 x 4, GPIO, UART, I2C (via Wafer)
- 12V ~ 24V Wide Power DC Input



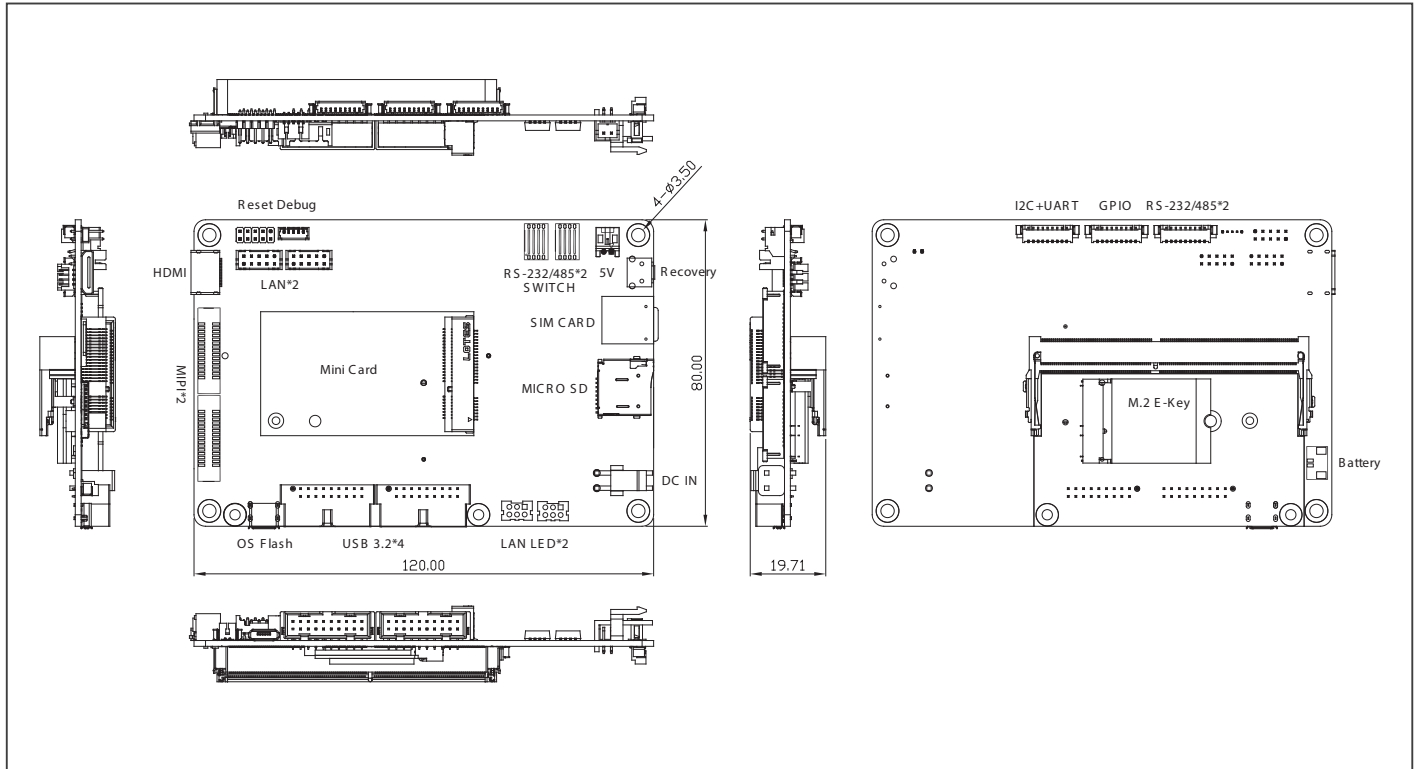
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Nano™
CPU	ARM® Cortex® -A57 Quad-Core Processor
System Memory	4GB LPDDR4
Storage Device	16GB eMMC 5.1 x 1 MicroSD slot x 1
Display Interface	Mini HDMI x 1 for HDMI 2.0
Ethernet	Wafer connector x 2 for Giga LAN
I/O	USB 3.2 Gen 1 x 4 (via 2x19-Pin Wafer) Mini HDMI x 1 for HDMI 2.0 RS-232/485 x 2 (via 1x9-Pin Wafer) UART x 1 and I2C x 2 (via 1x9-Pin Wafer) 5V Output (via 1x2-Pin Wafer) GPIO x 6 (via 1x9-Pin Wafer) MIPI Connector x 2 for MIPI Camera LAN LED x 2 (via 2x6-Pin Wafer) Micro USB for Flash OS x 1 Recovery Button x 1 Reset Button x 1 and Power Button x 1 (via Pin Header)
Expansion	M.2 2230 E Key x 1 for Wifi/BT Mini Card x 1 (LTE) Micro SD x 1 SIM card slot x 1
Indicator	—
OS Support	Linux (NVIDIA Jetpack™ 4.6 and above)
Power Supply	
Power Requirement	Wafer connector x 1 for 12V ~ 24V DC
Mechanical	
Mounting	—
Dimensions (W x D x H)	4.72" x 3.1" x 0.76" (120mm x 80mm x 19.7mm), SOM + Carrier Board Only
Gross Weight	0.45lb (0.2Kg)
Net Weight	0.23lb (0.1Kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C with 0.5 m/s airflow)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / X/Y/Z axis, random (by M.2 storage)
Anti-Shock	—
Certification	CE/FCC Class A



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	MIPI	LAN	USB	COM	UART	I2C	DISPLAY	Expansion Slot	POWER	OPERATION SYSTEM	Remark
BOXER-8224AI-JP462E-KIT-A1-1010	Jetson Nano™	2	2	4	2	1	2	HDMI x 1	M.2 2230 E Key x 1, Micro SD x 1, Mini card x 1	12V ~ 24V DC	Linux ( NVIDIA Jetpack 4.x up )	with Nano SOM, w/o Cable

## Packing List

- BOXER-8224AI (with Nano SOM, w/o Cable) x 1

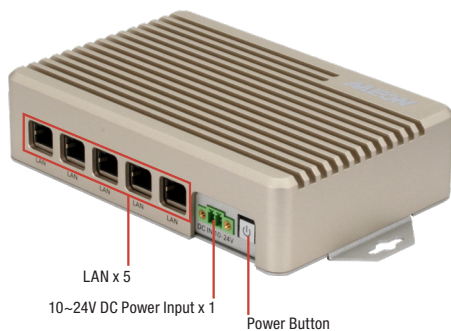
## Optional Accessories

- 9651822400  
Development Cable Kit
- 1255900603  
60W Power Adapter
- 1702031802  
Power Cord (US Type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

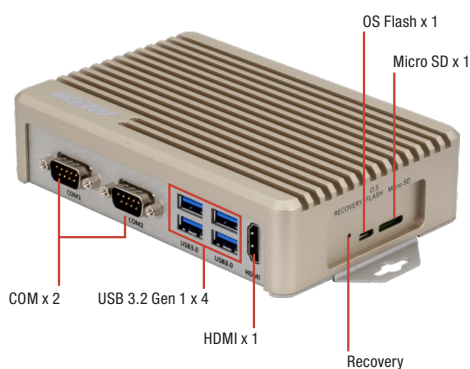
# BOXER-8230AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson™ TX2 NX

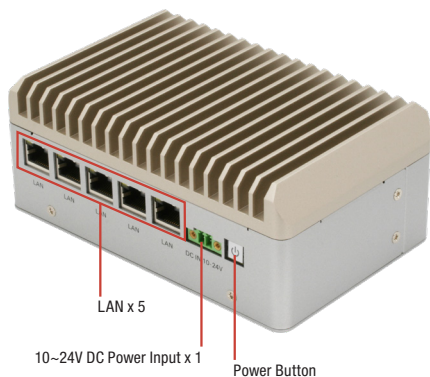
BOXER-8230AI-A3/JP46E-A1  
Front View



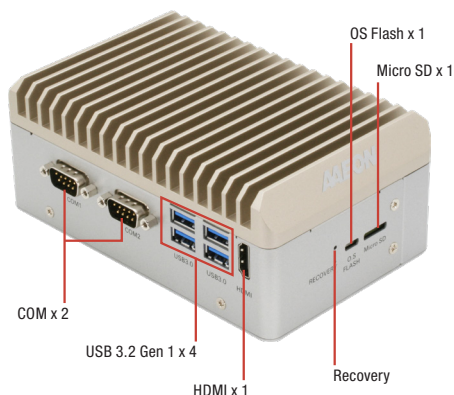
Rear View



BOXER-8230AI-A4/JP46E-A2  
Front View



Rear View



## Features

- NVIDIA® Jetson™ TX2 NX
- 4GB LPDDR4
- Multi-storage option: 16GB eMMC / MicroSD slot / 2.5" drive bay
- Support Operating Temperature -25°C ~ 75°C
- GbE LAN x 5
- USB 3.2 Gen 1 x 4
- 10~24Vdc Power input



## Specifications

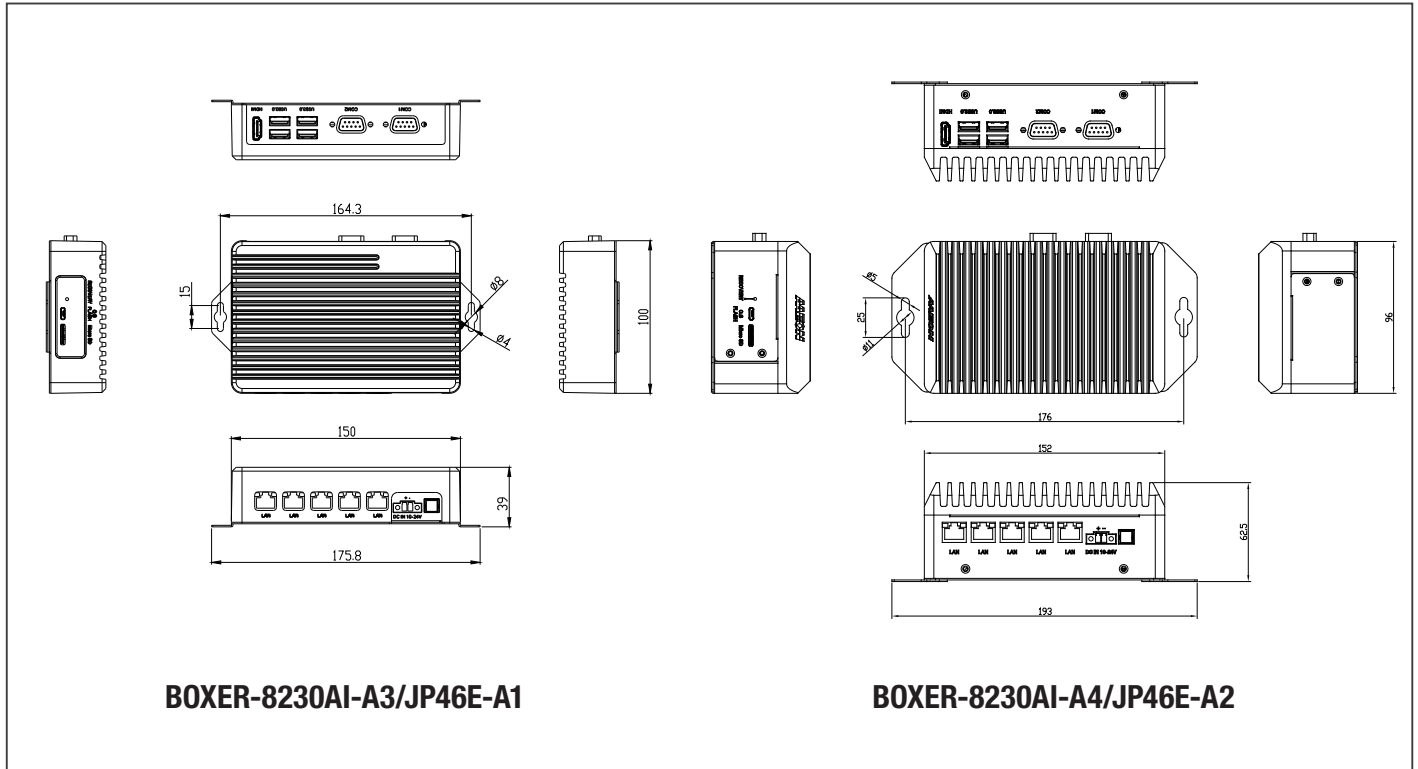
System	
AI Accelerator	NVIDIA® Jetson™ TX2 NX
CPU	NVIDIA® Denver 2 (Dual-Core) Processor & ARM® Cortex® -A57 MPCore (Quad-Core) Processor
System Memory	4GB 128-bit LPDDR4 @ 1600 MHz
Storage Device	eMMC 5.1 16GB MicroSD card slot x 1 2.5" SATA drive bay x 1 (A4/JP46E-A2 only)
Display Interface	HDMI Type A x 1 for HDMI 2.0
Ethernet	RJ-45 x 5 for GbE LAN
I/O	USB Type A x 4 for USB 3.2 Gen 1 DB-9 x 2 for RS-232 HDMI Type A x 1 for HDMI 2.0 MicroSD slot x 1 Micro USB x 1 for O.S Flash Recovery button x 1 Power button with power LED x 1
Expansion	SATA III Port x 1 for 2.5" SATA drive (A4/JP46E-A2 only)
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 4.5 or above)
Power Supply	
Power Requirement	DC-in 10V~24V with 2-pin terminal block ATX mode
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	A3/JP46E-A1 : 6.92" x 3.94" x 1.54"(175.8mm x 100.0mm x 39.0mm) A4/JP46E-A2 : 6.92" x 3.94" x 2.41"(175.8mm x 100.0mm x 61.3mm)
Gross Weight	A3/JP46E-A1 : 2.91lbs (1.3kg) A4/JP46E-A2 : 3.5lbs (1.6kg)
Net Weight	A3/JP46E-A1 : 1.51lbs (0.67kg) A4/JP46E-A2 : 2.0lbs (0.91kg)
Environmental	
Operating Temperature	A3/JP46E-A1 : -13°F ~ 149°F(-25°C ~ 65°C,according to IEC60068-2 with 0.5 m/s AirFlow) A4/JP46E-A2 : -13°F ~ 167°F(-25°C ~ 75°C,according to IEC60068-2 with 0.5 m/s AirFlow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / operation (eMMC, MicroSD, or SSD)
Anti-Shock	50G peak acceleration (11 msec. duration, eMMC, microSD, or SSD)
Certification	CE / FCC class A





## Dimension

Unit: mm



**BOXER-8230AI-A3/JP46E-A1**

**BOXER-8230AI-A4/JP46E-A2**

## Ordering Information

Part Number	AI Accelerator	LAN	USB 3.2 Gen1	RS-232	Storage	Display	Mounting	Power	Operation temp.	Operation System
BOXER-8230AI-A3-1111	TX2 NX	5	4	2	16GB eMMC / MicroSD slot	HDMI x 1	Wallmount	DC 10V-24V	-25°C ~ 65°C with 0.5m/s airflow	NVIDIA Jetpack 4.5
BOXER-8230AI-A4-1111	TX2 NX	5	4	2	16GB eMMC / MicroSD slot/2.5" SATA drive bay	HDMI x 1	Wallmount	DC 10V-24V	-25°C ~ 75°C with 0.5m/s airflow	NVIDIA Jetpack 4.5
BOXER-8230AI-JP46E-A1-1111	TX2 NX	5	4	2	16GB eMMC / MicroSD slot	HDMI x 1	Wallmount	DC 10V-24V	-25°C ~ 65°C with 0.5m/s airflow	NVIDIA Jetpack 4.6
BOXER-8230AI-JP46E-A2-1111	TX2 NX	5	4	2	16GB eMMC / MicroSD slot/2.5" SATA drive bay	HDMI x 1	Wallmount	DC 10V-24V	-25°C ~ 75°C with 0.5m/s airflow	NVIDIA Jetpack 4.6

## Packing List

- Wallmount Bracket x 2 (A4 only)
- Screw Package x 1 (A4 only)
- 2.5" drive bracket x 1 (A4 only)
- Power Connector x 1
- BOXER-8230AI

## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

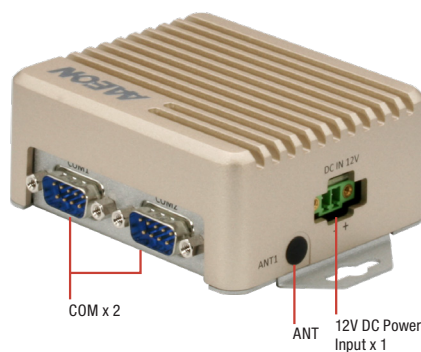
# BOXER-8231AI

AI@Edge Compact Fanless Embedded BOX PC with NVIDIA Jetson TX2 NX

Front View



Rear View



## Features

- NVIDIA® Jetson™ TX2 NX
- 4GB LPDDR4 + 16GB eMMC
- USB3.2 Gen 1 x 4
- LAN x 1 + RS-232 x 2
- 12Vdc Power input



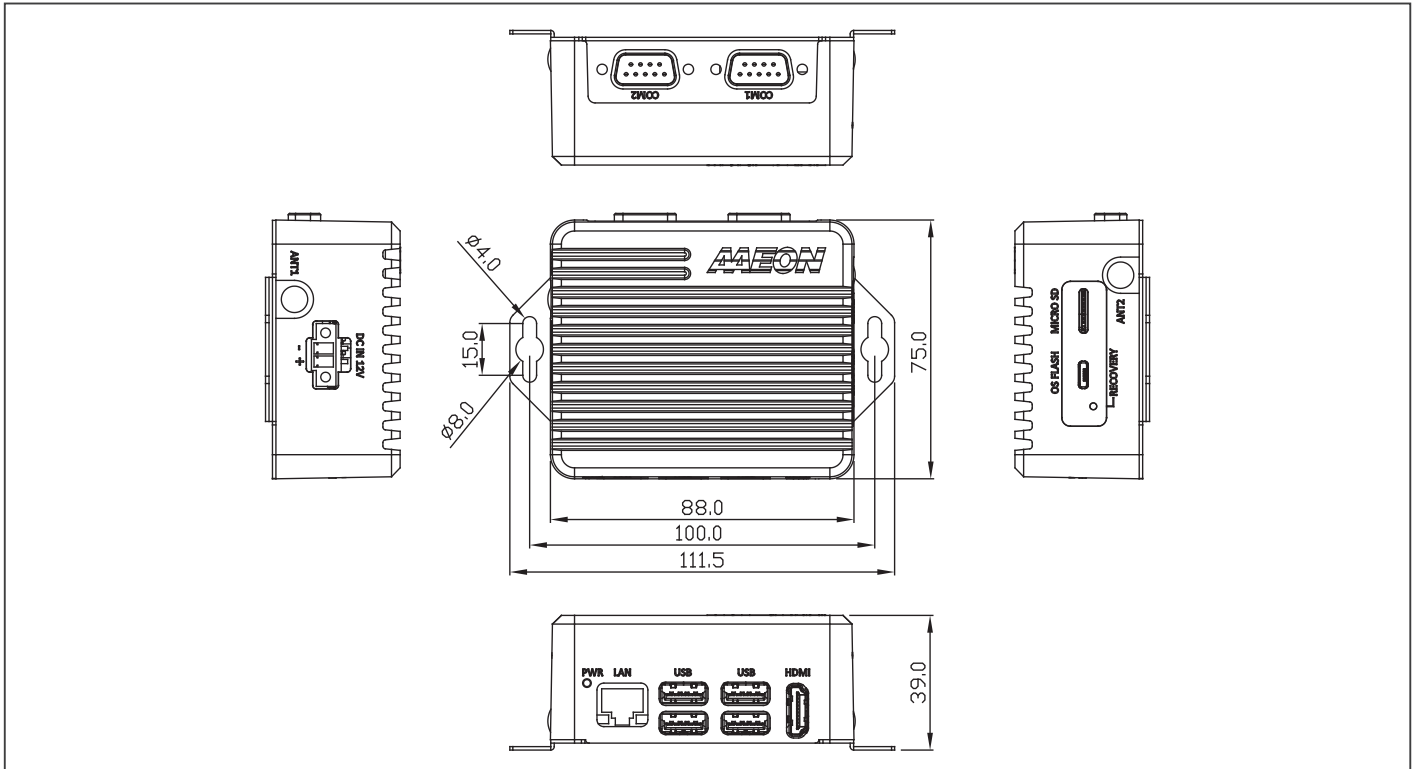
## Specifications

System	
AI Accelerator	NVIDIA® Jetson™ TX2 NX
CPU	4 Core ARM A57 Complex and 2 core NVIDIA Denver2 64-bit CPU
System Memory	4GB LPDDR4
Storage Device	16GB eMMC + MicroSD
Display Interface	HDMI 2.0
Ethernet	10/100/1000Base-TX x 1
I/O	USB 3.2 Gen 1 x 4 LAN x 1 RS-232 x 2 HDMI x 1 MicroSD x 1 DC Power Input x 1 Recovery Button x 1 Micro-USB for Flash OS x 1
Expansion	M.2 E-Key 2230 x 1(for WiFi)
Indicator	Power LED x 1
OS Support	Linux (AAEON ACLinux 4.9) Linux (NVIDIA Jetpack 4.5 and above)
Power Supply	
Power Requirement	12Vdc w/ 2-pin terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	3.46" x 2.95" x 1.53" (88mm x 75mm x 39mm)
Gross Weight	1.10 lb (0.5 kg)
Net Weight	0.66 lb (0.3 kg)
Environmental	
Operating Temperature	-25°C ~ 45°C, according to IEC60068-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3.5 Grms/ 5 ~ 500Hz/ operation – eMMC
Anti-Shock	50G peak acceleration (11 msec. duration) – eMMC
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU Module	RAM	LAN	USB 3	USB 2	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-8231AI-A3-1010	Jetson TX2 NX	4 GB 128-bit LPDDR4	1	4	—	2	—	—	—	16GB eMMC + MicroSD	HDMI x 1	M.2 E-Key 2230 x 1 (for WiFi)	Wallmount	12V	-25°C ~ 45°C
BOXER-8231AI-JP46E-A1-1010	Jetson TX2 NX	4 GB 128-bit LPDDR4	1	4	—	2	—	—	—	16GB eMMC + MicroSD	HDMI x 1	M.2 E-Key 2230 x 1 (for WiFi)	Wallmount	12V	-25°C ~ 45°C

## Packing List

- Power Connector x 1
- BOXER-8231AI

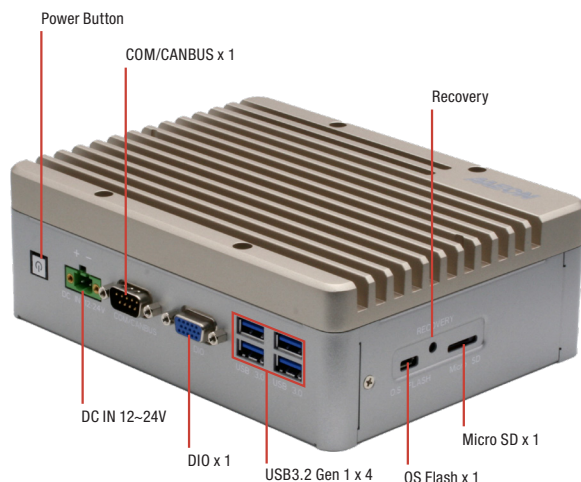
## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

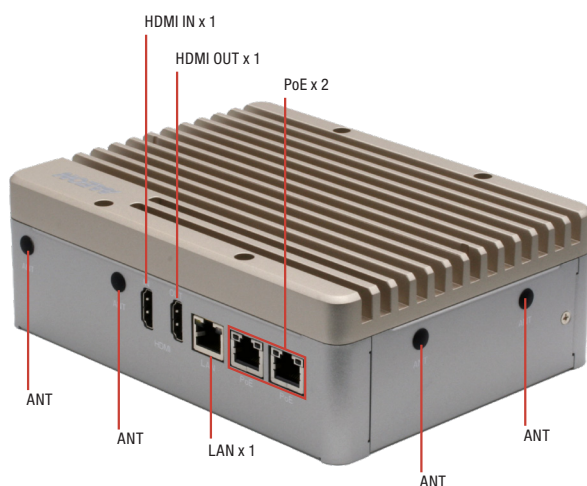
# BOXER-8233AI

AI@Edge Compact Fanless Embedded BOX PC with NVIDIA® Jetson™ TX2 NX

Front View



Rear View



## Features

- NVIDIA® Jetson™ TX2 NX
- 4GB LPDDR4
- Multi-storage option: 16GB eMMC / MicroSD slot / mSATA slot / 2.5 drive bay
- GbE PoE/PSE LAN x 2
- HDMI Input x 1 & HDMI Output x 1
- Digital I/O 13-channel
- Expansion support for WiFi/LTE



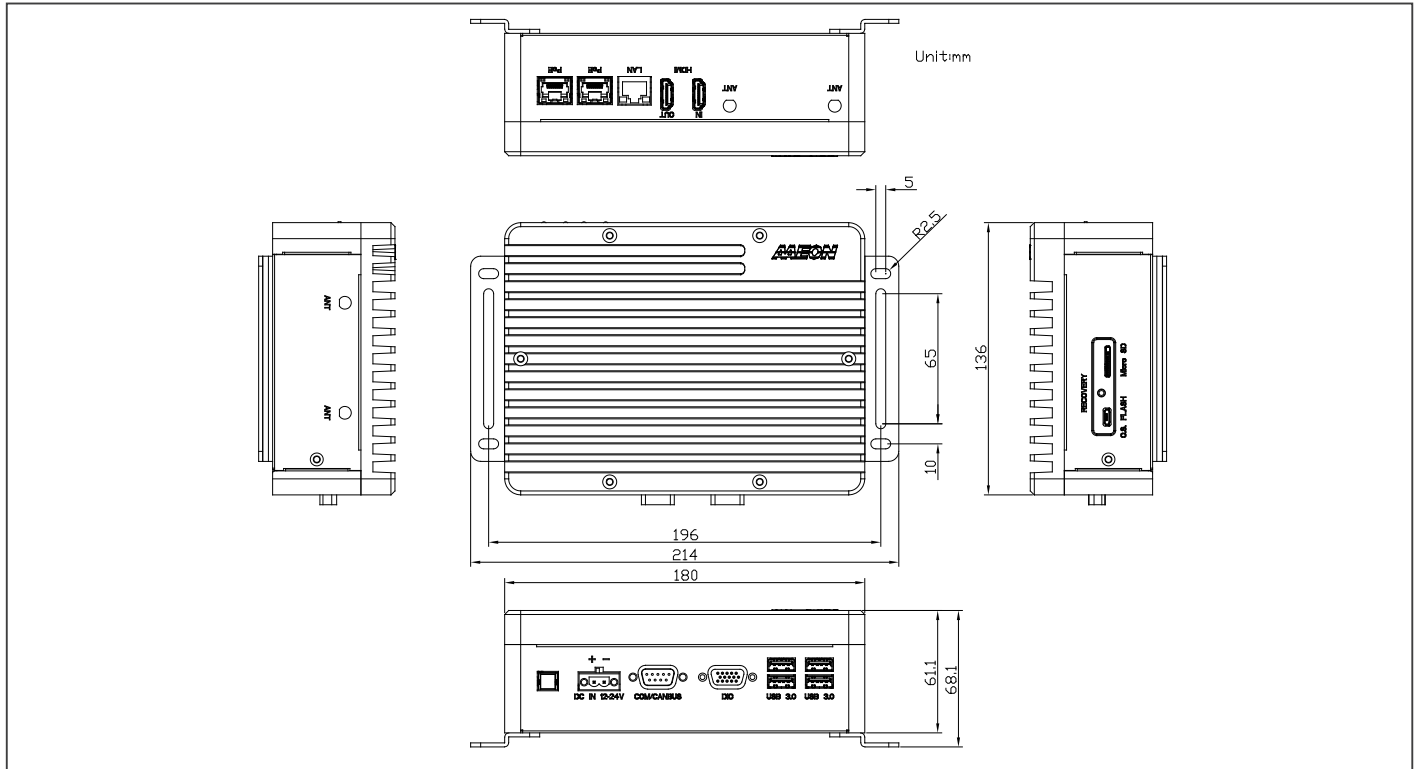
## Specifications

System	
AI Accelerator	NVIDIA® Jetson™ TX2 NX
CPU	NVIDIA® Denver 2 (Dual-Core) Processor & ARM® Cortex® -A57 MPCore (Quad-Core) Processor
System Memory	4GB 128-bit LPDDR4
Storage Device	eMMC 16GB MicroSD slot x 1 Full-size mSATA (sharing slot with Full-size minicard module) 2.5" SATA drive bay x 1
Display Interface	HDMI Type A x 1 for HDMI 2.0
Ethernet	RJ-45 x 2 for GbE PoE/PSE (802.3at) RJ-45 x 1 for GbE LAN
I/O	USB Type A x 4 for USB 3.2 Gen 1 USB Micro A/B x 1 for OS Flash RJ45 x 2 for GbE PoE/PSE x 2 (802.3at) (Total 60W) RJ-45 x 1 for GbE LAN DB-9 x 1 for RS-232/485 & CANBUS DB15 x 1 for Digital I/O 13-Channel (programmable) Recovery port x 1 MicroSD slot x 1 Antenna opening x 4 HDMI Type A for HDMI 2.0 output x 1 HDMI Type A for HDMI 1.4 input x 1 Power Button x 1
Expansion	Full-size minicard slot x 1 (PCIe/USB/mSATA, default PCIe) M.2 E-Key 2230 x 1 (for WiFi) SIM socket x 1 SATA III (6.0 Gbps) port x 1 for 2.5" drive
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 4.5.1)
Power Supply	
Power Requirement	DC 12V~24V with 2-pin terminal block ATX mode
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	7.09" x 5.35" x 2.41" (180.0 mm x 136.0 mm x 61.1 mm)
Gross Weight	4.63 lbs. (2.1kg)
Net Weight	2.87 lbs. (1.3kg)
Environmental	
Operating Temperature	5°F ~ 131°F (-15°C ~ 55°C, according to IEC60068-2 with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / operation (eMMC, MicroSD, mSATA, or SSD)
Anti-Shock	50G peak acceleration (11 msec. duration, eMMC, microSD, mSATA, or SSD)
Certification	CE / FCC class A / UKCA



## Dimension

Unit: mm



## Ordering Information

Part Number	AI Accelerator	LAN	POE	USB 3.2 Gen1	RS-232/485 & CANbus	Storage	Display	Mounting	Power	Operation temp.	OPERATION SYSTEM
BOXER-8233AI-A3-1111	Jetson TX2 NX	1	2	4	1	16GB eMMC / MicroSD slot / mSATA slot / 2.5 drive bay	HDMI OUT x 1	Wall mount kit	DC 12V~24V	-15°C ~ 55°C with 0.5m/s airflow	NVIDIA Jetpack 4.5.1
BOXER-8233AI-JP46E-A1-1111	Jetson TX2 NX	1	2	4	1	16GB eMMC / MicroSD slot / mSATA slot / 2.5 drive bay	HDMI OUT x 1	Wall mount kit	DC 12V~24V	-15°C ~ 55°C with 0.5m/s airflow	NVIDIA Jetpack 4.6

## Packing List

- Wallmount Bracket x 2
- Power Connector x 1
- Screw Package x 1
- BOXER-8233AI

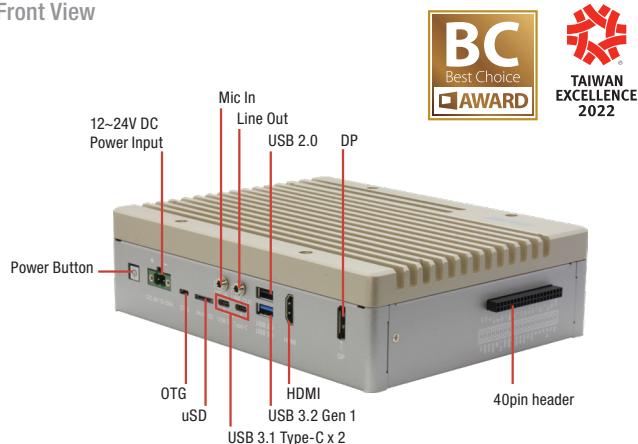
## Optional Accessories

- **1255X00035**  
120W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)

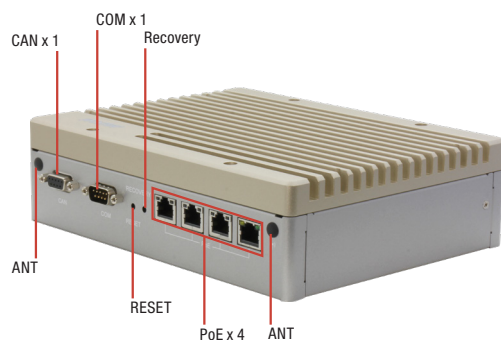
# BOXER-8240AI

AI@Edge Fanless Embedded Box PC with NVIDIA AGX Xavier

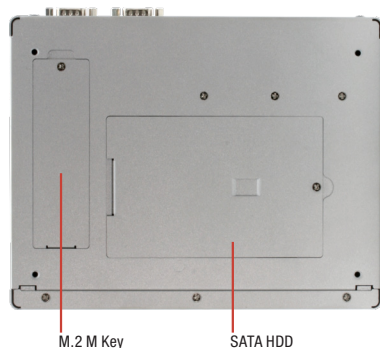
Front View



Rear View



Bottom View



## Features

- 512-core Volta GPU with Tensor Cores
- Support RJ-45 x 4 for PoE (802.3af, total 60W)
- Support DB-9 x 1 for RS-232/422/485, CANBUS x 1
- Support 40-pin header, Mic in and Line out
- Support M.2 E key, M key and SATA storage



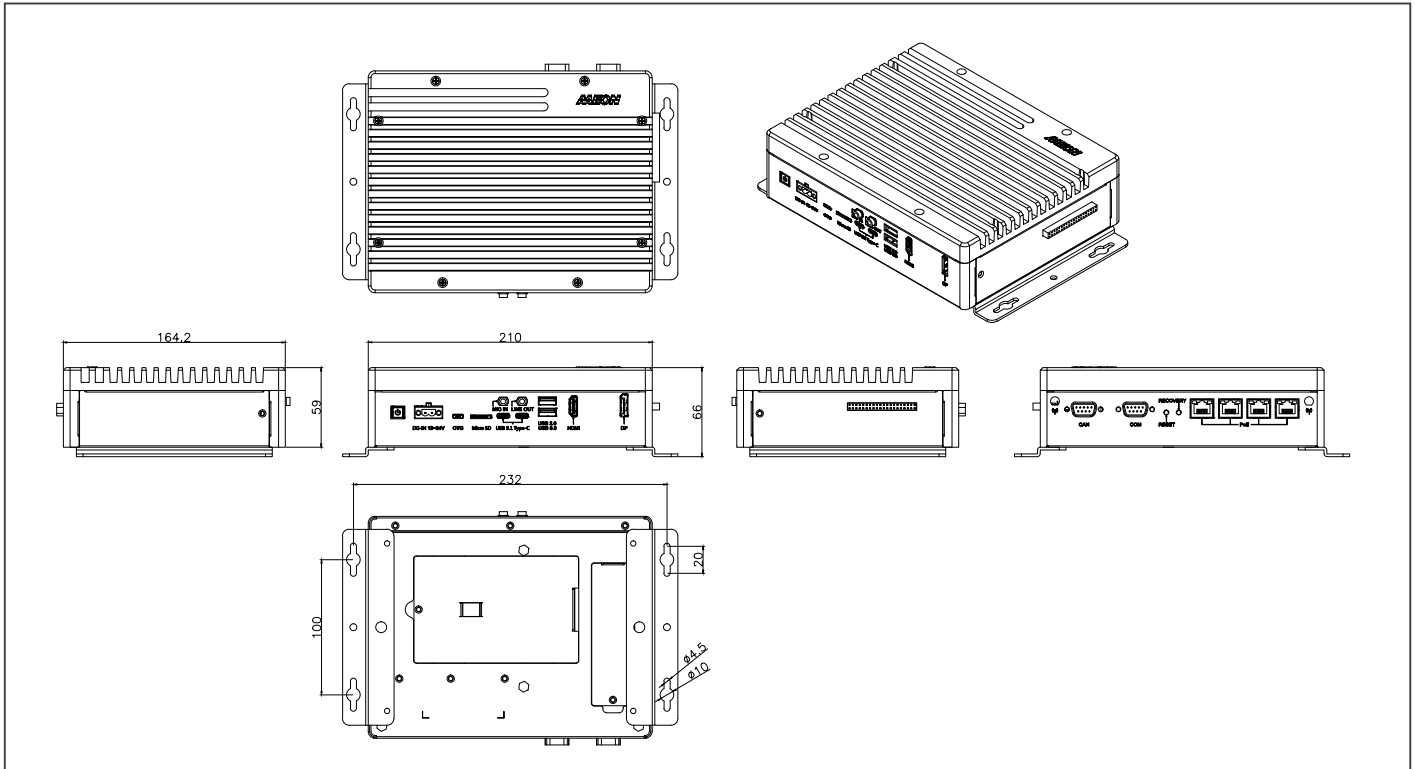
## Specifications

System	
AI Accelerator	NVIDIA® AGX Xavier
CPU	8-core ARM v8.2 64bit CPU, 8MB L2 + 4MB L3
System Memory	32GB 256-Bit LPDDR4x 137GB/s
Storage Device	32GB eMMC 5.1 Micro SD card slot 2.5" SATA drive bay M.2 Key M 2280
Display Interface	HDMI 2.0 x 1
Ethernet	10/100/1000 Base-TX with IEEE 802.3af PoE LAN x 4
I/O	PoE x 4 (IEEE 802.3af, total 60W) USB Type A x 1 for USB 3.2 Gen 1 USB Type C x 2 for USB 3.2 Gen 1 USB Type A x 1 for USB 2.0 RS-232/422/485 x1 CANBUS x 1 HDMI 2.0 x1 DP 1.4 x 1 Mic-in x 1 Line-out x 1 MicroSD slot x 1 Micro USB x 1 for OS Flash Recovery button x 1 Power button x 1 40-pin header compliance with NVIDIA Dev Kit 40 pins (4 pins CANBUS occupied)
Expansion	USB 2.0 header x 1 (Optional, circuit reserved) M.2 Key E 2230 x 1 for WiFi/Bluetooth (PCIe[x1] + USB) M.2 Key M 2280 x 1 (PCIe[x4]) SATA x 1 RS-232/422/485 pin header x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 4.5 and above)
Power Supply	
Power Requirement	DC 12V~24V 2-pin terminal
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	8.26" x 6.46" x 2.32" (210mm x 164.2mm x 59mm)
Gross Weight	6 lbs (2.72kg)
Net Weight	4.23 lbs (1.92kg)
Environmental	
Operating Temperature	14°F ~ 131°F (-10°C ~ 55°C, according to IEC60068-2 with 0.5 m/s AirFlow)
Storage Temperature	-40 °F ~ 158°F(-40°C ~ 70°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	Random, 3 Grms, 5 ~ 500Hz
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	AI SOLUTION	POE	USB	RS-232/422/485	CANBUS	STORAGE	EXPANSION	DISPLAY	AUDIO	MOUNTING	POWER	OPERATION TEMP	OPERATION SYSTEM
BOXER-8240AI-A3-1111	NVIDIA AGX Xavier	4	USB 3.2 Gen 1 x 2 + 2 (TypeA+C)	1	Dual Canbus in one Connector	eMMC / M.2 M Key / Micro-SD / 2.5" SATA	M.2 E Key	HDMI x 1 DP x1	MIC-in x1 LINE-OUT x1	Wallmount	DC 12V-24V	-10°C - 55°C	NVIDIA Jetpack 4.5
BOXER-8240AI-A4-1111	NVIDIA AGX Xavier	4	USB 3.2 Gen 1 x 2 + 2 (TypeA+C)	1	Dual Canbus in one Connector	eMMC / M.2 M Key / Micro-SD / 2.5" SATA	M.2 E Key	HDMI x 1 DP x1	—	Wallmount	DC 12V-24V	-10°C - 55°C	NVIDIA Jetpack 4.5
BOXER-8240AI-JP46E-A1-1111	NVIDIA AGX Xavier	4	USB 3.2 Gen 1 x 2 + 2 (TypeA+C)	1	Dual Canbus in one Connector	eMMC / M.2 M Key / Micro-SD / 2.5" SATA	M.2 E Key	HDMI x 1 DP x1	MIC-in x1 LINE-OUT x1	Wallmount	DC 12V-24V	-10°C - 55°C	NVIDIA Jetpack 4.6
BOXER-8240AI-JP46E-A2-1111	NVIDIA AGX Xavier	4	USB 3.2 Gen 1 x 2 + 2 (TypeA+C)	1	Dual Canbus in one Connector	eMMC / M.2 M Key / Micro-SD / 2.5" SATA	M.2 E Key	HDMI x 1 DP x1	—	Wallmount	DC 12V-24V	-10°C - 55°C	NVIDIA Jetpack 4.6

## Packing List

- BOXER-8240AI
- Power Connector x 1
- Wallmount Bracket x 2
- Screw Package x 1

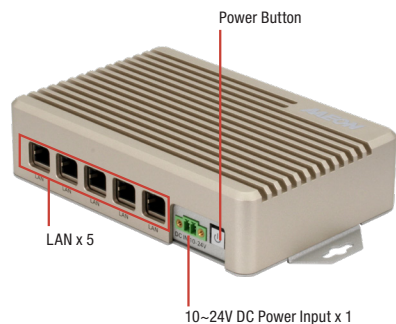
## Optional Accessories

- 1255X00066  
120W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

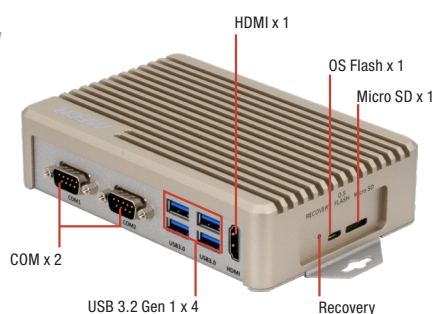
# BOXER-8250AI

AI@Edge Fanless Embedded Box PC with NVIDIA Jetson Xavier NX, 5 GbE LAN Ports

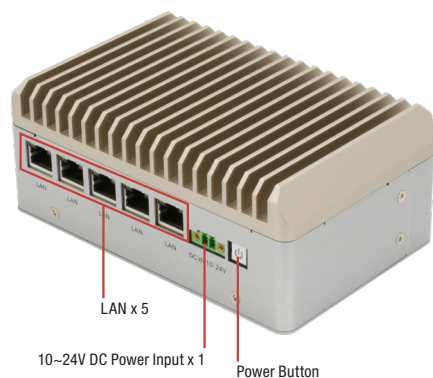
Front View



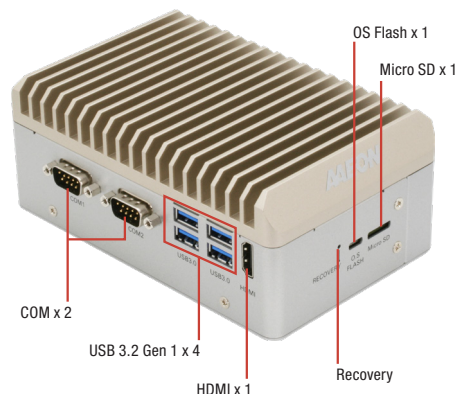
Rear View



BOXER-8250AI-A4  
Front View



Rear View



## Features

- NVIDIA® Jetson Xavier™ NX
- 8GB LPDDR4
- Multi-storage option: 16GB eMMC / MicroSD slot / 2.5" drive bay
- GbE LAN x 5
- USB 3.2 Gen 1 x 4
- 10~24Vdc Power input



## Specifications

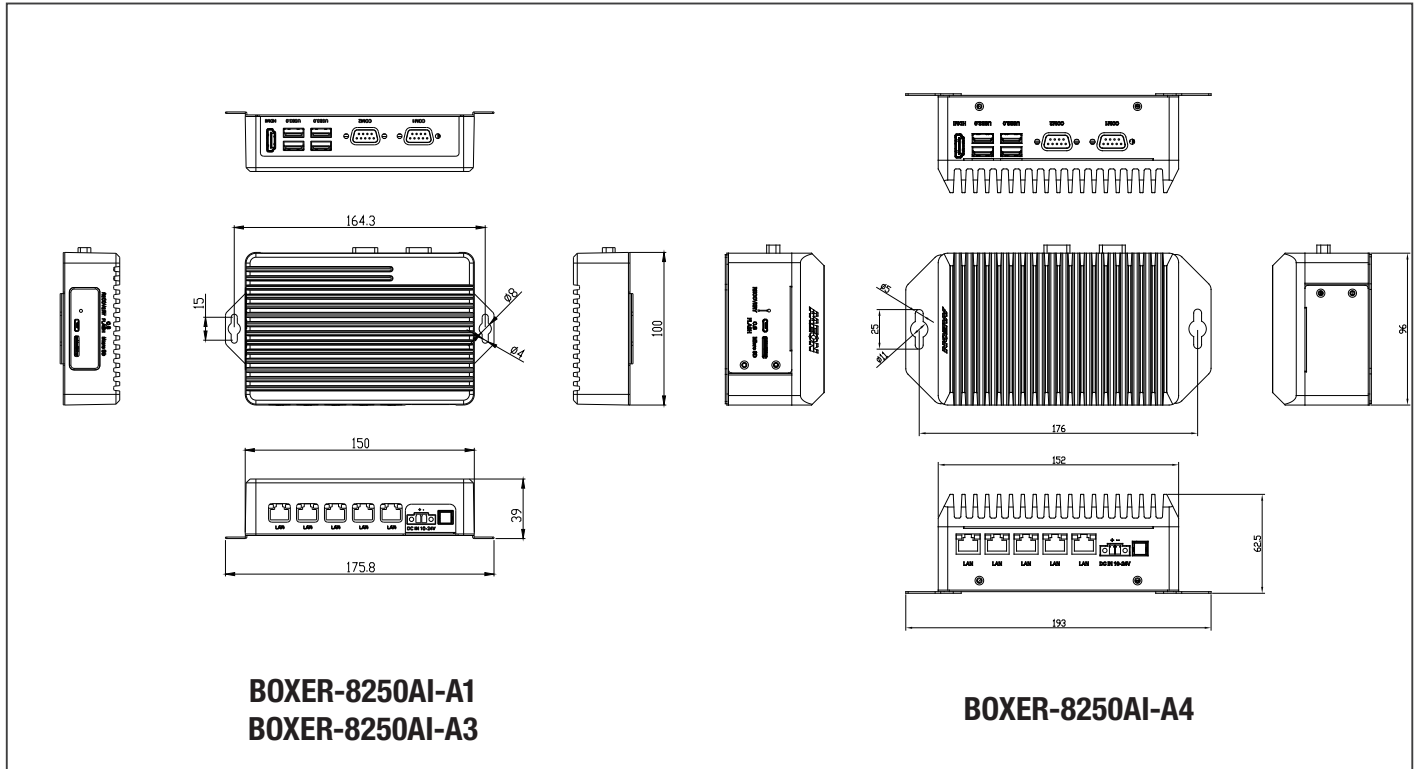
System	
AI Accelerator	NVIDIA Jetson Xavier NX
CPU	6-core NVIDIA Carmel ARM® v8.2 64-bit CP
System Memory	8GB LPDDR4x
Storage Device	16 eMMC and MicroSD card slot (A1, A3) 16 eMMC and MicroSD card slot and 2.5" HDD drive(A4)
Display Interface	HDMI 2.0
Ethernet	10/100/1000Base-TX x 5
I/O	USB Type A x 4 for USB 3.2 Gen 1 RJ-45 x 5 for GbE LAN DB-9 x 2 for RS-232 HDMI Type A x 1 for HDMI 2.0 MicroSD slot x 1 Micro USB x 1 for O.S Flash Recovery button x 1 Power button with power LED x 1
Expansion	—
Indicator	Power LED x 1
OS Support	Linux (AAEON ACLinux 4.9) Linux (NVIDIA Jetpack 4.5)
Power Supply	
Power Requirement	10 ~ 24V DC with 2-pin terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	A1, A3 : 6.92" x 3.94" x 1.54"(175.8mm x 100.0mm x 39.0mm) A4 : 6.92" x 3.94" x 2.41"(175.8mm x 100.0mm x 61.3mm)
Gross Weight	A1, A3 : 2.48 lbs (1.12 kg) A4 : 3.5lbs (1.6kg)
Net Weight	A1, A3 : 1.46 lbs (0.66 kg) A4 : 2.0lbs (0.91kg)
Environmental	
Operating Temperature	A1, A3 : 14°F ~ 149°F (-10°C ~ 65°C, according to IEC60068-2 with 0.5 m/s AirFlow) A4 : -13°F ~ 140°F (-10°C ~ 60°C, according to IEC60068-2 with 0.5 m/s AirFlow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / operation (eMMC, MicroSD, or SSD)
Anti-Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8250AI-A1-1010	Jetson Xavier NX	5	USB 3.2 Gen 1 x 4	2	16GB eMMC and Micro-SD card slot	HDMI x 1	Wallmount	10-24V	ACLinux 4.9
BOXER-8250AI-A3-1010	Jetson Xavier NX	5	USB 3.2 Gen 1 x 4	2	16GB eMMC and Micro-SD card slot	HDMI x 1	Wallmount	10-24V	NVIDIA Jetpack 4.5
BOXER-8250AI-A4-1010	Jetson Xavier NX	5	USB 3.2 Gen 1 x 4	2	16GB eMMC and Micro-SD card slot and 2.5" HDD Drive	HDMI x 1	Wallmount	10-24V	NVIDIA Jetpack 4.5
BOXER-8250AI-JP46E-A1-1111	Jetson Xavier NX	5	USB 3.2 Gen 1 x 4	2	16GB eMMC and Micro-SD card slot	HDMI x 1	Wallmount	10-24V	NVIDIA Jetpack 4.6
BOXER-8250AI-JP46E-A2-1111	Jetson Xavier NX	5	USB 3.2 Gen 1 x 4	2	16GB eMMC and Micro-SD card slot and 2.5" HDD Drive	HDMI x 1	Wallmount	10-24V	NVIDIA Jetpack 4.6

## Packing List

- Power Connector x 1
- BOXER-8250AI

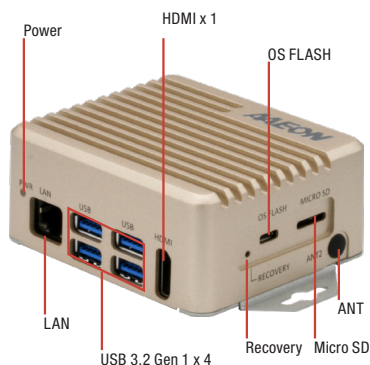
## Optional Accessories

- **1255300611**  
60W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)

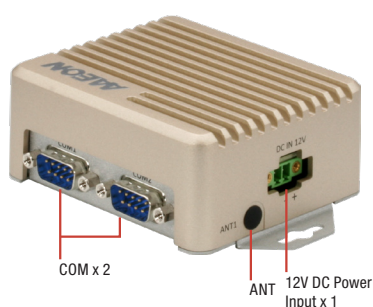
# BOXER-8251AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA Jetson Xavier NX

Front View



Rear View



With High Heatsink Front View



Rear View



## Features

- NVIDIA® Jetson Xavier™ NX
- 8GB LPDDR4x + 16GB eMMC
- USB3.2 Gen 1 x 4
- LAN x 1 + RS-232 x 2
- 12Vdc Power input



## Specifications

System	
AI Accelerator	NVIDIA Jetson Xavier NX
CPU	6 Core ARM® Carmel®V8.2 64bit CPU 6MB L2 + 4MB L3
System Memory	8GB LPDDR4x
Storage Device	16GB eMMC + MicroSD
Display Interface	HDMI 2.0
Ethernet	10/100/1000Base-TX x 1
I/O	USB 3.2 Gen 1 x 4 LAN x 1 RS-232 x 2 HDMI x 1 MicroSD x 1 DC Power Input x 1 Recovery Button x 1 Micro-USB for Flash OS x 1
Expansion	M.2 E-Key 2230 x 1(for WiFi)
Indicator	Power LED x 1
OS Support	Linux (AAEON ACLinux 4.9) Linux (NVIDIA Jetpack 4.5) Ubuntu18.04
Power Supply	
Power Requirement	12Vdc w/ 2-pin terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	Standard: 3.46" x 2.95" x 1.53" (88mm x 75mm x 39mm) High heatsink Dimension: 3.54" x 3.30" x 2.04" (90mm x 84mm x 52mm)
Gross Weight	Standard: 1.10 lb (0.5 kg) High heatsink: 1.76lb(0.8kg)
Net Weight	Standard: 0.66 lb (0.3 kg) High heatsink: 1.3lb(0.6kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C) (varies depending on selected power model)
Storage Temperature	-40°F ~ 158°F (-40°C ~ 70°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – MicroSD or eMMC
Anti-Shock	—
Certification	CE/FCC class A

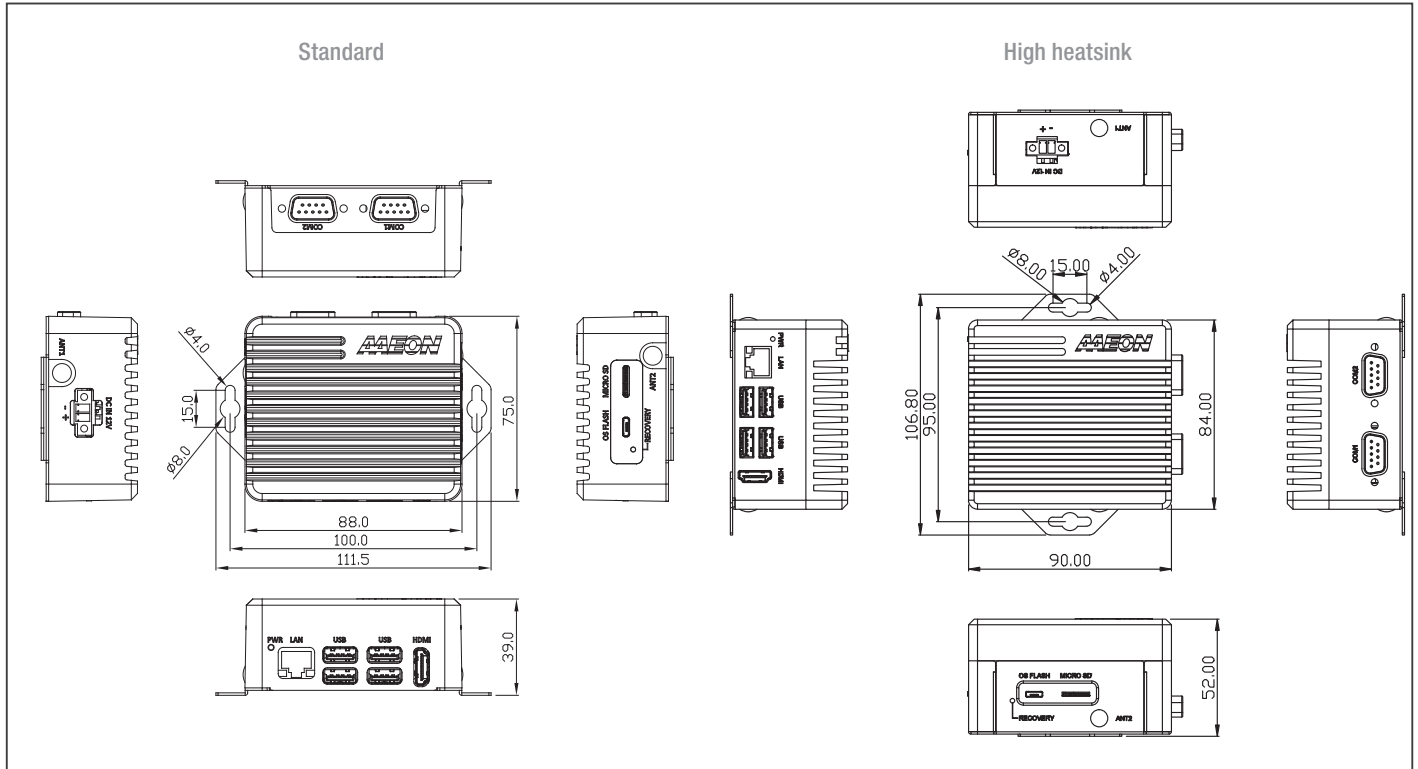
## Operating Temperature

Power Mode	CPU Core	CPU Maximum Frequency	Operation Temp.
20W	6 Core	1.4GHz	-20°C ~ 55°C (for high heat sink)
15W	6 Core	1.4GHz	-20°C ~ 40°C/-20°C ~ 50°C(for high heat sink)
	4 Core	1.4GHz	-20°C ~ 40°C
	2 Core	1.9GHz	-20°C ~ 50°C/-20°C ~ 60°C(for high heat sink)
10W	4 Core	1.2GHz	-20°C ~ 50°C/-20°C ~ 60°C(for high heat sink)
	2 Core	1.5GHz	-20°C ~ 50°C



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8251AI-A3-1010	Jetson Xavier NX	1	3.2 Gen 1 x 4	2	16GB eMMC + MicroSD	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	NVIDIA Jetpack 4.5
BOXER-8251AI-JP46E-A1-1010	Jetson Xavier NX	1	3.2 Gen 1 x 4	2	16GB eMMC + MicroSD	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	NVIDIA Jetpack 4.6
BOXER-8251AI-JP46E-E1-1010 (high heatsink)	Jetson Xavier NX	1	3.2 Gen 1 x 4	2	16GB eMMC + MicroSD	HDMI x 1	Wallmount	12Vdc w/ 2 pin terminal block	NVIDIA Jetpack 4.6

## Packing List

- Power Connector x 1
- BOXER-8251AI

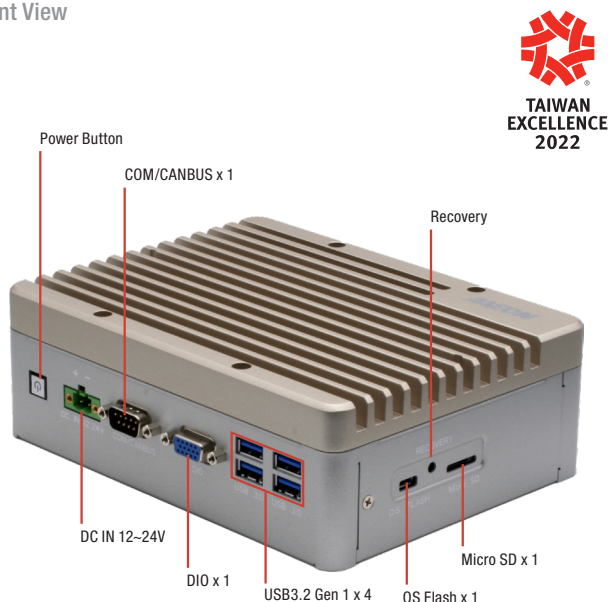
## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

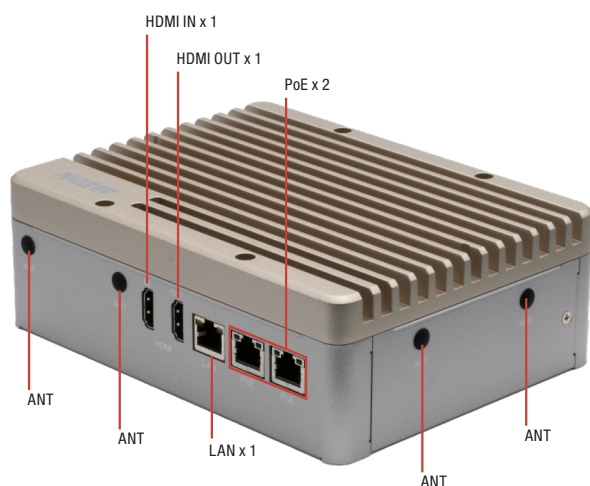
# BOXER-8253AI

AI@Edge Compact Fanless Embedded BOX PC with NVIDIA® Jetson Xavier™ NX

Front View



Rear View



## Features

- NVIDIA® Jetson Xavier™ NX
- 8GB LPDDR4x
- Multi-storage option: 16GB eMMC / MicroSD slot / mSATA slot / 2.5" drive bay
- GbE PoE/PSE LAN x 2
- HDMI Input x 1 & HDMI Output x 1
- Digital I/O 13-channel
- Expansion support for WiFi/LTE



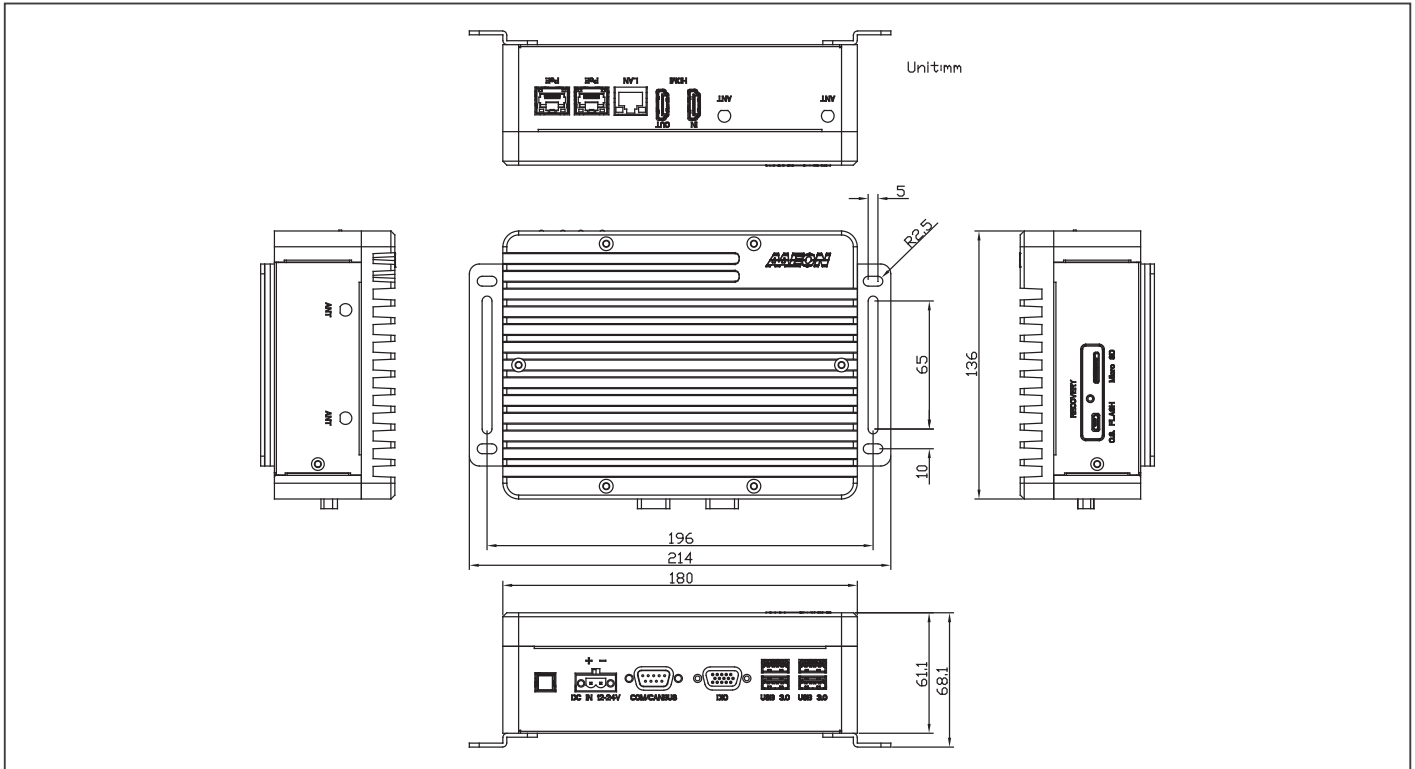
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Xavier™ NX
CPU	6 Core ARM® Carmel®V8.2 64bit CPU 6MB L2 + 4MB L3
System Memory	8GB LPDDR4x
Storage Device	eMMC 16GB MicroSD slot x 1 Full-size mSATA (sharing slot with Full-size minicard module) 2.5" SATA drive bay x 1
Display Interface	HDMI Type A for HDMI 2.0 x 1
Ethernet	RJ-45 x 2 For GbE PoE/PSE (802.3at) RJ-45 x 1 For GbE LAN
I/O	USB Type A x 4 for USB 3.2 Gen 1 USB Micro A/B x 1 for OS Flash RJ-45 x 2 for PoE/PSE (802.3at) (Total 60W) RJ-45 x 1 for GbE LAN DB-9 x 1 for RS-232/485 & CANbus DB15 x 1 for Digital I/O 13-Channel (programmable) Recovery Button x 1 MicroSD card slot x 1 Antenna opening x 4 HDMI Type A for HDMI 2.0 output x 1 HDMI Type A for HDMI 1.4 input x 1 Power Button x 1
Expansion	Full-size minicard slot x1 (PCIe/USB/mSATA, default PCIe) M.2 E-Key 2230 x 1 (for WiFi) SIM socket x 1 SATA III (6.0 Gbps) port x 1 for 2.5" drive
Indicator	Power LED x 1
OS Support	Linux (AAEON ACLinux4.9) Linux (NVIDIA Jetpack 4.5)
Power Supply	
Power Requirement	12-24V DC with 2-pin terminal block
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	7.09" x 5.35" x 2.41" (180.0 mm x 136.0 mm x 61.1 mm)
Gross Weight	4.63 lbs. (2.1 kg)
Net Weight	2.87 lbs. (1.3 kg)
Environmental	
Operating Temperature	5°F ~ 131°F (-15°C ~ 55°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5-500Hz / operation-eMMC, MicroSD or mSATA
Anti-Shock	50G peak acceleration (11 msec. duration, eMMC, microSD, or mSATA)
Certification	CE / FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	AI Accelerator	LAN	POE	USB 3.2 Gen1	RS-232/485 & CANbus	Storage	Display	Mounting	Power	Operation temp.	OPERATION SYSTEM
BOXER-8253AI-A1-1011	Jetson Xavier NX	1	2	4	1	16GB eMMC / MicroSD slot / mSATA slot / 2.5 drive bay	HDMI OUT x 1	Wall mount kit	DC 12V~24V	-15°C ~ 55°C with 0.5m/s airflow	ACLinux 4.9
BOXER-8253AI-A3-1010	Jetson Xavier NX	1	2	4	1	16GB eMMC / MicroSD slot / mSATA slot / 2.5 drive bay	HDMI OUT x 1	Wall mount kit	DC 12V~24V	-15°C ~ 55°C with 0.5m/s airflow	NVIDIA Jetpack 4.5
BOXER-8253AI-JP46E-A1-1211	Jetson Xavier NX	1	2	4	1	16GB eMMC / MicroSD slot / mSATA slot / 2.5 drive bay	HDMI OUT x 1	Wall mount kit	DC 12V~24V	-15°C ~ 55°C with 0.5m/s airflow	NVIDIA Jetpack 4.6

## Packing List

- Wallmount Bracket x 2
- Power Connector x 1
- Screw Package x 1
- BOXER-8253AI

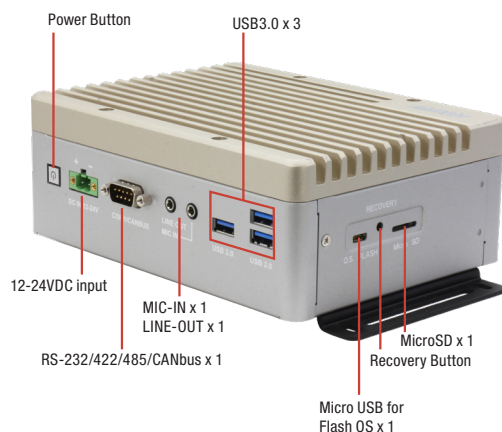
## Optional Accessories

- **1255X00066**  
120W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)

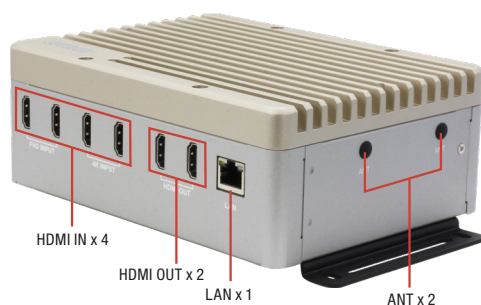
# BOXER-8256AI

AI@Edge Fanless Embedded AI System with NVIDIA Jetson Xavier NX, HDMI Input x4

Front View



Rear View



## Features

- HDMI x 4 for Video Input 1.4
- HDMI x 2 for Video Display 2.0
- USB Type A x 3 for USB 3.2 Gen 1
- DB9 for RS-232/422/485 (By switch) and CANbus x1
- RJ-45 x 1 for GbE LAN
- M.2 M-Key (PCIEx4)
- M.2 B-Key (PCIEx2 and USB 3.0)
- M.2 E-key (PCIEx1 and USB 2.0)



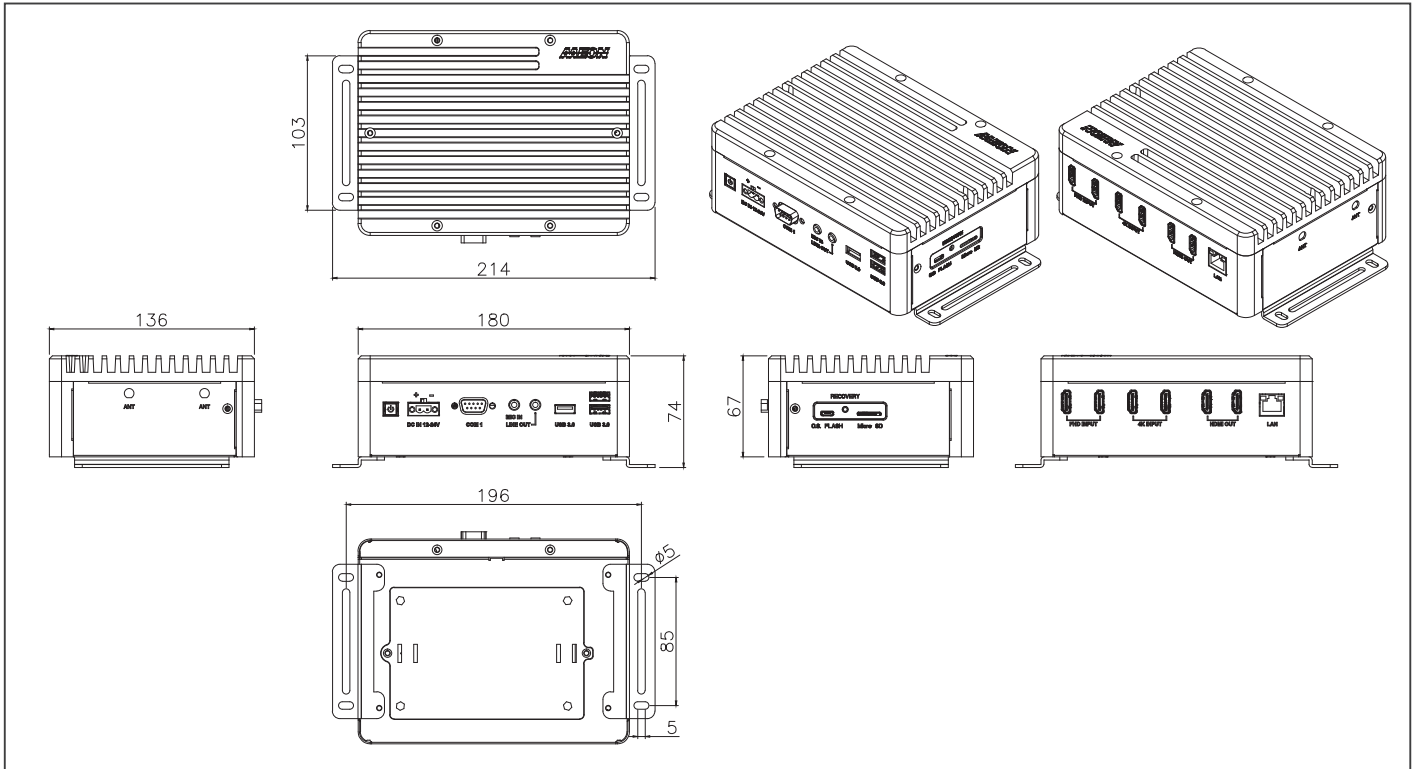
## Specifications

System	
AI Accelerator	NVIDIA Jetson Xavier NX
CPU	6-core NVIDIA Carmel Arm@v8.2 64-bit CPU
System Memory	8GB LPDDR4x
Storage Device	16GB eMMC x 1 MicroSD Slot x 1 M.2 M-Key 2280 x 1 (PCIEx4) 2.5" SATA x 1
Display Interface	HDMI 2.0 x 2
Ethernet	RJ-45 x 1 for GbE LAN
I/O	USB Type A x 3 for USB 3.2 Gen 1 DB9 for RS-232/422/485 (By switch) and CANbus x1 HDMI x 2 for Video Display 2.0 HDMI x 4 for Video Input 1.4 (Limitation have stated in User manual) Mic-in x 1, Line-Out x 1 Micro USB for OS Flash x 1 Power ON/OFF switch x 1 Recovery button x 1 SMA Antenna hole x 2
Expansion	M.2 B-Key 3042/3052 x 1 (PCIEx2] + USB 3.0) M.2 E-key x 1(PCIEx1] + USB 2.0)
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 4.6.2 or above)
Power Supply	
Power Requirement	DC-in 12-24V with 2-pin terminal block
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	7.09" x 5.35" x 2.64" (180 mm x 136 mm x 67 mm )
Gross Weight	4.23 lb (1.92 kg)
Net Weight	2.87 lb (1.3 kg)
Environmental	
Operating Temperature	-5°F ~ 140°F (-15°C ~ 60°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5 Grms/ 5 ~ 500Hz/ operation – eMMC
Anti-Shock	50G, IEC 60068-2-27, half sine, 11 ms duration – eMMC
Certification	CE / FCC class A



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	CANBus	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.	OPERATION SYSTEM
BOXER-8256AI-JP462E-A1-1010	Jetson Xavier NX	1	USB 3.2 Gen 1 x 3	1 (by Switch)	1 (by Switch)	—	Mic-in x 1 Line-Out x 1	16GB eMMC MicroSD slot x 1 M.2 M Key x 1 2.5" SATA x 1	HDMI x 2	M.2 B key x 1 M.2 E key x 1 SATA connector and 5V x 1 COM pin header x 1	Wallmount	DC 12V~24V	-15°C ~ 60°C	NVIDIA Jetpack 4.6.2

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- Power Connector x 1
- BOXER-8256AI

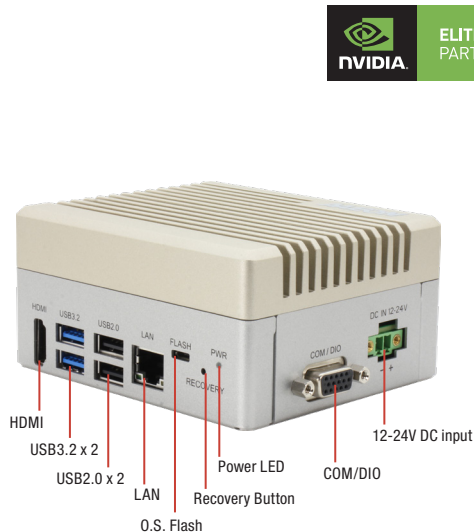
## Optional Accessories

- 1255X00023  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

# BOXER-8621AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin Nano™

Front View



Rear View



## Features

- NVIDIA® Jetson Orin Nano™
- Expansion: M.2 2230 E-Key x 1, M.2 3052 B-Key x 1
- USB 3.2 Gen 2 (Type-A) x 2 & USB 2.0 (Type-A) x 2
- COM, DIO, CANBus
- Operating Temperature: -5°F~ 140°F (-15°C ~ 60°C)



## Specifications

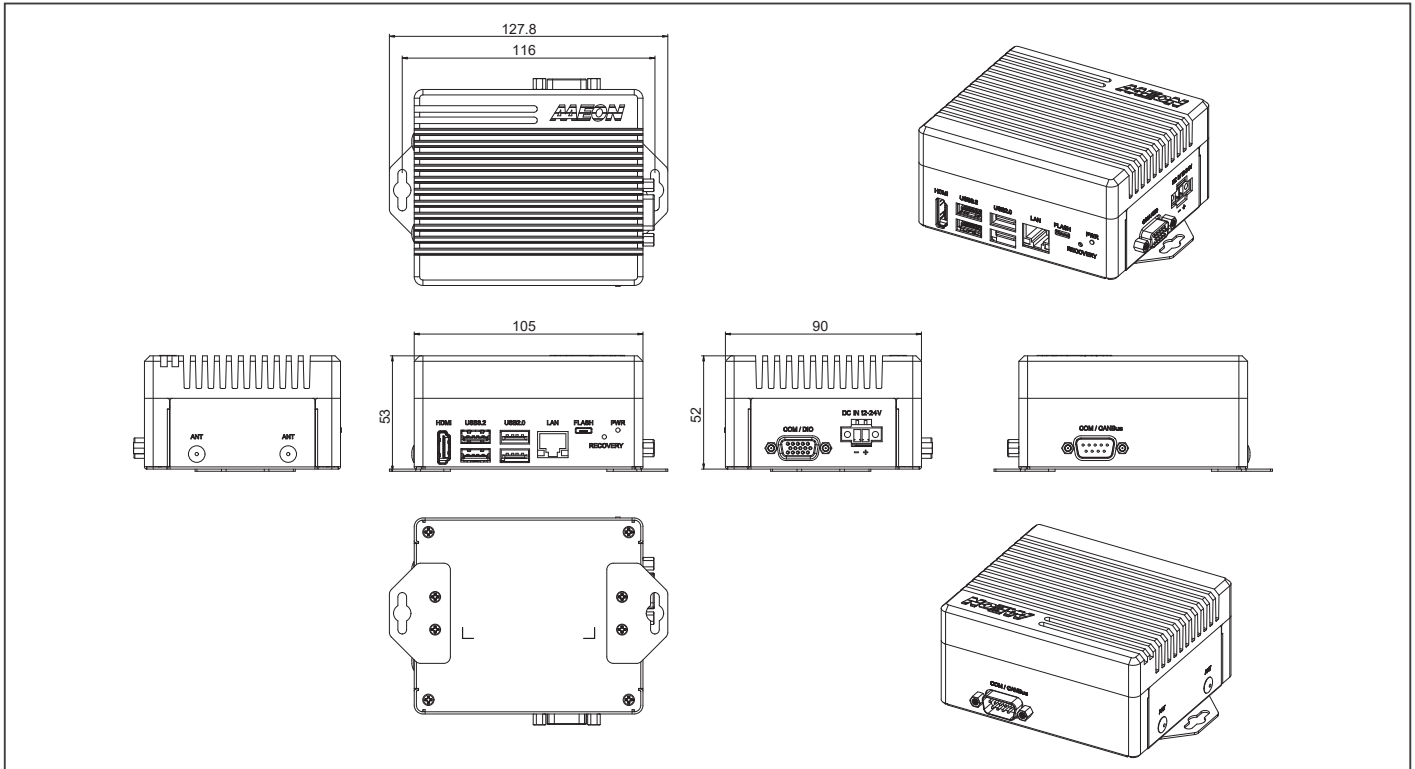
System	
AI Accelerator	NVIDIA® Jetson Orin Nano™
CPU	6-core Arm® Cortex®-A78AE ARMv8.2 64-bit CPU
System Memory	4GB LPDDR5
Storage Device	M.2 3052 B-Key x 1 for M.2 2242 B+M Key SSD (Default Storage) M.2 2230 E-Key x 1 (Optional)
Display Interface	HDMI 1.4 (Type-A) x 1
Ethernet	RJ-45 x 1 for GbE LAN
I/O	USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 (Type-A) x 2 DB-9 for RS-232 (Rx/Tx/CTS/RTS)/485 x 1 and CANBus FD x 1 DB-15 for RS-232 (Rx/Tx)/422/485 x 1 and DIO x 8 Micro USB x 1 for OS Flash Recovery Button x 1 Antenna x 2
Expansion	M.2 3042/3052 B Key x 1 (4G/5G/M.2 2242 B+M Key storage) M.2 2230 E Key x 1 (Wifi/BT/Storage) SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 up)
Power Supply	
Power Requirement	12V~24V DC in with 2 pins terminal block x 1
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	4.13" x 3.54" x 2.05" (105mm x 90mm x 52mm), w/o bracket
Gross Weight	2.4 lb. (1.1Kg)
Net Weight	1.58 lb. (0.7Kg)
Environmental	
Operating Temperature	-5°F ~ 140°F (-15°C ~ 60°C), according to IEC60068-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	5% ~ 95% @ 40C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232/422/485	CANBUS	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8621AI-JP511N-A1-1010	NVIDIA® Jetson Orin Nano™	1	3.2 Gen 2 x 2, 2.0 x 2	2	1	8	M.2 3052 B-Key x 1 for M.2 2242 B+M Key SSD (Default: 128GB) M.2 2230 E-Key x 1 (Optional)	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	Linux (NVIDIA Jetpack™ 5.0 or above)

## Packing List

- BOXER-8621AI x 1
- Wallmount Bracket x 2
- Power connector x 1
- Screw Package x 1

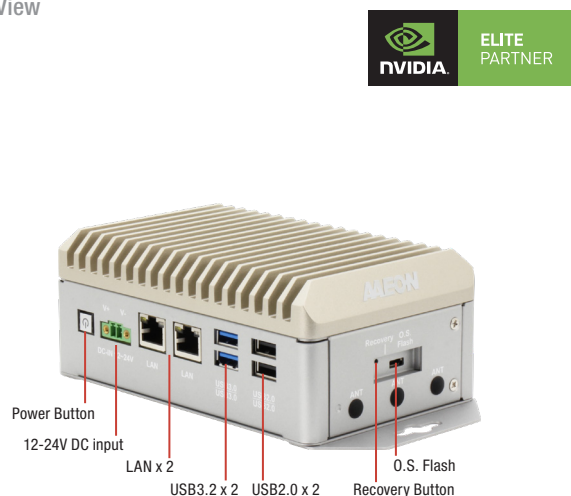
## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

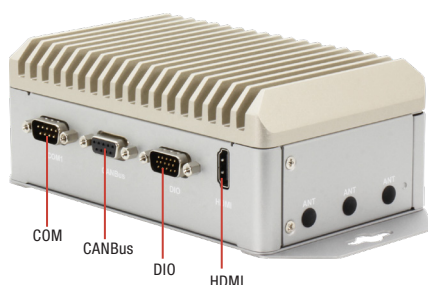
# BOXER-8622AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin Nano™

Front View



Rear View



## Features

- NVIDIA® Jetson Orin Nano™
- 4GB LPDDR5
- Supports M.2 E-Key x 1, M.2 B-Key x 1, M.2 M-Key x 1
- Supports DB-9 x 1 for CANBus
- Supports GbE LAN x 2



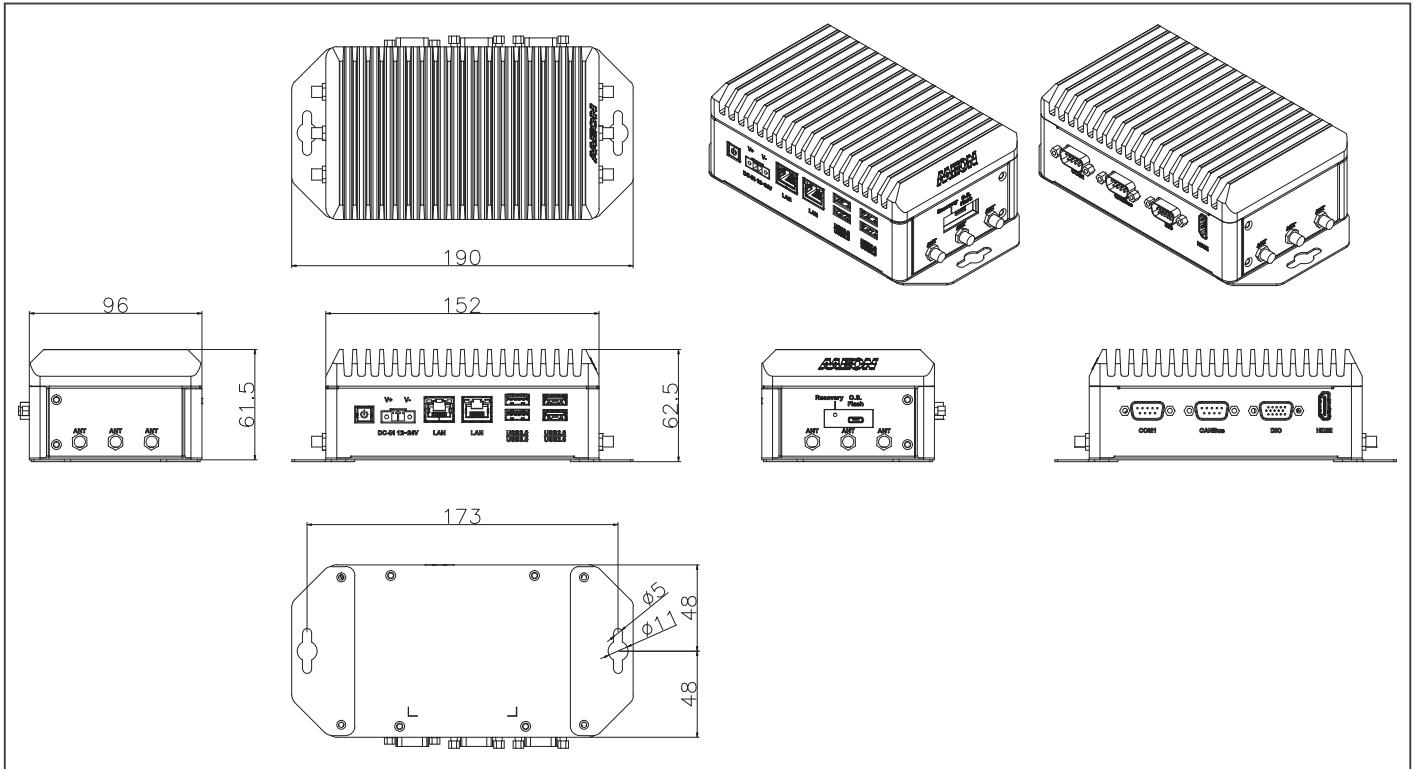
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin Nano™
CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU
System Memory	4GB LPDDR5
Storage Device	M.2 2280 M-Key x 1
Display Interface	HDMI 1.4 (Type-A) x 1
Ethernet	RJ-45 x 2 for 10/100/1000 Base-T
I/O	USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 (Type-A) x 2 Micro USB x 1 for OS Flash DB-9 x 1 for CANBus DB-9 x 1 for RS-232/422/485 DB-15 x 1 for 13-bit DIO Power ON/OFF switch x 1 Recovery button x 1 Antenna Hole x 6
Expansion	M.2 2230 E-Key x 1 (Wi-Fi/Bluetooth) M.2 3042/3052 B-Key x 1 (4G/5G) M.2 2280 M-Key x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 and up)
Power Supply	
Power Requirement	DC-in 12-24V with 2-pin terminal block
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	5.98" x 3.78" x 2.42" (152mm x 96 mm x 61.5mm)
Gross Weight	3.97lb (1.8kg)
Net Weight	2.65lb (1.2kg)
Environmental	
Operating Temperature	-5°F ~ 149°F (-15°C ~ 65°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 85°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz
Anti-Shock	50G peak acceleration
Certification	CE / FCC class A



## Dimension

Unit: mm



## Packing List

- BOXER-8622AI x 1
- Wallmount Bracket x 2
- Power connector x 1
- Screw Package x 1

## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

## Ordering Information

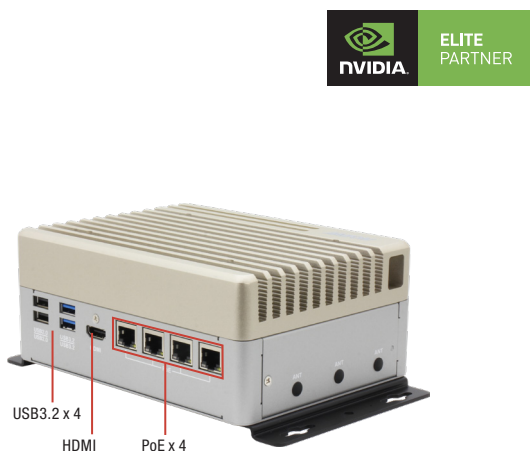
PART NUMBER	AI SOLUTION	LAN	USB	RS-232/422/485	CANBUS	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8622AI-JP511N-A1-1010	NVIDIA® Jetson Orin Nano™ 4GB	2	3.2 Gen 2 x 2, 2.0 x 2	1	1	13	M.2 2280 M-Key x 1 for Storage (Default: 128GB)	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	Linux (NVIDIA Jetpack™ 5.0 or above)



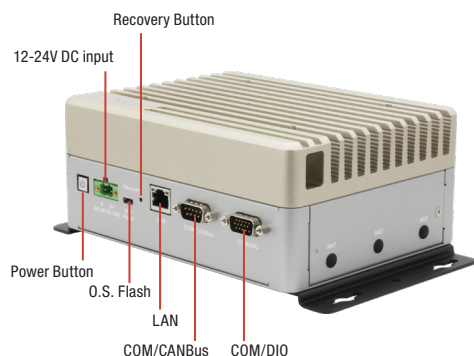
# BOXER-8623AI PRELIMINARY

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin™ NANO

Front View



Rear View



## Features

- NVIDIA® Jetson Orin Nano™
- GbE PoE/PSE 802.3af/at x 4 + GbE LAN x 1
- M.2 2230 E-Key x 1, M.2 2280 M-Key x 1, M.2 3042/3052 B-Key x 1
- COM/CANBus/DIO
- Operating Temperature: -15°C ~ 65°C



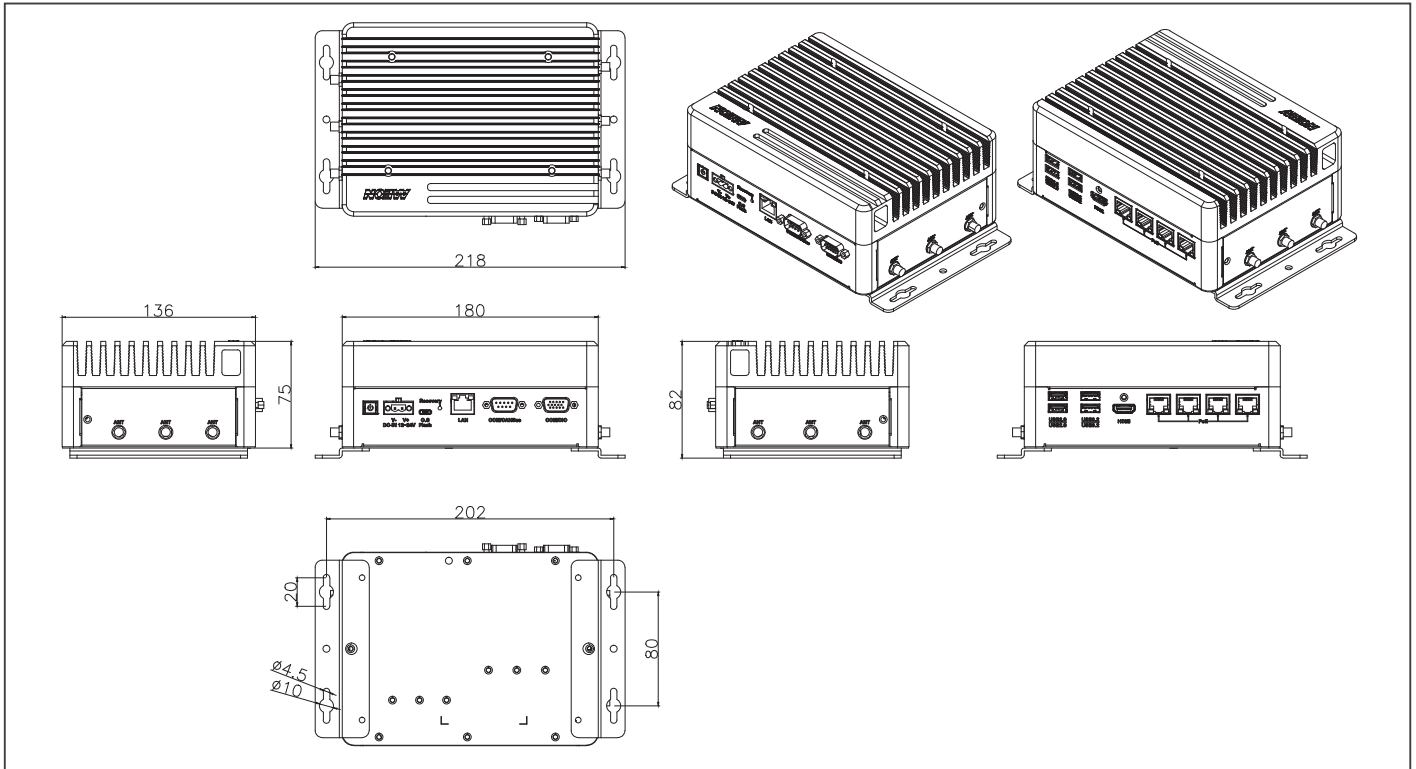
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin Nano™
CPU	6-core Arm® Cortex®-A78AE ARMv8.2 64-bit CPU
System Memory	4GB LPDDR5
Storage Device	M.2 2280 M Key x 1
Display Interface	HDMI 1.4 (Type-A) x 1
Ethernet	RJ-45 x 1 for GbE LAN RJ-45 x 4 for GbE PoE/PSE 802.3af/at (Max.60W)
I/O	USB 3.2 Gen 1 (Type-A) x 2 USB 2.0 (Type-A) x 2 DB-9 x 1 for RS-232 (Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 DB-15 x 1 for RS-232(Rx/Tx)/422/485 x 1 and DIO x 8 Micro USB x 1 for OS Flash Power Button x 1 Recovery Button x 1 Antenna x 6
Expansion	M.2 2280 M-Key x 1 (NVMe) M.2 3042/3052 B-Key x 1 M.2 2230 E-Key x 1 SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 and up)
Power Supply	
Power Requirement	12V ~ 24V DC in with 2-pin Terminal Block x 1
Mechanical	
Mounting	Wall Mount
Dimensions (W x D x H)	7.09" x 5.35" x 2.95" (180mm x 136mm x 75mm)
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	5°F ~ 149°F (-15°C ~ 65°C), according to IEC60068-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	5% ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A



## Dimension

Unit: mm



## Packing List

- TBD

## Optional Accessories

- TBD

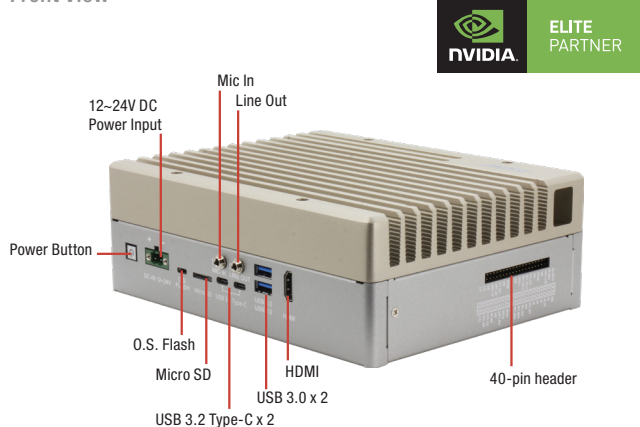
## Ordering Information

- BOXER-8623AI-JP511N-A1-1010

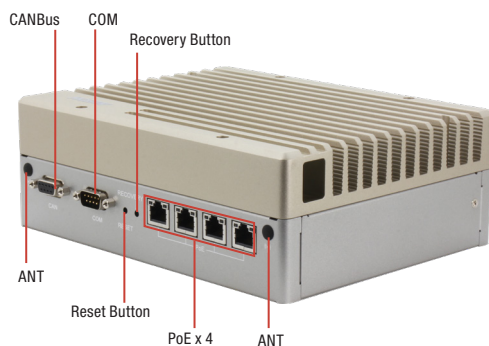
# BOXER-8640AI

AI@Edge Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™

Front View



Rear View



## Features

- NVIDIA® Jetson AGX Orin™
- PoE/PSE 802.3af x 4 (Max. 60W)
- RS-232/422/485 x 1, CANBus x 1
- 40-pin Header, Mic-in/Line-out
- M.2 2230 E-Key, M.2 2280 M-Key, 2.5" SATA Drive Bay



## Specifications

System	
AI Accelerator	NVIDIA® Jetson AGX Orin™
CPU	AGX Orin 32GB: 8-core Arm® Cortex®-A78AE CPU AGX Orin 64GB: 12-core Arm® Cortex®-A78AE CPU
System Memory	32GB LPDDR5 64GB LPDDR5
Storage Device	64GB eMMC 5.1 Micro SD Card Slot x 1 2.5" SATA Drive Bay x 1 M.2 2280 M-Key x 1
Display Interface	HDMI 2.0 x 1
Ethernet	RJ-45 for GbE PoE/PSE 802.3af x 4 (Max. 60W)
I/O	USB 3.2 Gen 2 (Type-A) x 2 USB 3.2 Gen 2 (Type-C) x 2 RS-232/422/485 x 1 CANBus x 1 Mic-in x 1 Line-out x 1 MicroSD Slot x 1 Micro USB x 1 for OS Flash Recovery Button x 1 Power Button x 1 40-pin Header compliant with NVIDIA Jetson Orin Nano Developer Kit (without CANBus)
Expansion	USB 2.0 Header x 1 (Optional, Circuit Reserved) M.2 2230 E-Key x 1 (Wifi/BT) M.2 2280 M-Key x 1 (NVMe) 2.5" SATA Drive Bay x 1 RS-232/422/485 Pin Header x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 or above)
Power Supply	
Power Requirement	DC 12V ~ 24V 2-pin terminal
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	8.26" x 6.46" x 2.91" (210mm x 164.2mm x 74mm)
Gross Weight	8.3 lb. (3.76Kg)
Net Weight	6.4 lb. (2.9Kg)
Environmental	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C, according to IEC60068-2 with 0.5 m/s AirFlow)
Storage Temperature	-40°F ~ 158°F (-40°C ~ 70°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	Random, 3.5 Grms, 5 ~ 500Hz
Anti-Shock	50G Peak Acceleration
Certification	CE/FCC Class A



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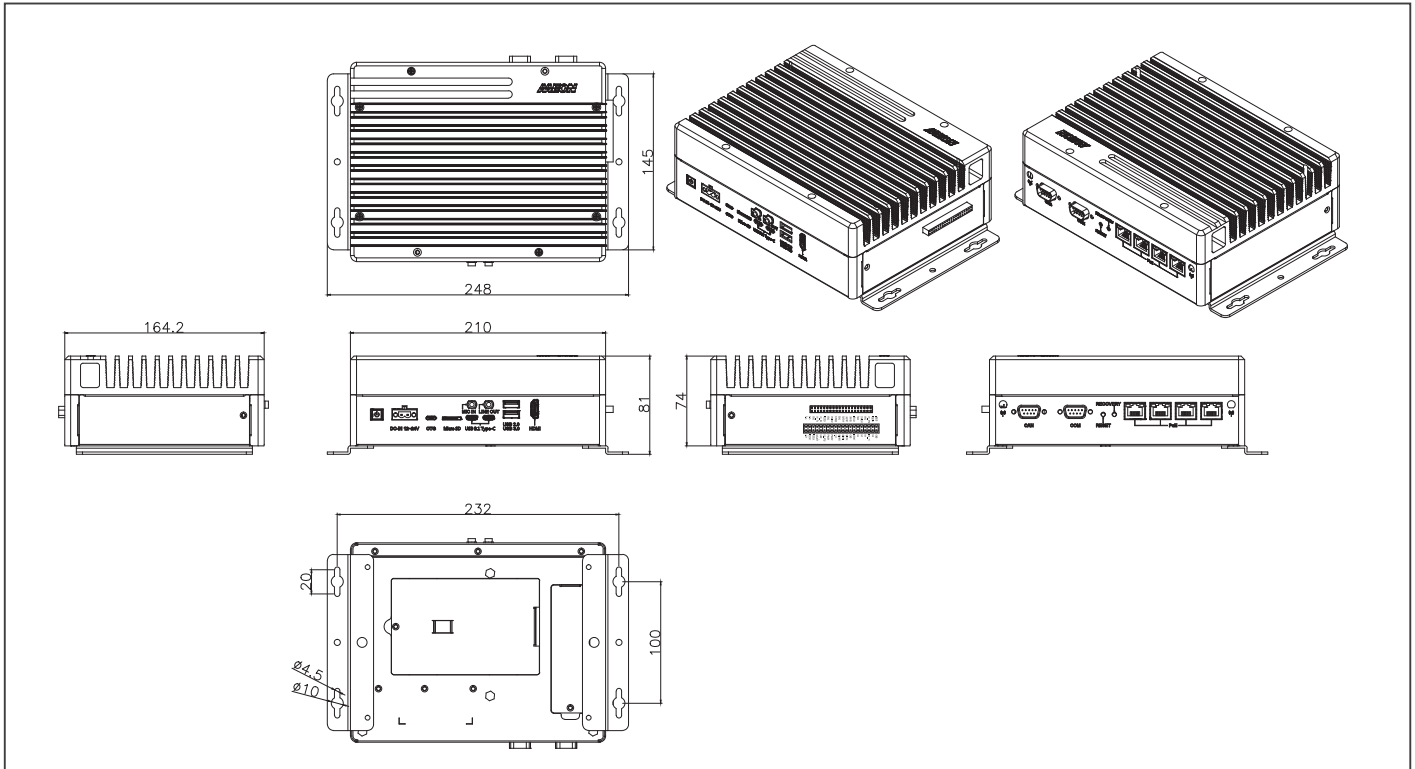
Tél. 01 47 95 99 80  
Fax. 01 47 01 16 22



e-mail : mse@es-france.com  
Site Web : www.es-france.com

## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	PoE LAN	USB	RS-232/422/485	CANBus	40-PIN HEADER	STORAGE	DISPLAY	MOUNTING	POWER	OPERATING SYSTEM
BOXER-8640AI-JP511E-A1-1010	NVIDIA® Jetson AGX Orin™ 32GB	4	3.2 Gen 2 x 4	2	1	1	64GB eMMC + MicroSD + 2.5" SATA + M.2 2280 M Key	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	JetPack™ 5.1.1
BOXER-8640AI-JP511E-A2-1010	NVIDIA® Jetson AGX Orin™ 64GB	4	3.2 Gen 2 x 4	2	1	1	64GB eMMC + MicroSD + 2.5" SATA + M.2 2280 M Key	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	JetPack™ 5.1.1

## Packing List

- BOXER-8640AI
- Wallmount Bracket x 2
- Power Connector x 1
- Screw Package x 1

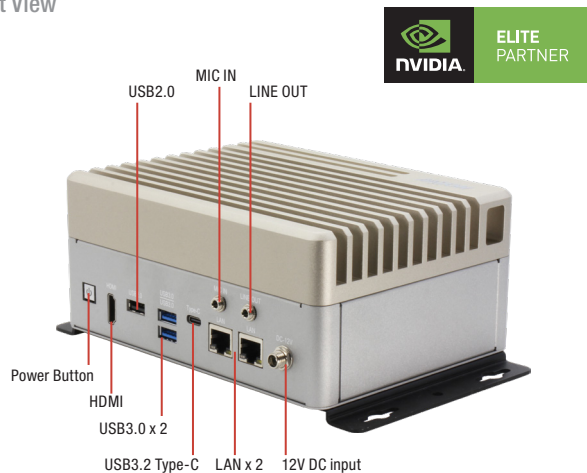
## Optional Accessories

- 1255X00066  
120W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

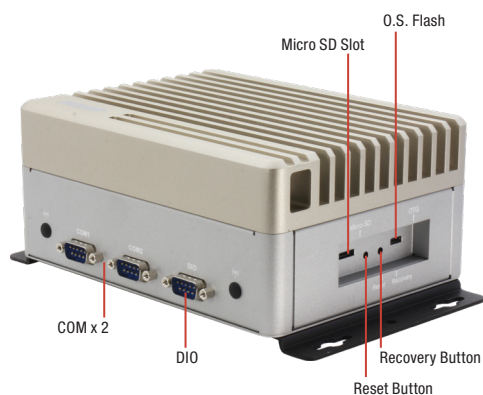
# BOXER-8641AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™

Front View



Rear View



## Features

- NVIDIA® Jetson AGX Orin™
- Multi-storage option: 64GB eMMC / MicroSD slot / 2.5" SATA drive bay/ M.2 2280 M Key
- Support M.2 E Key / M.2 B Key / M.2 M Key
- Support GbE LAN x 2



## Specifications

System	
AI Accelerator	NVIDIA® Jetson AGX Orin™
CPU	AGX Orin 32GB: 8-core Arm® Cortex®-A78AE CPU AGX Orin 64GB: 12-core Arm® Cortex®-A78AE CPU
System Memory	32GB LPDDR5 64GB LPDDR5
Storage Device	64GB eMMC 5.1 x 1 MicroSD slot x 1 SATA drive bay x 1
Display Interface	HDMI Type A for HDMI 2.0 x 1
Ethernet	RJ-45 for GbE LAN x 2
I/O	USB Type A for USB 3.2 Gen 2 x 2 USB Type C for USB 3.2 Gen 2 x 1 USB Type A for USB 2.0 x 1 Micro USB x 1 for OS Flash Mic in and Line out x1 Reset Button x 1 Recovery Button x 1 MicroSD card slot x 1 Antenna opening x 4 Power Button x 1 DB-9 x 2 for RS-232/422/485 DB-9 x 1 for DIO x 8
Expansion	M.2 E-Key 2230 ( for Wifi/BT ) x 1 M.2 B-Key 3052 x 1 M.2 M-Key 2280 ( NVMe ) x 1 2.5" SATA drive bay SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux ( NVIDIA Jetpack 5.0 or above )
Power Supply	
Power Requirement	12V DC with lockable DC Jack
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	7.09 " x 5.35 " x 3.11" (180.0 mm x 136 .0 mm x 79.1 mm)
Gross Weight	7.8lb ( 3.55kg )
Net Weight	5.5lb ( 2.5kg )
Environmental	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 158°F (-40°C ~ 70°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / operation-eMMC, MicroSD or SSD
Anti-Shock	50G peak acceleration (11 msec. duration, eMMC, microSD, or SSD)
Certification	CE / FCC Class B



ES France - Mobilité & Systèmes Embarqués  
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 80  
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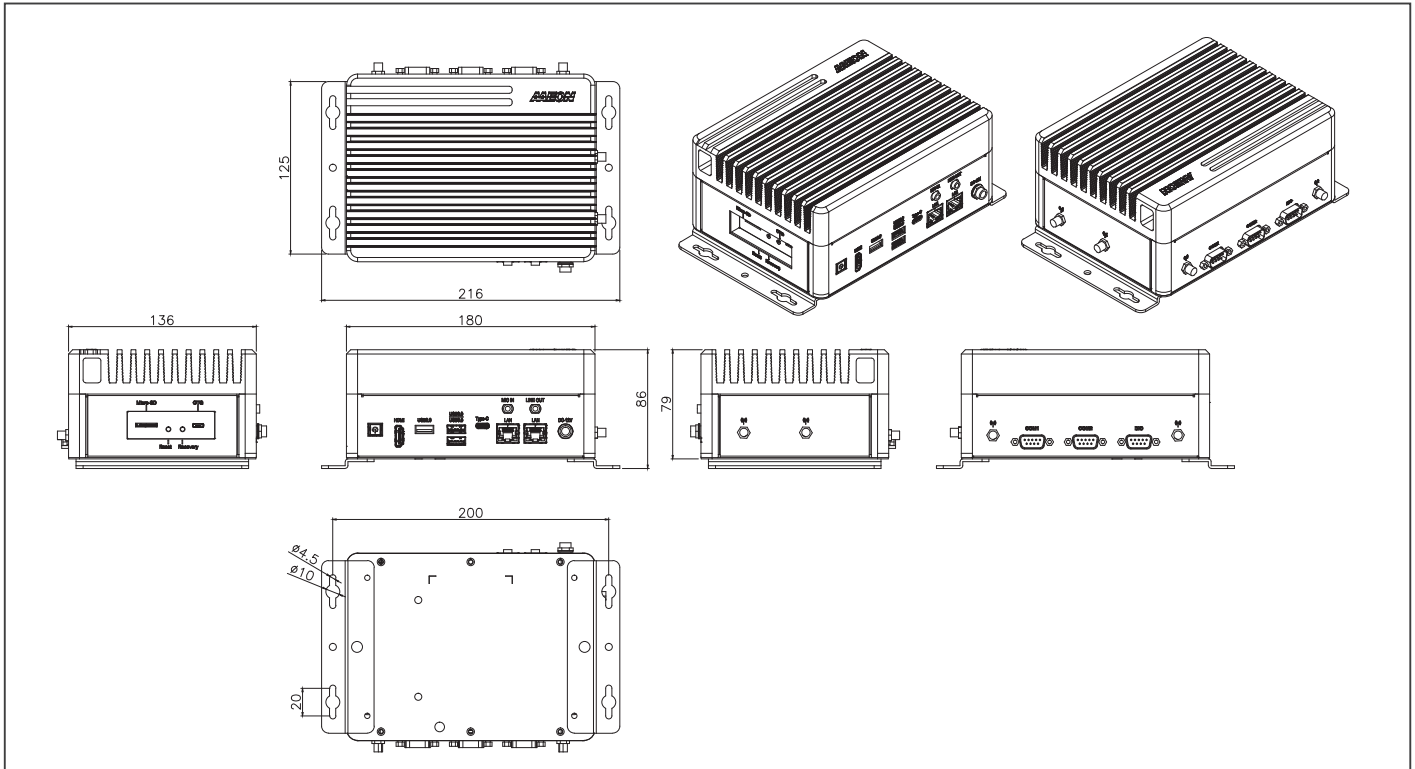


e-mail : mse@es-france.com  
Site Web : www.es-france.com



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232/422/485	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8641AI-JP511E-A1-1010	NVIDIA® Jetson AGX Orin™ 32GB	2	3.2 Gen 2 x 3 + 2.0 x 1	2	8	64GB eMMC + MicroSD + 2.5"SATA + M.2 2280 M Key	HDMI x 1	Wall mount	12V DC w/ lockable connector	NVIDIA Jetpack 5.1.1
BOXER-8641AI-JP511E-A2-1010	NVIDIA® Jetson AGX Orin™ 64GB	2	3.2 Gen 2 x 3 + 2.0 x 1	2	8	64GB eMMC + MicroSD + 2.5"SATA + M.2 2280 M Key	HDMI x 1	Wall mount	12V DC w/ lockable connector	NVIDIA Jetpack 5.1.1

## Packing List

- BOXER-8641AI
- Wallmount Bracket x 2
- Screw Package x 1

## Optional Accessories

- 1255X00057  
84W, lockable DC jack
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

# BOXER-8645AI

PRELIMINARY

AI@Edge Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™

Front View



Rear View



## Features

- NVIDIA® Jetson AGX Orin™
- GMSL2 with FAKRA Connectors x 8
- 10G LAN x 1, Giga LAN x 1
- ACC Ignition Delay On/Off
- Military Standard Vibration and Shock
- E-Mark Certified
- Additional LAN x 8 (Optional)



## Specifications

System	
AI Accelerator	NVIDIA® Jetson AGX Orin™
CPU	8-core ARM v8.2 64bit CPU, 2MB L2 + 4MB L3
System Memory	32GB 256-Bit LPDDR5 205GB/s
Storage Device	64GB eMMC 5.1 x 1 M.2 2280 M-Key x 1 (NVMe) 2.5" SATA x 2
Display Interface	HDMI 2.0 x 1 (Type-A)
Ethernet	RJ-45 for 10G x 1 RJ-45 for Giga LAN x 1 Additional LAN x 8 (Optional)
I/O	GMSL2 with FAKRA x 8 USB 3.2 Gen 2 x 4 (Type-A) Micro USB x 1 for OS Flash Line-Out x 1 DB-9 x 1 for Isolated CANBus x 2 DB-9 x 2 for RS-232 (Rx/Tx/CTS/RTS)/RS-485 x 2 DB-9 x 1 for DIO x 8 Switch x 1 for Ignition Delay On/Off 3-pin Terminal Block x 1 for Power Input Power Button x 1 Recovery Button x 1 Antenna Hole x 7 TPM Support GNSS Support 9-Axis Sensor Support
Expansion	M.2 2230 E-Key x 1 (Wifi/BT) M.2 3052 B-Key x 1 (LTE) M.2 2280 M-Key x 1 (NVMe) 2.5" SATA x 2 SIM Slot x 1 MicroSD Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA JetPack™ 5.0 and above)
Power Supply	
Power Requirement	3-pin Terminal Block x 1 for 9V ~ 36V ACC Ignition Delay On/Off
Mechanical	
Mounting	Wall mount
Dimensions (W x D x H)	11.26" x 7.95" x 3.54" (286mm x 202mm x 90mm)
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 158°F (-25°C ~ 70°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	MIL-STD-810G, 514.6C Procedure 1, Category 4 Trucker/Semitrailer on US highway (Figure 514.6C-1-Category 4-Common carrier)
Anti-Shock	MIL-STD-810G, Method 516.6, Procedure I, flight vehicle equipment
Certification	E-Mark, CE/FCC Class A

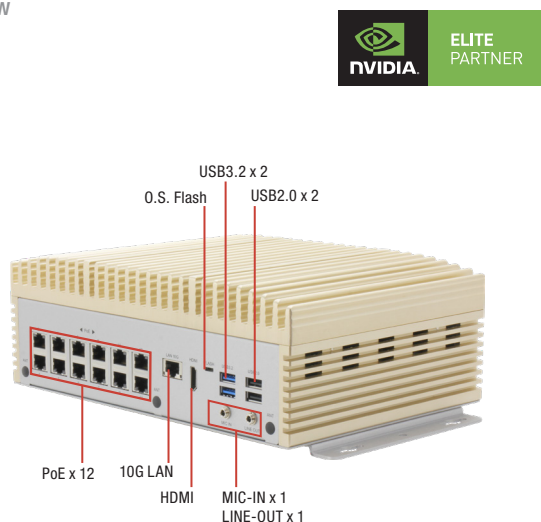




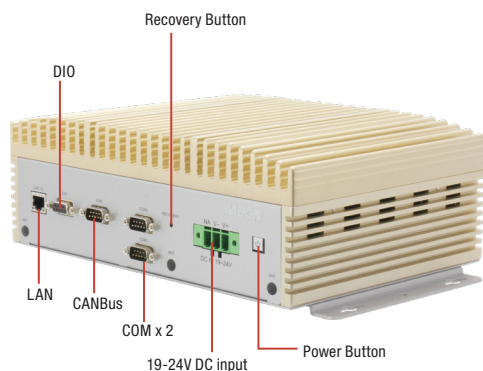
# BOXER-8646AI

AI@Edge Fanless PoE Embedded AI System with NVIDIA® Jetson AGX Orin™

Front View



Rear View



## Features

- NVIDIA® Jetson AGX Orin™
- PoE/PSE GbE LAN x 12
- 10G LAN x 1 and Giga LAN x 1
- Multi-expansion: M.2 E Key / M.2 B Key / M.2 M Key
- CANBus / COM / DIO



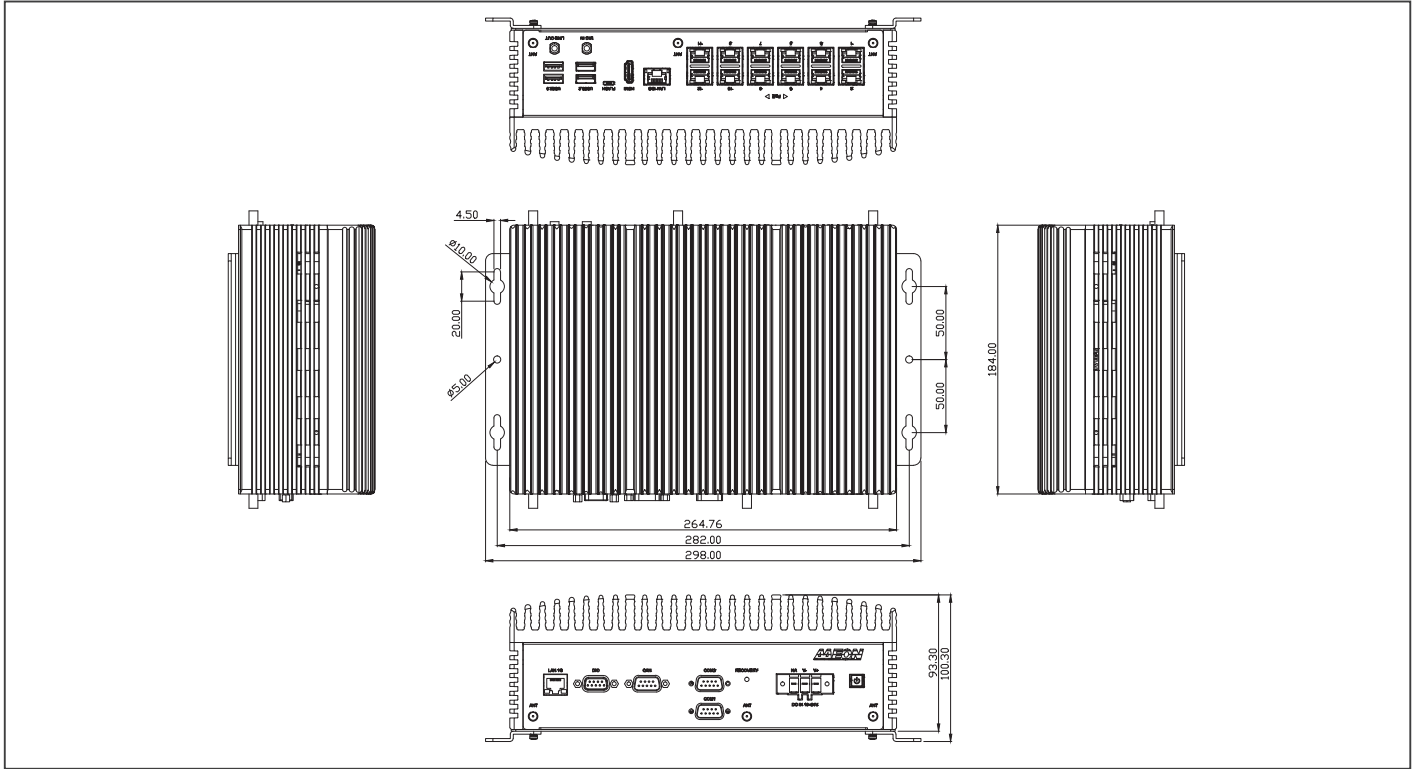
## Specifications

System	
AI Accelerator	NVIDIA® Jetson AGX Orin™
CPU	8-core ARM v8.2 64bit CPU, 2MB L2 + 4MB L3
System Memory	32GB LPDDR5
Storage Device	64GB eMMC 5.1 x 1 M.2 2280 NVMe M Key x 1
Display Interface	HDMI Type A x 1 for HDMI 2.0
Ethernet	RJ-45 x 12 for GbE PoE/PSE (802.3af/at, MAX.:120W) RJ-45 x 1 for 10G LAN RJ-45 x 1 for Giga LAN
I/O	USB Type A for USB 3.2 Gen 1 x 2 USB Type A for USB 2.0 x 2 Micro USB x 1 for OS Flash Mic-in x 1 Line-out x 1 DB-9 x 1 for CANBus FD x 2 DB-9 x 2 for RS-232/422/485 DB-9 x 1 for DIO x 8 3-pin terminal block x 1 for power input Power button x 1 Recovery button x 1 Antenna hole x 6
Expansion	M.2 2230 E Key x 1 (Wifi/BT) M.2 3052 B Key x 1 (LTE) M.2 2280 NVMe M Key x 1 SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 5.0 or above)
Power Supply	
Power Requirement	3-pin terminal block x 1 for 19V~24V
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	10.42 " x 7.24 " x 3.67" (264.76 mm x 184.00 mm x 93.30 mm)
Gross Weight	12.13lb (5.5kg)
Net Weight	9.92lb (4.5kg)
Environmental	
Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 158°F (-40°C ~ 70°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz
Anti-Shock	50G peak acceleration
Certification	CE / FCC class A



## Dimension

Unit: mm



## Packing List

- BOXER-8646AI x 1
- Wallmount Bracket x 2
- Power Connector x 1
- Screw Package x 1

## Optional Accessories

- 1255903300  
330W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

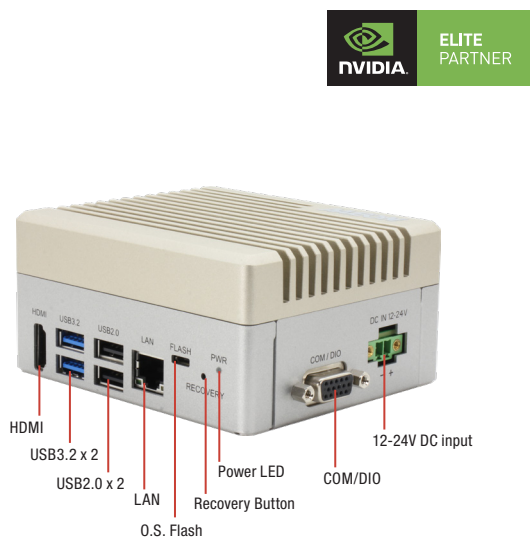
## Ordering Information

PART NUMBER	AI SOLUTION	POE LAN	USB	RS-232/422/485	CANBUS	LAN	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8646AI-JP511E-A1-1010	Jetson AGX Orin	12 (Max. 120W)	4	2	2	10G LAN x 1, Giga LAN x 1	64GB eMMC, M.2 2280 NVMe M Key	HDMI x 1	Wall mount	19V ~ 24VDC w/ 3 pin terminal block	Linux ( NVIDIA Jetpack 5.x up )

# BOXER-8651AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin NX

Front View



Rear View



## Features

- NVIDIA® Jetson Orin NX
- Expansion: M.2 2230 E-Key x 1, M.2 3052 B-Key x 1
- USB 3.2 Gen 2 (Type-A) x 2 & USB 2.0 (Type-A) x 2
- COM, DIO, CANBus
- Operating Temperature: -5°F~ 131°F (-15°C ~ 55°C)



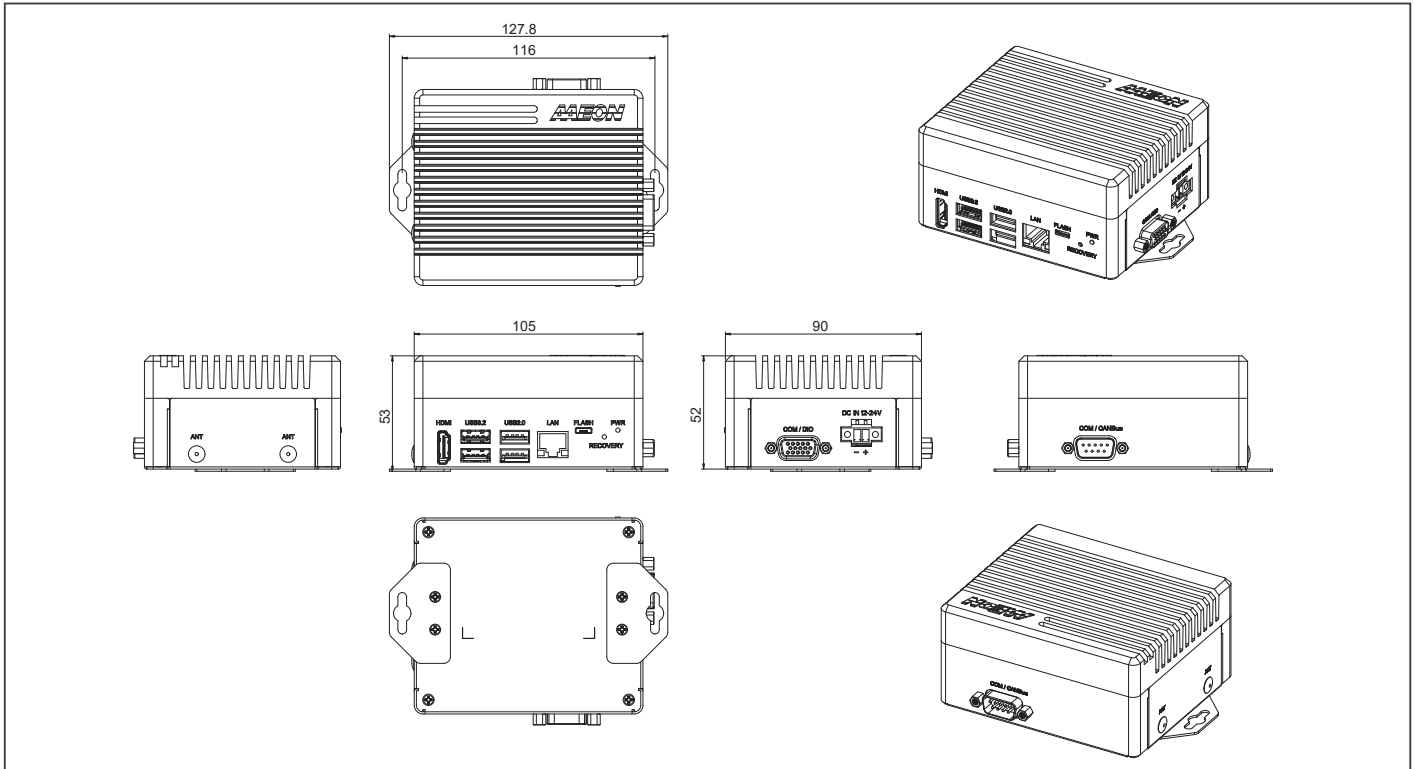
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin NX
CPU	6-core Arm® Cortex®-A78AE ARMv8.2 64-bit CPU
System Memory	8GB LPDDR5
Storage Device	M.2 3052 B-Key x 1 for M.2 2242 B+M Key SSD (Default Storage) M.2 2230 E-Key x 1 (Optional)
Display Interface	HDMI 2.1 (Type-A) x 1
Ethernet	RJ-45 x 1 for GbE LAN
I/O	USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 (Type-A) x 2 DB-9 for RS-232 (Rx/Tx/CTS/RTS)/485 x 1 and CANBus FD x 1 DB-15 for RS-232 (Rx/Tx)/422/485 x 1 and DIO x 8 Micro USB x 1 for OS Flash Recovery Button x 1 Antenna x 2
Expansion	M.2 3042/3052 B Key x 1 (4G/5G/M.2 2242 B+M Key storage) M.2 2230 E Key x 1 (Wifi/BT/Storage) SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 up)
Power Supply	
Power Requirement	12V~24V DC in with 2 pins terminal block x 1
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	4.13" x 3.54" x 2.05" (105mm x 90mm x 52mm), w/o bracket
Gross Weight	2.4 lb. (1.1Kg)
Net Weight	1.58 lb. (0.7Kg)
Environmental	
Operating Temperature	-5°F ~ 131°F (-15°C ~ 55°C), according to IEC60068-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	5% ~ 95% @ 40C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232/422/485	CANBUS	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8651AI-JP511N-A1-1010	NVIDIA® Jetson Orin NX	1	3.2 Gen 2 x 2, 2.0 x 2	2	1	8	M.2 3052 B-Key x 1 for M.2 2242 B+M Key SSD (Default: 128GB) M.2 2230 E-Key x 1 (Optional)	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	Linux (NVIDIA Jetpack™ 5.0 or above)

## Packing List

- BOXER-8651AI X 1
- Wallmount Bracket x 2
- Power connector x 1
- Screw Package x 1

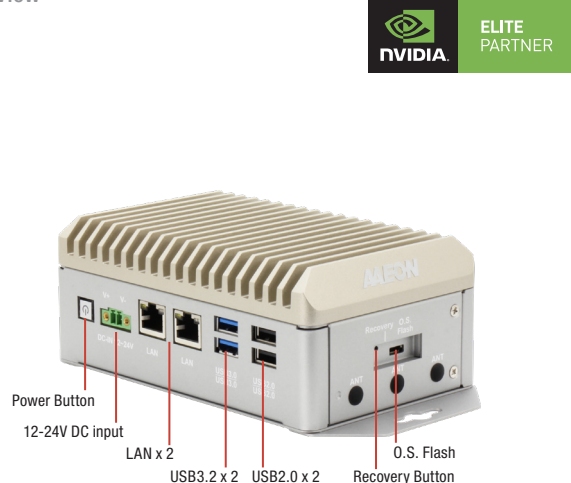
## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

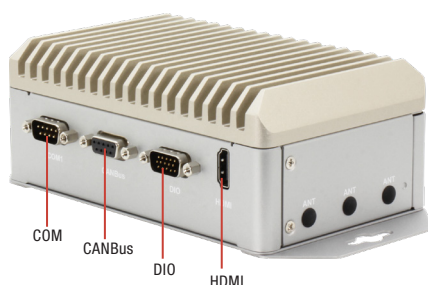
# BOXER-8652AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin™ NX

Front View



Rear View



## Features

- NVIDIA® Jetson Orin™ NX
- 8GB LPDDR5
- Supports M.2 E-Key x 1, M.2 B-Key x 1, M.2 M-Key x 1
- Supports DB-9 x 1 for CANBus
- Supports GbE LAN x 2



## Specifications

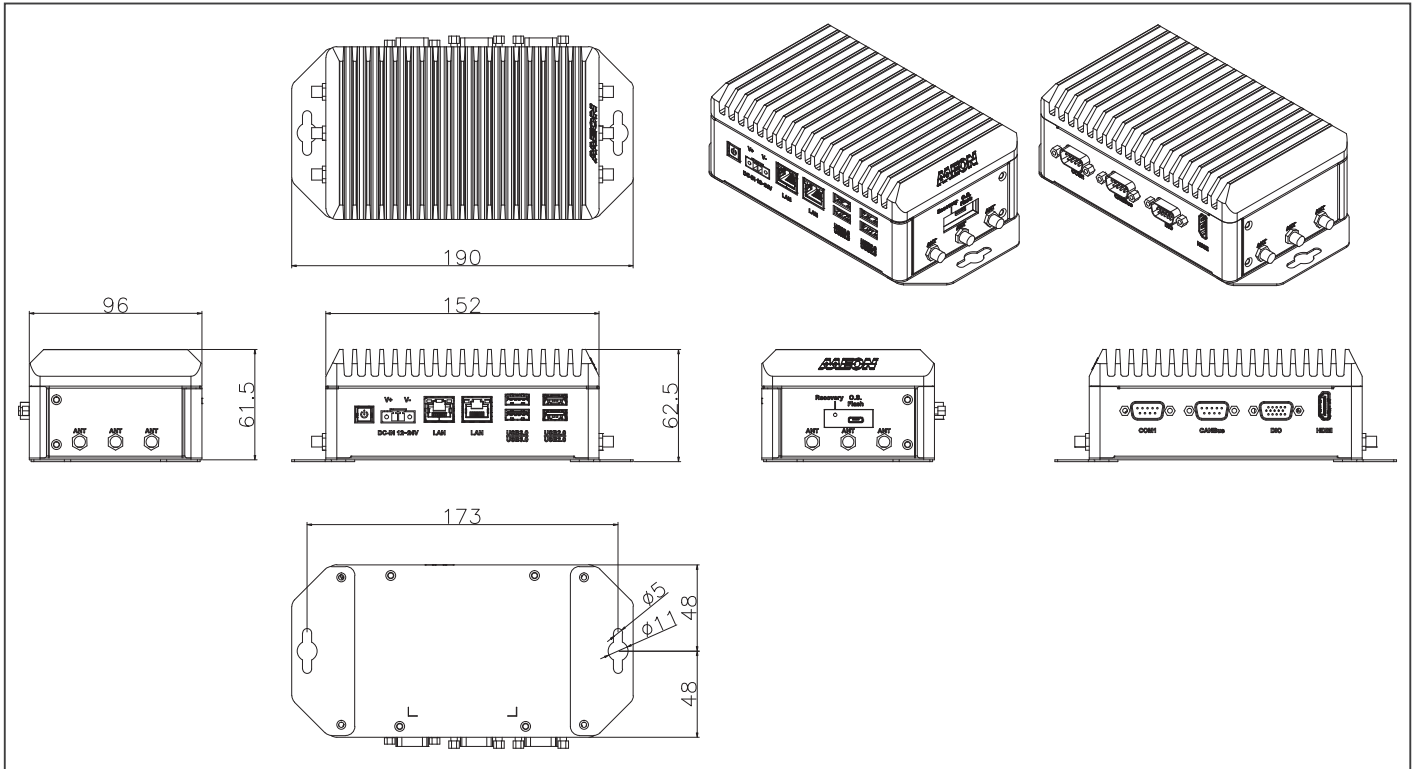
System	
AI Accelerator	NVIDIA® Jetson Orin™ NX
CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU
System Memory	8GB LPDDR5
Storage Device	M.2 2280 M-Key x 1
Display Interface	HDMI 2.0 (Type-A) x 1
Ethernet	RJ-45 x 2 for 10/100/1000 Base-T
I/O	USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 (Type-A) x 2 Micro USB x 1 for OS Flash DB-9 x 1 for CANBus DB-9 x 1 for RS-232/422/485 DB-15 x 1 for 13-bit DIO Power ON/OFF switch x 1 Recovery button x 1 Antenna Hole x 6
Expansion	M.2 2230 E-Key x 1 (Wi-Fi/Bluetooth) M.2 3042/3052 B-Key x 1 (4G/5G) M.2 2280 M-Key x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 and up)
Power Supply	
Power Requirement	DC-in 12-24V with 2-pin terminal block
Mechanical	
Mounting	Wall mount kit
Dimensions (W x D x H)	5.98" x 3.78" x 2.42" (152mm x 96 mm x 61.5mm)
Gross Weight	3.97lb (1.8kg)
Net Weight	2.65lb (1.2kg)
Environmental	
Operating Temperature	-5°F ~ 140°F (-15°C ~ 60°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 85°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz
Anti-Shock	50G peak acceleration
Certification	CE / FCC class A





## Dimension

Unit: mm



## Packing List

- BOXER-8652AI x 1
- Wallmount Bracket x 2
- Power connector x 1
- Screw Package x 1

## Optional Accessories

- 1255300611  
60W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

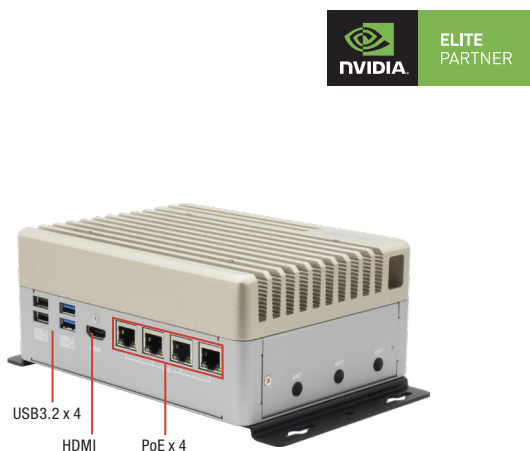
## Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232/422/485	CANBUS	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8652AI-JP511N-A1-1010	NVIDIA® Jetson Orin NX™	2	3.2 Gen 2 x 2, 2.0 x 2	1	1	13	M.2 2280 M-Key x 1 for Storage (Default: 128GB)	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	Linux (NVIDIA Jetpack™ 5.0 or above)

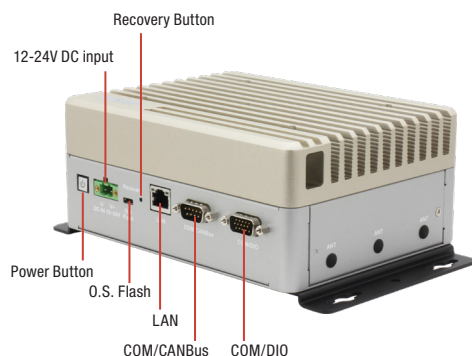
# BOXER-8653AI

AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson Orin™ NX

Front View



Rear View



## Features

- NVIDIA® Jetson Orin™ NX
- GbE PoE/PSE 802.3af/at x 4 + GbE LAN x 1
- M.2 2230 E-Key x 1, M.2 2280 M-Key x 1, M.2 3042/3052 B-Key x 1
- COM/CANBus/DIO
- Operating Temperature: -15°C ~ 60°C



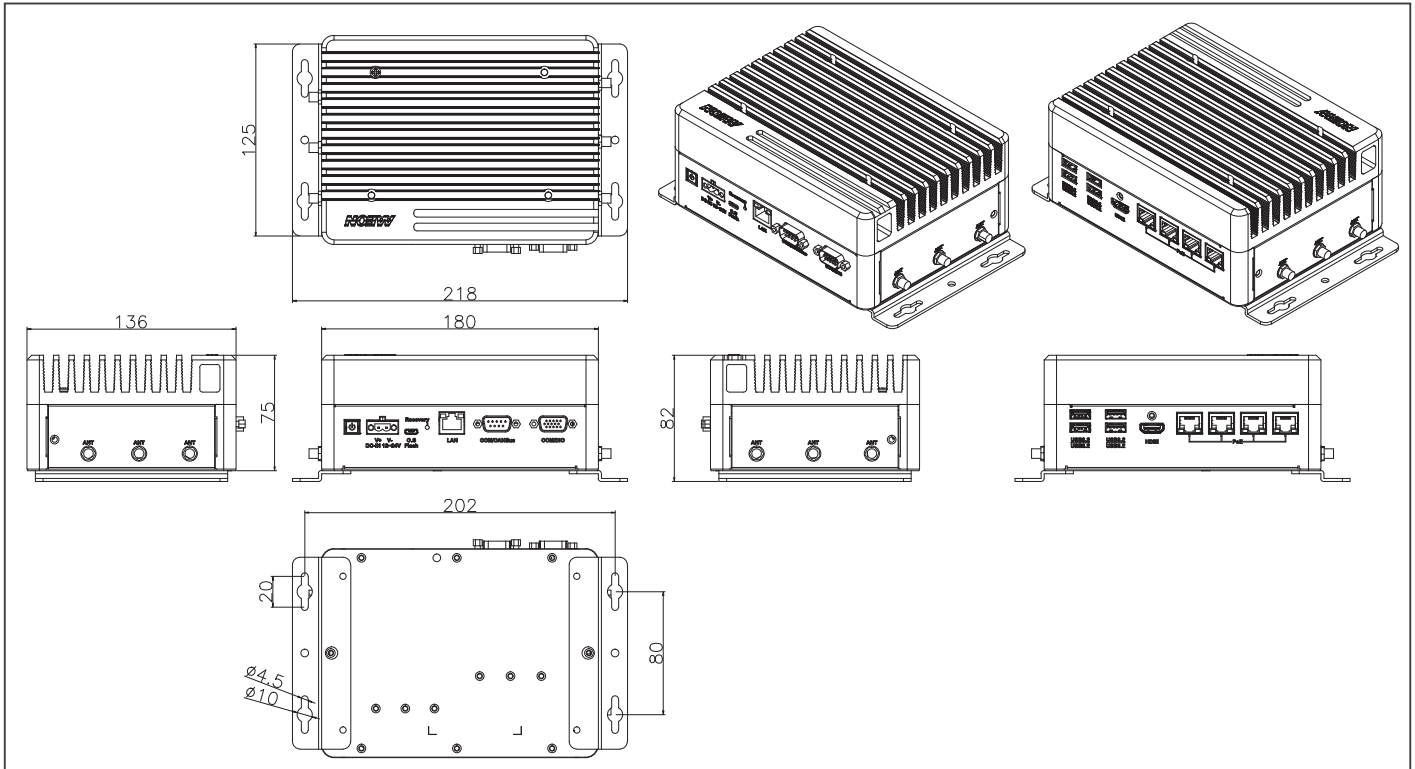
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin™ NX
CPU	6-core Arm® Cortex®-A78AE ARMv8.2 64-bit CPU
System Memory	8GB LPDDR5
Storage Device	M.2 2280 M Key x 1
Display Interface	HDMI 2.0 (Type-A) x 1
Ethernet	RJ-45 x 1 for GbE LAN RJ-45 x 4 for GbE PoE/PSE 802.3af/at (Max.60W)
I/O	USB 3.2 Gen 2 (Type-A) x 4 DB-9 x 1 for RS-232 (Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 DB-15 x 1 for RS-232(Rx/Tx)/422/485 x 1 and DIO x 8 Micro USB x 1 for OS Flash Power Button x 1 Recovery Button x 1 Antenna Hole x 6
Expansion	M.2 2280 M-Key x 1 (NVMe) M.2 3042/3052 B-Key x 1 M.2 2230 E-Key x 1 SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack™ 5.0 and up)
Power Supply	
Power Requirement	12V ~ 24V DC in with 2-pin Terminal Block x 1
Mechanical	
Mounting	Wall Mount
Dimensions (W x D x H)	7.09" x 5.35" x 2.95" (180mm x 136mm x 75mm)
Gross Weight	7.7 lb (3.5kg)
Net Weight	5.5 lb (2.5kg)
Environmental	
Operating Temperature	5°F ~ 140°F (-15°C ~ 60°C), according to IEC60068-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	5% ~ 95% @ 40°C, non-condensing
Anti-Vibration	3.5Grms / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A



## Dimension

Unit: mm



## Packing List

- BOXER-8653AI x 1
- Wallmount Bracket x 2
- Power connector x 1
- Screw Package x 1

## Optional Accessories

- 1255X00066  
120W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

## Ordering Information

PART NUMBER	AI SOLUTION	LAN	POE	USB	COM	CANBUS	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8653AI- JP511N-A1-1010	NVIDIA® Jetson Orin NX™ 8GB	1	4	3.2 Gen 2 x 4	2	1	8	M.2 2280 M-Key x 1 for Storage (Default: 128GB)	HDMI x 1	Wall mount	12 ~ 24VDC w/ 2 pin terminal block	Linux (NVIDIA Jetpack™ 5.0 or above)

# BOXER-8658AI PRELIMINARY

AI@Edge Fanless PoE Embedded AI System with NVIDIA® Jetson Orin™ NX

Front View



Rear View



## Features

- NVIDIA® Jetson Orin™ NX
- PoE/PSE GbE LAN x 8
- Giga LAN x 2
- 9V ~ 36V DC in with ACC Ignition Delay On/Off
- Military Standard Vibration and Shock
- IMU, TPM, GNSS



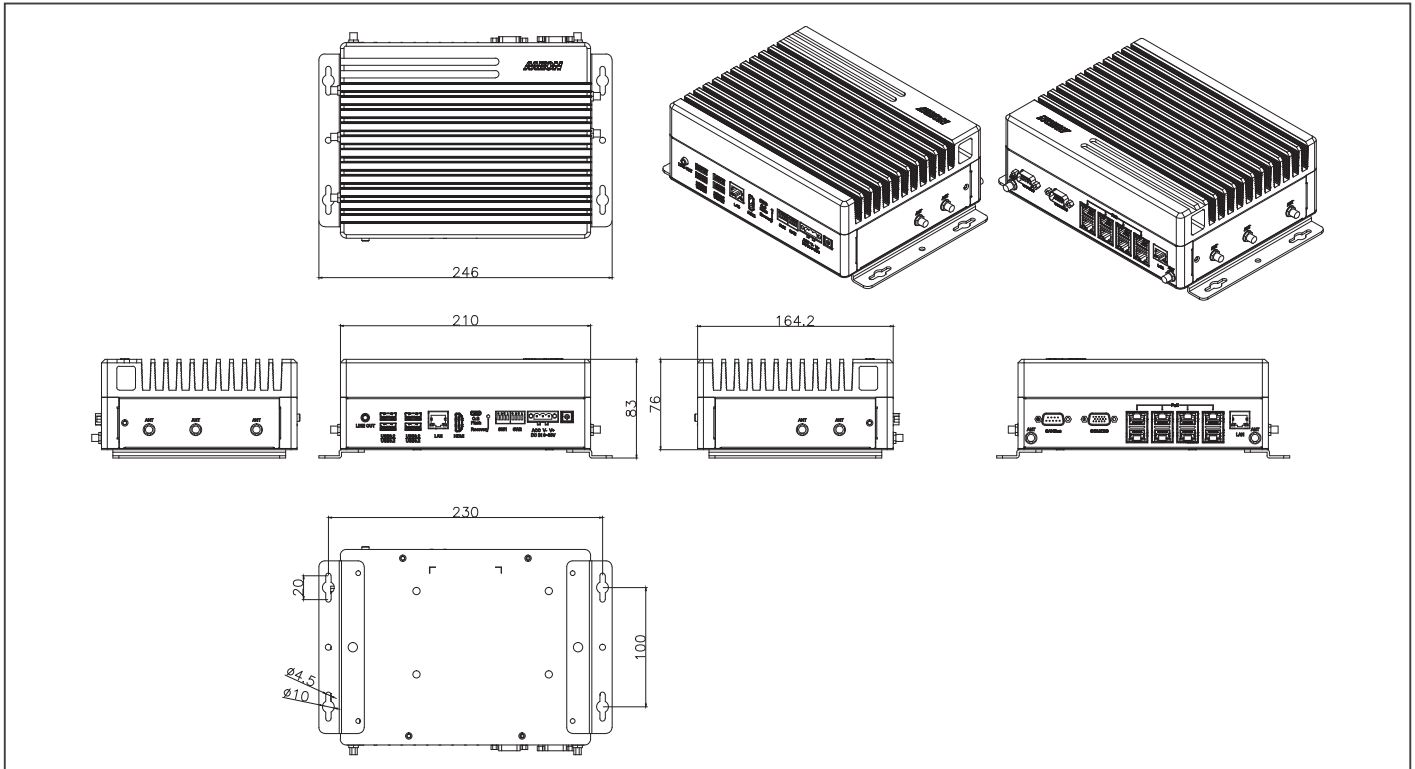
## Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin™ NX
CPU	6-core Arm® Cortex®-A78AE ARMv8.2 64-bit CPU
System Memory	8GB LPDDR5
Storage Device	2.5" SATA Driver Bay x 1, M.2 2280 NVMe M Key x 1
Display Interface	HDMI 2.0 type A x 1
Ethernet	RJ-45 x 8 for GbE PoE/PSE (802.3af/at, MAX.:120W) RJ-45 x 2 for Giga LAN
I/O	USB 3.2 Gen 2 type A x 4 DB-9 x 1 for CANBus FD x 1 DB-15 x 1 for RS232/422/485 x 1 and DIO x 8 Line out x 1 Micro USB x 1 for OS Flash Power button x 1 Recovery button x 1 Switch x 1 for ACC Ignition Delay On/Off Antenna x 7 TPM Support GNSS Support 9-Axis Sensor Support
Expansion	M.2 2230 E Key x 1 (Wifi/BT) M.2 3052 B Key x 1 (LTE) M.2 2280 NVMe M Key x 1 2.5" SATA x 1 SIM Slot x 2
Indicator	Power LED x 1
OS Support	Linux (NVIDIA JetPack™ 5.0 and above)
Power Supply	
Power Requirement	3-pin Terminal Block x 1 for 9V ~ 36V ACC Ignition Delay On/Off
Mechanical	
Mounting	Wall Mount Kit
Dimensions (W x D x H)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	5°F ~ 140°F (-15°C ~ 60°C with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	MIL-STD-810G, 514.6C Procedure 1, Category 4 Trucker/Semitrailer on US highway (Figure 514.6C-1-Category 4-Common carrier)
Anti-Shock	MIL-STD-810G, Method 516.6, Procedure I, flight vehicle equipment
Certification	CE / FCC class A



## Dimension

Unit: mm



## Packing List

- TBD

## Ordering Information

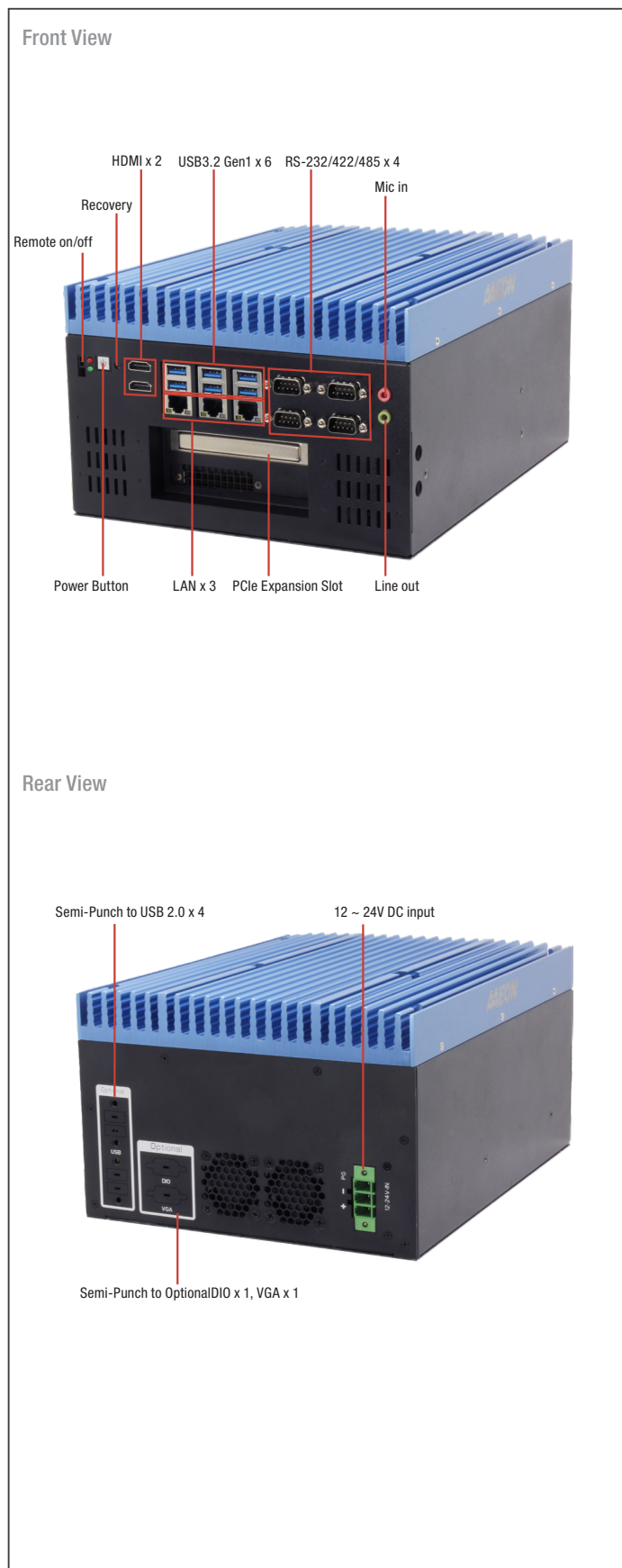
- BOXER-8658AI-JP511N-A1-1010

## Optional Accessories

- TBD

# BOXER-8332AI-CFL

High Computing Power AI Edge Server with 8th/9th Generation Intel® Processor & NVIDIA A2



## Features

- High Computing Power
- Built in Nvidia A2 x1
- Intel Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x2 for Dual Display
- Support C246 PCH
- Support PCIe x4
- Single Power Input (for both System & one Graphics Card)



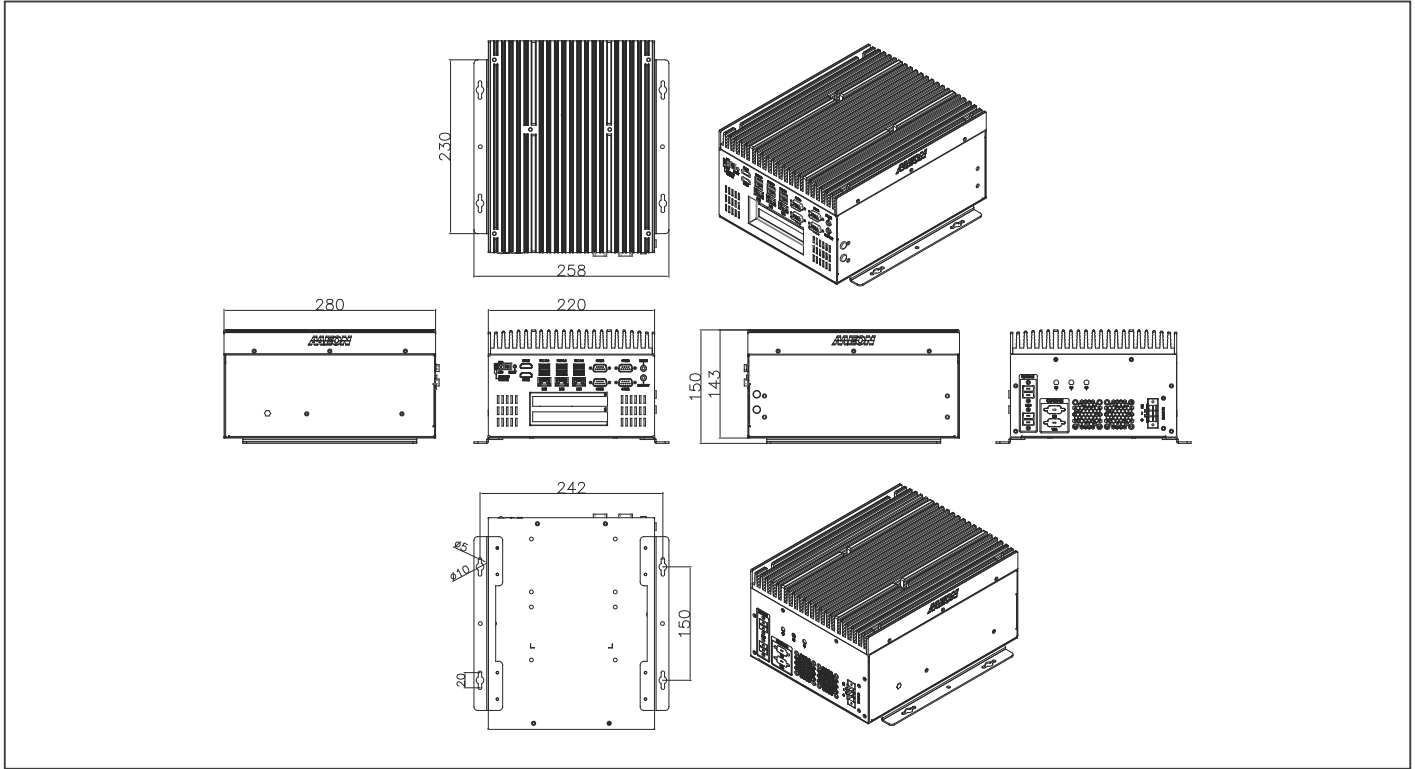
## Specifications

System	
CPU	Intel® Xeon® E-2124G Intel® Core™ i7-9700TE Intel® Core™ i7-8700T Intel® Core™ i5-8500T Intel® Core™ i3-8100T Intel® Pentium® G5400T Intel® Celeron® G4900T Intel® Xeon® E-2278GEL Note: Support max. TPD 71W Processor
Chipset	C246, No H310 downward support
System Memory	DDR4 SO-DIMM socket x4 (double deck) Support max. 2666MHz up to 128GB Support un-buffered and ECC / non-ECC type SODIMM
Storage Device	2.5" SATA Drive Bay x2 (4 SATA Port w/ RAID Function) Half-size Minicard x1 for mSATA (optional) M.2 2280 NVMe slot x1
Display Interface	HDMI 1.4 x2 Support Dual Independent Display, 4K Ultra HD displays
Ethernet	RJ-45 x3 for GbE LAN (Intel i211AT x2, i219LM x1)
I/O	USB Type-A x6 for USB3.2 Gen1 DB9 x4 For RS-232/422/485 Mic-in x1, Line-out x1 Power ON/OFF switch x1 Remote power on/off connector x1 Reset switch x1 SMA Antenna Holes x3
Expansion	Full-size Minicard x1 (PCIe + USB with 1 SIM Slot) Half-size Minicard x1 (PCIe + USB, optional for mSATA) M.2 M key (2280) x1 (PCIe x4) Built in NVIDIA A2 x1 PCIe [x4] x1
Indicator	System Power LED x1 (Green) Storage Active LED x1 (Red)
OS Support	Windows® 10 Enterprise 64 bit Ubuntu 20.04.3/Kernel 5.40.-72
Power Supply	
Power Requirement	DC In 12~24V x1 for 3-pin Terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x D x H)	8.66" x 5.91" x 11.02" (220 mm x 150 mm x 280 mm)
Gross Weight	17.64 lb (8 kg)
Net Weight	15.43 lb (7 kg)
Environmental	
Operating Temperature	32°F~104°F (0°C ~ 40°C) IEC68-2 with 0.5 m/s AirFlow
Storage Temperature	-49°F~176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	SSD : Random, 1Grms, 5~500Hz
Anti-Shock	SSD : 5G @ wallmount, Half-sine, 11ms
Certification	CE/FCC class A , UKCA



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen1	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-8332AI-CFL-A2-1010	—	C246	3	6	—	—	4	—	Mic-in, Line-out x1	2.5" SATA Drive bay x2 mSATA x1 (optional) M.2 2280 NVMe SSD slot x1	HDMI x2	Full-size M.2 slot x1 (PCIe + USB with 1 SIM Slot) Half-size M.2 slot x1 (PCIe + USB, optional for mSATA) M.2 M key (2280) x1 (PCIe x4) Built in Nvidia A2 x1 PCIe [x4] x1	Wallmount	DC In 12~24V with 3-pin terminal block	0°C ~ 40°C with 0.5m/s airflow

## Packing List

- NVIDIA A2 x1
- Wallmount Bracket x2
- 3 Pin DC-in Power Connector x1
- Screw Package x1
- Thermal Pad Package x1
- BOXER-8332AI-CFL x1

## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1255903300**  
330W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741324A00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)

# 02



# 02

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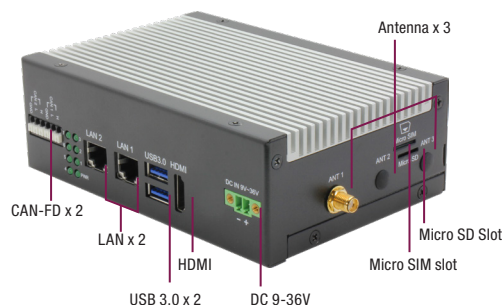
## *RISC Gateway Solutions*



# SRG-IMX8P

Standard RISC Gateway with ARM i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor

Front View



Rear View



Pinout	PIN	CAN1 Definition	CAN2 Definition
	1	H	H
	2	L	L
	3	GND	GND

Pinout	PIN	COM P1 Definition	COM P2 Definition
	1	DCD1	DCD2
	2	RXD1	RXD2
	3	TXD1	TXD2
	4	DTR1	DTR2
	5	RTS1	RTS2
	6	CTS1	CTS2
	7	GND	GND

With Antennas installed



(Antennas: Optional Accessories)

## Features

- NXP i.MX8M Plus Quad Cortex-A53 1.6 GHz RISC Processor
- Onboard LPDDR4 2GB / eMMC 16GB (Optional 4GB RAM/ eMMC 32GB)
- HDMI 2.0a
- GbE x 2
- USB 3.0 x 2, Full size mPCIe x 2, CAN-FD x 2 CH, Micro SD Card Slot x 1, RTC, TPM 2.0
- Wide DC Input 9~36V
- Wide Temperature -20 °C ~ 70 °C
- UL61010 certified; PLC and heavy industry IEC61000-6-2, IEC61000-6-4, IEC61131-2 qualified
- Pre-Install Linux Debian 11
- Supports Modbus/ MQTT Library/ OPCUA/ Security boot/ GUI/ Machine learning eIQ (by request)



## Specifications

System	
Processor	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor
Memory	Onboard LPDDR4 2GB (Optional 4GB)
Storage	eMMC 5.1 16GB (Optional 32GB)
Real Time Clock	RTC x 1, with 3V CR2032H Lithium battery
Security	TPM 2.0
Indicators	Programmable LED control x 7
Cellular	Mini PCIe Connector x 1 (USB signal)
Wireless Lan	Mini PCIe Connector x 1 (USB signal)
Operating System	Debian 11
Support Protocol	Modbus / MQTT Library (by request)
I/O Interfaces	
Serial Port	RS-232/422/485 switchable x 2, Phoenix Connector
Ethernet	Gigabit Ethernet x 2, RJ-45
USB	USB 3.0, Type-A x 2
ADC	—
DI/DO	—
CAN Bus	CAN-FD x 2 CH, Phoenix Connector
Display	HDMI 2.0a x 1
Power Connector	2 Pin 3.81mm Pitch Phoenix Connector
Debug Port	Micro USB x 1
Expansion Slot	SIM card slot x 1 Micro SD slot x 1
Other Interface	—
Power Supply	
Power Requirement	DC 9-36V
Power Consumption	9.36W (Full Loading)
MTBF (Hours)	479,374
Environmental and Mechanical	
Dimension	5.54" x 3.86" x 1.89" (140.76 x 98.2 x 48 mm)
Weight	2.6lb (1.18kg)
Mount Options	Wall Mount, Din Rail (Optional)
Operation Temperature	-4 °F ~ 158 °F (-20 °C ~ 70 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing

## Packing List

- SRG-IMX8P



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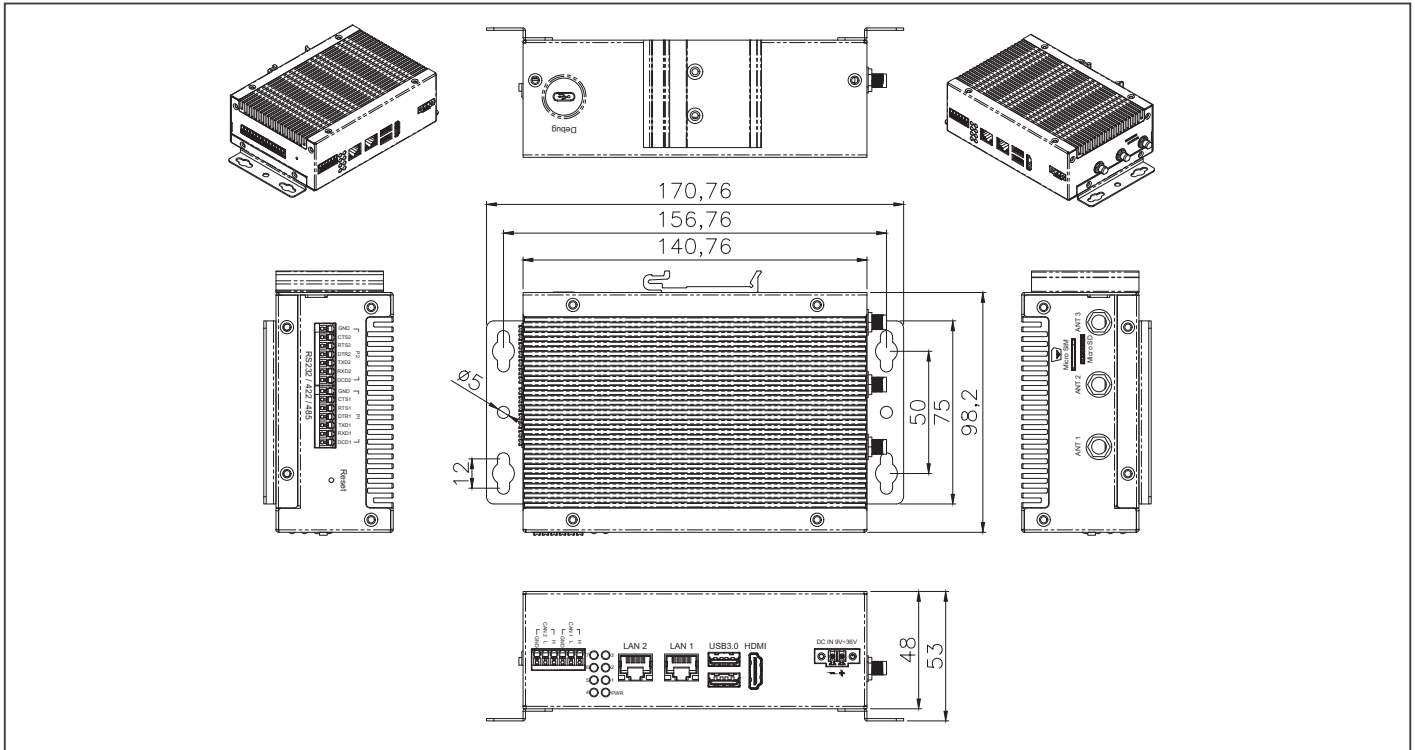
Tél. 01 47 95 99 80  
Fax. 01 47 01 16 22



e-mail : mse@es-france.com  
Site Web : www.es-france.com

## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	NPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-IMX8P-A11-0216	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	2.3 TOPs	Onboard LPDDR4 1866MHz 2GB	Fanless	RS-232/422/485 x 2, Phoenix HDMI x 1 (Output) CAN-FD x 2 CH, Phoenix	eMMC 16GB, MicroSD x1	GbE x 2	USB 3.0 x 2	Mini PCIe slot x 2 SIM card socket x 1	DC 9-36V	-20°C ~ 70°C @ 0.5 m/s airflow	3G/4G LTE module Wifi/BT Module (optional)
SRG-IMX8P-A11-0432	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	2.3 TOPs	Onboard LPDDR4 1866MHz 4GB	Fanless	RS-232/422/485 x 2, Phoenix HDMI x 1 (Output) CAN-FD x 2 CH, Phoenix	eMMC 32GB, MicroSD x1	GbE x 2	USB 3.0 x 2	Mini PCIe slot x 2 SIM card socket x 1	DC 9-36V	-20°C ~ 70°C @ 0.5 m/s airflow	3G/4G LTE module Wifi/BT Module (optional)

## Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration

## Optional Accessories

- 9741EG25G0**  
 PCIe mini card. 4G LTE. module kit. Global Band W/ SIM holder. W/Cable & antenna. Quectel. EG25-G
- 9741EC25E0**  
 PCIe mini card.4G LTE. module kit. W/Cable & Antenna. Quectel. EC25-E
- 9741236A00**  
 Mini card WiFi Kit.802.11ac/a/b/g/n. BT4.2. W/ Cable&Antenna.SparkLan.WPET-236ACN(BT)
- 1255300611**  
 Power Adapter.DC.100/240V.12V.5A.60W.2P Phoenix P=3.81mm.
- 170203180J**  
 POWER CORD.3P-250V 13A.1.8M.UK
- 9651IMX802**  
 DIN rail kit. SRG-IMX8P series
- 9651IMX801**  
 Wall mount kit.SRG-IMX8P series

# SRG-AM62 PRELIMINARY

Standard RISC Gateway with TI AM62x Sitara™ Processors



## Features

- ARM TI AM62x, up to Quad 64-bit Arm® Cortex®-A53
- DDR4, up to 4GB, eMMC 5.1 x 1
- HDMI 1.4b x 1
- GbE x 2
- USB 2.0 host/device x 1, USB2.0 x 1
- Minicard x 2 (half x 1, full x 1)
- COM x 4, GPIO x 8, CAN x 2, TPM 2.0



USB	USB2.0 x 1 host/device by image option, default: host USB2.0 host x 1
ADC	Line in/Line Out/Mic
DI/DO	—
CAN Bus	CAN 2.0 FD x 2 (Optional)
Display	HDMI 1.4b x 1, up to 1080p
Power Connector	2 Pin 2.54mm Pitch Phoenix Connector
Debug Port	Micro USB x 1
Expansion Slot	—
Other Interface	GPIO x 8
<b>Power Supply</b>	
Power Requirement	DC 9-36V (Optional: 12V)
Power Consumption	—
MTBF (Hours)	—
<b>Environmental and Mechanical</b>	
Dimension	4.25" x 3.13" x 1.3" (108mm x 79.5mm x 33mm)
Weight	0.74lb (0.335kg)
Mount Options	Wall Mount, Din Rail (Optional)
Operation Temperature	32°F ~ 140°F (0°C ~ 60°C) Optional: -40°F ~ 185°F (-40°C ~ 85°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operation Humidity	0% ~ 95% relative humidity, non-condensing

## Specifications

System	
Processor	ARM TI-AM625/623 Cortex-A53 Quad-core Cortex-A53 1.4GHz Processor
Memory	Onboard DDR4, up to 4GB
Storage	eMMC 16GB (32GB optional) Micro SD Card x 1
Real Time Clock	RTC x 1
Security	TPM 2.0 (Optional)
Indicators	—
Cellular	Full Size Mini Card Connector x 1 (USB Signal)
Wireless Lan	Half Size Mini Card Connector x 1 (USB Signal)
Operating System	Debian 12
Support Protocol	—
I/O Interfaces	
Serial Port	RS232/422/485 (4-wire) x 2, RS232/422/485 (4-wire) x 2 (optional)
Ethernet	GbE x 2, RJ-45 Support IEEE 1588 TSN integrated RGMII

## Packing List

- SRG-AM62

## Optional Accessories

- TBD

## Ordering Information

- TBD



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# 03



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# 03

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## *Compact Fanless BOX PC Solutions*



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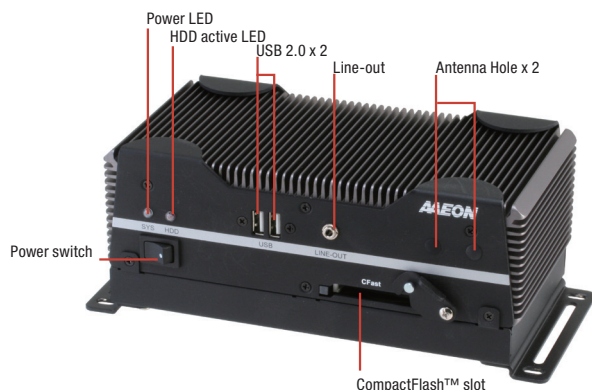


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Site Web : [www.es-france.com](http://www.es-france.com)

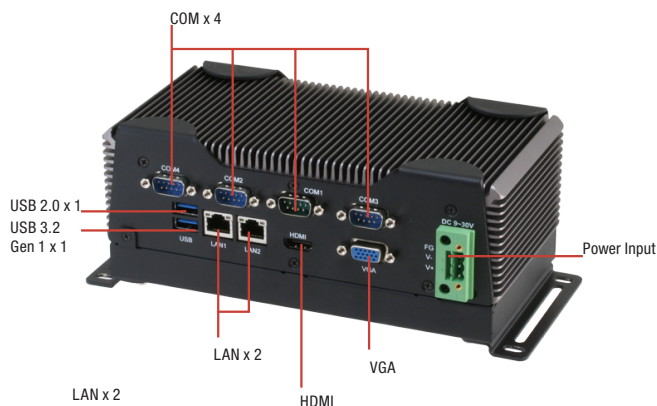
# BOXER-6614

Fanless Embedded Box PC with Intel® Celeron® N2930 Quad Core 1.83 GHz/ Celeron® N2807 Dual Core 1.58 GHz

Front View



Rear View



## Features

- Intel® Celeron® N2930 Quad Core 1.83 GHz/ Celeron® N2807 Dual Core 1.58 GHz
- Intel® HD Graphics Engine
- DDR3L 1333 MHz SODIMM x 1, Memory up to 8 GB
- Intel® Gigabit Ethernet x 2
- VGA + HDMI Output, Supports Dual View/Simultaneous Display
- RS-232/422/485 x 2, RS-232 x 2, USB 3.2 Gen 1 x 1, USB 2.0 x 3
- Full-size Mini-Card with SIM Card Slot x 1, Half-size Mini-Card x 1 for Factory-Install
- Compact Size & Low Power
- Cost-Effective Design
- Fanless System Design
- AAЕON's Hi-Safe Support



## Specifications

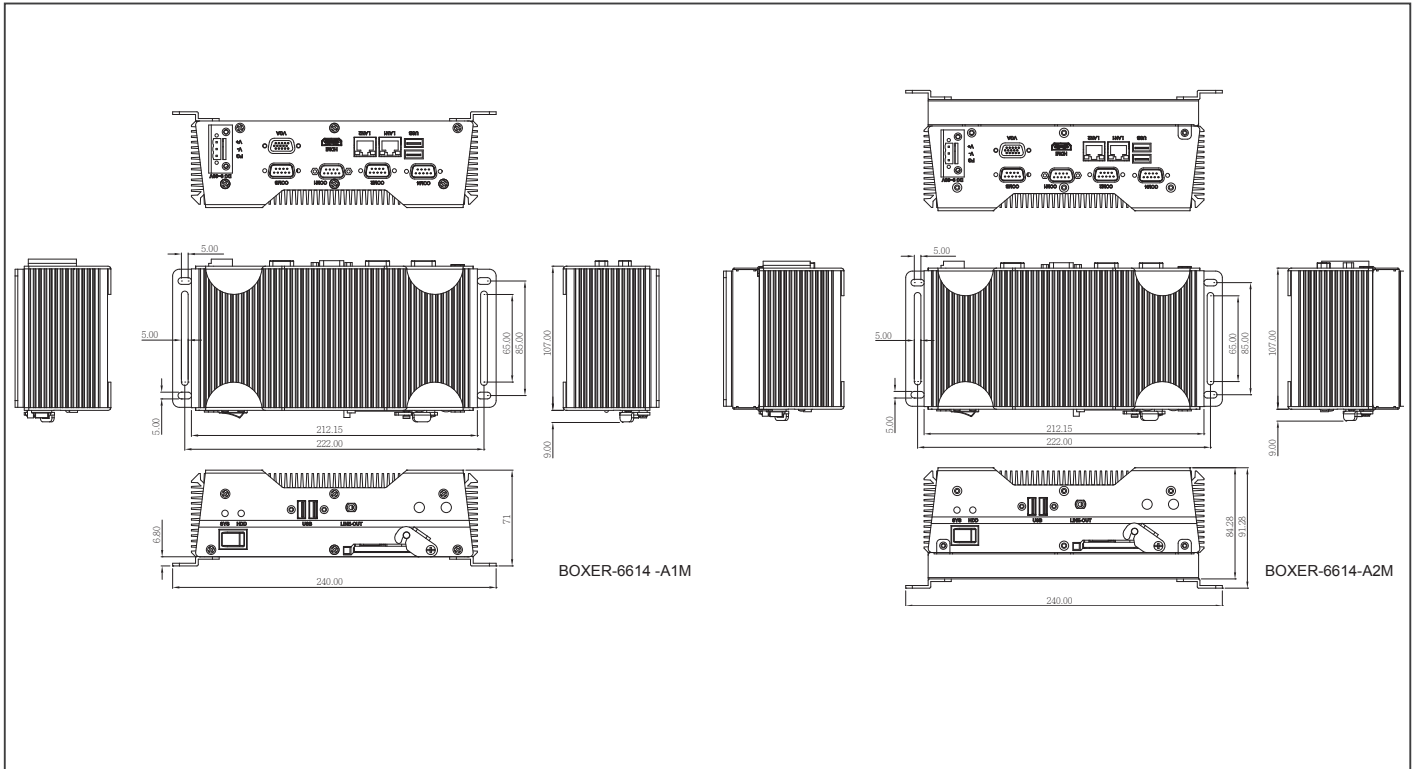
System	
CPU	Intel® Celeron® N2930, 1.83 GHz Intel® Celeron® N2807, 1.58GHz
Chipset	Intel® System on Chip
System Memory	DDR3L 1333 SODIMM slot x 1, up to 8 GB (N2930) or 4 GB (N2807)
Display Interface	VGA, HDMI
Storage Device	CFast™, HDD/SSD
Ethernet	Intel® I210/I211, 10/100/1000 Base-TX x 2
I/O	RS-232/422/485 x 2 RS-232 x 2 USB 2.0 x 3 USB 3.2 Gen 1 x 1 VGA x 1 HDMI x 1 Line-out x 1 LAN x 2 CFast slot x 1 Antenna holes x 2 Power switch Power input
Expansion	Full-size Mini-Card x 1 (PCI-E + USB, w/ SIM slot) Half-size Mini-Card x 1 (PCI-E + USB)
Indicator	Power LED HDD active LED
OS support	Windows® 10, Windows® 8.1 (32/64-bit), Windows® 7 (32/64-bit), WES7/WES8, Linux Ubuntu 14.04/ Kernel 3.13.0
<b>Power Supply</b>	
Power Requirement	9 - 30V with 3-pin terminal block, 12V with lockable DC jack
<b>Mechanical</b>	
Mounting	Wallmount DIN Rail (Mounting kit is optional)
Dimensions (W x H x D)	8.35" x 4.21" x 2.53" (212.15mm x 107mm x 64.2mm )
Gross Weight	6.6 lb (2.8 kg)
Net Weight	4.4 lb (2 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) with wide temperature CFast™ card -4°F ~ 140°F (-20°C ~ 60°C) with wide temperature HDD (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation –CFast™ card 1 Grms/ 5~ 500Hz/ operation – HDD
Anti-Shock	—
Certification	CE/FCC class A, UL





