



PRODUCT CATALOG | 2023

AIOT Solutions

Your Smart Computing Partner

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About AAEON

A Leader and Partner in Embedded Computing Platforms

We have a relentless drive for excellence and passion for unsurpassed service.



Established in 1992, AAEON is one of the leading designers and manufacturers of professional intelligent IoT solutions and advanced industrial computing platforms today. Committed to innovative engineering, AAEON provides integrated solutions including industrial motherboards and systems, industrial displays, rugged tablets, embedded controllers, network appliances and related accessories. We also work with premier OEM/ODMs and system integrators around the world. Offering x86-based platforms from Intel® Atom™ all the way to Intel® Xeon processors, and in desktop, 1U and 2U form factors, AAEON's team of experienced engineers has helped dozens of companies around the globe deploy reliable appliances with faster times to market and lower development costs based on state-of-the-art hardware platforms, unmatched service quality and long-term support.

As an Associate Member of the Intel® Internet of Things Solutions Alliance, AAEON offers customized end-to-end services from initial product conceptualization and board product development to mass manufacturing and after-sales service programs.

At AAEON, we take the environment seriously, and all of our products are compliant with RoHS regulations. We are dedicated to the sustainability of the Earth, and all of our products conform to applicable laws and regulations.

AAEON Core Values

Reliability:

Delivering dependable products in a timely manner

Integrity:

Valuing business integrity and ethics

Innovation:

Turning cutting-edge concepts into reality



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, PC/104 Modules, PC/104 Peripheral Modules, IoT Node/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 maximum ruggedness.



Milestones

- AAEON awarded 2021 System Integration Outbound Award
- AAEON awarded 2021 COMPUTEX d&i Awards
- AAEON awarded the 30th Taiwan Symbol of Excellence Award
- AAEON awarded the 26th National Quality Award

2021

- AAEON awarded two 2019 COMPUTEX d&i Awards
- AAEON awarded the 28th Taiwan Symbol of Excellence Award

2019

- AAEON awarded the 26th Taiwan Symbol of Excellence Award
- AAEON went public on the Taiwan Stock Exchange
- AAEON awarded a 2017 COMPUTEX d&i Award
- AAEON awarded the 2017 Smart City Innovative Application Award

2017

- AAEON awarded the 23rd Taiwan Symbol of Excellence Award
- AAEON awarded the Microsoft Partner of Year 2015 Award
- AAEON awarded the Outstanding Business Achievement Award

2015

- AAEON awarded the Computex Taipei 2013 Best Choice of the Year Award
- AAEON awarded the 21st Taiwan Symbol of Excellence Award
- AAEON awarded the Microsoft Silver Partner Award

2013

- AAEON awarded the Taiwan Excellence Achievement Award
- AAEON awarded the 19th Taiwan Symbol of Excellence Award
- AAEON awarded the Siemens Star Supplier 2011 Award
- AAEON awarded the Computex Taipei 2011 Best Choice of the Year Award
- AAEON joined ASUSTeK Computer Inc. (ASUS)

2011

- AAEON awarded the Taiwan Superior Brand Award
- AAEON awarded the 17th Taiwan Symbol of Excellence Award
- AAEON awarded the 17th MOEA's Joint Award

2009

- AAEON awarded the Intel® Marketing Development Funds Award of Excellence
- AAEON awarded the Intel® Greatest Co-Selling Growth Award of Excellence
- AAEON received ISO 13485 medical certification
- AAEON awarded the 15th Taiwan Symbol of Excellence Award
- AAEON awarded the Computex Taipei Best Choice of the Year Award

2007

- AAEON awarded the Computex Taipei Best Choice of the Year Award
- AAEON established a U.S. West Coast sales office in Brea, California
- AAEON moved its European branch to the Netherlands

2005

- AAEON became an Associate Member of the Intel® Embedded Alliance

2003

- AAEON Technology Inc. was established in Su Zhou, China
- AAEON became a publicly traded company on the Taiwan Stock Exchange
- AAEON set up a European office in Limburg, Germany

2001

- AAEON was listed as an OTC (Over The Counter) stock company
- The AAEON Foundation was established to promote humanitarian work and technological education

1999

- AAEON-USA, the premier off-shore branch office was established in New Jersey

1997

2022

- AAEON awarded 2022 Best Choice Golden Award

2020

- AAEON awarded the 29th Taiwan Symbol of Excellence Award

2018

- AAEON awarded a 2018 Vision Systems Design Award
- AAEON awarded three 2018 COMPUTEX d&i Awards
- AAEON awarded the 27th Taiwan Symbol of Excellence Award

2016

- AAEON awarded the 25th Taiwan Symbol of Excellence Award
- AAEON awarded a 2016 ICT Month Innovative Elite Top 100 Award
- AAEON awarded the 2016 Excellence in Corporate Social Responsibility Award
- AAEON awarded a 2016 outstanding Enterprises of the Year Golden Peak Award
- AAEON awarded the Transcend Most Valued Partner Award

2014

- AAEON awarded the 22nd Taiwan Symbol of Excellence Award
- AAEON awarded the Intel® IoT Solutions Alliance Member Performance Award

2012

- AAEON awarded the Computex Taipei 2012 Best Choice Award of the Year Golden Award
- AAEON awarded the 20th Taiwan Symbol of Excellence Award
- AAEON awarded the Microsoft® Windows® Embedded Partner of Year 2012
- AAEON awarded the Intel® Best Customer Award

2010

- AAEON awarded the 18th Taiwan Symbol of Excellence Award
- AAEON awarded the 2009 Growth in Intel® Atom™ Co-selling Award

2008

- AAEON awarded the Intel® Marketing Development Funds Award of Excellence
- AAEON awarded the 8th Industrial Sustainable Excellence Award
- AAEON awarded the 16th Taiwan Symbol of Excellence Award
- AAEON awarded the INFO TECH 100 TAIWAN Award

2006

- AAEON awarded the 14th Taiwan Symbol of Excellence Award

2004

- AAEON Technology (Su Zhou factory) received 3C and ISO-9001 certification
- AAEON set up a Singapore office

2002

- AAEON received TL9000-H certification
- AAEON became a member of the Intel® ACPP Program

2000

- AAEON acquired Astech Technology Inc. to form the core of its panel PC Division

1998

- AAEON established sales offices in Europe and China

1992

- AAEON established its first office in Taipei, Taiwan



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.

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

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.

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.

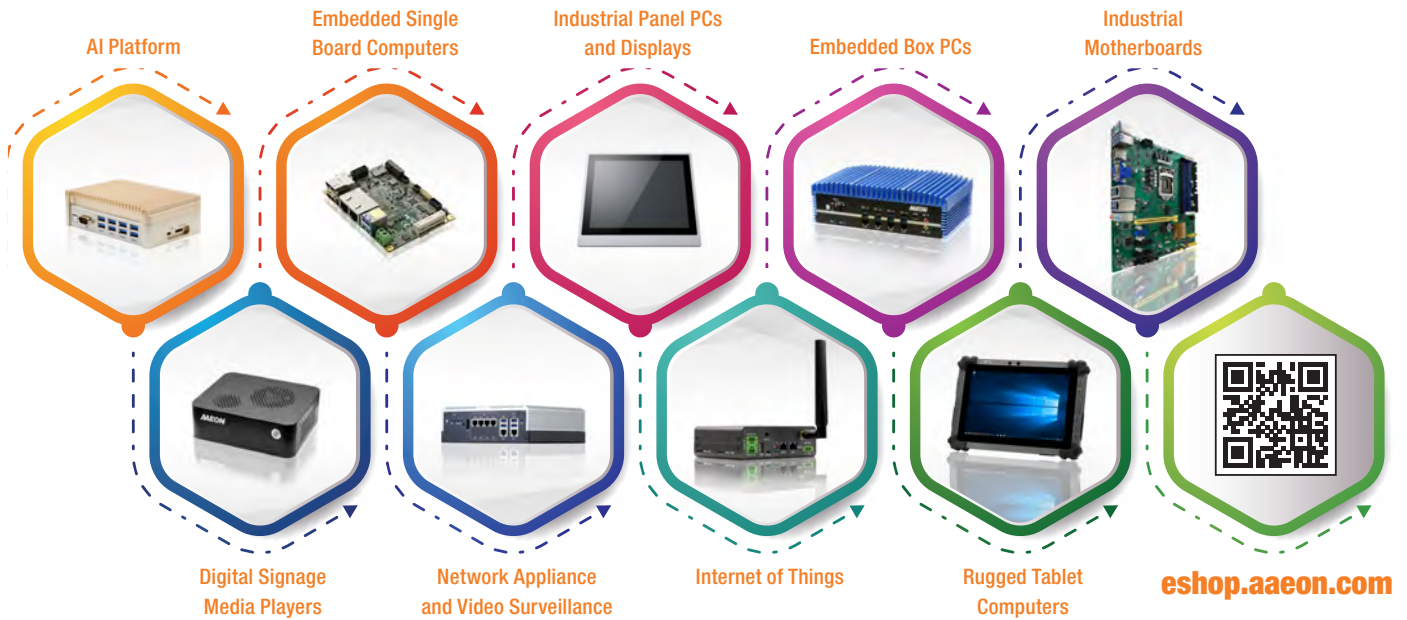
Market analysts have consistently pointed to expanded growth and deployment of Industry 4.0 technologies, especially AI edge computing, in various vertical markets. AAEON.ai collects all of AAEON's rugged, compact, industrial grade AI edge solutions in one convenient location. From boards and systems 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.



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AAEON eShop offers customers a convenient way to quickly place orders from a selection of our latest and most popular IPC, AI and Edge Computing platforms. Orders are processed and shipped within two working days on all in stock items, with 50% off worldwide shipping on all orders over US\$500. Customers can also order any accessories or configurations listed on the AAEON.com product page through eShop. Registering an account on eShop allows customers access to benefits including managing multiple shipping addresses, order tracking, price drop and in stock notifications and more! Visit AAEON eShop today at eshop.aaeon.com.



AAEON eShop Benefits



Fast Processing

eShop brings you the convenience of fast order processing. Orders are processed and shipped within two working days for all in-stock items.



Easy Payment

eShop supports payment options including credit card, PayPal™ and even wire transfer. (Advanced notification is needed when using wire transfer.)



50% off Shipping

Save more when you shop more with eShop! Receive 50% off global shipping on all eShop orders over US\$500.



Official Warranty

All products sold on eShop are backed by the same official warranty and industry leading support offered on every AAEON product.



Flexible Service

Purchase any product accessory or configuration listed on the AAEON.com product page, including processor, memory, storage and more. Contact AAEON eShop service representatives for more details. (EShop@aaeon.com)



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<https://eshop.aaeon.com/>

AI@Edge



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-8521AI



- Google Edge TPU
- GbE PoE/PD x 1/ USB3.2 Gen 1 x 2 & USB2.0 x 2
- Mic-in & Line-out
- Support MEMS x 2 (Optional)
- Built-in WiFi 2x2 MIMO (802.11b/g/n/ac 2.4/5GHz) & Bluetooth 4.1

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-8221AI



- Powered by 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

BOXER-8253AI



- Powered by NVIDIA Jetson Xavier NX
- PoE PSE x 2/ HDMI input
- Multi-storage option: 16GB eMMC/ MicroSD/ mSATA/ 2.5" 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)

BOXER-8230AI



- Powered by NVIDIA Jetson TX2 NX
- 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

UPX-Edge i11



- 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

Industrial Automation



BOXER-6643-TGU



- Extreme Computing Power with Intel® SoC Processor
- DDR4 slot x2, up to 64GB
- Support 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

BOXER-6645-ADS



- Intel 12th 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-6840-CFL



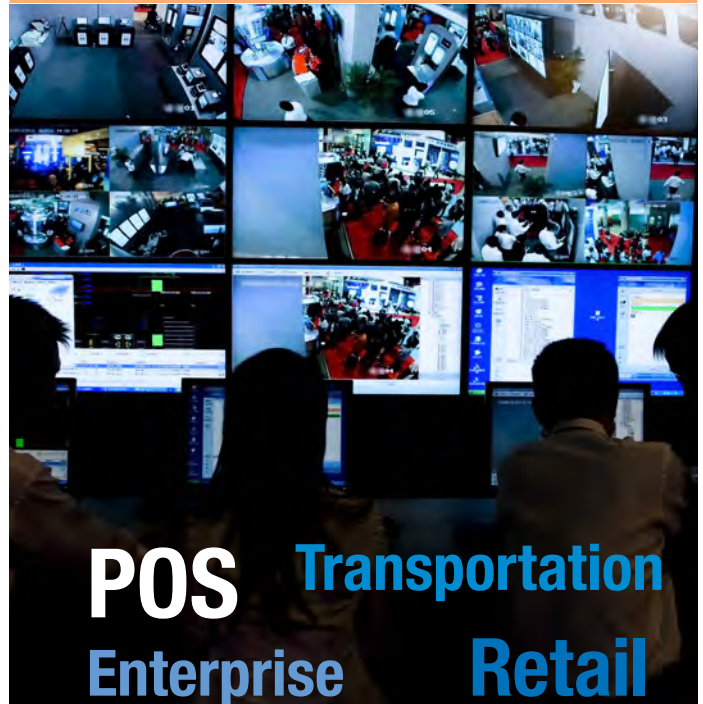
- High Computing Power
- Intel Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x2 for Dual Display
- Support C246 PCH
- Support PCIe x16 + PCIe x4

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
- SuperSpeed+ USB 3.2 Gen2

Video Surveillance



POS **Transportation**
Enterprise **Retail**

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)



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-6842M

- High Computing Power
- Intel® Coffee Lake-S LGA 1151 Desktop Processor
- HDMI x 2 for Dual Display
- Support C246 PCH
- Support PCIe x16 + PCIe x4 / 2PCIe x8 (in x16 slot) + PCIe x 4
- Single Power Input (for both System & one Graphics Card)
- Fanless System (A3) or Fan System with PWM function (A2/A4)
- Support dual Graphics Cards with Two Power Inputs (A4)

Robotics



RBX-12000

- Max. up to 64G DDR4 3200MHz dual channel memory, non-ECC type
- Support M.2 M Key PCIe Gen4 x4 NVMe SSD, max. up to 2TB capability
- Four channel CANbus interface, compatible with PEAK CAN module.
- Four channel syncout channel of PPS + ToD for external sensors.
- Built-in BMI160 6-axis IMU for robot odometry



UP Squared 6000 Edge

- 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
- M.2 2230 E-Key / M.2 2280 M-Key / M.2 3052 B-Key x 1
- TPM 2.0



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)
- LAN port x 3 and 1 for 2.5Gbps

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-APL



- Intel Atom X5-E3940 Quad Core 1.6GHz
- Onboard LPDDR4 4 GB / eMMC 32G
- Built-in Micro SD Card Slot x 1
- HDMI output x 1
- Gigabit Ethernet RJ-45 x 2 LAN port
- USB 3.0 x 4
- M.2 E key x 1 (For Wifi/BT Module)
- Mini PCIe connector x 1 (For 4G LTE Module)

SRG-IMX8P



- i.MX8M Plus Quad Cortex-A53/M7 1800 MHz RISC Processor
- Onboard DDR4L 2GB / eMMC 16G (Optional 4G RAM/ eMMC 32G)
- USB 3.0 x 2
- Gigabit Ethernet port x 2
- CAN-FD x 2CH
- Mini PCIe connector (For RF Module) x 2
- Micro SD Card Slot x 1
- Support RTC, TPM 2.0

SRG-3352



- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- Gigabit Ethernet port x 2
- USB2.0 x 1, RS-485 x 2, Programmable LED x 4
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector(For RF Module) x 1
- Debug Port x 1
- DC9-30V Power Input

SRG-3352C



- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- Gigabit Ethernet port x 2
- USB2.0 x 2, RS-485 x 2, Programmable LED x 4
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector(For RF Module) x 1
- NB-IoT connector x 1
- Board to Board connector x 1



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.

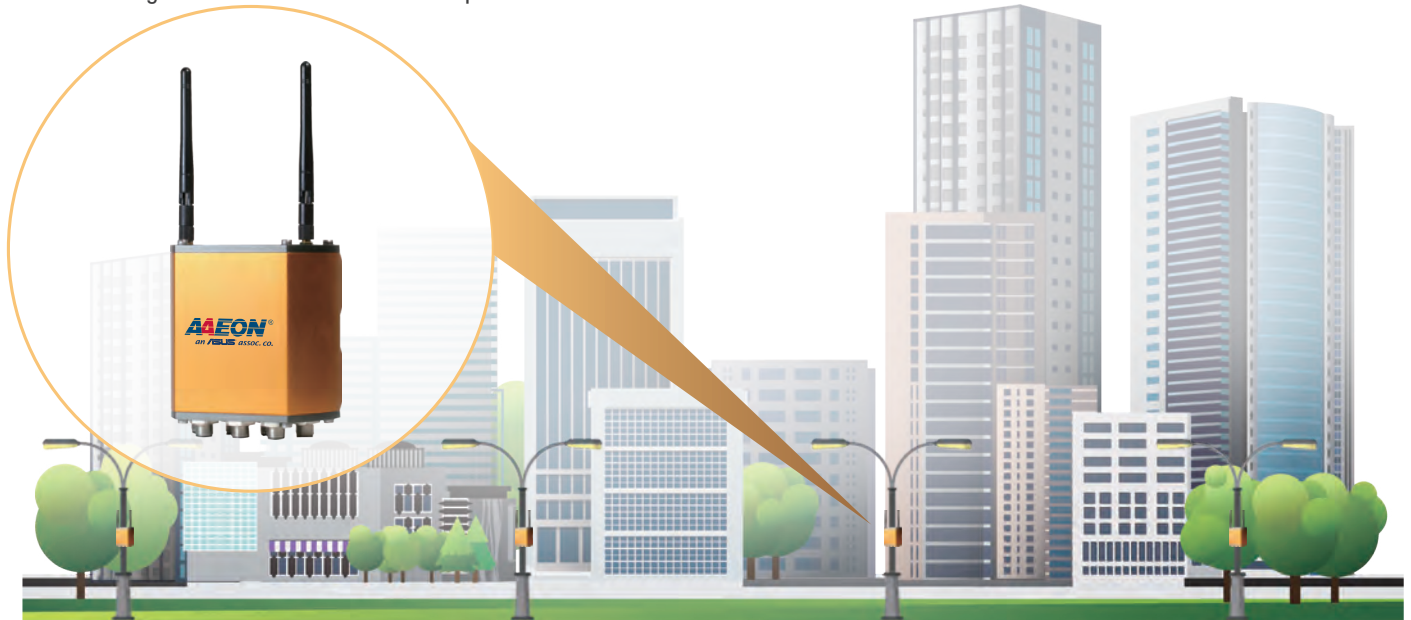
Smart City:

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

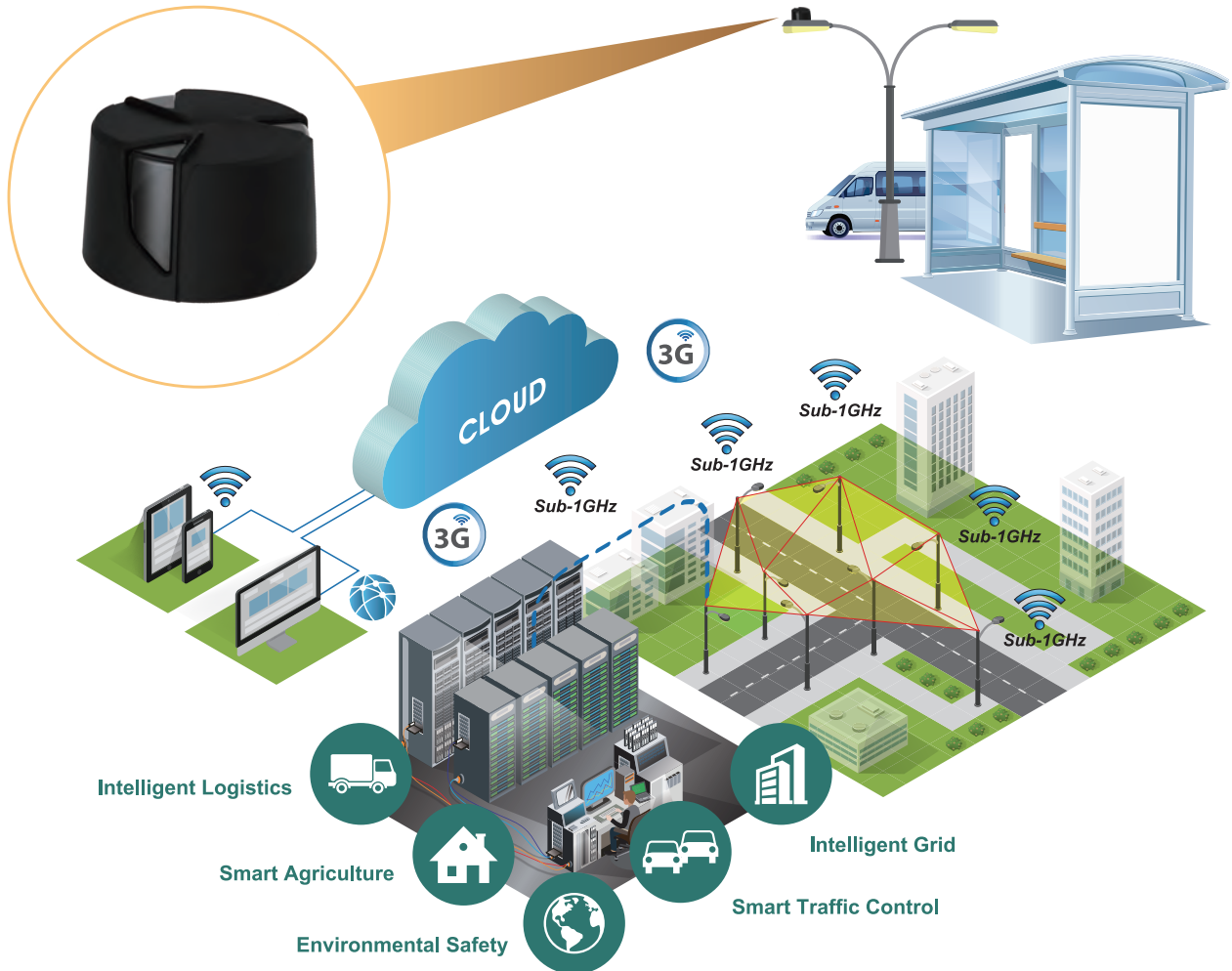
AAEON Atlas, powered by Intel® Movidius™ Myriad™ X vision processing unit (VPU). The Intel® Movidius™ Myriad™ X provides a low-power, high-performance solution for on-device AI inference. Atlas is compatible with the Intel® Distribution of OpenVINO™ toolkit, which includes built-in features such as model 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

Wireless Communication

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

Centralized Management

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

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.

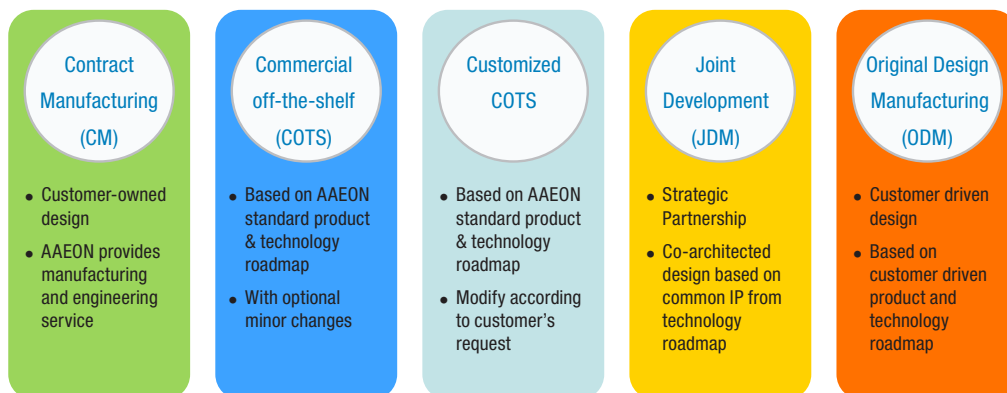
Collaboration Models



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



Quality Manufacturing

Collaborative Development



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.

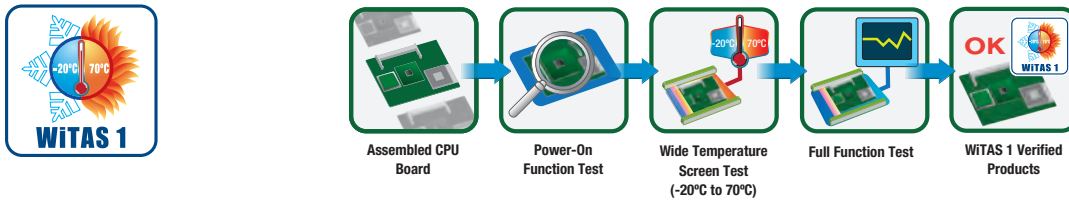
AAEON has been designing and manufacturing quality embedding products for over two decades. Our accumulated experience in all aspects of the embedded electronics market puts us in a strong position to develop wide temperature CPU boards and systems.

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

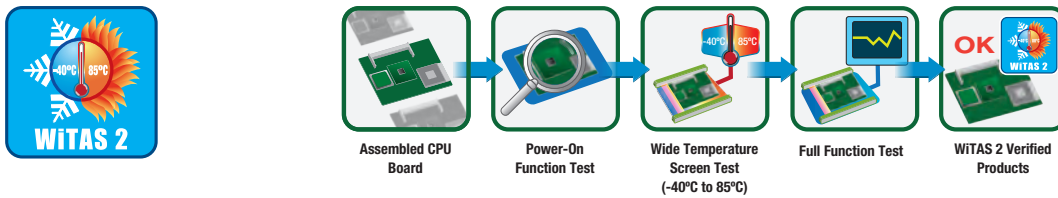
- 20°C to 70°C (-4°F ~ 158°F) = WiTAS 1
- 40°C to 85°C (-40°F ~ 185°F) = WiTAS 2

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



AAEON's Embedded OS Solution/Hi-Supervisor

Embedded OS Main Features

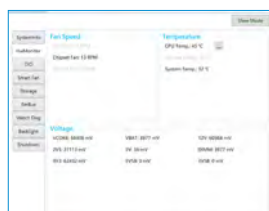
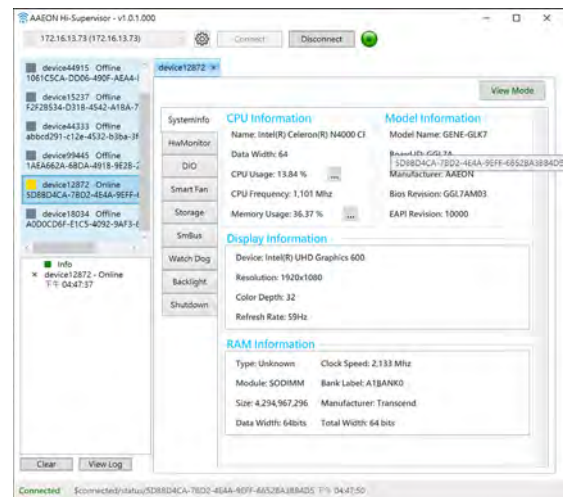
OS Family	Windows® Embedded Standard	Windows® Embedded POS Ready	Windows® Embedded Enterprise
Features	Full Customization	Simple Installation	Full Function
Windows® Product Sku	Windows® Embedded Standard 2009 Windows® Embedded Standard 7 Windows® Embedded Standard 8	WEPOS 1.1 POSReady 7 POSReady 2009 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