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB	RS-232	RS-232/422/485	Storage	Display	Expansion	Mounting	Power	Temp.
BOXER-6614-A1-1210	Intel® Celeron® SoC N2930	—	2	4	2	2	CFast Socket x 1 (Easy-to-swap)	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount/ Din Rail Mounting Kit (Optional)	DC 12V	-20°C~55°C with Wide Temp. CFast(with 0.5 m/s air flow, according to IEC68-2-14)
BOXER-6614-A1M-1210	Intel® Celeron® SoC N2930	—	2	4	2	2	CFast Socket x 1 (Easy-to-swap)	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount/ Din Rail Mounting Kit (Optional)	DC 9-30V	-20°C~55°C with Wide Temp. CFast(with 0.5 m/s air flow, according to IEC68-2-14)
BOXER-6614-A2-1210	Intel® Celeron® SoC N2930	—	2	4	2	2	CFast Socket x 1 (Easy-to-swap) SATA 2.5" HDD bay x 1	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount/ Din Rail Mounting Kit (Optional)	DC 12V	-20°C~55°C with Wide Temp. CFast(with 0.5 m/s air flow, according to IEC68-2-14)
BOXER-6614-A2M-1210	Intel® Celeron® SoC N2930	—	2	4	2	2	CFast Socket x 1 (Easy-to-swap) SATA 2.5" HDD bay x 1	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount/ Din Rail Mounting Kit (Optional)	DC 9-30V	-20°C~60°C with Wide Temp. HDD(with 0.5 m/s air flow, according to IEC68-2-14)
BOXER-6614-A11M-1210	Intel® Celeron® SoC N2807	—	2	4	2	2	CFast Socket x 1 (Easy-to-swap)	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount/ Din Rail Mounting Kit (Optional)	DC 9-30V	-20°C~55°C with Wide Temp. CFast(with 0.5 m/s air flow, according to IEC68-2-14)
BOXER-6614-A12-1210	Intel® Celeron® SoC N2807	—	2	4	2	2	CFast Socket x 1 (Easy-to-swap) SATA 2.5" HDD bay x 1	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount/ Din Rail Mounting Kit (Optional)	DC 12V	-20°C~55°C with Wide Temp. CFast(with 0.5 m/s air flow, according to IEC68-2-14) -20°C~60°C with Wide Temp. HDD(with 0.5 m/s air flow, according to IEC68-2-14)

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- RAM Thermal Pad x 1 (60mm x 25mm x 3mm) (For A1/A1M the SKU without HDD kit only)
- 3 Pin DC-In Power Connector x 1 (For A1M/A2M, for DC 9 ~30 V only)
- BOXER-6614

## Optional Accessories

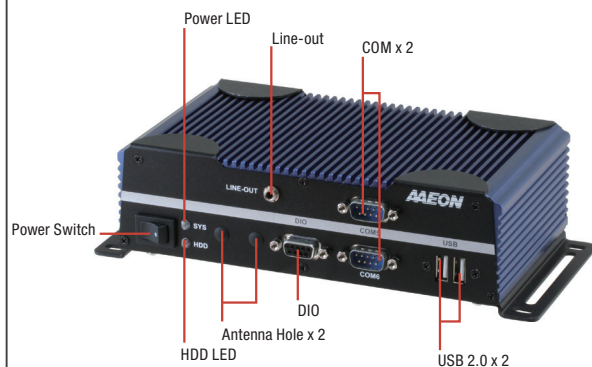
- 125530060Z - DC Jack for 6614-A1/A2
- 1702031803 Power Adapter, AC, 100/240V, 12V/5A, 60W, W/ Lock, FSP, FSP060-DHAN3 Power Cord (European Type)
- 1255900849 - 3 pin for 6614-A1M/A2M
- 170203180E Power Adapter, AC, 100/240V, 12V/7A, 84W, FSP, FSP084-DHAN3 Power Cord (Japanese Type)
- 1702031802 Power Cord (US Type)
- 9741681003 Din Rail Mount Kit



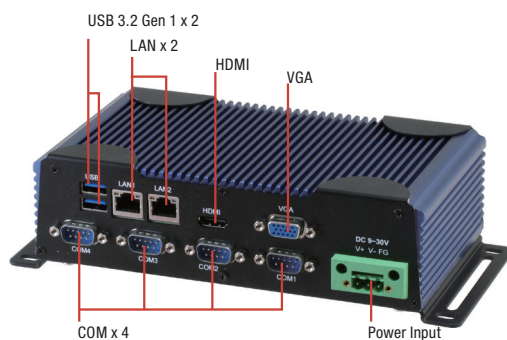
# BOXER-6615

Fanless Embedded Box PC with Intel® Pentium® N3710, 1.6 GHz

Front View



Rear View



## Features

- Intel® Pentium® N3710 1.6 GHz
- 6COMs: RS-232/422/485 x 2 + RS-232 x 4
- USB 3.2 Gen 1 x 2, USB2.0 x 2
- VGA + HDMI Output, Support Dual View/ Simultaneous Display
- Supports 2.5" Drive Bay x 1, mSATA
- Supports 8 Channel DIO x 1
- DDR3L 1600 SODIMM x 1, Memory Max. up to 8 GB
- AAEON's Hi-Safe Support



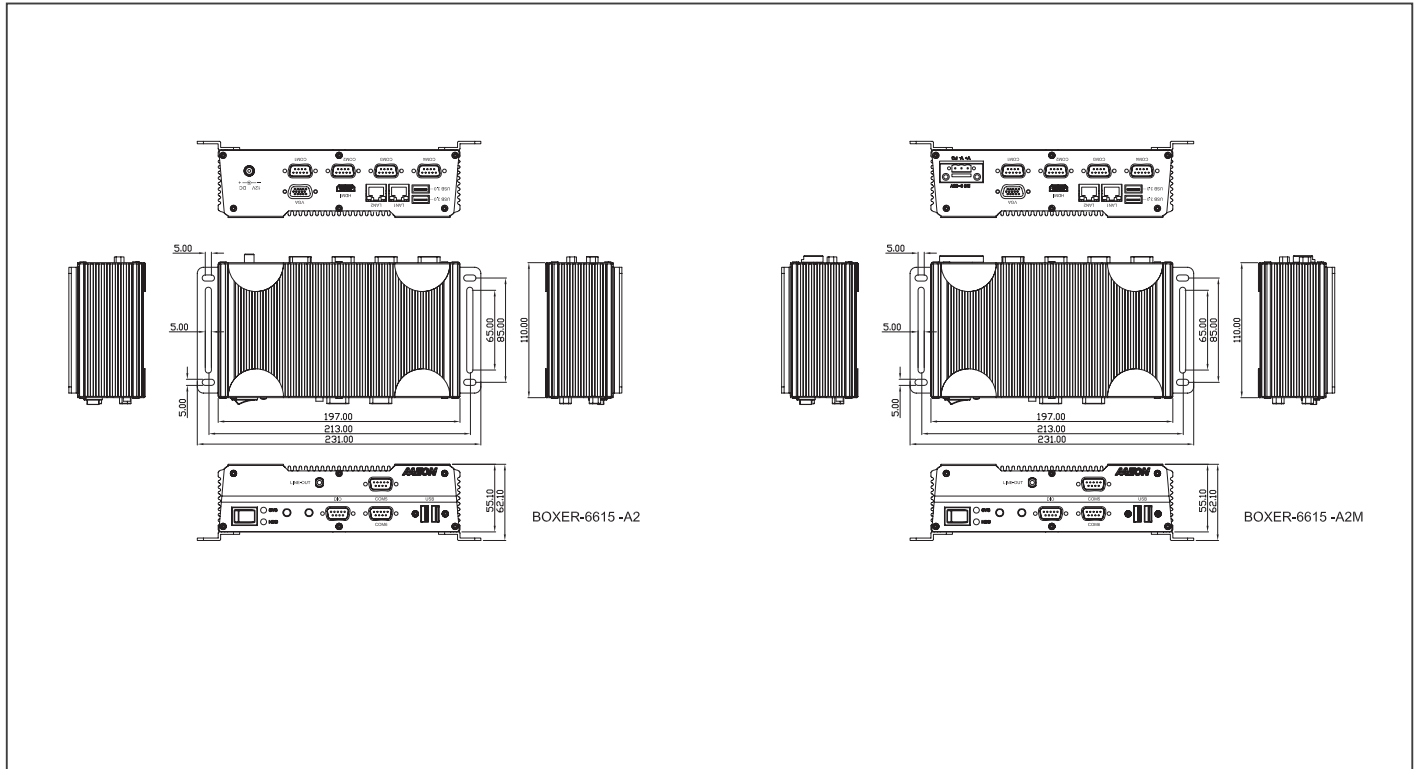
## Specifications

System	
CPU	Intel® Pentium® N3710 1.6GHz
Chipset	Intel® System on Chip
System memory	204-pin 1600 DDR3L SODIMM x 1, up to 8GB
Display Interface	VGA, HDMI
Storage Device	mSATA, 2.5" HDD/SSD
Ethernet	Realtek® RTL-8111E, 10/100/1000 Base x2
I/O	RS-232/422/485 x 2 RS-232 x 4 USB 3.2 Gen 1 x 2 USB2.0 x 2 VGA x 1 HDMI x 1 DIO x 1 Line-Out x 1 Antenna holes x 2 Power switch Power input
Expansion	Full-size Mini-Card x 1 (PCI-E + USB, w/ SIM slot) Half-size Mini-Card x 1 (mSATA + USB)
Indicator	Power LED HDD active LED
OS Support	Windows® 10 IoT, Ubuntu 15.04 Kernel 3.19.0
Power Supply	
Power Requirement	9 - 30V with 3-pin terminal block, 12V with lockable DC jack
Mechanical	
Mounting	Wallmount DIN Rail (Mounting kit is optional)
Dimensions (W x H x D)	7.76" x 2.17" x 4.33" (197mm x 55mm x 110mm)
Gross Weight	6.6 lb (2.8 kg)
Net Weight	4.4 lb (2 kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. SSD/HDD/mSATA (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation – mSATA/SSD 1 Grms/ 5 ~ 500Hz/ operation – HDD
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232 /422/485	DIO	Audio	Storage	Display	Expansion	Mounting	Power	Temp.
BOXER-6615-A2-1110	Intel® Pentium® N3710 1.6GHz	—	2	2	2	4	2	8 bit	Line-Out	SATA 2.5" HDD bay x 1 mSATA x 1	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount Din Rail Mounting Kit (Optional)	DC 12V	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. SSD/HDD/mSATA (according to IEC68-2-14)
BOXER-6615-A2M-1110	Intel® Pentium® N3710 1.6GHz	—	2	2	2	4	2	8 bit	Line-Out	SATA 2.5" HDD bay x 1 mSATA x 1	VGA x 1 HDMI x 1	Full Size Mini-Card x 1 Half Size Mini-Card x 1	Wallmount Din Rail Mounting Kit (Optional)	DC 9-30V	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. SSD/HDD/mSATA (according to IEC68-2-14)

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1 (For A2M, DC 9 ~30 V only)
- BOXER-6615

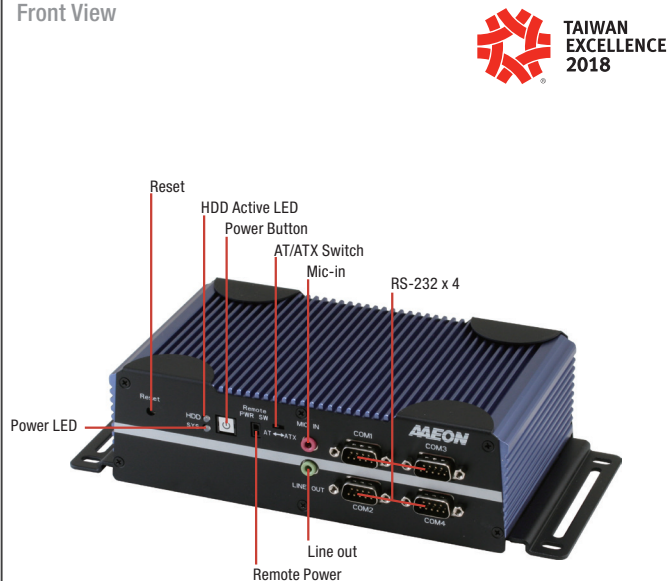
## Optional Accessories

- **125530060Z**  
DC Jack for 6615-A2, Power Adapter, AC, 100/240V, 12V/5A, 60W, W/ Lock
- **1255900849**  
3 pin for 6615-A2M, Power Adapter, AC, 100/240V, 12V/7A, 84W
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741640404**  
Din Rail Mount Kit

# BOXER-6616

Fanless Embedded Box PC with Intel® Celeron® Processor N3350/N4200

Front View



Rear View



## Features

- Intel® Pentium® N4200 2.5 GHz/ Celeron® N3350 2.4 GHz
- DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
- COM x 6: RS-232/422/485 x 2 + RS-232 x 4
- USB 3.2 Gen 1 x 4
- VGA + HDMI Output, Support Dual View/ Simultaneous Display
- Supports 2.5" Drive Bay x 1, mSATA
- Supports 8 Channel TTL Level DIO x 1 (Optional)
- AAEON's Hi-Safe Support
- Supports DC 9~24V with Power Protection
- Wide Operating Temperature: -4°F ~ 158°F (-20°C ~ 70°C)
- AT/ATX Switch, Remote Power On/Off Switch



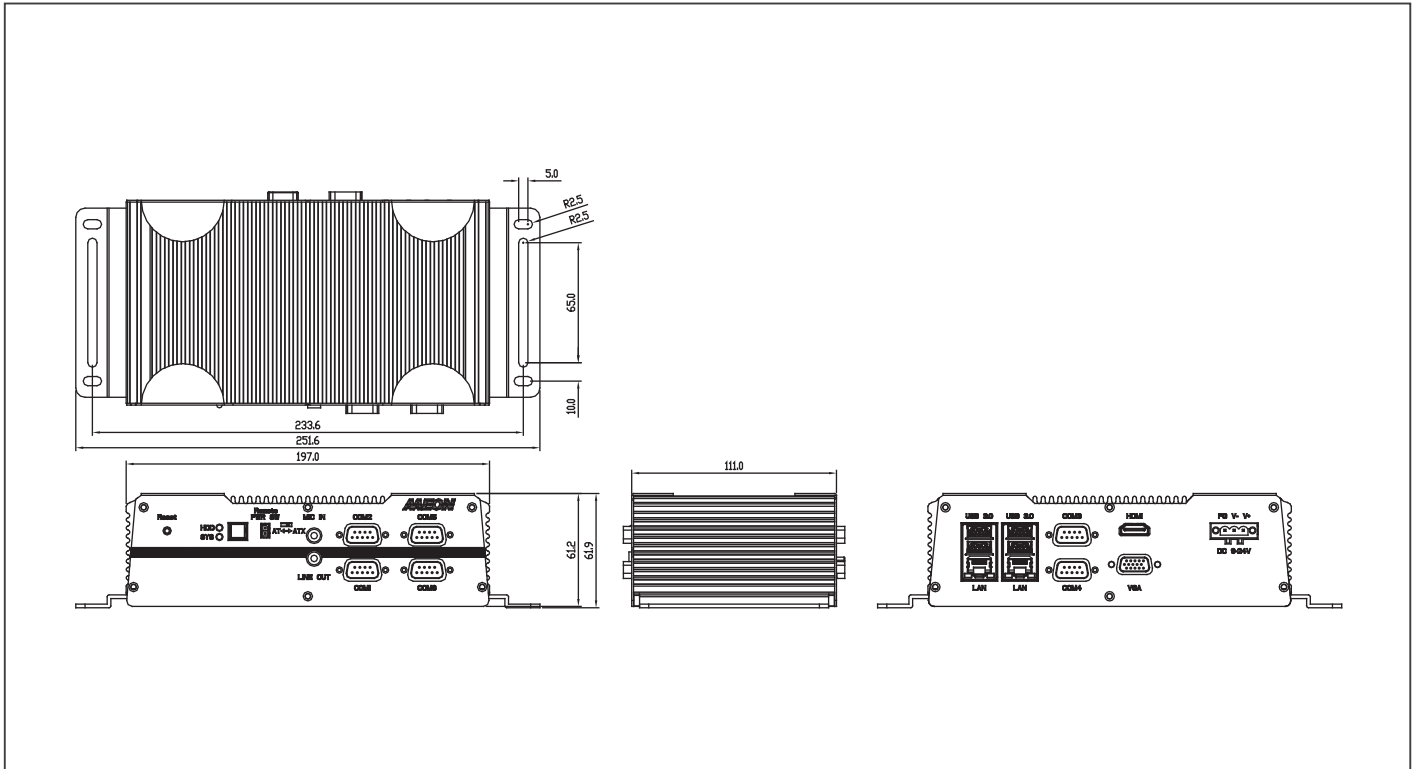
## Specifications

System	
CPU	Intel® Pentium® N4200, 2.5 GHz Intel® Celeron® N3350, 2.4 GHz
Chipset	Intel® System on Chip
System memory	DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
Display Interface	HDMI (max. 2048 x 1152) VGA (max. 2048 x 1152)
Storage Device	mSATA, HDD/SSD
Ethernet	Intel® I211, 10/100/1000 Base-TX x 2
I/O	RS-232/422/485 x 2 RS-232 x 4 USB 3.2 Gen 1 x 4 VGA x 1 HDMI x 1 LAN x 2 Remote On/Off x 1 Reset Button x 1 AT/ATX DIP Switch Mic-In x 1 Line-Out x 1 Antenna holes x 1 Power button Power input
Expansion	Full-size Mini-Card x 1 (PCI-E + USB, w/ SIM slot) Half-size Mini-Card x 1 (A1:PCI-E + USB, A2: mSATA + USB)
Indicator	Power LED HDD active LED
OS Support	Windows® 10 IoT Ent LTSC 2019 64 bit Ubuntu 16.04 above
Power Supply	
Power Requirement	9-24V with 3-pin terminal block
Mechanical	
Mounting	Wallmount DIN Rail (Mounting kit is optional)
Dimensions (W x H x D)	7.76" x 2.17" x 4.33" (197mm x 55mm x 110mm)
Gross Weight	6.6 lb (2.8 kg)
Net Weight	4.4 lb (2 kg)
Environmental	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C) with W.T. SSD/HDD/mSATA (according to IEC682-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – mSATA/SSD 1 Grms/ 5 ~ 500Hz/ operation – HDD
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	PoE	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6616-A1-1110	Intel® Pentium® N4200 2.5 GHz	—	2	—	4	0	4	2	—	MIC-in x 1 Line-Out x 1	2.5" Drive Bay x 1	VGA x 1 HDMI x 1	Full-size Minicard x 1 Half-size Minicard x 1	Wallmount Optional Dinrail Optional VESA-Mount	9-24V DC In	-4°F ~ 158°F (-20°C ~ 70°C)
BOXER-6616-A2-1110	Intel® Celeron® N3350 2.4 GHz	—	2	—	4	0	4	2	—	MIC-in x 1 Line-Out x 1	2.5" Drive Bay x 1 mSATA x 1	VGA x 1 HDMI x 1	Full-size Minicard x 1 Half-size Minicard x 1	Wallmount Optional Dinrail Optional VESA-Mount	9-24V DC In	-4°F ~ 158°F (-20°C ~ 70°C)

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1
- BOXER-6616

## Optional Accessories

- **1255900849**  
12V 84W Power Adapter
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)
- **9741640404**  
Din Rail Mount Kit

# BOXER-6617-ADN

Fanless Compact Embedded Computer with Intel® Core™ i3 Processor N/Intel Atom® Processor X/Intel® Processor N-series SoC (formerly Alder Lake-N)

Front View



Rear View



## Features

- Intel® Core™ i3 Processor N/Intel® Atom® Processor X/Intel® Processor N-series SoC (formerly Alder Lake-N)
- DDR5 4800MHz SODIMM x 1
- 2.5GbE x 2
- M.2 2280 M-Key/M.2 2230 E-Key
- M.2 3052 B-Key for 5G
- SuperSpeed+ USB 3.2 Gen 2
- Onboard TPM 2.0
- Wide Range 9 ~ 36V DC input
- Super Wide Operating Temperature -20~70°C
- Hailo-8™ M.2 2280 AI Accelerator Module Support (Optional)



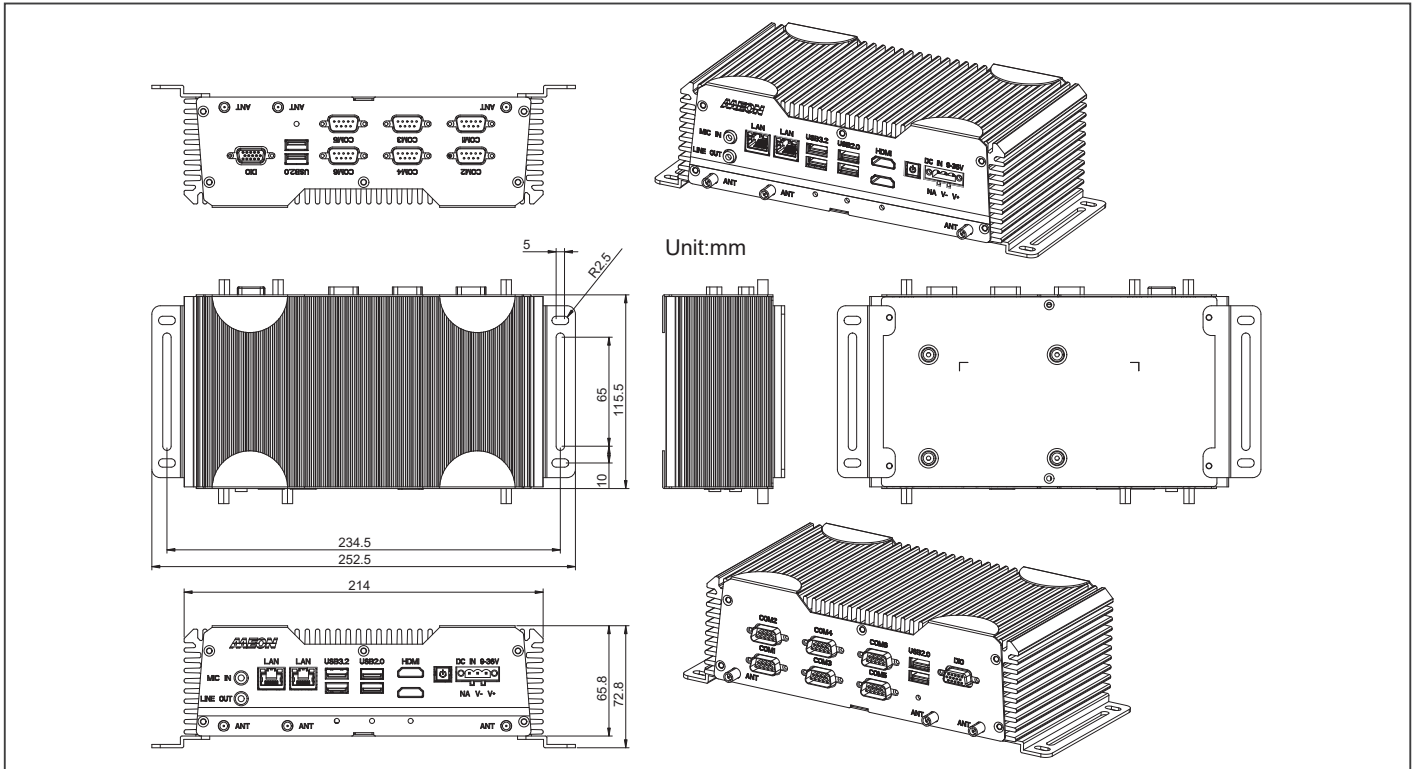
## Specifications

System	
CPU	Intel® Processor N50 Intel® Processor N97 Intel® Core™ i3-N305 Intel Atom® x7211E
Chipset	Intel® SoC
System Memory	DDR5 4800MHz SODIMM x 1, up to 32GB
Display Interface	HDMI x 2
Storage Device	M.2 2280 M-Key x 1 (PCIe [x2]) 2.5" SATA HDD/SSD x 1
Ethernet	RJ-45 x 2 for 2.5GbE LAN (Intel® I226)
I/O	HDMI x 2 RJ-45 x 2 for 2.5GbE LAN (Intel® I226) USB 3.2 Gen 2 x 2 (Type-A) USB 2.0 x 4 (Type-A) DB-9 x 6 for RS-232/422/485 Mic-in/Line-out 10-Pin Terminal Block x 1 for Digital I/O 8-channel 3-Pin Terminal Block for DC In x 1 2-Pin Remote On/Off x 1 Reset Button x 1 Power Button with LED x 1
Expansion	M.2 2280 M-Key x 1 (PCIe [x2]) M.2 2230 E-Key x 1 (for Wi-Fi) M.2 3052 B-Key x 1 (for 5G/LTE) SIM Slot x 1
Indicator	Sys LED Storage active LED
OS support	Windows® 10 IoT Enterprise Linux Ubuntu 22.04
Power Supply	
Power Requirement	DC-in 9-36V x 1 for 3-Pin Terminal Block
Mechanical	
Mounting	Wall Mount
Dimensions (W x H x D)	8.42" x 4.54" x 2.59" (214mm x 115.5mm x 65.8mm) without brackets
Gross Weight	6.17 lb. (2.8Kg)
Net Weight	4.4 lb. (2Kg)
Environmental	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation (with SSD)
Anti-Shock	50G, IEC 68-2-27, half sine, 11 ms duration (with SSD)
Certification	CE/FCC Class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	LAN	PCH	USB 3.2 Gen 2	USB 2.0	RS-232/422/485	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6617-ADN-A1-1010	Intel® Processor N50	2	Intel SoC	2	4	6	M.2 2280 M Key Slot x1 (PCIe x2) 2.5" SATA Drive Bay x1	HDMI x2	M.2 2280 M-Key x1 (PCIe x2) M.2 2230 E-Key x1 M.2 3052 B-Key x1 SIM Slot	Wallmount	9~36V DC in	-4°F ~ 158°F (-20°C ~ 70°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6617-ADN-A2-1010	Intel® Processor N97	2	Intel SoC	2	4	6	M.2 2280 M Key Slot x1 (PCIe x2) 2.5" SATA Drive Bay x1	HDMI x2	M.2 2280 M-Key x1 (PCIe x2) M.2 2230 E-Key x1 M.2 3052 B-Key x1 SIM Slot	Wallmount	9~36V DC in	-4°F ~ 158°F (-20°C ~ 70°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6617-ADN-A3-1010	Intel® Core™ i3-N305	2	Intel SoC	2	4	6	M.2 2280 M Key Slot x1 (PCIe x2) 2.5" SATA Drive Bay x1	HDMI x2	M.2 2280 M-Key x1 (PCIe x2) M.2 2230 E-Key x1 M.2 3052 B-Key x1 SIM Slot	Wallmount	9~36V DC in	-4°F ~ 158°F (-20°C ~ 70°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6617-ADN-A4-1010	Intel Atom® x7211E	2	Intel SoC	2	4	6	M.2 2280 M Key Slot x1 (PCIe x2) 2.5" SATA Drive Bay x1	HDMI x2	M.2 2280 M-Key x1 (PCIe x2) M.2 2230 E-Key x1 M.2 3052 B-Key x1 SIM Slot	Wallmount	9~36V DC in	-4°F ~ 158°F (-20°C ~ 70°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)

## Optional Accessories

- **1255900849**  
12V 84W Power Adapter
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)

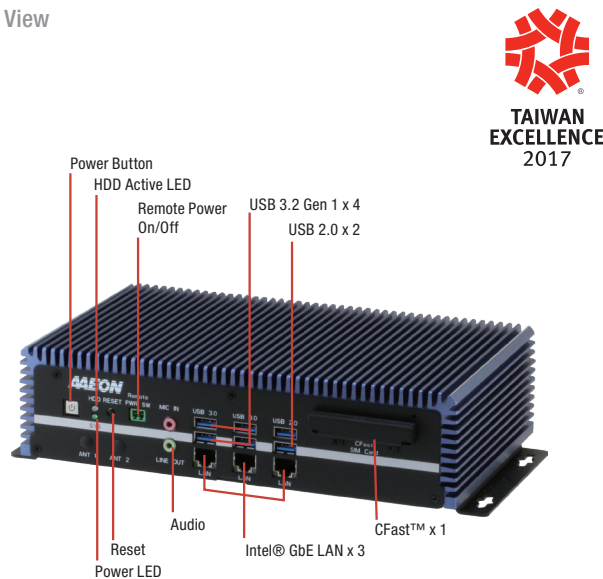
## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1
- BOXER-6617-ADN

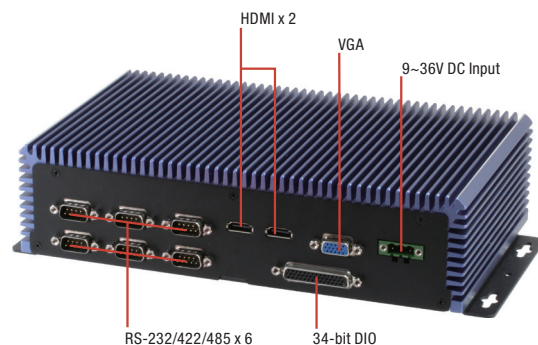
# BOXER-6639

Fanless Embedded Box PC with Socket Type 6th Generation Intel® Processor and Q170 Chipset

Front View



Rear View



## Features

- Extreme Computing Power & Graphic Display Capability
- Desktop Grade Socket Type Processor with Longevity Support
- Supports DDR4 ECC or Non-ECC SODIMM, Up to 32GB
- Supports VGA + HDMI x 2 Triple Display, HDMI 4K Display
- Supports USB 3.2 Gen 1 x 4, USB 2.0 x 2
- Supports Industrial-grade Intel® GbE LAN x 3
- Supports BIOS Selectable RS-232/422/485 x 3
- Compact Size and Easy Access Design
- Wide Range DC 9~36V Input
- 34-bit Digital Input and Output



## Specifications

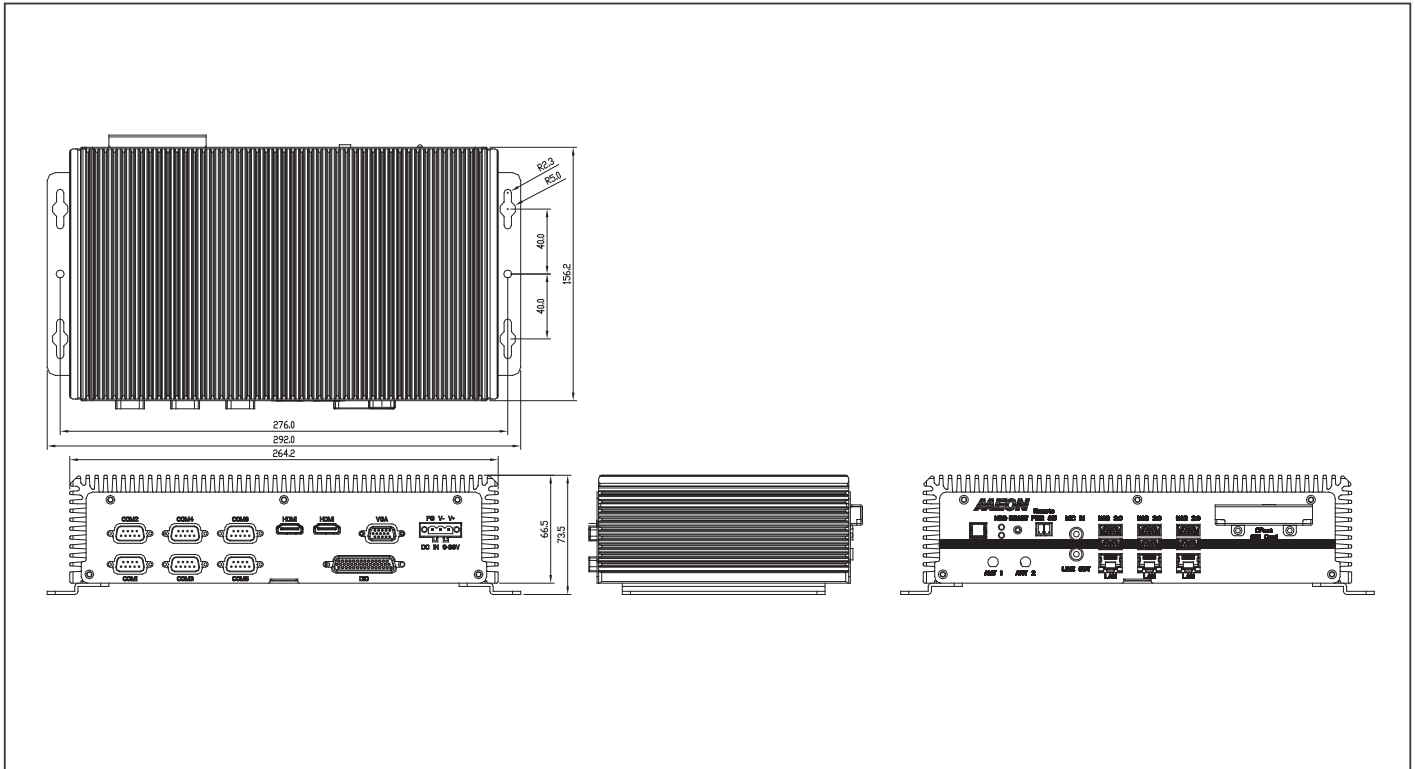
System	
CPU	Intel® Core™ i7-7700T, 2.9 GHz Intel® Core™ i5-7500T, 2.7 GHz Intel® Core™ i7-6700TE, 2.4 GHz Intel® Core™ i5-6500TE, 2.3 GHz Intel® Core™ i3-6100TE, 2.7 GHz Intel® Pentium® G4400TE, 2.4 GHz Intel® Celeron® G3900TE, 2.3 GHz
Chipset	Q170
System Memory	DDR4 1866/2133 SODIMM slot x 2, up to 32 GB, ECC or Non-ECC support
Display Interface	VGA, HDMI
Storage Device	CFast x 1, 2.5" SATA SSD x 1 (2.5" SATA SSD x 2 supports RAID 0/1 for A3/A4 model)
Ethernet	Intel® i210, 10/100/1000Base-TX x 3
I/O	RS-232/422/485 x 6 USB 3.2 Gen 1 x 4 USB 2.0 x 2 VGA x 1 HDMI x 2 Line-out x 1 Mic-in x 1 LAN x 3 CFast slot x 1 SIM slot x 1 Antenna holes x 2 34bit DIO x 1(A2 & A4 SKU) Power switch Power input Remote power switch Reset Button
Expansion	Full-size Mini-Card x 1 (PCI-E + USB, w/ SIM slot) Full-size Mini-Card x 1 (PCI-E + USB, Optional for mSATA and SIM Slot)
Indicator	Power LED HDD active LED
OS support	Windows® 7 (32/64-bit), Windows® 8/8.1 (64-bit), Windows® 10 (64-bit)
<b>Power Supply</b>	
Power Requirement	9 - 36V with 3-pin terminal block
<b>Mechanical</b>	
Mounting	Wallmount, DIN Rail (Mounting Kit is optional)
Dimensions (W x H x D)	10.4" x 2.6" x 6.1" (264.2mm x 66.5mm x 156.2mm)
Gross Weight	7.7 lb (3.5 kg)
Net Weight	6.6 lb (3 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5~95% @ 40°C, non-condensing
Anti-Vibration	2 Grms/ 5 ~ 500Hz/ operation - CFast™ card 1 Grms/ 5 ~ 500Hz/ operation - HDD
Anti-Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232/422/485	DIO	Audio	Storage	Display	Expansion	Mounting	Power	Temp.
BOXER-6639-A1-1110	—	—	3	4	2	6	—	Mic-in, Line-out	2.5" SATA Drive bay x 1, CFast™ slot x 1	VGA x 1, HDMI x 2	Full-size Mini-Card x 2	Wallmount	9-36V	-4°F ~ 131°F (-20°C ~ 55°C)
BOXER-6639-A2-1110	—	—	3	4	2	6	34 bit	Mic-in, Line-out	2.5" SATA Drive bay x 1, CFast™ slot x 1	VGA x 1, HDMI x 2	Full-size Mini-Card x 2	Wallmount	9-36V	-4°F ~ 131°F (-20°C ~ 55°C)
BOXER-6639-A3-1010	—	—	3	4	2	6	—	Mic-in, Line-out	2.5" SATA Drive bay x 2 (RAID 0/1), CFast™ slot x 1	VGA x 1, HDMI x 2	Full-size Mini-Card x 2	Wallmount	9-36V	-4°F ~ 131°F (-20°C ~ 55°C)
BOXER-6639-A4-1010	—	—	3	4	2	6	34 bit	Mic-in, Line-out	2.5" SATA Drive bay x 2 (RAID 0/1), CFast™ slot x 1	VGA x 1, HDMI x 2	Full-size Mini-Card x 2	Wallmount	9-36V	-4°F ~ 131°F (-20°C ~ 55°C)

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- BOXER-6639

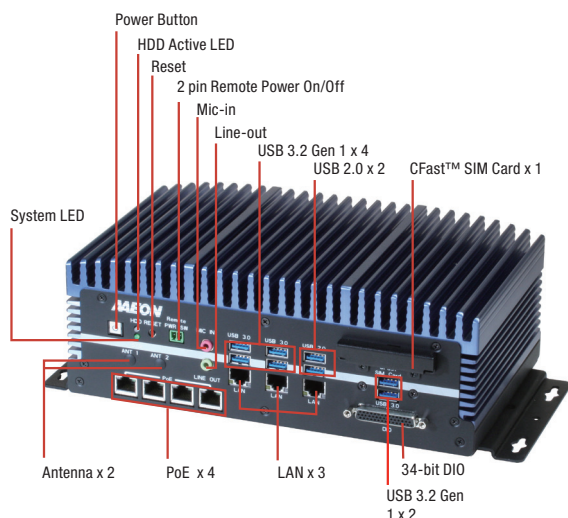
## Optional Accessories

- 1255X00059  
Power Adapter
- 1702031802  
Power Cord (US Type)
- 1702031803  
Power Cord (Europe)
- 170203180E  
Power Cord (Japan)
- 9741663902  
Din Rail Mount Kit
- 9741663900  
I/O Dust Cover Kit. For BOXER-6639 (A1 & A3 sku)

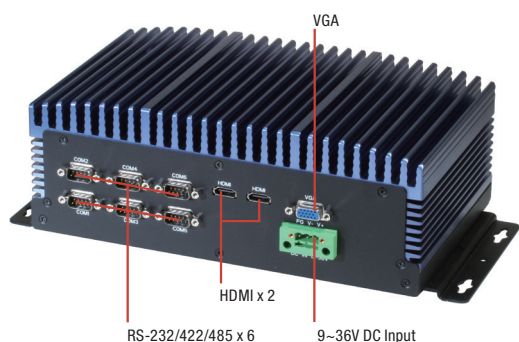
# BOXER-6639M

Vision System Fanless Embedded Box PC with 6th/ 7th Generation Intel® Core™ Desktop Processor and PoE

Front View



Rear View



## Features

- Extreme Computing Power & Graphic Display Capability
- Desktop Grade Socket Type Processor with Longevity Support
- DDR4 ECC or Non-ECC SODIMM, Up to 32GB
- VGA + HDMI x 2 Triple Display, HDMI 4K Display
- 802.3at GbE PoE x 4 (Max. 80W in total)
- USB 3.2 Gen 1 x 6
- Industrial-grade Intel® GbE LAN x 3
- Supports BIOS Selectable RS-232/422/485 x 6
- Easy Access Design
- Wide Range DC 12~36V Input
- 34-bit Digital Input and Output



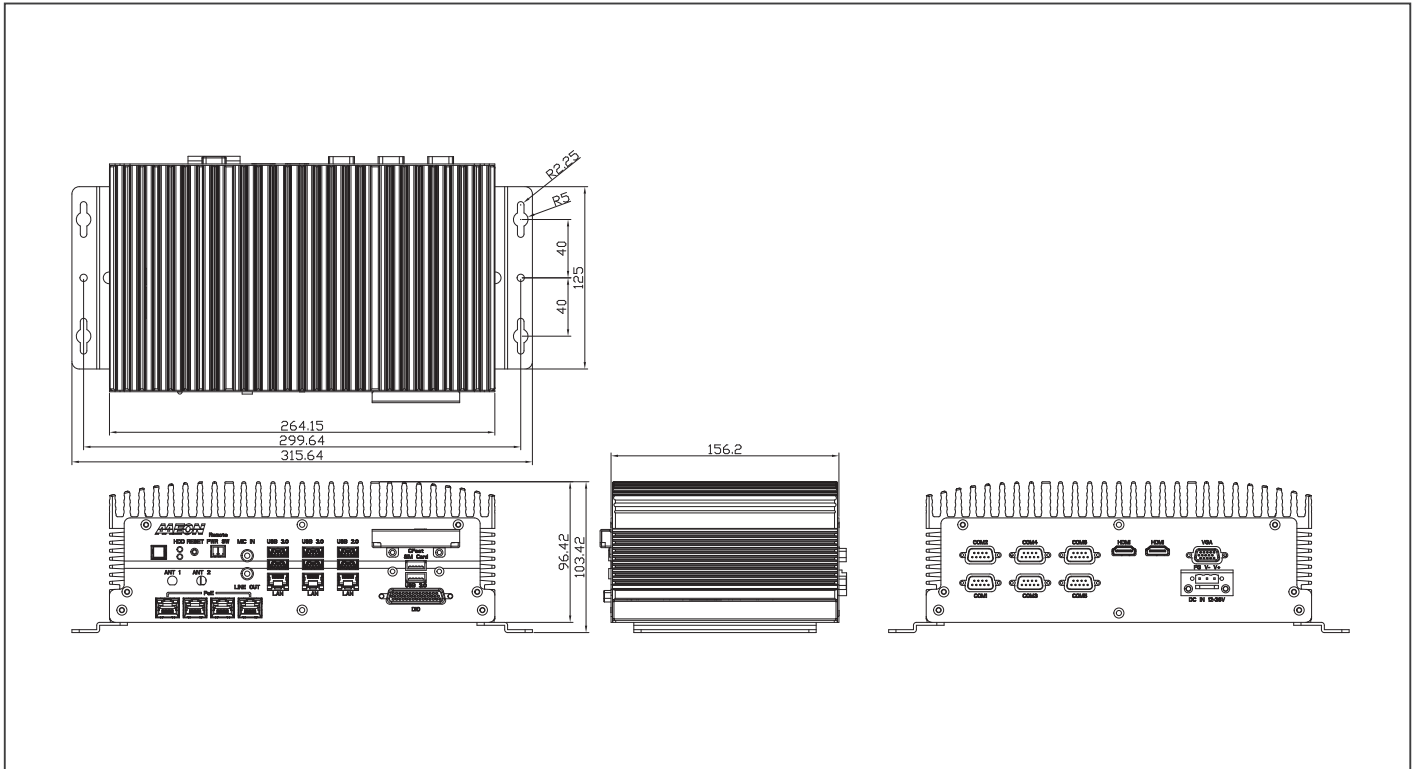
## Specifications

System	
CPU	<b>7th Generation Intel® Core™ Processor family:</b> Intel® Core™ i7-7700T, 2.9 GHz Intel® Core™ i5-7500T, 2.8 GHz Intel® Core™ i3-7101TE, 3.4 GHz Intel® Pentium® G4600T, 2.9 GHz Intel® Pentium® G4560T, 2.9 GHz Intel® Celeron® G3930T, 2.7 GHz <b>6th Generation Intel® Core™ Processor family:</b> Intel® Core™ i7-6700TE, 2.4 GHz Intel® Core™ i5-6500TE, 2.3 GHz Intel® Core™ i3-6100TE, 2.7 GHz Intel® Pentium® G4500T, 3.0 GHz Intel® Pentium® G4400T, 2.9 GHz Intel® Celeron® G3900T, 2.6 GHz
Chipset	Intel® Q170
System memory	DDR4 1866/2133 SODIMM slot x 2, up to 32GB
Display Interface	HDMI, VGA
Storage Device	CFast™, HDD/SSD
Ethernet	Intel® I210, 10/100/1000 Base-TX x 3
I/O	RS-232/422/485 x 6, USB Type A x 6 for USB 3.2 Gen 1, USB Type A x 2 for USB 2.0 RJ-45 x 3 for GbE LAN, RJ-45 x 4 for PoE (802.3at, max. 80W in total) DB-44 for 34-bit Digital I/O (5V), CFast™ slot x 1, SIM card slot x 1 Power On/Off Button x 1, 2 pin Remote power on/off, Reset switch Mic-in x 1, Line-out x 1, Antenna opening x 2, SYS LED indicator x 1, HDD LED indicator x 1, DB-15 x 1 for VGA, HDMI v1.3 x 2, DC-in 3-pin terminal block (12~36V)
Expansion	Full-size Mini-Card x 1 (PCI-E + USB, w/ SIM slot) Full-size Mini-Card x 1 (PCI-E + USB, Optional for mSATA and SIM Slot)
Indicator	Power LED, HDD active LED
OS Support	<b>7th Generation Intel® Core™ Processor family:</b> Windows® 10 IOT (64bit), Ubuntu 16.04 above, Fedora 25 above, CentOS 7.3 above <b>6th Generation Intel® Core™ Processor family:</b> Windows® 10 IOT (64bit), Windows® 8.1 (64bit), Windows® Embedded 8 Standard (64bit), Windows® 7 (32/64bit), Windows® Embedded Standard 7 (32/64bit), Ubuntu 16.04 above, Fedora 25 above, CentOS 7.3 above
<b>Power Supply</b>	
Power Requirement	12 - 36V with 3-pin terminal block
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	10.4" x 3.8" x 6.1" (264.2mm x 96.4mm x 154.2mm)
Gross Weight	13.0 lb (5.9 kg)
Net Weight	8.8 lb (4.0 kg)
<b>Environmental</b>	
Operating Temperature	-13°F ~ 131°F (-25°C ~ 55°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5~95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation – SSD/CFast™ card 1 Grms/ 5 ~ 500Hz/ operation – HDD



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	PoE	USB 3.2 Gen 1	USB 2.0	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operating Temp.
BOXER-6639M-A1-1010	—	—	3	4	6	2	6	34 bit	MIC-in x 1 Line-Out x 1	2.5" Drive Bay x 1 CFast™ x 1	VGA x 1 HDMI x 2	Full-size Minicard x 2	Wallmount	12~36V DC in	-13°F ~ 131°F (-25°C ~ 55°C)

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- Thermal Pad x 1
- Phoenix Connector x 2
- BOXER-6639M

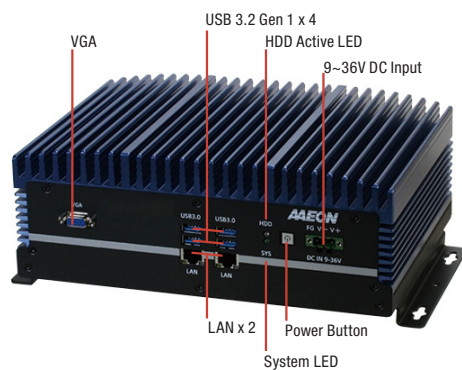
## Optional Accessories

- **1255302300**  
230W Power Adapter (for 2 or above PoE cameras)
- **125590120B**  
120W Power Adapter (for only 1 PoE camera)
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)
- **9741324A00**  
WiFi/Bluetooth Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (Global Band with SIM holder)

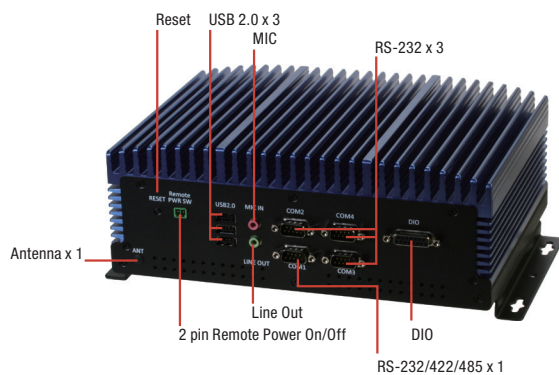
# BOXER-6640

Fanless Embedded Box PC with 6th/7th Generation Intel® Core™ Desktop Processor and GbE

Front View



Rear View



## Features

- Extreme Computing Power & Graphic Display Capability
- Desktop Grade Socket Type Processor
- Supports DDR4 ECC or Non-ECC SODIMM, Up to 32GB
- Supports VGA x 1
- Supports USB 3.2 Gen 1 x 4
- Supports Intel® GbE LAN x 2
- Wide Range DC 9~36V Input
- 8-bit Digital Input and Output



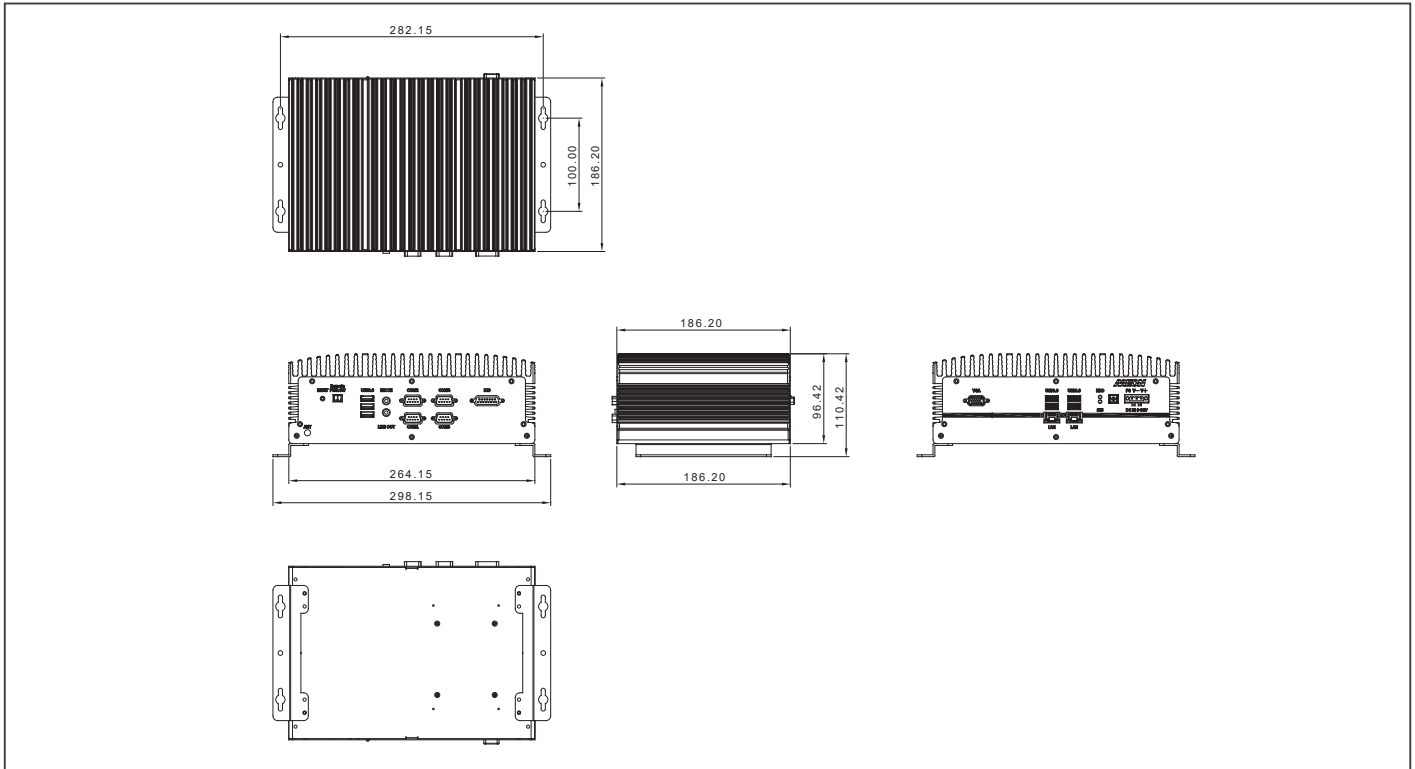
## Specifications

System	
CPU	Intel® Core™ i7-7700T, Quad Core, 2.9 GHz Intel® Core™ i5-7600T, Quad Core, 2.8 GHz Intel® Core™ i3-7300T, Dual Core, 3.5 GHz Intel® Core™ i7-6700TE, Quad Core, 2.4 GHz Intel® Core™ i5-6500TE, Quad Core, 2.3 GHz Intel® Core™ i3-6100TE, Dual Core, 2.7 GHz
Chipset	Intel® H110
System Memory	DDR4 SODIMM socket (double deck) x 2 Supports 1866/2133MHz DDR4 and up to 32GB Supports un-buffered and ECC / non-ECC type SODIMM
Display Interface	VGA x 1, HDMI x 2 (Combo DP x 2) - A1 Sku VGA x 1 - A2 Sku
Storage Device	mSATA, SATA HDD/SSD
Ethernet	Intel® I211AT x 1, I219LM x 1
I/O	2 pin Remote power on/off connector Audio x1 (MIC-in, Line-out) USB 2.0 x 3 DB-9 x 3 for RS-232 8-bit DIO DB-9 x 1 for RS-232/422/485 with auto flow control Power ON/OFF switch x 1 3 pin 9~36V DC Power input x 1 (+, -, GND) VGA x 1 HDMI x 2 (Combo DP x 2) USB 3.2 Gen 1 x 4 RJ-45 x 2 for GbE (I211AT x 1, I219LM x 1)
Expansion	Full-size Mini-Card x 1 (PCI-E + USB, w/ SIM slot) Full-size Mini-Card x 1 (mSATA + USB) LPC x 1
Indicator	Power LED HDD active LED
OS Support	Windows® 10 64-bit (Kabylake, Skylake CPU) Windows® 8.1 64-bit (Skylake CPU only) Windows® embedded 8 standard 64-bit (Skylake CPU only)
<b>Power Supply</b>	
Power Requirement	3-pin Phoenix DC Input 9~36V
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	10.39" x 3.8" x 7.33" (264mm x 96.4mm x 186.2mm)
Gross Weight	12.76 lb (5.8 kg)
Net Weight	9.9 lb (4.5 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-49 °F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	2 Grms/ 5 ~ 500Hz/ operation - SSD 1 Grms/ 5 ~ 500Hz/ operation - HDD
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6640-A1-1010	—	—	2	4	3	RS-232: 3 RS-232/422/485: 1	8 bit	MIC-in, Line-out	2.5" SATA Drive bay x 1	VGA x 1 HDMI x 2	Full-size Minicard x 2	Wallmount	9-36V	-4°F ~ 131°F (-20°C ~ 55°C)
BOXER-6640-A2-1010	—	—	2	4	3	RS-232: 3 RS-232/422/485: 1	8 bit	MIC-in, Line-out	2.5" SATA Drive bay x 1	VGA x 1	Full-size Minicard x 2	Wallmount	9-36V	-4°F ~ 131°F (-20°C ~ 55°C)

## Packing List

- 3 Pin DC-In Power Connector x 1
- 2 Pin Remote on/off Connector
- Thermal Pad
- Wallmount Bracket x 2
- Screw Package x 1
- BOXER-6640

## Optional Accessories

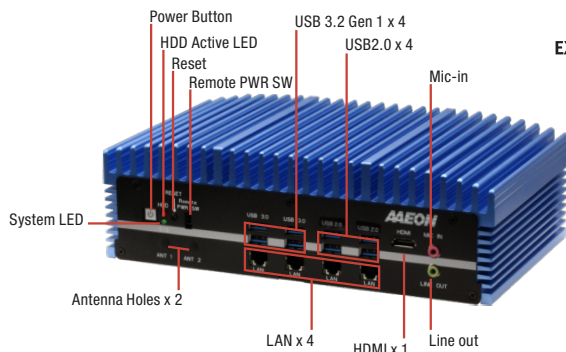
- **1255X00059**  
Power Adapter
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)

# BOXER-6641

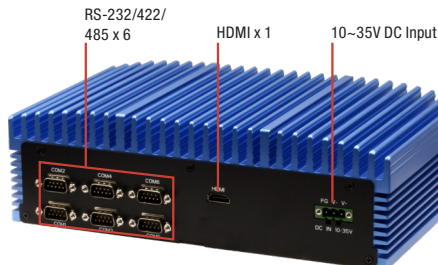
Fanless Embedded Box PC with Socket Type 8th Generation Intel® Processor

## BOXER-6641-A1/A5-1010 (H310)

Front View

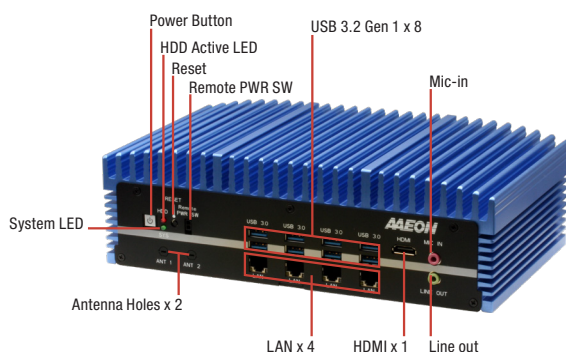


Rear View

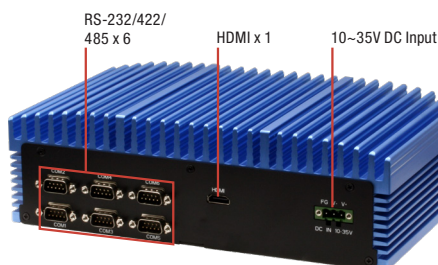


## BOXER-6641-A2/A6-1010 (C246)

Front View



Rear View



## Features

- Extreme Computing Power & Graphic Display Capability
- Desktop Grade Socket Type Core™ - i3/i5/i7/i9 Processor for A1 & A5 model (max. TDP up to 65W)
- Desktop Grade Socket Type Core™ - i3/i5/i7/i9/Xeon® Processor for A2 & A6 model (max. TDP up to 71W)
- Supports DDR4 ECC or Non-ECC SODIMM, Up to 64GB
- Supports Intel® GbE LAN x 4 (i211 x 3 + i219 x 1)
- Supports Intel® AMT (A2 & A6 Model)
- Supports HDMI x 2 Dual Display
- Supports USB 3.2 Gen 1 x 8 (A2 & A6 model)
- Supports BIOS Selectable RS-232/422/485 x 6
- Wide Range DC 10~35V Input



## Specifications

System	
CPU	Intel® Xeon® E-2124G (for A2 & A6 model only) Intel® i9-9900T Intel® i7-9700TE Intel® i7-8700T Intel® i5-8500T Intel® i3-8100T Pentium® G5400T Celeron® G4900T
Chipset	Intel® C246/H310
System Memory	DDR4-2666 SO-DIMM slot x 2, Up to 64GB, ECC or Non-ECC Support
Display Interface	HDMI x 2
Storage Device	2.5" SATA HDD/SSD Bay x 1 (x 2 for A5 & A6 model, A6 supports RAID 0/1)
Ethernet	Intel® i211 x 3, i219 x 1
I/O	HDMI x 2 RJ-45 x 4 for GbE LAN (i211 x 3, i219 x 1) USB 3.2 Gen 1 x 4, USB 2.0 x 4 (A1 & A5 model) USB 3.2 Gen 1 x 8 (A2 & A6 model) DB-9 x 6 for RS-232/422/485 Audio x 1 (MIC-in, Line-out) 3 pin 10~35V Power Input x 1 Power Button x 1 Remote Power switch x 1 Reset Button x 1 HDD LED x 1 SYS LED x 1
Expansion	Full-size Mini PCIe x 1 Full-size Mini PCIe x 1 (PCIe/mSATA switch by BIOS, Default: mSATA) SIM slot x 1
Indicator	HDD LED x 1 SYS LED x 1
OS Support	Windows® 10 64-bit Linux Ubuntu 20.04
<b>Power Supply</b>	
Power Requirement	3-pin DC Input 10~35V
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	10.4" x 3.19" x 6.15" (264.2mm x 80.92mm x 156.2mm)
Gross Weight	10.4 lb (4.7 kg)
Net Weight	8.2 lb (3.7 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) with 0.5 m/s airflow – with TDP ≤ 35W CPU -4°F ~ 113°F (-20°C ~ 45°C) with 0.5 m/s airflow – with TDP >35W CPU
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	2 Grms/ 5 ~ 500Hz/ operation – SSD/mSATA 1 Grms/ 5 ~ 500Hz/ operation – HDD
Anti-Shock	—



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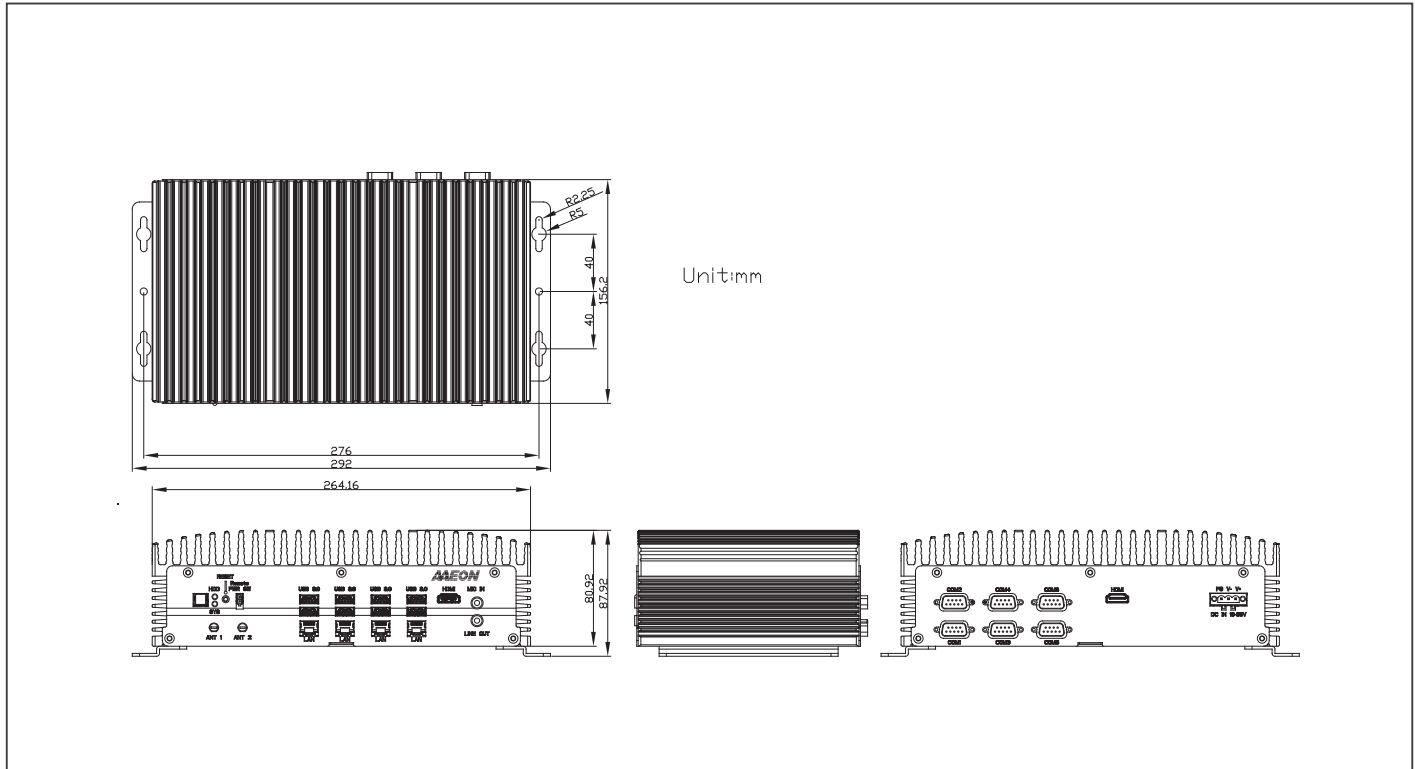
Tél. 01 47 95 99 80  
Fax. 01 47 01 16 22



e-mail : mse@es-france.com  
Site Web : www.es-france.com

## Dimension

Unit: mm



## Ordering Information

Part Number	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232/422/485	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6641-A1-1210(H310)	4	4	4	—	RS-232/422/485 x 6	Mic-in Line-out	Internal 2.5" SATA Drive bay x 1	HDMI x 2	Full-size Mini-Card x 2 SIM x 1	Wallmount	10~35V	-4°F ~ 131°F (-20°C ~ 55°C) with 0.5 m/s airflow – with TDP ≤ 35W CPU -4°F ~ 113°F (-20°C ~ 45°C) with 0.5 m/s airflow – with TDP >35W CPU
BOXER-6641-A2-1210(C246)	4	8	—	—	RS-232/422/485 x 6	Mic-in Line-out	Internal 2.5" SATA Drive bay x 1	HDMI x 2	Full-size Mini-Card x 2 SIM x 1	Wallmount	10~35V	-4°F ~ 131°F (-20°C ~ 55°C) with 0.5 m/s airflow – with TDP ≤ 35W CPU -4°F ~ 113°F (-20°C ~ 45°C) with 0.5 m/s airflow – with TDP >35W CPU
BOXER-6641-A5-1210(H310)	4	4	4	—	RS-232/422/485 x 6	Mic-in Line-out	Internal 2.5" SATA Drive bay x 2	HDMI x 2	Full-size Mini-Card x 2 SIM x 1	Wallmount	10~35V	-4°F ~ 131°F (-20°C ~ 55°C) with 0.5 m/s airflow – with TDP ≤ 35W CPU -4°F ~ 113°F (-20°C ~ 45°C) with 0.5 m/s airflow – with TDP >35W CPU
BOXER-6641-A6-1210(C246)	4	8	—	—	RS-232/422/485 x 6	Mic-in Line-out	Internal 2.5" SATA Drive bay x 2 (RAID 0/1)	HDMI x 2	Full-size Mini-Card x 2 SIM x 1	Wallmount	10~35V	-4°F ~ 131°F (-20°C ~ 55°C) with 0.5 m/s airflow – with TDP ≤ 35W CPU -4°F ~ 113°F (-20°C ~ 45°C) with 0.5 m/s airflow – with TDP >35W CPU

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-In Power Connector x 1
- Screw Package x 1
- BOXER-6641

## Optional Accessories

- **1255X00059**  
120W Power Adapter (Recommend for 35W CPU)
- **1255302300**  
230W Power Adapter (Recommend for >35W CPU)
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)

# BOXER-6641-PRO

Fanless Embedded Box PC with Socket Type 8th/9th Generation Intel® Processor

Front View



Rear View



## Features

- Wide Operating Temperature -40~70°C with “Graphene” Chassis for Extreme Computing Power & Graphic Display Capability
- Desktop Grade Socket Type Core™ - i3/i5/i7 Processor (CPU TDP 35W)
- Supports DDR4 ECC or Non-ECC SODIMM, Up to 64GB
- Supports HDMI x 2 Dual Display
- Supports Intel® GbE LAN x 4 (i211 x 3 + i219 x 1)
- Supports Intel® AMT (A2 Model)
- Supports RAID 0/1 Function (A2 Model)
- Wide Range DC 10~35V Input



## Specifications

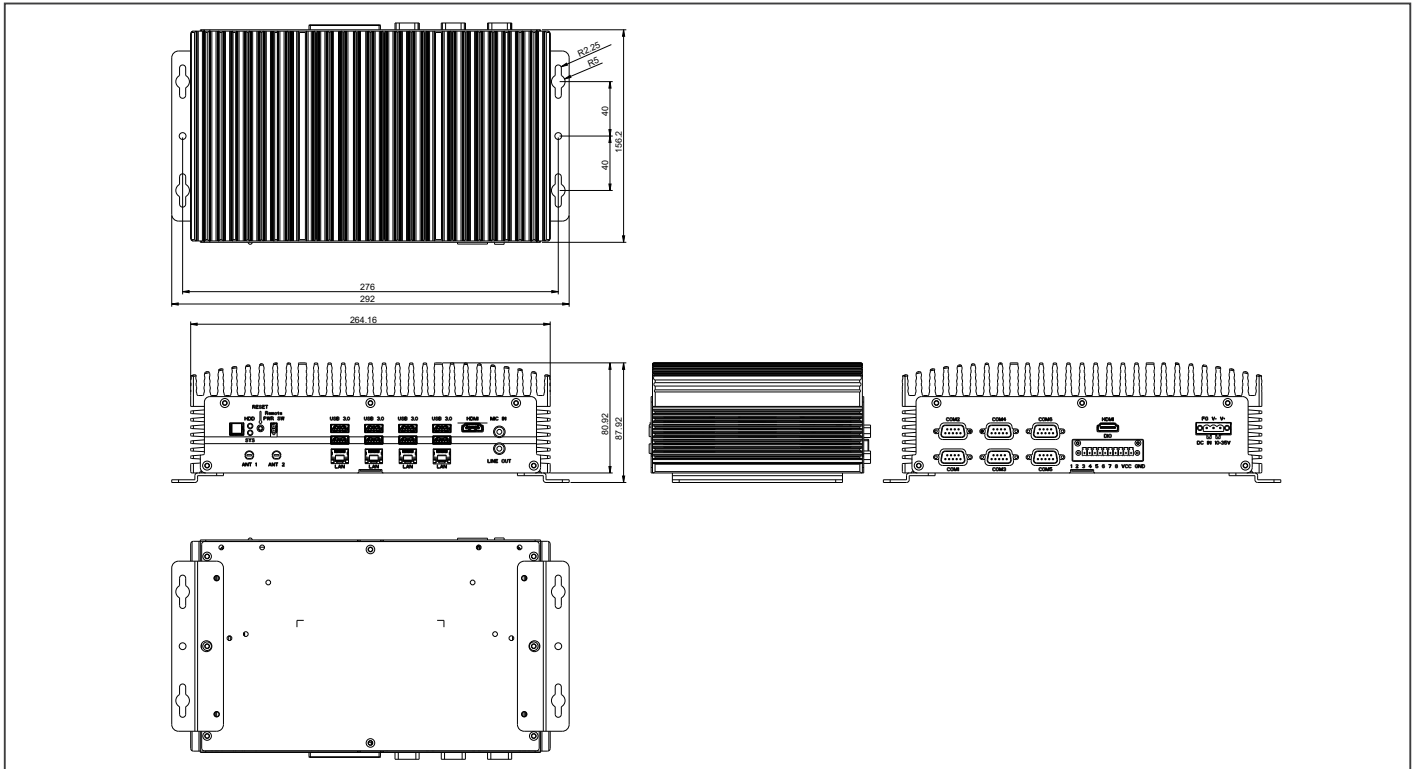
System	
CPU	Intel® i7-9700TE Intel® i7-8700T Intel® i5-8500T Intel® i3-8100T Pentium® G5400T Celeron® G4900T
Chipset	Intel® C246/H310
System Memory	DDR4-2666 SO-DIMM slot x 2, Up to 64GB, ECC or Non-ECC Support
Display Interface	HDMI x 2
Storage Device	2.5" SATA HDD/SSD Bay x 2
Ethernet	Intel® i211 x 3, i219 x 1
I/O	HDMI x 2 RJ-45 x 4 for GbE LAN (i211 x 3, i219 x 1) USB 3.2 Gen 1 x 4, USB2.0 x 4 (A1 model) USB 3.2 Gen 1 x 8 (A2 model) DB-9 x 6 for RS-232/422/485 10 pin Terminal Block for 8-bit DIO Audio x 1 (MIC-in, Line-out) 3 pin 10~35V Power Input x 1 Power Button x 1 Remote Power switch x 1 Reset Button x 1
Expansion	Full-size Mini PCIe x 1 Full-size Mini Card x 1 (PCIe/mSATA switch by BIOS, Default: mSATA) SIM slot x 1
Indicator	HDD LED x 1 SYS LED x 1
OS support	Windows® 10 64-bit Linux Ubuntu 20.04.2
<b>Power Supply</b>	
Power Requirement	3-pin DC Input 10~35V
<b>Mechanical</b>	
Mounting	Wall mount kit
Dimensions (W x H x D)	10.4" x 3.19" x 6.15" (264.2mm x 80.92mm x 156.2mm)
Gross Weight	10.4 lb (4.7 kg)
Net Weight	8.2 lb (3.7 kg)
<b>Environmental</b>	
Operating Temperature	-40°F ~ 158°F (-40°C ~ 70°C), according to IEC68-2-14 with 0.5 m/s AirFlow
Storage Temperature	-40°C ~ 80°C
Storage Humidity	5 ~ 95% @ 40C, non-condensing
Anti-Vibration	2 Grms/ 5 ~ 500Hz/ operation (with SSD)
Anti-Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	Chipset	LAN	USB 3.2 Gen 1	USB 2.0	DIO	RS-232/422/485	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6641-PRO-A1-1010	H310	4	4	4	8bit	6	Mic-in Line-out	Internal 2.5" SATA Drive bay x 2	HDMI x 2	Full-size Mini-Card x 2 SIM x 1	Wallmount	10~35V	-40°F ~ 158°F (-40°C ~ 70°C), according to IEC68-2-14 with 0.5 m/s AirFlow
BOXER-6641-PRO-A2-1010	C246	4	8	—	8bit	6	Mic-in Line-out	Internal 2.5" SATA Drive bay x 2	HDMI x 2	Full-size Mini-Card x 2 SIM x 1	Wallmount	10~35V	-40°F ~ 158°F (-40°C ~ 70°C), according to IEC68-2-14 with 0.5 m/s AirFlow

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- 10 pin DIO Connector x 1
- Screw Package x 1
- BOXER-6641-PRO

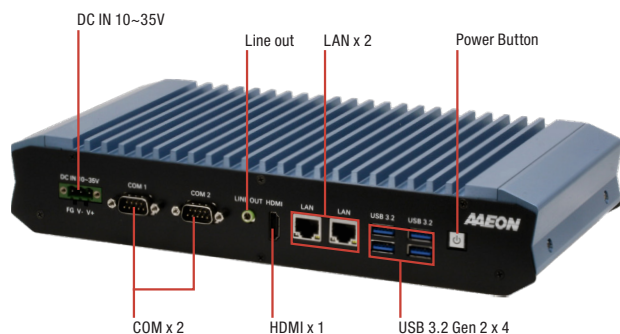
## Optional Accessories

- 125590120B  
120W Power Adapter
- 1702031802  
Power Cord (US)
- 1702031803  
Power Cord (EU)
- 170203180E  
Power Cord (JP)

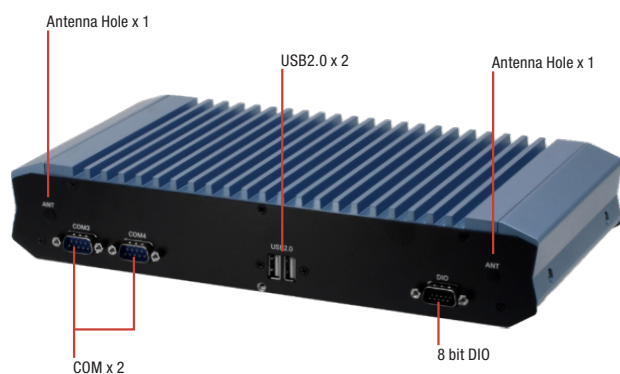
# BOXER-6642-CML

Fanless Embedded Box PC with Socket Type 10th Generation Intel® Core™ Processor

Front View



Rear View



## Features

- Extreme Computing Power & Graphic Display Capability
- DDR4 slot x 2, up to 64GB
- Support High Speed NVMe storage (M.2 2280)
- GbE LAN x 2, RS232/422/485 x 4
- Supports Intel® AMT
- Supports TPM 2.0
- Wide Range 10-35V DC input
- Wide Range 0 ~ 45°C Operating Temperature



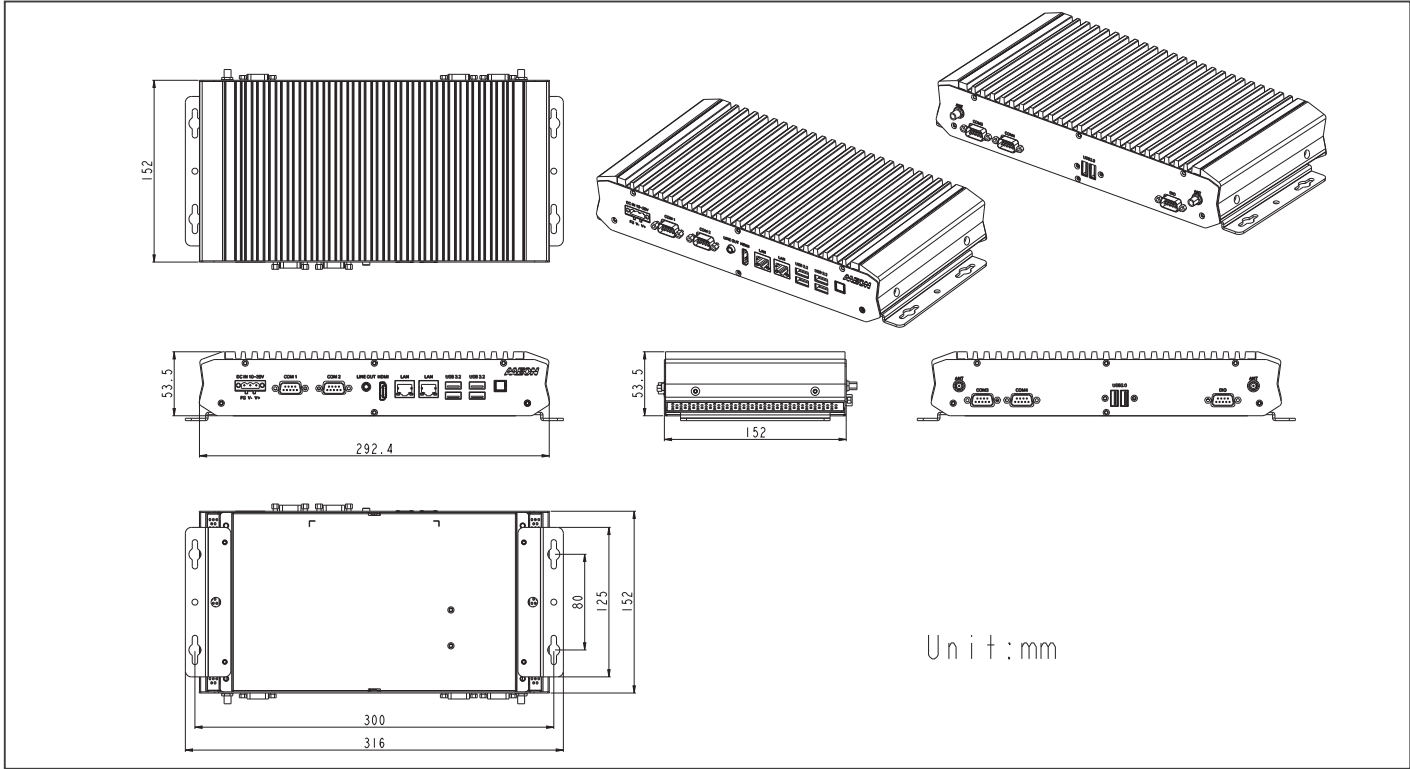
## Specifications

System	
CPU	Intel® Core™ i9-10900TE Intel® Core™ i7-10700TE Intel® Core™ i5-10500TE Intel® Core™ i3-10100TE Intel® Celeron® G5900TE
Chipset	Intel® Q470E
System Memory	DDR4 SO-DIMM x 2, up to 64GB
Display Interface	HDMI 1.4 x 1
Storage Device	M.2 2280 slot x 1 (PCIex4), 2.5" SATA SSD/HDD bay x 1
Ethernet	Intel® i211-AT x 1, i219-LM x 1
I/O	HDMI x 1 RJ-45 x 2 for GbE LAN (i211-AT x 1, i219-LM x 1) USB 3.2 Gen 2 x 4 USB 2.0 x 2 DB-9 x 4 for RS-232/422/485 DB15 x 1 for 8 channel DIO Line out x 1 3 pin 10-35V Power Input x 1 Power Button with LED x 1
Expansion	M.2 2230 E Key x 1 M.2 2280 M Key x 1 Full-Size Mini Card x1 (mSATA/PCIe switch by BIOS, default PCIe) SIM x 1
Indicator	Power LED
OS Support	Windows® 10 IoT Enterprise 64-bit Linux Ubuntu 20.04.2
Power Supply	
Power Requirement	10-35V DC-in with 3-pin terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	11.58" x 5.98" x 2.11" (292.4mm x 152mm x 53.5mm)
Gross Weight	8.4lb (3.8kg)
Net Weight	6.2lb (2.8kg)
Environmental	
Operating Temperature	32°F ~ 113°F (0°C ~ 45°C) (35W CPU), according to IEC68-2-14 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	2 Grms/5 ~ 500Hz/operation (with SSD)
Anti-Shock	50G peak acceleration (11msec) (with SSD)
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	LAN	PCH	USB 3.2 Gen 2	USB 2.0	RS-232/422/485	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6642-CML-A1-1010	2	Q470E	4	2	4	M.2 2280 M Key x 1 2.5" HDD/SSD Bay x 1	HDMI x 1	M.2 2230 E Key x 1 Full-Size Mini Card x 1	Wall mount kit	10-35V DC-in	0°C ~ 45°C with 0.5m/s airflow

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- BOXER-6642-CML x 1

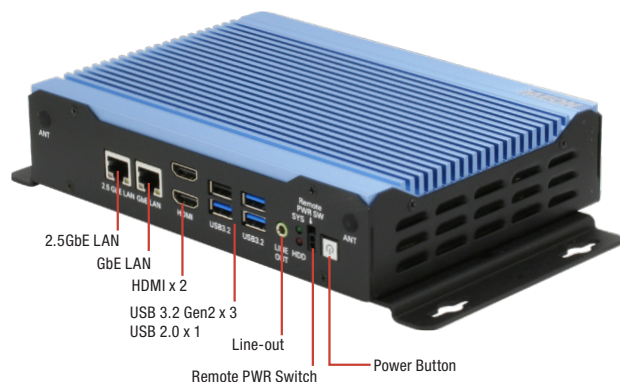
## Optional Accessories

- 1255X00059  
120W Power Adapter
- 1255302300  
230W Power Adapter
- 1702031802  
Power Cord (US Type)
- 1702031803  
Power Cord (Europe)
- 170203180E  
Power Cord (Japan)

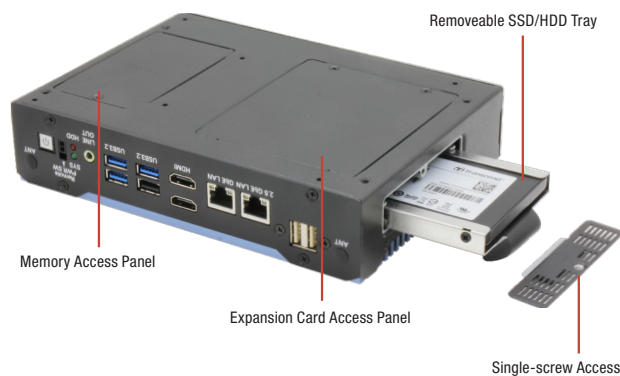
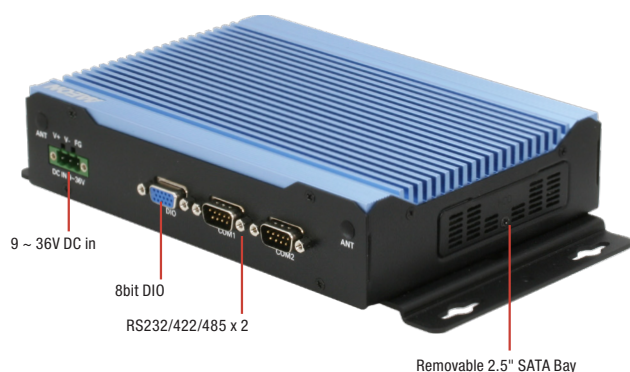
# BOXER-6643-TGU

Fanless Embedded Box PC 11th Generation Intel® Core™ SoC Processor

Front View



Rear View



## Features

- Extreme Computing Power with Intel® SoC Processor
- DDR4 slot x2, up to 64GB
- TPM 2.0 onboard
- Supports High Speed NVMe storage (M.2 2280)
- GbE LAN x 1 (Intel I219) + 2.5GbE LAN x 1 (Intel I225)
- Supports M.2 3052 B Key for 5G module
- Wide Range 9-36V DC input
- Wide Range -20~60 °C Operating Temperature