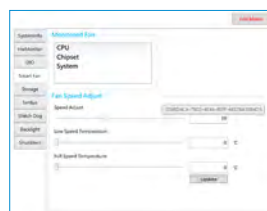
- ▶ Support Hi-Safe full functions remotely
- ▶ Customized support
- ▶ Support Azure IoT Central



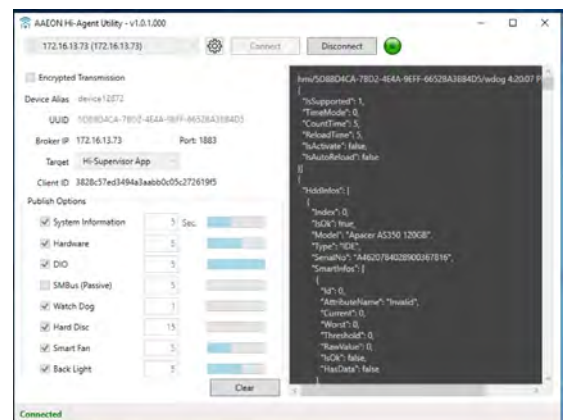
Hardware Monitor:
Retrieves fan, temperature and voltage data



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



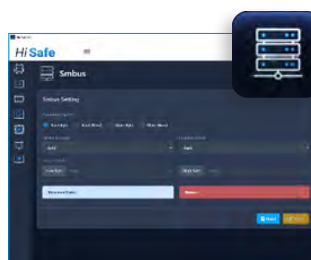
Smart Fan:

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



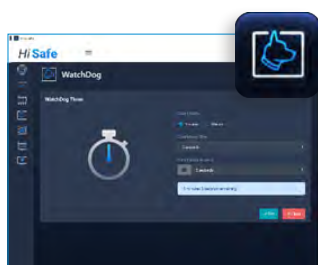
DIO:

Obtains DIO information: sets the pin direction and pin data



Backlight Controller:

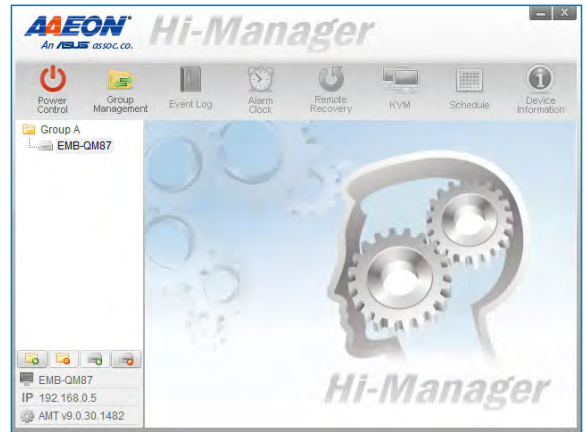
Controls LVDS or eDP display



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



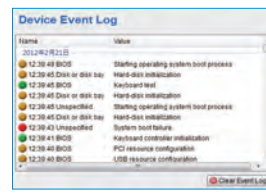
Network Discovery:
AMT device discovery



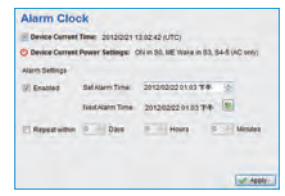
Power Control:
Powers On/Off the target device



Group Management:
Arrange devices in this function



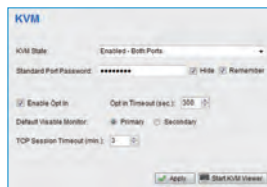
Event Log:
Logs boot records of the selected device



Alarm Clock:
Sets timer to wake up a sleeping device



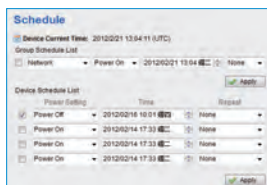
Remote Recovery:
Mounts boot image or physical CD-Rom to target device



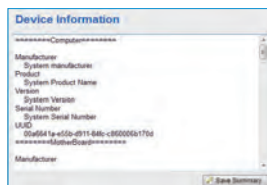
KVM:
Controls remotely from the target device

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	✓



Schedule:
Schedules the power On/Off target devices

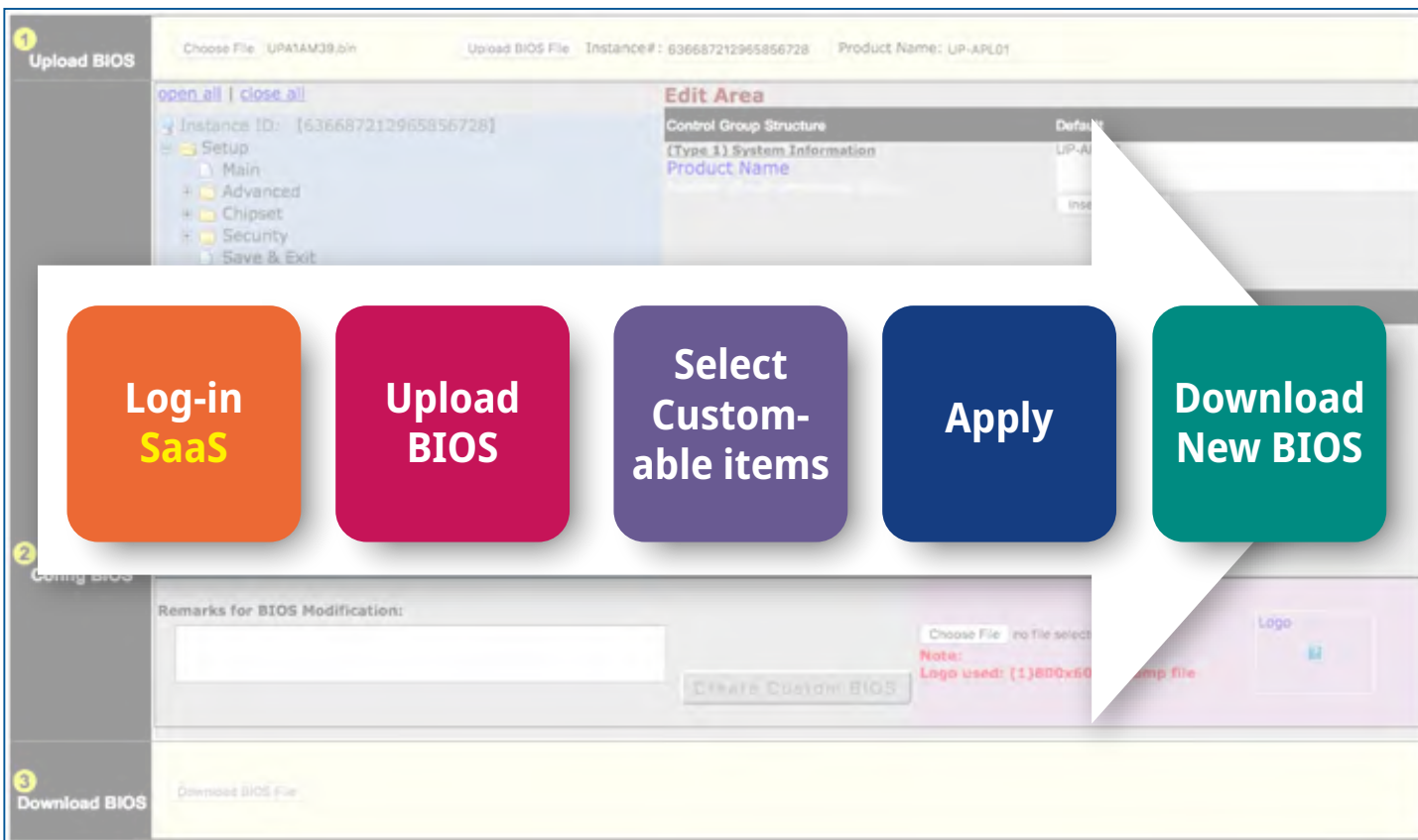


Device Information:
Shows target device assets



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.



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.



AIOT Gateway

AAEON's AIOT 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.



Turn-key Chassis

AAEON Turn-key Chassis systems provide users with a platform that's ready to go out of the box. Including the compact Nano system and the 1U form factor ACS series, AAEON Turn-key systems provide support for a range of Intel® processors from the Intel® Atom™ to the 6th Gen Intel® Core™ (formerly Skylake). AAEON Turn-key chassis come with a range of I/O and expansion features to easily integrate into your workplace.

01



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01

AI@Edge Solutions



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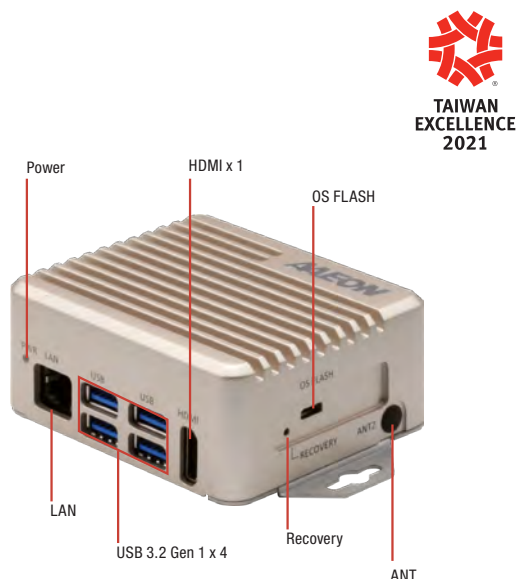


e-mail : mse@es-france.com
Site Web : www.es-france.com

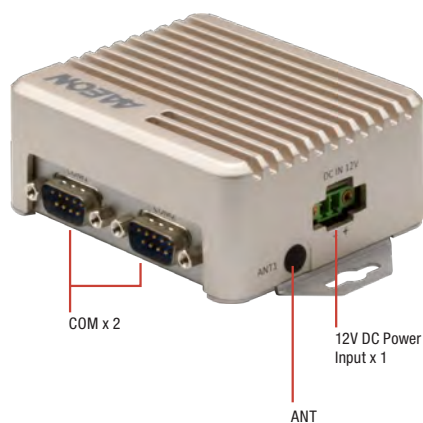
BOXER-8221AI

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



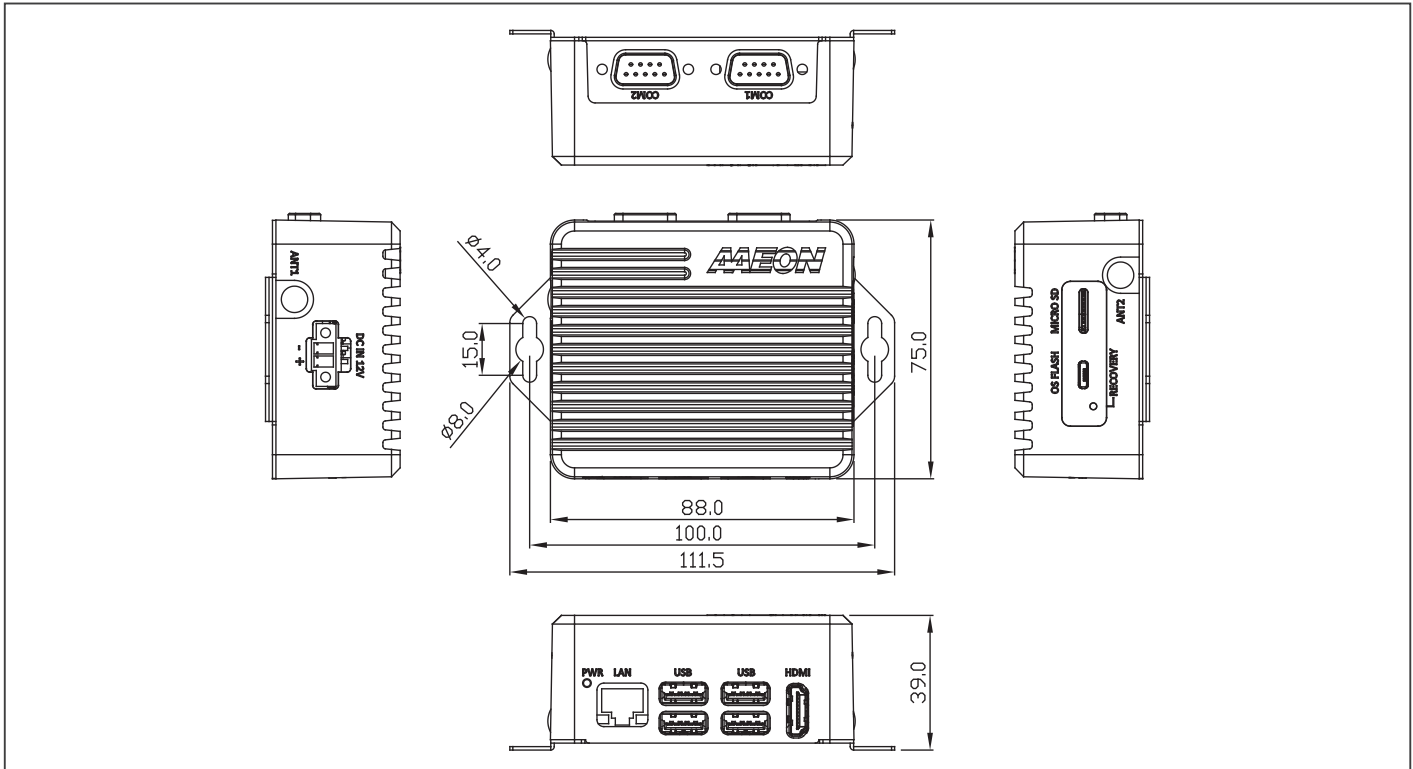
Specifications

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

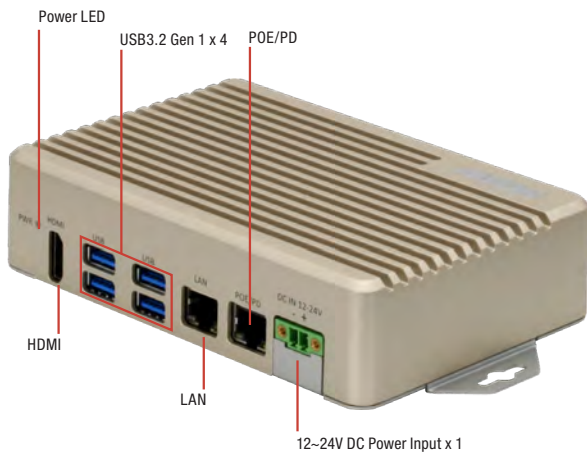
- **1255300611**
60W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)



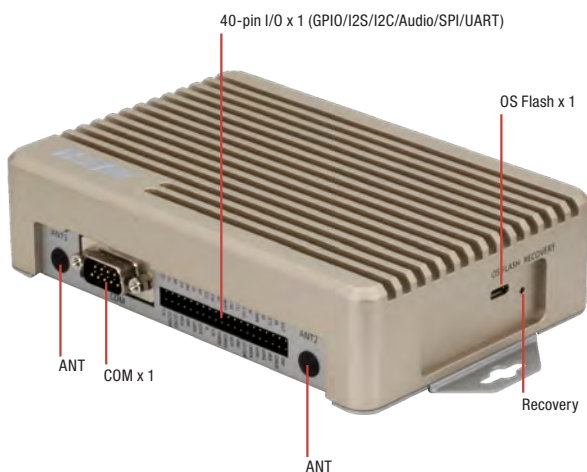
BOXER-8222AI

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 or 32GB SD card
- 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



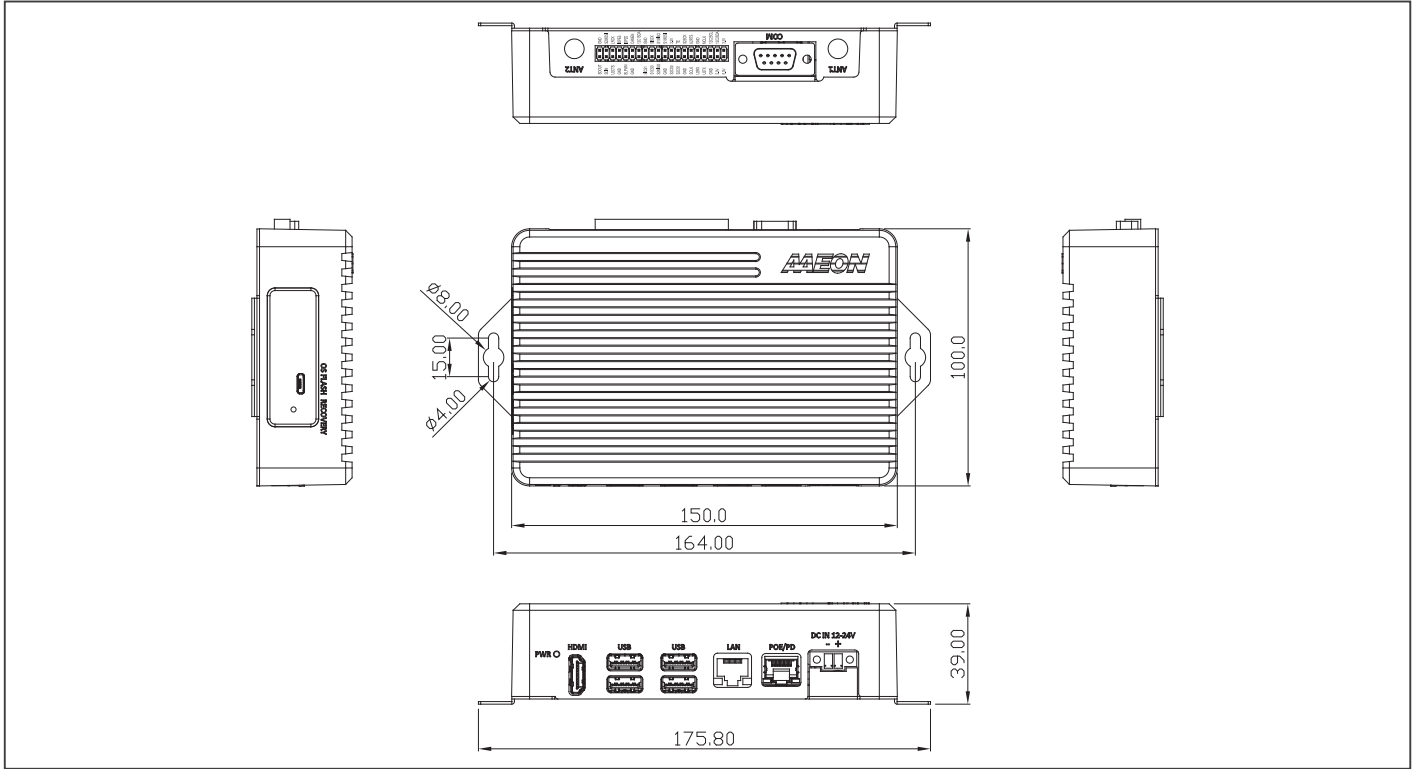
Specifications

System	
AI Accelerator	NVIDIA® Jetson Nano™
CPU	Quad Core Arm® Cortex®-A57 MPCore Processor
System Memory	4GB LPDDR4
Storage Device	32 GB MicroSD Card (Version A) 16 GB eMMC (Version B) 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 (AAEON ACLinux 4.9) Linux (NVIDIA Jetpack 4.5)
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-A1-1010	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	32 GB MicroSD Card x 1 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	ACLinux 4.9
BOXER-8222AI-A3-1010	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	32 GB MicroSD Card x 1 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-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

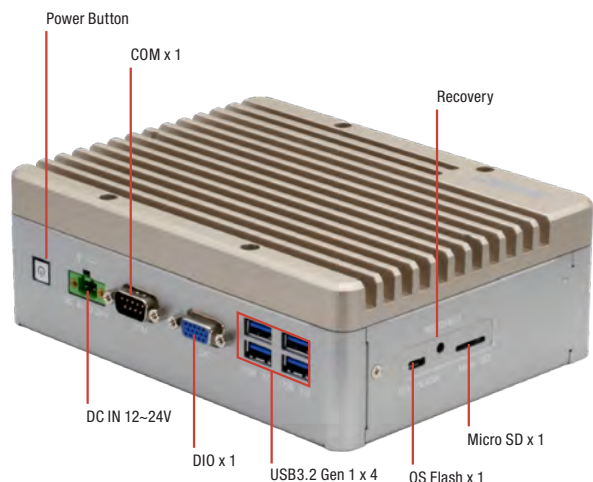
- 1255300611
60W Power Adapter
- 1702031802
Power Cord (US type)
- 1702031803
Power Cord (European Type)
- 170203180E
Power Cord (Japanese Type)



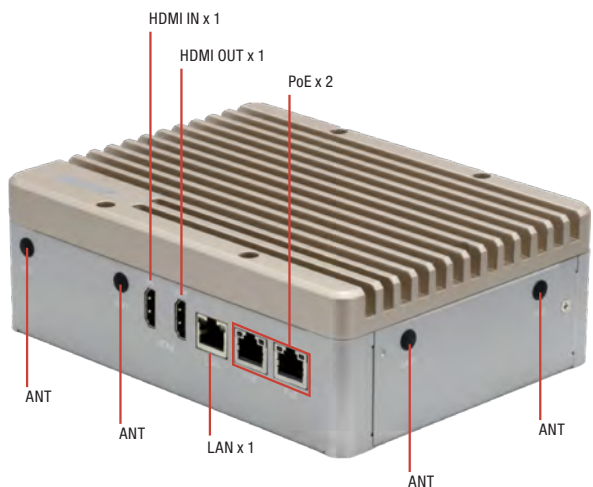
BOXER-8223AI

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



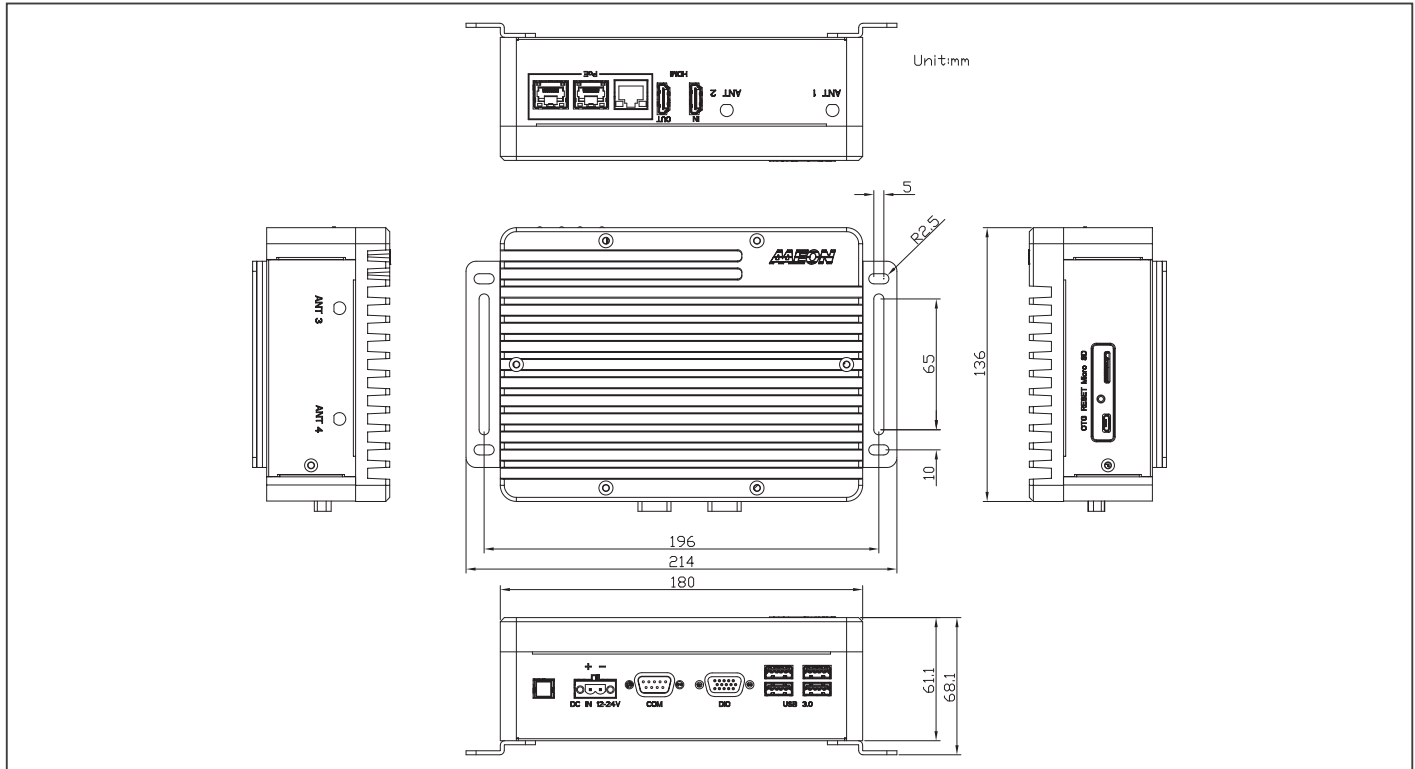
Specifications

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

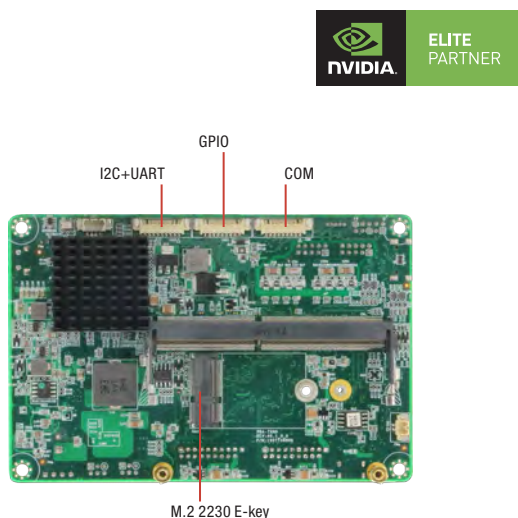
- **1255X00035**
120W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)