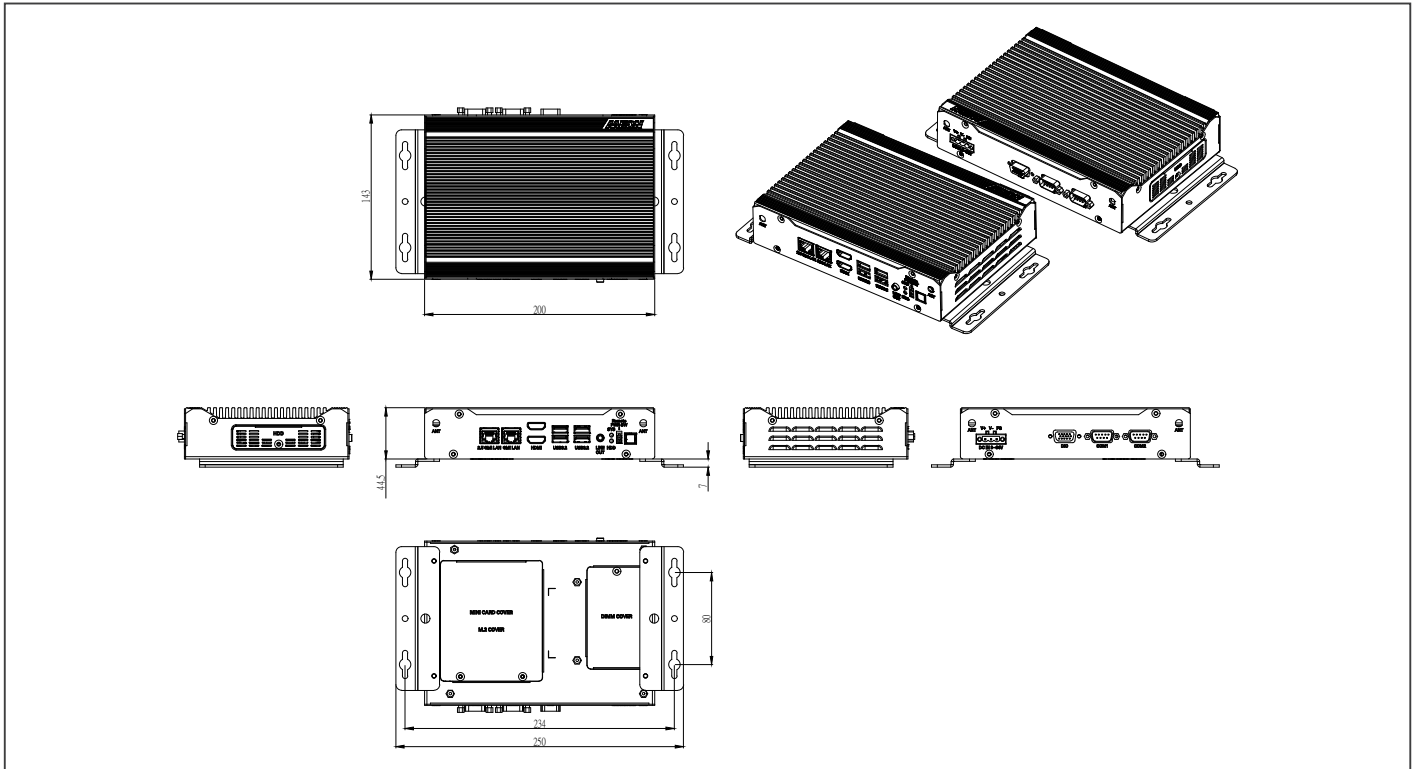
## Specifications

System	
CPU	Intel® Core™ i7-1185G7E Intel® Core™ i5-1145G7E Intel® Core™ i3-1115G4E
Chipset	Intel® SoC
System Memory	DDR4 3200MHz S0-DIMM x 2, max 64GB
Display Interface	HDMI 2.0 x 2
Storage Device	M.2 2280 M Key NVMe Slot x1 (PCIex4) 2.5" SATA Drive Bay x1
Ethernet	RJ-45 x 2 for 1G/2.5GbE LAN (i219x1, i225x1)
I/O	HDMI 2.0 x 2 RJ-45 x 2 for 1G/2.5GbE LAN (i219 x 1, i225 x 1) USB Type-A x3 for USB3.2 Gen2 USB Type-A x1 for USB 2.0 DB-9 x 2 for RS-232/422/485 DB15 x1 Male for Digital I/O 8-channel Line out x 1 3 pin 9-36V Power Input x 1 Power Button with LED x 1
Expansion	M.2 3052 B Key x 1 (for 5G module) Full-Size Minicard x1 (PCIe + USB / SATA, Default PCIe + USB) SIM Slot x 1
Indicator	Power / System LED
OS Support	Windows® 10 IoT 64-bit Windows® 11 Pro 64-bit Linux Ubuntu 20.04.2
Power Supply	
Power Requirement	DC-in 9-36V x1 for 3-pin Terminal Block
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	9.84" x 5.62" x 2.03" (250 x 143 x 51.5) with bracket 7.87" x 5.62" x 1.75" (200 x 143 x 44.5) w/o bracket
Gross Weight	4.4 lb (2.0 kg)
Net Weight	3.3 lb (1.5 kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation (with SSD)
Anti-Shock	50G, IEC 68-2-27, half sine, 11 ms duration (with SSD)
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	LAN	PCH	USB 3.2 Gen2	USB 2.0	RS 232/422/485	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6643-TGU-A1-1010	Intel® Core™ i3-1115G4E	2	Intel SoC	3	1	2	-M.2 2280 M Key NVMe Slot x1 (PCIex4) -2.5" SATA Drive Bay x1	HDMI x 2	-M.2 3052 B Key x 1 (for 5G module) -Full-Size Minitcard x1 (PCIe + USB / SATA, Default PCIe + USB) -SIM Slot x 1	Wallmount	9-36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6643-TGU-A2-1010	Intel® Core™ i5-1145G7E	2	Intel SoC	3	1	2	-M.2 2280 M Key NVMe Slot x1 (PCIex4) -2.5" SATA Drive Bay x1	HDMI x 2	-M.2 3052 B Key x 1 (for 5G module) -Full-Size Minitcard x1 (PCIe + USB / SATA, Default PCIe + USB) -SIM Slot x 1	Wallmount	9-36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6643-TGU-A3-1010	Intel® Core™ i7-1185G7E	2	Intel SoC	3	1	2	-M.2 2280 M Key NVMe Slot x1 (PCIex4) -2.5" SATA Drive Bay x1	HDMI x 2	-M.2 3052 B Key x 1 (for 5G module) -Full-Size Minitcard x1 (PCIe + USB / SATA, Default PCIe + USB) -SIM Slot x 1	Wallmount	9-36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- BOXER-6643-TGU x 1

## Optional Accessories

- 125590120B  
120W Power Adapter
- 1702031802  
Power Cord (US Type)
- 1702031803  
Power Cord (Europe)
- 170203180E  
Power Cord (Japan)

# BOXER-6645-ADS

Fanless Embedded Box PC with Socket Type 12th/13th Generation Intel® Core™ Processors

Front View



Rear View



## Features

- 12th/13th Gen Intel® Core™ Desktop Processors
- Built-in high performance Intel® UHD Graphic Engine
- Dual-Channel DDR5 SODIMM, Max. 64GB
- Four Independent Displays (A2 Model)
- SuperSpeed+ USB 3.2 Gen 2 (10Gbps) x 8 (A2 Model)
- M.2 3052 B-Key for 5G Module
- Quadruple LAN (GbE x 3, 2.5GbE x 1)
- Onboard TPM 2.0
- Hailo-8™ M.2 2280 AI Accelerator Module Support (Optional)



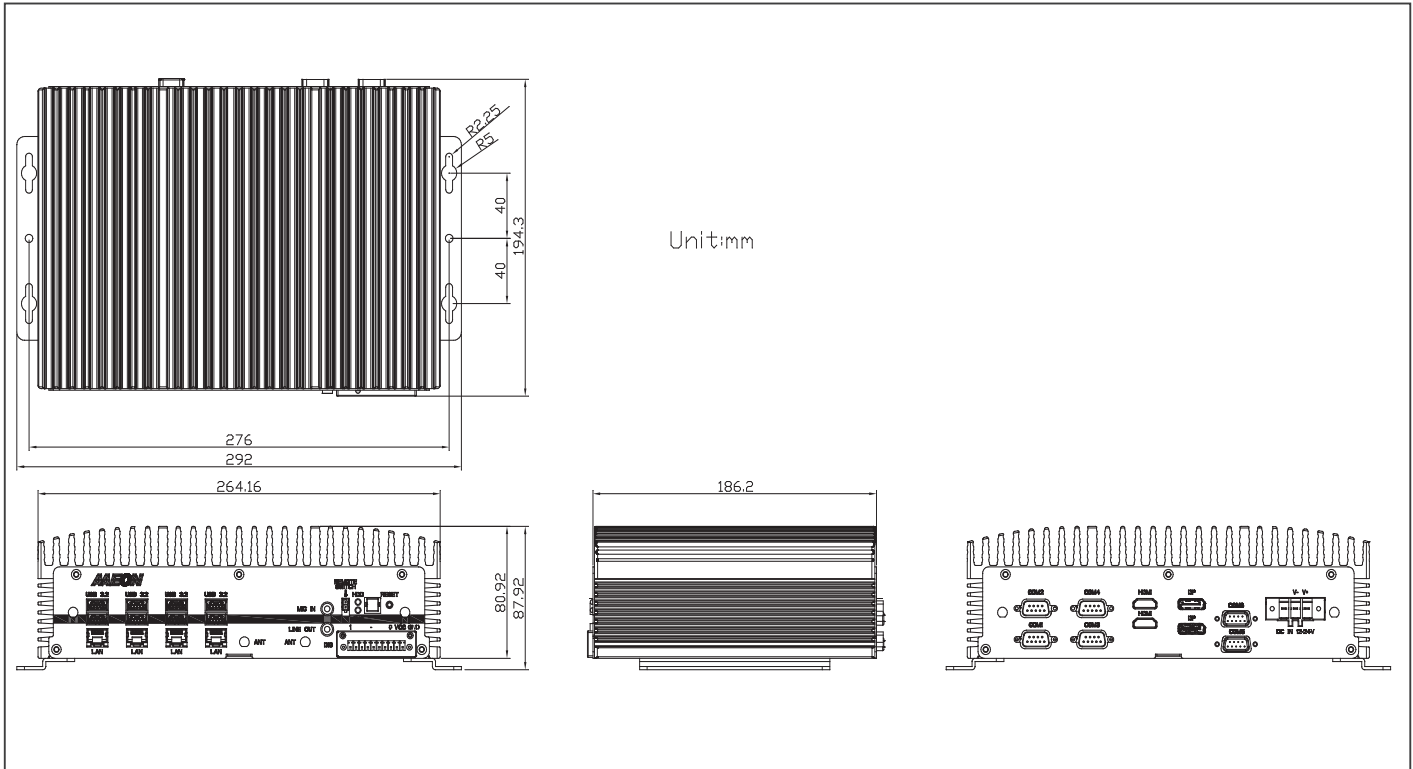
## Specifications

System	
CPU	13th Generation Intel® Core™ Processors: Intel® Core™ i9-13900TE, Intel® Core™ i9-13900E, Intel® Core™ i7-13700TE, Intel® Core™ i7-13700E, Intel® Core™ i5-13500TE, Intel® Core™ i5-13500E, Intel® Core™ i3-13100TE, Intel® Core™ i3-13100E
	12th Generation Intel® Core™/Celeron® Processors: Intel® Core™ i9-12900E, Intel® Core™ i7-12700TE, Intel® Core™ i7-12700E, Intel® Core™ i5-12500TE, Intel® Core™ i5-12500E, Intel® Core™ i3-12100TE, Intel® Core™ i3-12100E, Intel® Celeron® Processor G6900TE, Intel® Celeron® Processor G6900E
Chipset	Intel® H610E/Q670E
System Memory	DDR5 4800MHz SODIMM x 2, up to 64GB
Display Interface	HDMI 1.4b (Type-A) x 2 DP 1.4a x 2 *A2 model supports four simultaneous display outputs *A1 model supports three simultaneous display outputs
Storage Device	2.5" SATA 6Gb/s Drive Bay x 2 (A2 SKU supports RAID 0, 1) M.2 2280 M-Key x 1 (NVMe, extra heatsink required, refer to optional accessories) (A2 Model)
Ethernet	Intel® I210-AT, 10/100/1000 Base-TX x 2 Intel® I219-LM, 10/100/1000 Base-TX x 1 Intel® I226-LM, 2.5GbE Base-TX x 1
I/O	USB 3.2 Gen 2 (5Gbps) x 4 (A1 Model) USB 3.2 Gen 2 (10Gbps) x 8 (A2 Model) USB 2.0 x 4 (A1 Model) Audio x 1 (MIC-in, Line-out) DB-9 x 6 for RS-232/422/485 SMA Antenna Hole x 6 DIO x 8
Expansion	M.2 2230 E-Key x 1 for WiFi module M.2 3052 B-Key x 1 for 4G/5G module
Indicator	System LED x 1 HDD LED x 1
OS support	Windows® 10 IoT Enterprise 64-bit Windows® 11 PRO 64-bit Linux Ubuntu 20.04 (Kernel 15.5 or above)
<b>Power Supply</b>	
Power Requirement	3-pin DC Input 12~24V
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	10.39" x 3.8" x 7.33" (264mm x 80.92mm x 186.2mm)
Gross Weight	11.7 lb (5.3 kg)
Net Weight	9.5 lb (4.3 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature memory/storage (TDP 65W CPU) -4°F ~ 140°F (-20°C ~ 60°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature memory (Max. 32GB)/Storage (TDP 35W CPU)
Storage Temperature	-40 °F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – SSD 1 Grms/ 5 ~ 500Hz/ operation – HDD
Anti-Shock	50G, IEC68-2-27, half sine, 11ms duration (with SSD)
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	PCH	LAN	USB 3.0	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6645-ADS-A1-1010	Intel® H610E	4	USB 3.2 (5Gbps) x 4	4	—	6	8 bit	Mic-in Line-out	2.5" SATA 6Gb/s Drive Bay x 2	HDMI x 2 DP x 2	M.2 2230 E-Key x 1 M.2 3052 B-Key x 1 w/ SIM Slot	Wallmount	12~24V	-4°F ~122°F (-20°C ~ 50°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature Memory / Storage & TDP 65W CPU. -4°F ~140°F (-20°C ~ 60°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature Memory (Max. 32G) / Storage & TDP 35W CPU
BOXER-6645-ADS-A2-1010	Intel® Q670E	4	USB 3.2 (10Gbps) x 8	—	—	6	8 bit	Mic-in Line-out	2.5" SATA 6Gb/s Drive Bay x 2 (RAID 0, 1) M.2 2280 M-Key x 1 (NVMe)	HDMI x 2 DP x 2	M.2 2230 E-Key x 1 M.2 3052 B-Key x 1 w/ SIM Slot	Wallmount	12~24V	-4°F ~122°F (-20°C ~ 50°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature Memory / Storage & TDP 65W CPU. -4°F ~140°F (-20°C ~ 60°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature Memory (Max. 32G) / Storage & TDP 35W CPU

## Packing List

- BOXER-6645-ADS x1
- Wallmount Bracket x 2
- 3 Pin DC-In Power Connector x 1
- Remote ON/OFF Connector x 1
- Screw Package x 1

## Optional Accessories

- **1255X00070**  
180W Power Adapter (Recommended for 35W CPU)
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)
- **1255903300**  
330W Power Adapter (Recommended for 65W CPU)
- **9C3256G007**  
M.2 2280 M Key 256GB, PCIe Gen4 x 4, 3D TLC, -40°C~85°C, Transcend TS256GMTE710T-I
- **9C3512G006**  
M.2 2280 M Key 512GB, PCIe Gen4 x 4, 3D TLC, -40°C~85°C, Transcend TS512GMTE710T-I
- **9C2001T007**  
M.2 2280 M Key 1TB, PCIe Gen4 x 4, 3D TLC, -40°C~85°C, Transcend TS1TMTE710T-I
- **9C3002T002**  
M.2 2280 M Key 2TB, PCIe Gen4 x 4, 3D TLC, -40°C~85°C, Transcend TS2TMTE710T-I
- **9641664500**  
Heatsink pack for above PCIe Gen4x4 M.2 2280 NVMe SSD models

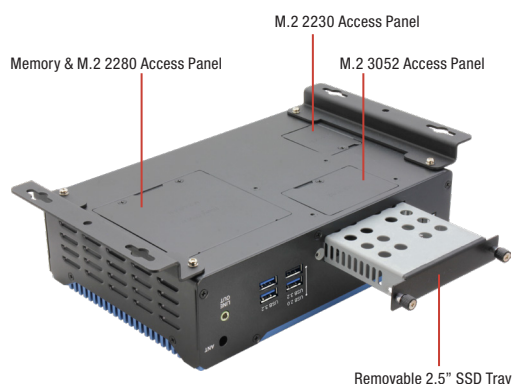
# BOXER-6646-ADP

Fanless Compact Embedded Computer with 12th/13th Generation Intel® Core™ i7/i5/i3 Processor

Front View



Rear View



## Features

- 12th/13th Gen Intel® Core™ i7/i5/i3 Processor SoC
- Dual-Channel DDR5 SODIMM slot
- Support Multi-LAN including 2.5GbE Ethernet
- Support M.2 2280 M Key High speed NVMe SSD
- SuperSpeed+ USB 3.2 Gen2
- Wide Range 10~35V DC input
- Wide Operating Temperature -20~60°C
- Compact Size
- Onboard TPM 2.0
- Hailo-8™ M.2 2280 AI Accelerator Module Support (Optional)



## Specifications

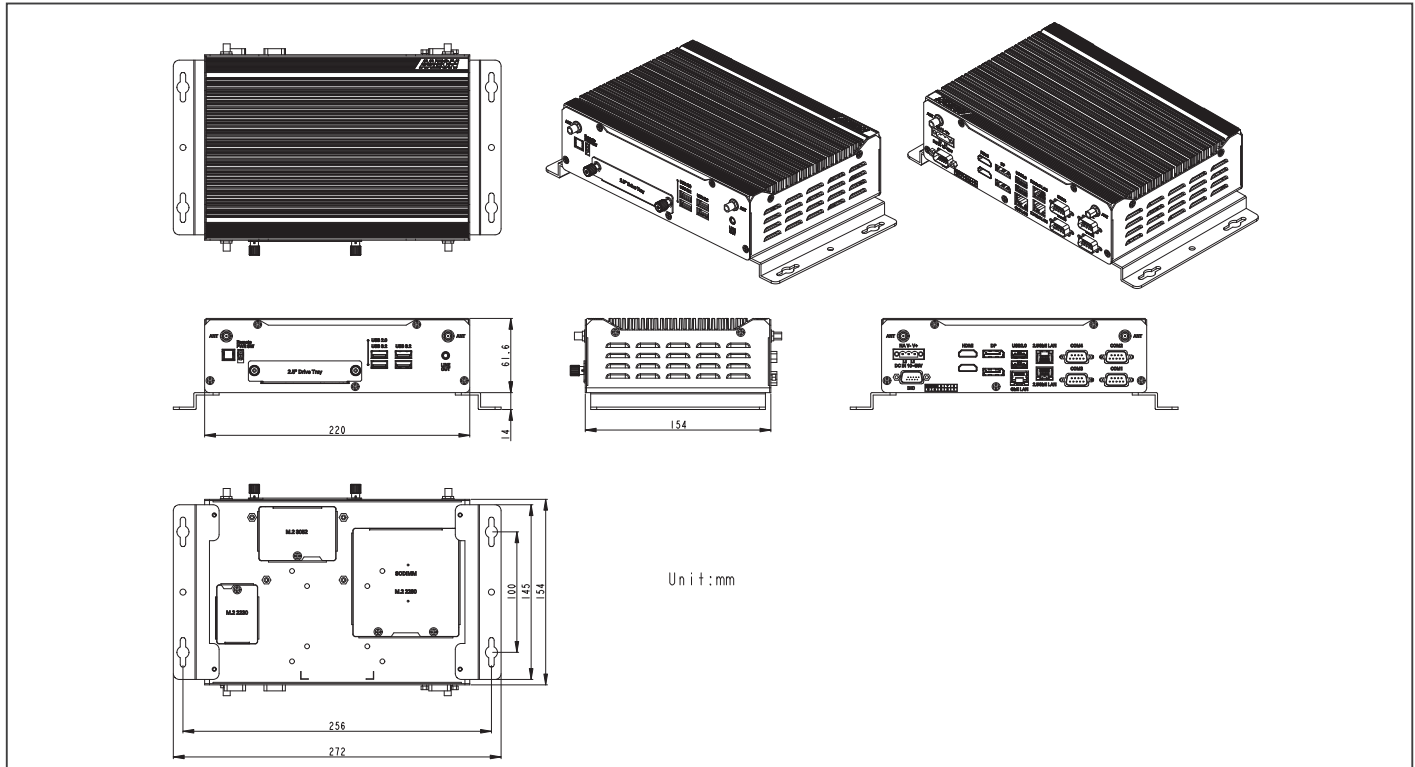
System	
CPU	13th Generation Intel® Core™ Processors: Intel® Core™ i7-1370PE Intel® Core™ i5-1350PE Intel® Core™ i3-1320PE  12th Generation Intel® Core™ Processors: Intel® Core™ i7-1270PE Intel® Core™ i5-1250PE Intel® Core™ i3-1220PE
Chipset	Intel® System on Chip
System Memory	DDR5 SODIMM slot x 2, max. 64GB
Display Interface	HDMI x2, Display Port x 2
Storage Device	Removable 2.5" SATA Drive Bay x 1 M.2 2280 M Key NVMe Slot x 1
Ethernet	RJ-45 x 2 for 2.5GbE LAN i225-LM x 2 RJ-45 x 1 for GbE LAN i219-LM x 1
I/O	USB Type-A x 3 for USB3.2 Gen2 (10Gbps) USB Type-A x 3 for USB 2.0 DB-9 x 4 for RS-232/422/485 Line out SMA Antenna Holes x 6 DB-9 for DIO 8 bit x 1 Power Button with LED indicator x 1 Remote Power on/off 2pin connector x 1
Expansion	M.2 E key 2230 x 1 M.2 B Key 3052 x 1 (for 5G/LTE module)
Indicator	System Power LED x 1
OS support	Windows® 10 IoT Ent LTSC, Windows® 11 PRO, Ubuntu 22.04
Power Supply	
Power Requirement	DC-in 10~35V in 3pin Terminal block connector
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	8.66" x 6.06" x 2.42" (220 mm x 154 mm x 61.6 mm)
Gross Weight	6.6 lbs. (3.0 kg)
Net Weight	4.9 lbs. (2.2 kg)
Environmental	
Operating Temperature	-4°F ~140°F (-20°C ~ 60°C), IEC68-2 with 0.5 m/s AirFlow, with wide temperature Memory/Storage
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	SSD: Random, 3Grms, 5~500Hz
Anti-Shock	SSD: 50G @ wallmount, Half-sine, 11ms
Certification	CE/FCC class A





## Dimension

Unit: mm



Unit: mm

## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.0	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6646-ADP-A1-1010	Intel® Core™ i3-1220PE	SoC	3	USB 3.2 (10Gbps) x3	3	—	4	8bit	Line-out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	Wallmount	10~35V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6646-ADP-A2-1010	Intel® Core™ i5-1250PE	SoC	3	USB 3.2 (10Gbps) x3	3	—	4	8bit	Line-out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	Wallmount	10~35V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6646-ADP-A3-1010	Intel® Core™ i7-1270PE	SoC	3	USB 3.2 (10Gbps) x3	3	—	4	8bit	Line-out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	Wallmount	10~35V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6646-ADP-A4-1010	Intel® Core™ i3-1320PE	SoC	3	USB 3.2 (10Gbps) x3	3	—	4	8bit	Line-out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	Wallmount	10~35V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6646-ADP-A5-1010	Intel® Core™ i5-1350PE	SoC	3	USB 3.2 (10Gbps) x3	3	—	4	8bit	Line-out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	Wallmount	10~35V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6646-ADP-A6-1010	Intel® Core™ i7-1370PE	SoC	3	USB 3.2 (10Gbps) x3	3	—	4	8bit	Line-out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	Wallmount	10~35V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage

## Packing List

- BOXER-6646-ADP x1
- Wallmount Bracket x 2
- 3 Pin DC-In Power Connector x 1
- Remote ON/OFF Connector x 1
- Screw Package x 1

## Optional Accessories

- 125590120B  
19V 120W AC to DC Adapter
- 1702031802  
Power Cord (US Type)
- 1702031803  
Power Cord (Europe)
- 170203180E  
Power Cord (Japan)

# BOXER-6645U-RPL PRELIMINARY

Fanless Embedded Box PC with Socket Type 12th/13th Generation Intel® Core™ Processor



## Features

- 12th/13th Generation Intel® Core™ LGA 1700 socket-type Processor with Intel® H610E Chipset
- Wide Operating Temperature (-25°C ~ 70°C)
- VGA and HDMI
- GbE LAN x 2
- USB Type-A x 8
- RS-232/422/485 x 2, RS-232 x 4 (Optional)
- 2.5" HDD/SSD x 1, mSATA x 1 (optional)
- 9 ~ 36 VDC power input range
- IP40 dust proof for deployment in harsh environment
- Supports Hi-Safe
- Supports Intel® vPro™/AMT and TPM technologies



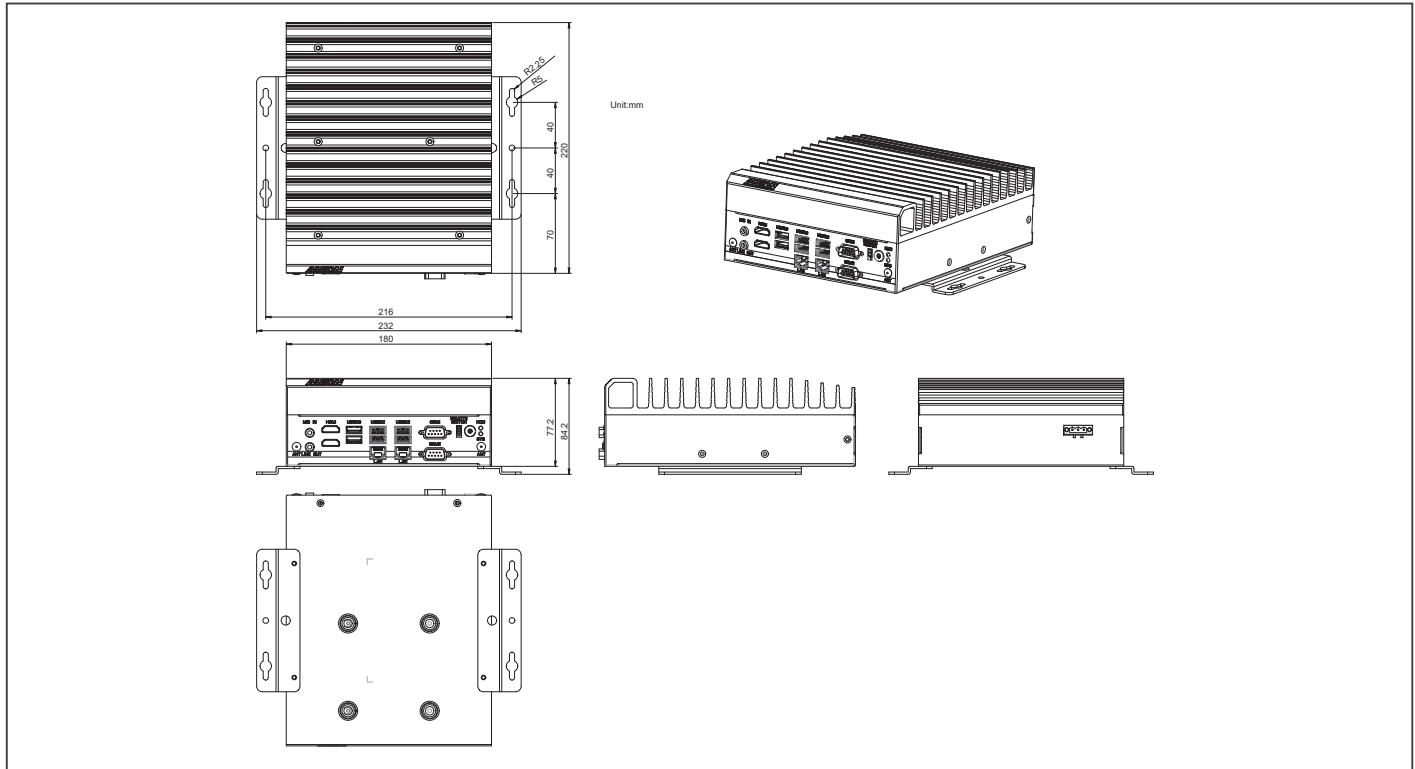
## Specifications

System	
CPU	12th/13th Generation Intel® Core™ LGA 1700 socket-type Processor, Max TDP 65W
Chipset	Intel® H610E
System Memory	DDR5 SODIMM x 2, up to 64GB
Display Interface	HDMI x 2, 4K x 2K @30Hz
Storage Device	2.5" SATA Drive Bay x 1 Mini Card x 1 (mSATA) M.2 2280 M-Key x 1 (PCIe Gen 4 [x4]) for NVMe
Ethernet	Intel® I219-LM, GbE RJ-45 x 1 Intel® I226-V, 2.5GbE RJ-45 x 1
I/O	USB 3.2 Gen 1 x 4, USB 2.0 x 4 DB-9 x 2 for RS-232/422/485 Audio x 1 (Mic-in/Line-out) Antenna opening x 2 Power Button with power LED x 1 Remote Power On/Off x 1 Reset Button x 1
Expansion	M.2 2280 M-Key x 1 (For NVMe Storage) M.2 2230 E-Key x 1 (for Wi-Fi/Bluetooth) Mini Card x 1 (optional for mSATA) 2.5" Drive Bay for SATA 6Gb/s x 2 4-Pin Power Connector x 2 for 2.5" Drive Bay Onboard TPM 2.0
Indicator	System Power LED x 1
OS support	Windows® 10 IoT Enterprise 64-bit Windows® 11 PRO 64-bit Linux Ubuntu 20.04 (Kernel 15.5 or above) Linux Ubuntu 22.04
Power Supply	
Power Requirement	3-pin DC Input 9~36V
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 149°F (-25°C ~ 70°C) with 0.7 m/s airflow – TDP 35W CPU with W.T. SSD -13°F ~ 131°F (-25°C ~ 55°C) with 0.7 m/s airflow – TDP 65W CPU with W.T. SSD
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation (with SSD)
Anti-Shock	50G, IEC68-2-27, half sine, 11ms duration (with SSD)
Certification	CE/FCC Class A, LVD



## Dimension

Unit: mm



## Packing List

- TBD

## Optional Accessories

- TBD

## Ordering Information

- TBD

# 04



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# 04

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## *Ultra Slim Fanless BOX PC Solutions*



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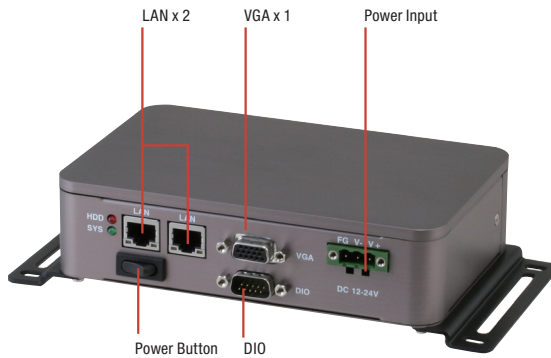


e-mail : [mse@es-france.com](mailto:mse@es-france.com)  
Site Web : [www.es-france.com](http://www.es-france.com)

# BOXER-6404U

Compact Embedded Box PC with Intel® Celeron® Processor SoC

Front View



Rear View



## Features

- Dual GbE LAN Port for Industrial Network Appliance
- 2.5" HDD/SDD Bay x 1
- USB 3.2 Gen 1 Port Connectivity
- 8-bit Programmable Digital Input/Output
- 12 ~ 24V DC-in Support



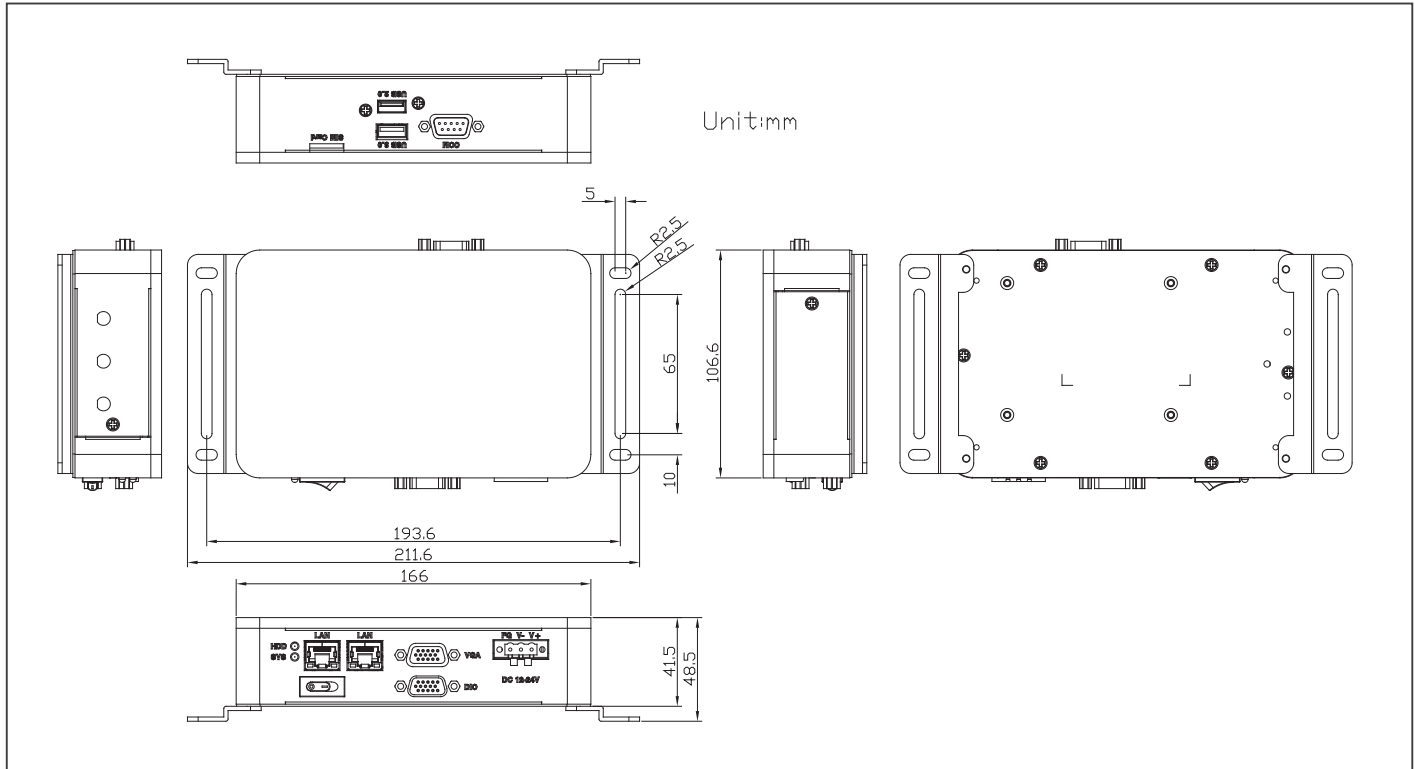
## Specifications

System	
CPU	Intel® Celeron® J1900, 2.0 GHz Intel® Celeron® N2807, 1.58 GHz
Chipset	Intel® System on Chip
System Memory	DDR3L 1333 SODIMM slot x 1, up to 8 GB (J1900) or 4 GB (N2807)
Display Interface	VGA
Storage Device	mSATA, HDD/SSD
Ethernet	Intel® I211-AT x 2
I/O	RS-232 x 1 USB 2.0 x 1 USB 3.2 Gen 1 x 1 VGA x 1 LAN x 2 Digital I/O x 8 bit Antenna holes x 3 Power switch Power input
Expansion	Full-size Mini-Card x 1 Half Mini-Card x 1 (for mSATA) SIM card slot x 1
Indicator	Power LED HDD active LED
OS support	Windows® 10, Windows® 8.1, Windows® 7, Windows® Embedded 8, Windows® Embedded 7, Linux Fedora
Power Supply	
Power Requirement	12 - 24V with 3-pin terminal block
Mechanical	
Mounting	Wallmount VESA (Mounting kit is optional) DIN rail (Mounting kit is optional)
Dimensions (W x H x D)	6.53" x 4.20" x 1.63" (166 mm x 106.6 mm x 41.5 mm)
Gross Weight	3.6 lb (1.6 kg)
Net Weight	1.76 lb (0.8 kg)
Environmental	
Operating Temperature	-13°F ~ 140°F (-25°C ~ 60°C) with wide temperature HDD/mSATA (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-22°F ~ 176°F (-30°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation –mSATA
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	Digital I/O	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6404U-A1-1011	Intel® J1900	—	2	1	1	1	8 bit	2.5" Drive Bay x 1, Half-size mSATA bay x 1	VGA x 1	Full-size Minicard x 1, Half-size Minicard x 1	Wallmount/Din Rail/ VESA 75	DC in 12~24V	-13°F ~ 140°F (-25°C ~ 60°C)
BOXER-6404U-A2-1011	Intel® N2807	—	2	1	1	1	8 bit	2.5" Drive Bay x 1, Half-size mSATA bay x 1	VGA x 1	Full-size Minicard x 1, Half-size Minicard x 1	Wallmount/Din Rail/ VESA 75	DC in 12~24V	-13°F ~ 140°F (-25°C ~ 60°C)

## Packing List

- Wallmount Bracket x 2
- Phoenix Power Connector x 1
- BOXER-6404U

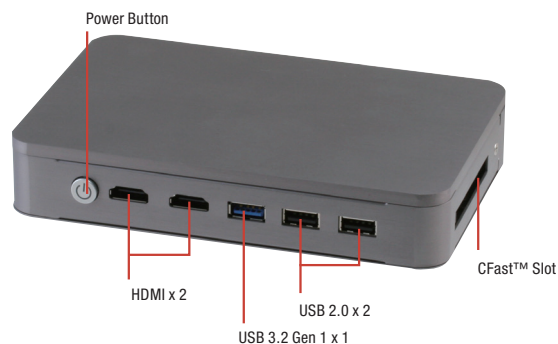
## Optional Accessories

- 125530040F  
Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)
- 9741238H00  
WiFi Module & Antenna
- 9741EG25G0  
4G Module & Antenna (for global)
- 9741640403  
VESA Mount Kit
- 9741640404  
Din rail Mount Kit

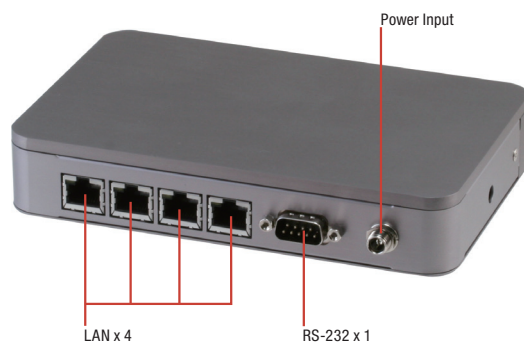
# BOXER-6404

Compact Embedded Box PC with LAN x 4, HDMI x 2, Intel® Celeron® J1900/N2807 Processor SoC

Front View



Rear View



## Features

- Slim Boxer Design: 30mm
- RJ-45 LAN Port x 4, HDMI Port x 2
- Operating in -22°F ~ 149°F (-30°C ~ 65°C) Environment



## Specifications

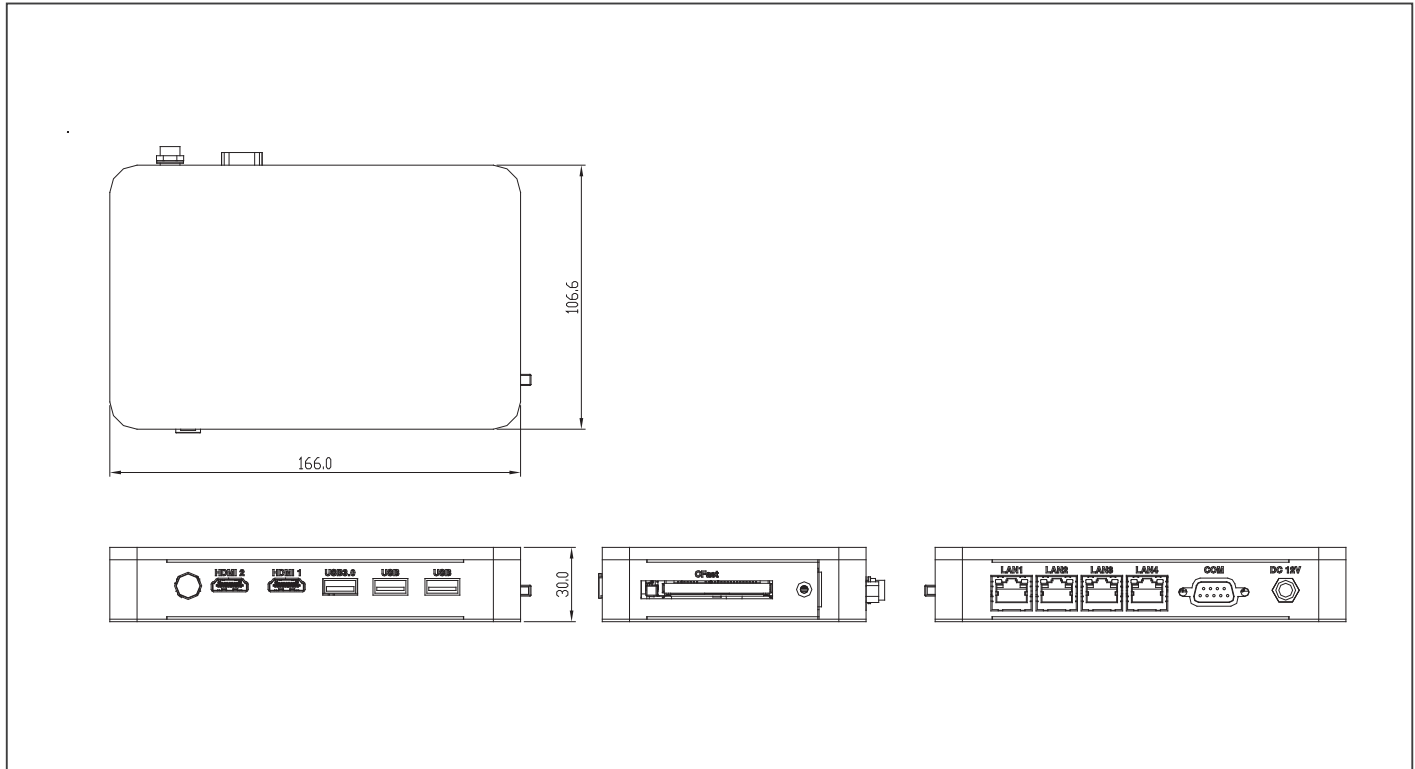
System	
CPU	Intel® Celeron® J1900, 2.0 GHz Intel® Celeron® N2807, 1.58 GHz
Chipset	Intel® System on Chip
System Memory	DDR3L 1333 SODIMM slot x 1, up to 8 GB (J1900) or 4 GB (N2807)
Display Interface	HDMI (max. 1920 x 1080)
Storage Device	CFast™
Ethernet	Intel® I210AT, 10/100/1000Base-TX x 4
I/O	RS-232 x 1 USB 2.0 x 2 USB 3.2 Gen 1 x 1 HDMI x 2 LAN x 4 CFast slot x 1 Antenna holes x 1 Power button Power input
Expansion	Full-size Mini-Card (USB interface only) x 1
Indicator	Power LED on power button
OS support	Windows® 10, Windows® 8.1, Windows® 7, Windows® Embedded 8, Windows® Embedded 7, Linux Fedora
Power Supply	
Power Requirement	12V - 24V with lockable DC jack
Mechanical	
Mounting	VESA (Mounting kit is optional) DIN rail (Mounting kit is optional)
Dimensions (W x H x D)	6.53" x 4.20" x 1.18" (166 mm x 106.6 mm x 30 mm)
Gross Weight	2.9 lb (1.3 kg)
Net Weight	1.9 lb (0.86 kg)
Environmental	
Operating Temperature	-22°F ~ 149°F (-30°C ~ 65°C) with wide temperature CFast™ card (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-22°F ~ 176°F (-30°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation -CFast™ card
Anti-Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	Display	USB 3.2 Gen 1	USB 2.0	RS-232	Storage	Expansion	Power	Operating Temp.
BOXER-6404-A1-1210	Intel® J1900	—	4	HDMI x 2	1	2	1	CFast™	Mini-Card x 1 (USB Interface)	12V - 24V DC in	-30 ~ 65°C with 0.5 m/s airflow
BOXER-6404-A2-1210	Intel® J1900	—	2	HDMI x 1	1	2	1	CFast™	Mini-Card x 1 (USB Interface)	12V - 24V DC in	-30 ~ 65°C with 0.5 m/s airflow
BOXER-6404-A3-1210	Intel® N2807	—	4	HDMI x 2	1	2	1	CFast™	Mini-Card x 1 (USB Interface)	12V - 24V DC in	-30 ~ 65°C with 0.5 m/s airflow
BOXER-6404-A4-1210	Intel® N2807	—	2	HDMI x 1	1	2	1	CFast™	Mini-Card x 1 (USB Interface)	12V - 24V DC in	-30 ~ 65°C with 0.5 m/s airflow

## Packing List

- **125530040C**  
Power Adapter
- **BOXER-6404**

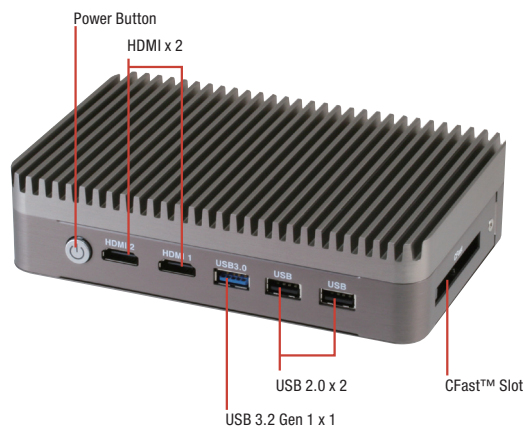
## Optional Accessories

- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741236A00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741640400**  
VESA Mount Kit
- **9741640401**  
DIN Rail Mount Kit
- **9741640402**  
CFast™ Cover Kit

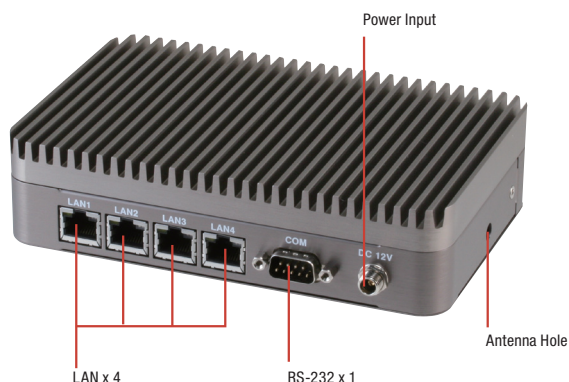
# BOXER-6404WT

Wide Temperature Compact Embedded Box PC with Intel® Celeron® J1900/ N2807 Processor SoC

Front View



Rear View



## Features

- Quad GbE LAN Port for Industrial Network Appliance
- Dual HDMI Port
- USB 3.2 Gen 1 Port Connectivity
- Easy Access Storage Bay
- Operating in -22°F ~ 167°F (-30°C ~ 75°C) Environment



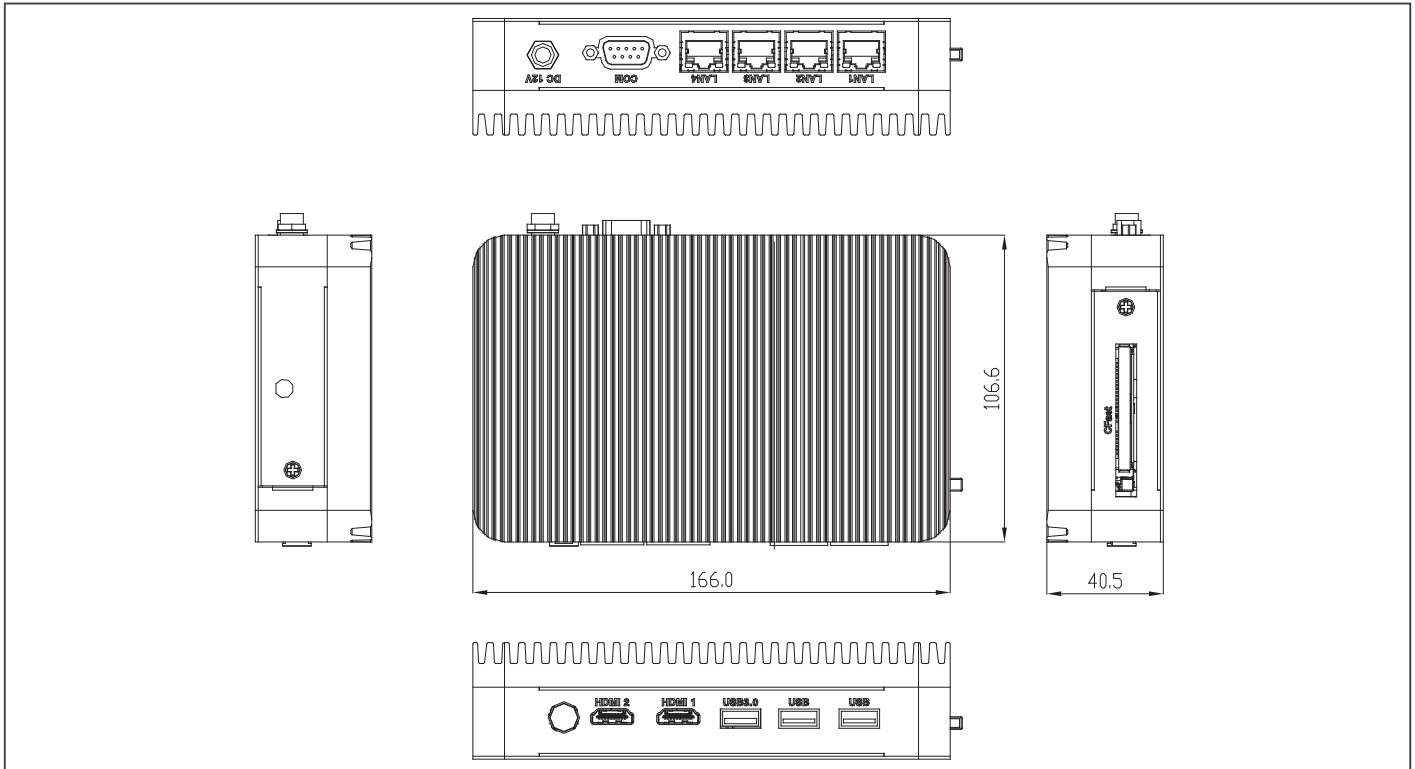
## Specifications

System	
CPU	Intel® Celeron® J1900, 2.0 GHz Intel® Celeron® N2807, 1.58 GHz
Chipset	Intel® System on Chip
System Memory	DDR3L 1333 SODIMM slot x 1, up to 8 GB (J1900) or 4 GB (N2807)
Display Interface	HDMI
Storage Device	CFast™
Ethernet	Intel® I210AT, 10/100/1000Base-TX x 4
I/O	RS-232 x 1 USB 2.0 x 2 USB 3.2 Gen 1 x 1 HDMI x 2 LAN x 4 CFast™ slot x 1 Antenna holes x 1 Power button Power input
Expansion	Full-size Mini-Card (USB interface only) x 1
Indicator	Power LED on power button
OS support	Windows® 10, Windows® 8.1, Windows® 7, Windows® Embedded 8, Windows® Embedded 7, Linux Fedora
Power Supply	
Power Requirement	12V - 24V with lockable DC jack
Mechanical	
Mounting	VESA (Mounting kit is optional) DIN rail (Mounting kit is optional)
Dimensions (W x H x D)	6.53" x 4.20" x 1.59" (166mm x 106.6mm x 40.5mm)
Gross Weight	3.59 lb (1.63 kg)
Net Weight	2.6 lb (1.17 kg)
Environmental	
Operating Temperature	-22°F ~ 167°F (-30°C ~ 75°C) with wide temperature CFast™ card (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-22°F ~ 176°F (-30°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation - CFast™ card
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB2.0	RS-232	Storage	Display	Expansion	Mounting	Power	Operating Temp.
BOXER-6404WT-A1-1210	Intel® J1900	—	4	1	2	1	CFast™ bay x 1	HDMI x 2	Full size Mini-card slot x 1 (USB signal)	Din Rail/VESA 75	12V - 24V DC in	-22°F ~ 167°F (-30°C ~ 75°C) with 0.5m/s airflow
BOXER-6404WT-A2-1210	Intel® N2807	—	2	1	2	1	CFast™ bay x 1	HDMI x 1	Full size Mini-card slot x 1 (USB signal)	Din Rail/VESA 75	12V - 24V DC in	-22°F ~ 167°F (-30°C ~ 75°C) with 0.5m/s airflow

## Packing List

- 125530040C  
Power Adapter
- BOXER-6404WT

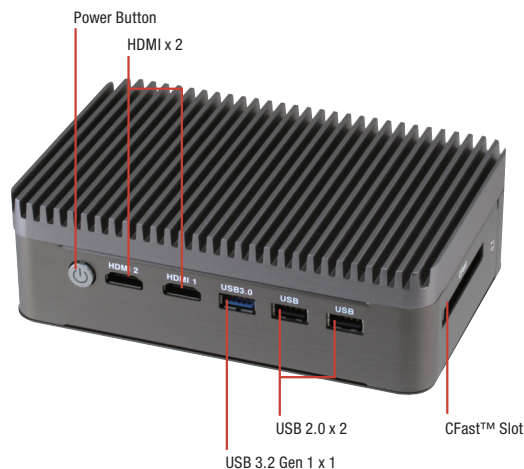
## Optional Accessories

- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)
- 9741236A00  
WiFi Module & Antenna
- 9741EG25G0  
4G Module & Antenna (for global)
- 9741640400  
VESA Mount Kit
- 9741640401  
DIN Rail Mount Kit
- 9741640402  
CFast™ Cover Kit

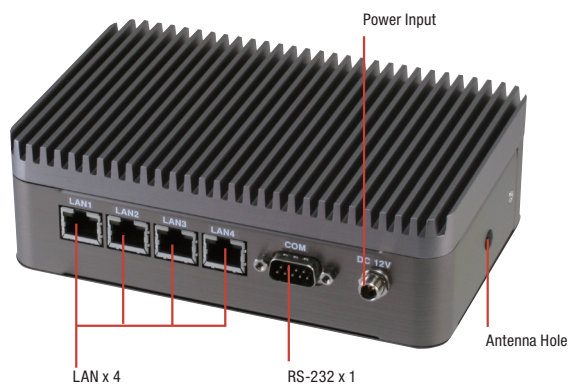
# BOXER-6404M

Wide Temperature Compact Embedded Box PC with LAN x 4, HDMI x 2, Intel® Celeron® J1900/N2807 Processor SoC

Front View



Rear View



## Features

- Quad GbE LAN Port for Industrial Network Appliance
- 2.5" HDD/SSD Bay x 1
- Dual HDMI Port
- USB 3.2 Gen 1 Port Connectivity
- Easy Access Storage Bay
- Operating in -22°F ~ 167°F (-30°C ~ 75°C) Environment



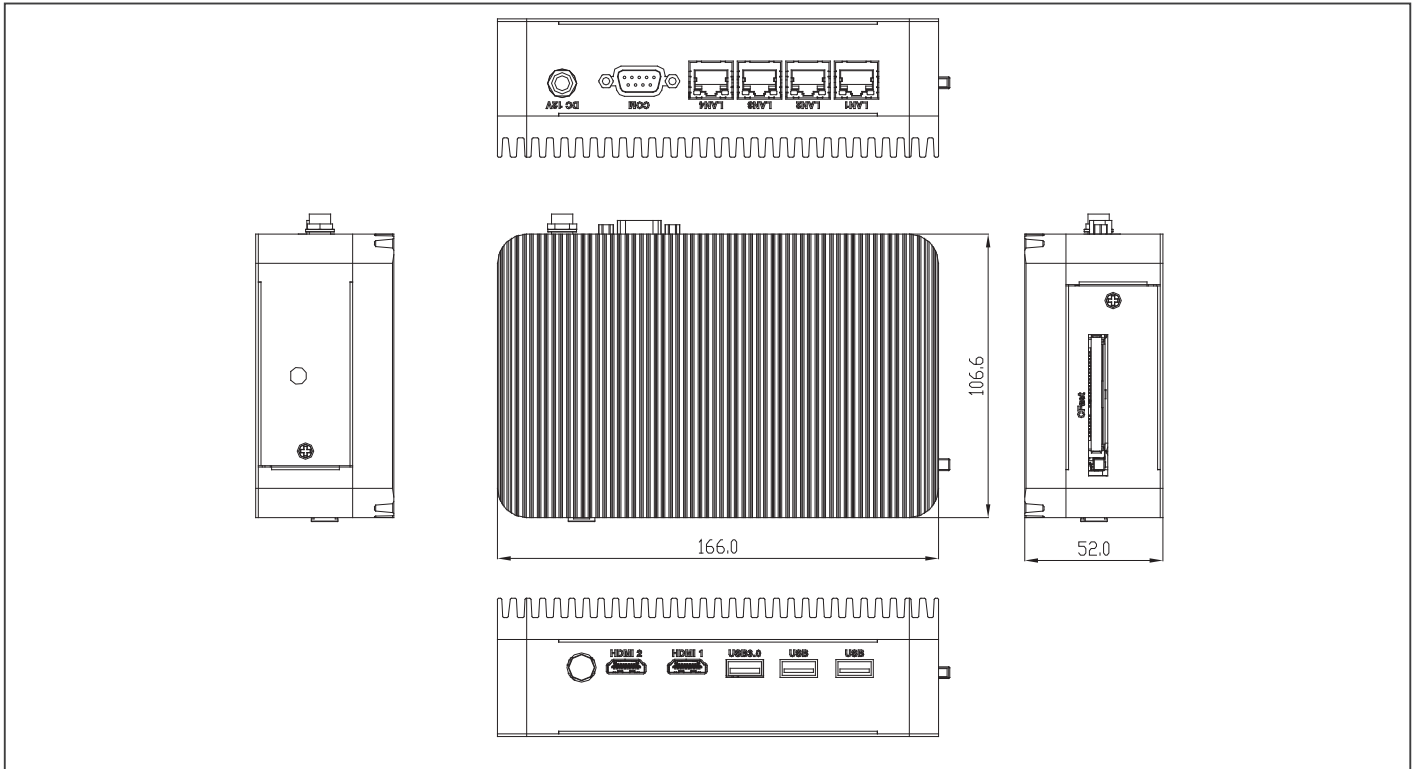
## Specifications

System	
CPU	Intel® Celeron® J1900, 2.0 GHz Intel® Celeron® N2807, 1.58 GHz
Chipset	Intel® System on Chip
System Memory	DDR3L 1333 SODIMM slot x 1, up to 8 GB (J1900) or 4 GB (N2807)
Display Interface	HDMI
Storage Device	CFast™, HDD/SSD
Ethernet	Intel® I210AT, 10/100/1000Base-TX x 4
I/O	RS-232 x 1 USB 2.0 x 2 USB 3.2 Gen 1 x 1 HDMI x 2 LAN x 4 CFast slot x 1 Antenna hole x 1 Power button Power input
Expansion	Full-size Mini-Card (USB interface only) x 1
Indicator	Power LED on power button
OS support	Windows® 10, Windows® 8.1, Windows® 7, Windows® Embedded 8, Windows® Embedded 7, Linux Fedora
Power Supply	
Power Requirement	12V - 24V with lockable DC jack
Mechanical	
Mounting	VESA (Mounting kit is optional) DIN rail (Mounting kit is optional)
Dimensions (W x H x D)	6.53" x 4.20" x 2.05" (166mm x 106.6mm x 52mm)
Gross Weight	3.81 lb (1.73 kg)
Net Weight	2.8 lb (1.27 kg)
Environmental	
Operating Temperature	-22°F ~ 167°F (-30°C ~ 75°C) with wide temperature CFast™ card (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-22°F ~ 176°F (-30°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation -CFast™ card or SSD 1 Grms/ 5 ~ 500Hz/ operation -HDD
Anti - Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	Storage	Display	Expansion	Mounting	Power	Operating Temp.
BOXER-6404M-A1-1210	Intel® J1900	—	4	1	2	1	CFast™ bay x 1 2.5" HDD/SSD bay x 1	HDMI x 2	Full size Mini-card slot x 1 (USB signal)	Din Rail/VESA 75	12V - 24V DC in	-30°C ~ 75°C (-22°F ~ 167°F) with 0.5m/s airflow
BOXER-6404M-A2-1210	Intel® N2807	—	2	1	2	1	CFast™ bay x 1 2.5" HDD/SSD bay x 1	HDMI x 1	Full size Mini-card slot x 1 (USB signal)	Din Rail/VESA 75	12V - 24V DC in	-30°C ~ 75°C (-22°F ~ 167°F) with 0.5m/s airflow

## Packing List

- 125530040C  
Power Adapter
- BOXER-6404M

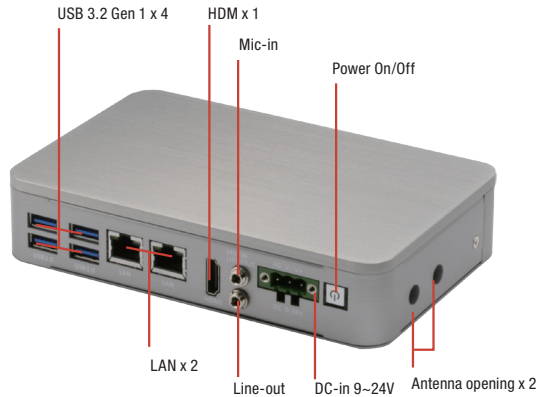
## Optional Accessories

- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)
- 9741236A00  
WiFi Module & Antenna
- 9741EG25G0  
4G Module & Antenna (for global)
- 9741640400  
VESA Mount Kit
- 9641640401  
DIN Rail Mount Kit
- 9741640402  
CFast™ Cover Kit

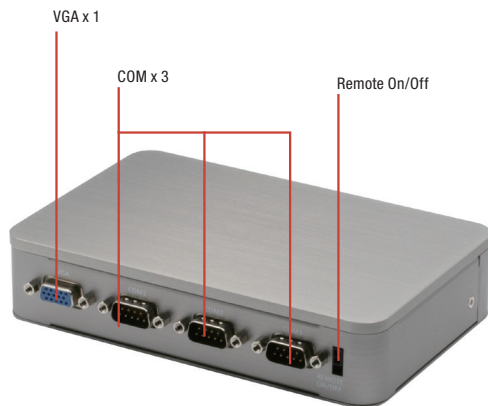
# BOXER-6405

Fanless Compact Embedded Computer with Intel® Celeron®/Pentium® Processor

Front View



Rear View



## Features

- Slim Boxer Design: 37mm
- Rich I/O, Design for Auto System Control
- Wide Operating Temperature -20°C ~ 60°C
- Gigabit Ethernet x 2, USB x 4
- Support Wallmount



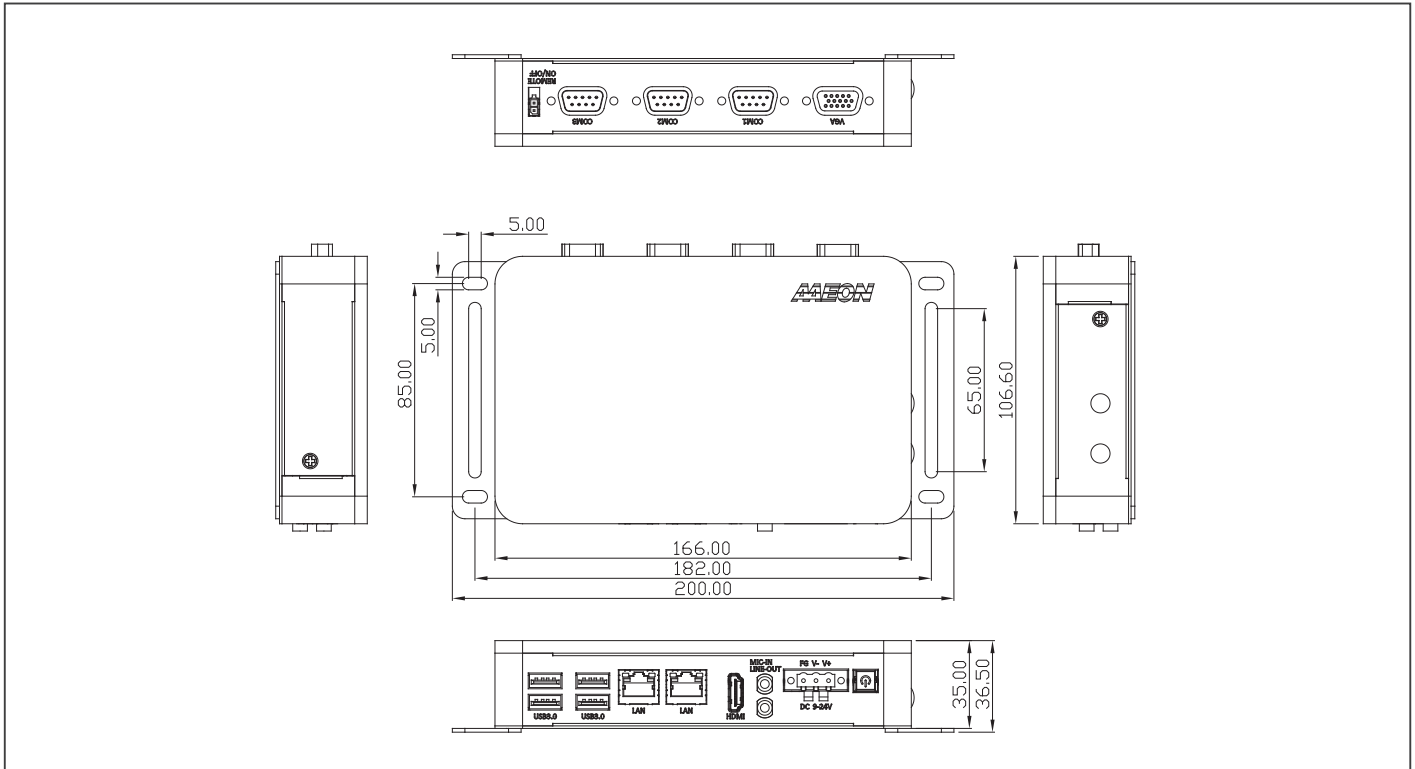
## Specifications

System	
CPU	Intel® Celeron®/Pentium® processor
Chipset	Intel® System on Chip
System Memory	DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
Display Interface	HDMI (max. 1920 x 1080)
Storage Device	mSATA
Ethernet	Intel® i211-AT x 2
I/O	Power Button x 1 USB Type A x 4 for USB 3.2 Gen 1 HDMI type A x 1 for HDMI v1.4b RJ-45 x 2 for GbE LAN with LED indicator ( i211-AT x 2) Power input x 1 3-pin terminal block in default (+, -, GND) Co-layout 3-pin terminal block & lockable DC-in jack.) Co-layout internal DC Mic-in x 1, Line-out x 1 RS-232/422/485 x 3 with automatic flow control (switch by BIOS) VGA x 1 Remote On/Off Antenna opening x 2 DC-in 3-pin terminal block(9~24V) x 1
Expansion	Full-size Mini PCIe slot x 1 (PCIe/USB/SIM slot), one screw Half-size Minicard slot x 1 (mSATA only)
Indicator	Power LED x1, HDD active LED x1
OS Support	Windows® 10, Windows® 10 IoT, Linux
Power Supply	
Power Requirement	9-24V with 3-pin terminal block
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	6.54" x 4.2" x 1.45" (166mm x 106.6mm x 37mm)
Gross Weight	3.6 lb (1.6kg)
Net Weight	1.76 lb (0.8 kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. mSATA (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial decives)
Storage Temperature	-22°F ~ 140°F (-30°C ~ 60°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – mSATA 1 Grms/ 5 ~ 500Hz/ operation - HDD
Anti-Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6405-A1-1011	N3350	SoC	—	2	4	—	—	3	—	MIC-in, Line-out	mSATA x 1	VGA/ HDMI x1	Full-size Minitcard x 1 Half-size Minitcard x 1	Wallmount	9~24V	-20°C ~ 60°C
BOXER-6405-A2-1011	N4200	SoC	—	2	4	—	—	3	—	MIC-in, Line-out	mSATA x 1	VGA/ HDMI x1	Full-size Minitcard x 1 Half-size Minitcard x 1	Wallmount	9~24V	-20°C ~ 60°C

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-In Power Connector x 1
- BOXER-6405

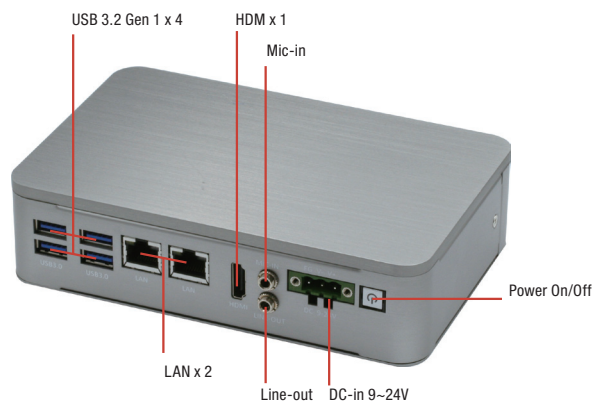
## Optional Accessories

- **125530040F**  
Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741640404**  
Din Rail Mount Kit

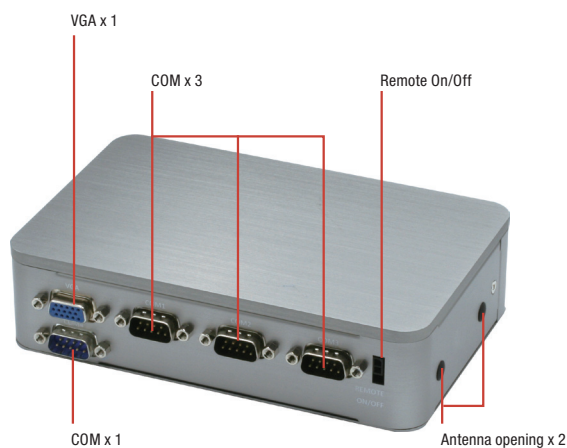
# BOXER-6405M

Fanless Compact Embedded Computer with Intel® Celeron®/Pentium® Processor

Front View



Rear View



## Features

- Slim Boxer Design: 42mm
- Rich I/O, Design for Auto System Control
- Wide Operating Temperature -20°C ~ 60°C
- Gigabit Ethernet x 2, USB x 4
- Support Wallmount



## Specifications

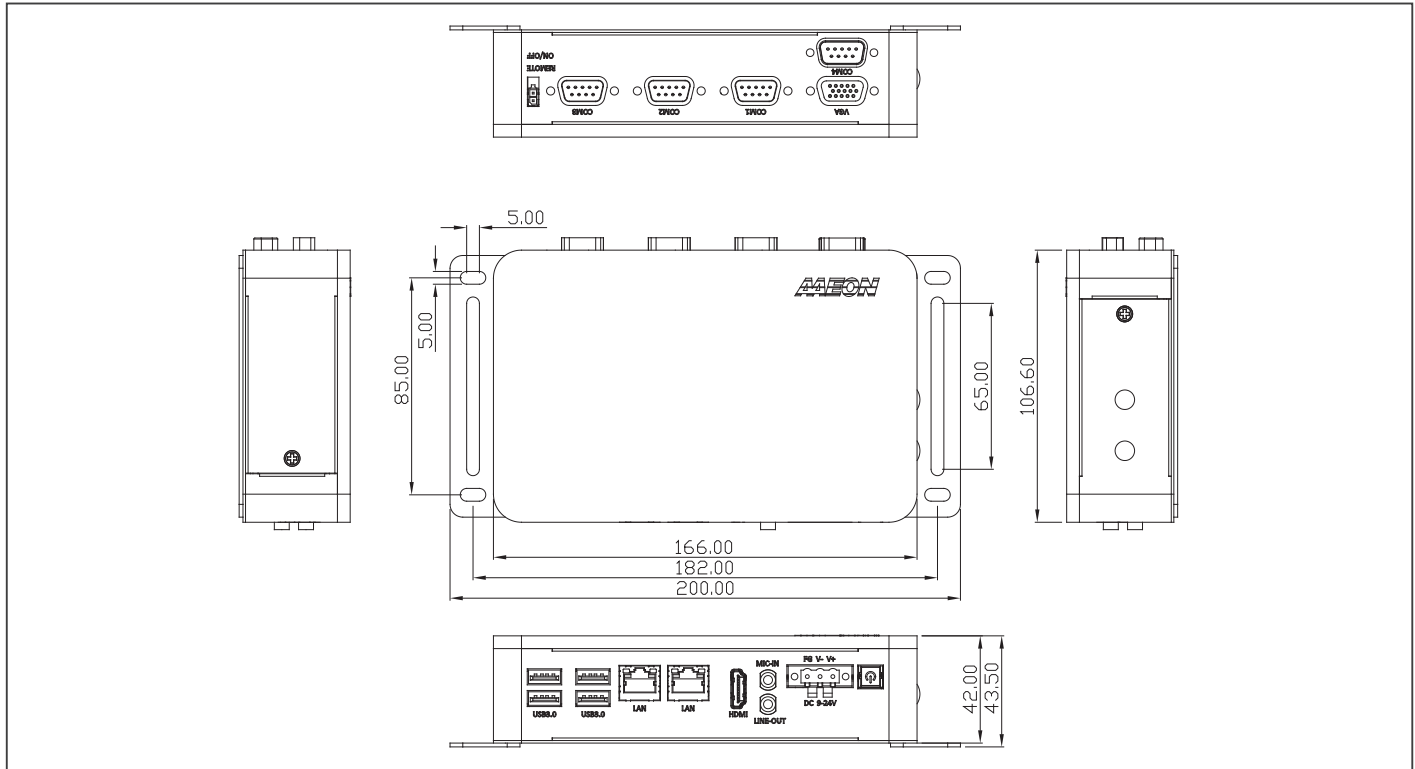
System	
CPU	Intel® Celeron®/Pentium® processor
Chipset	Intel® System on Chip
System Memory	DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
Display Interface	HDMI type A x 1 for HDMI v1.4b VGA x 1
Storage Device	HDD/SSD, (mSATA BOM option)
Ethernet	Intel® i211-AT x 2
I/O	Power Button x 1 USB Type A x 4 for USB 3.2 Gen 1 HDMI type A x 1 for HDMI v1.4b RJ-45 x 2 for GbE LAN with LED indicator ( i211-AT x 2) Power input x 1 3-pin terminal block in default (+, -, GND) Co-layout 3-pin terminal block & lockable DC-in jack.) Co-layout internal DC Mic-in x 1, Line-out x 1 RS-232/422/485 x 4 with automatic flow control (switch by BIOS) VGA x 1 Remote On/Off Antenna opening x 2
Expansion	Full-size Mini PCIe slot x 1 (PCIe/USB/SIM slot), one screw Half-size Minicard slot x 1 (optional for mSATA,PCIe/mSATA)
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Windows® 10, Windows® 10 IoT, Linux
Power Supply	
Power Requirement	3-pin Phoenix DC Input 9~24V without power protection
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	6.54" x 4.2" x 1.65" (166mm x 106.6mm x 42mm)
Gross Weight	3.6 lb (1.6kg)
Net Weight	1.7 lb (0.8 kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. mSATA (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial decives)
Storage Temperature	-22°F ~ 140°F (-30°C ~ 60°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – mSATA 1 Grms/5 ~ 500Hz/ operation - HDD
Anti - Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6405M-A1-1011	Intel® N3350	—	2	4	—	—	4	—	MIC-in, Line-out	SSD/HDD x 1	VGA/HDMI x1	Full-size Minicard x1 Half-size Minicard x 1	Wallmount	9~24V	-20°C ~ 60°C
BOXER-6405M-A2-1011	Intel® N4200	—	2	4	—	—	4	—	MIC-in, Line-out	SSD/HDD x 1	VGA/HDMI x1	Full-size Minicard x1 Half-size Minicard x 1	Wallmount	9~24V	-20°C ~ 60°C

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-In Power Connector x 1
- BOXER-6405M

## Optional Accessories

- 125530040F  
Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)
- 9741238H00  
WiFi Module & Antenna
- 9741EG25G0  
4G Module & Antenna (for global)
- 9741640404  
Din Rail Mount Kit

# BOXER-6406-ADN

Fanless Compact Embedded Computer with Intel Atom® x7211E and Intel® Processor N-series Processors

Front View



Rear View



## Features

- Intel Atom® x7211E and Intel® Processor N-series Processors (formerly Alder Lake-N)
- DDR5 4800Mhz SODIMM
- 2.5GbE x 2
- M.2 2280 M-Key x 1, M.2 2230 E-Key x 1
- USB 3.2 Gen 2 x 2 (Type-A)
- Onboard TPM 2.0
- Wide Range 9 ~ 36V DC input
- Wide Operating Temperature -20 ~ 60°C
- Compact Size



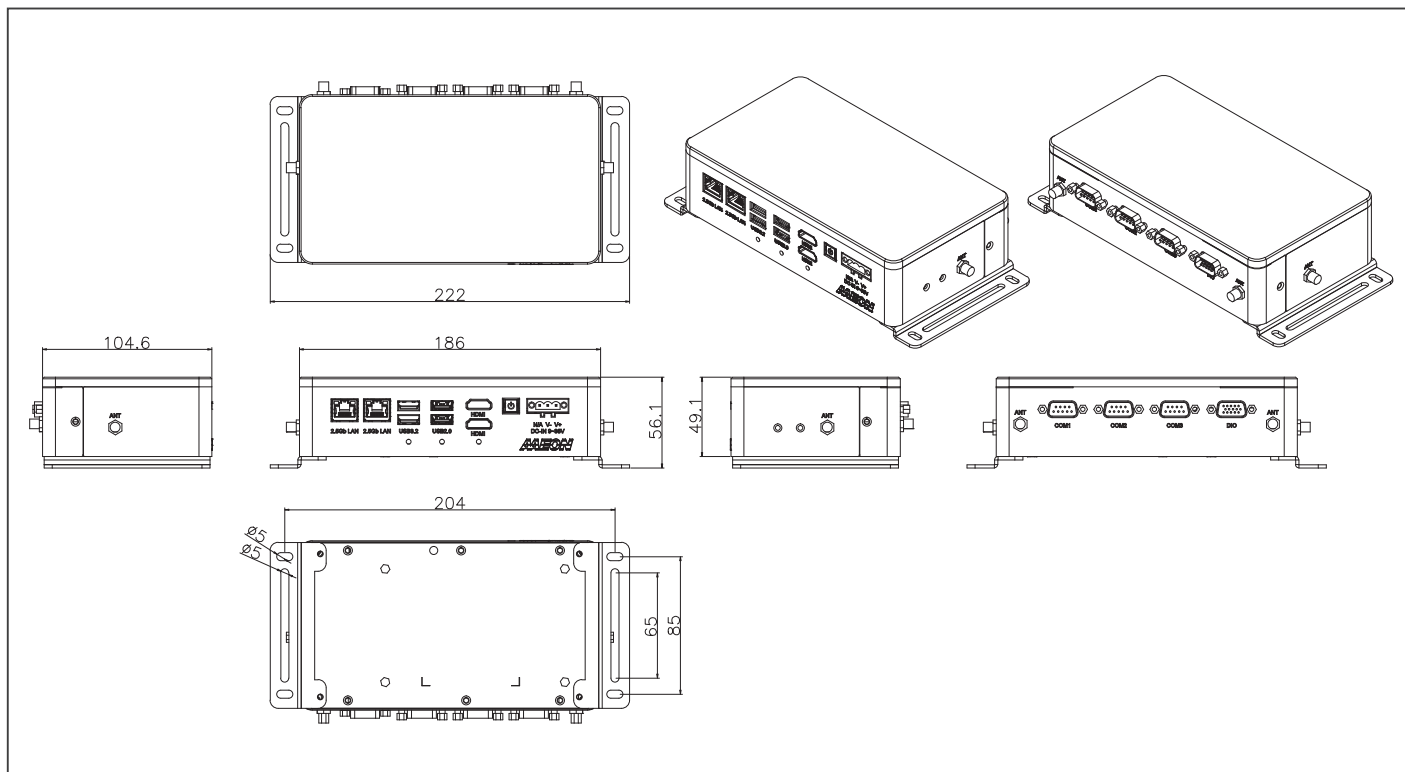
## Specifications

System	
CPU	Intel® Processor N200 Intel® Processor N50 Intel Atom® x7211E (formerly Alder Lake-N)
Chipset	Intel® SoC
System Memory	DDR5 4800Mhz SODIMM x 1, up to 32GB
Display Interface	HDMI x 2
Storage Device	M.2 2280 M-Key x 1 (PCIe Gen 3 x 2) 2.5" SATA HDD/SSD x 1
Ethernet	RJ-45 x 2 for 2.5GbE LAN (Intel® I226-LM)
I/O	HDMI x 2 RJ-45 x 2 for 2.5GbE LAN (Intel® I226-LM) USB 3.2 Gen 2 x 2 (Type-A) USB 2.0 x 2 (Type-A) DB-9 x 3 for RS-232/422/485 DB-15 x 1 Male for Digital I/O 8-Channel 3-pin Terminal Block for DC In x 1 Power Button with LED x 1
Expansion	M.2 2280 M-Key x 1 (PCIe [x2]) M.2 2230 E-Key x 1 Full-Size Mini Card x 1 (PCIe + USB) SIM Slot x 1
Indicator	—
OS support	Windows® 10 IoT Enterprise Windows® 11 Pro Linux Ubuntu 22.04
Power Supply	
Power Requirement	9 ~ 36V DC-In x 1 for 3-pin Terminal Block
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	7.32" x 4.12" x 1.93" (186mm x 104.6mm x 49.1mm) without bracket 8.74" x 4.12" x 2.21" (222mm x 104.6mm x 56.1mm) with bracket
Gross Weight	4.32 lb (1.96 Kg)
Net Weight	2.56 lb (1.16 Kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation (with SSD)
Anti-Shock	50G, IEC 68-2-27, half sine, 11 ms duration (with SSD)
Certification	CE/FCC Class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	LAN	PCH	USB 3.2 Gen 2	USB 2.0	RS-232/422/485	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6406-ADN-A1-1010	Intel® Processor N200	2	Intel SoC	2	2	3	M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) 2.5" SATA Drive Bay x 1	HDMI x 2	M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) M.2 2230 E-Key x 1 Full-Size Mini Card x 1 (PCIe + USB) SIM Slot x 1	Wallmount	9-36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6406-ADN-A2-1010	Intel® Processor N50	2	Intel SoC	2	2	3	M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) 2.5" SATA Drive Bay x 1	HDMI x 2	M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) M.2 2230 E-Key x 1 Full-Size Mini Card x 1 (PCIe + USB) SIM Slot x 1	Wallmount	9-36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6406-ADN-A3-1010	Intel Atom® x7211E	2	Intel SoC	2	2	3	M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) 2.5" SATA Drive Bay x 1	HDMI x 2	M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) M.2 2230 E-Key x 1 Full-Size Mini Card x 1 (PCIe + USB) SIM Slot x 1	Wallmount	9-36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1
- BOXER-6406-ADN x 1

## Optional Accessories

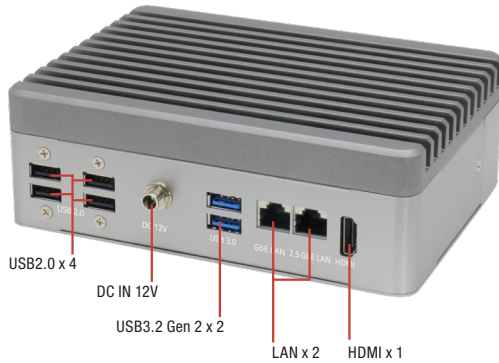
- **1255900849**  
12V 84W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741EG25G0**  
4G Module & Antenna (for global)



# BOXER-6450-TGU

Fanless Compact Embedded Computer with 11th Generation Intel® Core™ i7/i5/i3/Celeron Processor

Front View

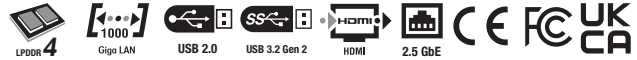


Rear View



## Features

- 11th Gen Intel® Core™ i7/i5/i3/Celeron Processor SoC
- LPDDR4x on board memory, Max. 32 GB
- 2.5GbE Intel i225 + 1GbE Intel i219
- M.2 2280 M Key (PCIe x4 GEN4/SATA) x 1
- Slim Boxer Design
- Support Wide Operating Temperature



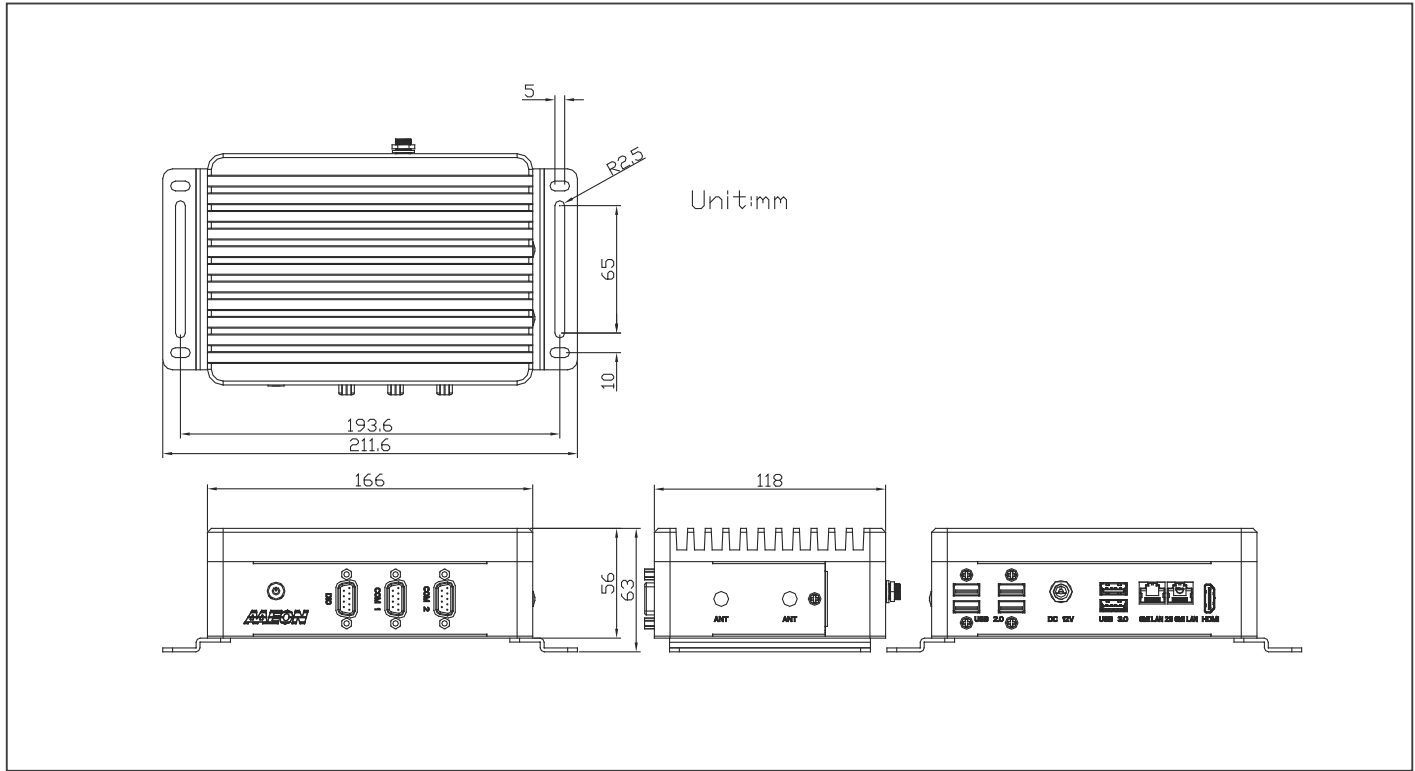
## Specifications

System	
CPU	Intel® Core™ i7-1185G7E, 1.80 GHz Intel® Core™ i5-1145G7E, 1.50 GHz Intel® Core™ i3-1115G4E, 2.20 GHz Intel® Celeron® 6305E Processor, 1.80 GHz
Chipset	Intel® System on Chip
System Memory	LPDDR4x max 3200 MHz on board memory. Default 4GB or 8GB, max. up to 32GB by customization
Display Interface	HDMI2.0b x 1, 4Kx2K 60Hz
Storage Device	2.5" SATA Drive Bay x 1 Full-size Minicard x 1 for mSATA (optional) M.2 2280 NVMe Slot x 1
Ethernet	RJ-45 x 1 for 2.5GbE LAN i225-LM x 1 RJ-45 x 1 for GbE LAN i219-LM x 1
I/O	USB Type-A x 2 for USB3.2 Gen2 USB Type-A x 4 for USB 2.0 DB-9 x 2 for RS-232/422/485 SMA Antenna Holes x 2 DB-9 for DIO 4 bit x 1 Power Button x 1
Expansion	M.2 M key 2280 x 1 (PCIe + SATA, PCIe Gen4 default) Full-size Minicard x 1 (PCIe + USB + SATA)
Indicator	System Power LED x 1 (Green)
OS support	Windows® 10, Windows® 10 IoT, Ubuntu 20.04.2
Power Supply	
Power Requirement	DC-in 12V x 1 for Lockable DC Jack
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	6.54" x 4.65" x 2.2" (166 mm x 118 mm x 56 mm)
Gross Weight	3,3 lb (1.5Kg)
Net Weight	2.20 lb (1Kg)
Environmental	
Operating Temperature	14°F ~131°F (-10°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (Turbo boost off)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	SSD: Random, 3.5Grms, 5~500Hz
Anti-Shock	SSD: 50G @ wallmount, Half-sine, 11ms
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	MEMORY	LAN	USB 3.2 Gen2	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6450-TGU-A1-1010	Intel® Core™ i7-1185G7E	8G	2	2	4	—	2	4 bit	—	2.5" SATA Drive Bay x 1 Full-size M.2 2280 x 1 for mSATA (optional) M.2 2280 NVMe Slot x 1	HDMI x 1	M.2 M key 2280 x 1 (PCIe + SATA, PCIe Gen4 default) Full-size M.2 2280 x 1 (PCIe + USB + SATA)	Wallmount	DC-in 12V x 1 for Lockable DC Jack	14°F ~131°F (-10°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (Turbo boost off)
BOXER-6450-TGU-A2-1010	Intel® Core™ i5-1145G7E	8G	2	2	4	—	2	4 bit	—	2.5" SATA Drive Bay x 1 Full-size M.2 2280 x 1 for mSATA (optional) M.2 2280 NVMe Slot x 1	HDMI x 1	M.2 M key 2280 x 1 (PCIe + SATA, PCIe Gen4 default) Full-size M.2 2280 x 1 (PCIe + USB + SATA)	Wallmount	DC-in 12V x 1 for Lockable DC Jack	14°F ~131°F (-10°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (Turbo boost off)
BOXER-6450-TGU-A3-1010	Intel® Core™ i3-1115G4E	4G	2	2	4	—	2	4 bit	—	2.5" SATA Drive Bay x 1 Full-size M.2 2280 x 1 for mSATA (optional) M.2 2280 NVMe Slot x 1	HDMI x 1	M.2 M key 2280 x 1 (PCIe + SATA, PCIe Gen4 default) Full-size M.2 2280 x 1 (PCIe + USB + SATA)	Wallmount	DC-in 12V x 1 for Lockable DC Jack	14°F ~131°F (-10°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (Turbo boost off)
BOXER-6450-TGU-A4-1010	Intel® Celeron® 6305E	4G	2	2	4	—	2	4 bit	—	2.5" SATA Drive Bay x 1 Full-size M.2 2280 x 1 for mSATA (optional) M.2 2280 NVMe Slot x 1	HDMI x 1	M.2 M key 2280 x 1 (PCIe + SATA, PCIe Gen4 default) Full-size M.2 2280 x 1 (PCIe + USB + SATA)	Wallmount	DC-in 12V x 1 for Lockable DC Jack	14°F ~131°F (-10°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (Turbo boost off)