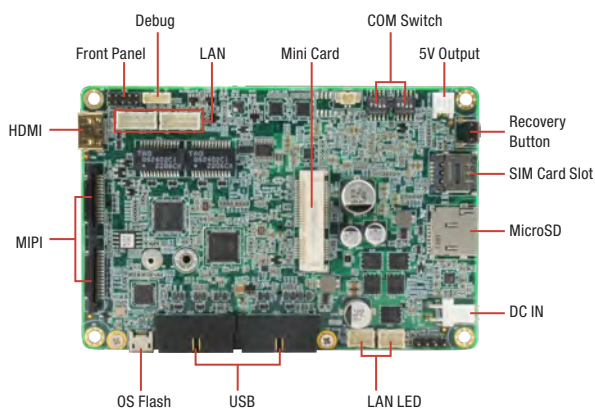
BOXER-8224AI

AI@Edge Embedded System with NVIDIA® Jetson Nano™

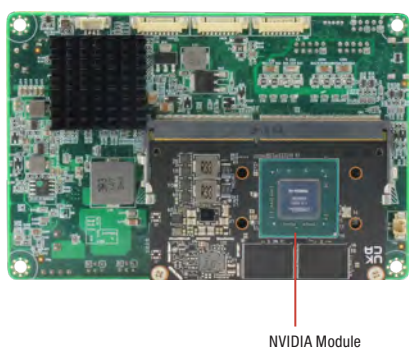
Front View



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



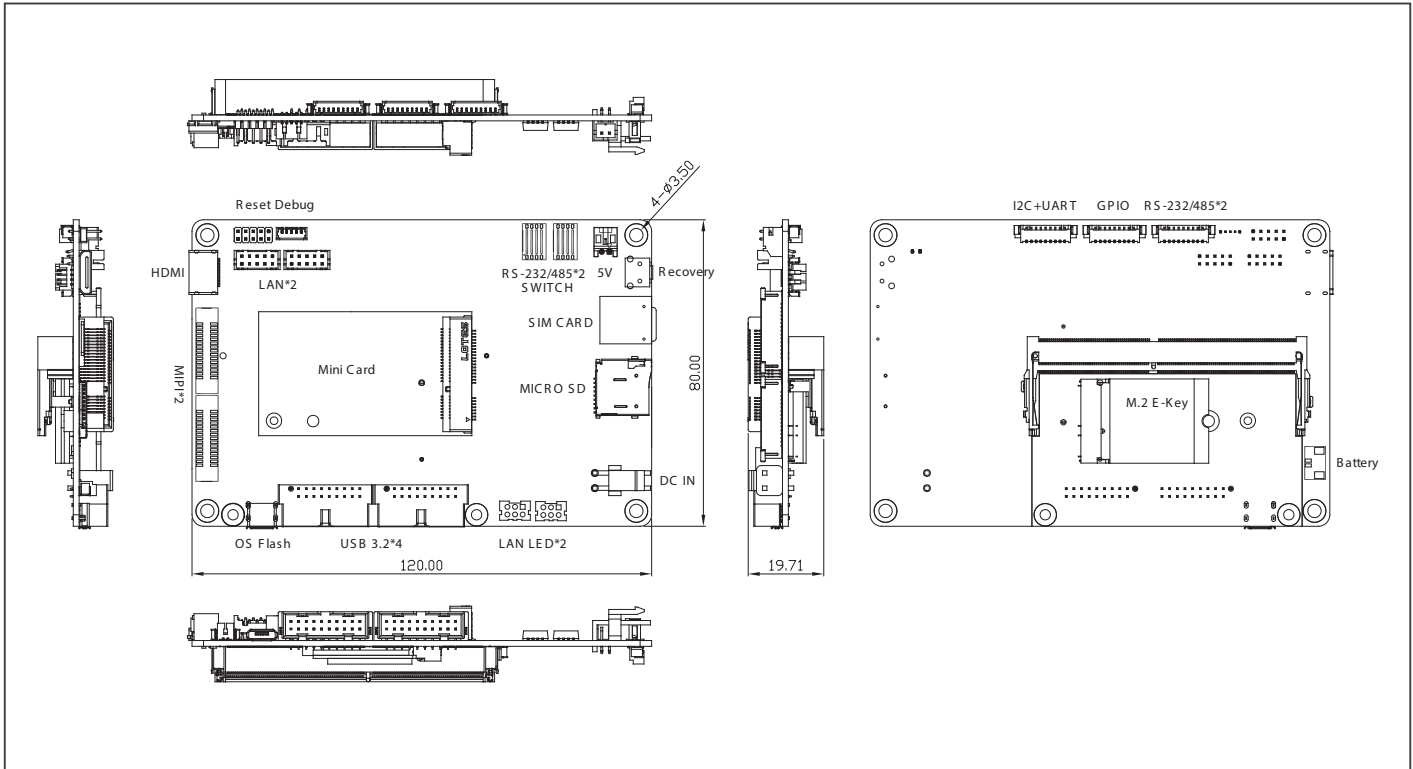
Specifications

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)

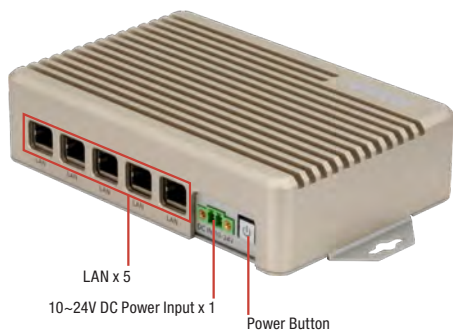


BOXER-8230AI

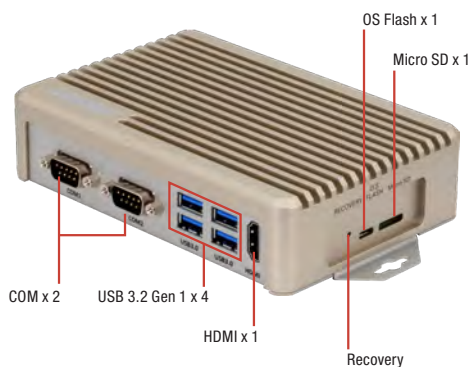
AI@Edge Compact Fanless Embedded AI System with NVIDIA® Jetson™ TX2 NX

BOXER-8230AI-A3/JP46E-A1

Front View

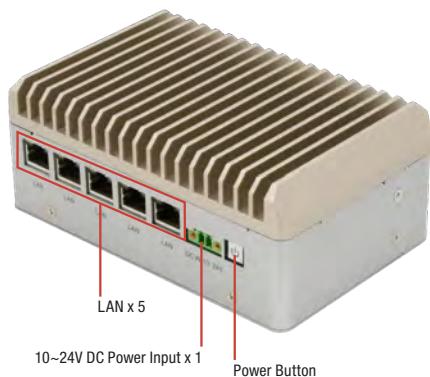


Rear View

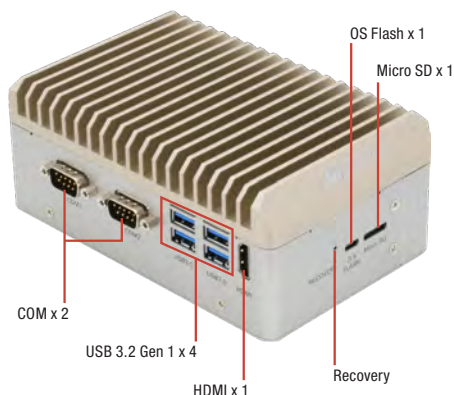


BOXER-8230AI-A4/JP46E-A2

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



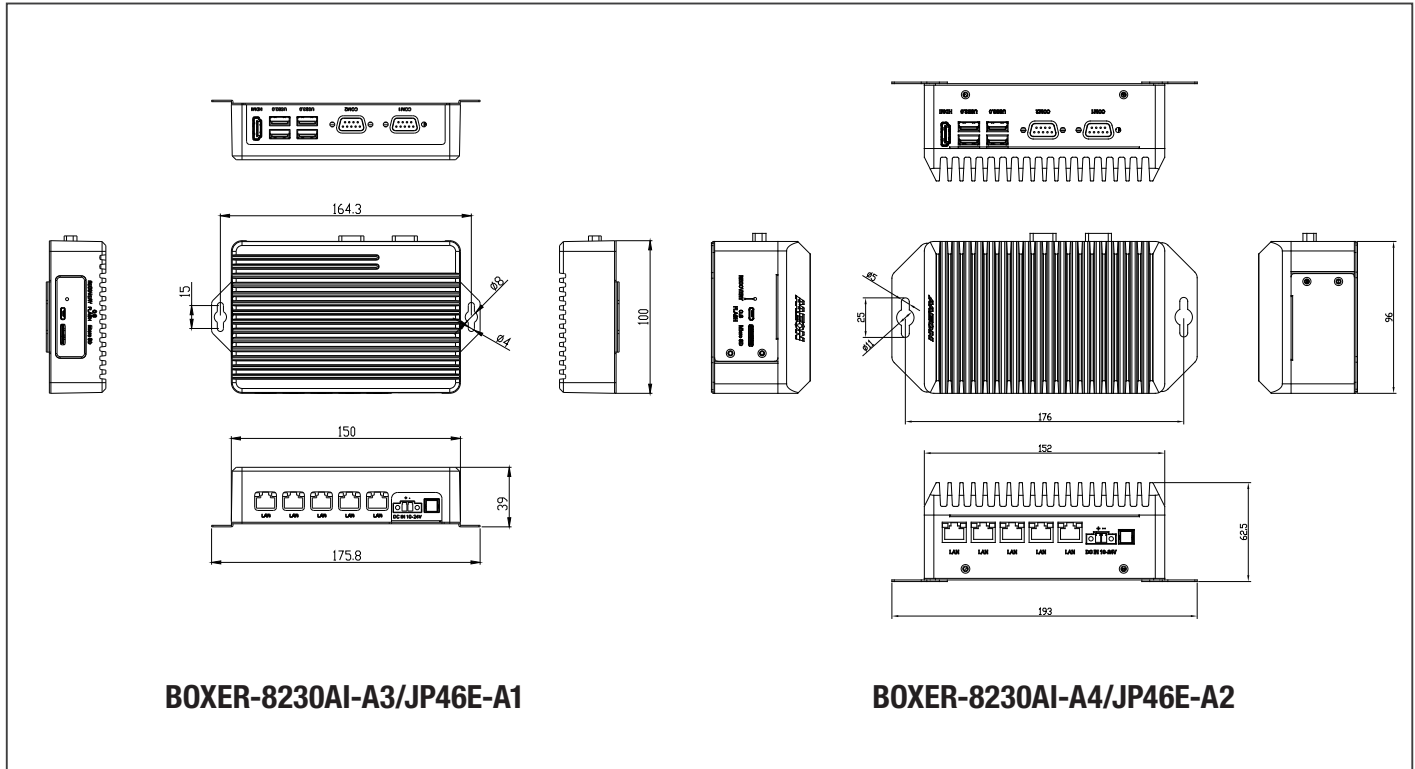
Specifications

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)



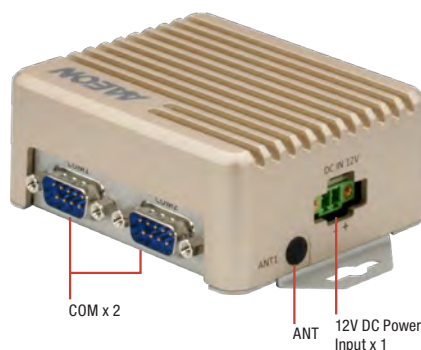
BOXER-8231AI

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



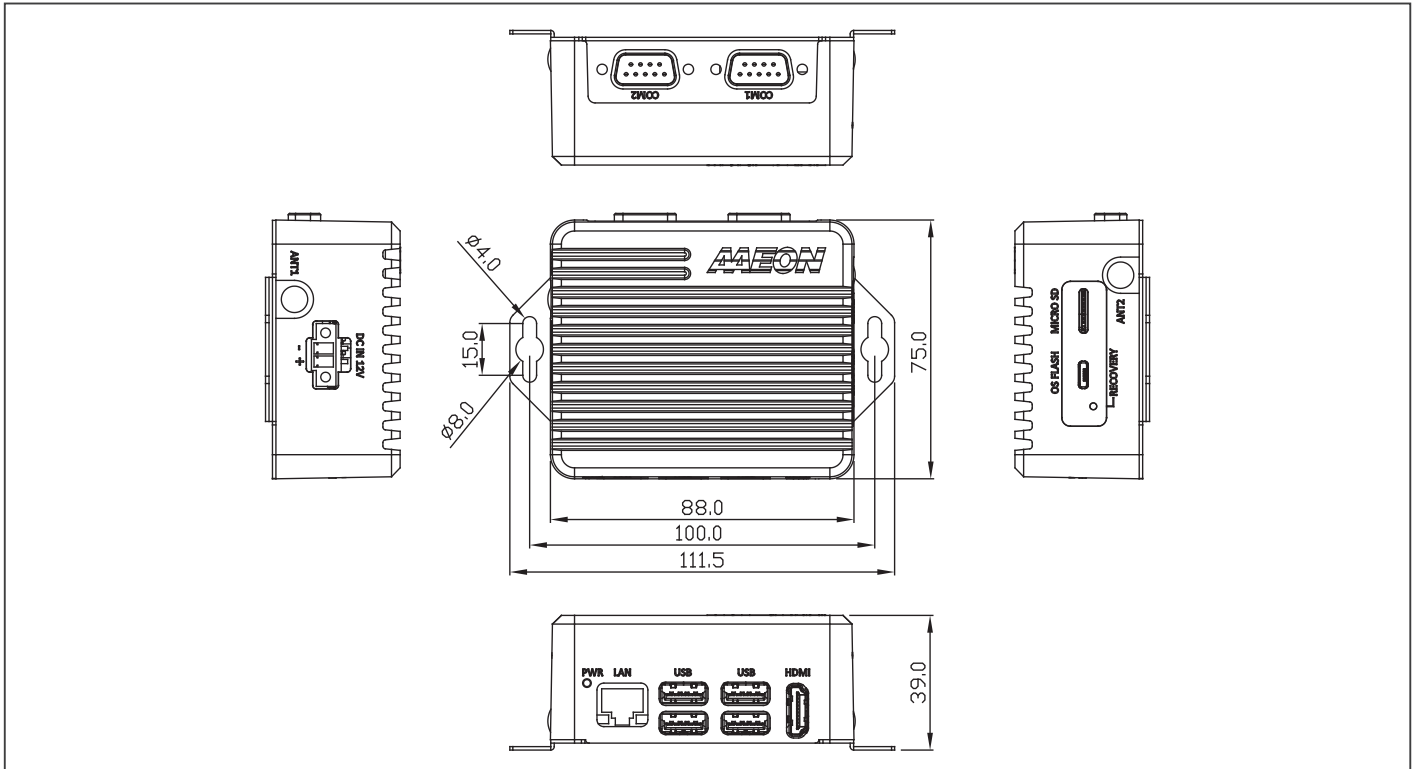
Specifications

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

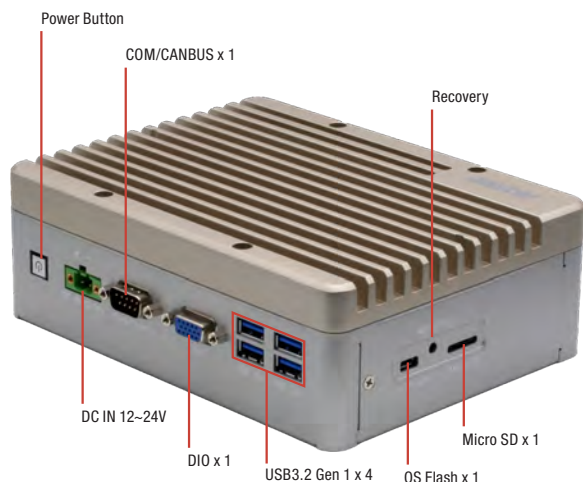
- 1255300611
60W Power Adapter
- 1702031802
Power Cord (US type)
- 1702031803
Power Cord (European Type)
- 170203180E
Power Cord (Japanese Type)



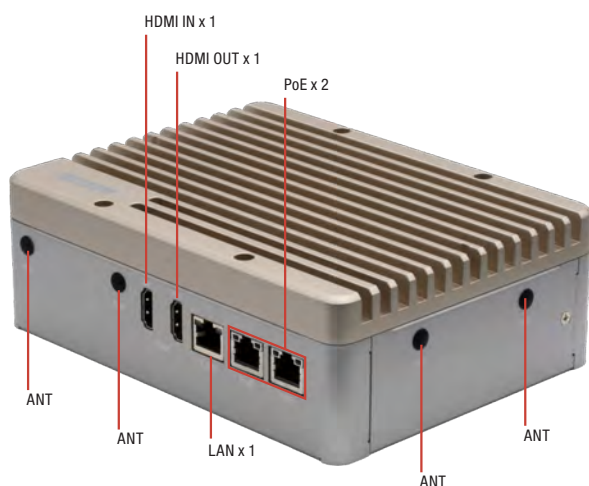
BOXER-8233AI

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



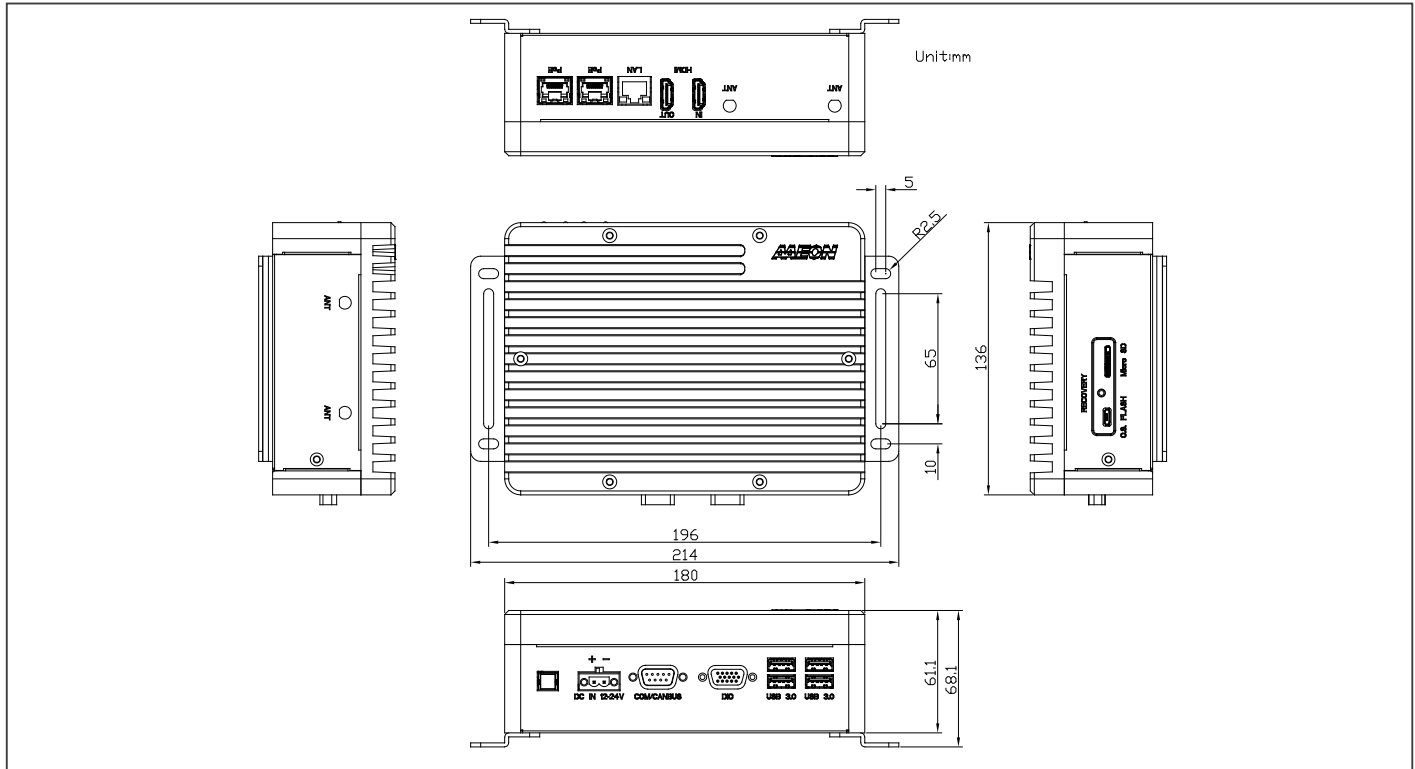
Specifications

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. (1.3kb)
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

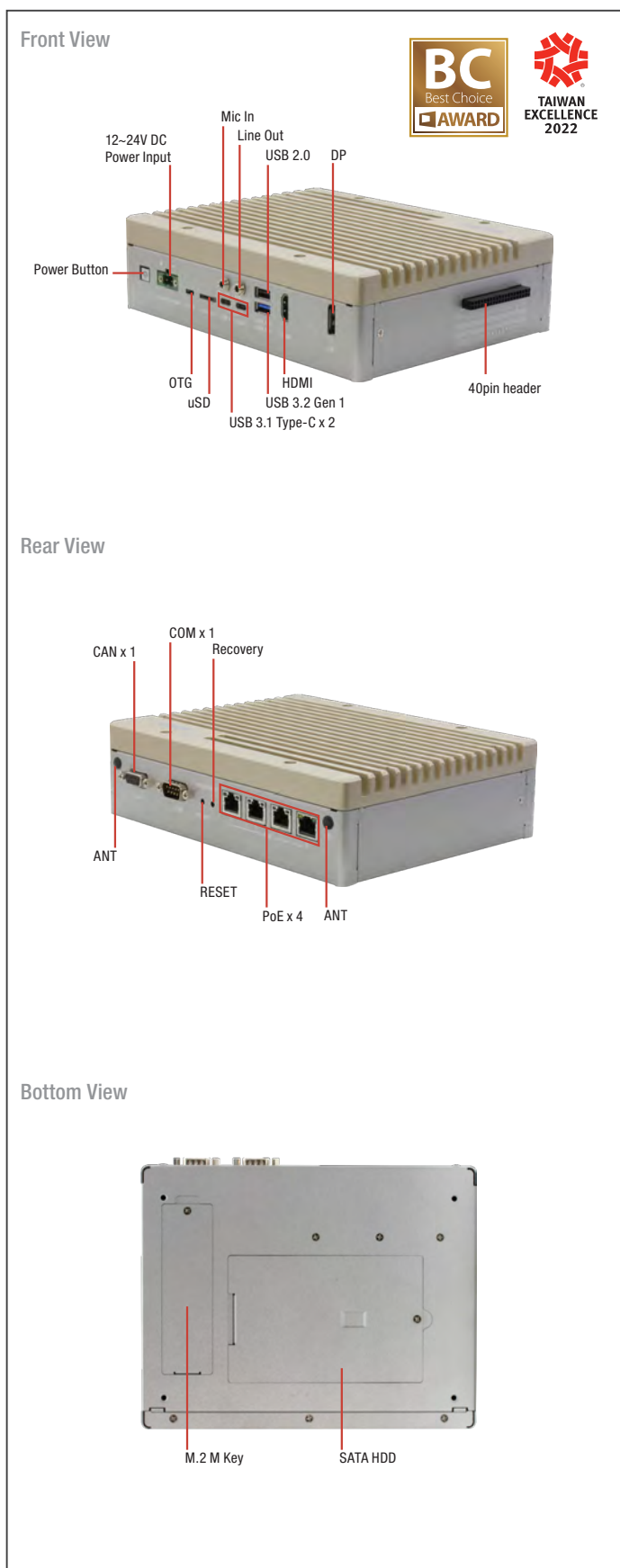
- Wallmount Bracket x 2
- Power Connector x 1
- Screw Package x 1
- BOXER-8233AI

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



Features

- 512-core Volta GPU with Tensor Cores
- Support RJ-45 x 4 for PoE (802.11af, 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



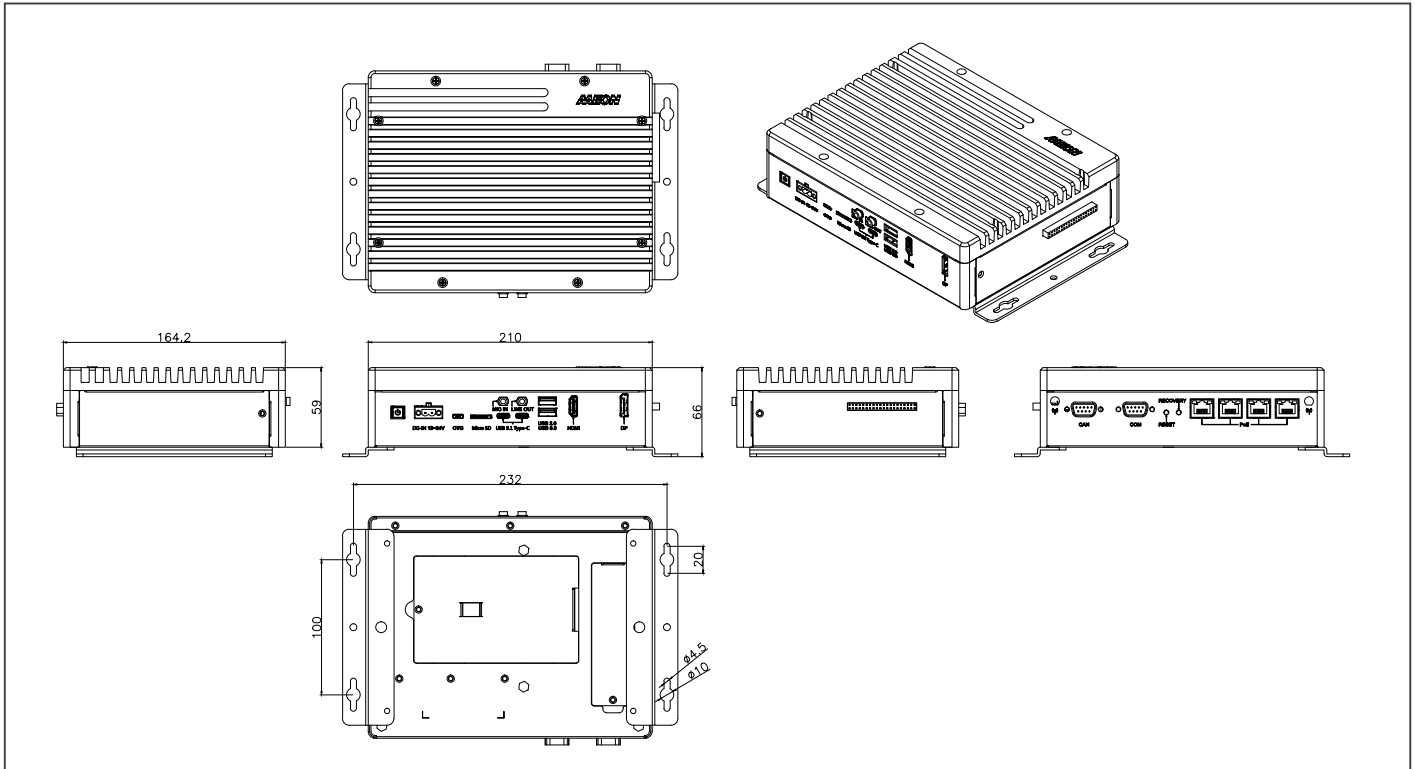
Specifications

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 802.11 af PoE LAN x 4
I/O	PoE x 4 (IEEE 802.af, 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) Linux (AAEON AClinux 4.9)
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-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	ACLinux
BOXER-8240AI-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	ACLinux
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