## Packing List

- Wallmount Bracket x2
- Screw Package x1
- BOXER-6450-TGU

## Optional Accessories

- **125530060Z**  
60W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741324A00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)

# BOXER-6451-ADP

Fanless Compact Embedded Computer with 12th Generation Intel® Core™ Processors

Front View



Rear View



## Features

- Compact Computer with 12th Gen Intel® Core™ Processors
- DDR4 SODIMM, Max. 32GB
- USB 3.2 Gen 2 x 3 (10Gbps) + USB 2.0 x 1
- 2.5GbE LAN x 1 (Intel® I226-LM) + GbE LAN x 1 (Intel® I219-LM)
- M.2 3052 B-Key for 5G Support
- Wide Operating Temperature
- Onboard TPM 2.0



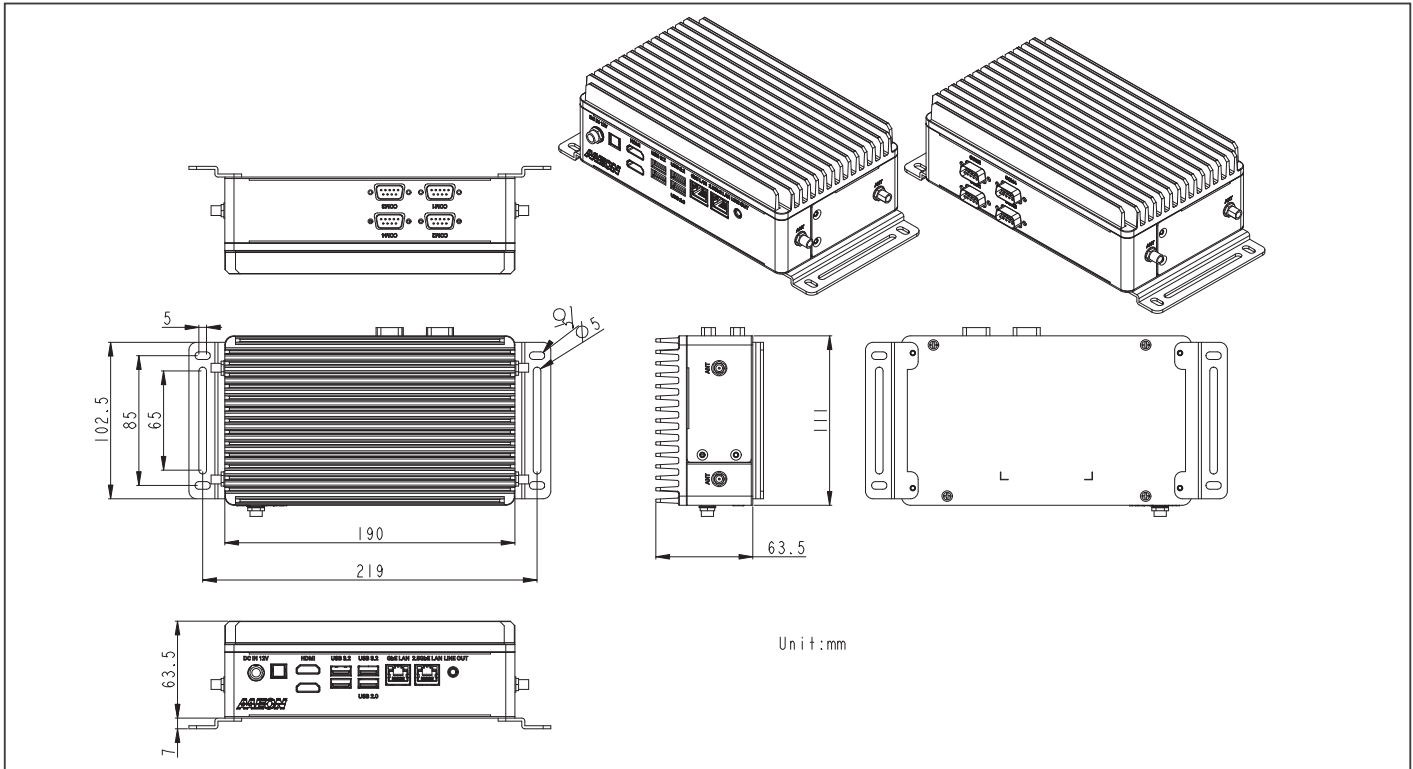
## Specifications

System	
CPU	Intel® Core™ i7-1265UE Intel® Core™ i5-1245UE Intel® Core™ i3-1215UE
Chipset	Intel® SoC
System Memory	DDR4 SODIMM x 1, up to 32GB
Display Interface	HDMI 1.4b x 2 (Type-A)
Storage Device	2.5" SATA Drive Bay x 1 M.2 2280 M-Key x 1 (PCIe [x4])
Ethernet	RJ-45 x 1 for 2.5GbE (Intel® I226-LM) RJ-45 x 1 for GbE (Intel® I219-LM)
I/O	USB 3.2 Gen 2 x 3 (Type-A) USB 2.0 x 1 (Type-A) DB-9 x 4 for RS-232/422/485 HDMI 1.4b x 2 (Type-A) Power Button x 1 DC Jack 12V Input Antenna Opening x 6
Expansion	M.2 2230 E-Key x 1 (Wi-Fi/BT) M.2 3052 B-Key w/ SIM x 1 (LTE/5G) M.2 2280 M-Key x 1 (NVMe)
Indicator	Power Button with LED
OS support	Windows® 10 IoT Ent LTSC Windows® 11 PRO Ubuntu 22.04
Power Supply	
Power Requirement	DC-in 12V x 1 for Lockable DC Jack
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	7.68" x 4.37" x 2.5" (195mm x 111mm x 63.5mm) w/o bracket
Gross Weight	4.4 lb. (2Kg)
Net Weight	3.3 lb. (1.5Kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C), IEC68-2 with 0.5 m/s AirFlow with Wide Temperature Memory/Storage
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	SSD: Random, 3Grms, 5~500Hz
Anti-Shock	SSD: 50G @ wallmount, Half-sine, 11ms
Certification	CE/FCC Class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.0	USB 2.0	RS-232/422/485	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6451-ADP-A1-1010	i3-1215UE	SoC	2	USB 3.2 x 3 (10Gbps)	1	4	Line-out	2.5" SATA Drive Bay x 1 M.2 2280 M-Key x 1 (NVMe)	HDMI x 2	M.2 2230 E-Key x 1 M.2 3052 B-Key w/ SIM Slot x 1	Wallmount	12V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6451-ADP-A2-1010	i5-1245UE	SoC	2	USB 3.2 x 3 (10Gbps)	1	4	Line-out	2.5" SATA Drive Bay x 1 M.2 2280 M-Key x 1 (NVMe)	HDMI x 2	M.2 2230 E-Key x 1 M.2 3052 B-Key w/ SIM Slot x 1	Wallmount	12V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage
BOXER-6451-ADP-A3-1010	i7-1265UE	SoC	2	USB 3.2 x 3 (10Gbps)	1	4	Line-out	2.5" SATA Drive Bay x 1 M.2 2280 M-Key x 1 (NVMe)	HDMI x 2	M.2 2230 E-Key x 1 M.2 3052 B-Key w/ SIM Slot x 1	Wallmount	12V	-4°F ~ 140°F (-20°C ~ 60°C) with 0.5 m/s airflow, with wide temperature Memory/Storage

## Packing List

- Wallmount Bracket x 2
- Screw Package x 1
- 84W 12V Power Adapter
- BOXER-6451-ADP

## Optional Accessories

- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)

# 05



ES France - Mobilité & Systèmes Embarqués  
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 80  
Fax. 01 47 01 16 22



e-mail : [mse@es-france.com](mailto:mse@es-france.com)  
Site Web : [www.es-france.com](http://www.es-france.com)



# 05

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## *Din Rail Fanless BOX PC*



ES France - Mobilité & Systèmes Embarqués  
127 rue de Buzenval BP 26 - 92380 Garches



Tél. 01 47 95 99 80  
Fax. 01 47 01 16 22



e-mail : [mse@es-france.com](mailto:mse@es-france.com)  
Site Web : [www.es-france.com](http://www.es-france.com)

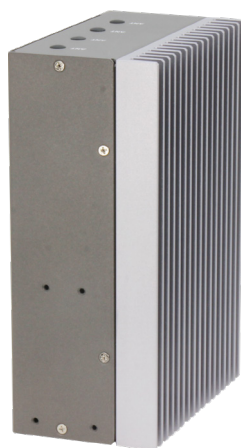
# BOXER-6751-ADP

DIN Rail Fanless Embedded BOX PC with 12th Generation Intel® Core™ Processors

Front View



Rear View



## Features

- 12th Gen Intel® Core™ Processors
- DDR4 SODIMM, Max. 32GB
- USB 3.2 Gen 2 x 3 + USB 2.0 x 3
- 2.5GbE x 1 (Intel® I226-LM) + GbE x 1 (Intel® I219-LM)
- RS-232/422/485 x 2
- HDMI x 2 Dual Display Output
- 8-bit Digital Input and Output x 1
- M.2 3052 B-Key for 5G
- Onboard TPM 2.0
- Wide 9 ~ 36V DC Input Range With Power Protection
- Wide -20°C ~ 60°C Temperature Range
- DIN Rail Mount Design



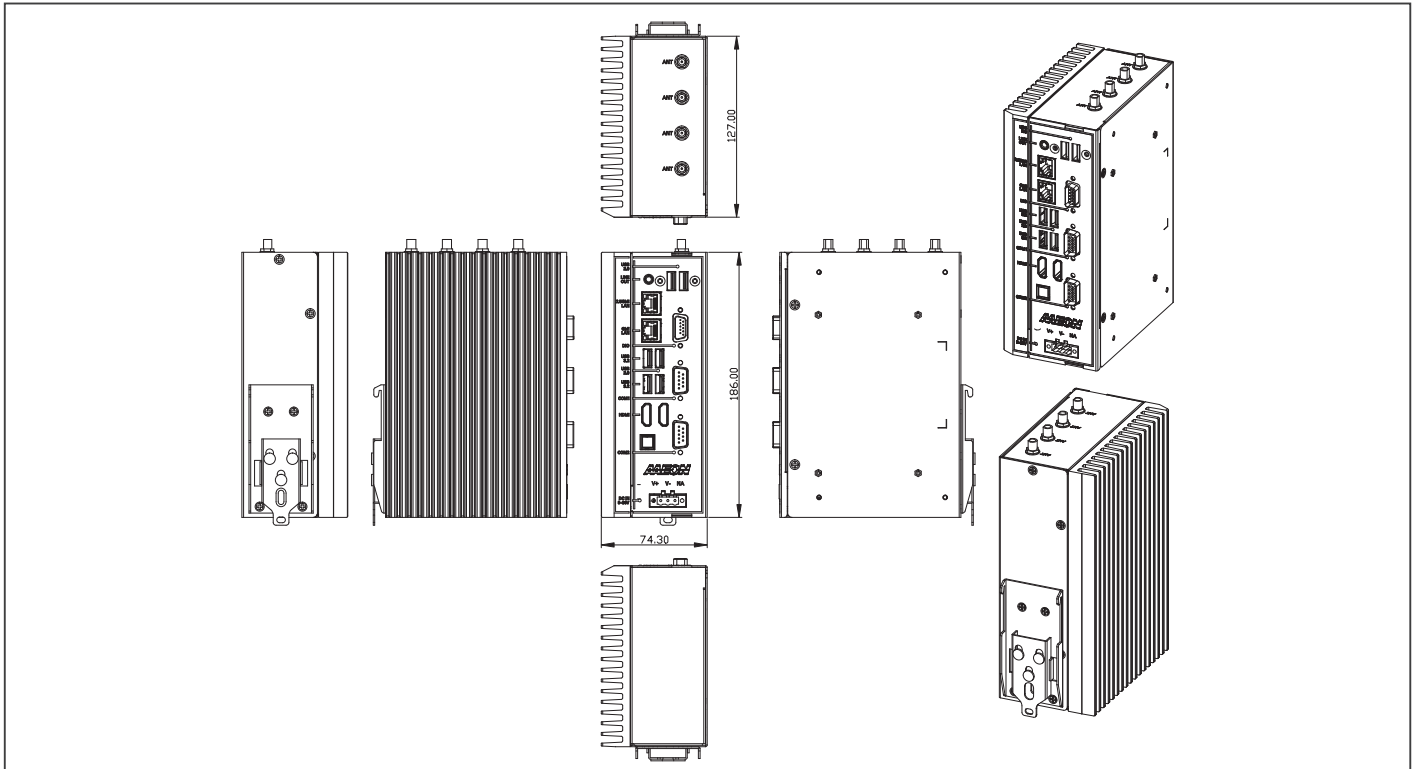
## Specifications

System	
CPU	Intel® Core™ i7-1265UE Intel® Core™ i5-1245UE Intel® Core™ i3-1215UE
Chipset	Intel® SoC
System Memory	DDR4 SODIMM x 1, up to 32GB
Display Interface	HDMI 1.4b (Type-A) x 2
Storage Device	2.5" SATA III Drive Bay x 1 M.2 2280 M-Key x 1 (PCIe [x4])
Ethernet	RJ-45 x 1 for Intel® I226-LM, 2.5GbE RJ-45 x 1 for Intel® I219-LM, GbE
I/O	USB 3.2 Gen 2 (Type-A) x 3 USB 2.0 (Type-A) x 3 DB-9 x 2 for RS-232/422/485 DB-15 x 1 for DIO 8-bit HDMI 1.4b (Type-A) x 2 Audio x 1 for Line-Out Power Button x 1 3-pin Terminal Block for DC-in x 1 Antenna Opening x 4
Expansion	M.2 2230 E-Key x 1 (Wi-Fi/BT) M.2 3052 B-Key w/ SIM x 1 (LTE/5G) M.2 2280 M-Key x 1 (NVMe)
Indicator	Power Button with LED
OS Support	Windows® 10 IoT Ent LTSC Windows® 11 PRO Ubuntu 22.04
Power Supply	
Power Requirement	DC 9 - 36V with 3-pin terminal block
Mechanical	
Mounting	DIN Rail Mount Wallmount (Mounting kit is optional)
Dimensions (W x H x D)	2.93" x 7.32" x 5.0" (74.3mm x 186mm x 127mm)
Gross Weight	5.3 lb (2.41 Kg)
Net Weight	3.9 lb (1.77 Kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C), IEC68-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	With SSD: Random, 3 Grms, 5~500Hz
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	CPU	PCH	LAN	USB	RS-232	RS-232/422/485	DIGITAL I/O	AUDIO	STORAGE	DISPLAY	EXPANSION	MOUNTING	POWER	OPERATION TEMP
BOXER-6751-ADP-A1-1010	Intel® Core™ i3-1215UE	Soc	2	USB 3.2 Gen 2 x 3 USB 2.0 x 3	—	2	8-Bit DIO	Line-Out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2	M.2 E-Key 2230 x 1 M.2 B-Key 3052 x 1 w/ SIM Slot x 1	DIN Rail Wallmount (Optional)	9~36V	-20°C ~ 60°C
BOXER-6751-ADP-A2-1010	Intel® Core™ i5-1245UE	Soc	2	USB 3.2 Gen 2 x 3 USB 2.0 x 3	—	2	8-Bit DIO	Line-Out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2	M.2 E-Key 2230 x 1 M.2 B-Key 3052 x 1 w/ SIM Slot x 1	DIN Rail Wallmount (Optional)	9~36V	-20°C ~ 60°C
BOXER-6751-ADP-A3-1010	Intel® Core™ i7-1265UE	Soc	2	USB 3.2 Gen 2 x 3 USB 2.0 x 3	—	2	8-Bit DIO	Line-Out	2.5" SATA-III Drive bay x 1 M.2 2280 M Key NVMe Slot x 1	HDMI x 2	M.2 E-Key 2230 x 1 M.2 B-Key 3052 x 1 w/ SIM Slot x 1	DIN Rail Wallmount (Optional)	9~36V	-20°C ~ 60°C

## Packing List

- BOXER-6751-ADP x 1
- DIN Rail Kit x 1
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1

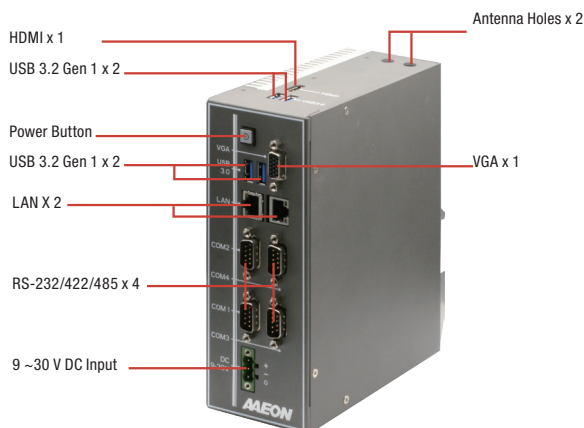
## Optional Accessories

- 1702031802  
Power Cord (US type)
- 170203180E  
Power Cord (Japanese Type)
- 1702031803  
Power Cord (European Type)
- 1255X00059  
120W Power Adapter

# BOXER-6750

Din Rail Mount Embedded BOX PC with 6th/7th Generation Intel® U Series Processor

Front View



Rear View



## Features

- U-Series CPU: Intel® Core™ i3-6100U/i3-7100U/i5-7300U/Celeron® 3955U
- DDR4 2133 MHz SODIMM x 1, Memory Max. up to 16GB
- Supports Industrial-grade Intel® GbE LAN x 2
- Supports BIOS Selectable RS-232/422/485 x 4
- VGA + HDMI Dual Display Output
- USB 3.2 Gen 1 x 4
- 8-bit Digital Input and Output x 1 (Optional)
- Wide Range DC 9~30V Input With Power Protection
- Wide Temperature -20 °C ~ 60 °C
- Din-Rail Mount Design



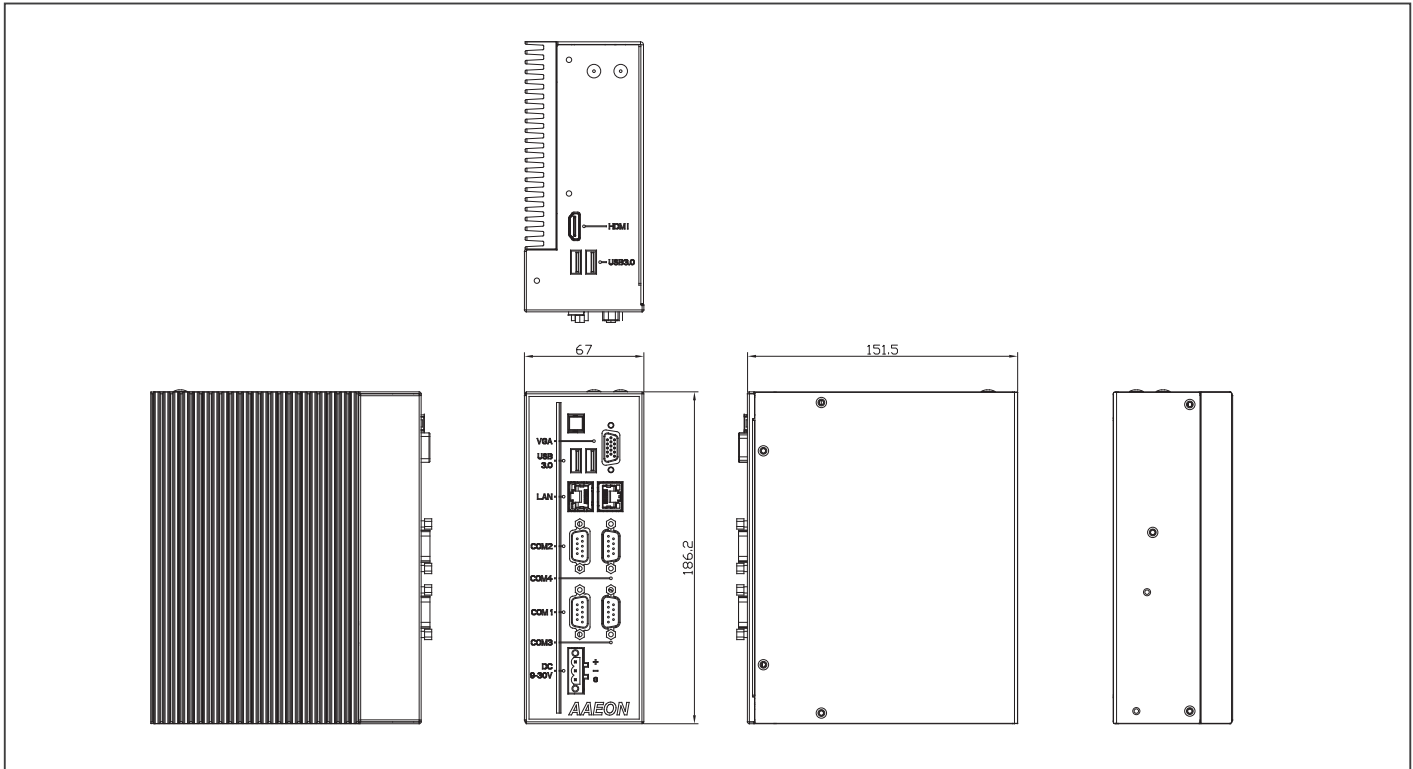
## Specifications

System	
CPU	Intel® Core™ i3-6100U Intel® Celeron® 3955U Intel® Core™ i3-7100U Intel® Core™ i5-7300U
Chipset	Intel® System on Chip
System Memory	DDR4 2133MHz SODIMM slot x 1, up to 16GB
Display Interface	HDMI x 1, VGA x 1
Storage Device	mSATA, HDD/SSD
Ethernet	Intel® i211-AT x 2
I/O	RS-232/422/485 x 4 RJ-45 x 2 for GbE (i211AT x 2) USB 3.2 Gen 1 x 4 VGA x 1 HDMI x 1 Antenna Holes x 2 Power Switch Power Input
Expansion	Full-size minicard x 1 (PCIe+USB with SIM slot, optional for mSATA) Full-size minicard x 1 (PCIe+USB)
Indicator	Power LED on power button
OS Support	Windows® 10 (64-bit) Windows® 8.1 (64-bit) Windows® 7 (32/64-bit) Linux
Power Supply	
Power Requirement	9 - 30V with 3-pin terminal block
Mechanical	
Mounting	DIN Rail Mount Wallmount (Monting kit is optional)
Dimensions (W x H x D)	2.72" x 7.2" x 6.1" (69mm x 183mm x 155mm)
Gross Weight	6.1 lb (2.8kg)
Net Weight	3.9 lb (1.8kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. SSD/HDD/mSATA (according to IEC68-2-14 with 0.5 m/s AirFlow ; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – mSATA/SSD 1 Grms/ 5 ~ 500Hz/ operation – HDD
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6750-A1-1011	Intel® Core™ i3-6100U	—	2	4	—	—	4	—	—	2.5" SATA Drive bay x 1 Optional mSATA x 1	VGA x 1 HDMI x 1	Full-size Minicard x 2	Din Rail Optional Wallmount	9~30V	-20°C ~ 60°C
BOXER-6750-A2-1011	Intel® Celeron® 3955U	—	2	4	—	—	4	—	—	2.5" SATA Drive bay x 1 Optional mSATA x 1	VGA x 1 HDMI x 1	Full-size Minicard x 2	Din Rail Optional Wallmount	9~30V	-20°C ~ 60°C
BOXER-6750-A3-1011	Intel® Core™ i3-7100U	—	2	4	—	—	4	—	—	2.5" SATA Drive bay x 1 Optional mSATA x 1	VGA x 1 HDMI x 1	Full-size Minicard x 2	Din Rail Optional Wallmount	9~30V	-20°C ~ 60°C
BOXER-6750-A4-1011	Intel® Core™ i5-7300U	—	2	4	—	—	4	—	—	2.5" SATA Drive bay x 1 Optional mSATA x 1	VGA x 1 HDMI x 1	Full-size Minicard x 2	Din Rail Optional Wallmount	9~30V	-20°C ~ 60°C

## Packing List

- DIN Rail Bracket x 1
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1
- BOXER-6750

## Optional Accessories

- **1255900849**  
Power Adapter
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)
- **9741909A00**  
Wifi 802.11 a/b/g/n + BT 4.0 Kit
- **9741UC20G0**  
3G module Kit

# BOXER-6711-ADN PRELIMINARY

DIN Rail Mount Embedded BOX PC with Intel Atom® x7211E/Intel® Processor N-Series Processors

Front View



Rear View



## Features

- Designed for Embedded Automation Controller
- Support DIN Rail Mount
- Intel Atom® x7211E/Intel® Processor N-Series
- DDR5 4800 MT/s SO-DIMM slot
- Onboard TPM 2.0
- Wide Range 9~36V DC input
- Wide Operating Temperature -20~60°C



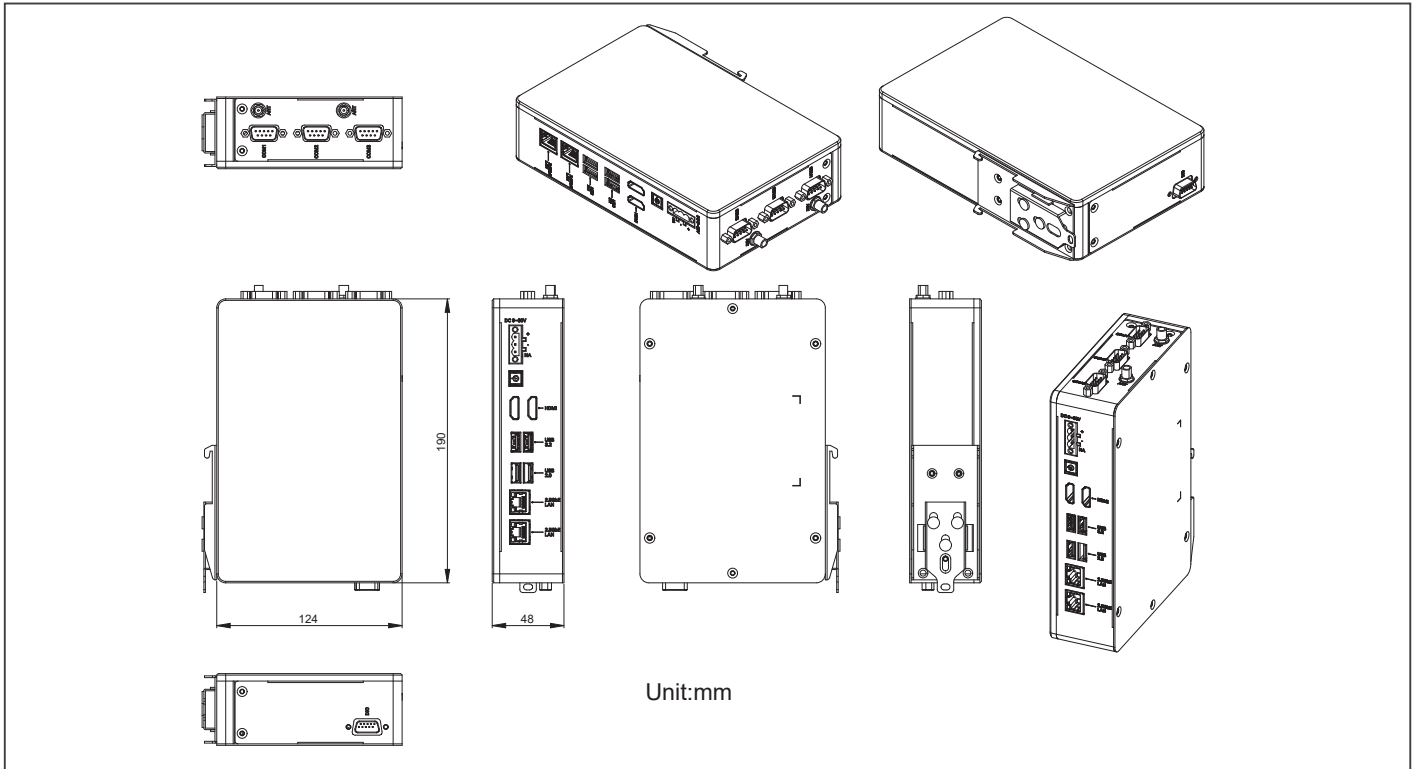
## Specifications

System	
CPU	Intel Atom® x7211E Intel® Processor N200 Intel® Processor N50
Chipset	Intel® SoC
System Memory	DDR5 4800 MT/s SO-DIMM slot x 1, up to 32GB
Display Interface	HDMI x 2
Storage Device	M.2 2280 M-Key x 1 (PCIe [x2]) 2.5" SATA HDD/SSD x 1
Ethernet	RJ-45 x 2 for 2.5GbE LAN (Intel® I226)
I/O	HDMI x 2 RJ-45 x 2 for 2.5GbE LAN (Intel® I226) USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 (Type-A) x 2 DB-9 x 3 for RS-232/422/485 DB-15 x 1 for 8-bit DIO 3-pin Terminal Block for DC in x 1 Power Button with LED x 1
Expansion	M.2 2280 M-Key x 1 (PCIe [x2]) M.2 2230 E-Key x 1 Full Size Mini Card x1 (PCIe + USB) SIM Slot x 1
Indicator	—
OS Support	Windows® 10 IoT Enterprise Windows® 11 Pro Linux Ubuntu 22.04
Power Supply	
Power Requirement	DC-in 9-36V x1 for 3-pin Terminal Block
Mechanical	
Mounting	DIN Rail Mount
Dimensions (W x H x D)	1.89" x 7.48" x 4.88" (48mm x 190mm x 124mm)
Gross Weight	3.50 lb (1.59 Kg)
Net Weight	2.40 lb (1.09 Kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation (with SSD)
Certification	CE/FCC class A



## Dimension

Unit: mm



## Packing List

- DIN Rail Bracket x 1
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1
- BOXER-6711-ADN x 1

## Optional Accessories

- **1255900849**  
12V 84W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741EG25G0**  
4G Module & Antenna (for global)

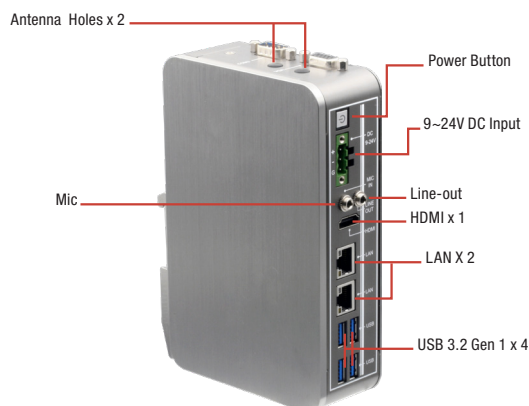
## Ordering Information

Part Number	CPU	LAN	PCH	USB 3.2 Gen2	USB 2.0	RS-232/422/485	Storage	Display	Expansion	Mounting	Power	Operation Temp.
BOXER-6711-ADN-A1-1010	Intel® Processor N200	2	Intel SoC	2	2	3	M.2 2280 M Key Slot x1 (PCIex2) 2.5"SATA Drive Bay x1	HDMI x2	M.2 2280 M Key x1 (PCIex2) M.2 2230 E Key x1 Full-Size Minitcard x1 (PCIe + USB) SIM Slot	DIN Rail Mount	9~36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6711-ADN-A2-1010	Intel® Processor N50	2	Intel SoC	2	2	3	M.2 2280 M Key Slot x1 (PCIex2) 2.5"SATA Drive Bay x1	HDMI x2	M.2 2280 M Key x1 (PCIex2) M.2 2230 E Key x1 Full-Size Minitcard x1 (PCIe + USB) SIM Slot	DIN Rail Mount	9~36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
BOXER-6711-ADN-A3-1010	Intel Atom® x7211E	2	Intel SoC	2	2	3	M.2 2280 M Key Slot x1 (PCIex2) 2.5"SATA Drive Bay x1	HDMI x2	M.2 2280 M Key x1 (PCIex2) M.2 2230 E Key x1 Full-Size Minitcard x1 (PCIe + USB) SIM Slot	DIN Rail Mount	9~36V DC in	-4°F ~ 140°F (-20°C ~ 60°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)

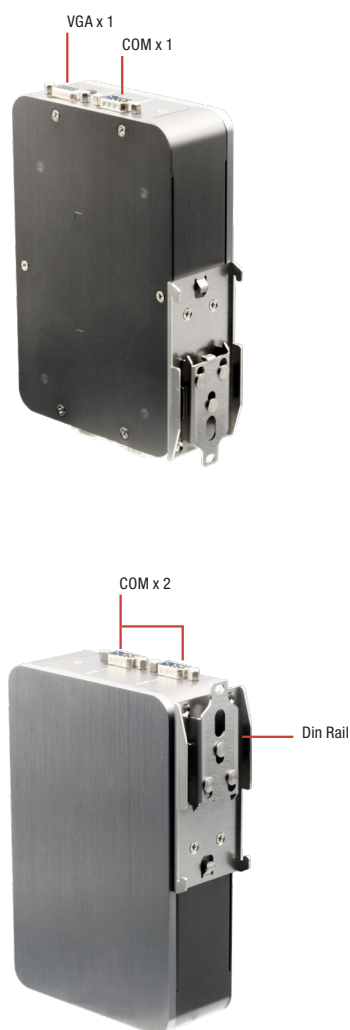
# BOXER-6710

Din Rail Mount Embedded BOX PC with Intel® Atom® Processor N4200 or N3350

Front View



Rear View



## Features

- Slim Design: Min. width 44mm
- Designed for Embedded Automation Controller
- Gigabit Ethernet x 2, USB x 4
- Operate in -20°C ~ 60°C Environment
- Support Din Rail Mount



## Specifications

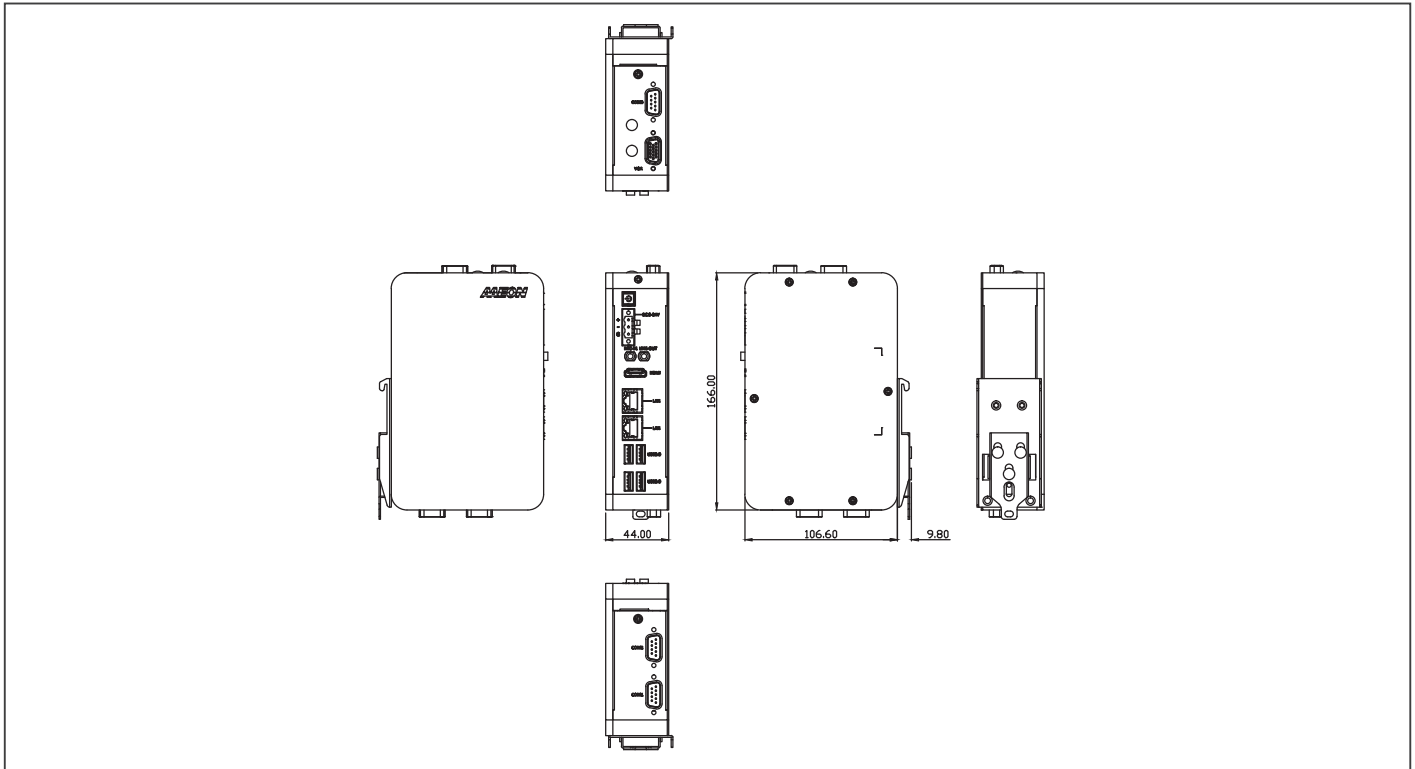
System	
CPU	Intel® Pentium® processor N4200 Intel® Celeron® processor N3350
Chipset	Intel® System on Chip
System Memory	DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
Display Interface	HDMI, VGA
Storage Device	HDD/SSD, optional mSATA
Ethernet	Intel® i211-AT x 2
I/O	VGA x 1 HDMI x 1 RJ-45 x 2 for GbE LAN USB Type A x 4 for USB 3.2 Gen 1 Mic-in x 1 Line-out x 1 RS-232/422/485 x 3 with automatic flow control Power On/Off Button x 1 DC-in 3-pin terminal block (9~24V) x 1
Expansion	Full-size Minicard x 1 w/ SIM Slot Half-size Minicard x 1 (optional for mSATA)
Indicator	Power LED on power button
OS Support	Windows® 10 (64-bit) Windows® 10 IoT (64-bit) Linux Ubuntu 16.04.4
Power Supply	
Power Requirement	9 - 24V with 3-pin terminal block
Mechanical	
Mounting	DIN Rail Mount
Dimensions (W x H x D)	1.73" x 6.54" x 4.17" (44mm x 166mm x 106mm)
Gross Weight	3.08lb (1.4kg)
Net Weight	1.32lb (0.6kg)
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°C ~ 60°C) with W.T. SSD/HDD/mSATA (according to IEC68-2-14 with 0.5 m/s AirFlow ; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation – mSATA/SSD 1 Grms/ 5 ~ 500Hz/ operation – HDD
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6710-A1-1011	N3350	SoC	—	2	4	—	—	3	—	MIC-in, Line-out	2.5" SATA Drive bay x 1 Optional mSATA x1	VGA x 1 HDMI x 1	Full-size Minicard x 1 Half-size Minicard x 1	Din Rail Mount	9~24V	-20°C ~ 60°C
BOXER-6710-A2-1011	N4200	SoC	—	2	4	—	—	3	—	MIC-in, Line-out	2.5" SATA Drive bay x 1 Optional mSATA x1	VGA x 1 HDMI x 1	Full-size Minicard x 1 Half-size Minicard x 1	Din Rail Mount	9~24V	-20°C ~ 60°C

## Packing List

- DIN Rail Bracket x 1
- Screw Package x 1
- 3 Pin DC-In Power Connector x 1
- BOXER-6710

## Optional Accessories

- **125530040F**  
Power Adapter
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)
- **9741238H00**  
WiFi Module & Antenna
- **9741EC20E0**  
4G Module & Antenna(for Europe)

# 06

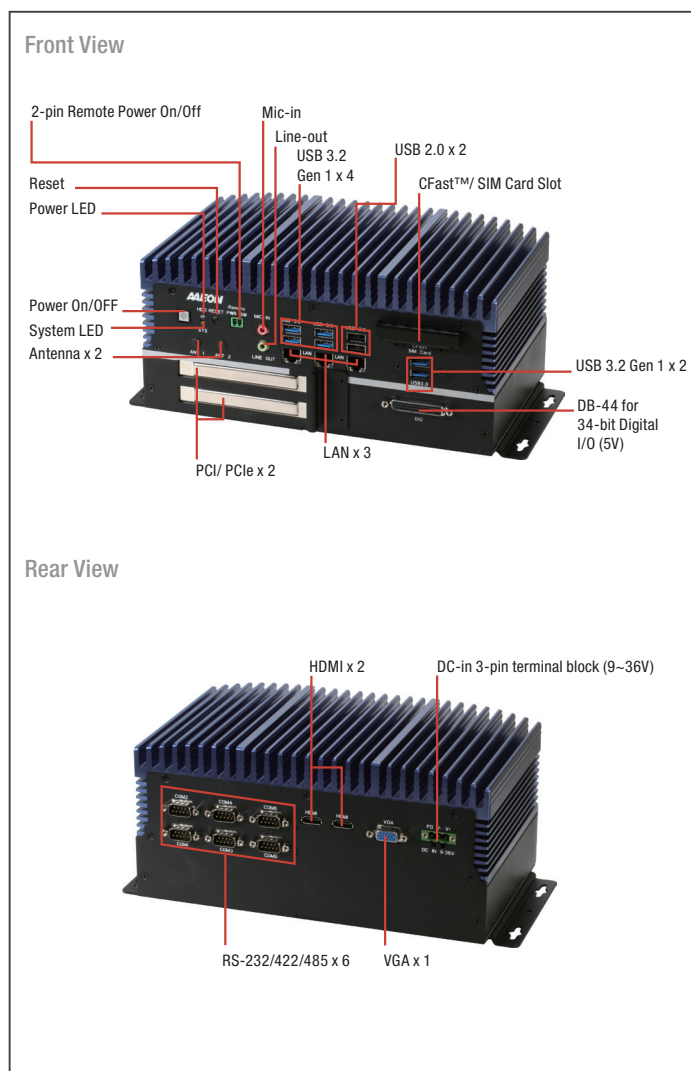
# 06

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## *Expandable Fanless BOX PC Solutions*

# BOXER-6839

Expandable Fanless Embedded Box PC with 6th/ 7th Generation Intel® Core™ Desktop Processor and PCIe [x4] & PCI Expansion



## Features

- Extreme Computing Power & Graphic Display Capability
- Desktop Grade Socket Type Processor with Longevity Support
- DDR4 ECC or Non-ECC SODIMM, Up to 32GB
- VGA + HDMI x 2 Triple Display, HDMI 4K Display
- PCIe [x4] & PCI Expansion
- USB 3.2 Gen 1 x 6
- Industrial-grade Intel® GbE LAN x 3
- Supports BIOS Selectable RS-232/422/485 x 6
- Easy Access Design
- Wide Range DC 9-36V Input
- 34-bit Digital Input and Output



I/O	RS-232/422/485 x 6 USB Type A x 6 for USB 3.2 Gen 1 USB Type A x 2 for USB 2.0 RJ-45 x 3 for GbE LAN DB-44 for 34-bit Digital I/O (5V) CFast™ slot x 1 SIM card slot x 1 Power On/Off Button x 1 2 pin Remote power on/off Reset switch Mic-in x 1 Line-out x 1 Antenna opening x 2 SYS LED indicator x 1 HDD LED indicator x 1 DB-15 x 1 for VGA HDMI v1.3 x 2 DC-in 3-pin terminal block (9-36V)
Expansion	Full-size Mini-Card x 2 PCIe [x4] x 1 & PCIe [x1] x 1 (for A1) PCIe [x4] x 1 & PCI x 1 (for A2) PCI x 2 (for A3) Max. size of expansion card 150 x 105 x 40 mm
Indicator	Power LED HDD active LED
OS Support	<b>7th Generation Intel® Core™ Processor family:</b> Windows® 10 IOT (64bit) Ubuntu 16.04 above Fedora 25 above CentOS 7.3 above <b>6th Generation Intel® Core™ Processor family:</b> Windows® 10 IOT (64bit) Windows® 8.1 (64bit) Windows® embedded 8 standard (64bit) Windows® 7 (64bit/32bit) Windows® embedded standard 7 (32/64bit) Ubuntu 16.04 above Fedora 25 above CentOS 7.3 above
<b>Power Supply</b>	
Power Requirement	9 - 36V with 3-pin terminal block
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	10.40" x 4.90" x 6.15" (264.2mm x 124.5mm x 156.2mm)
Gross Weight	13.2 lb (6.0 kg)
Net Weight	9.9 lb (4.5 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5-95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation - SSD/CFast™ card 1 Grms/ 5 ~ 500Hz/ operation - HDD
Anti-Shock	—
Certification	CE/FCC class A

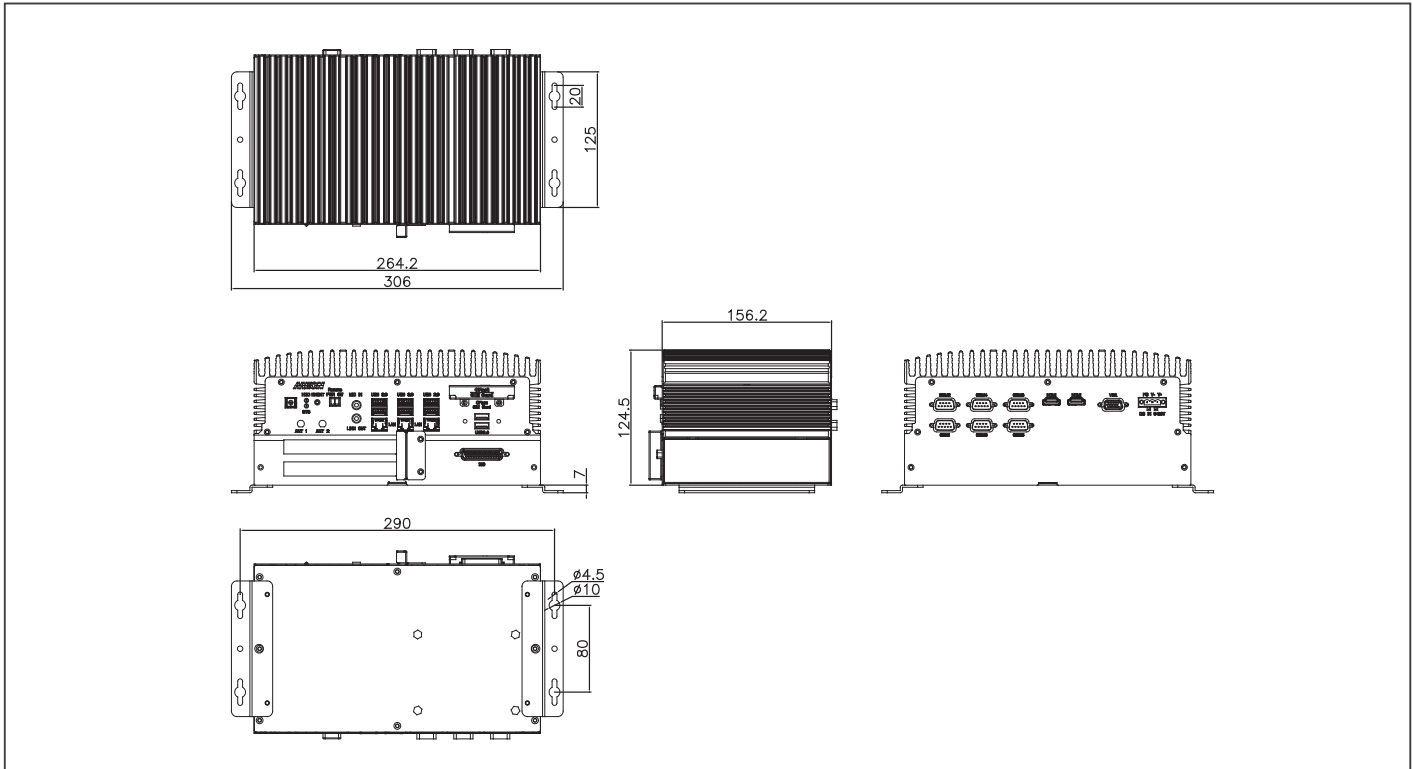
## Specifications

System	
CPU	<b>7th Generation Intel® Core™ Processor family:</b> Intel® Core™ i7-7700T, 2.9 GHz Intel® Core™ i5-7500T, 2.8 GHz Intel® Core™ i3-7101TE, 3.4 GHz Intel® Pentium® G4600T, 3.0 GHz Intel® Pentium® G4560T, 2.9 GHz Intel® Celeron® G3930T, 2.7 GHz <b>6th Generation Intel® Core™ Processor family:</b> Intel® Core™ i7-6700TE, 2.4 GHz Intel® Core™ i5-6500TE, 2.3 GHz Intel® Core™ i3-6100TE, 2.7 GHz Intel® Pentium® G4500T, 3.0 GHz Intel® Pentium® G4400T, 2.9 GHz Intel® Celeron® G3900T, 2.6 GHz
Chipset	Intel® Q170
System Memory	DDR4 1866/2133 SODIMM slot x 2, up to 32GB
Display Interface	HDMI, VGA
Storage Device	CFast™, HDD/SSD
Ethernet	Intel® I210, 10/100/1000 Base-TX x 3



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM	LAN	USB 3.2 Gen 1	USB 2.0	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operating Temp.
BOXER-6839-A1-1010	—	—	3	6	2	6	34 bit	MIC-in x 1 Line-Out x 1	2.5" Drive Bay x 2 CFast™ x 1	VGA x 1 HDMI x 2	PCIe[x4] + PCIe[x1] Full-size Minicard x 2	Wallmount	9-36V DC In	-4°F ~ 131°F (-20°C ~ 55°C)
BOXER-6839-A2-1010	—	—	3	6	2	6	34 bit	MIC-in x 1 Line-Out x 1	2.5" Drive Bay x 2 CFast™ x 1	VGA x 1 HDMI x 2	PCIe[x4] + PCI Full-size Minicard x 2	Wallmount	9-36V DC In	-4°F ~ 131°F (-20°C ~ 55°C)
BOXER-6839-A3-1010	—	—	3	6	2	6	34 bit	MIC-in x 1 Line-Out x 1	2.5" Drive Bay x 2 CFast™ x 1	VGA x 1 HDMI x 2	PCI x 2 Full-size Minicard x 2	Wallmount	9-36V DC In	-4°F ~ 131°F (-20°C ~ 55°C)

## Packing List

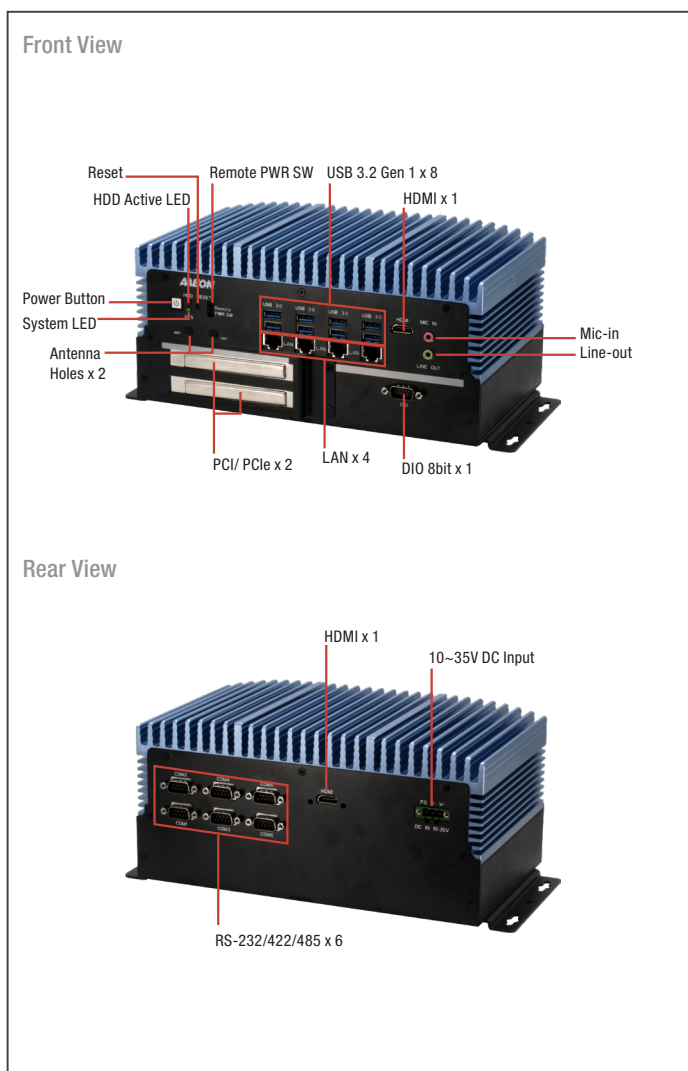
- Wallmount Bracket x 2
- Screw Package x 1
- Thermal Pad x 3
- Phoenix Power Connector x 1
- BOXER-6839

## Optional Accessories

- **125590120B**  
Power Adapter
- **1702031802**  
Power Cord (US Type)
- **1702031803**  
Power Cord (Europe)
- **170203180E**  
Power Cord (Japan)
- **9741159H00**  
WiFi/Bluetooth Module & Antenna
- **9741EC25E0**  
4G Module & Antenna (For Europe)
- **9741EC25A0**  
4G Module & Antenna (For USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (For USA-Verizon)

# BOXER-6839-CFL

Fanless Embedded Box PC with Socket Type 8th/9th Generation Intel® Processor



## Features

- High Computing Power
- Intel Coffee Lake-S LGA 1151 Desktop Processor
- Support DDR4 ECC or Non-ECC SODIMM, Up to 64GB
- Support HDMI x 2 Double Display
- Support USB 3.2 Gen 1 x 8
- PCIe [x4] & PCI [x1] Expansion



I/O	HDMI x 2 RJ-45 x 4 for GbE LAN (i211 x 3, i219 x 1) USB 3.2 Gen 1 x 8 DB-9 x 6 for RS-232/422/485 Audio x 1 (MIC-in, Line-out) DB-15 for DIO 8 bit x 1 3 pin 10~35V Power Input x 1 Power Button x 1 Remote Power switch x 1 Reset Button x 1
Expansion	Full-size Mini card x 1 (PCIe) Full-size Mini card x 1 ((PCIe/mSATA switch by BIOS, Default: mSATA) SIM slot x 1 PCIe slot : Riser card type 1: PCIe[x4] slot x 1 & PCIe[x1] x 1 (A1) Riser card type 2: PCIe[x4] slot x 1 & PCI x 1 (A2) Riser card type 3: PCI x 2 (A3) Max. size of expansion card 150 x 105 x 40 mm
Indicator	HDD LED x 1 System LED x 1
OS Support	Windows® 10 64-bit, Linux Ubuntu 20.04
<b>Power Supply</b>	
Power Requirement	3-pin Phoenix DC Input 10~35V
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	264mm x 156mm x 125mm
Gross Weight	13.2 lb (6.0 kg)
Net Weight	9.9 lb (4.5 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~131°F (-20°C ~ 55°C) with 0.5 m/s airflow (with TDP ≤ 35W CPU) -4°F~113°F (-20°C ~45°C) with 0.5 m/s airflow (with TDP > 35W CPU)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5~95% @ 40°C, non-condensing
Anti-Vibration	5 Grms/ 5 ~ 500Hz/ operation -SSD
Anti-Shock	SSD: 50G @ wallmount, Half-sine, 11ms
Certification	CE/FCC class A

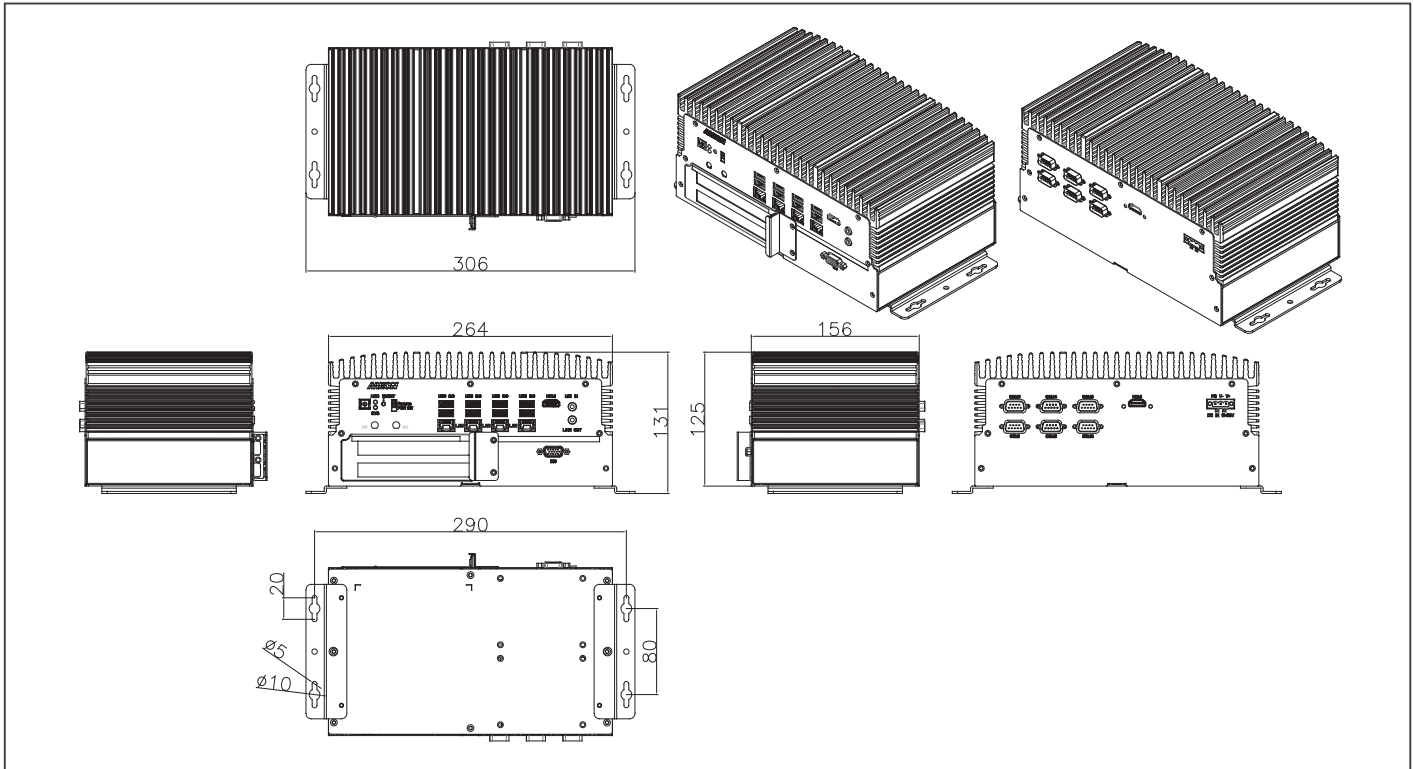
## Specifications

System	
CPU	Intel® Xeon® E-2124G Intel® i9-9900T Intel® i7-9700TE Intel® i7-8700T Intel® i5-8500T Intel® i3-8100T Pentium® G5400T Celeron® G4900T
Chipset	C246
System Memory	DDR4-2666 SO-DIMM slot x 2 Up to 64GB, ECC or Non-ECC Support
Display Interface	HDMI x 2
Storage Device	2.5" SATA HDD/SSD Bay x 2
Ethernet	RJ-45 x 4 for GbE LAN (i211-AT x 3, i219-LM x 1)



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen1	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6839-CFL-A1-1010	—	C246	4	8	6	8 bit	Mic-in x 1 Line-out x 1	2.5" SATA Drive Bay x 2	HDMI x 2	PCIe [x4] x 1 + PCIe[k1] x 1 Full-size Minicard x 2	Wallmount	DC-in 10-35V x 1 for 3-pin Terminal Block	-4°F ~131°F (-20°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (with TDP ≤ 35W CPU) * -4°F ~113°F (-20°C ~ 45°C), IEC68-2 with 0.5 m/s AirFlow (with TDP 35W > CPU)
BOXER-6839-CFL-A2-1010	—	C246	4	8	6	8 bit	Mic-in x 1 Line-out x 1	2.5" SATA Drive Bay x 2	HDMI x 2	PCIe [x4] x 1 + PCI x 1 Full-size Minicard x 2	Wallmount	DC-in 10-35V x 1 for 3-pin Terminal Block	-4°F ~131°F (-20°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (with TDP ≤ 35W CPU) * -4°F ~113°F (-20°C ~ 45°C), IEC68-2 with 0.5 m/s AirFlow (with TDP 35W > CPU)
BOXER-6839-CFL-A3-1010	—	C246	4	8	6	8 bit	Mic-in x 1 Line-out x 1	2.5" SATA Drive Bay x 2	HDMI x 2	PCI x 2 Full-size Minicard x 2	Wallmount	DC-in 10-35V x 1 for 3-pin Terminal Block	-4°F ~131°F (-20°C ~ 55°C), IEC68-2 with 0.5 m/s AirFlow (with TDP ≤ 35W CPU) * -4°F ~113°F (-20°C ~ 45°C), IEC68-2 with 0.5 m/s AirFlow (with TDP 35W > CPU)

## Packing List

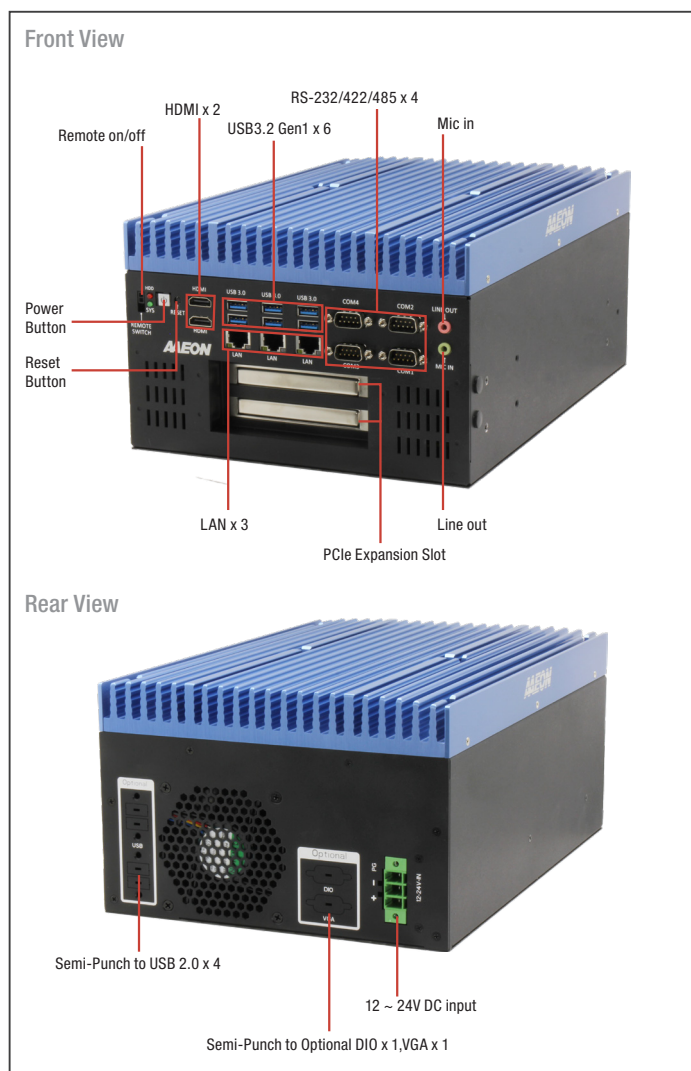
- Wallmount Bracket x 2
- Screw Package x 1
- Thermal Pad x 3
- Phoenix Power Connector x 1
- BOXER-6839-CFL

## Optional Accessories

- 125590120B  
120W Power Adapter
- 1255302300  
230W Power Adapter
- 1702031802  
Power Cord (US Type)
- 1702031803  
Power Cord (Europe Type)
- 170203180E  
Power Cord (Japan Type)
- 9741324A00  
WiFi/Bluetooth Module & Antenna
- 9741EG25G0  
4G Module & Antenna (For Global)

# BOXER-6840-CFL

High Computing Power Embedded Controller with 8th/9th Generation Intel® Processor



## Features

- High Computing Power
- Intel Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x2 for Dual Display
- Support C246 PCH
- Support PCIe16 + PCIe4
- Single Power Input (for both System & one Graphics Card)



Expansion	Full-size Minicard x1 (PCIe + USB with 1 SIM Slot) Half-size Minicard x1 (PCIe + USB, optional for mSATA) M.2 M key (2280) x1 (PCIe4) PCIe [x4] x1 PCIe [x16] x1 - Max. Power Consumption of GPU card 250W - Max. Size of GPU card 250mm x 125mm x 20mm Note: If the GPU card dimension is 250mm x 125mm x 40mm, we can change the riser card inside to support.
Reserved Connector	Internal, SATA x 2; Internal, 8bit DIO x 1; Internal, USB 2.0 x 4; Internal, LPC x 1; Internal, Secondary System Fan Connector x 1
Indicator	System Power LED x1 (Green) Storage Active LED x1 (Red)
OS Support	Windows® 10 Enterprise 64 bit Ubuntu 20.04.1/Kernel 5.4
<b>Power Supply</b>	
Power Requirement	DC In 12~24V x1 for 3-pin Terminal block
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	8.66" x 5.91" x 12.6" (220 mm x 150 mm x 320 mm)
Gross Weight	17.64 lb (8 kg)
Net Weight	15.43 lb (7 kg)
<b>Environmental</b>	
Operating Temperature	-4°F~140°F (-20°C ~ 60°C) IEC68-2 with 0.5 m/s AirFlow
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	SSD: Random, 1Grm,5~500Hz
Anti - Shock	SSD: 50G @ wallmount, Half-sine, 11ms
Certification	CE/FCC class A , UKCA

## Specifications

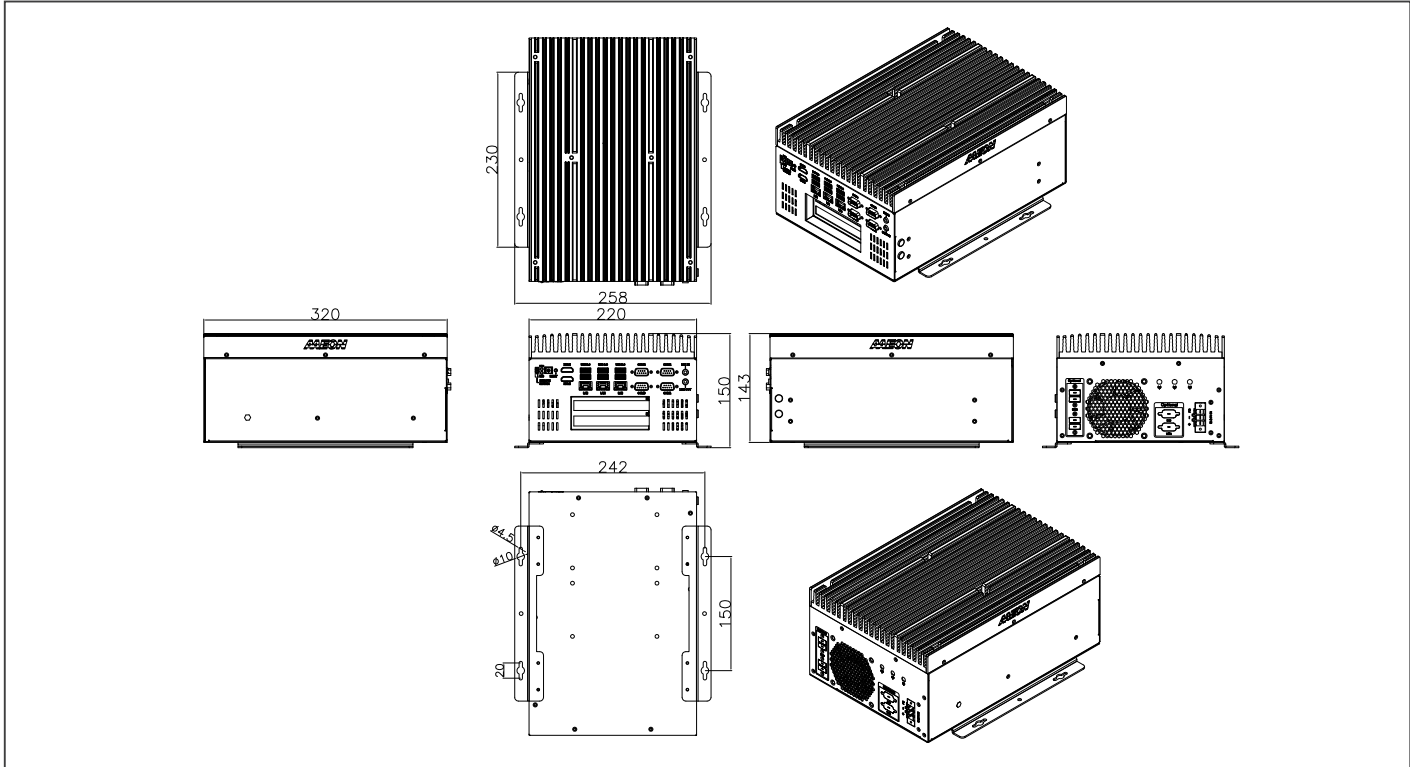
System	
CPU	Intel® Xeon® E-2124G Intel® Core™ i9-9900T Intel® Core™ i7-8700T Intel® Core™ i5-8500T Intel® Core™ i3-8100T Intel® Pentium® G5400T Intel® Celeron® G4900T Note: Support max. TPD 71W Processor
Chipset	C246, No H310 downward support
System Memory	DDR4 SO-DIMM socket x4 (double deck) Support max. 2666MHz up to 128GB Support un-buffered and ECC / non-ECC type SODIMM
Display Interface	HDMI 1.4 x2 Support Dual Independent Display, 4K Ultra HD displays
Storage Device	2.5" SATA Drive Bay x2 (4 SATA Port w/ RAID Function) Half-size Minicard x1 for mSATA (optional) M.2 2280 NVMe slot x1
Ethernet	RJ-45 x3 for GbE LAN (Intel i211AT x2, i219LM x1)
I/O	USB Type-A x6 for USB3.2 Gen1 DB9 x4 For RS-232/422/485 Mic-in x1, Line-out x1 Power ON/OFF switch x1 Remote power on/off connector x1 Reset switch x1 SMA Antenna Holes x3





### Dimension

Unit: mm



### Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen1	USB 2.0	RS-232	RS-2/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6840-CFL-A1-1010	—	C246	3	6	—	—	4	—	Mic-in, Line-out x1	2.5" SATA Drive bay x2 mSATA x1 (optional) M.2 2280 NVMe SSD slot x1	HDMI x2	Full-size Minicard x1 Half-size Minicard x1 M.2 M key (2280) x1 PCIe [x4] x1 PCIe [x16] x1	Wallmount	DC In 12-24V with 3-pin terminal block	-20°C ~ 60°C with 0.5m/s airflow

### Packing List

- Wallmount Bracket x2
- 3 Pin DC-in Power Connector x1
- Screw Package x1
- Thermal Pad Package x1
- BOXER-6840-CFL

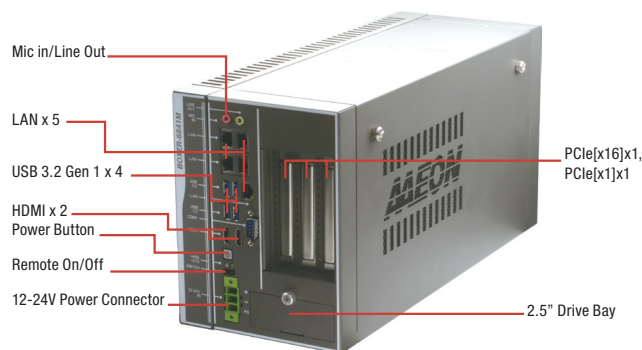
### Optional Accessories

- **963X000008**  
Securing Bracket for Expansion Card
- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1255903300**  
330W Power Adapter
- **1255X00021**  
480W Power Adapter (DIN Rail)
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741324A00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)

# BOXER-6841M-A1

Vision System Embedded Box PC with 6th / 7th Generation Intel® Core™ Desktop Processor and PCIe(x16) + PCIe (x1)

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop processor, Max 65W
- Intel® H110 PCH
- Easy Installation design for expand slot
- Support PCIe[x16] x1, PCIe[x1] x1
- Support up to max 180W Graphic Card
- System Fan with PWM function



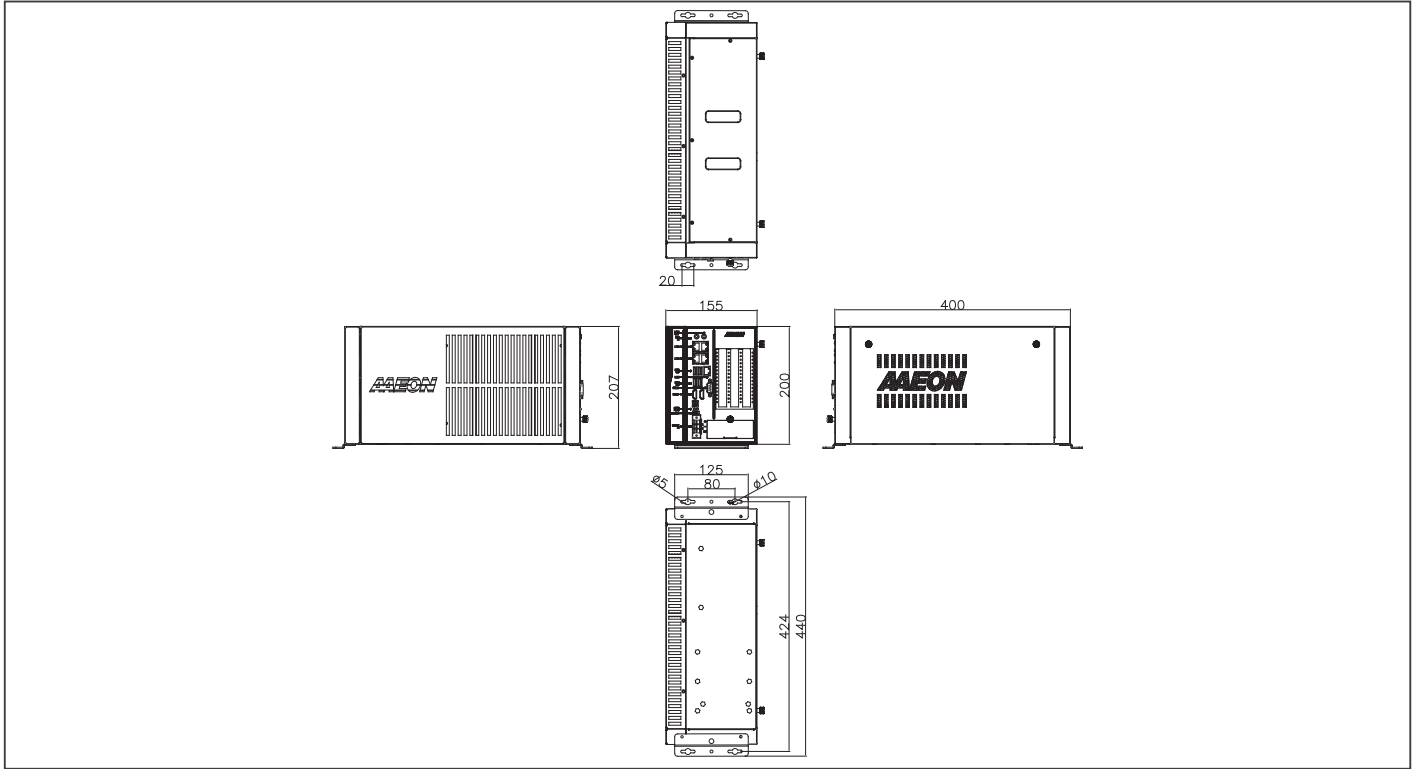
## Specifications

System	
CPU	6th / 7th Generation Intel® Core™-i desktop Processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz
Chipset	Intel® H110 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI type A x 2 for HDMI v1.4b
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel i211AT x 4, i219LM x 1)
I/O	2 pin Remote Power on/off connector Power ON/OFF Switch x 1 HDMI 1.4b x 2 Audio x 2 (MIC-in, Line-out) USB 3.2 Gen 1 x 4 DB-9 x 1 for RS-232/422/485 3 pin DC Power input x 1 (+, -, GND)
Expansion	Full-size Mini card x 2 (USB, w/ 1 SIM slot) PCIe [x1] x 1 PCIe [x16] x 1 - Power Consumption of GPU card max. 180W - Max. size of GPU card 312 x 113 x 40 mm (Option) Max. size of GPU card 312 x 113 x 60 mm (Riser Card: 9697T50300)
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>Power Supply</b>	
Power Requirement	DC-In 12~24V - CPU < 65W, No Graphic Card: 120W Adapter - CPU ≤ 65W, 180W Graphic Card: 330W Adapter
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 15.75" (155mm x 200mm x 400mm)
Gross Weight	18.29 lb (8.3 Kg)
Net Weight	14.53 lb (7 Kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1 Grms, 5~500Hz, Anti-vibration design
Anti - Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A1-1010	—	H110	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x2	HDMI x2	Full-size Minicard x2, PCIe[x16] x1, PCIe[x1]x1	Wallmount	DC12-24V - CPU < 65W, No Graphic Card: 120W Adapter - CPU ≤ 65W, 180W Graphic Card: 330W Adapter	-20°C - 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C - 45°C with 0.5m/s airflow (TDP 65W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A1

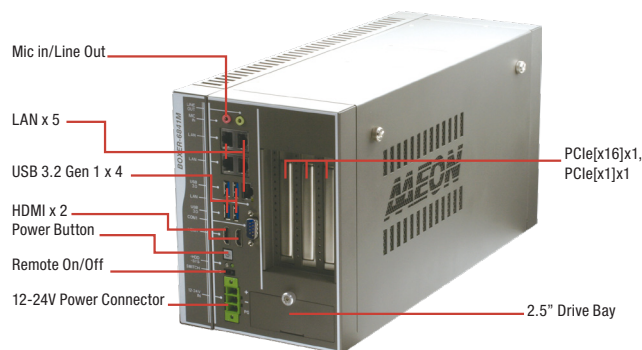
## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255903300**  
330W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **9697T50300**  
Riser Card with PCIe [x16] x 1, max. size of GPU card 312 /190mm x 113mm x 60mm

# BOXER-6841M-A2

Vision System Embedded Box PC with 6th / 7th Generation Intel® Core™ Desktop Processor and PCIe(x16) + PCIe (x1)

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop processor, Max 65W
- Intel® H110 PCH
- Easy Installation design for expand slot
- Support PCIe[x16] x1, PCIe[x1] x1
- Support up to max 250W Graphic Card
- System Fan with PWM function



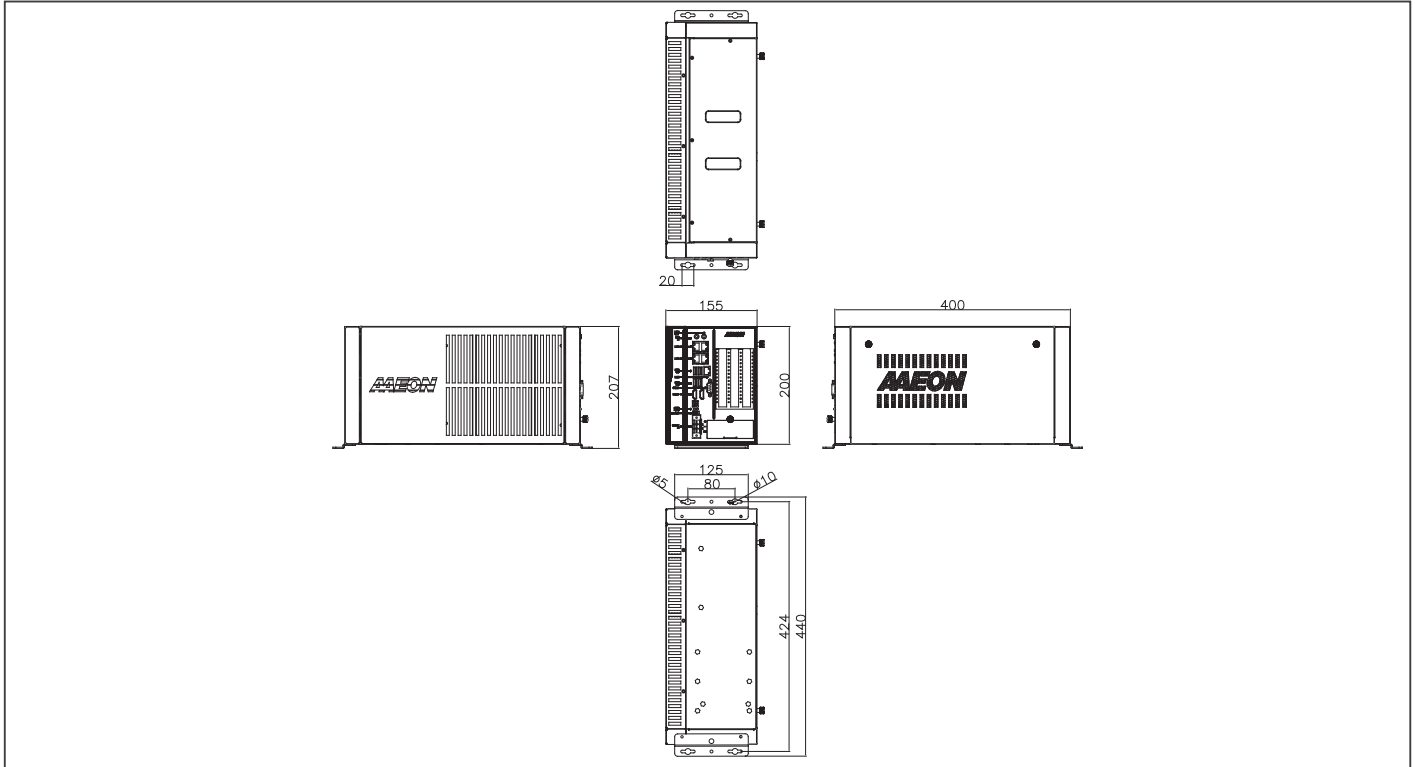
## Specifications

System	
CPU	6th / 7th Generation Intel® Core™-i desktop Processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz
Chipset	Intel® H110 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI type A x 2 for HDMI v1.4b
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel® i211AT x 4, i219LM x 1)
I/O	2 pin Remote Power on/off connector Power ON/OFF Switch x 1 HDMI 1.4b x 2 Audio x 2 (MIC-in, Line-out) USB 3.2 Gen 1 x 4 DB-9 x 1 for RS-232/422/485 3 pin DC Power input x 1 (+, -, GND)
Expansion	Full-size Mini card x 2 (USB, w/ 1 SIM slot) PCIe [x1] x 1 PCIe [x16] x 1 - Power Consumption of GPU card max. 250W - Max. size of GPU card 312 x 113 x 40 mm (Option) Max. size of GPU card 312 x 113 x 60 mm (Riser Card: 9697T50300)
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>Power Supply</b>	
Power Requirement	DC-In 12~24V For System power, 12V only for Graphic Card - CPU < 65W, No Graphic Card: 120W Adapter - CPU ≤ 65W, 180W < Graphic Card < 250W: 240W Adapter x 2
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 15.75" (155mm x 200mm x 400mm)
Gross Weight	18.29 lb (8.3 Kg)
Net Weight	14.53 lb (7 Kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1 Grms, 5~500Hz, Anti-vibration design
Anti - Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A2-1010	—	H110	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x 2	HDMI x2	Full-size M.2 x2, PCIe[x16] x1, PCIe[x1]x1	Wallmount	DC-In 12~24V For System power, 12V only for Graphic Card - CPU < 65W, No Graphic Card: 120W Adapter - CPU ≤ 65W, 180W < Graphic Card < 250W: 240W Adapter x 2	-20°C ~ 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C ~ 45°C with 0.5m/s airflow (TDP 65W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A2

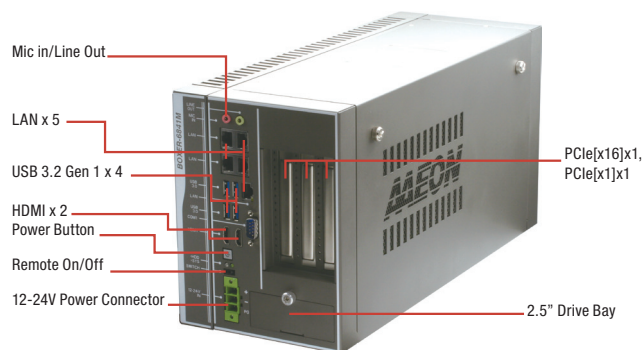
## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **9697T50300**  
Riser Card with PCIe [x16] x 1, max. size of GPU card 312 /190mm x 113mm x 60mm

# BOXER-6841M-A3

Vision System Embedded Box PC with 6th / 7th Generation Intel® Core™ Desktop / Xeon® server-grade Processor and PCIe(x16)  
+ PCIe (x1)

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop and Xeon® server-grade processor, Max 73W.
- Intel® C236 PCH
- Easy Installation design for expand slot
- Support PCIe[x16] x1, PCIe[x1] x1
- Support up to max 180W Graphic Card
- System Fan with PWM function