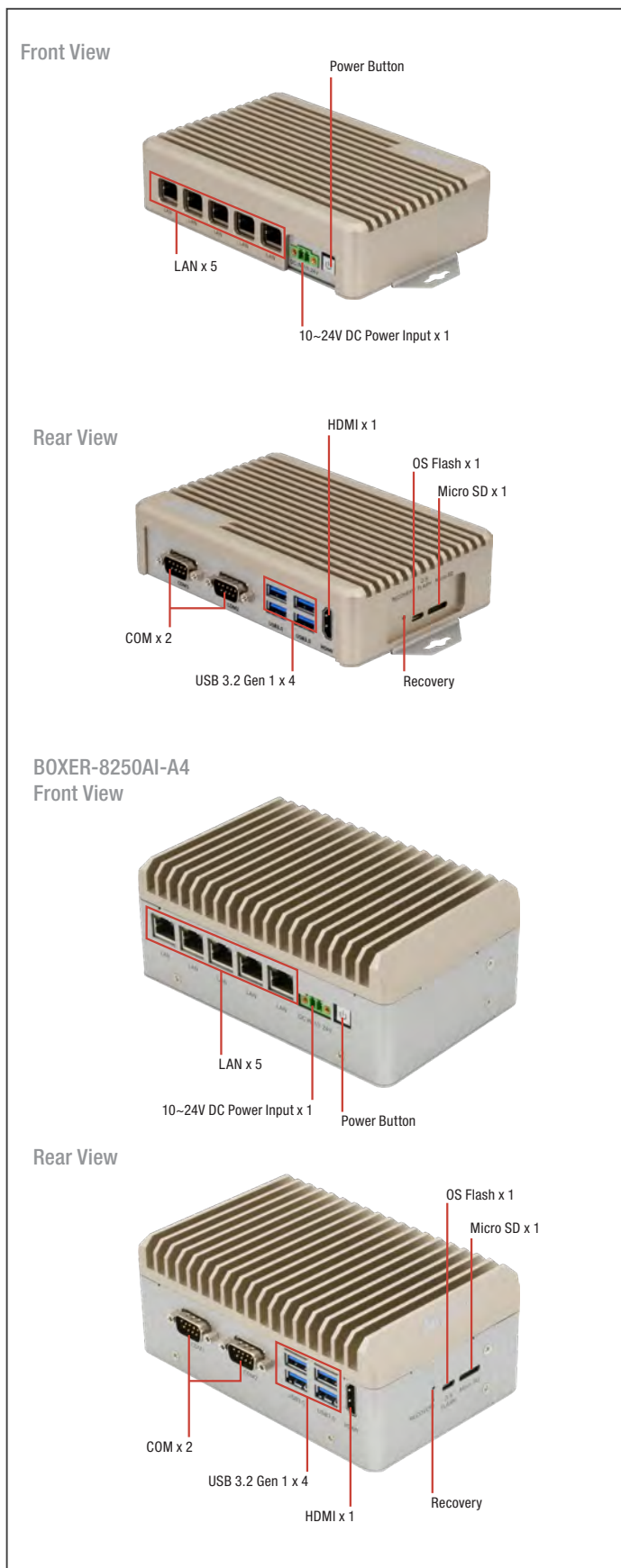
Optional Accessories

- 1255X00035
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



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



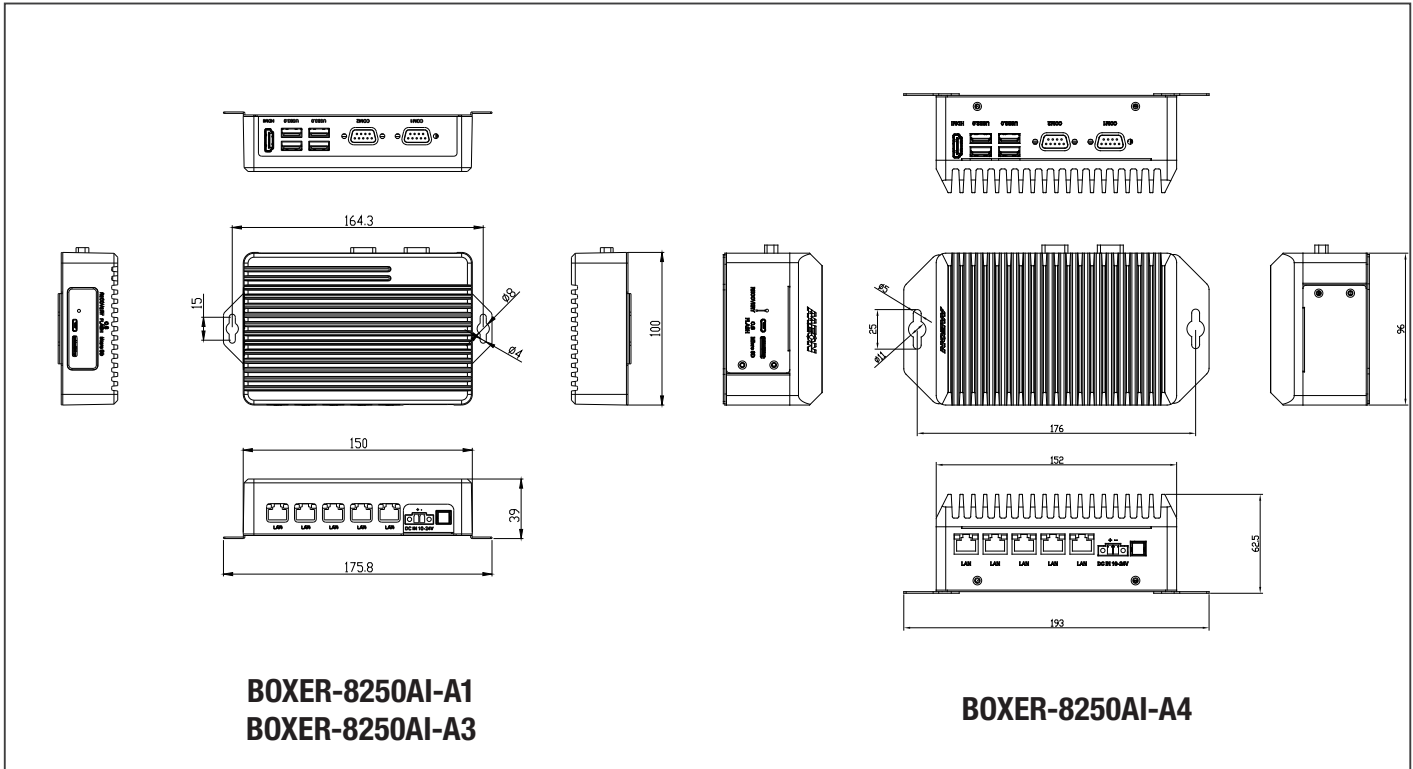
Specifications

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

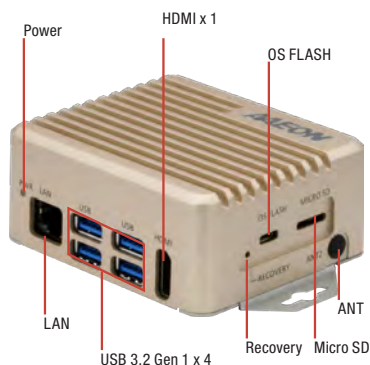
- **1255300611**
60W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)



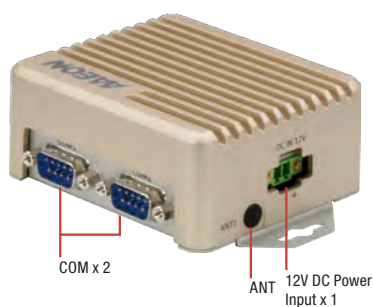
BOXER-8251AI

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	
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