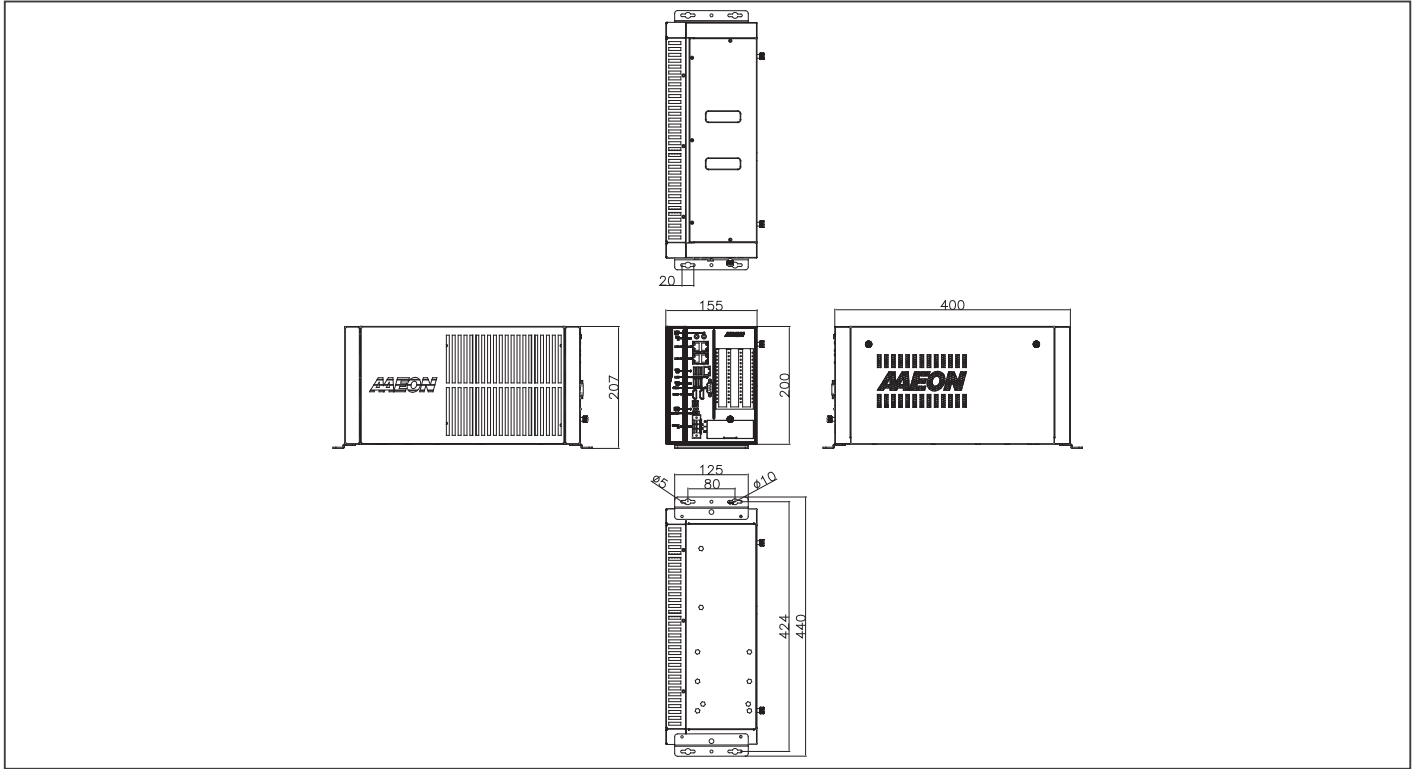
## Specifications

System	
CPU	6th / 7th Generation Intel® Core™-i desktop and Xeon® server grade processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz -Intel® Xeon® E3-1268L v5, 2.40 GHz -Intel® Xeon® E3-1275 v6, 3.80 GHz
Chipset	Intel® C236 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI type A x 2 for HDMI v1.4b
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel i211AT x 4, i219LM x 1)
I/O	2 pin Remote Power on/off connector Power ON/OFF Switch x 1 HDMI 1.4b x 2 Audio x 2 (MIC-in, Line-out) USB 3.2 Gen 1 x 4 DB-9 x 1 for RS-232/422/485 3 pin DC Power input x 1 (+, -, GND)
Expansion	Full-size Mini card x 2 (USB, w/ 1 SIM slot) PCIe [x1] x 1 PCIe [x16] x 1 - Power Consumption of GPU card max. 180W - Max. size of GPU card 312 x 113 x 40 mm (Option) Max. size of GPU card 312 x 113 x 60 mm (Riser Card: 9697T50300)
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>Power Supply</b>	
Power Requirement	DC-In 12~24V - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 180W Graphic Card: 330W Adapter
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 15.75" (155mm x 200mm x 400mm)
Gross Weight	18.29 lb (8.3 Kg)
Net Weight	14.53 lb (7 Kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor) -4°F ~113°F (-20°C ~ 45°C) according to IEC60068-2 with 0.5m/s airflow (TDP 73W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1 Grms, 5~500Hz, Anti-vibration design
Anti - Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A3-1010	—	C236	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x 2	HDMI x2	Full-size Minicard x2, PCIe[x16] x1, PCIe[x1]x1	Wallmount	DC-In 12-24V - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 180W Graphic Card: 330W Adapter	-20°C ~ 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C ~ 45°C with 0.5m/s airflow (TDP 73W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A3

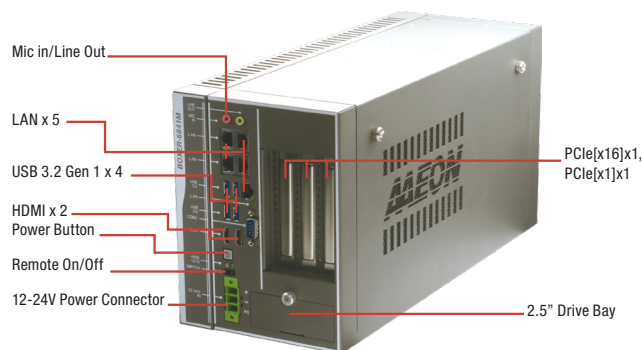
## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255903300**  
330W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **9697T50300**  
Riser Card with PCIe [x16] x 1, max. size of GPU card 312 /190mm x 113mm x 60mm

# BOXER-6841M-A4

Vision System Embedded Box PC with 6th/7th Generation Intel® Core™ Desktop / Xeon® server-grade Processor and PCIe(x16) + PCIe (x1)

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop and Xeon® server-grade processor, Max 73W.
- Intel® C236 PCH
- Easy Installation design for expand slot
- Support PCIe[x16] x1, PCIe[x1] x1
- Support up to max 250W Graphic Card
- System Fan with PWM function



## Specifications

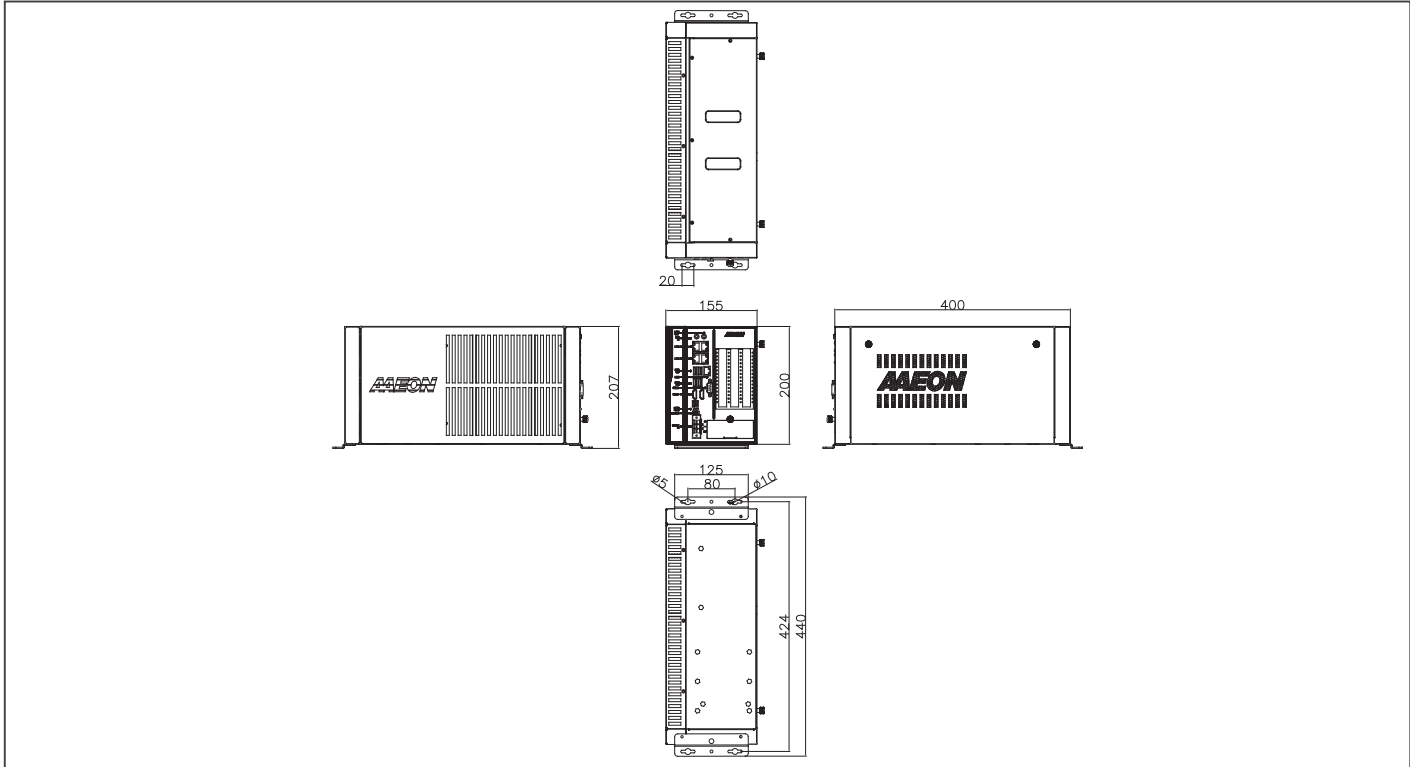
System	
CPU	6th / 7th Generation Intel® Core™-i desktop and Xeon® server grade processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz -Intel® Xeon® E3-1268L v5, 2.40 GHz -Intel® Xeon® E3-1275 v6, 3.80 GHz
Chipset	Intel® C236 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI type A x 2 for HDMI v1.4b
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel i211AT x4, i219LM x1)
I/O	2 pin Remote Power on/off connector Power ON/OFF Switch x 1 HDMI 1.4b x 2 Audio x 2 (MIC-in, Line-out) USB 3.2 Gen 1 x 4 DB-9 x 1 for RS-232/422/485 3 pin DC Power input x 1 (+, -, GND)
Expansion	Full-size Mini card x 2 (USB, w/ 1 SIM slot) PCIe [x1] x 1 PCIe [x16] x 1 - Power Consumption of GPU card max. 250W - Max. size of GPU card 312 x 113 x 40 mm (Option) Max. size of GPU card 312 x 113 x 60 mm (Riser Card: 9697T50300)
Indicator	Power LED x1, HDD active LED x1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
Power Supply	
Power Requirement	DC-In 12-24V For System Power, 12V only for Graphic Card - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 250W Graphic Card: 240W Adapter x 2
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 15.75" (155mm x 200mm x 400mm)
Gross Weight	18.29 lb ( 8.3 Kg)
Net Weight	14.53 lb ( 7 Kg)
Environmental	
Operating Temperature	-4°F ~131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor) -4°F ~113°F (-20°C ~ 45°C) according to IEC60068-2 with 0.5m/s airflow (TDP 73W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1Grm, 5~500Hz, Anti-vibration design
Anti - Shock	—
Certification	CE/FCC class A





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A4-1010	—	C236	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x 2	HDMI x2	Full-size Minicard x2, PCIe[x16] x1, PCIe[x1]x1	Wallmount	DC-In 12-24V For System Power, 12V only for Graphic Card - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 250W Graphic Card: 240W Adapter x 2	-20°C ~ 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C ~ 45°C with 0.5m/s airflow (TDP 73W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A4

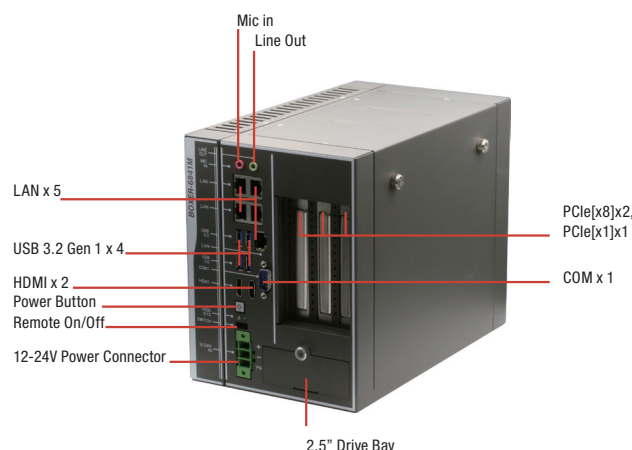
## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **9697T50300**  
Riser Card with PCIe [x16] x 1, max. size of GPU card 312 /190mm x 113mm x 60mm

# BOXER-6841M-A5

Vision System Fanless Embedded Box PC with 6th/ 7th Generation Intel® Core™ Desktop / Xeon® server-grade Processor and 2 PCIe(x8) + PCIe (x1)

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop and Xeon® server-grade processor, Max 73W.
- Intel® C236 PCH
- Easy Installation design for expand slot
- Support PCIe[x8] x2, PCIe[x1] x1
- Support frame grabber card
- Fanless system



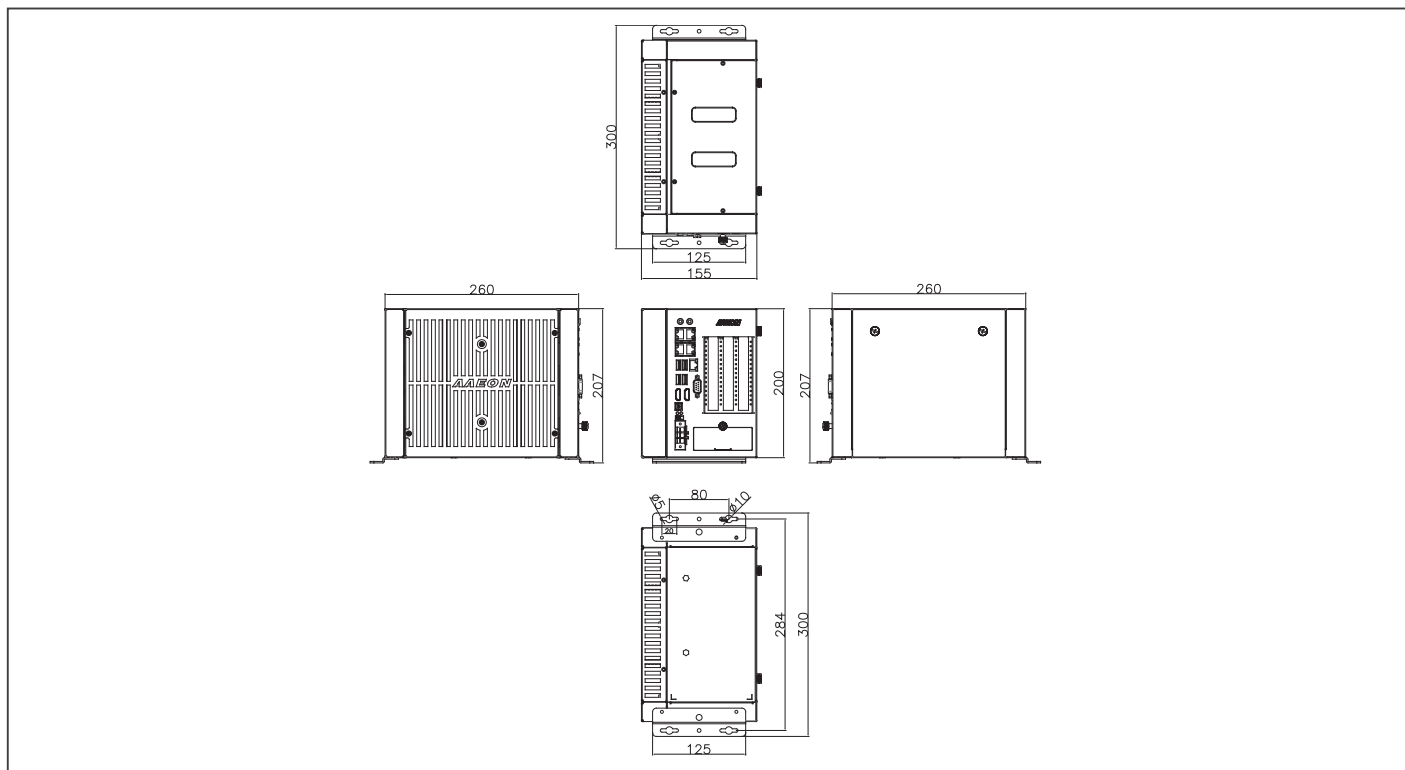
## Specifications

System	
CPU	6th / 7th Generation Intel® Core™-i desktop and Xeon® server grade processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz -Intel® Xeon® E3-1268L v5, 2.40 GHz -Intel® Xeon® E3-1275 v6, 3.80 GHz
Chipset	Intel® C236 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI type A x 2 for HDMI v1.4b
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel i211AT x 4, i219LM x 1)
I/O	2 pin Remote Power on/off connector Power ON/OFF Switch x 1 HDMI 1.4b x 2 Audio x 2 (MIC-in, Line-out) USB 3.2 Gen 1 x 4 DB-9 x 1 for RS-232/422/485 3 pin DC Power input x 1 (+, -, GND)
Expansion	Full-size Mini card x 2 (USB, w/ 1 SIM slot) PCIe [x8] x 2 Extension card size limit: 114.55mm(H) x 192mm (L) PCIe [x1] x 1
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>Power Supply</b>	
Power Requirement	DC-In 12-24V - CPU = 35W: 120W Adapter - 35W < CPU ≤ 73W: 240W Adapter
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 10.24" (155mm x 200mm x 260mm)
Gross Weight	12.75 lb (5.8 kg)
Net Weight	9.9 lb (4.5 Kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor) -4°F ~113°F (-20°C ~ 45°C) according to IEC60068-2 with 0.5m/s airflow (TDP 73W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1Grm, 5~500Hz, Anti-vibration design
Anti - Shock	—
Certification	CE/FCC class A



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A5-1010	—	C236	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x 2	HDMI x2	Full-size Minicard x2, PCIe[x8] x2, PCIe[x1]x1	Wallmount	DC-In 12-24V - CPU = 35W: 120W Adapter - 35W < CPU ≤ 73W: 240W Adapter	-20°C ~ 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C ~ 45°C with 0.5m/s airflow (TDP 73W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A5

## Optional Accessories

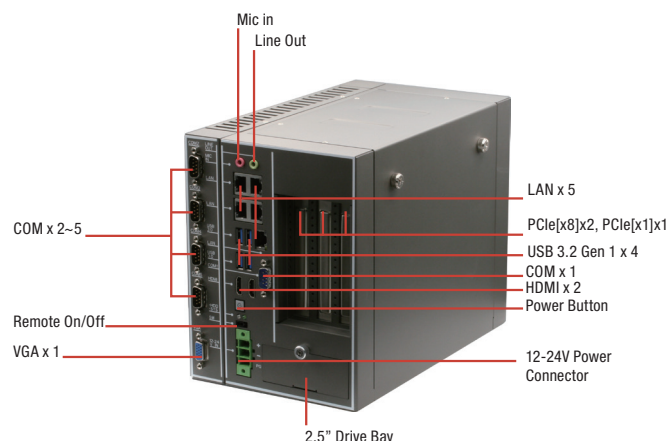
- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **M046841140**  
Main heatsink cover



# BOXER-6841M-A6

Vision System Fanless Embedded Box PC with 6th/ 7th Generation Intel® Core™ Desktop / Xeon® server-grade Processor and 2 PCIe(x8) + PCIe (x1)

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop and Xeon® server-grade processor, Max 73W.
- Intel® C236 PCH
- Easy Installation design for expand slot
- Support PCIe[x8] x2, PCIe[x1] x1
- Support frame grabber card
- Fanless system
- 5 COM Port and VGA + HDMIx2 Triple display



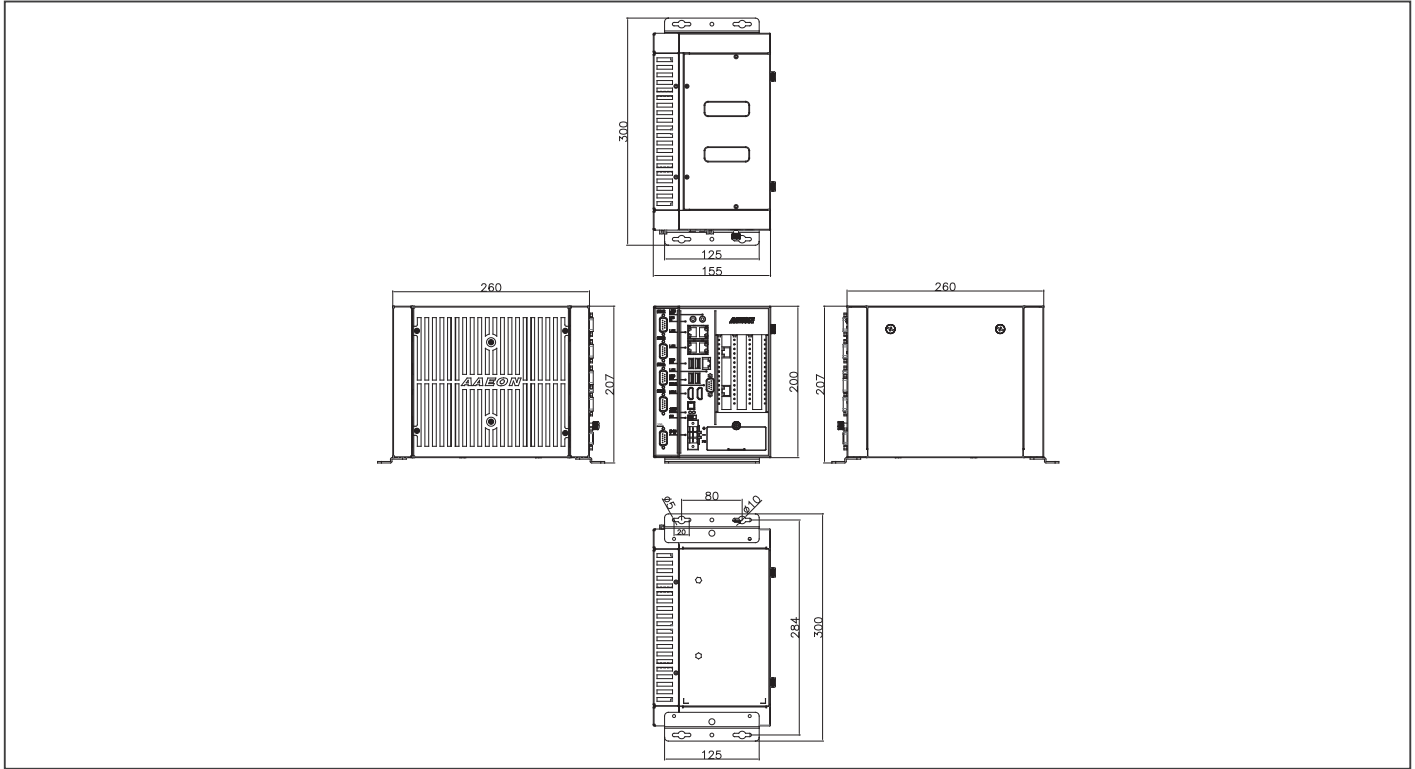
## Specifications

System	
CPU	6th / 7th Generation Intel® Core™-i desktop and Xeon® server grade processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz -Intel® Xeon® E3-1268L v5, 2.40 GHz -Intel® Xeon® E3-1275 v6, 3.80 GHz
Chipset	Intel® C236 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI type A x 2 for HDMI v1.4b VGA x 1
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel i211AT x 4, i219LM x 1)
I/O	2 pin Remote Power on/off connector Power ON/OFF Switch x 1 HDMI 1.4b x 2 VGA x 1 Audio x 2 (MIC-in, Line-out) USB 3.2 Gen 1 x 4 DB-9 x 1 for RS-232/422/485 DB-9 x 4 for RS-232 3 pin DC Power input x 1 (+, -, GND)
Expansion	Full-size Mini card x 2 (USB, w/ 1 SIM slot) PCIe[x8] x 2 Extension card size limit: 114.55mm(H) x 192mm (L) PCIe[x1] x 1
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>Power Supply</b>	
Power Requirement	DC-In 12~24V - CPU = 35W: 120W Adapter - 35W < CPU ≤ 73W: 240W Adapter
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 10.24" (155mm x 200mm x 260mm)
Gross Weight	12.75 lb (5.8 kg)
Net Weight	9.9 lb (4.5 Kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor) -4°F ~113°F (-20°C ~ 45°C) according to IEC60068-2 with 0.5m/s airflow (TDP 73W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1 Grms, 5~500Hz, Anti-vibration design
Anti - Shock	—



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A6-1010	—	C236	5	4	1	4	—	MIC-in, Line-out	2.5" Drive Bay x2	HDMI x2, VGA x1	Full-size Minicard x2, PCIe(x8) x2, PCIe(x1)x1	Wallmount	DC-In 12-24V - CPU = 35W: 120W Adapter - 35W < CPU ≤ 73W: 240W Adapter	-20°C ~ 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C ~ 45°C with 0.5m/s airflow (TDP 73W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A6

## Optional Accessories

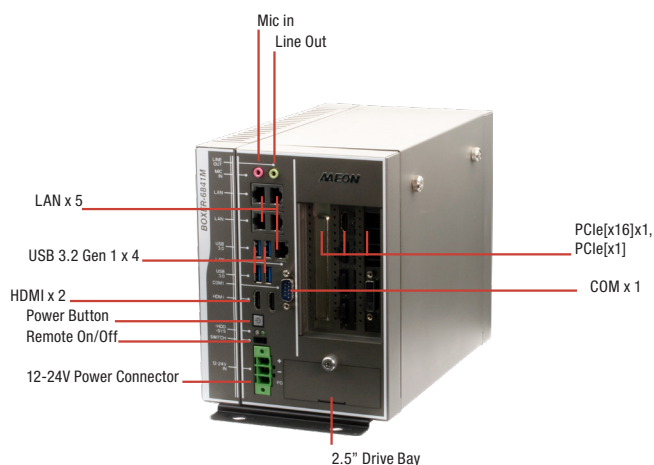
- **1255901209**  
120W Power Adapter
- **1255902400**  
240W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **M046841140**  
Main heatsink cover



# BOXER-6841M-A7

Vision System Embedded Box PC with 6th/ 7th Generation Intel® Core™ Desktop / Xeon® server-grade Processor and PCIe[x16] + PCIe [x1]

Front View



Rear View



## Features

- Support 6th / 7th Core-i desktop and Xeon® server-grade processor, Max 73W.
- Intel® C236 PCH
- Easy Installation design for expand slot
- Support PCIe[x16] x 1, PCIe[x1] x 1
- System Fan with PWM function



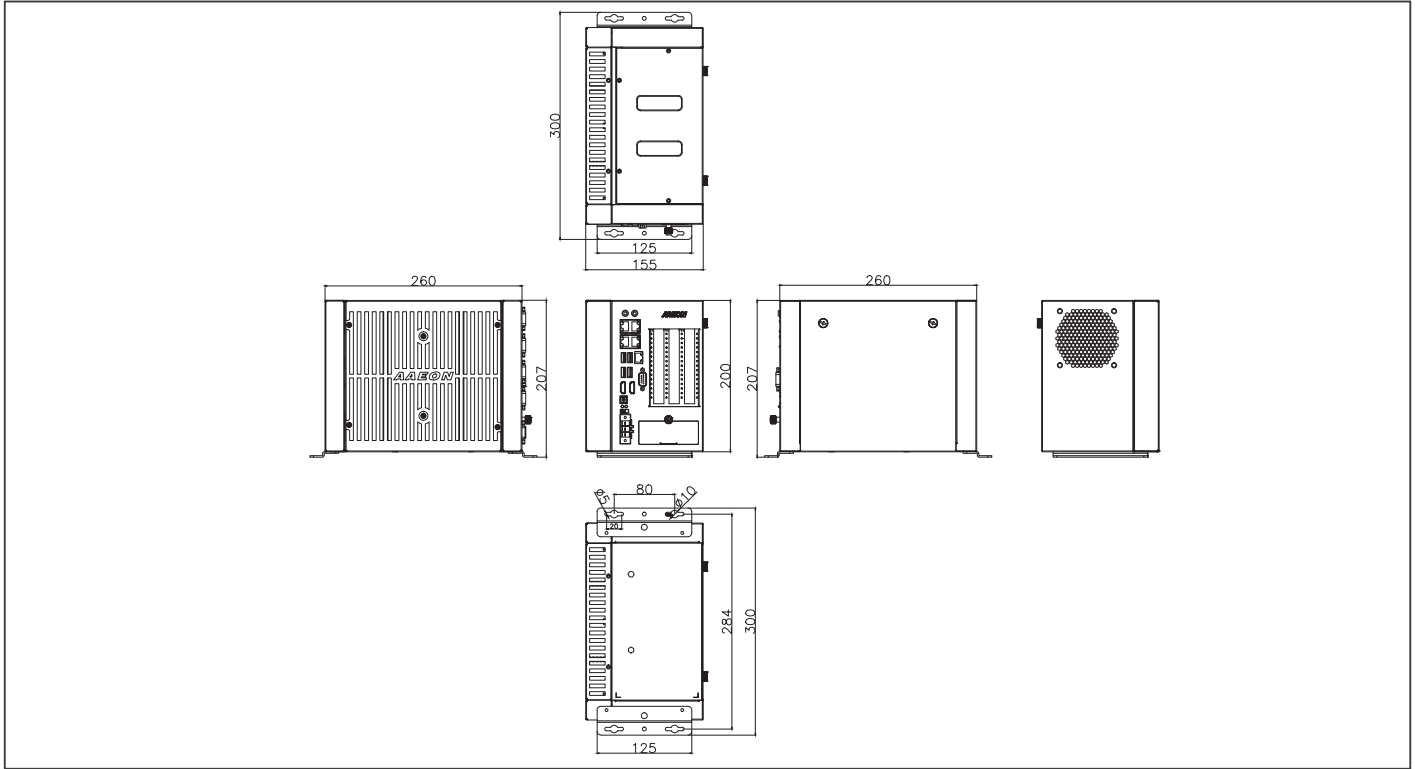
## Specifications

System	
CPU	6th / 7th Generation Intel® Core™-i desktop and Xeon® server grade processor -Intel® Core™ i7-6700TE, 2.4 GHz -Intel® Core™ i5-6500TE, 2.3 GHz -Intel® Core™ i3-6100TE, 2.7 GHz -Intel® Core™ i7-7700, 3.6 GHz -Intel® Core™ i7-7700T, 2.9 GHz -Intel® Core™ i3-7101TE, 3.4 GHz -Intel® Xeon® E3-1268L v5, 2.40 GHz -Intel® Xeon® E3-1275 v6, 3.80 GHz
Chipset	Intel® C236 PCH
System Memory	DDR4 ECC or Non-ECC SODIMM, up to 32GB
Display Interface	HDMI 1.4b
Storage Device	2.5" Drive Bay x 2
Ethernet	RJ-45 x 5 for GbE (Intel® i211AT x4, i219LM x1)
I/O	Audio x 2 (MIC-in, Line-out) RJ-45 x 5 for GbE LAN USB Type A x 4 for USB 3.2 Gen 1 DB-9 x 1 for RS-232/422/485 HDMI type A x 2 for HDMI v1.4b Power ON/OFF Switch x 1 2 pin Remote Power on/off connector x1 Power input x 1
Expansion	Full-size Mini card x2 (USB, w/ 1 SIM slot) PCIe [x1] x 1 PCIe [x16] x 1 - Power Consumption of GPU card max. 180W - Max. size of GPU card 190 x 113 x 40 mm (Option) Max. size of GPU card 190 x 113 x 60 mm (Riser Card: 9697T50300)
Indicator	Power LED x 1, HDD active LED x 1
OS Support	Skylake S Windows® 10, Windows® 10 IoT, Windows® 8.1, Windows® Embedded Standard 8, Windows® 7, Windows® Embedded Standard 7, Ubuntu 16.04.2 Kabylake Windows® 10, Windows® 10 IoT, Ubuntu 16.04.2
<b>Power Supply</b>	
Power Requirement	DC-In 12~24V - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 180W Graphic Card: 330W Adapter
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	6.10" x 7.87" x 10.24" (155mm x 200mm x 260mm)
Gross Weight	12.75 lb (5.8 kg)
Net Weight	9.9 lb (4.5 kg)
<b>Environmental</b>	
Operating Temperature	-4°F ~131°F (-20°C ~ 55°C) according to IEC60068-2 with 0.5m/s airflow (TDP 35W Processor) -4°F ~113°F (-20°C ~ 45°C) according to IEC60068-2 with 0.5m/s airflow (TDP 73W Processor)
Storage Temperature	-4°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	Random, 1 Grms, 5~500Hz, Anti-vibration design
Anti - Shock	—



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	USB 3.2 Gen 1	RS-232 /422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6841M-A7-1010	—	C236	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x2	HDMI x2	Full-size Minicard x2, PCIe[x16] x 1, PCIe[x1] x 1	Wallmount	DC-In 12-24V - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 180W Graphic Card: 330W Adapter	-20°C ~ 55°C with 0.5m/s airflow (TDP 35W Processor) -20°C ~ 45°C with 0.5m/s airflow (TDP 73W Processor)

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A7

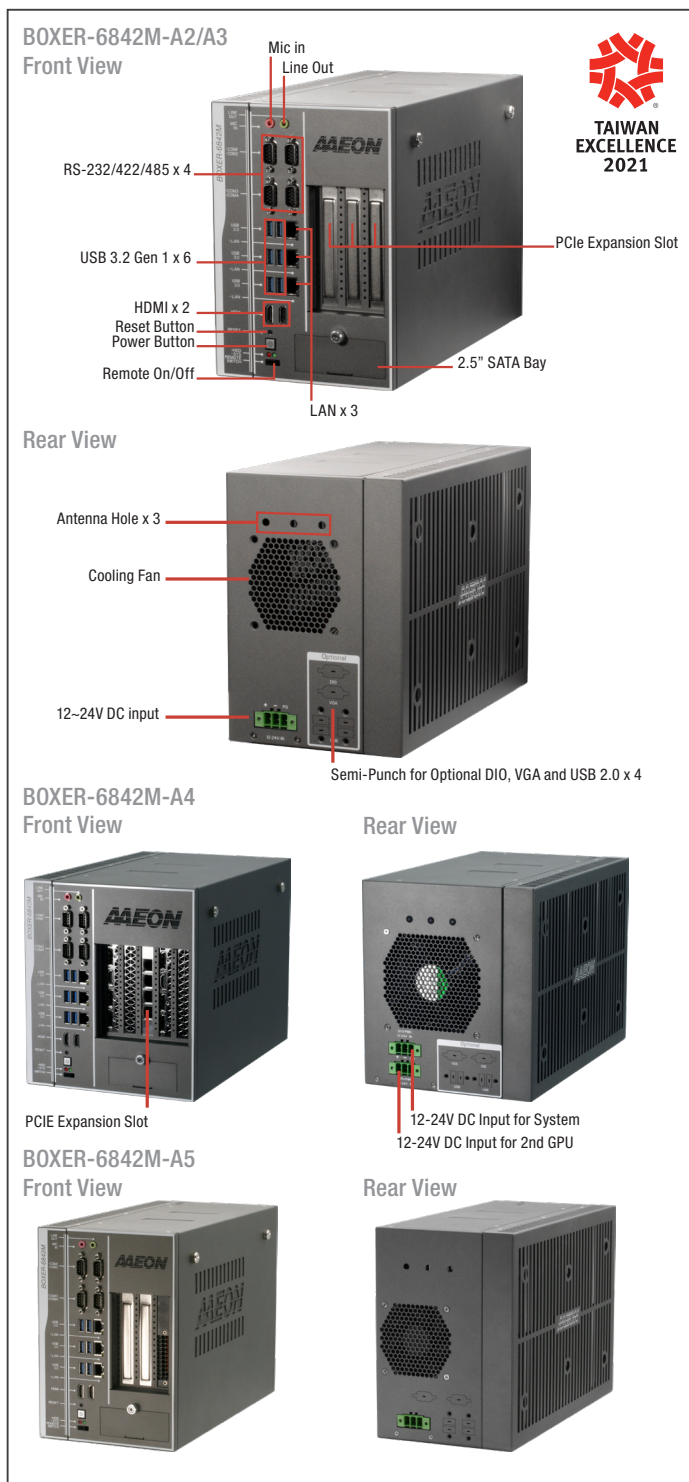
## Optional Accessories

- **1255901209**  
120W Power Adapter
- **1255903300**  
330W Power Adapter
- **1702031802**  
Power Cord (US type)
- **1702031803**  
Power Cord (European Type)
- **170203180E**  
Power Cord (Japanese Type)
- **9741238H00**  
WiFi Module & Antenna
- **9741EG25G0**  
4G Module & Antenna (for global)
- **9741EC25A0**  
4G Module & Antenna (for USA-AT&T)
- **9741EC25V0**  
4G Module & Antenna (for USA-Verizon)
- **M046841140**  
Main heatsink cover
- **9697T50300**  
Riser Card with PCIe [x16] x 1, max. size of GPU card 312 /190mm x 113mm x 60mm



# BOXER-6842M

Fanless Embedded Controller with 8th/9th Generation Intel® Processor



## Features

- High Computing Power
- Intel® Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x 2 for Dual Display
- Support C246 PCH
- Support PCIe16 + PCIe4/ 2PCIe x8 (in x16 slot) + PCIe x4
- Single Power Input (for both System & one Graphics Card)
- Fanless System (A3) or Fan System with PWM function (A2/A4/A5)
- Support dual Graphics Cards with Two Power Inputs (A4)



Storage Device	2.5" SATA Drive Bay x2 (4 SATA Port w/ RAID Function) mSATA x 1 (optional) M.2 2280 NVMe SSD slot x 1
Ethernet	RJ-45 x 3 for GbE (Intel i211AT x 2, i219LM x 1)
I/O	HDMI x 2 Audio (Mic-in, Line-out) USB 3.2 Gen1 x 6 DB-9 x4 for RS-232/422/485 with automatic flow control 3 pin DC Power input x 1 (+, -, GND) Power ON/OFF switch x 1 2 pin Remote power on/off connector Reset switch
Expansion	A2/A3/A4/A5 Full-size Minicard x 1 (PCIe + USB with 1 SIM Slot) Half-size Minicard x 1 (PCIe + USB, optional for mSATA) M.2 M key (2280) x 1 (PCIEx4) - Max. Power Consumption of GPU card 250W - Max. Size of GPU card 280mm x150mm x 40mm A2 PCIe [x4] x 1 + PCIe [x16] x 1 A3 PCIe [x4] x 1 + PCIe [x8] (in x16 slot) x 2 A4 PCIe [x4] x 1 + PCIe [x8] (in x16 slot) x2 Support dual Graphics Cards with two power inputs A5 Built in Nvidia A2 x1 PCIe [x4] x 1 + PCIe [x8] x 1 (in x16 slot) Note: A3 is fanless system. A2 & A4 & A5 is fan system with PWM function.
Reserved Connector	Internal, SATA x 2; Internal, 8bit DIO x 1; Internal, USB 2.0 x 4; Internal, LPC x 1; Internal, Secondary System Fan Connector x 1
Indicator	System Power LED x 1 (Green), Storage Active LED x 1 (Red)
OS Support	Windows® 10 Enterprise 64 bit, Ubuntu 18.04.4
<b>Power Supply</b>	
Power Requirement	A2/A3/A4 DC In 12~24V with 3-pin terminal block No Graphics Card: CPU 35W->120W Adapter x 1, CPU 71W->240W Adapter x 1 With 250W Graphics Card x1: 480W Adapter x 1 A4 DC In 12~24V with 3-pin terminal block With 250W Graphics Card x2: 330W Adapter x 1 + 480W Adapter x 1 A5 DC In 12~24V with 3-pin terminal block With A2 x 1: 240W Power Adapter x 1 With A2 x 2: 330W Power Adapter x 1
<b>Mechanical</b>	
Mounting	Wallmount
Dimensions (W x H x D)	A2/A3/A5: 6.17" x 8.92" x 12.8" (156.7mm x 226.5mm x 325mm) A4: 7.77" x 8.92" x 12.8" (197.3mm x 226.5mm x 325mm)
Gross Weight	A2/A3: 18.52 lb (8.4 Kg); A4: 20.72 lb (9.4 Kg); A5: 20.5 lb (9.3 Kg)
Net Weight	A2/A3: 15.65 lb (7.1 Kg); A4: 17.86 lb (8.1 Kg); A5: 17.64 (8 Kg)
<b>Environmental</b>	
Operating Temperature	Without Graphics Cards: -4°F ~ 149°F (-20°C ~ 65°C) with 0.5m/s airflow With 250W Graphics Card: 32°F ~ 113°F (0°C ~ 45°C) with 0.5m/s airflow A5: 32°F ~ 113°F (0°C ~ 40°C) with 0.5m/s airflow
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	HDD: Random, 1Grm, 5~500Hz
Anti - Shock	—
Certification	CE / FCC class A

## Specifications

System	
CPU	Intel® Xeon® E-2124G; Intel® Core™ i9-9900T; Intel® Core™ i7-8700T; Intel® Core™ i5-9500TE; Intel® Core™ i5-8500T; Intel® Core™ i3-8100T; Intel® Pentium® G5400T; Intel® Celeron® G4900T Note: Support max. TPD 71W Processor
Chipset	C246, No H310 downward support
System Memory	DDR4 SO-DIMM socket x4 (double deck) Support max. 2666MHz up to 128GB Support un-buffered and ECC / non-ECC type SODIMM



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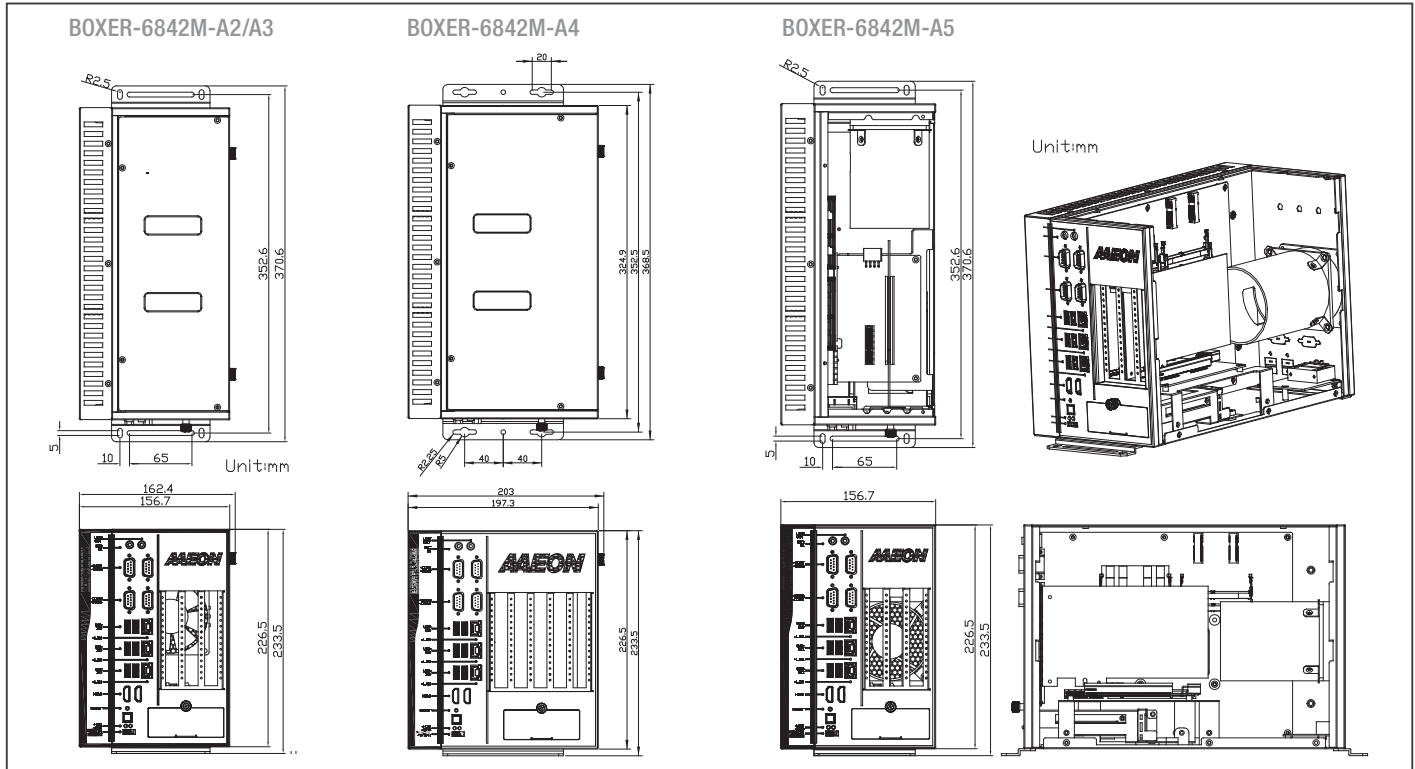


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Site Web : www.es-france.com



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	PCH	LAN	Fan	USB 3.2 Gen1	RS-232/422/485	RS-232	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6842M-A2-1010	—	C246	3	Fan System	6	4	—	—	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 mSATA x 1 (optional) M.2 2280 NVMe SSD slot x 1	HDMI x 2	Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, PCIe [x4] x 1, PCIe [x16] x 1	Wallmount	DC In 12-24V with 3-pin terminal block	-20°C ~ 65°C with 0.5m/s airflow
BOXER-6842M-A3-1010	—	C246	3	Fanless System	6	4	—	—	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 mSATA x 1 (optional) M.2 2280 NVMe SSD slot x 1	HDMI x 2	Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, PCIe [x4] x 1, PCIe [x8] x 2 (in x16 slot)	Wallmount	DC In 12-24V with 3-pin terminal block	-20°C ~ 65°C with 0.5m/s airflow
BOXER-6842M-A4-1010	—	C246	3	Fan System	6	4	—	—	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 mSATA x 1 (optional) M.2 2280 NVMe SSD slot x 1	HDMI x 2	Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, PCIe [x4] x 1, PCIe [x8] x 2 (in x16 slot)	Wallmount	DC In 12-24V with 3-pin terminal block	-20°C ~ 65°C with 0.5m/s airflow
BOXER-6842M-A5-1010	—	C246	3	Fan System	6	4	—	—	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 mSATA x 1 (optional) M.2 2280 NVMe SSD slot x 1	HDMI x 2	Full-size Minicard x 1, Half-size Minicard x 1, M.2 M key (2280) x 1, Built in Nvidia A2 x 1, PCIe [x4] x 1 + PCIe [x8] x 1 (in x16 slot)	Wallmount	DC In 12-24V with 3-pin terminal block	0°C ~ 40°C with 0.5m/s airflow

## Packing List

- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6842M

## Optional Accessories

- 1255901209  
120W Power Adapter
- 1255902400  
240W Power Adapter
- 1255903300  
330W Power Adapter
- 1702031802  
Power Cord (US type)
- 1702031803  
Power Cord (European Type)
- 170203180E  
Power Cord (Japanese Type)
- 9741238H00  
WiFi Module & Antenna
- 9741EG25G0  
4G Module & Antenna (for global)
- 9741EC25A0  
4G Module & Antenna (for USA-AT&T)
- 9741EC25V0  
4G Module & Antenna (for USA-Verizon)
- 9697T60101-D  
Riser card with 1 PCIe x 16 + 1 PCIe x 4
- 9697T62100-D  
Riser card with 2PCIe x 8 (in x 16 slot) +1PCIe x 4
- 1255X00021  
480W Power Adapter (DIN Rail)

# BOXER-6843-ADS

Fanless Embedded Controller with 12/13th Generation Intel® Core™/Celeron® Processor G Series

Front View



Rear View



## Features

- 12th/13th Generation Intel® Core™/Celeron® Processor G Serie
- DDR5 U-DIMM x 4
- HDMI x 2 + DP x 2
- PCIe [x16] + PCIe [x4] or Dual PCIe [x8] (in [x16] slot) + PCIe [x4]
- Supports Dual Graphics Cards with Dual Power Inputs
- Support NVIDIA L4



## Specifications

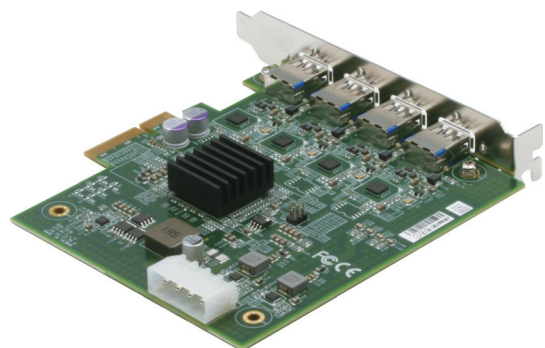
System	
CPU	12th Generation Intel® Core™, TDP Max. 65W Intel® Core™ i9-12900TE/i9-12900E Intel® Core™ i7-12700TE/i7-12700E Intel® Core™ i5-12500TE/i5-12500E Intel® Core™ i3-12100TE/i3-12100E
	13th Generation Intel® Core™, TDP Max. 65W Intel® Core™ i9-13900TE/i9-13900E Intel® Core™ i7-13700E Intel® Core™ i5-13500E Intel® Core™ i3-13100TE
Chipset	Q670E
System Memory	DDR5 4800Mhz U-DIMM x 4, up to 128GB
Display Interface	HDMI x 2 (Type-A) Display Port x 2
Storage Device	2.5" SATA Drive Bay x 2 (external, swappable) M.2 2280 M-Key x 2 (PCIe Gen 4 [x4]) 3.5" SATA Drive Bay (internal, non-swappable, optional)
Ethernet	2.5GbE x 3 (Intel® I226-IT) GbE x 1 with LED Indicator (Intel® I219-LM)
I/O	HDMI x 2, Display Port x 2 RJ-45 x 4 3.2 Gen 2 x 8 (Type-A) DB-9 Male x 6 for RS-232/422/485 (Autoflow, Programmable) DB-15 Male x 1 for 8-bit DIO Audio (Mic-in/Line-out) DC 19 ~ 36V 3-pin Terminal Block Connector Power Button with LED x 1 Remote Power On/Off x 1 Reset Button x 1
Expansion	M.2 2230 E-Key x 1 M.2 3052 B-Key w/SIM x 1 M.2 2280 M-Key/B+M-Key x 2 Full-Size Mini Card x 1 (PCIe + USB)
Indicator	—
OS Support	Windows® 10 IoT Enterprise LTSC 2021 Windows® 11 Pro Linux Ubuntu 22.04
Power Supply	
Power Requirement	DC 19~36V 3-pin Terminal Block
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	7.35" x 8.92" x 14.76" (186.8 x 226.5 x 375 mm)(Without brackets) 7.35" x 9.19" x 16.50" (186.8 x 233.5 x 419 mm)(With brackets)
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-4°F ~ 113°F (-20°C ~ 45°C), according to IEC68-2 with 0.5 m/s AirFlow (w/ Industrial wide Temp. SSD/RAM)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Anti-Vibration	3 Grms/ 5 ~ 500Hz/ operation (with SSD)
Anti-Shock	50G, IEC 68-2-27, half sine, 11 ms duration (with SSD)
Certification	CE/FCC Class A





# PER-T479

4-Port USB 3.2 Gen 1 PCI-E [x4] Frame Grabber Card



## Features

- PCI-Express® [x4] Gen. 2 Compliant
- 4 Independent USB 3.2 Gen 1 Host Controller
- Supports Bandwidth 5 Gb/s for Each Port
- Supports Lockable USB Connector



## Specifications

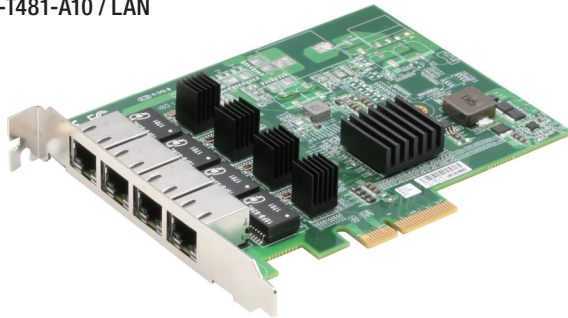
System	
Bus Interface	PCI-Express® [x4], Gen 2 PCI-Express Specification Revision 2.1 at 5GT/s
USB	4 independent USB 3.2 Gen 1 host controllers 900mA @ 5V for each port Compliant with USB 3.2 Gen 1 Specification Revision 1.0 4 downstream USB ports support SS/HS/FS/LS data rates (5Gbps/480Mbps/12Mbps/1.5Mbps)
USB Connector	4 USB 3.2 Gen 1 Type-A connectors with lockable screw threads
OS Support	Windows® 10, Windows® 8.1 (32/64-bit), Windows® 7(32/64-bit) Linux
Power Supply	
Power Requirement	12V from external IDE 4-pin power connector
Mechanical	
Dimensions (W x D)	4.72" x 4.21" (120mm x 107mm)
Environmental	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) (according to IEC68-2-14 with 0.5 m/s AirFlow ; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing

## Ordering Information

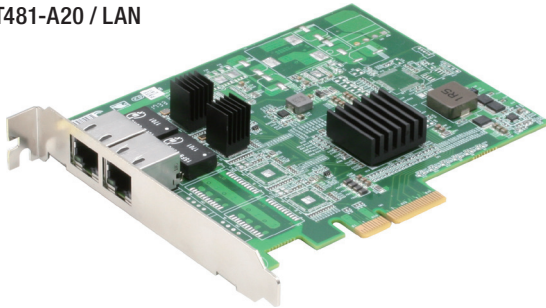
- PER-T479-A11-00  
4-Port USB 3.2 Gen 1 PCI-E [x4] Frame Grabber Card



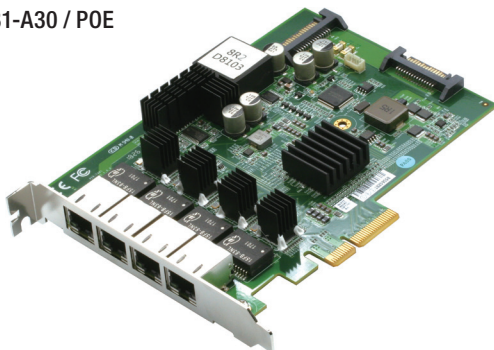
PER-T481-A10 / LAN



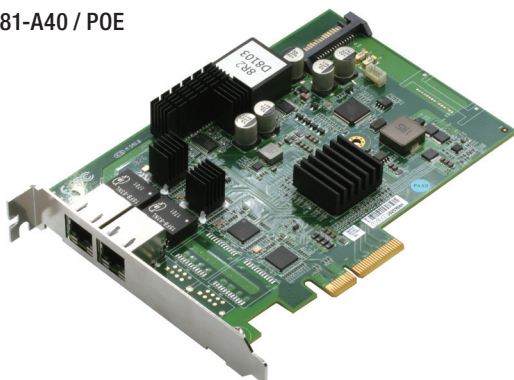
PER-T481-A20 / LAN



PER-T481-A30 / POE



PER-T481-A40 / POE



## Features

### LAN:

- PCI-Express® [x4] Gen. 2 Compliant
- Gigabit Ethernet Controller, Intel® i211AT
- Supports Bandwidth 1Gb/s for Each Port
- Supports for Link Aggregation/Jumbo Frames (9 KByte)

### POE:

- PCI-Express® [x4] Gen 2 Compliant
- Gigabit Ethernet Controller, Intel® i211AT
- Supports Bandwidth 1Gb/s for Each Port
- Supports for Link Aggregation/Jumbo Frames (9 KByte)



## Specifications

System	
Bus Interface	PCI-Express® [x4], Gen 2 PCI-Express Specification Revision 2.0 at 5GT/s
USB	—
USB Connector	—
Ethernet	LAN: Intel® i211AT Ethernet Controller x 4 (A10) Intel® i211AT Ethernet Controller x 2 (A20) Fully compliant with IEEE 802.3 and IEEE 802.3u Support IEEE 1588 precision time synchronization POE: Intel® i211AT Ethernet Controller x 4 (A30) Intel® i211AT Ethernet Controller x 2 (A40) Fully compliant with IEEE 802.3 and IEEE 802.3u Support IEEE 1588 precision time synchronization Support IEEE 802.3 at
OS Support	LAN: Windows® 10(32/64-bit), Windows® 8.1 (32/64-bit), Windows® 7(32/64-bit), Linux POE: Windows® 10(32/64-bit), Windows® 8.1 (32/64-bit), Windows® 7(32/64-bit) (Linux not Supported)
Power Supply	
Power Requirement	LAN: Max. 10W POE: 4POE DUAL SATA Power (15 pin) DC Input 12~24V,Max. 90W for 4ports (A30) 2POE DUAL SATA Power (15 pin) DC Input 12~24V,Max. 60W for 2ports (A40)
Mechanical	
Dimensions (W x D)	LAN: 4.33" x 5.35" (110mm x 136mm) POE: 4.41" x 5.91" (112mm x 150mm)
Environmental	
Operating Temperature	LAN: -4°F ~ 140°F(-20°C ~ 60°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; with industrial devices) POE: -4°F ~ 131°F(-20°C ~ 55°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; 90W loading) (A30) -4°F ~ 131°F(-20°C ~ 55°C) (according to IEC68-2-14 with 0.5 m/s AirFlow; 60W loading) (A40)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing

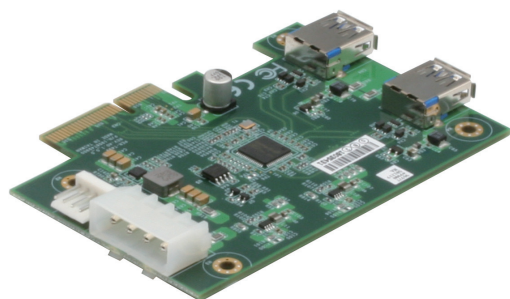
## Ordering Information

- **PER-T481-A10-00**  
4-Port Intel GbE LAN PCIE x4 Lane Frame Grabber Card
- **PER-T481-A20-00**  
2-Port Intel GbE LAN PCIE x4 Lane Frame Grabber Card
- **PER-T481-A30-00**  
4-Port Intel POE PCI-E [x4] Frame Grabber Card
- **PER-T481-A40-00**  
2-Port Intel POE PCI-E [x4] Frame Grabber Card



# PER-T499

2-Port USB 3.1 PCI-E [x4] Frame Grabber Card



## Features

- PCI-Express® [x4] Gen. 3 Compliant
- 1 Independent USB 3.2 Gen 2 Host Controller
- Supports Bandwidth 10 Gb/s for Each Port
- Supports Lockable USB Connector



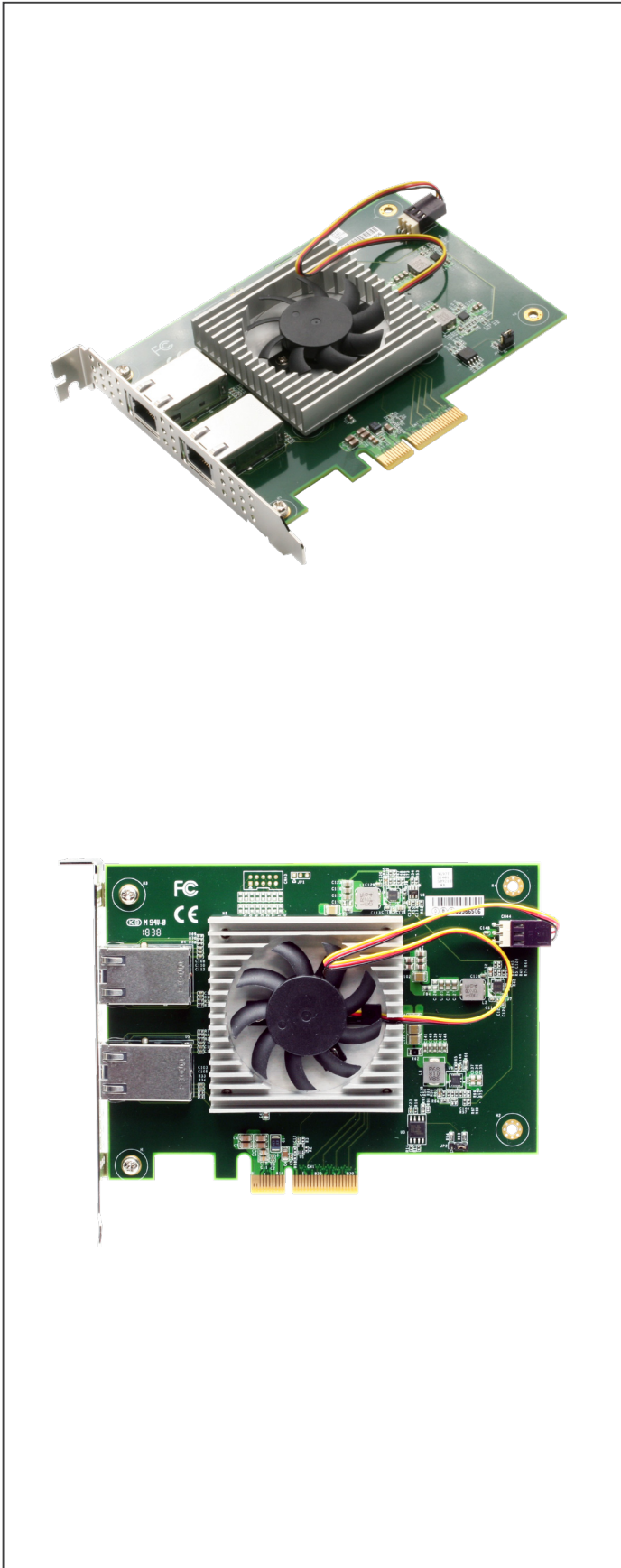
## Specifications

<b>System</b>	
Bus Interface	PCI-Express® [x4], Gen 3 PCI-Express Specification Revision 3.0 at 8GT/s
USB	1 independent USB 3.2 Gen 2 host controllers 900mA @ 5V for each port Compliant with USB 3.2 Gen 2 specification Revision 1.0
USB Connector	2 USB 3.2 Gen 2 Type-A connectors with lockable screw threads
OS Support	Windows® 10, Windows® 8.1 (32/64-bit), Windows® 7 (32/64-bit) Linux
<b>Power Supply</b>	
Power Requirement	From PCIe bus
<b>Mechanical</b>	
Dimensions (W x D)	3.94" x 2.8" (100mm x 71mm)
<b>Environmental</b>	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) (according to IEC68-2-14 with 0.5 m/s AirFlow ; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing

## Ordering Information

- **PER-T499-A10-00**  
2-Port USB 3.2 Gen 2 PCI-E [x4] Frame Grabber Card





## Features

- PCI-Express® [x4] Gen 2 Compliant
- 2 10Gigabit Ethernet Controller, Intel® x550
- Supports CAT-6/6a RJ45 cable
- Supports NBASE-T and 1000BASE-T with CAT-5/ 5e cable
- Supports 15.5 KB Jumbo Frame, NIC teaming and IEEE 1588



## Specifications

System	
Bus Interface	PCI-Express® [x4], Gen 2 PCI-Express Specification Revision 2.1 at 5GT/s
USB	—
USB Connector	—
Ethernet	2 Ports 10GbE Ethernet w/ Intel X550 Controller Fully compliant with IEEE 802.3 and IEEE 802.3u Support IEEE 1588 precision time synchronization Support 15.5 KB Jumbo Frame, teaming Support IEEE 802.3 Ethernet interface for 10GBASE-T (IEEE 802.3an) Support NBASE-T (IEEE 802.3bz) and 1000BASE-T (IEEE 802.3ab)
OS Support	Windows® 10(64-bit), Windows® 8.1 (64-bit), Windows® 7(64-bit), Linux 18.04.1
Power Supply	
Power Requirement	Max. 7.84W
Mechanical	
Dimensions (W x D)	3.94" x 5.35" (100mm x 136mm)
Environmental	
Operating Temperature	32°F ~ 140°F(0°C ~ 60°C) (according to IEC68-2-14 with 0.5 m/s AirFlow ; with industrial devices)
Storage Temperature	-49°F ~ 176°F (-45°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing

## Ordering Information

- **PER-T514-A10-00**  
2 Ports Intel® 10GbE LAN PCI-E [x4] Frame Grabber Card

# 07



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# 07

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## *Smart In-vehicle & AMR BOX PC*



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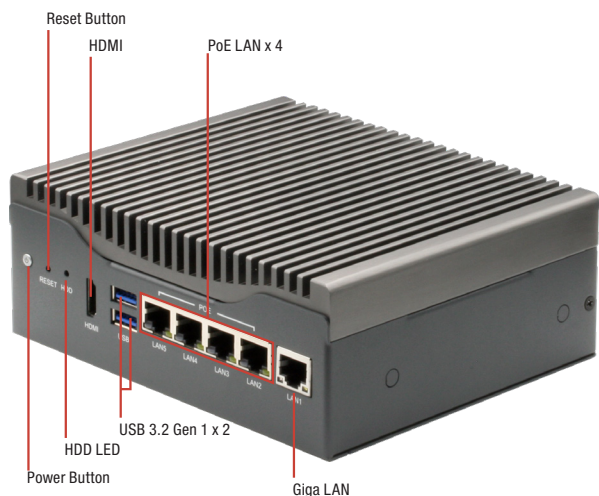


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Site Web : [www.es-france.com](http://www.es-france.com)

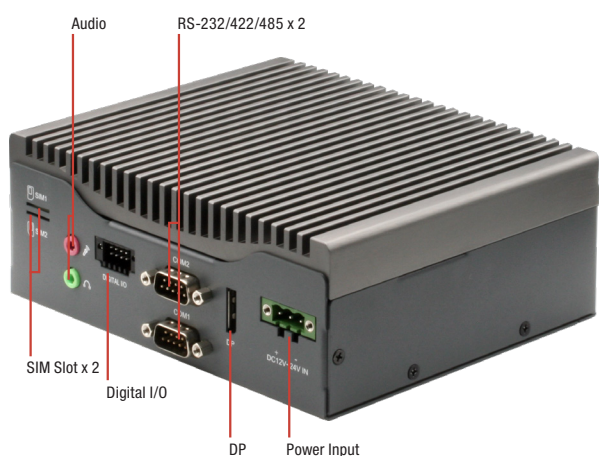
# VPC-3350S

Multi-PoE & Fanless Appliance with Intel® Pentium®/ Celeron®/ Atom® Processor

Front View



Rear View



## Features

- Mobile Industrial Platform
- DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
- Intel® Integrated Graphics Engine Supports Two Display by HDMI x 1, DP x 1
- Intel® Ethernet Connection x 5 Ports (including 4 x PoE Ports)
- Full Mini-PCIe Socket x 2 (USB + PCIe); (Support up to Mini-PCIe Socket x 4, In-vehicle platform)
- Built-in CANBus, GPS & G-Sensor (In-vehicle platform)
- eMark Compliance Available Per Project Basis



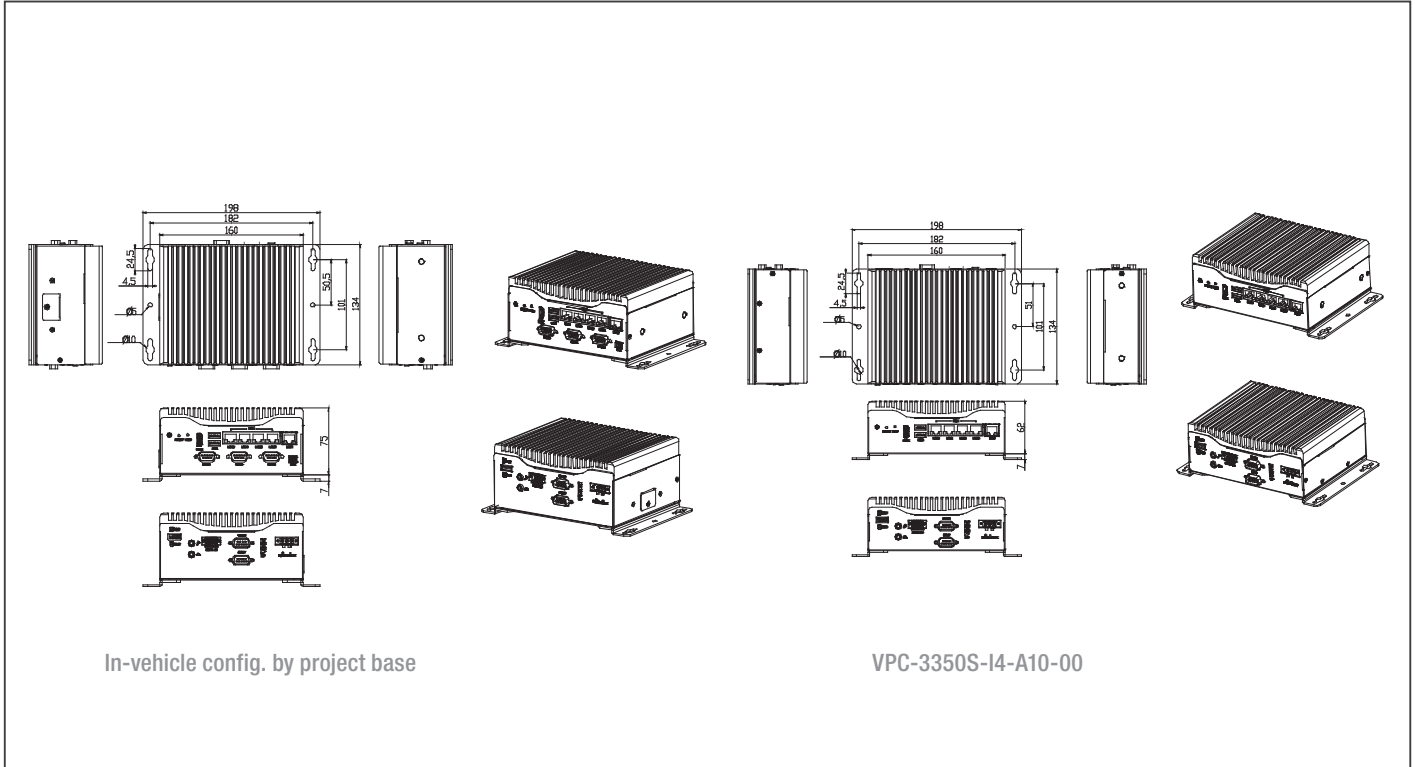
## Specifications

System	
Form Factor	Multi-PoE & Fanless Appliance
Processor	Intel® Pentium®/ Celeron®/ Atom® Processor (Default: E3940; Project base: N4200/N3350, or E3950 w/ customized chassis)
Chipset	—
Main Memory	DDR3L 1866, Single Channel SODIMM x 1, Non-ECC (Max.8GB, up to 1600MHz)
Display	HDMI x 1, DP x 1
Ethernet	Intel® i211 (colay i210)
Smart PoE	4 ports, sharing 60W of power budget for every four PoE ports
RAID support	—
Expansion Slot	Mini-Card slot x 2 (USB 2.0 + PCIe, full size), up to 4 slots (In-vehicle platform) SATA x 1 Built-in CANBus (In-vehicle platform)
GPS, G-Sensor	Built-in GPS & G-Sensor (In-vehicle platform)
Front I/O Panel	Power Button x 1 Reset Button x 1 Power/HDD, LED x 2 USB 3.2 Gen 1 x 2 GbE port (RJ-45) x 1 PoE LAN x 4 (IEEE 802.3 at/af) HDMI x 1 CanBus connector x 1 (In-vehicle platform) RS-232 x 3 (In-vehicle platform)
Rear I/O Panel	DC-In power x 1 8-bit DIO x 1, 4-ch digital input , 4-ch digital output RS-232/422/485 x 2 DP x 1 Audio Line-out x 1, Mic-In x 1 Micro SIM slot x 2
Storage	
HDD Tray	2.5" HDD/SSD Bay x 1
CF/CFast/mSATA Slot	—
Environmental	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	10%~80% @40°C, non-condensing
Vibration/Shock	MIL-STD-810G
Certification	CE & FCC Class A, eMark Compliance Available Per Project Basis
Power Requirement	
Power Supply	DC 12-24V; DC9-36V with power ignition (In-vehicle platform)
Mechanical	
Removable HDD Tray	—
Internal System HDD Bay	—
Dimension	6.3" x 5.28" x 2.44" (160mm x 134mm x 62mm) 6.3" x 5.28" x 2.95" (160mm x 134mm x 75mm), In-vehicle platform.
Gross Weight	3.96 lb (1.8 kg)
Note	—



## Dimension

Unit: mm



In-vehicle config. by project base

VPC-3350S-I4-A10-00

## Ordering Information

Part Number	Processor	RAM	Cooler	Storage	RAID Support	Display	LAN	PoE	USB	RS-232	RS-232/422/485	Expansion Slot	Form Factor	Power
VPC-3350S-IS-A12-00	Intel® Atom®x5 E3940	DDR3L 204-pin SODIMM	Fanless	Supporting 2.5" SSD x 1 (Optional SKU: Supporting additional mSATA x1 & eMMC)	—	DP x 1, HDMI x 1	GbE x 1	4 Ports	USB 3.2 Gen 1 x 2	—	2	Mini-Card x 2	Desktop	DC 12-24V

## Packing List

- SATA cable x 1
- Power cable x 1 (for SATA)
- VPC-3350S

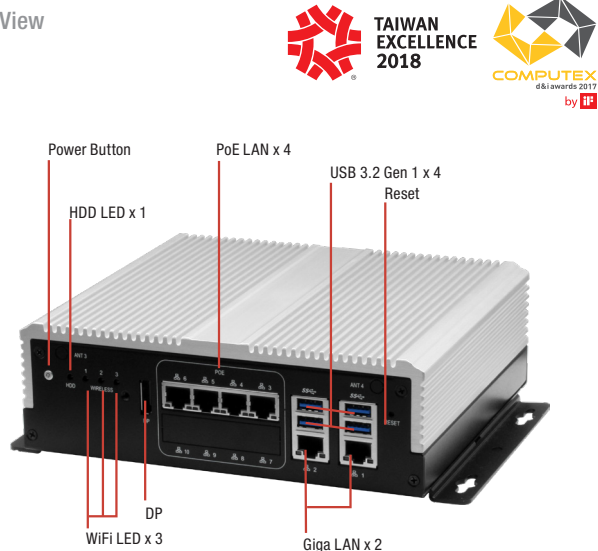
## Optional Accessories

- **9741236A00**  
WiFi module kit, 802.11ac/a/b/g/n.BT4.2.USB Signal.SparkLan.WPET-236ACN(BT).W/2 sets of cable&antenna
- **978966660G**  
GPS Antenna
- **9741EG25G0**  
PCIe mimi card 4G LTE module kit Global Band W/SIM holder w/ Cable & antenna
- **1702031803**  
Power Cord.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12 (Euro)
- **1702031802**  
Power Cord.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12 (USA)
- **170203180E**  
Power Cord. 3P. 125V/7A. 1. 8M. PSE YP12/YC12 Certificat (JPN)
- **9651335001**  
Package of VPC-3350S mating connectors

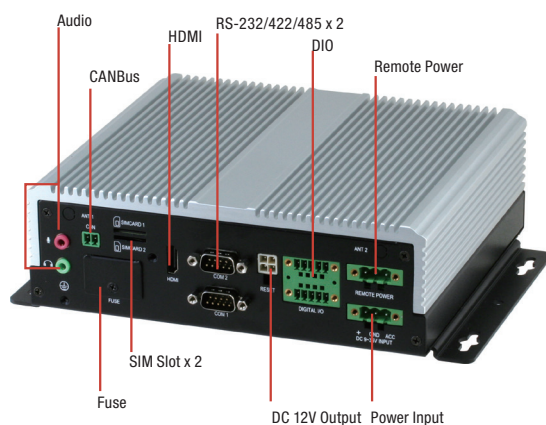
# VPC-5600S

Multi-PoE & Fanless Appliance with 7th Generation Intel® Core™ Processors

Front View



Rear View



## Features

- In-Vehicle Platform
- 260-pin DDR4 2133MHz SODIMM x 2, up to 32GB
- Intel® Integrated Graphics Engine Supports HDMI x 1 + DP x 1
- Realtek® Ethernet x 6 (PoE x 4, LAN x 2)
- Mini-PCIe x 3 (Full Size x 2, Half Size x 1), mSATA x 1 (Optional)
- Built-in CAN 2.0B. Optional OBDII Function (SAE J1939/J1708) (UART Interface)
- E-Mark Certified



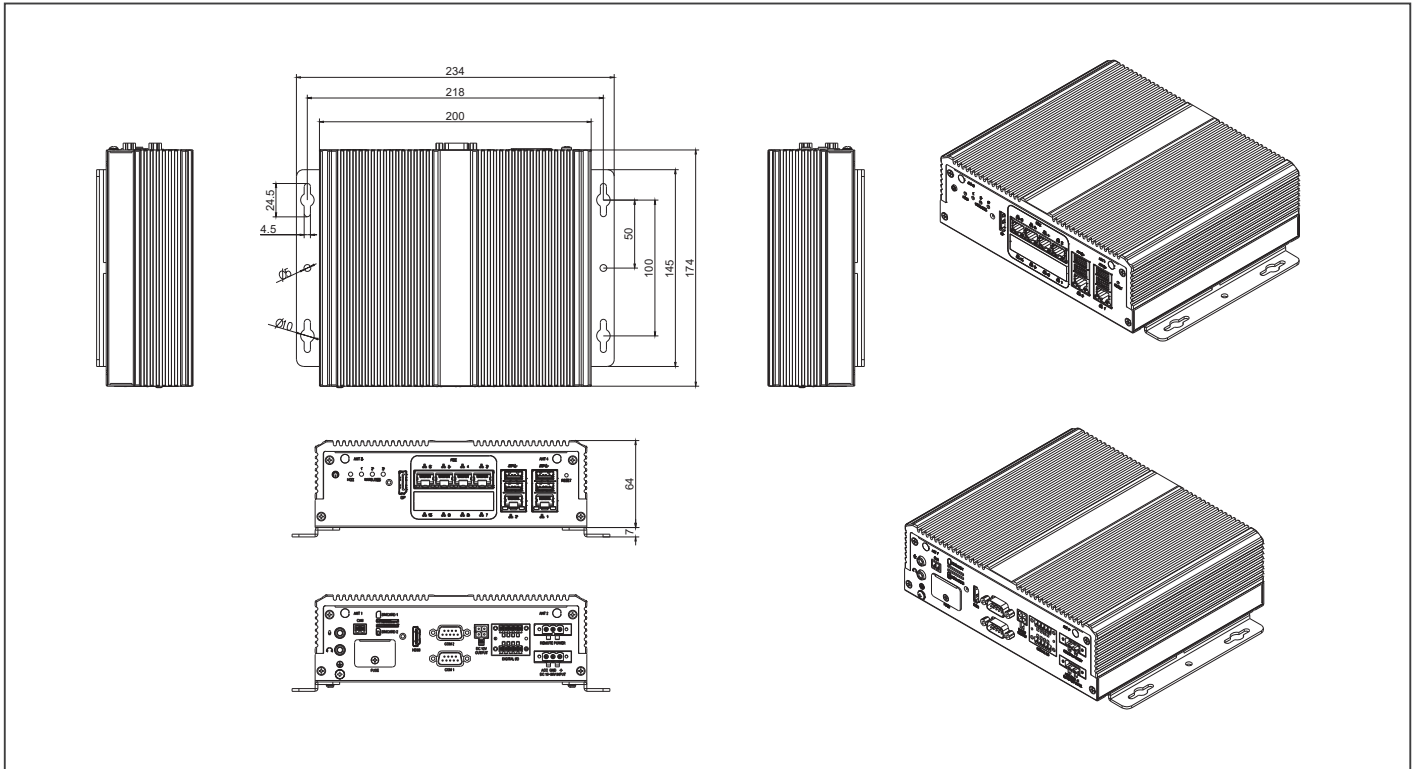
## Specifications

System	
Form Factor	Multi-PoE & Fanless Appliance
Processor	7th Generation Intel® Core™ i3/i5/i7 Processors Default: Intel® Core™ i3-7100U Project Base: Intel® Core™ i5-7300U, Intel® Core™ i7-7600U
Chipset	—
Main Memory	DDR4 2133MHz SODIMM x 2, up to 32GB
Display	HDMI x 1, DP x 1
Ethernet	PoE x 4, LAN x 2, RTL8111E 10/100/1000 Base-T
Smart PoE	4 ports, sharing 60W of power budget for every four PoE ports.
RAID support	RAID 0, RAID 1
Expansion Slot	Mini-Card x 3 (USB 2.0 x 2 + PCIe & USB 2.0 x 1) Built-in CAN 2.0B x 1
GPS, G-Sensor	On board (GPS/GLONASS), G Sensor
Front I/O Panel	Power Button x 1 3G/4G/WIFI LED x 3 USB 3.2 Gen 1 x 4 RJ-45 x 2 for GbE PoE LAN x 4 (IEEE 802.3 at/af) DP x 1 Reset Button x 1
Rear I/O Panel	DC-in Power x 1 Remote Power x 1 8-bit DIO x 1, 4-CH Digital Input (Wet/dry contact with Isolation Protection 3,000VDC), 4-CH Digital Output (Compatible 5V/TTL, 31mA Max. per Channel) 12V/1A DC Output x 1 RS-232/422/485 x 2 HDMI x 1 CanBus x 1, Audio Line-out x 1, Mic-In x 1 SIM Slot x 2
Storage	
HDD Tray	2.5" SATA SSD x 2
CF/CFast/mSATA Slot	mSATA Slot x 1 (Optional, If mSATA x 1 used, then only one SATA available)
Environmental	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	10%~80% @40°C, non-condensing
Vibration/Shock	MIL-STD-810G
Certification	CE & FCC Class A, EMARK
Power Requirement	
Power Supply	DC 10-36V, with ignition pin
Mechanical	
Removable HDD Tray	Hot swappable 2.5" SSD x 2 (Project base) via extension module
Internal System HDD Bay	2.5" HDD x 2
Dimension	6.85" x 7.87" x 2.52" (174mm x 200mm x 64mm)
Gross Weight	5.7 lb. (2.6Kg)



## Dimension

Unit: mm



## Ordering Information

Part Number	Chipset	RAM	Cooler	Storage	RAID Support	Display	LAN	PoE	USB	RS-232	RS-232/422/485	Expansion Slot	Form Factor	Power
VPC-5600S-143-A11-W1	Intel® Core™ i3-7100U	32GB DDR4 SODIMM x 2	Fanless	2.5" SSD x 2	RAID 0, 1	DP x 1, HDMI x 1	GbE x 2	4 Ports	USB 3.2 Gen 1 x 4	—	2	Mini-Card x 3 Built-in CAN2.0B x 1	Desktop	DC 10-36V

## Packing List

- Wall mount bracket
- SATA cable x 2
- SATA Power Cable x 2
- VPC-5600S

## Optional Accessories

- **9741236A00**  
WiFi module kit, 802.11ac/a/b/g/n.BT4.2.USB Signal.SparkLan.WPET-236ACN(BT).W/2 sets of cable&antenna
- **978966660G**  
GPS Antenna
- **9741EG25G0**  
PCIe mimi card 4G LTE module kit Global Band W/SIM holder w/ Cable & antenna
- **1702031803**  
Power Cord.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12 (Euro)
- **1702031802**  
Power Cord.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12 (USA)
- **170203180E**  
Power Cord. 3P. 125V/7A. 1. 8M. PSE YP12/YC12 Certificat (JPN)
- **9651560001**  
Package of VPC-5600S mating connectors
- **1255X00059**  
(TF)AC/DC Power Supply.input AC100-240V output DC 19V.6.32A.120W.3P phoenix.5.08mm.FSP.FSP120-ABAN3.9NA1208542

# VPC-5620S

Multi-PoE & Fanless Appliance with 8th Generation Intel® Processor

VPC-5620S IS  
Front View



Rear View



VPC-5620S VS  
Front View



Rear View



## Features

- Multi-PoE & Fanless Appliance
- Intel® 8th Generation Whisky Lake processor
- Supporting up to 64 GB DDR4 2400 SDRAM, two slots
- DP x 1, HDMI x 1
- RS232/422/485 COM port x 2 (Isolated by BOM option), USB3.0 port x 4
- GigE connector x 5 (PoE x 4, GigE x 1)
- DC 12-24V power Input, Industrial config.; DC 10~36V, In-vehicle config
- 1 x jack for Line out & MIC in
- 8 bits DIO ( Isolated 4DI & 4DO / 8DI/ 8DO by BOM option)
- Wide Temperature: -20°C ~ 70°C
- LAN LED indicator (ACTx5, LNKx5), Status LED x1, HDD LED x 1, Wireless LED x 1, Power button w/indicator x 1, Reset button x 1



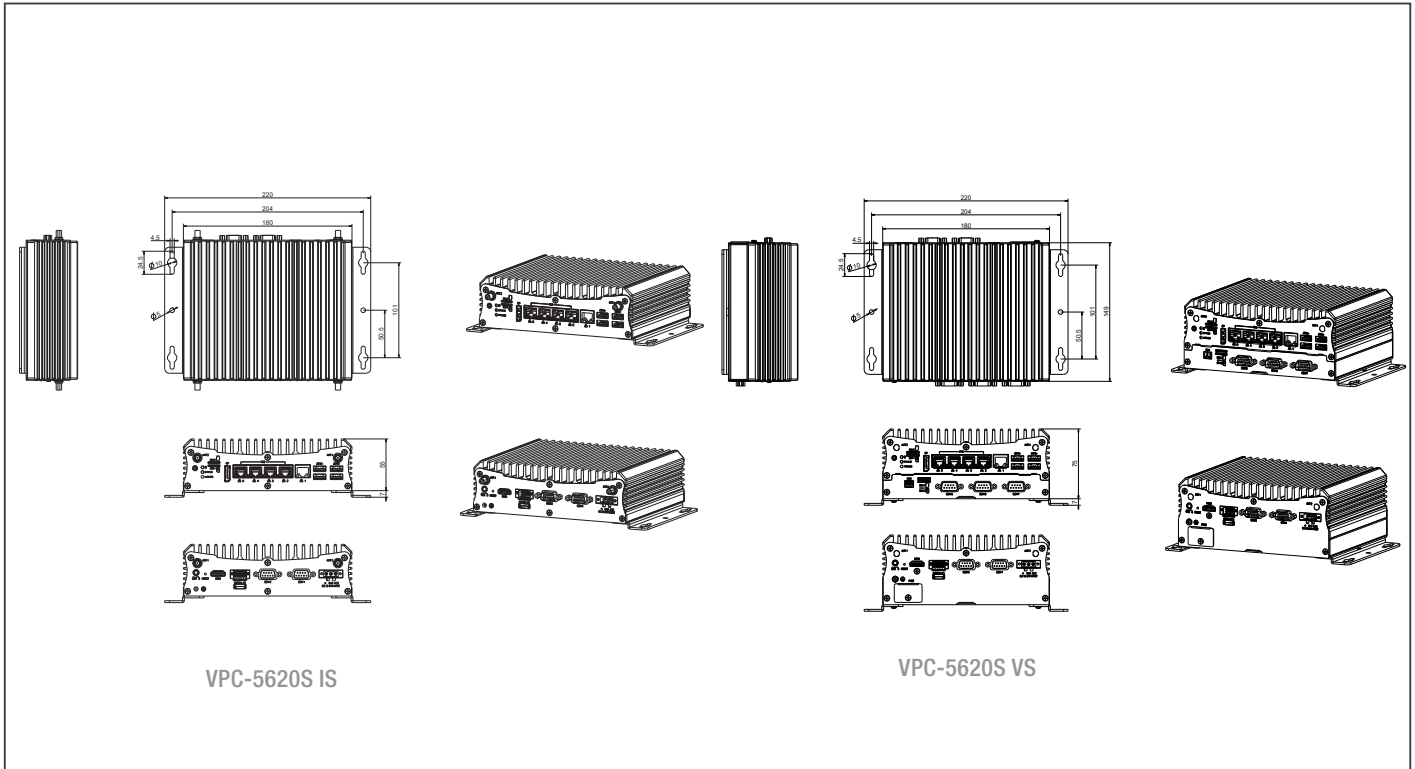
## Specifications

System	
Form Factor	Multi-PoE & Fanless Appliance
Processor	Intel® Whisky Lake Processor (Default: i7-8665UE; Project base: i5-8365UE, i3-8145UE or 4305UE)
Chipset	—
Main Memory	Up to 64GB, DDR4 260-pin SODIMM
Display	HDMI x 1, DP x 1
Ethernet	1x GbE, Intel i211, support Wake on LAN and PXE supported
Smart PoE	4 ports, IEEE 802.3 at/at, sharing 60W of power budget for every four PoE ports. Able to power management in each independent PoE port (SDK available)
RAID support	0/1
Expansion Slot	IS: mPCIe Full-Size (USB+PCIe) x 1 mPCIe Full-Size (USB+SATA) coloy SATA x 1 M.2 2280 (USB+PCIe), support NVMe PCIe [x4] SSD x 1 VS: mPCIe Full-Size (USB+PCIe) x 3 mPCIe Full-Size (USB+SATA) coloy SATA x 1 M.2 2280 (USB+PCIe), support NVMe PCIe [x4] SSD x 1
GPS, G-Sensor	VS:Built-in GPS, Gyro & G-Sensor
Front I/O Panel	RJ45 Smart PoE Port (60W) x 4, USB 3.2 Gen 1 x 4, Giga LAN x 1, DP x 1, Power button, Status LED, HDD LED, Wireless LED, Micro SIM slots(S) x 2, Micro SIM slots(VS) x 4, Antenna holes x 2, CANbus (VS) x 1, RS-232 (VS) x 3
Rear I/O Panel	jack for Line out & MIC in x 1 HDMI x 1 RS-232/422/485 (Isolated by BOM option) x 2 HW Reset x 1, 3pin Power input x 1 8 bits DIO ( Isolated 4DI & 4DO / 8DI/ 8DO by BOM option) Antenna holes x 2
Storage	
HDD Tray	IS:2.5" HDD/SSD Bay x 2 VS:2.5" HDD/SSD Bay x 1
CF/CFast/msATA Slot	—
Environmental	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Storage Humidity	10%~80% @40°C, non-condensing
Vibration/Shock	MIL-STD-810G
Certification	CE & FCC Class A
Power Requirement	
Power Supply	IS:DC 12-24V; VS:DC10-36V with power ignition
Mechanical	
Removable HDD Tray	—
Internal System HDD Bay	IS:2.5" HDD/SSD Bay x 2 VS:2.5" HDD/SSD Bay x 1
Dimension	IS:6.3" x 5.87" x 2.16" (180mm x 149mm x 55mm) VS:6.3" x 5.87" x 2.95" (180mm x 149mm x 75mm)
Gross Weight	TBD
Note	—



## Dimension

Unit: mm



## Ordering Information

Part Number	Chipset	RAM	Cooler	Storage	RAID Support	Display	LAN	PoE	USB	RS-232	RS-232/422/485	Expansion Slot	Form Factor	Power
VPC-5620S-IS-A11-00	Intel® i7-8665UE	260-pin SODIMM	Fanless	Supporting 2.5" SSD x 2 (Supporting 2.5" SSD x 1, mSATA x 1, by project base)	0/1	DP x 1, HDMI x 1	GbE x 1	4 Ports	USB 3.2 Gen1 x 4	—	2	Mini-Card x 2 M.2 2280 M key x 1	Desktop	DC 12-24V
VPC-5620S-VS-A11-00	Intel® i7-8665UE	260-pin SODIMM	Fanless	Supporting 2.5" SSD x 1 (Supporting 2.5" SSD x 1, mSATA x 1, by project base)	0/1	DP x 1, HDMI x 1	GbE x 1	4 Ports	USB 3.2 Gen1 x 4	3	2	Mini card x 4 M.2 M key x 1	Desktop	DC 10-36V ignition

## Packing List

- SATA cable x 2,
- Power cable x 2 (for SATA)
- Matting connector for power input
- VPC-5620S

## Optional Accessories

- **9741236A00**  
WiFi module kit, 802.11ac/a/b/g/n.BT4.2.USB Signal.SparkLan.WPET-236ACN(BT).W/2 sets of cable&antenna
- **978966660G**  
GPS Antenna
- **9741EG2560**  
PCIe mimi card 4G LTE module kit Global Band W/SIM holder w/ Cable & antenna
- **1702031803**  
Power Cord.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12 (Euro)
- **1702031802**  
Power Cord.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12 (USA)
- **170203180E**  
Power Cord. 3P. 125V/7A. 1. 8M. PSE YP12/YC12 Certificat (JPN)
- **1255X00059**  
(TF)AC/DC Power Supply.input AC100-240V output DC 19V.6.32A.120W.3P phoenix.5.08mm.FSP.FSP120-ABAN3.9NA1208542

# VPC-5640S PRELIMINARY

Multi-PoE & Fanless Appliance with 12th Generation Intel® Core™ i7 Processor

Front View



Rear View



## Features

- 12th Gen Intel® Core™ i7 Processor
- DDR5 SODIMM x 2, Max 64GB
- 2.5GbE POE/PSE 802.3 af/at x 4
- Dual LTE Module with SIM Slots x 4, 5G Supported
- M.2 2280 M-Key (PCIe [x4])/M.2 2230 E-Key)
- M.2 3052 B-Key x 2 (USB 2.0, USB 3.0)
- Onboard TPM 2.0
- 9 ~ 36V DC-in with protection circuit and ignition delay on/off
- -40°C ~ 70°C Operating Temperature
- MIL-STD-810H and E-Mark Certified



## Specifications

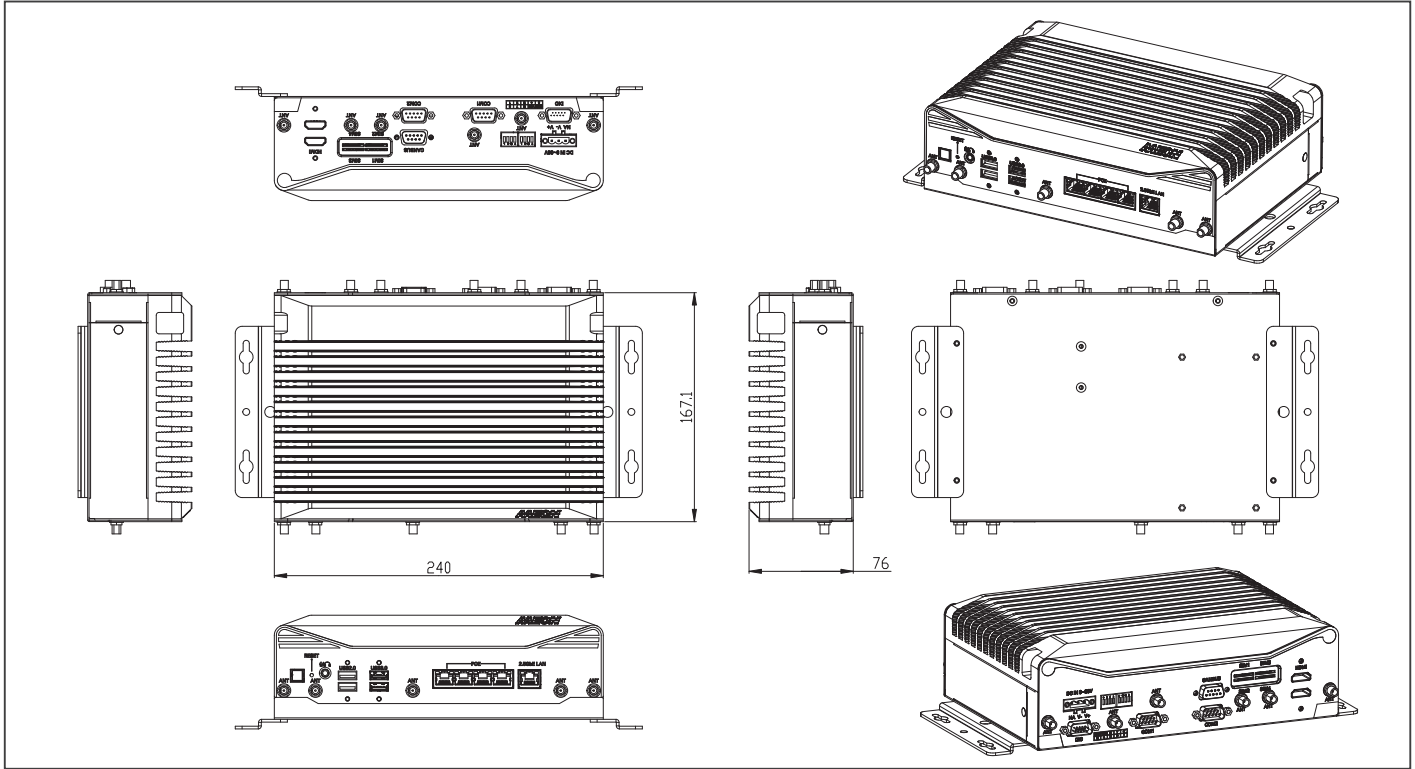
System	
Form Factor	Multi-PoE & Fanless Appliance
Processor	Default: 12th Generation Intel® Core™ i7-1265UE Processor Project Based: Intel® Core™ i5-1245UE Intel® Core™ i3-1215UE
Chipset	—
Main Memory	DDR5 SODIMM x 2, up to 64GB
Display	HDMI x 2
Ethernet	2.5GbE x 1 (Intel® I226-LM)
Smart PoE	2.5GbE x 4 (IEEE802.3 at/af, sharing 60W of power budget for every four PoE ports)
RAID support	—
Expansion Slot	M.2 2230 E-Key x 1 (PCIe [x1] + USB 2.0, for WiFi/Bluetooth Module) M.2 3052 B-Key w/ Dual-SIM x 2 (USB 3.0 + USB 2.0, for LTE/5G Module) M.2 2280 M-Key x 1 (PCIe [x4], support NVME PCIe [x4] SSD)
GPS, G-Sensor	VS: Built-in GPS, NEO-M9V & G-Sensor
Front I/O Panel	USB 3.2 Gen 2 (Type-A) x 2 USB 2.0 (Type-A) x 2 2.5GbE LAN x 1 2.5GbE PoE LAN x 4 (IEEE802.3 at/af) Jack x 1 for Line-out & MIC-in Reset Button x 1 Power Button x 1
Rear I/O Panel	DB-9 Male x 2 for RS-232/422/485 DB-9 Male x 1 for Isolated CANBus FD x 2 DB-15 Male x 1 for DIO 8 bit HDMI 1.4b x 2 3-pin Terminal Block x 1 DIP Switch x 1 SIM Slot x 4
Storage	
HDD Tray	2.5" HDD/SSD Bay x 1
CF/CFast/msATA Slot	—
Environmental	
Operating Temperature	-40°F ~ 158°F (-40°C ~ 70°C), IEC68-2 with 0.5 m/s AirFlow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	5 ~ 95% @ 40°C, non-condensing
Vibration/Shock	MIL-STD-810H
Certification	CE/FCC Class A, UKCA, E-Mark
Power Requirement	
Power Supply	IS: DC-in 9~36V x 1 for 3-pin Terminal Block VS: DC-in 9~36V x 1 for 3-pin Terminal Block with power ignition
Mechanical	
Removable HDD Tray	—
Internal System HDD Bay	2.5" HDD/SSD Bay x 1
Dimension	9.45" x 6.58" x 2.99" (240mm x 167.1mm x 76mm) Without brackets 11.69" x 6.58" x 3.27" (297mm x 167.1mm x 83mm) With brackets
Gross Weight	7.93 lb (3.6 Kg)
Note	—





## Dimension

Unit: mm



## Ordering Information

Part Number	Chipset	RAM	Cooler	Storage	RAID Support	Display	LAN	PoE	USB	RS-232	RS-232/422/485	Expansion Slot	Power
VPC-5640S-IS-A10-00	Intel® Core™ i7-1265UE	—	Fanless	M.2 2280 M-Key x 1 (PCIe [x4]) 2.5" SATA Drive Bay x 1	—	HDMI x 2	2.5GbE x 1	2.5GbE POE/PSE 802.3 af/at x 4 ( Max. 60W)	USB 3.2 Gen 2 x 2 USB 2.0 x 2	—	2	M.2 2280 M-Key x 1 M.2 2230 E-Key x 1 M.2 3052 B-Key x 2 w/ Dual-SIM	DC 9-36V
VPC-5640S-VS-A10-00	Intel® Core™ i7-1265UE	—	Fanless	M.2 2280 M-Key x 1 (PCIe [x4]) 2.5" SATA Drive Bay x 1	—	HDMI x 2	2.5GbE x 1	2.5GbE POE/PSE 802.3 af/at x 4 ( Max. 60W)	USB 3.2 Gen 2 x 2 USB 2.0 x 2	—	2	M.2 2280 M-Key x 1 M.2 2230 E-Key x 1 M.2 3052 B-Key x 2 w/ Dual-SIM Built-In GPS NEO-M9V module	DC 9-36V ignition

## Packing List

- VPC-5640S x 1
- Wallmount Bracket x 2
- Screw Package x 1
- 3 Pin DC-in Power Connector x 1

## Optional Accessories

- **1702031803**  
Power Cord.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12 (Euro)
- **1702031802**  
Power Cord.3P-125V 10A 180D.1.8M.U.S.A.FANJET.YP12/YC-12 (USA)
- **170203180E**  
Power Cord. 3P. 125V/7A. 1. 8M. PSE YP12/YC12 Certificat (JPN)
- **1255X00059**  
120W Power Adapter

# 08

# 08

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## *UP Systems*



ES France - Mobilité & Systèmes Embarqués  
127 rue de Buzenval BP 26 - 92380 Garches



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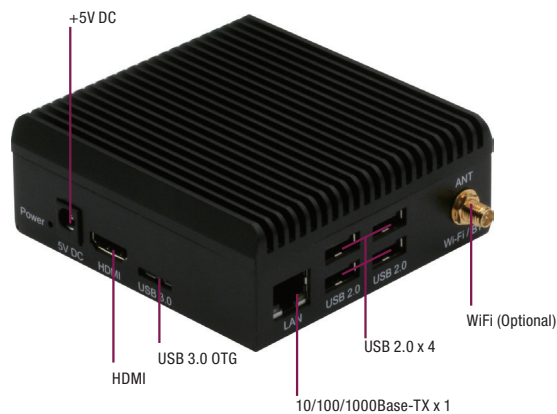


e-mail : [mse@es-france.com](mailto:mse@es-france.com)  
Site Web : [www.es-france.com](http://www.es-france.com)

# UP-GWS01

Tiny Gateway System with UP Board

Front View



Rear View



## Features

- Intel Atom® x5-Z8350 Processor SoC
- Onboard DDR3L Memory
- Onboard eMMC Storage
- Gigabit LAN x 1, USB 2.0 x 4, USB 3.0 x 1, HDMI x 1
- Optimized Fanless Cooling Design
- Wi-Fi (Optional)
- No eDP/ MIPI-CSI/ 40pin HAT/ CPLD internally



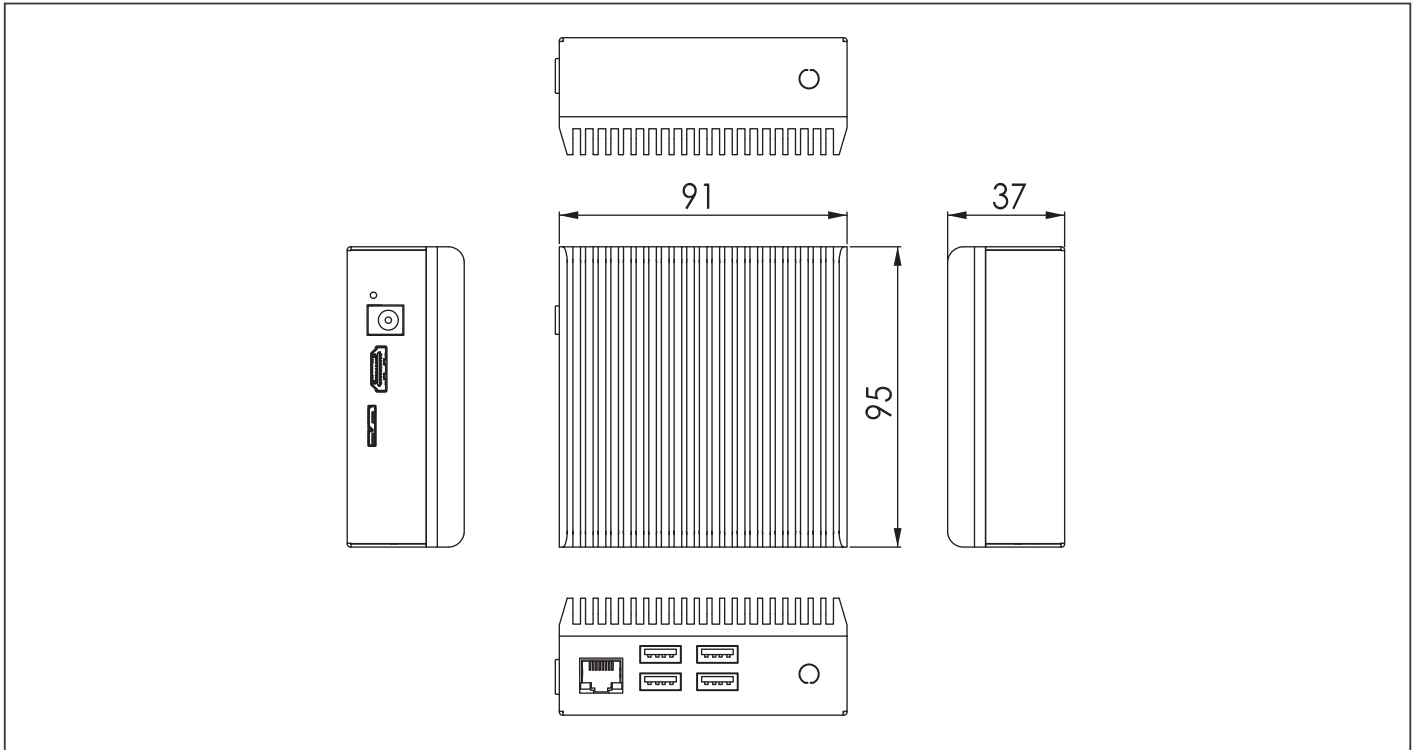
## Specifications

System	
CPU	Intel Atom® x5-Z8350 Processor SoC
Memory	Up to 4GB onboard DDR3L
Graphics	Intel HD Graphics 400
Storage	Up to 64GB onboard eMMC
Ethernet	1GbE RJ-45 x 1 (Realtek RTL8111H-CG)
WiFi/BT	Optional
Expansion Slot	—
Security	—
OS Support	Microsoft Windows 10 Windows IOT Core Linux Ubuntu 22.04 Linux Yocto 3.1
I/O Placements	
USB	USB 2.0 x 4 USB 3.0 OTG x 1
Display Port	HDMI x 1
Ethernet	RJ45 x1
COM	—
Audio	—
GPIO	—
Power Supply	
Power requirement	5V DC-in
Power supply type	AT/ATX (AT as default)
Power Consumption (Typical)	6.6W
Mechanical	
Mounting	—
Dimensions (WxHxD)	3.74" x 3.58" x 1.46" (95mm x 91mm x 37mm)
Net Weight	0.73 lbs (0.33kg)
Gross Weight	1.30 lbs (0.59kg)
Environment	
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
Operating Humidity	0% ~ 90% relative humidity non-condensing
Storage Temperature	—
MTBF	270,599 Hours
Certification	CE/FCC Class A



## Dimension

Unit: mm



## Packing List

- UP-GWS01

## Optional Accessories

Part Number	Description
1255300203	(TF)Power Adapter.AC/DC.100-240VAC.20W.5VDC/4A.POWERTRON.PA1024-050IB400

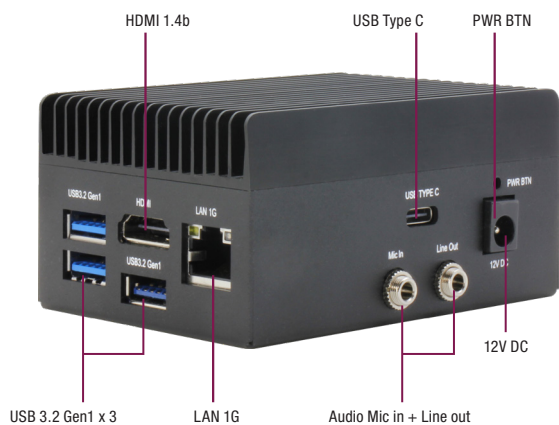
## Ordering Information

Part Number	CPU	MEMORY	STORAGE	HEATSINK	VESA
UP-GWS01-A20-0216-A11	Intel Atom® x5-Z8350	2GB	16GB	FANLESS	No
UP-GWS01-A20-0232-A11	Intel Atom® x5-Z8350	2GB	32GB	FANLESS	No
UP-GWS01-A20-0432-A11	Intel Atom® x5-Z8350	4GB	32GB	FANLESS	No
UP-GWS01-A20-0464-A11	Intel Atom® x5-Z8350	4GB	64GB	FANLESS	No
UP-GWS01-A20-1432-A11	Intel Atom® x5-Z8350	4GB	32GB	FANLESS	Yes

# UP 4000 Edge

UP 4000 System with Intel® Pentium® N4200/ Celeron® N3350/ Atom® E3950 Processor SoC

Front View



Rear View



## Features

- Intel® Pentium® N4200/ Celeron® N3350/ Atom® E3950 Processor SoC
- Onboard LPDDR4 Memory up to 8GB
- Onboard eMMC Storage up to 64GB
- Dual displays up to 4K at 30Hz
- Gigabit LAN x 1, HDMI x 1, USB 3.2 Gen 1 (Type A) x 3
- Audio Jack x 1 (Line out + Mic in)
- 12V DC-in, 5A
- TPM 2.0



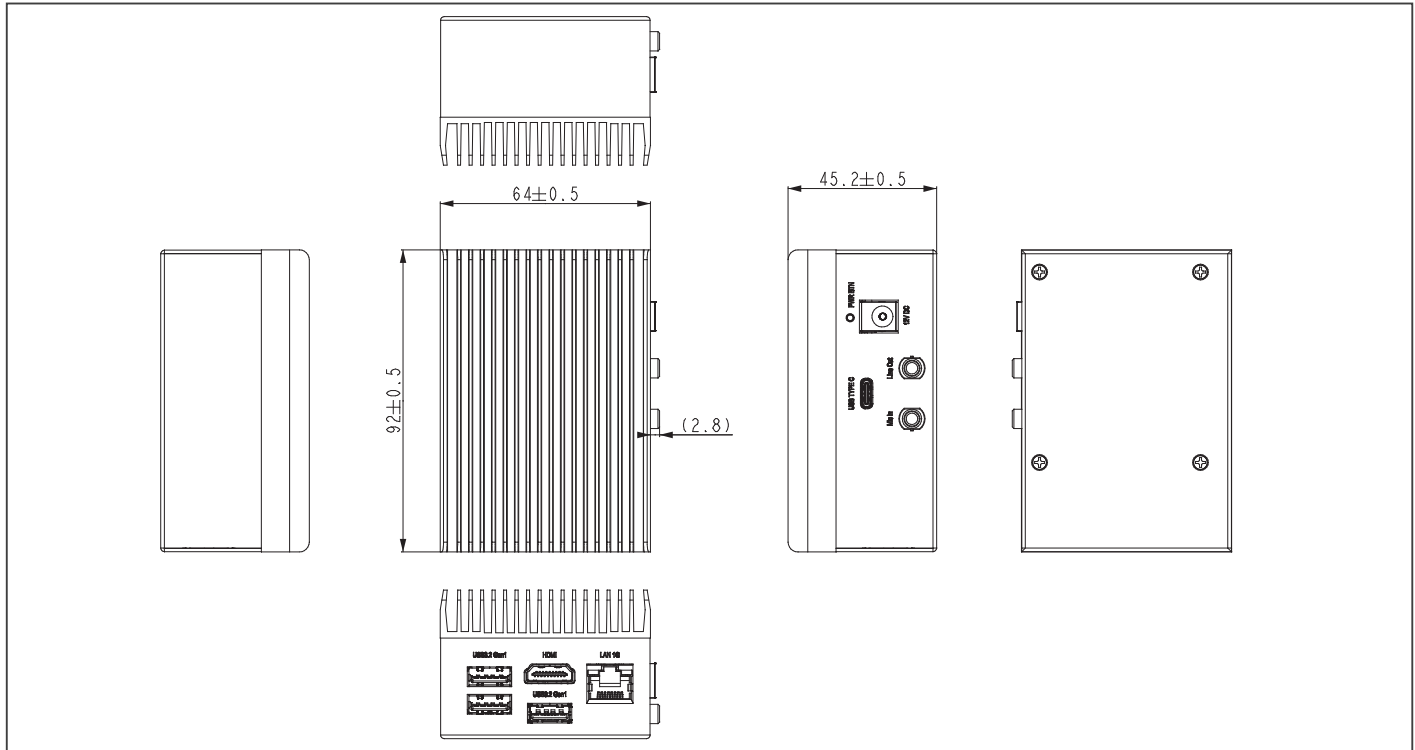
## Specifications

System	
CPU	Intel® Celeron® Processor N3350 Intel® Pentium® Processor N4200 Intel Atom® x7-E3950
Memory	Up to 8GB onboard LPDDR4
Graphics	Intel® HD Graphics
Storage	Up to 64GB onboard eMMC
Ethernet	1GbE RJ-45 x 1 (Realtek RTL8111-CG)
WiFi/BT	—
Expansion Slot	—
Security	Onboard TPM 2.0
OS Support	Microsoft Windows 10 and Windows IoT Linux Ubuntu 22.04 Linux Yocto 4.0
I/O Placements	
USB	USB 3.2 Gen 1 (Type-A) x 3 USB 3.0 OTG (via USB Type-C) x 1
Display Port	HDMI 1.4b x 1 DP x 1 (via USB Type-C)
Ethernet	RJ45 x 1
COM	—
Audio	Audio wafer x 1 (Mic-in+Line-out)
GPIO	—
Power Supply	
Power requirement	12V DC-in
Power supply type	AT/ATX (AT as default)
Power Consumption (Typical)	19W~25W
Mechanical	
Mounting	VESA Mount/Wall Mount(Optional)
Dimensions (WxHxD)	3.62" x 2.52" x 1.78" (92mm x 64mm x 45.2mm)
Net Weight	0.64lb (0.29kg)
Gross Weight	1.21lb (0.55kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) with air flow 0.5m/s
Operating Humidity	10% ~ 80% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	538,629 hrs @ 30°C
Certification	CE/FCC Class A, RoHS Compliant, REACH



## Dimension

Unit: mm



## Ordering Information

Part number	CPU	Memory	Storage	TPM 2.0	Gbe	LAN	Audio wafer
UP-EDGE-APL03C2F-A10-0216	Apollo Lake N3350(F1)	2GB	16GB	yes	Realtek	RTL8111H	yes
UP-EDGE-APL03C2F-A10-0232	Apollo Lake N3350(F1)	2GB	32GB	yes	Realtek	RTL8111H	yes
UP-EDGE-APL03C2F-A10-0432	Apollo Lake N3350(F1)	4GB	32GB	yes	Realtek	RTL8111H	yes
UP-EDGE-APL03P4F-A10-0432	Apollo Lake N4200(F1)	4GB	32GB	yes	Realtek	RTL8111H	yes
UP-EDGE-APL03P4F-A10-0864	Apollo Lake N4200(F1)	8GB	64GB	yes	Realtek	RTL8111H	yes
UP-EDGE-APL03X7F-A10-0464	Apollo Lake E3950(F1)	4GB	64GB	yes	Realtek	RTL8111H	yes

## Packing List

- UP 4000 Edge

## Optional Accessories

Part Number	Description
125530060L	(TF)Power Adapter.DC.100/240V.12V.5A.60W.Powertron.PS1065-120IB500.For UPC-PLUS
9741364A00	(TF).M.2 2230 Wireless.802.11 ac/a/b/g/n + BT 5.0.2T2R,Enli OCNFA364A.w/2 sets of cable and antenna
9651926001	(TF).M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT Intel.9260.NGVG. NV,958867 w/2 cable & antenna
9651UPED00	(TF).VESA kit.UP4000-EDGE, A.1



# UP 7000 Edge

UP 7000 System with Intel® Processor N-series Processor (formerly Alder Lake N)

Front View



Rear View



## Features

- Intel® Processor N-series
- Onboard LPDDR5 Memory, up to 8GB
- Onboard eMMC Storage, up to 64GB
- 1Gigabit LAN x 1
- HDMI 1.4b x 1
- USB 3.2 Gen 2 (Type-A) x 3, 10-pin USB 2.0 x 2/UART x 1
- 12V DC-in, 5A
- TPM 2.0



## Specifications

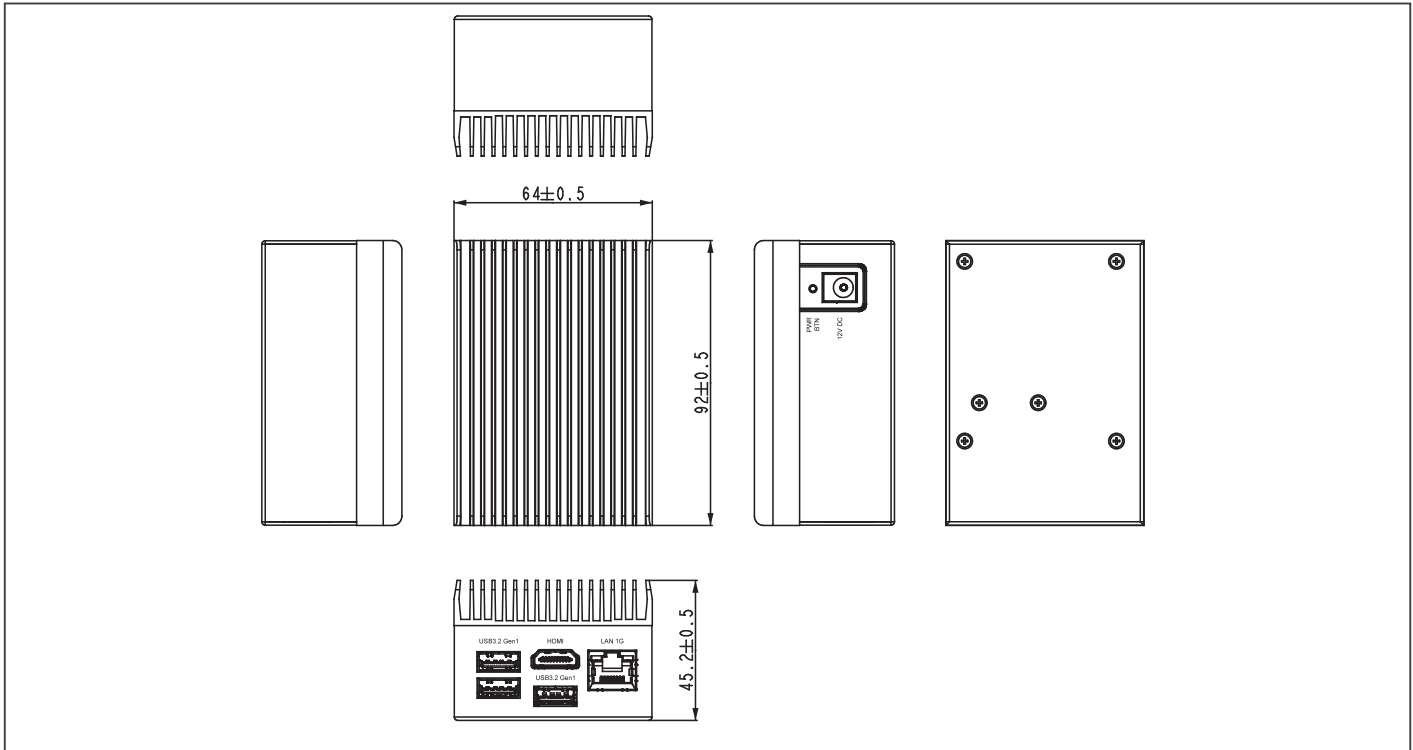
System	
CPU	Intel® Processor N200 Intel® Processor N97 Intel® Processor N100 Intel® Processor N50 (formerly Alder Lake-N)
Memory	Up to 8GB LPDDR5
Graphics	Intel® UHD Graphics for 12th Gen Intel® Processors
Storage	Up to 64GB eMMC
Ethernet	1GbE RJ-45 x 1 (Realtek RTL8111H CG)
WiFi/BT	—
Expansion Slot	HDMI 1.4b/USB 3.2 Gen 2 STACK Connector x 1 (Type-A) Power Button x 1
Security	Onboard TPM 2.0
OS Support	Windows 10 LTSC 2021 Linux: Ubuntu 22.04 LTS/Kernel 5.15, Yocto 4.0
I/O Placements	
USB	USB 3.2 Gen 2 (Type-A) x 3
Display Port	HDMI 1.4b x 1
Ethernet	1GbE RJ-45 x 1 (Realtek RTL8111H CG)
COM	—
Audio	—
GPIO	—
Power Supply	
Power requirement	12V DC-in, 5A
Power supply type	AT (default)/ATX
Power Consumption (Typical)	30W~36W
Mechanical	
Mounting	VESA Mount (optional)
Dimensions (WxHxD)	3.62" x 2.52" x 1.78" (92mm x 64mm x 45.2mm)
Net Weight	0.68 lbs (0.31kg)
Gross Weight	1.04 lbs (0.47kg)
Environment	
Operating Temperature	32°F ~ 131°F (0°C ~ 55°C) with 0.5m/s air flow
Operating Humidity	10% ~ 80% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	685,218 Hours
Certification	CE/FCC Class A, RoHS Compliant, REACH





## Dimension

Unit: mm



## Ordering Information

PART NUMBER	CPU	CORE	MEMORY	Storage
UP-EDGE-ADLN50-A10-0432	Intel® Processor N50	2	4GB	32GB
UP-EDGE-ADLN100-A10-0432	Intel® Processor N100	4	4GB	32GB
UP-EDGE-ADLN100-A10-0864	Intel® Processor N100	4	8GB	64GB
UP-EDGE-ADLN97-A10-0864	Intel® Processor N97	4	8GB	64GB
UP-EDGE-ADLN200-A10-0864	Intel® Processor N200	4	8GB	64GB

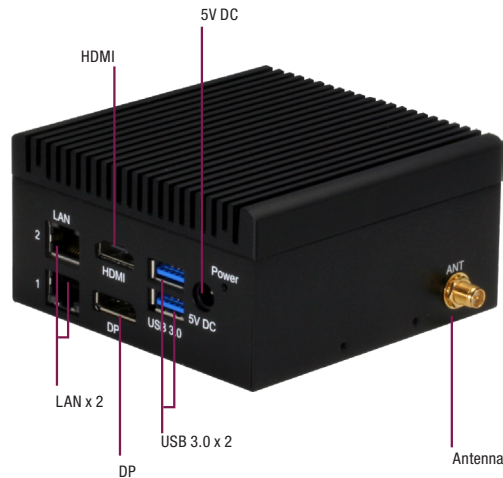
## Optional Accessories

Part Number	Description
125530060L	PowerAdapter (TF)PowerAdapter.DC.100/240V.12V.5A.60W.Powertron.PS1065-120IB500.

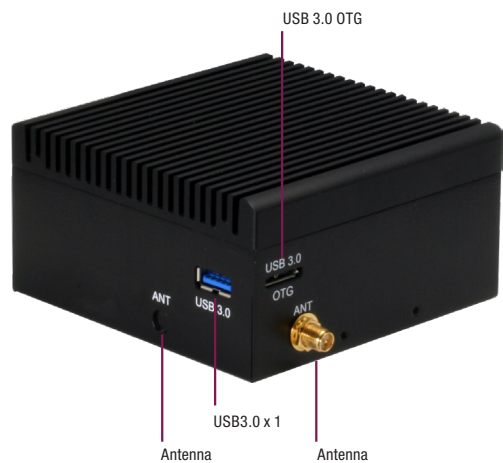
## Packing List

- UP 7000 Edge

Front View



Rear View



## Features

- Intel® Pentium® N4200/ Celeron® N3350 Processor SoC/Atom® E3950
- Onboard LPDDR4 Memory, eMMC Storage
- Gigabit LAN x 2
- HDMI x 1, DP x 1
- USB 3.0 x 3, USB 3.0 OTG x 1
- 3G/ WiFi/ BT(Optional)



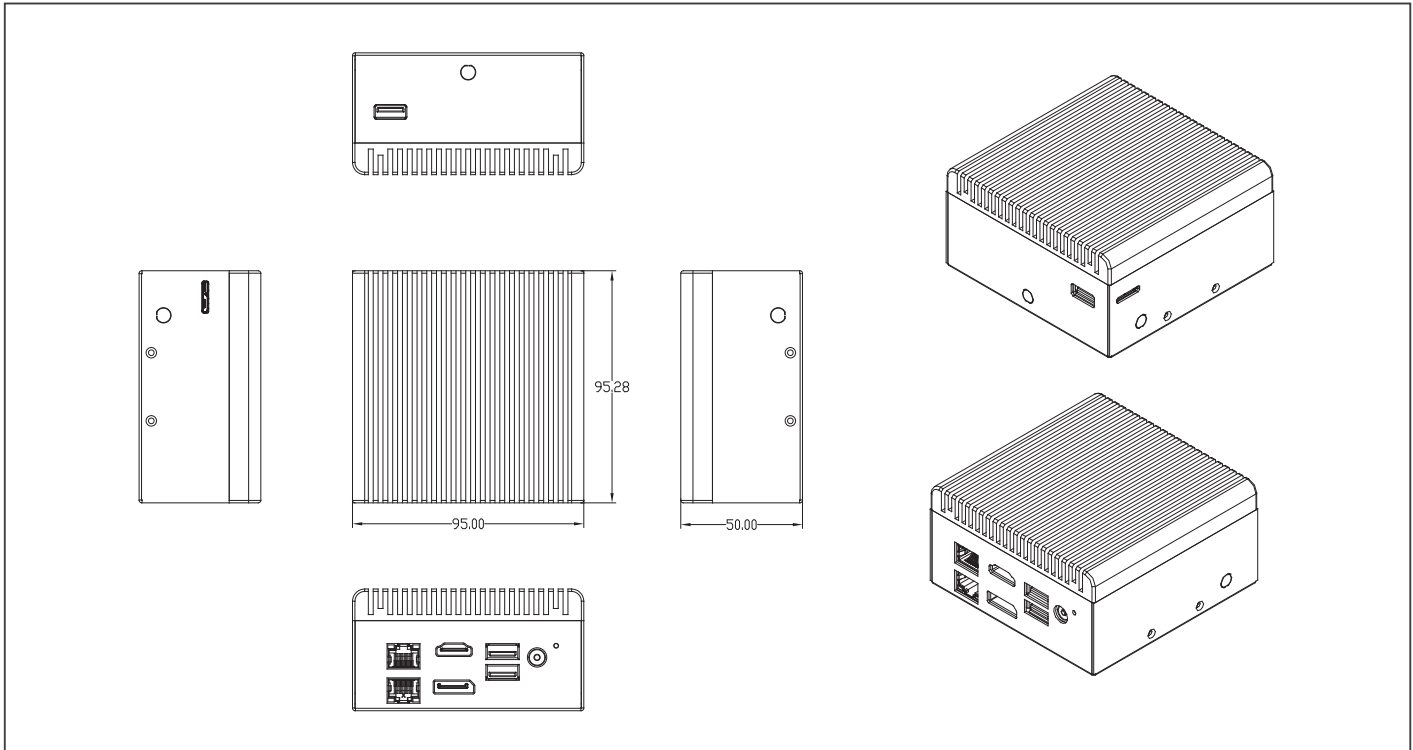
## Specifications

System	
CPU	Intel® Celeron® Processor N3350 Intel® Pentium® Processor N4200 Intel Atom® x7-E3950
Memory	Up to 8GB onboard LPDDR4
Graphics	Intel® HD Graphics
Storage	Up to 128GB onboard eMMC
Ethernet	GbE x 2 (Realtek 8111H CG)
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	40-pin GPIO x 1 Full-sized mPCIe x 1 (PCIe & SATA [x1], USB2.0 [x1]) M.2 2230 E-Key x 1 (PCIe [x1], USB2.0 [x1]) SATA III x 1
Security	fTPM
OS Support	Windows® 10 IoT Enterprise LTSC 2021 Windows IoT Core Linux Ubuntu 20.04 LTS Linux Yocto 3.1
I/O Placements	
USB	USB 2.0 x 2 (via 10 Pin Header x 1) USB 3.2 Gen 1 x 3 (Type-A) USB 3.2 Gen 1 OTG x 1 (Micro B)
Display Port	HDMI 1.4b x 1 DP 1.2 x 1
Ethernet	Realtek® 8111G x 2
COM	—
Audio	—
GPIO	—
Power Supply	
Power requirement	5V DC-in
Power supply type	AT/ATX (AT as default)
Power Consumption (Typical)	15.05W
Mechanical	
Mounting	VESA Mounting
Dimensions (WxHxD)	3.74" x 3.58" x 1.46" (95mm x 91mm x 37mm)
Net Weight	0.99lb (450g)
Gross Weight	1.32lb (600g)
Environment	
Operating Temperature	32°F ~ 113°F (0°C ~ 45°C)
Operating Humidity	0% ~ 90% relative humidity non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	179,902 Hours
Certification	CE, FCC Class A, UL



## Dimension

Unit: mm



## Packing List

- UPS-GWS01

## Optional Accessories

Part Number	Description
1255300362	(TF)AC/DC Adapter.5VDC.30W.6A.SUNWARD.AD36AM050600
1702020911	(TF)POWER CORD.SP12N 2P.C8 2P.91cm.NISPT-2 for US
9651926001	(TF).M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT Intel.9260.NG.WG.NV.958867 w/2 cable & antenna
9741364A00	(TF).M.2 2230 Wireless.802.11 ac/a/b/g/n + BT 5.0.2T2R.Enli QCNFA364A.w/2 sets of cable and antenna

## Ordering Information

Part Number	CPU	CORE	MEMORY	STORAGE	HEATSINK
UPS-GWS01C2F-A20-0232	Intel® Celeron® Processor N3350	2 Core	2GB	32GB	FANLESS
UPS-GWS01C2F-A20-0432	Intel® Celeron® Processor N3350	2 Core	4GB	32GB	FANLESS
UPS-GWS01C2F-A20-1232	Intel® Celeron® Processor N3350	2 Core	2GB	32GB	FANLESS
UPS-GWS01C2F-A20-1432	Intel® Celeron® Processor N3350	2 Core	4GB	32GB	FANLESS
UPS-GWS01P4F-A20-0432	Intel® Pentium® Processor N4200	4 Core	4GB	32GB	FANLESS
UPS-GWS01P4F-A20-0864	Intel® Pentium® Processor N4200	4 Core	8GB	64GB	FANLESS
UPS-GWS01P4F-A20-1432	Intel® Pentium® Processor N4200	4 Core	4GB	32GB	FANLESS
UPS-GWS01P4F-A20-1864	Intel® Pentium® Processor N4200	4 Core	8GB	64GB	FANLESS
UPS-GWS01X7F-0464-AI	Intel Atom® x7-E3950	4 Core	4GB	64GB	FANLESS
UPS-GWS01X7F-A20-0864	Intel Atom® x7-E3950	4 Core	8GB	64GB	FANLESS

# UP Squared V2 Edge

UP Squared V2 System with Intel® Pentium® Celeron® Processor SoC

Front View



Rear View



## Features

- Intel® Pentium® Celeron® Processor SoC
- Onboard LPDDR4 Memory up to 16GB
- Onboard eMMC Storage up to 64GB
- Gb Ethernet (full speed) RJ-45 x 2
- USB 3.2 Type A x 3
- DP 1.2 / HDMI 1.4b
- COM x 1
- Audio Jack (Line out x 1 + Mic in x 1)
- M.2 2230 E-Key x 1
- M.2 2280 M-Key x 1
- SATA3 x 1
- TPM 2.0
- 12V DC-in, 5A



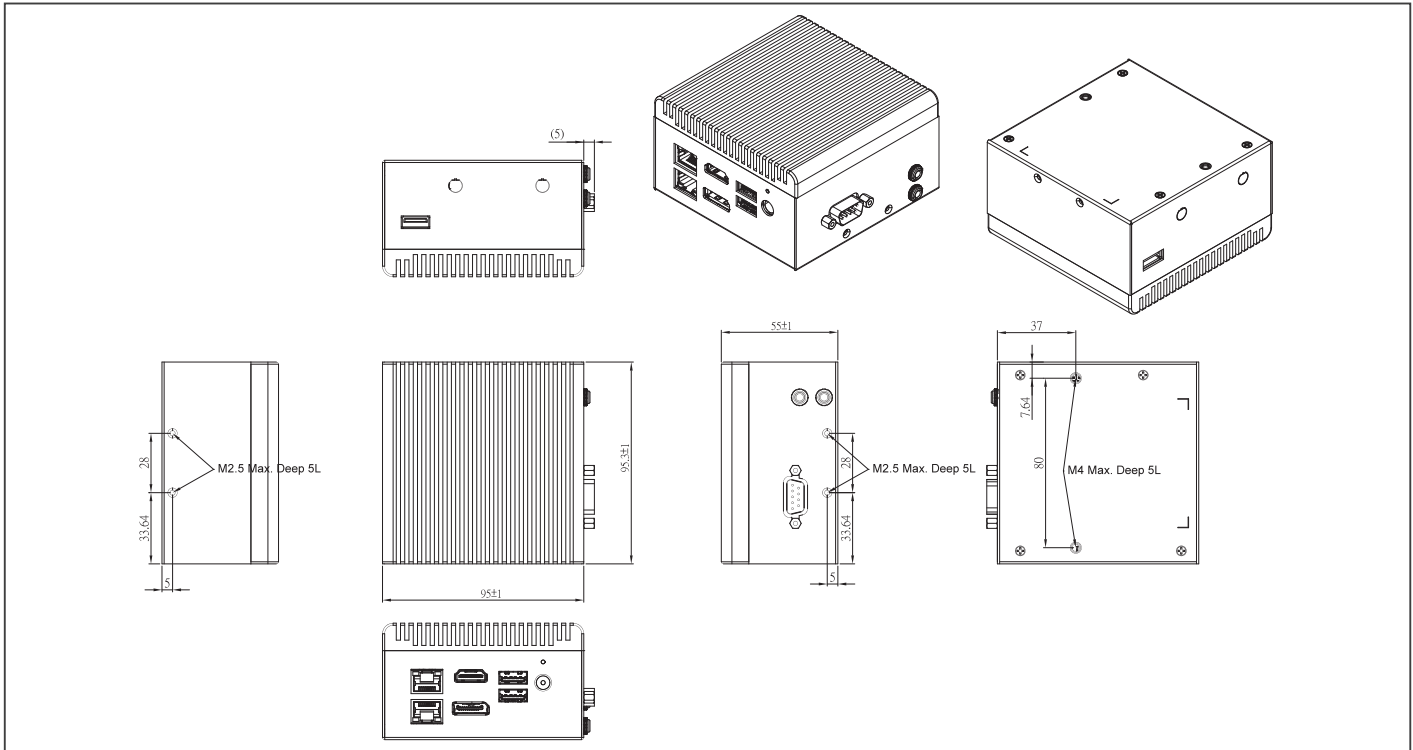
## Specifications

System	
CPU	Intel® Celeron® N6210 Processor SoC Intel® Celeron® J6412 Processor SoC Intel® Pentium® J6426 Processor SoC
Memory	Up to 16GB LPDDR4
Graphics	Intel® UHD Graphics
Storage	Up to 64GB eMMC
Ethernet	Gb Ethernet (full speed) RJ-45 x 2
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	M.2 2230 E-Key x 1 (PCIe Gen 3.0 [x2], USB 2.0 [x1]) M.2 2280 M-key x 1 (PCIe Gen 3.0 [x2]) SATA 6Gb/s x 1
Security	Onboard TPM 2.0
OS Support	Microsoft Windows 10 (full) Windows IOT Core Ubuntu 20.04 LTS Yocto 3.1
I/O Placements	
USB	USB 2.0 x 2 (via 10 Pin Header x 1) USB 3.2 Gen 2 x 3 (Type-A)
Display Port	HDMI 1.4b x 1 DP 1.2 x 1
Ethernet	Gb Ethernet (full speed) RJ-45 x 2
COM	RS-232/422 x 1
Audio	Line out x 1 Mic in x 1
GPIO	—
Power Supply	
Power requirement	12V DC-in, 5A
Power supply type	AT/ATX (AT as default)
Power Consumption (Typical)	30~38W
Mechanical	
Mounting	VESA Mounting
Dimensions (WxHxD)	3.74" x 3.74" x 2.16" (95 x 95 x 55 mm)
Net Weight	0.99lb (450g)
Gross Weight	1.32lb (600g)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°) / 0.5 airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	465,586
Certification	CE/FCC Class A, RoHS Compliant, REACH



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Memory	Storage	VPU
UPS-EDGE-EHLCN2-A10-0232	Intel® Celeron® N6210 Processor SoC	2GB	32GB	—
UPS-EDGE-EHLCN2-A10-0432	Intel® Celeron® N6210 Processor SoC	4GB	32GB	—
UPS-EDGE-EHLCJ4-A10-0432	Intel® Celeron® J6412 Processor SoC	4GB	32GB	—
UPS-EDGE-EHLPJ4-A10-0432	Intel® Pentium® J6426 Processor SoC	4GB	32GB	—
UPS-EDGE-EHLPJ4-A10-0864	Intel® Pentium® J6426 Processor SoC	8GB	64GB	—
UPS-EDGE-EHLPJ4-A10-1664	Intel® Pentium® J6426 Processor SoC	16GB	64GB	—
UPS-EDGE-EHLPJ4-A10-0864-HALO	Intel® Pentium® J6426 Processor SoC	8GB	64GB	Hailo-8™ M.2 2280 B+M key AI module via m.2 2280

## Optional Accessories

Part Number	Description
125530060L	12V.5A.60W Power Adapter w/ multi-country plugs
9651926001	M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT w/2 cable & antenna
9741364A00	Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna

## Packing List

- UP Squared V2 Edge

# UPN-Edge Pro

UP Squared Pro EDGE System with Intel® Pentium® N4200/ Celeron® N3350/ Atom® E3950 Processor SoC

Front View



Rear View



## Features

- Intel® Pentium® N4200/ Celeron® N3350/ Atom® E3950 Processor SoC
- Onboard LPDDR4 Memory up to 8GB
- Onboard eMMC Storage up to 64GB
- Gigabit LAN x 2, USB 3.2 Gen 1 (Type A) x 3
- 12-24 VDC-in, 5A
- 16pin GPIO connector for 40 pin HAT
- Audio Jack x 1 (line out + Mic)
- SATA3 x 1



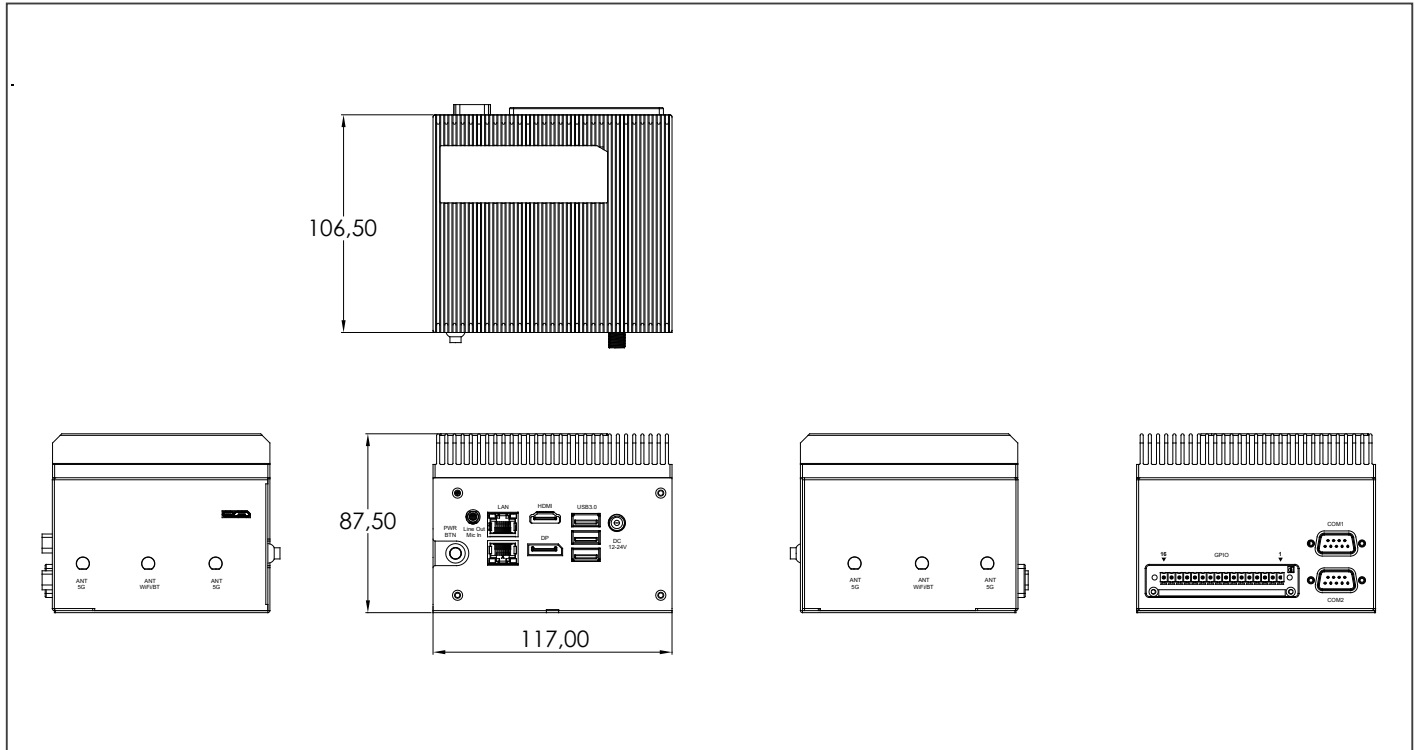
## Specifications

System	
CPU	Intel® Apollo Lake N4200/N3350/E3950 Processor SoC
Memory	onboard DDR4, Max 8GB Single Channel:2GB Dual Channel:4GB,8GB
Graphics	Intel® Graphic ,Gen 9
Storage	Emmc 32G/64G
Ethernet	Intel i210 x2
WiFi/BT	Optional
Audio	Line out+mic in x1
USB	USB 3.2 Gen 1 OTG x 1 USB 3.2 Gen 1 (Type A) x 3
Expansion Slot	40 pin GPIO x 1 M.2 2230 E-key x 1 M.2 2280 M-key x 1 M.2 3052/3042 B-key x 1 (support with SIM) SATA3 connector x 1 (support 2.5" HDD/SSD expansion)
I/O Placements	
Power	DC-in Jack x 1, Power Button x 1
USB	USB3.2 Gen1 OTG x 1 USB3.2 Gen1 (Type A) x 3
Display Port	HDMIx1, DP x1
Ethernet	Gb Ethernet (full speed) RJ-45 x 2 ( Intel i210)
COM	RS422/RS232/RS485 x 2
Environment	
Power	12-24VDC
Form Factor	4.61" x4.19" x3.5" (117mm x 106.5mm x 88.8mm)
Gross Weight	2.17 lb (982.5g)
Operating Temperature	32°F ~ 140°F (0°C ~ 55°C) with air flow 0.5m/s
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE/FCC Class A, RoHS Compliant , REACH
OS Support	Microsoft Windows 10 (full), Windows IoT Core Linux: Ubuntu 18.04.5 & Ubuntu 20.04.1 Yocto 3.1



## Dimension

Unit: mm



## Ordering Information

Product SKU	Description
UPN-EDGE-APLC2F-A10-0232	UPN-EDGE-APL01.CPU N3350(F1).Memory 2GB.eMMC 32GB.REV.A1.0
UPN-EDGE-APLC2F-A10-0432	UPN-EDGE-APL01.CPU N3350(F1).Memory 4GB.eMMC 32GB.REV.A1.0
UPN-EDGE-APLP4F-A10-0432	UPN-EDGE-APL01.CPU N4200(F1).Memory 4GB.eMMC 32GB.REV.A1.0
UPN-EDGE-APLP4F-A10-0864	UPN-EDGE-APL01.CPU N4200(F1).Memory 8GB.eMMC 64GB.REV.A1.0
UPN-EDGE-APLX7F-A10-0464	UPN-EDGE-APL01.CPU E3950(F1).Memory 4GB.eMMC 64GB.REV.A1.0

## Packing List

- UPN-EDGE PRO

## Optional Accessories

- **1255X00032**  
12VDC/6A Adapter
- **1702031803**  
Power cord for EU
- **1702031802**  
Power cord for US
- **9651926001**  
M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT w/2 cable & antenna
- **9741364A00**  
Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna

# UP Squared 6000 Edge

UP Squared 6000 System with Intel® Atom® x6000E Pentium® Celeron® Processor SoC

Front View



Rear View



## Features

- Intel® Atom® x6000E Pentium® Celeron® Processor SoC
- Onboard LPDDR4 Memory up to 8GB
- Onboard eMMC Storage up to 64GB
- GbE x 1, 2.5GbE x 1 (Intel® i210, i225)
- USB 3.2 x 3 (Type A x 2, Type C x 1)
- 40 pin GPIO x 1
- DP 1.2 / HDMI 2.0b
- COM x 1
- M.2 2230 E-Key / M.2 2280 M-Key / M.2 3052 B-Key x 1
- SATA 6Gb/s x 1
- TPM 2.0
- 12V DC-in, 6A
- Supports Intel AX210 WiFi 6 via M.2 2230



## Specifications

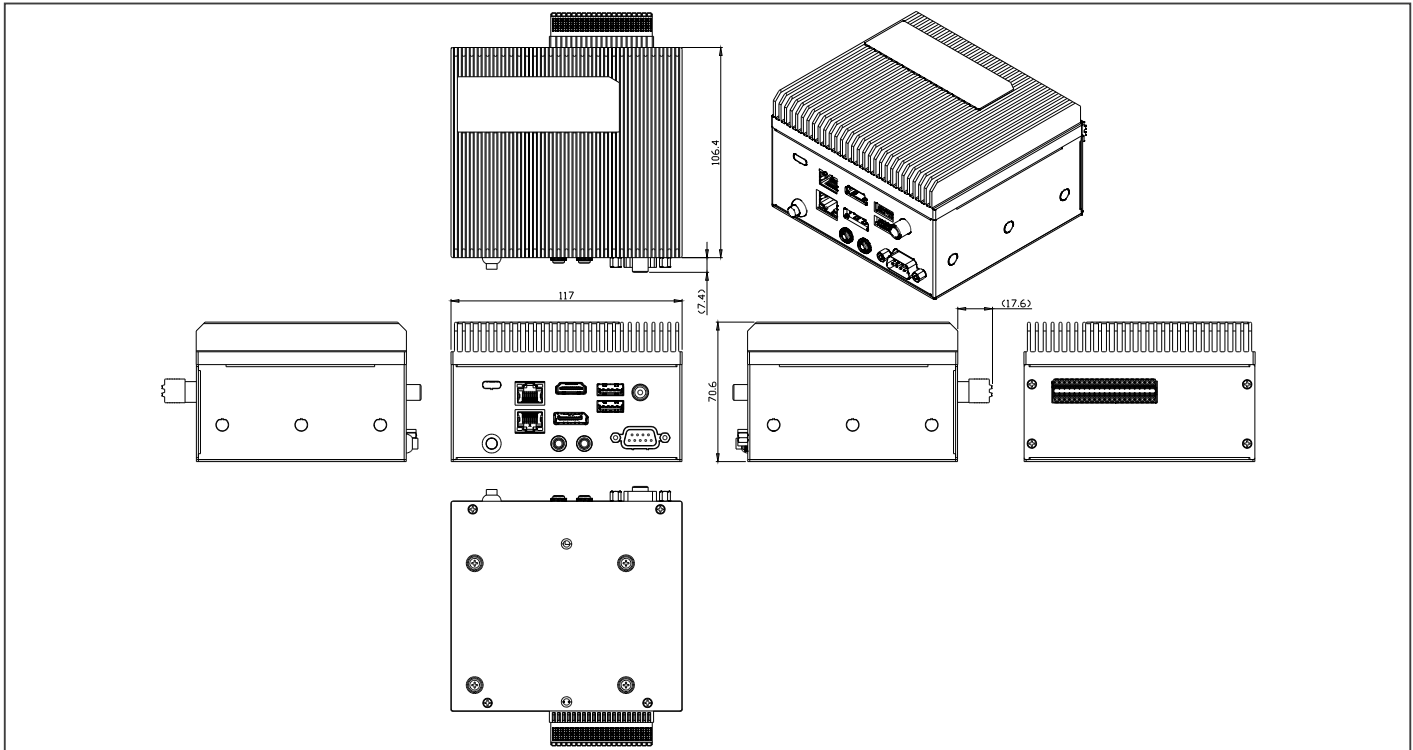
System	
CPU	Intel® Celeron® N6210 Processor SoC Intel® Pentium® J6426 Processor SoC Intel® Atom® X6413E Processor SoC Intel® Atom® X6425RE Processor SoC
Memory	Up to 8GB LPDDR4
Graphics	Intel® UHD Graphics VPU: Hailo-8™ M.2 2280 B+M key AI module via m.2 2280 (Optional by SKU from ordering information)
Storage	Up to 64GB onboard eMMC Optional with M.2 2280 M-key x 1, SATA 6Gb/s x 1
Ethernet	GbE x 1, 2.5GbE x 1 Atom: Intel® i210-IT, i225-IT PC Client: Intel® i211-AT, i225-V
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	M.2 2230 E-Key x 1 (PCIe Gen 3.0 [x1], USB 2.0 [x1]) M.2 2280 M-key x 1 (PCIe Gen 3.0 [x2]) M.2 3052 B-Key x 1 (USB 3.2 Gen 2) Nano SIM slot x 1
Security	TPM 2.0 (Limited to Atom series)
OS Support	Windows® 10 IoT Enterprise Windows IOT Core Ubuntu 20.04 LTS Yocto 3.1
I/O Placements	
USB	USB 3.2 Gen 2 x 2 (Type-A) USB 3.2 Gen 2 x 1 (Type-C) (support OTG) x 1 (Limited to Atom series)
Display Port	HDMI 2.0b x 1, DP 1.2 x 1
Ethernet	GbE x 1, 2.5GbE x 1 Atom: Intel® i210-IT, i225-IT PC Client: Intel® i211-AT, i225-V
COM	RS232/RS422 x 1 (Limited to Atom series)
Audio	Line out x 1, Mic in x 1
GPIO	40 Pin GPIO x 1
Power Supply	
Power requirement	12V DC-in (Lockable plug)
Power supply type	AT/ATX (ATX as default)
Power Consumption(Typical)	Balance current: 24.72W, Max current: 25.92W
Mechanical	
Mounting	VESA Mount/Wall Mount (Optional)
Dimensions (WxHxD)	4.6" x 4.2" x 2.8" (117mm x 106mm x 70mm)
Net Weight	1.8 lbs (0.7kg)
Gross Weight	2.31lb (1.05Kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°) / 0.5 airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)





## Dimension

Unit: mm



## Ordering Information

Part number	CPU	Memory	Storage	USB 3.2 Type C	COM Port	TPM 2.0	LAN	VPU
UPN-EDGE-EHLCN2-A10-0232	Intel® Celeron® N6210 Processor SoC	2GB	32GB	No	No	No	i211-AT / i225-V	—
UPN-EDGE-EHLPJ4-A10-0432	Intel® Pentium® J6426 Processor SoC	4GB	32GB	No	No	No	i211-AT / i225-V	—
UPN-EDGE-EHLX4E-A10-0432	Intel® Atom® X6413E Processor SoC	4GB	32GB	Yes	Yes	Yes	i210-IT / i225-IT	—
UPN-EDGE-EHLX4RE-A10-0864	Intel® Atom® X6425RE Processor SoC	8GB	64GB	Yes	Yes	Yes	i210-IT / i225-IT	—
UPN-EDGE-EHLX4RE-A10-0864-HAILO	Intel® Atom® X6425RE Processor SoC	8GB	64GB	Yes	Yes	Yes	i210-IT / i225-IT	Hailo-8™ M.2 2280 B+M key AI module via m.2 2280

## Packing List

- 40Pin Phoenix Connector
- Quick Start Guide
- UP Squared 6000 Edge

## Optional Accessories

Part Number	Description
1255X00032	12VDC/6A Adapter
1702031803	Power cord for EU
1702031802	Power cord for US
170203180J	Power cord for UK
170203180E	Power cord for Japan
170203180B	Power cord for China
1702031811	Power cord for Taiwan
9651926001	M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT w/2 cable & antenna
9741364A00	Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna
UP-SATAKIT-A10-0001	SATA KIT for UPN-EDGE-APL01/UPN-EDGE-EHL01

# UP Squared Pro 7000 Edge

UP Squared Pro 7000 System with Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3-N305 Processor



## Features

- Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3-N305 Processor
- Onboard LPDDR5 Memory up to 16GB
- Onboard eMMC Storage up to 64GB
- 2.5GbE x 2 (Intel® I226-IT)
- USB 3.2 x 3 (Type A x 2, Type C x 1)
- 40 pin GPIO x 1
- DP 1.2 x 1/DP 1.4a x 1/HDMI 2.0b
- RS-232/422/485 x 2
- M.2 2230 E-Key/M.2 2280 M-Key/M.2 3052 B-Key
- SATA 6Gb/s x 1
- TPM 2.0
- 12V DC-in, 6A



## Specifications

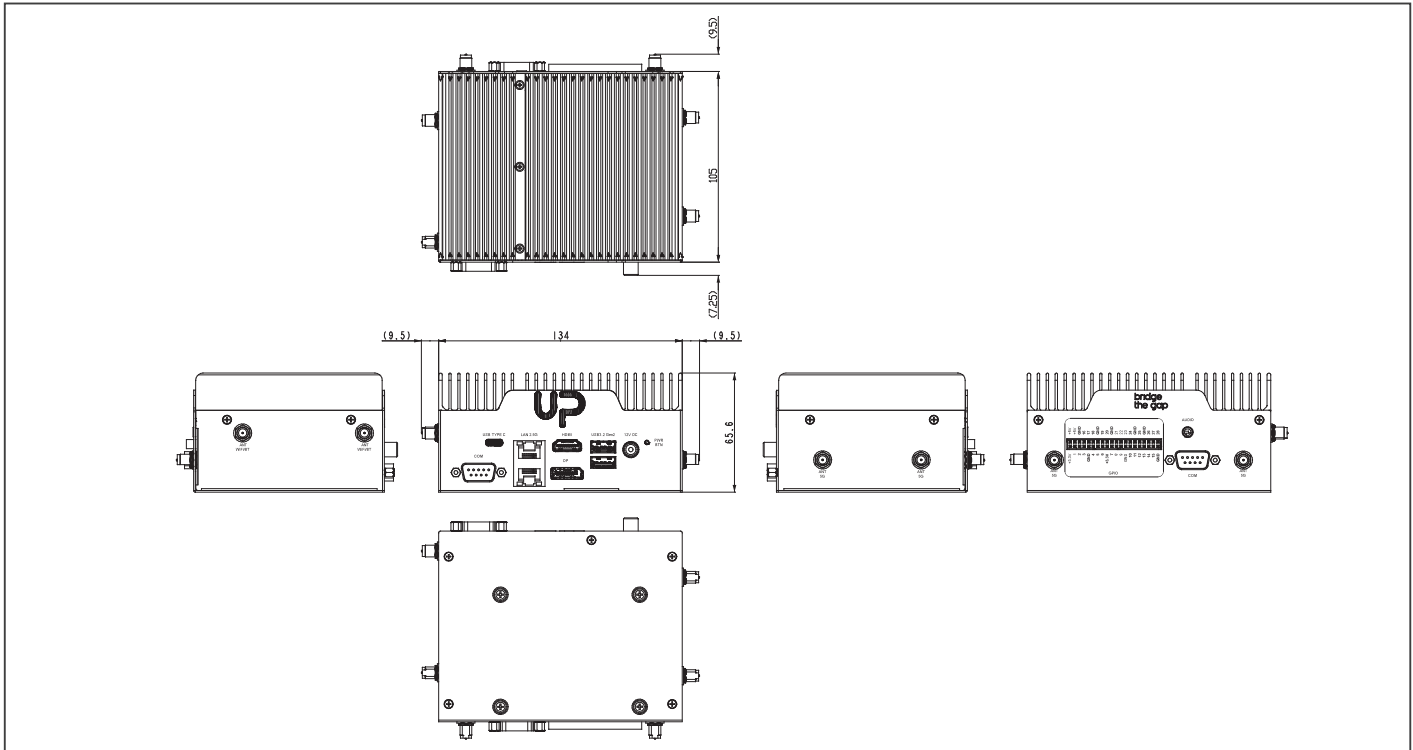
System	
CPU	Intel® Core™ i3-N305 Intel Atom® x7425E Intel® Processor N97 Intel® Processor N50
Memory	Up to 16GB onboard LPDDR5
Graphics	Intel® UHD Graphics for 12th Gen Intel® Processors VPU: Halo-8™ M.2 2280 B+M key AI module via m.2 2280 (Optional by SKU from ordering information)
Storage	Up to 64GB onboard eMMC
Ethernet	2.5GbE x 2 (Intel® I226-IT)
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	M.2 2230 E-Key x 1 (CNVI, PCIe Gen 3 [x1], USB 2.0) M.2 2280 M-Key x 1 (PCIe Gen 3 [x2], USB 2.0) M.2 3052 B-Key x 1 (USB 3.2 Gen 2) with Nano SIM slot (USB 3.0) SATA 6Gb/s x 1
Security	Onboard TPM 2.0
OS Support	Windows® 10 IoT Enterprise Ubuntu 22.04 LTS Yocto 4.0
I/O Placements	
USB	USB 3.2 Gen 2 x 2 (Type-A) USB 3.2 Gen 2 x 1 (Type-C)
Display Port	HDMI 2.0b x 1 DP 1.2 x 1 DP 1.4a via USB Type C
Ethernet	2.5GbE x 2 (Intel® I226-IT)
COM	RS-232/422/485 x 2
Audio	Audio Jack x 1 (Mic-in+Line-out)
GPIO	40 Pin GPIO x 1
Power Supply	
Power requirement	12V DC-in (Lockable plug)
Power supply type	AT/ATX (ATX as default)
Power Consumption (Typical)	26W~35W
Mechanical	
Mounting	—
Dimensions (WxHxD)	5.27" x 4.13" x 2.56" (134mm x 105mm x 65mm)
Net Weight	2 lbs (0.95kg)
Gross Weight	2.8 lbs (1.3kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) / 0.5 airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	422,053 Hours



# UP Squared Pro 7000 Edge

## Dimension

Unit: mm



## Ordering Information

Part number	CPU	CORE	MEMORY	STORAGE	HEATSINK	VPU
UPN-EDGE-ADLN50-A10-0432	Intel® Processor N50	2 Core	4GB	32GB	FANLESS	—
UPN-EDGE-ADLN97-A10-0432	Intel® Processor N97	4 Core	4GB	32GB	FANLESS	—
UPN-EDGE-ADLN97-A10-0864	Intel® Processor N97	4 Core	8GB	64GB	FANLESS	—
UPN-EDGE-ADLN13-A10-1664	Intel® Core™ i3-N305	8 Core	16GB	64GB	FANLESS	—
UPN-EDGE-ADLN25E-A10-0864	Intel Atom® x7425E	4 Core	8GB	64GB	FANLESS	—
UPN-EDGE-ADLN97-A10-0864-HAILO	Intel® Processor N97	4 Core	8GB	64GB	FANLESS	Hailo-8™ M.2 2280 B+M key AI module via m.2 2280
UPN-EDGE-ADLN25E-A10-0864-HAILO	Intel Atom® x7425E	4 Core	8GB	64GB	FANLESS	Hailo-8™ M.2 2280 B+M key AI module via m.2 2280

## Optional Accessories

Part Number	Description
1255X00032	(TF)AC/DC Adapter.Input AC:100~240V.Output DC:12V.MAX 72W.6.0A.180D.W/ LOCK.EDAC.EA10681U(120)
1702031803	(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12 (for EU)
1702031802	(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FAN.JET.YP12/YC-12 (for USA)
170203180J	(TF)Power Cord.3P.250V 10A.UK type.1830mm (for UK)
170203180E	(TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificat (for Japan)
170203180B	(TF)POWER CORD.3P(M).3P(F).1.8m.250V 10A 180D.CHINA.FAN-JET.YP-03/YC-12 (for China)
1702031811	(TF)Power Cord.3P-125VP.7A.180D.1.8M.TWN/BSML.FANJET.YP-12/YC-12 (for Japan)
9651926001	M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT w/2 cable & antenna
9741364A00	Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna
UP-SATAKIT-A10-0001	SATA KIT for UPN-EDGE-APL01/UPN-EDGE-EHL01/UPN-EDGE-ADLN01

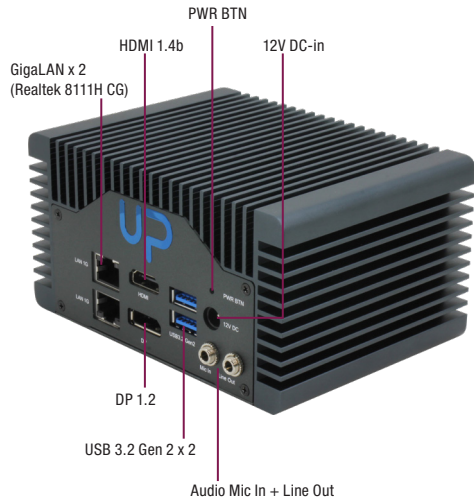
## Packing List

- UP Squared Pro 7000 Edge

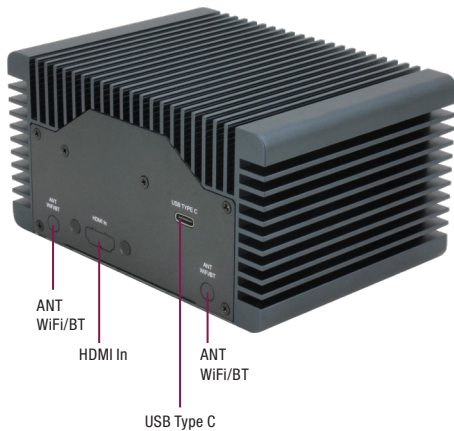
# UP Squared i12 Edge

UP Squared i12 system with 12th/13th generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC

Front View



Rear View



## Features

- 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- Up to 16GB Onboard LPDDR5
- Up to 128GB Onboard SSD
- M.2 2230 E-Key/M.2 2280 M-Key/SATA 6Gb/s x 1
- 1GbE x 2
- HDMI 1.4b x 1, DP 1.2 x 1, DP 1.4a via USB Type-C x 1
- USB 3.2 x 3 (Type A x 2, Type C x 1)
- Audio Jack x 1 (Line out + Mic in)
- 12V DC-in
- TPM 2.0



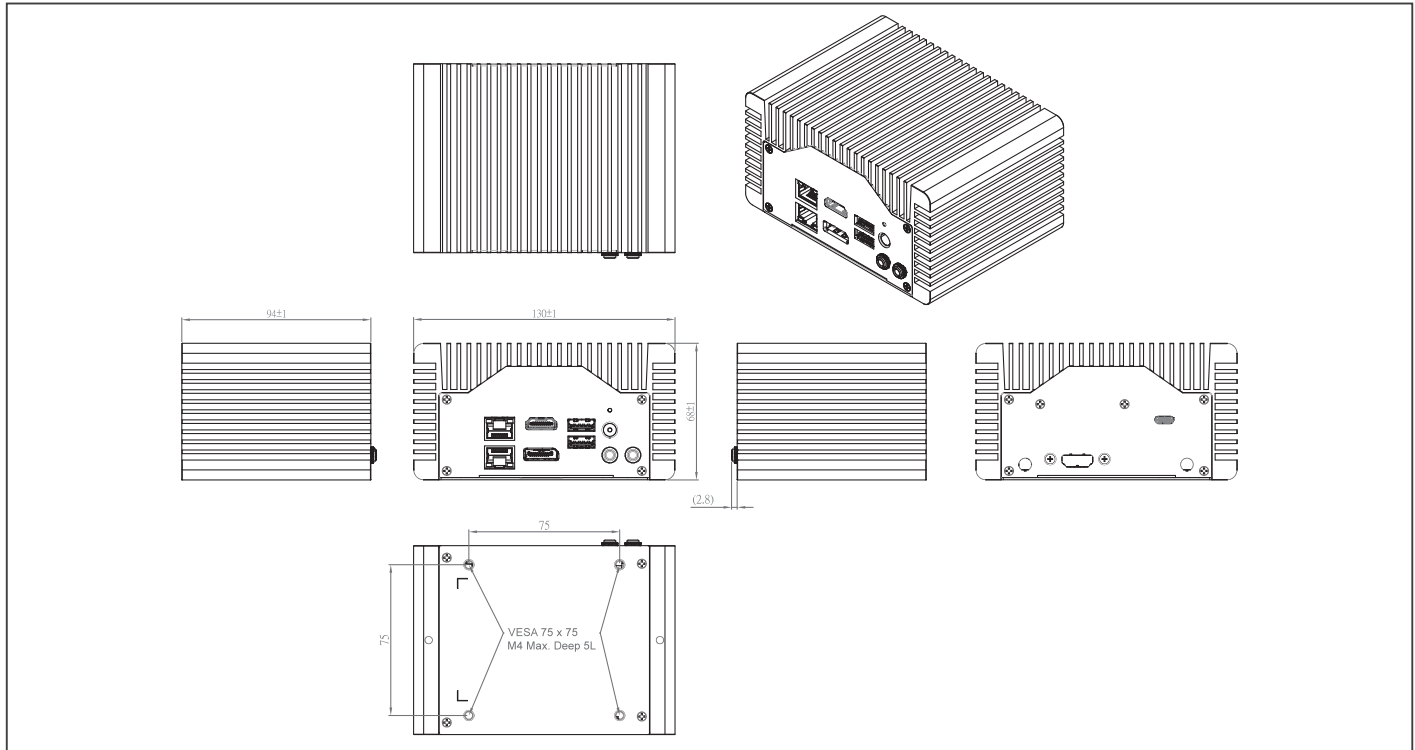
## Specifications

System	
CPU	12th Gen Intel® Core™ Processor SoC Intel® Core™ i7-1270PE Intel® Core™ i7-1260P Intel® Core™ i5-1250PE Intel® Core™ i5-1240P Intel® Core™ i3-1220PE Intel® Celeron® Processor 7305E 13th Gen Intel® Core™ Processor SoC Intel® Core™ i7-1370PE Intel® Core™ i7-1360P Intel® Core™ i5-1340PE Intel® Core™ i3-1320PE
Memory	Up to 16GB Onboard LPDDR5 (Single-Channel)
Graphics	Intel® UHD Graphics
Storage	Up to 128GB Onboard SSD M.2 2280 M-Key NVMe x 1 (PCIe Gen 4.0 [x4]) SATA 6Gb/s x 1
Ethernet	1GbE RJ-45 x 2 (Realtek RTL8111H-CG)
WiFi/BT	Optional: M.2 2230 E-Key
Expansion Slot	M.2 2230 E-Key x 1 (CNVI & PCIe Gen 3.0 [x1]) M.2 2280 M-Key NVMe x 1 (PCIe Gen 4.0 [x4]) SATA 6Gb/s x 1
Security	Onboard TPM 2.0
OS Support	Windows® 10 IoT Enterprise Ubuntu 22.04 LTS Yocto 4
I/O Placements	
USB	USB 3.2 Gen 2 (Type A) x 2 USB 3.2 Gen2 (Type C) x 1
Display Port	HDMI 1.4b/DP 1.2 STACK Connector x 1 DP 1.4a x 1 (via USB Type-C)
Ethernet	1GbE RJ45 x 2 (Dual Stacked) (Realtek 8111H CG)
COM	—
Audio	Audio Jack (Line out + MIC in) x 1
GPIO	—
Power Supply	
Power requirement	12V DC-in
Power supply type	AT (default) /ATX
Power Consumption (Typical)	26W-39W
Mechanical	
Mounting	VESA Mount/Wall Mount(Optional)
Dimensions (WxHxD)	5.12" x 3.7" x 2.68" (130mm x 94mm x 68mm)
Net Weight	1.87 lbs (0.85kg)
Gross Weight	2.36 lbs (1.07kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) / 0.5 airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	522,716



## Dimension

Unit: mm



## Ordering Information

PART NUMBER	CPU	CORE	MEMORY	STORAGE	HEATSINK
UPS-EDGE-ADLPCR-A10-0864	Intel® Celeron® Processor 7305E	1P+4E	8GB	64GB	FANLESS
UPS-EDGE-ADLP13-A10-08128	Intel® Core™ i3-1220PE	4P+4E	8GB	128GB	FANLESS
UPS-EDGE-ADLP15-A10-08128	Intel® Core™ i5-1250PE	4P+8E	8GB	128GB	FANLESS
UPS-EDGE-ADLP15C-A10-16128	Intel® Core™ i5-1240P	4P+8E	16GB	128GB	FANLESS
UPS-EDGE-ADLP17-A10-16128	Intel® Core™ i7-1270PE	4P+8E	16GB	128GB	FANLESS
UPS-EDGE-ADLP17C-A10-16128	Intel® Core™ i7-1260P	4P+8E	16GB	128GB	FANLESS
UPS-EDGE-RAP13-A10-08128	Intel® Core™ i3-1320PE	4P+4E	8GB	128GB	FANLESS
UPS-EDGE-RAP15-A10-08128	Intel® Core™ i5-1340PE	4P+8E	8GB	128GB	FANLESS
UPS-EDGE-RAP17-A10-16128	Intel® Core™ i7-1360P	4P+8E	16GB	128GB	FANLESS
UPS-EDGE-RAP17C-A10-16128	Intel® Core™ i7-1370PE	4P+8E	16GB	128GB	FANLESS

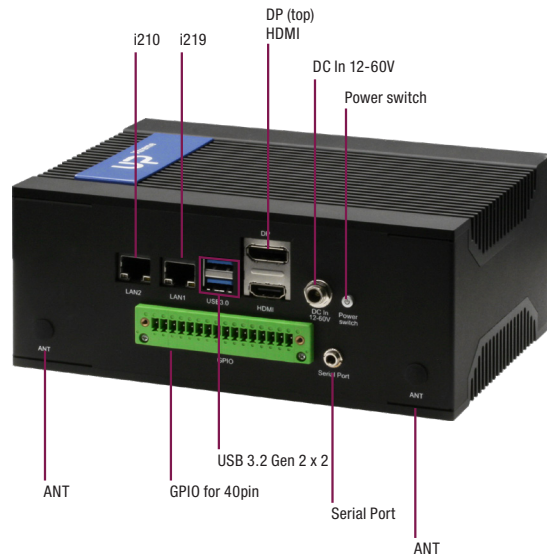
## Optional Accessories

Part Number	Description
1255X00088	(TF)AC/DC Adapter.100-240VAC.120W.12VDC/10A.W/O Lock.DC plug 2.1*5.5*12mm.FSP.FSP120-AHAN3/9NA1206756
1702031803	Power cord for EU.(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12
1702031802	Power cord for US.(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12
170203180J	Power cord for UK.(TF)Power Cord.3P.250V 10A.UK type.1830mm
170203180E	Power cord for Japan.(TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificat
170203180B	Power cord for China.(TF)POWER CORD.3P(M).3P(F).1.8m.250V 10A 180D.CHINA.FAN-JET.YP-03/YC-12
1702031811	Power cord for Taiwan.(TF)Power Cord.3P-125VP.7A.180D.1.8M.TWN/BSMI.FANJET.YP-12/YC-12
1709070500	SATA cable.(TF)SATA CABLE.7P Pitch 1.27mm.50cm
1702150155	SATA power cable(15cm).(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).15cm
1702150306	SATA power cable(30cm).(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).30cm
170010015G	UART to USB cable.(TF)USB Cable.10P 1.0mm Housing.USB A(F)
9741364A00	(TF).M.2 2230 Wireless.802.11 ac/a/b/g/n + BT 5.0.2T2R,Enitl QCNFA364A.w/2 sets of cable and antenna
9651926001	Wireless BT Kit (TF).M.2 2230 WiFi Kit.802.11ac.2.4G/5G.W/BT Intel.9260.NGW6.NV.958867w/2 cable & antenna

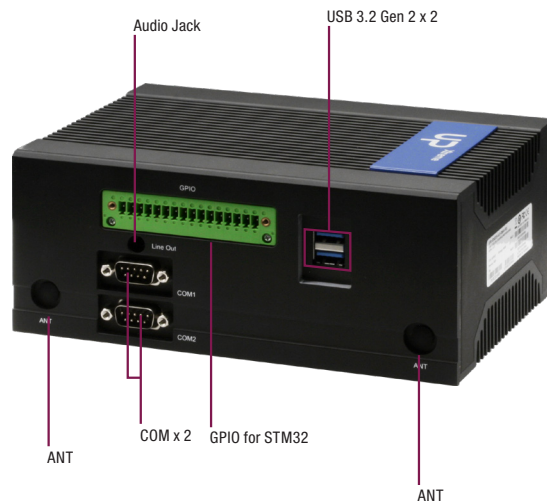
## Packing List

- UP Squared i12 Edge

Front View



Rear View



## Features

- 8th Gen Intel® Core™/Celeron® Processor SoC
- Onboard DDR4 Memory, Max 16GB
- eMMC 64GB
- HDMI 2.0 x 1 (Supports 4K @60Hz)
- COM x 2 (RS-232/422/485)
- 16-pin GPIO Connectors (GPIO x 1 for STM32, GPIO x 1 for 40-pin HAT)
- Audio Jack x 1 (Line out + Mic)
- 12V~60V DC-in
- Fanless Chassis design



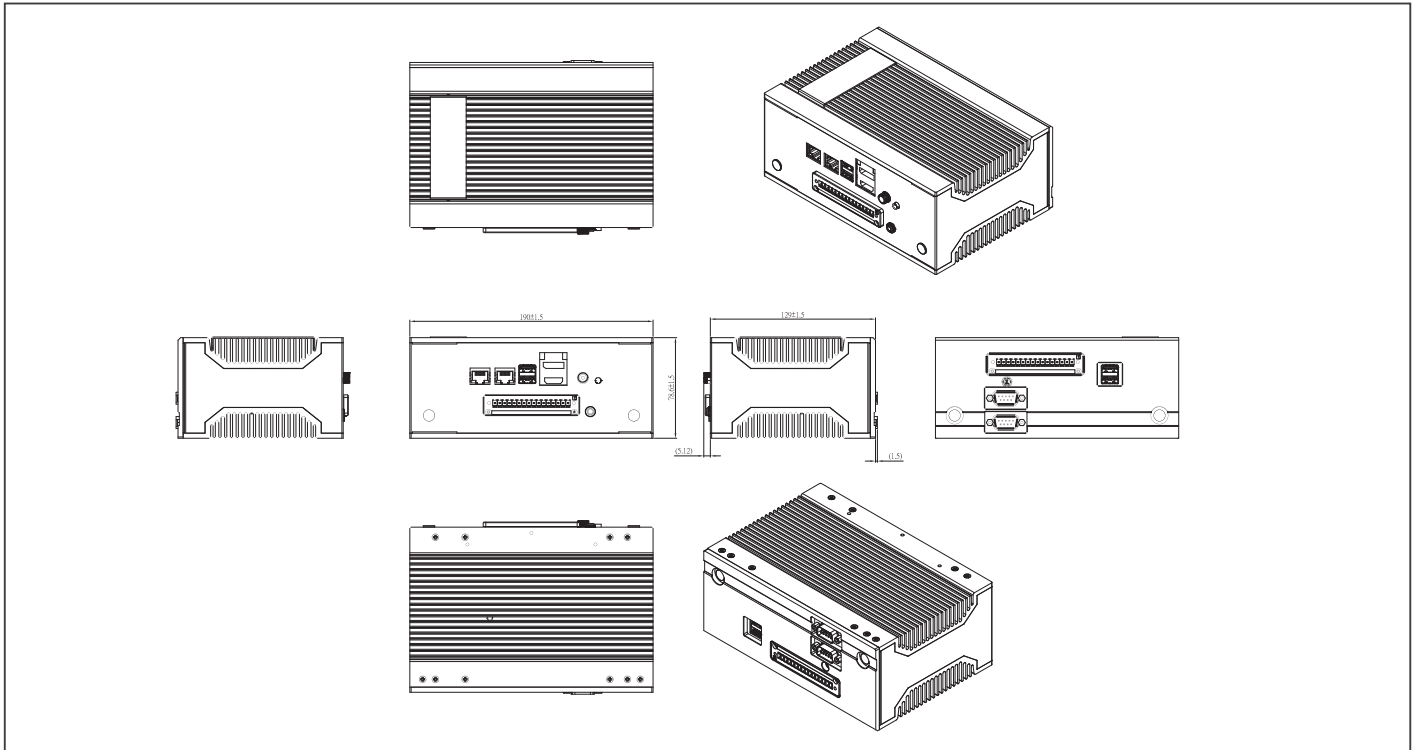
## Specifications

System	
CPU	8th Gen Intel® Core™/Celeron® Processor SoC Intel® Core™ i7-8665UE Intel® Core™ i5-8365UE Intel® Core™ i3-8145UE Intel® Celeron® 4305UE
Memory	Onboard DDR4, up to 16GB Single Channel: 4GB Dual Channel: 8GB, 16GB
Graphics	Intel® UHD Graphics
Storage	Onboard eMMC, 64GB M.2 2280 M-Key x 1 SATA 6Gb/s x 1 Mini Card mSATA x 1
Ethernet	i7/i5 SKU: Intel® I210-AT x 1, Intel® I219-LM x 1 i3/Celeron® SKU: Intel® I210-AT x 1, Intel® I219-V x 1
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	40-pin GPIO x 1 M.2 2230 E-Key x 1 M.2 2280 M-Key x 1 SATA 6Gb/s x 1 mPCIe Slot x 1 100-pin Connector x 1
Security	—
OS Support	Microsoft Windows 10 Linux Ubuntu 22.04 Linux Yocto 3.1
I/O Placements	
USB	USB 3.2 Gen 1 x 4
Display Port	HDMI 2.0 x 1 DP 1.2 x 1 eDP x 1 CEC support with STM32 on HDMI x 1
Ethernet	RJ45 x 2
COM	RS-232/422/485 x 2
Audio	Audio Jack x 1 (Mic-in+Line-out)
GPIO	16-pin terminal block connector x1
Power Supply	
Power requirement	12V - 60V DC-in (Lockable plug)
Power supply type	—
Power Consumption(Typical)	31.8W
Mechanical	
Mounting	—
Dimensions (WxHxD)	7.48" x 5.08" x 3.09" (190mm x 129mm x 78.6mm)
Net Weight	—
Gross Weight	6.61lbs (3kg)
Environment	
Operating Temperature	eMMC: 32°F ~ 140°F (0°C ~ 60°C) SATA: -4°F ~ 158°F (-20°C ~ 70°C) With AI module: 32°F ~ 140°F (0°C ~ 60°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	—
MTBF	250,000 Hours



## Dimension

Unit: mm



## Packing List

- VESA Kit
- DIN-RAIL Kit
- SATA cable
- Screw packs
- UPX-EDGE

## Ordering Information

Part number	CPU	MEMORY	STORAGE	HEATSINK	OTHERS
UPX-EDGECR-A10-0464-F01	Intel® Celeron® 4305UE	4GB	64GB	FANLESS	—
UPX-EDGECR-A10-0464-FX1	Intel® Celeron® 4305UE	4GB	64GB	FANLESS	W/ foundation kit image preload, AI Core X 2280
UPX-EDGEI3-A10-0864-F01	Intel® Core™ i3-8145UE	8GB	64GB	FANLESS	—
UPX-EDGEI3-A10-0864-FX1	Intel® Core™ i3-8145UE	8GB	64GB	FANLESS	W/ foundation kit image preload, AI Core X 2280
UPX-EDGEI5-A10-0864-F01	Intel® Core™ i5-8365UE	8GB	64GB	FANLESS	—
UPX-EDGEI5-A10-0864-FX1	Intel® Core™ i5-8365UE	8GB	64GB	FANLESS	W/ foundation kit image preload, AI Core X 2280
UPX-EDGEI7-A10-1664-F01	Intel® Core™ i7-8665UE	16GB	64GB	FANLESS	—
UPX-EDGEI7-A10-1664-FX1	Intel® Core™ i7-8665UE	16GB	64GB	FANLESS	W/ foundation kit image preload, AI Core X 2280

## Optional Accessories

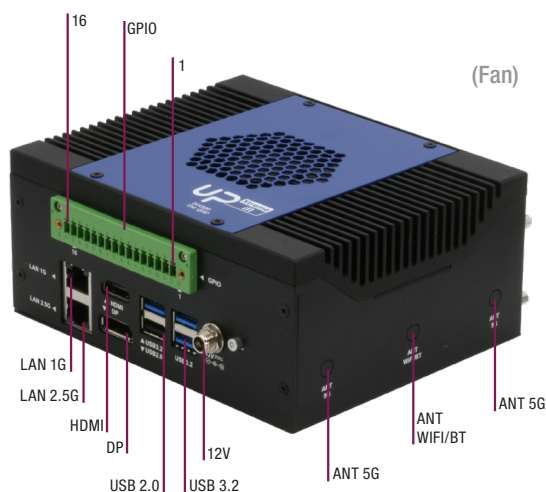
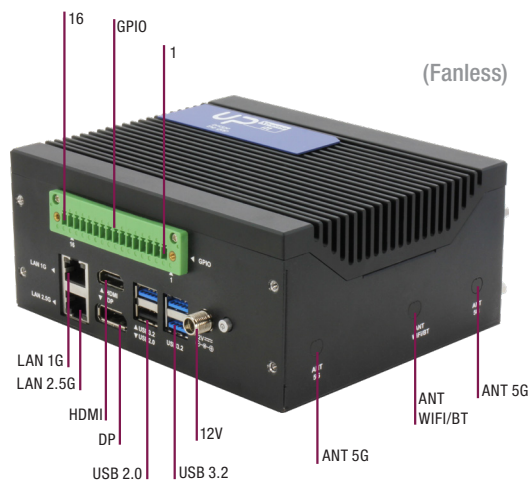
Part Number	Description
125530065A	19Vdc/3.42A.65W power adapter
1702031830	Power cord for USA
9741364A00	(TF).M.2 2230 Wireless.802.11 ac/a/b/g/n + BT 5.0.2T2R,Enli OCNFA364A.w/2 sets of cable and antenna
9741159H00	(TF)Wireless LAN kit.IEEE 802.11 b/g/n.w/BT 4.0/3.0.(AzureWave.AWNB159H). w/cable.& antenna (mini card)
PER-TAIX2-A10-2280	AI Core XM 2280.M.2 2280 B+M key card.with Dual Myriad X.15 mm heat sink with FAN



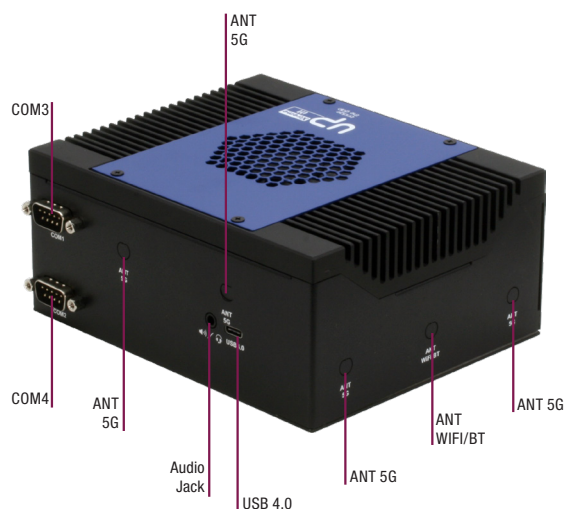
# UP Xtreme i11 Edge

UP System powered by 11th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC

Front View



Rear View



## Features

- 11th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- DDR4 SODIMM Slot x 2 (up to 64GB)
- 16-pin GPIO Connector x 1
- SATA Storage
- M.2 2230 E-Key x 1 (Wi-Fi 6)
- M.2 2280 M-Key x 1 (AI)
- M.2 3052 B-Key x 1 (5G)
- USB 4.0
- 2.5GbE x 1, GbE x 1
- Fanless/Fan design available



## Specifications

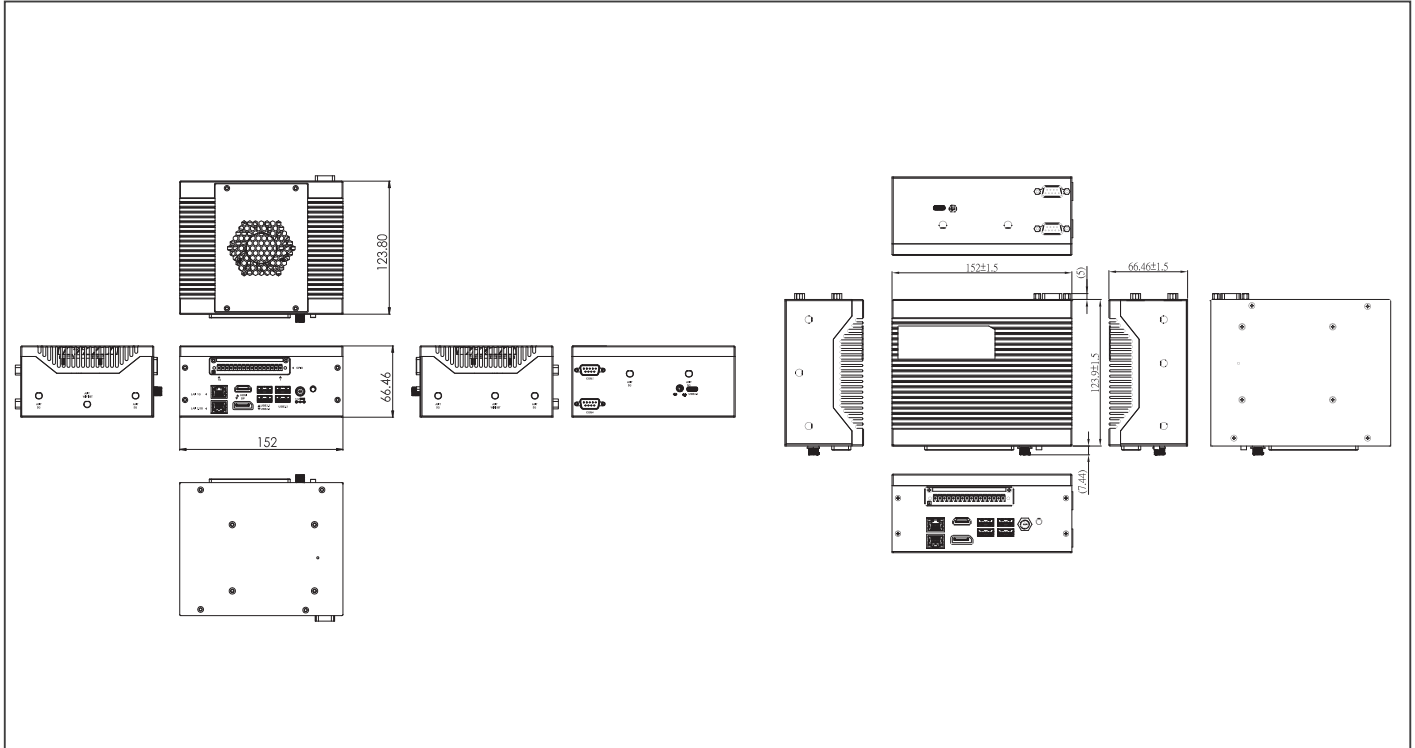
System	
CPU	11th Gen Intel® Core™/Celeron® Processor SoC Intel® Core™ i7-1185G7E Intel® Core™ i7-1185GRE Intel® Core™ i5-1145G7E Intel® Core™ i5-1145GRE Intel® Core™ i3-1115GRE Intel® Celeron® 6305E
Memory	DDR4 SODIMM Slot x 2 (up to 64GB)
Graphics	Intel® Iris® Xe graphics VPU: Hailo-8™ M.2 2280 B+M key AI module via m.2 2280 (Optional by SKU from ordering information)
Storage	M.2 2280 M-Key x 1 for NVMe (PCIe x [2]) SATA 6Gb/s x 1
Ethernet	Intel® I225-T x 1 Intel® I219 x 1 (Intel vPro®)
WIFI/BT	Optional via M.2 2230 E-Key x 1
Expansion Slot	40-pin GPIO x 1 M.2 2230 E-Key x 1 M.2 2280 M-Key x 1 M.2 3052 B-Key x 1 SATA 6Gb/s x 1 PCIe [x4] Slot
Security	Onboard TPM 2.0
OS Support	Microsoft Windows 10 and Windows IoT Linux Ubuntu 22.04 Linux Yocto 3.1
I/O Placements	
USB	USB 2.0 (Type-A) x 1 USB 3.2 Gen 2 (Type-A) x 3 USB 4.0 (Type-C) x 1
Display Port	HDMI 2.0 x 1 DP 1.4 x 1 (via USB Type-C) eDP x 1
Ethernet	RJ45 x 2
COM	RS232/422/485 x 2
Audio	Audio Jack x 1 (Mic-in+Line-out)
GPIO	16-pin terminal block connector x 1
Power Supply	
Power requirement	12V DC-in (Lockable plug)
Power supply type	AT/ATX (ATX as default)
Power Consumption(Typical)	Balance: 32.4W, Max current: 66W
Mechanical	
Mounting	VESA Mount/Wall Mount (optional)
Dimensions (WxHxD)	5.98" x 4.88" x 2.62" (152mm x 123.9mm x 66.5mm)
Net Weight	2.76 lbs (1.25kg)
Gross Weight	3.68 lbs (1.67kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) Fanless Sku memory and Storage requirement: DRAM Module : 0°C ~ 85°C, 2.5" SSD: -45°C ~ 85°C
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Memory	Storage	Heatsink	VPU
UPX-EDGE-TGLCR-A10-0000	Intel® Celeron® 6305E	SO-DIMM	—	FAN	—
UPX-EDGE-TGLI3-A10-0000	Intel® Core™ i5-1145G7E	SO-DIMM	—	FAN	—
UPX-EDGE-TGLI5-A10-0000	Intel® Core™ i5-1145G7E	SO-DIMM	—	FAN	—
UPX-EDGE-TGLI5G7E-A10-0000	Intel® Core™ i5-1145G7E	SO-DIMM	—	FAN	—
UPX-EDGE-TGLI7-A10-0000	Intel® Core™ i7-1185G7E	SO-DIMM	—	FAN	—
UPX-EDGE-TGLI7G7E-A10-0000	Intel® Core™ i7-1185G7E	SO-DIMM	—	FAN	—
UPX-EDGE-TGLI7G7E-A10-0000	Intel® Core™ i7-1185G7E	SO-DIMM	—	FAN	—
UPX-EDGEFL-TGLCR-A10-0000	Intel® Celeron® 6305E	SO-DIMM	—	FANLESS	—
UPX-EDGEFL-TGLI3-A10-0000	Intel® Core™ i3-1115G7E	SO-DIMM	—	FANLESS	—
UPX-EDGEFL-TGLI5-A10-0000	Intel® Core™ i5-1145G7E	SO-DIMM	—	FANLESS	—
UPX-EDGEFL-TGLI5G7E-A10-0000	Intel® Core™ i5-1145G7E	SO-DIMM	—	FANLESS	—
UPX-EDGEFL-TGLI7-A10-0000	Intel® Core™ i7-1185G7E	SO-DIMM	—	FANLESS	—
UPX-EDGEFL-TGLI7G7E-A10-0000	Intel® Core™ i7-1185G7E	SO-DIMM	—	FANLESS	—
UPX-EDGE-TGLI5-A10-16128-HAILO	Intel® Core™ i5-1145G7E	16GB	128GB	FAN	Hailo-8™ M.2 2280 B+M key AI module via m.2 2280

## Optional Accessories

Part Number	Description
1255X00032	(TF)AC/DC Adapter.Input AC.100~240V.Output DC.12V.MAX 72W.6.0A.180D.W/ LOCK.EDAC.EA10681U(120)
1255300960	(TF)Power Adapter.100-240VAC~50/60Hz.12V/8A.96W.DC jack W/lock.FSP.FSP096-AHAN3/9NA0961403 *Use this adapter if select AI Core XM
1702031802	(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12 (for USA)
1702031803	(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12 (for EU)
170203180E	(TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificat (for Japan)
9741364A00	Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna (Enli,QCNFA364A)
9651926001	(TF).M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT Intel.9260.NGWG.NV.958867 w/2 cable & antenna

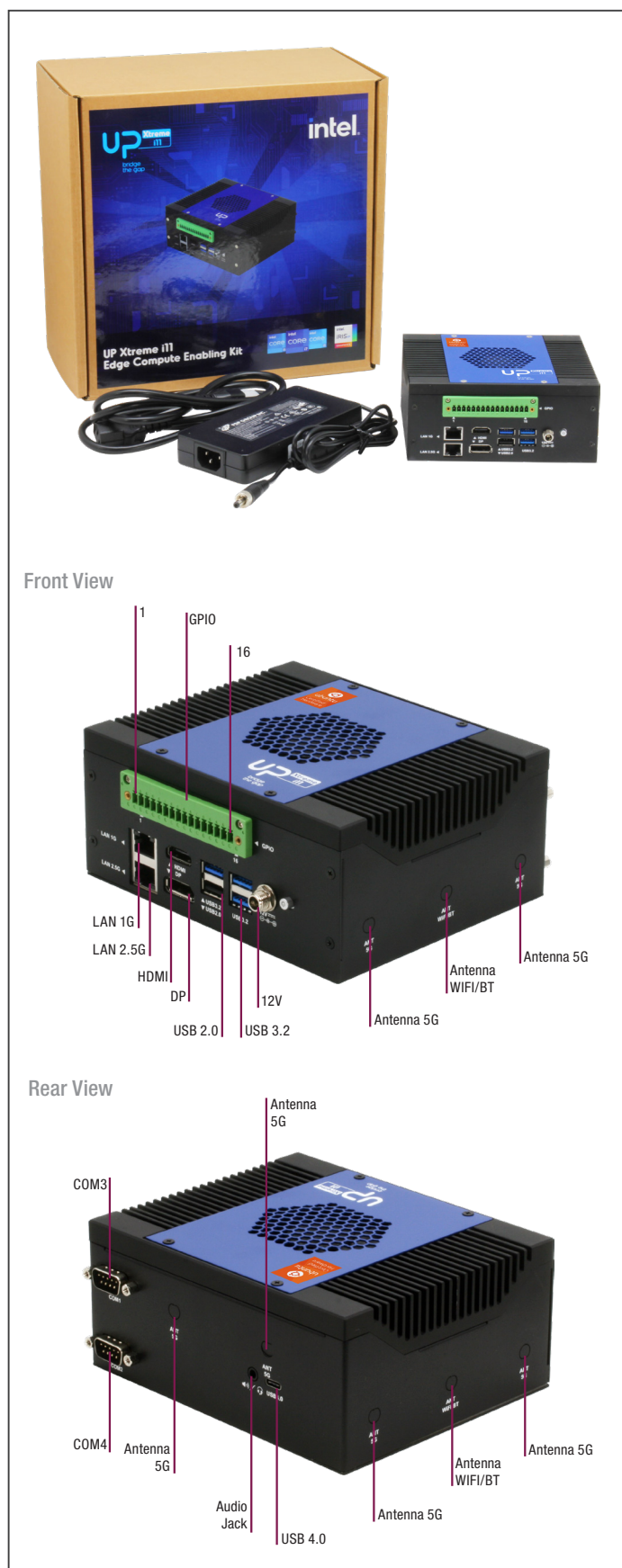
## Packing List

- SATA cable
- SATA power cable
- UP Xtreme i11 EDGE



# UP Xtreme i11 Edge Compute Enabling Kit

11th Generation Intel® Core™ i7/i5 Processor SoC (formerly Tiger Lake UP3)



## Features

- 11th generation Intel® Core™ i7/i5 Processor SoC (formerly Tiger Lake UP3)
- 16-pin GPIO connector x 1
- Pre-load Software
- Supports 5G via M.2 3052
- Supports AI Accelerator via M.2 2280
- Supports WiFi 6
- Supports USB 4.0
- Supports LAN up to 2.5Gbps



## Specifications

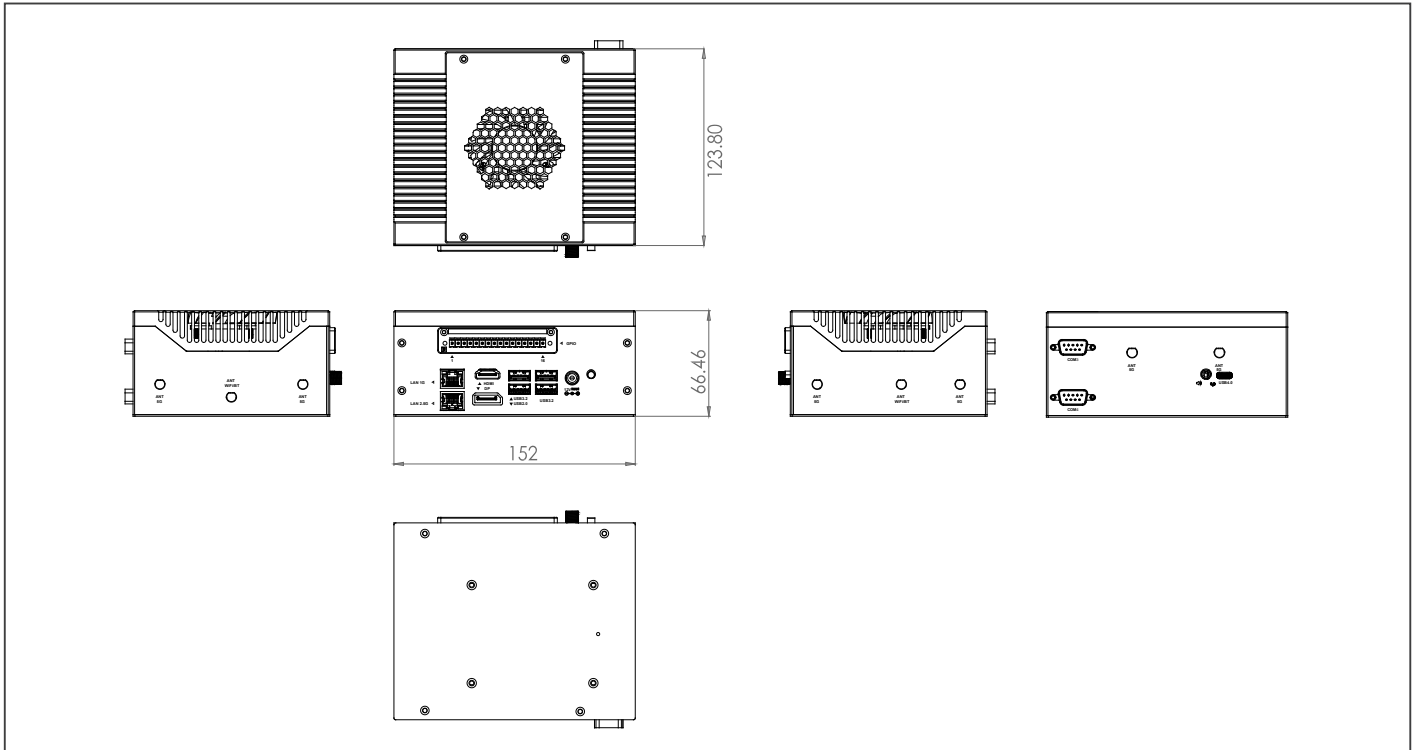
System	
CPU	11th Gen Intel® Core™ Processor SoC Core i7-1185GRE Core i5-1145GRE
Memory	8GB 3200MHz SODIMM modules x 2
Graphics	Intel® Iris® Xe graphics
Storage	128GB 2.5" SSD x 1
Ethernet	Intel® i225IT (TSN) x 1, Intel® i219 (vPRO) x 1
WiFi/BT	Optional
Audio	Realtek ALC888s x 1 (Mic /Line out)
USB	USB 3.2 Gen2 x 3 USB 2.0 x 1 (Type A) USB 4.0 via USB type C
Expansion Slot	M.2 2230 E-Key x 1 M.2 2280 M-Key x 1 M.2 3052 B-Key x 1 with SIM
I/O Placements	
Power	12V DC-in (Lockable plug)/ Phoenix connector
USB	USB3.2 Gen2 x 3 USB2.0 x 1 (Type A) USB4.0 via USB type C
Display Port	HDM 2.0 x 1 /DP 1.4 x 1 eDP x 1, 4K at 60hz panel
Ethernet	Intel® i225IT x 1, Intel® i219 (vPRO) x 1
COM	RS232/422/485 x 2
Environment	
Power	12V (AT & ATX)
Form Factor	4.88"x 5.98" x 2.62" (124mm x 152mm x 66.5mm)
Gross Weight	5.07 lb (2.3kg)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE, FCC Class A
OS Support	Preinstalled Software Ubuntu 20.04 LTS and 5.11 Kernel Intel® Distribution of OpenVINO™ toolkit 2021 R1 Intel® Media SDK Intel® Distribution for Python* MRAA and UPM I/O and sensor libraries for C++, Python*, Java*, and JavaScript* Docker-CE k3s Kubernetes ONNX AWS Greengrass SQLite 3 Node.js cmake gcc Openssl Openssh-server/client git vim tmux



# UP Xtreme i11 Edge Compute Enabling Kit

## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Core	LAN	Memory	Storage	USB	COM Ports	Expansion slot	AI Core XM 2280	GPIO	Display	Power	Operation temp	Preload Software
UPX-EDGE-TGLi7-A10-16128-FDKT	Intel Core i7-1185GRE	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	8GB*2 3200MHz SODIMM	2.5" SATA SSD 128GB	USB 3.2 Gen 2 x 3 USB 2.0 x 1 USB4.0 x 1	2	M.2 2280 M key x 1, M.2 2230 E key x 1, M.2 3052 B key x 1 SATA 3 x 1 PCIe 4.0 x 1 (need customized chassis)	NO	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Ubuntu 20.04 LTS and 5.11 Kernel Intel® Distribution of OpenVINO™ toolkit 2021 R1 Intel® Media SDK Intel® Distribution for Python* MRAA and UPM I/O and sensor libraries for C++, Python*, Java*, and JavaScript* Docker-CE k3s Kubernetes ONNX AWS Greengrass SQLite 3 Node.js cmake gcc Openssl Openssh-server/client git vim tmux
UPX-EDGE-TGLi5-A10-16128-FDKT	Intel Core i5-1145GRE	2	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	8GB*2 3200MHz SODIMM	2.5" SATA SSD 128GB	USB 3.2 Gen 2 x 3 USB 2.0 x 1 USB4.0 x 1	2	M.2 2280 M key x 1, M.2 2230 E key x 1, M.2 3052 B key x 1 SATA 3 x 1 PCIe 4.0 x 1 (need customized chassis)	NO	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	
UPX-EDGE-TGLi7-A10-16128-FDAI	Intel Core i7-1185GRE	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	8GB*2 3200MHz SODIMM	2.5" SATA SSD 128GB	USB 3.2 Gen 2 x 3 USB 2.0 x 1 USB4.0 x 1	2	M.2 2280 M key x 1, M.2 2230 E key x 1, M.2 3052 B key x 1 SATA 3 x 1 PCIe 4.0 x 1 (need customized chassis)	x1	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	
UPX-EDGE-TGLi5-A10-16128-FDAI	Intel Core i5-1145GRE	2	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	8GB*2 3200MHz SODIMM	2.5" SATA SSD 128GB	USB 3.2 Gen 2 x 3 USB 2.0 x 1 USB4.0 x 1	2	M.2 2280 M key x 1, M.2 2230 E key x 1, M.2 3052 B key x 1 SATA 3 x 1 PCIe 4.0 x 1 (need customized chassis)	x1	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	

## Packing List

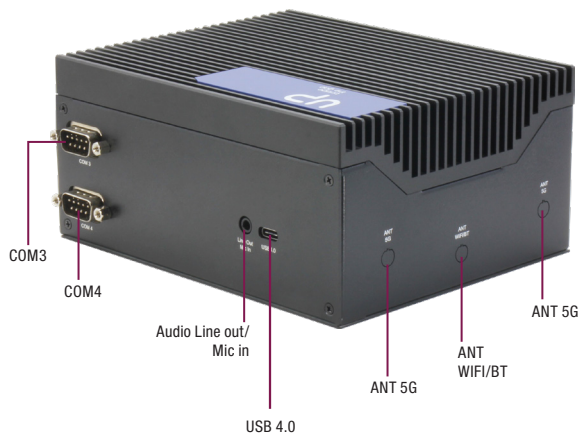
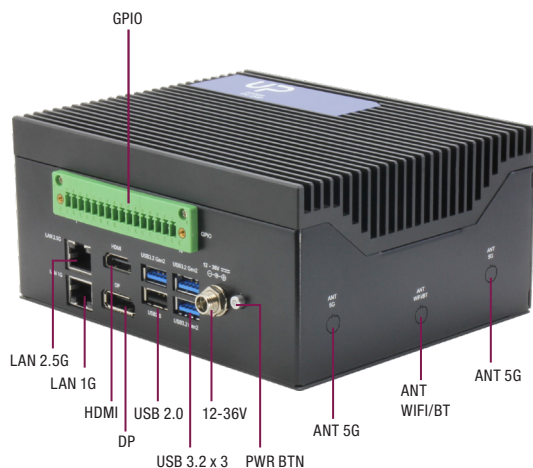
- UPX-EDGE i11 x 1
- 8GB 3200MHz SODIMM modules x 2
- 128GB 2.5" SSD x 1
- PER-TAIX2-A20-2280 x 1 (for UPX-EDGE-TGLi7- A10-16128-FDAI & UPX-EDGE-TGLi5- A10-16128-FDAI only)
- Ubuntu License sticker x 1
- 1255300960  
(TF)Power Adapter:100-240VAC-50/60Hz.12V/8A.96W.DC jack W/lock.FSP.FSP096-AHAN3/9NA0961403  
(Use this adapter if select AI Core XM)
- 1702031802  
(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12
- 1702031803  
(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12

## Optional Accessories

- 170203180E  
(TF)Power cord.3P.125V/7A.1.8M.PSE.YP12/YC12  
Certificate
- 9741364A00  
Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n  
+ BT 4.0, 2T2R, with 2 sets of cable & antenna  
(Enli, QCNFA364A)
- 9651926001  
(TF).M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT  
Intel.9260.NG.WG.NV.958867 w/2 cable & antenna

# UP Xtreme i12 Edge

UP Xtreme i12/13 system with 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC



## Features

- 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- Onboard Dual Channel LPDDR5, up to 32GB
- Support 4 independent displays up to 4K @60Hz
- M.2 2280 M-Key x 2 (PCIe Gen 4)
- M.2 3052 B-Key x 1
- Intel® AX210 WiFi 6 support
- TPM 2.0
- USB 4.0
- Up to 2.5GbE LAN speed
- Wide Range 12V~36V Power Input



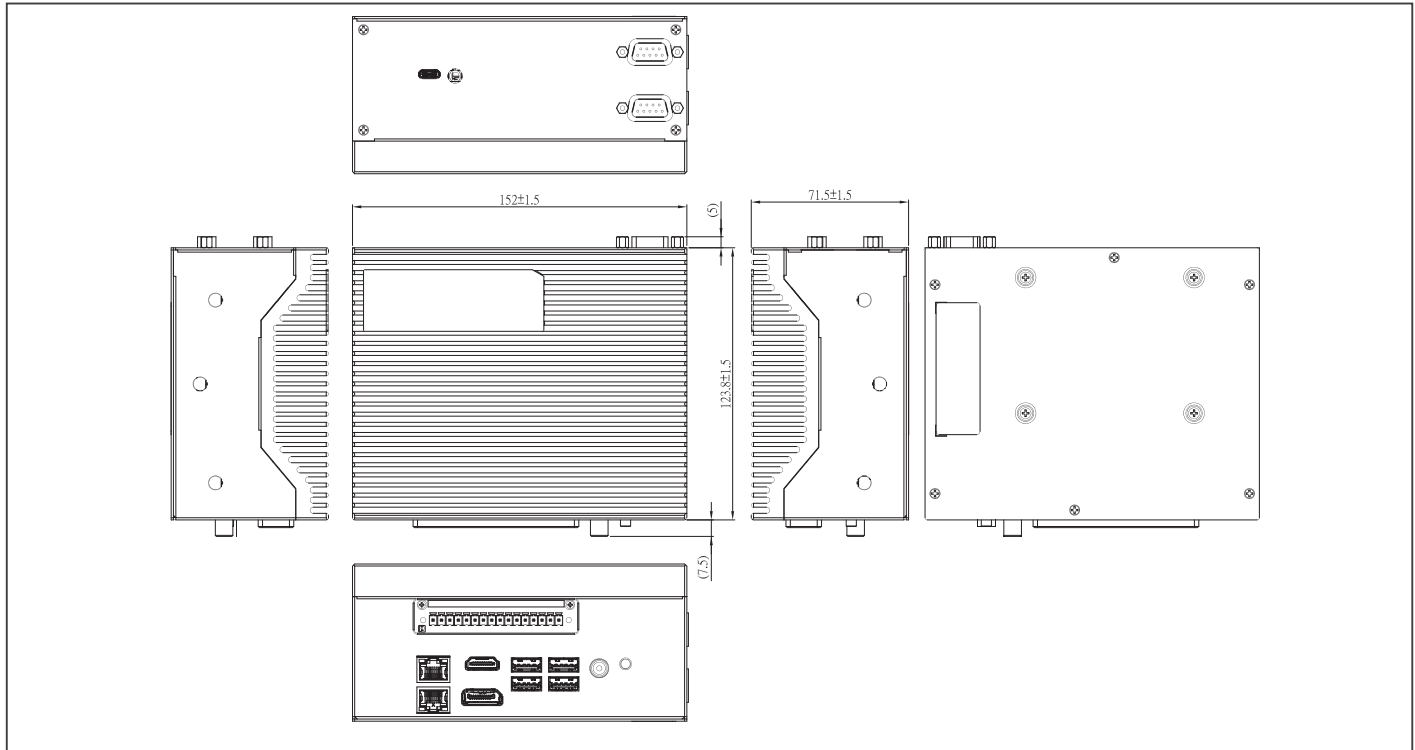
## Specifications

System	
CPU	12th Gen Intel® Core™ Processor SoC Intel® Core™ i7-1270PE Intel® Core™ i7-1260P Intel® Core™ i5-1250PE Intel® Core™ i5-1240P Intel® Core™ i3-1220PE Intel® Celeron® 7305E 13th Gen Intel® Core™ Processor SoC Intel® Core™ i7-1370PE Intel® Core™ i7-1360P Intel® Core™ i5-1340PE Intel® Core™ i3-1320PE
Memory	Up to 32GB onboard LPDDR5
Graphics	Intel® Iris® Xe graphics VPU: Hailo-8™ M.2 2280 B+M key AI module via m.2 2280 (Optional by SKU from ordering information)
Storage	M.2 2280 M-Key x 2 (PCIe Gen 4.0 [x4]) SATA 6Gb/s x 1
Ethernet	Intel® I226-IT x 1 (TSN), Intel® I219 x 1 (vPRO)
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	40-pin GPIO x 1 M.2 2230 E-Key x 1 M.2 2280 M-Key x 2 (PCIe Gen 4.0 [x4]) SATA 6Gb/s x 1 M.2 3052 B-Key x 1 Nano SIM Slot x 1
Security	Onboard TPM 2.0
OS Support	Windows® 10 Enterprise 2021 LTSC, Ubuntu 22.04, Yocto 4.0
<b>I/O Placements</b>	
USB	USB 2.0 (Type-A) x 1, USB 3.2 Gen 2 (Type-A) x 3, USB 4.0 (Type-C) x 1
Display Port	HDMI 2.0b x 1 DP 1.4a x 1 DP 1.4a x 1 (via USB Type-C) eDP 1.4b x 1
Ethernet	RJ45 x 2
COM	RS-232/422/485 x 2
Audio	Audio Jack x 1 (Mic-in+Line-out)
GPIO	16-pin terminal block connector x 1
<b>POWER Supply</b>	
Power requirement	12-36V DC-in (Lockable plug)
Power supply type	AT/ATX (ATX as default)
Power Consumption(Typical)	Intel® Core™ i7-1270PE, LPDDR5 4800MHz 16GB, 5.86A@+ 12V (Typical) Intel® Core™ i7-1270PE, LPDDR5 4800MHz 16GB, 8.05A@+ 12V (Max)
<b>MECHANICAL</b>	
Mounting	VESA Mount/Wall Mount(optional)
Dimensions (WxHxD)	5.98" x 4.87" x 2.81" (152mm x 123.8mm x 71.5mm)
Net Weight	2.95 lbs (1.34kg)
Gross Weight	3.88 lbs (1.76kg)
<b>Environment</b>	
Operating Temperature	0°C - 60°C degree with air flow 0.5m/s
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)



## Dimension

Unit: mm



## Packing List

- UP Xtreme i12 Edge
- SATA cable
- SATA power cable

## Optional Accessories

Part Number	Description
1255X00071	(TF)AC/DC Adapter.Input 100V~240V.output DC 19V.120W.6.32A.DC JACK w/Lock.FSP.FSP120-ABAN3/9NA1208548
1702031802	(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12
1702031803	(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12
170203180E	(TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificat
9741364A00	Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna (Enli,DCNFA364A)
9651926001	(TF).M.2 2230 Wifi Kit.802.11ac.2.4G/5G,W/BT Intel.9260.NG.WG.NV.958867 w/2 cable & antenna
9651210000	Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT5.2,2.4G/5G/6G,with 2 sets of cable & antenna (Intel AX210)
M0UPAD0020	(TF).WALLMOUNT_BRACKET.PMS BLACK C-13.UPX-EDGE-ADLP01

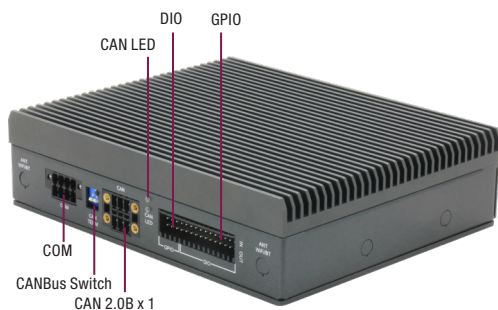
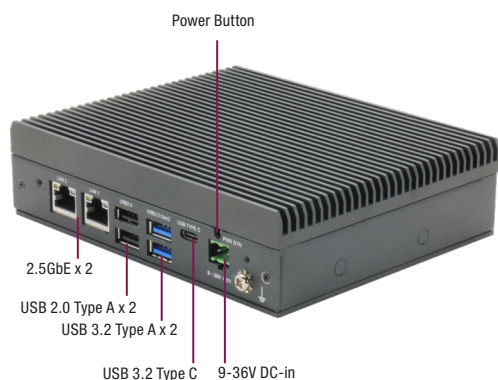
## Ordering Information

Part Number	CPU	Core	Memory	Storage	Heatsink	VPU
UPX-EDGE-ADLPCR-A10-0864	Intel® Celeron® 7305E	1P+4E	8GB	64GB 2.5" SSD	FANLESS	—
UPX-EDGE-ADLP13-A10-08128	Intel® Core™ i3-1220PE	4P+4E	8GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-ADLP15-A10-16128	Intel® Core™ i5-1250PE	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-ADLP17-A10-16128	Intel® Core™ i7-1270PE	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-ADLP15C-A10-16128	Intel® Core™ i5-1240P	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-ADLP17C-A10-16128	Intel® Core™ i7-1260P	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-RAP13-A11-08128	Intel® Core™ i3-1320PE	4P+4E	8GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-RAP15-A11-16128	Intel® Core™ i5-1340PE	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-RAP17-A11-16128	Intel® Core™ i5-1370PE	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-RAP17C-A11-16128	Intel® Core™ i7-1360P	4P+8E	16GB	128GB 2.5" SSD	FANLESS	—
UPX-EDGE-ADLP15-A10-16128-HAILO	Intel® Core™ i5-1250PE	4P+8E	16GB	128GB 2.5" SSD	FANLESS	Hailo-8™ M.2 2280 B+M key AI module via m.2 2280



# UP Xtreme 7100 Edge

UP Xtreme 7100 System powered by Intel® Processor N-series, and Intel® Core™ i3-N305 Processor



## Features

- Intel® Processor N-series and Intel® Core™ i3-N305 Processor SoC
- Low power consumption
- 2.5GbE x 2 (Intel® I226-IT)
- 2-channel CAN 2.0B x 1
- Watchdog timer, Onboard TPM 2.0
- DIO/GPIO via Terminal Block
- Cable-free design
- Wide 9V~36V power input
- Fanless design



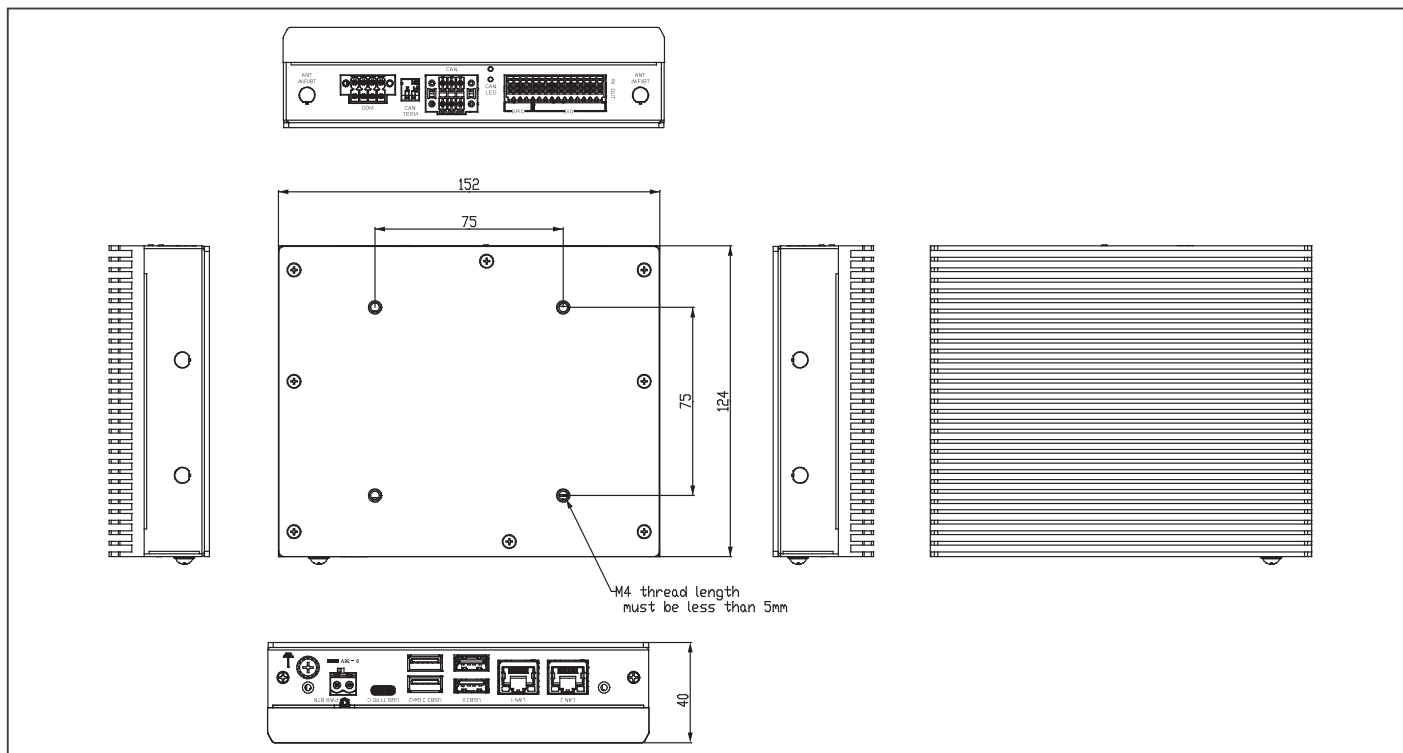
## Specifications

System	
CPU	Intel® Core™ i3-N305 Intel® Processor N97
Memory	Up to 16GB LPDDR5
Graphics	Intel® UHD Graphics for 12th Gen Intel® Processors
Storage	Up to 64GB eMMC
Ethernet	2.5GbE x 2 (Intel® I226-IT)
WIFI/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	M.2 3052 B-Key x 1 with Nano SIM slot (USB 3.0) M.2 2230 E-Key x 1 (USB 2.0/PCIe) M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) 24V 8-in/8-out Digital I/O x 1 via Terminal Block (Output current: 500mA per channel) 6 pin 2-channel CAN 2.0B x 1 via Terminal Block (10 ~ 1000 kbps) DIP Switch for CANBus function x 1 CAN LED indicator x 2 SATA III x 1
Security	Onboard TPM 2.0
OS Support	Ubuntu 22.04 LTS (Kernel 5.15 and kernel 5.19)
I/O Placements	
USB	USB 2.0 (Type-A) x 2 USB 3.2 (Type-A) x 2 USB 3.2 Gen 2 (Type-C) x 1 (Supports DP alt mode)
Display Port	DP 1.4a x 1 (via USB Type-C)
Ethernet	RJ45 x 2
COM	RS-232/422/485 x 1 (Terminal Block) (Default RS232)
Audio	—
GPIO	6 pin GPIO x 1 via Terminal Block
POWER Supply	
Power requirement	9-36V
Power supply type	AT/ATX (AT as default)
Power Consumption(Typical)	52W~55W
MECHANICAL	
Mounting	75mm x 75mm VESA mount, optional Wall mount kit
Dimensions (WxHxD)	5.98" x 4.8" x 1.7" (152mm x 124mm x 40mm)
Net Weight	2.21lb (1.0Kg)
Gross Weight	3.31lb (1.5Kg)
Environment	
Operating Temperature	32°F ~ 131°F (0°C ~ 55°C)/0.5m/s airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	421,998
Certification	CE/FCC Class A, RoHS Compliant, REACH



## Dimension

Unit: mm



## Packing List

- UPX-EDGE-ASL01 x 1
- DC in Phoenix
- Block Connector x 1
- RS232/422/485 Block x 1
- DIO/GPIO Phoenix Connector x 1
- CAN Phoenix Connector x 2

## Ordering Information

Part Number	CPU	Memory	Storage
UPX-EDGE-ASLN97-A10-0864	Intel® Processor N97	8GB	64GB
UPX-EDGE-ASLN13-A10-1664	Intel® Core™ i3-N305	16GB	64GB

## Optional Accessories

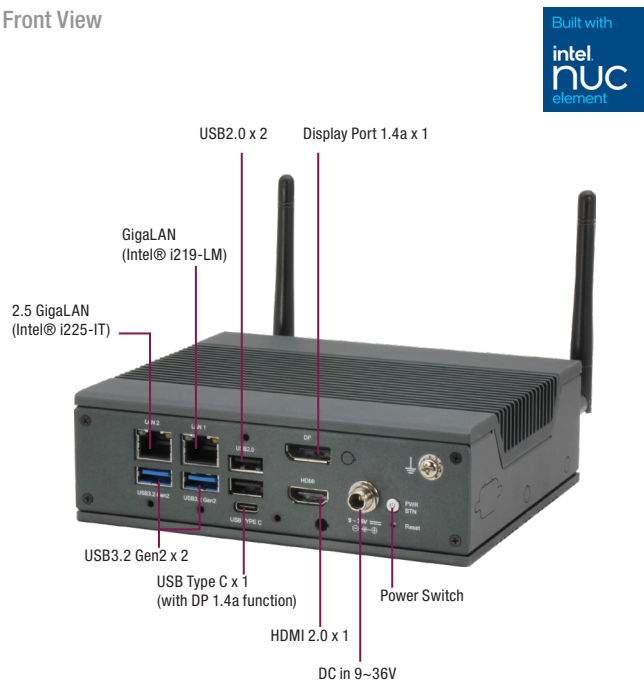
Part Number	Description
1255X00091	12VDC/6A Adapter
1702031803	Power cord for EU
1702031802	Power cord for US
170203180J	Power cord for UK
170203180E	Power cord for Japan
170203180B	Power cord for China
1702031811	Power cord for Taiwan
9651210000	Wireless LAN Kit M.2 2230 802.11ax/ac/a/b/g/n + BT5.2,2.4G/5G/6G,with 2 sets of cable & antenna
9651UPEG00	Wall Mount Bracket kit 183*125*4mm
9651UPEG01	Shock Absorbers kit



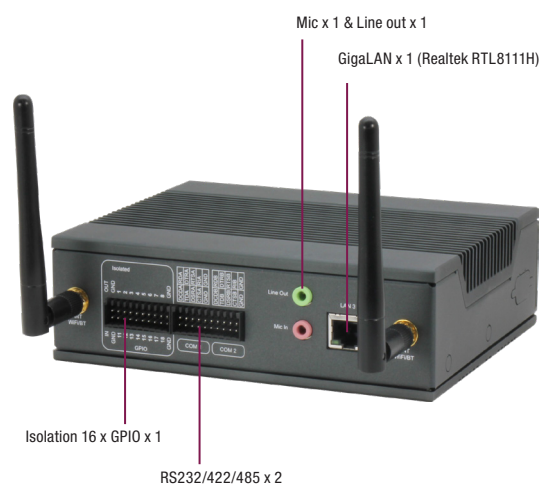
# UP Element i12 Edge

UP Element i12 system powered by Intel® NUC 12 Compute Element

Front View



Rear View



## Features

- 12th generation Intel® Core™ i5-1235U Processor SoC
- LPDDR5 memory 8GB/16GB
- Isolation 16pin GPIO connector x 1
- Support 5G via M.2 3052
- Support AI Accelerator via M.2 2280
- Built-in WiFi 6E & Bluetooth (with CE-RED certified)
- LAN port x 3 and 1 for 2.5Gbps
- Optional CANBUS 2.0B module
- Support OOB function in LAN1(for vPRO version)
- Fanless design



## Specifications

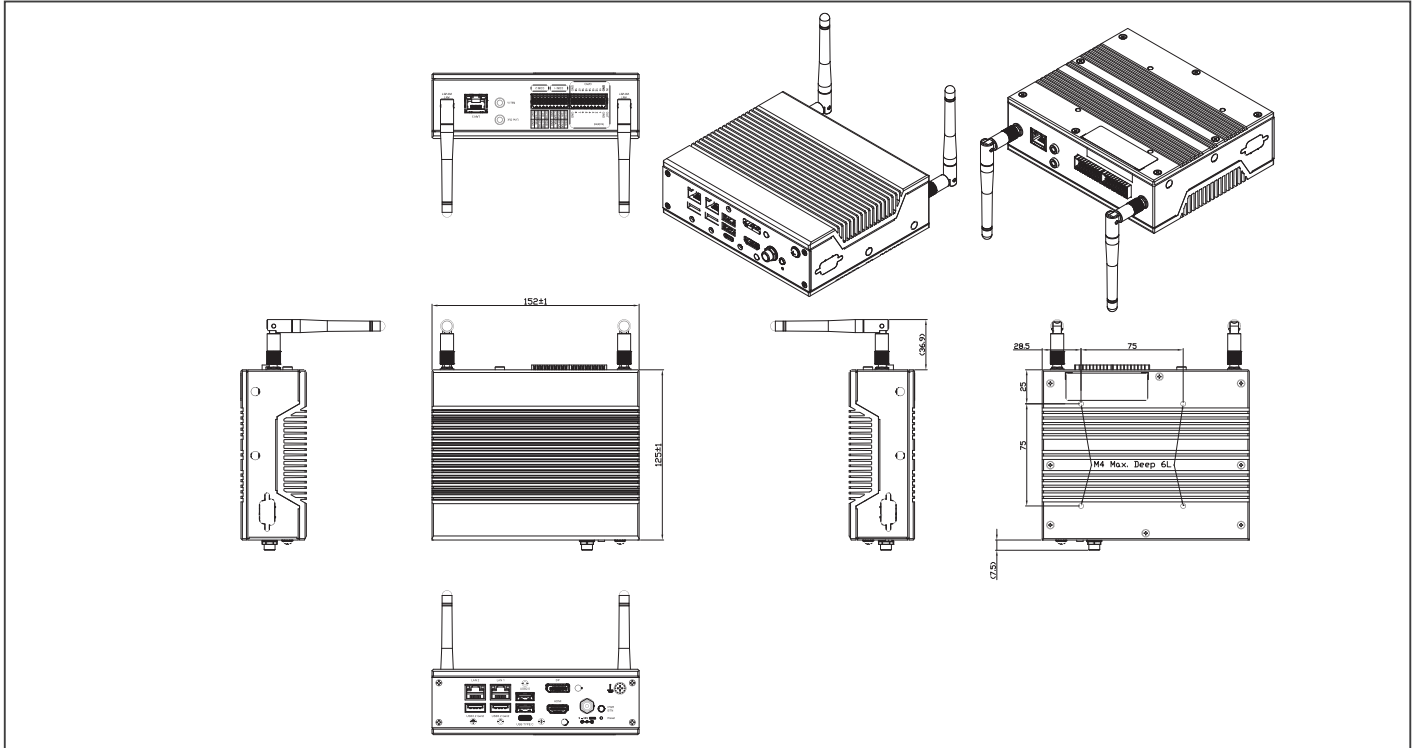
System	
CPU	Intel® Core™i5-1235U Processor SoC
Memory	Onboard LPDDR5 8GB / 16GB
Graphics	Intel® Iris® Xe Graphics
Storage	Optional with M.2 2280 M-key x 2
Ethernet	GbE x 2 / 2.5GbE x 1 (All three support PXE function) Intel® i225-IT for 2.5G Gigabit Ethernet Intel® i219-LM for 1G Gigabit Ethernet Realtek RTL8111H for 1G Gigabit Ethernet
WiFi/BT	Intel® AX211 Wi-Fi 6E (802.11ax)
Expansion Slot	M.2 3052 USB3.0/PCIe B-key x 1 (with Nano SIM slot) M.2 2280 SATA/PCIe Gen3.0 x2 M-key x 1 M.2 2280 PCIe Gen4.0 x4 M-key x 1
Security	TPM 2.0
OS Support	Microsoft Windows 10 Linux: Ubuntu 22.04 LTS
I/O Placements	
USB	USB 3.2 Gen 2 Type A x 2 USB 2.0 Type A x 2 USB 3.2 Gen 1 Type C (support DP 1.4a) x 1
Display Port	HDMI 2.0b x 1 DP 1.4a x 1
Ethernet	RJ45 x 3
COM	RS232/422/485 x 2 (pin header type)
Audio	Mic x 1 / Line out x 1
GPIO	Isolation GPIO x 8in/8out (pin header type)
Power Supply	
Power requirement	9-36V
Power supply type	Ø2.5 Lockable connector
Power Consumption(Typical)	Power Consumption (Typical): Intel® Core™ i7-1255U, LPDDR5 5200MHz 32GB, 4.47A@ 12V Power Consumption (Maximum): Intel® Core™ i7-1255U, LPDDR5 5200MHz 32GB, 9.6A@ 12V
Mechanical	
Mounting	75mm x 75mm VESA mount, optional Wall mount kit
Dimensions (WxHxD)	5.98" x 4.9" x 1.8" (152 x 125 x 48 mm)
Net Weight	2.21lb (1.0Kg)
Gross Weight	3.31lb (1.5Kg)
Environment	
Operating Temperature	With Heatsink: 32°F ~ 140°F (0°C ~ 60°) with air flow 0.5m/s (According Industrial wide temp. M.2 SSD)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	—
MTBF	—
Certification	CE-RED/FCC Class A, RoHS Compliant, REACH Shock: MIL-STD-202G Method 213B, Table 213-1 Condition A(with Absorber) Vibration: IEC 60068-2-6: 1G, 5-500Hz, 3 axes IEC 60068-2-64: Operating 5Grms, 5-500 Hz, 3 axes





## Dimension

Unit: mm



## Ordering Information

Part number	CPU	Memory	Storage	Power Adapter	Power cord	COM port	GPIO	Fan
UPE-EDGE-HBI5-A10-0800	i5-1235U	8GB	—	—	—	2	16	Fanless
UPE-EDGE-HBI5-A10-0825	i5-1235U	8GB	256GB SSD	120w adapter	US / EU	2	16	Fanless

## Packing List

- UP Element i12 Edge
- Screw Bag for VESA
- WiFi Antenna x 2pcs
- Plug & Push Terminal Block x 2pcs

## Optional Accessories

Part Number	Description
1255X00071	(TF)AC/DC Adapter.Input 100V~240V.output DC 19V.120W.6.32A.DC JACK w/Lock.FSP.FSP120-ABAN3
1702031802	(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA. FANJET.YP12/YC-12
1702031803	(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE. FAN-JET.YP-22/YC-12
170203180E	(TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificate
9651UPEG00	(TF)Wall Mount Bracket kit 183*125*4mm for UPE-EDGE
9651UPEG01	(TF)Shock Absorbers kit for UPE-EDGE

# UP Squared Pro 710H Edge

**PRELIMINARY**

UP Squared Pro 700H/710H Edge System with Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3-N305 Processors

Front View



Rear View



## Features

- Intel Atom® x7000E Series, Intel® Processor N-series, and Intel® Core™ i3-N305 Processor
- Onboard Hailo-8™ edge AI processor
- Onboard LPDDR5 Memory, up to 16GB
- Onboard eMMC Storage, up to 64GB
- 2.5GbE x 2 (Intel® I226-IT)
- USB 3.2 (Type-A) x 2
- 40-pin GPIO x 1
- DP 1.2 x 1/HDMI 2.0b x 1
- RS-232/422/485 x 2
- M.2 2230 E-Key/M.2 2280 M-Key (Optional: M.2 3052 B-Key x 1)
- Onboard TPM 2.0
- 12V~36V DC-in with Phoenix Connector



## Specifications

System	
CPU	Intel® Core™ i3-N305 Intel® Processor N97 Onboard Hailo-8™ edge AI processor
Memory	Up to 16GB onboard LPDDR5
Graphics	Intel® UHD Graphics for 12th Gen Intel® Processors
Storage	Up to 64GB onboard eMMC
Ethernet	2.5GbE x 2 (Intel® I226-IT)
WiFi/BT	Optional with M.2 2230 E-key x 1
Expansion Slot	M.2 2230 E-Key x 1 (CNVI, PCIe Gen 3 [x1], USB 2.0) M.2 2280 M-Key x 1 (PCIe Gen 3 [x2], USB 2.0, Colay with M.2 3052 B-Key) M.2 3052 B-Key x 1 (USB 3.2 Gen 2 only) (Optional)
Security	Onboard TPM 2.0
OS Support	Windows® 10 IoT Enterprise Ubuntu 22.04 LTS Yocto 4.0
I/O Placements	
USB	USB 3.2 Gen 2 x 2 (Type-A) USB 3.2 Gen 2 x 1 (Type-C)
Display Port	HDMI 2.0b x 1 DP 1.2 x 1
Ethernet	2.5GbE x 2 (Intel® I226-IT)
COM	RS-232/422/485 x 2
Audio	—
GPIO	40 Pin GPIO x 1
Power Supply	
Power requirement	12V-36V DC-in Phoenix connector (Optional: Lockable plug)
Power supply type	AT/ATX (ATX as default)
Power Consumption(Typical)	TBD
Mechanical	
Mounting	VESA Mount/Wall Mount (Optional)
Dimensions (WxHxD)	5.28" x 4.13" x 2.36" (134mm x 105mm x 60mm)
Net Weight	TBD
Gross Weight	TBD
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) / 0.5 airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	TBD
Certification	CE/FCC Class A, RoHS Compliant, REACH





ES France - Mobilité & Systèmes Embarqués  
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# 09



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# 09

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## *Turn-Key Chassis Solutions*



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Tél. 01 47 95 99 80  
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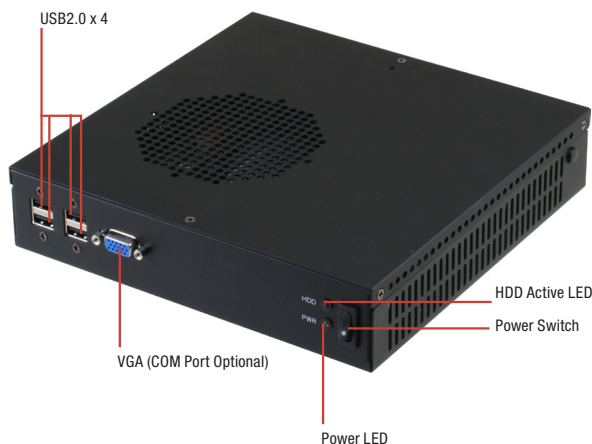


e-mail : [mse@es-france.com](mailto:mse@es-france.com)  
Site Web : [www.es-france.com](http://www.es-france.com)

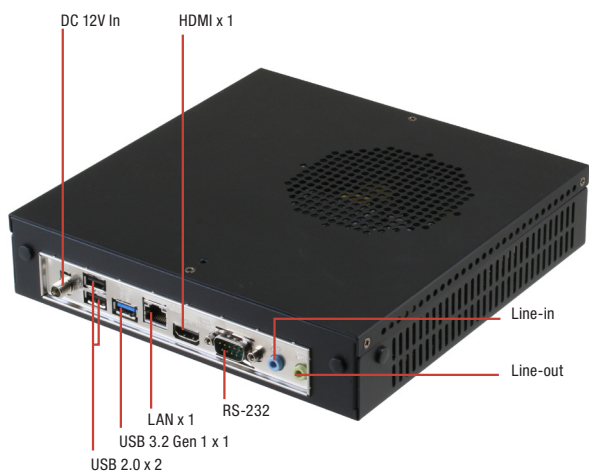
# ACS-1U01-BT4

Fanless Solution with Intel® Atom® J1900/ N2807 Processor

Front View



Rear View



## Features

- Intel® Atom® J1900/ N2807 Processor
- DDR3L 1333 SODIMM x 2, Up to 16GB (J1900), DDR3L 1333 SODIMM x 1, Up to 4GB (N2807)
- Dual Independent Display: VGA + HDMI
- Rich IO Supported: USB 3.2 Gen 1 x 1, USB 2.0 x 4~7
- Compact Size, Low Power & Fanless Solution



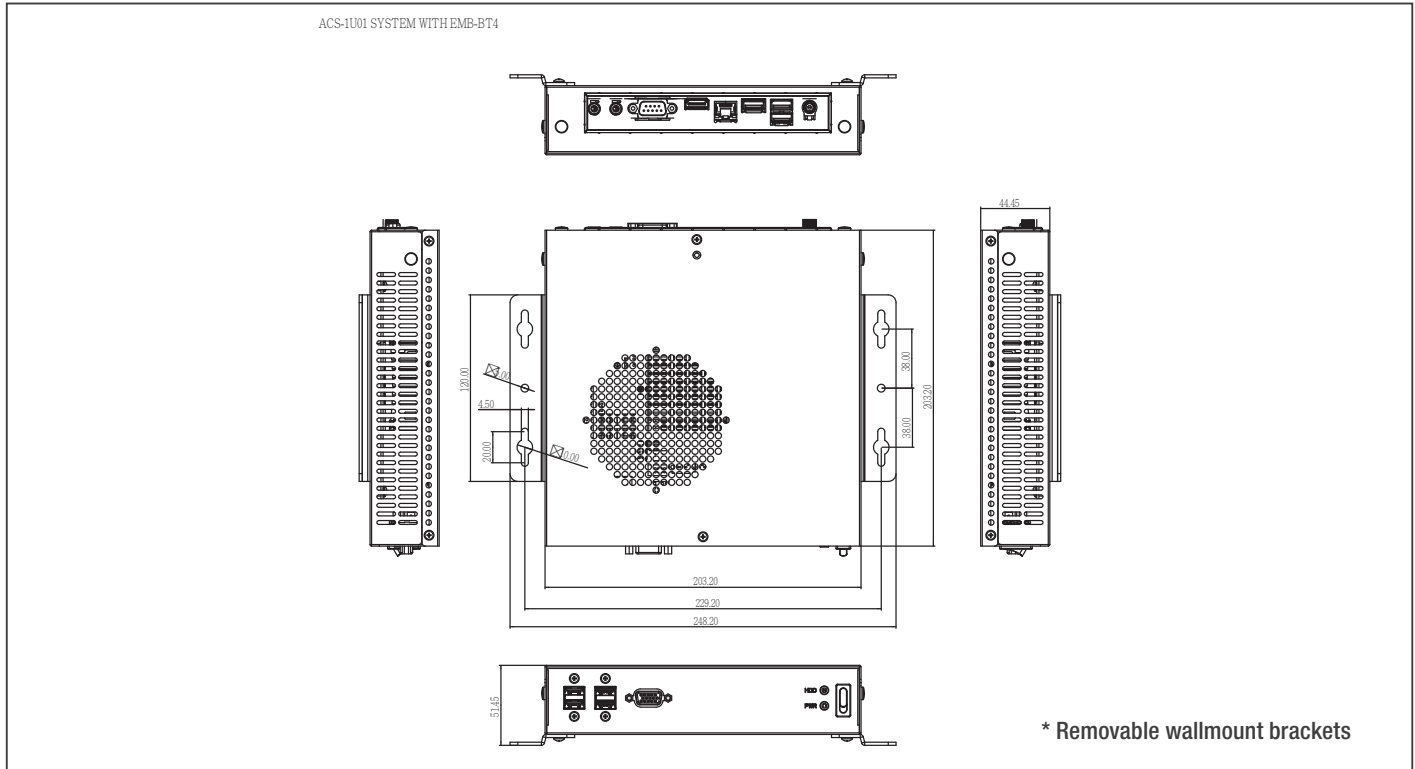
## Specifications

System		
CPU	Intel® Atom® J1900 Processor (4C @ 2.00 GHz CPU, 688/854 MHz GFX, 10W TDP), Intel® Atom™ N2807 Processor (2C @ 1.58 GHz CPU, 313/750 MHz GFX, 4.3W TDP)	
Chipset	—	
System Memory	204-pin SODIMM x 2 up to 8 GB (for J1900) 204-pin SODIMM x 1 up to 4 GB (for N2807) DDR3L 1333 MHz, Non-ECC, un-buffered memory, Dual-channel memory architecture	
I/O Chipset	Fintech 81866D	
Display Interface	Chipset	Intel® Graphics Media Accelerator
	DP	VGA x 1, Up to 1920 x 1200 @60 Hz ; HDMI x 1, Up to 1920 x 1200 @60 Hz
Storage Devices	2.5" HDD, Full-Size Mini-Card (optional)	
Network	LAN	Realtek® PCIe Gb LAN 8111G x 1
I/O		
Front I/O	USB	USB 2.0 port x 4
	Audio	—
	Display	VGA x 1
	Others	On/Off Button x 1, Power LED + HD LED x 1, (COM port optional if not use VGA port)
Rear I/O	USB	USB 3.2 Gen 1/2.0 port x 1, USB 2.0 port x 2
	Audio	Line-out (green) x 1, Line-in (blue) x 1
	Display	HDMI x 1
	LAN	RJ-45 connector x 1
	Power	DC Power x 1
Expansion	Others	RS-232 connector x 1
	Mini PCIe	Full-size Mini-Card (PCIe +USB or mSATA) + SIM Card (mSATA default) x 1, Half-size Mini-Card (PCIe +USB) x 1
	Storage	Full-size Mini-Card slot (mSATA default) x 1, SATA3 (6.0Gb/s) x 1, SATA2 (3.0Gb/s) x 1, SATA power connector x 1
	Others	RS-232 9-pin int. box header x 1, RS-232/422/485 9-pin box header x 1, 5-pin USB 2.0 header (p=2.00mm) x 2
Indicator	Front	Power LED x 1, HDD Active LED x 1
	Rear	—
Power		
Battery	Lithium battery	
Power Requirement	DC: 12V	
Mechanical		
Dimension (WxHxD)	8" x 8" x 1.75" (203.20mm x 203.20mm x 44.45mm)	
VESA Mounting	Wallmount	
Anti-Vibration	0.5 Grms/ 5~ 500Hz/ operation – HDD	
Anti-Shock	10 G peak acceleration (11 msec. duration)	
Environmental		
Operating temperature	32°F ~ 122°F (0°C ~ 50°C)	
Certificate	CE & FCC Class A	
Operating System		
MS Windows	Windows® 7 32/64-bit, Windows® 8.1 32/64-bit	
Linux	Fedora	



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM Module	Display	Cooler	Storage	LAN	USB	Serial Port	Expansion Slot	Power	Mounting
ACS-1U01-BT4-1900-V10	J1900 2.42G/2M	—	VGA x 1 HDMI x 1	Fanless w/ CPU heatsink	2.5" HDD shelf, Full-Size Mini-Card (mSATA) x 1	GbE x 1	USB 3.2 Gen 1 x 1 USB 2.0 x 7	RS-232 x 1, RS-232/422/485 x 1 (W/O VGA)	Half-size Mini-Card x 1 w/o SIM Slot	DC12V	wallmount

## Packing List

- Wallmount Kit
- 2.5" HDD tray
- ACS-1U01-BT4 (1U Chassis w/ EMB-BT4)

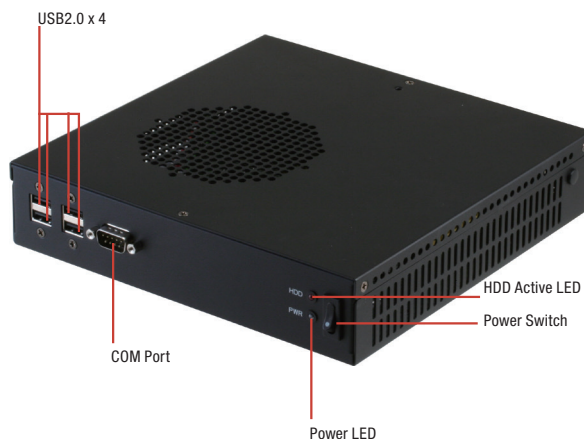
## Optional Accessories

- **1702031802**  
Power Cord (US & Taiwan Type)
- **1702031803**  
Power Cord (European Type)
- **170203180B**  
Power Cord (China Type)
- **170203180E**  
Power Cord (Japanese Type)
- **1255300607**  
60W Power Adapter

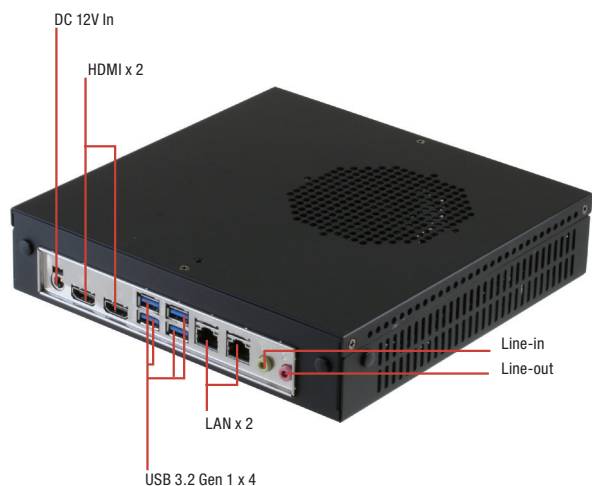
# ACS-1U01-H110B

Mini-ITX 1U Chassis with 6th Generation Intel® Processor

Front View



Rear View



## Features

- LGA 1151 Socket For 6th Generation Intel® 14 nm Processor
- Intel® H110
- DDR4 2133/1867 MHz SODIMM x 2, Up to 32GB
- Dual Independent Display: HDMI x 2, BOM Changeable to DP
- Rich IO Supported: USB 3.2 Gen 1 x 4, USB 2.0 x 4
- Compact Size, Low Profile



## Specifications

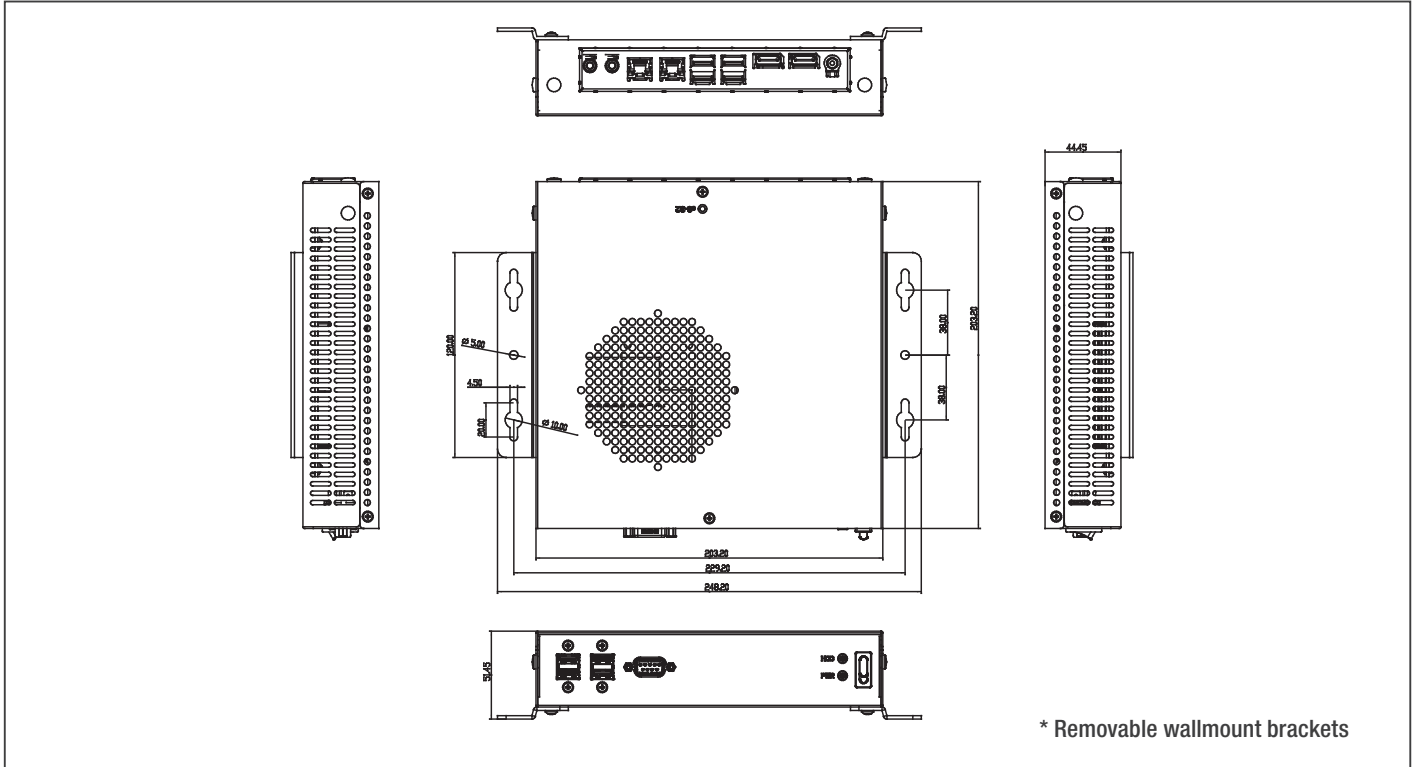
System		
CPU Board	EMB-H110B-A10-HH	
CPU	Intel® Skylake 14nm LGA 1151 socket Processor, Max. 65W TDPs (follow thin mini-ITX)	
Chipset	Intel® H110	
System Memory	2 x SODIMM, Max. 32GB, DDR4 2133/1867 MHz, Non-ECC, Un-buffered	
I/O Chipset	NCT6791D	
Display Interface	Intel® HD Graphics DP(BOM Change, default HDMI): Up to 1920 x 1200 @60Hz, with Digital Audio HDMI: Up to 4096 x 2304 @24Hz / 2560 x 1600 @60Hz, with Digital Audio LVDS: Up to 1920 x 1200 @60Hz, Dual Channel 18/24-bit coloy eDP: Up to 4096 x 2304 @60Hz	
Storage Devices	2.5" HDD x 1, Full-Size Mini-Card(mSATA default, PCIe + USB optional) x 1	
LAN	Realtek® PCIe Gb LAN 8111G x 2	
I/O		
Front I/O Ports	USB 2.0 port x 4 Power S/W x 1 COM port x 1 HDD LED x 1 POWER LED x 1	
Rear I/O Ports	USB 3.2 Gen 1 port x 4 Mic-In (pink) x 1 Line-Out (green) x 1 HDMI x 2 (BOM Changeable to DP) RJ-45 Connector x 2 DC Power jack x 1	
Expansion	Mini PCIe	Half-Size Mini-Card slot (PCIe + USB) x 1, Full-Size Mini-Card (Default mSATA, PCIe + USB optional) x 1
	Storage	Full-size Mini-Card slot (mSATA default) x 1, SATA3(6.0Gb/s) x 1, SATA power connector x 1
	Others	RS-232 9-pin int. box header x 1, RS/232/422/485 9-pin box header x 1, 5-pin USB 2.0 header(p=2.00mm) x 2
Power		
Battery	Lithium battery	
Power Requirement	DC: 12V	
Mechanical		
Dimension (WxHxD)	8" x 8" x 1.75" (203.20mm x 203.20mm x 44.45mm)	
VESA Mounting	Wallmount	
Anti-Vibration	0.5 Grms/ 5~ 500Hz/ operation - HDD	
Anti-Shock	10 G peak acceleration (11 msec. duration)	
Environmental		
Operating temperature	32°F ~ 122°F (0°C ~ 50°C)	
Certificate	CE & FCC Class A	
Operating System		
MS Windows	Windows® 7 32 / 64-bit, Windows® 8.1 32 / 64-bit, Windows® 10 32 / 64-bit	
Linux	Ubuntu 16.04.02/Kernal 4.8.0	





## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	RAM Module	Display	Cooler	Storage	LAN	USB	Serial Port	Expansion Slot	Power	Mounting
ACS-1U01-H110B-C10	LGA 1151 Socket Type	—	HDMI x 2 / HDMI x 1, DP x 1	1U aluminium cooler x 1	2.5" HDD shelf, Full-Size Mini-Card	GbE x 2	USB 3.2 Gen 1/2.0 x 4 USB 2.0 x 4	RS-232 x 1, RS-232/422/485 x 1	Half size Mini-Card x 1	DC 12V ~ 24V	Wallmount

## Packing List

- Wallmount Kit
- 2.5" HDD Tray
- ACS-1U01-H110B (1U Chassis w/ EMB-H110B)

## Optional Accessories

- 1702031802  
Power Cord (US & Taiwan Type)
- 1702031803  
Power Cord (European Type)
- 170203180B  
Power Cord (China Type)
- 170203180E  
Power Cord (Japanese Type)
- 1255201200  
120W Power Adapter

# ACS-1U01

Low-profile Mini-ITX Embedded Chassis



## Features

- Supports Low-profile Mini-ITX Motherboard
- Supports 1 x 2.5" Internal HDD Bays
- Supports Wallmount Bracket

## Specifications

System	
M/B	Mini-ITX
Dimension (W x D x H)	8" x 8" x 1.75" (203.20mm x 203.20mm x 44.45mm)
Color	Black
Processor Support	TDP < 65W
Drive Bay	2.5" internal HDD bracket x 1
Front I/O	USB 2.0 Port x 4 COM/VGA Port
Button	Power Switch x 1
LED	Power LED x 1 HDD LED x 1
Other	Antenna Hole x 4
Environmental	
Operating temperature	32°F~122°F (0°C~50°C)

## Packing List

- Screw Bag
- Wallmount Kit
- SATA 7P Cable
- SATA Power Cable
- USB 2.0 Cable 2.0MM
- USB 2.0 Cable 2.54MM
- COM Cable
- ACS-1U01





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# 10

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## *Industrial Chassis*



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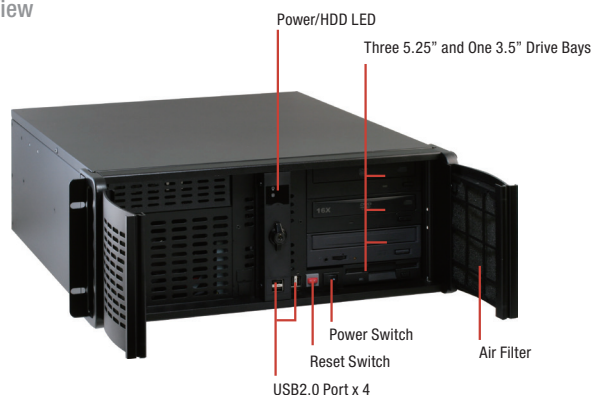


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Site Web : [www.es-france.com](http://www.es-france.com)

# ARC-645

4U 14-Slot Rackmount Chassis, Full-Size/ Half-Size CPU Cards Support

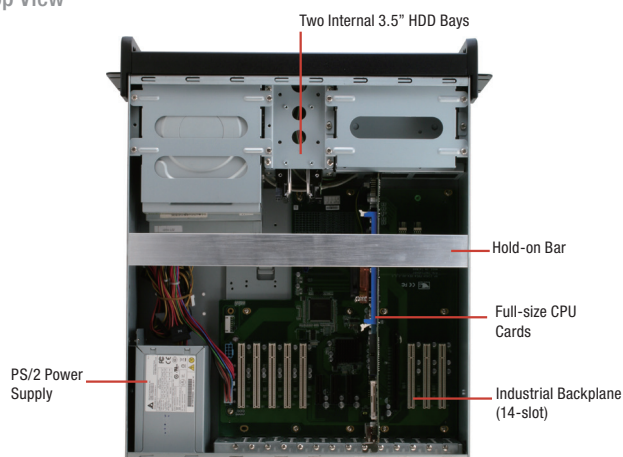
Front View



Front View



Top View



Rear View



## Features

- 4U Height 19" Rackmount Chassis
- 14-Slot ISA/ PICMG Bus Passive Backplanes
- Standard PS2 AT/ATX
- 5.25" x 4 and 3.5" x 1 Front Access Drive Bays
- 3.5" x 2 Internal Drive Bays
- Dual Lockable Front Doors For Added Protection
- USB2.0 x 4 On Front Panel



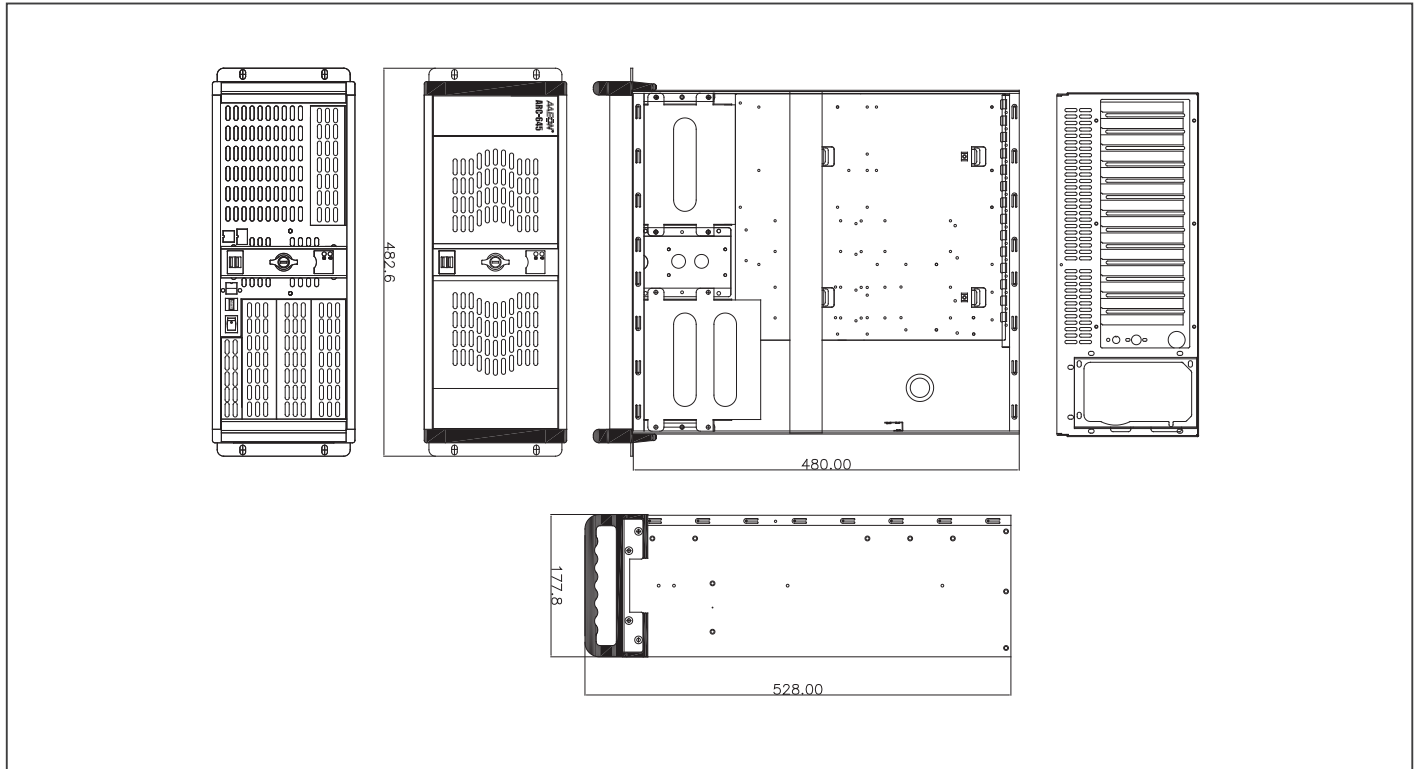
## Specifications

System	
Construction	1.2 mm SECC Zinc-coated Steel
Storage	External: 3.5" Drive Bay x 1 5.25" Drive Bay x 4 Internal: 3.5" Drive Bay x 2
System Fan	12 cm Ball Bearing Fan with Removable Filter x 1
Front Panel	Power ON/OFF Switch x 1 Reset Button x 1 Power ON LED x 1 Hard Disk Drive Active LED x 1 USB Port x 4
Rear Panel	AT Keyboard Cut-out x 1 14 Slots (including system slot), supports max. 339 mm (length) for expansion card
Color	Black
Dimensions	19" (W) x 20.8" (D) x 7" (H) (482mm x 528mm x 177mm)
Carton Size	21.6" (W) x 27" (D) x 12.4" (H) (548mm x 685mm x 315mm)
Net Weight	26.4 lb (12 kg)
Gross Weight	30.8 lb (14 kg)
Environmental	
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-4°F ~ 176°F (-20°C ~ 80°C)
Storage Humidity	10 ~ 90% @ 40°C, non-condensing
Vibration	0.5 Grms/ 5 ~ 500Hz/ operation (2.5" Hard Disk Drive) 1.5 Grms/ 5 ~ 500Hz/ non operation
Shock	15 G peak acceleration (11 m sec. duration), operation 30 G peak acceleration (11 m sec. duration), non operation
EMC	CE/FCC Class A



## Dimension

Unit: mm



## Power Supply Options

P/N	TYPE	PFC Support	Input Voltage	Watt	Size
1255304003	ATX	Active PFC	Auto 90 ~ 264V	400W	PS2
AP-PS1255305000	ATX	Active PFC	Auto 90 ~ 264V	500W	PS2

## Passive Backplane Options

P/N	Description	Master Interface	Slots	Power Connector, ATX Extend Function
BP-214SH-P3E2I6	Rackmount, PICMG 1.3, 14-Slot Backplane, 3 PCI, 2 PCI-E, 6 ISA, Single Segment, ATX	PICMG 1.3	3/2/6/2 (PCI/PCI-E/ISA/PICMG 1.3)	ATX
BP-214SH-P8E4	Rackmount, PICMG 1.3, 14-Slot Backplane, 8 PCI, 4 PCI-E, Single Segment, ATX	PICMG 1.3	8/4/2 (PCI/PCI-E/PICMG1.3)	ATX
BP-214SG-P4	Rackmount, PICMG 14-Slot Backplane, 4 PCI/ 8 ISA, Single Segment, AT/ATX, Bulk Pack	PICMG 1.0	4/9/2 (PCI/ ISA/ PICMG)	AT, ATX, 3-pin ATX extend
BP-214SG-P7	Rackmount, PICMG 14-Slot Backplane, 7 PCI/ 5 ISA, Single Segment, AT/ATX, Bulk Pack	PICMG 1.0	7/6/2 (PCI/ ISA/ PICMG)	ATX
BP-214SG-P12	Rackmount, PICMG 14-Slot Backplane, 12 PCI/ 1 ISA, Single Segment, AT/ATX, Bulk Pack	PICMG 1.0	12/1/2 (PCI/ ISA/ PICMG)	AT, ATX, 3-pin ATX extend

## CPU Card Options

Model/Name	CPU Level	Master Interface
FSB-B75G	Socket LGA 1155, Intel® 3rd Generation Core™ i3/i5/i7	PICMG 1.0

## Ordering Information

Model/Name	Description
TF-ARC-645-B02	Rackmount 4U Chassis, Bare for 14-Slot Backplane, PS2 Power, PS_SW (ATX), Black

## CPU Cooler Options

Model/Name	Description
175920000D	LGA1155/1150 CPU Cooler (2U)
1759218000	LGA1155/1150 CPU Cooler (1.5U)
175920000G	LGA775 CPU Cooler
1759200335	LGA775 CPU Cooler



# 2024

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