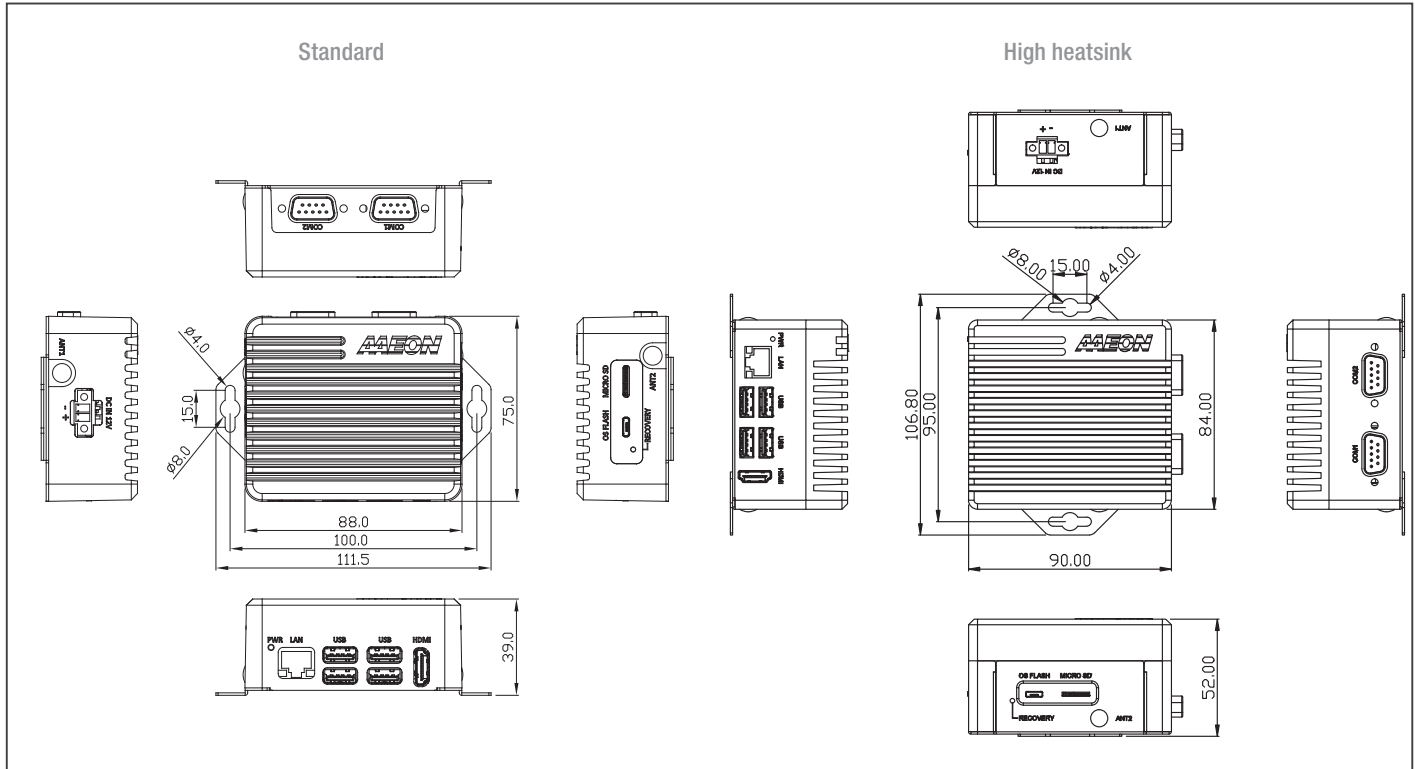
Operating Temperature

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

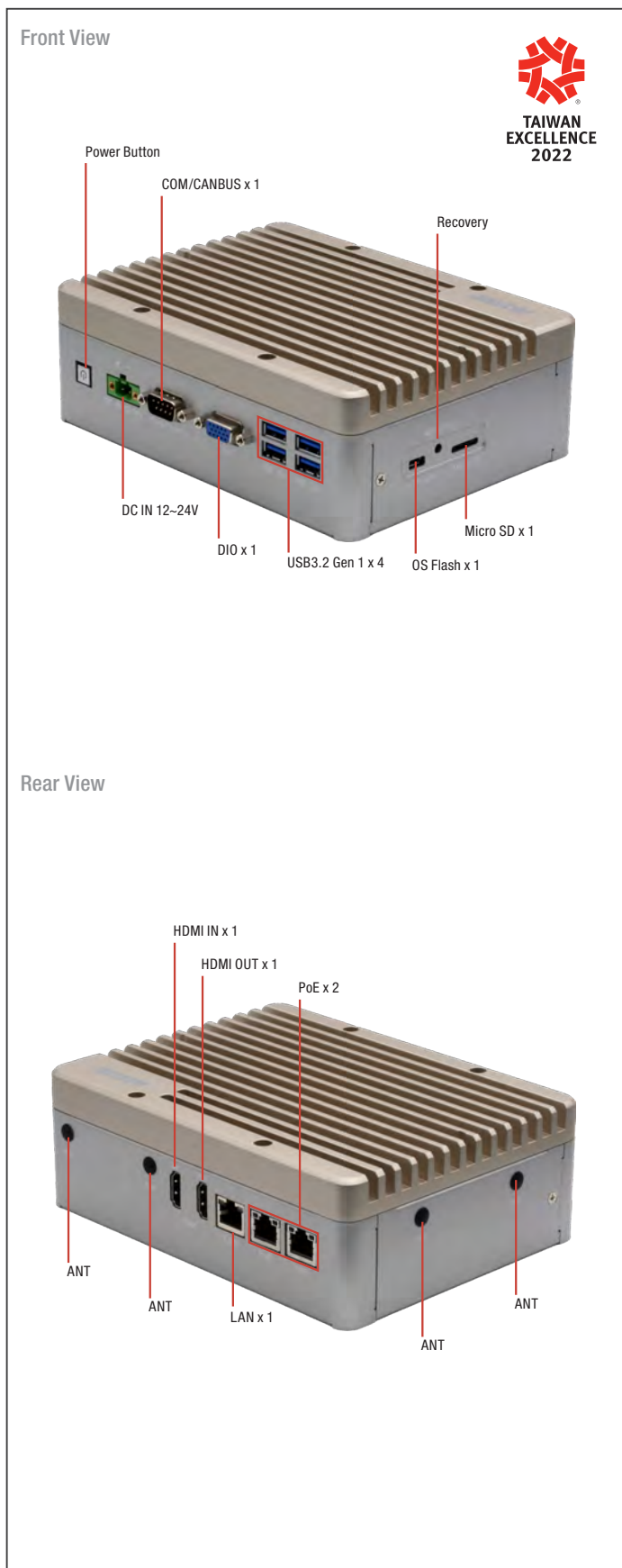
Optional Accessories

- 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



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



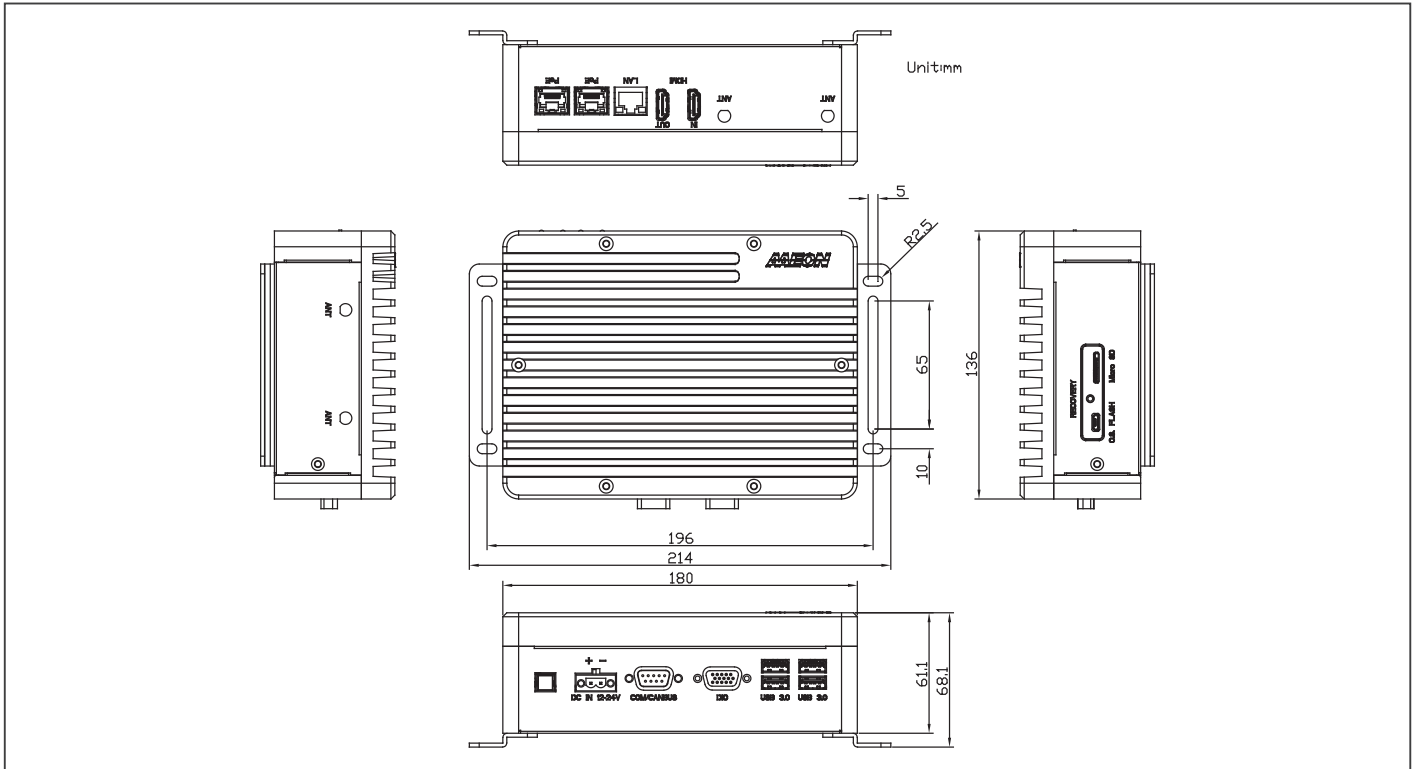
Specifications

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

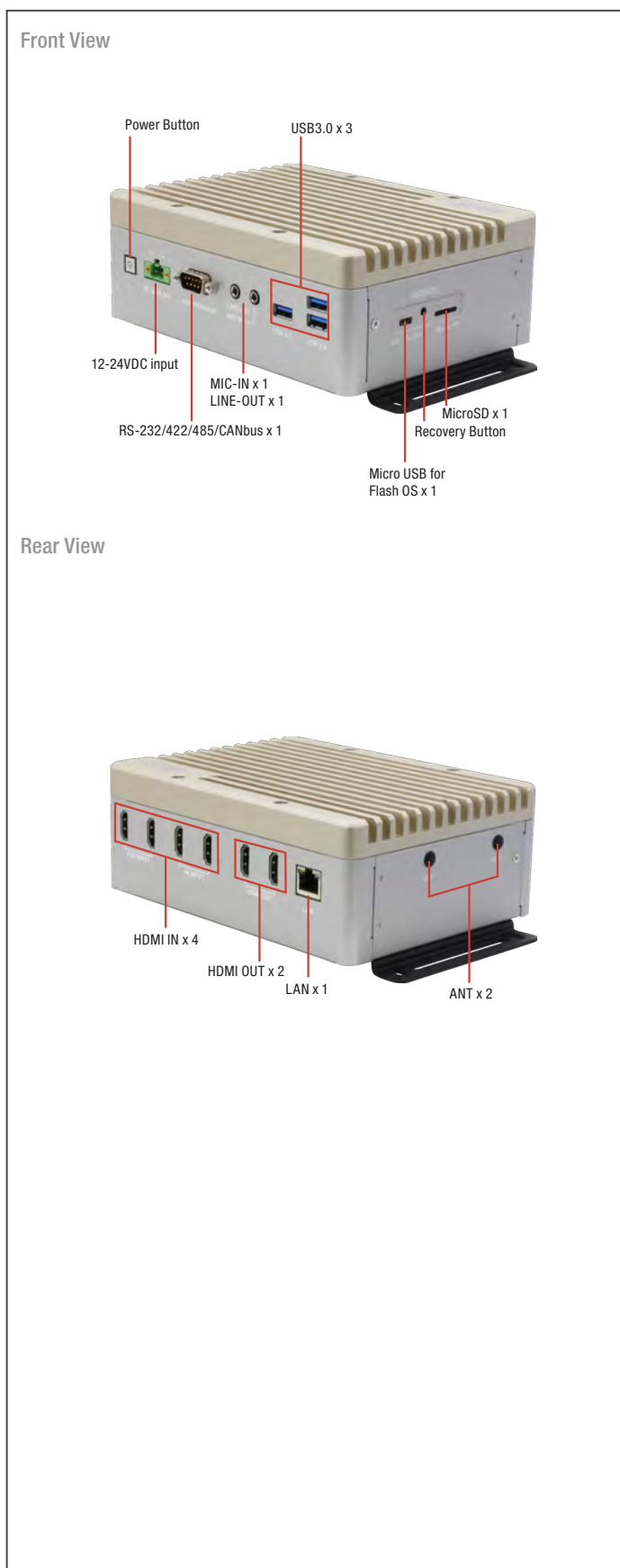
Optional Accessories

- **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



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)



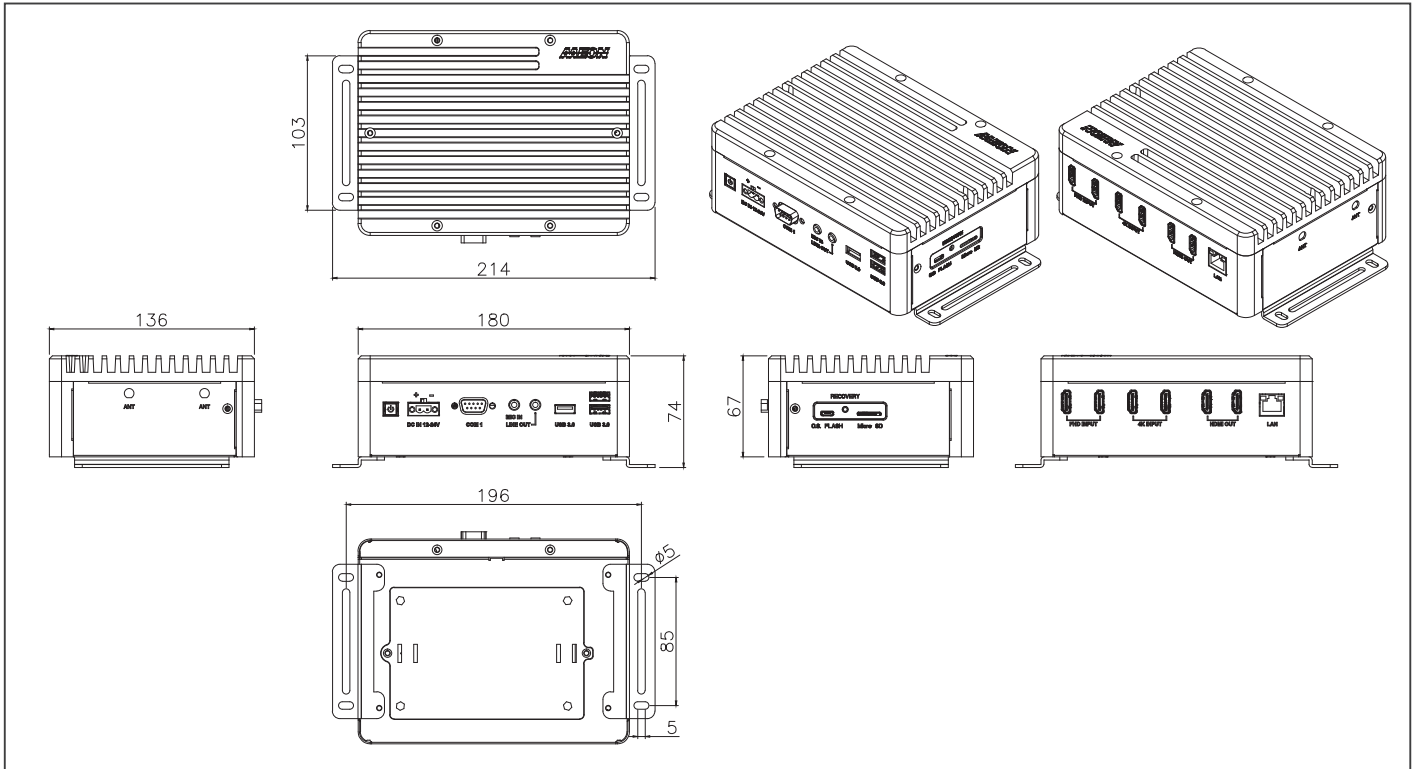
Specifications

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-8622AI PRELIMINARY

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

Front View



Rear View



Features

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



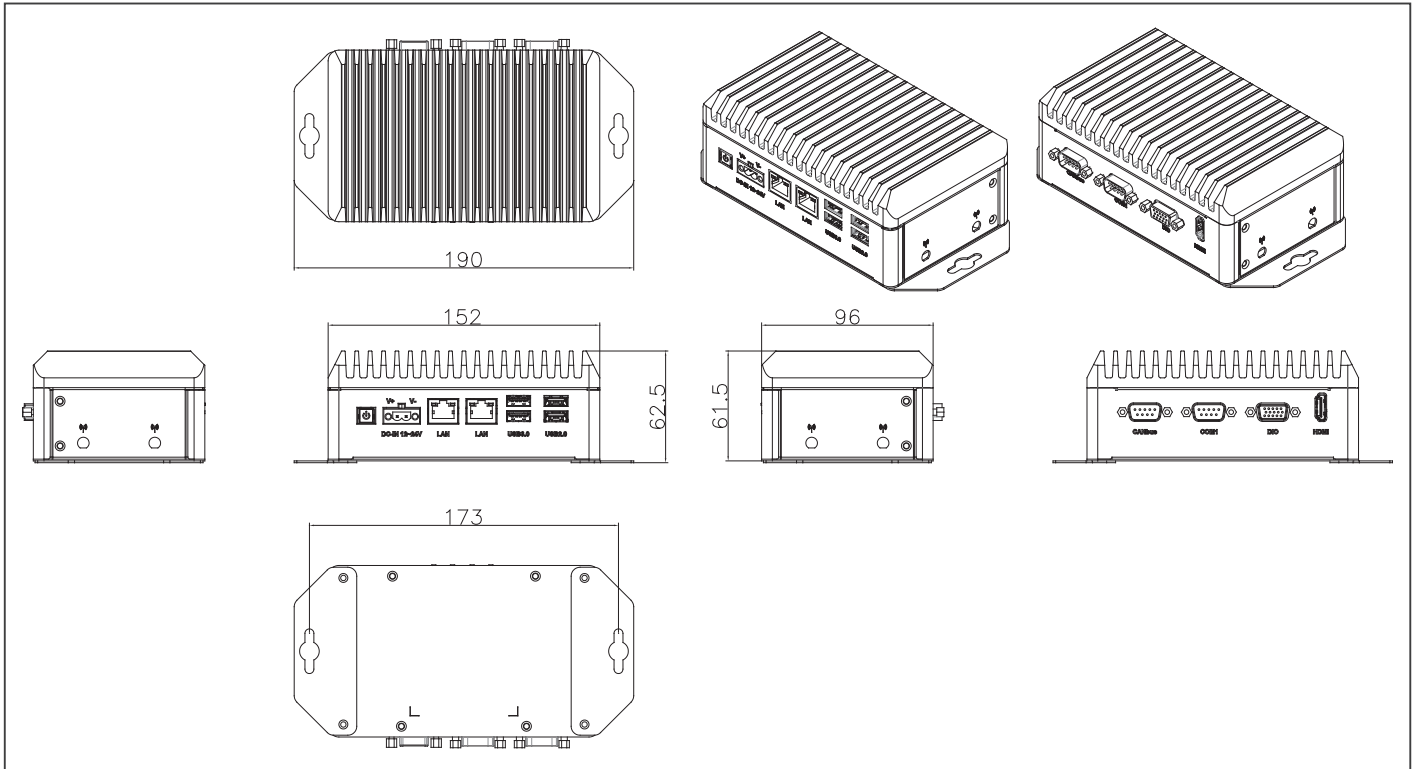
Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin Nano™
CPU	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU
System Memory	4GB 64-Bit LPDDR5
Storage Device	M.2 M Key x 1
Display Interface	HDMI Type A for HDMI 2.0 x 1
Ethernet	RJ-45 x 2 for 10/100/1000 Base-T
I/O	RJ-45 x 2 for 10/100/1000 Base-T USB Type A x 2 for USB 3.2 Gen 1 USB Type A x 2 for USB 2.0 HDMI type A for HDMI v2.0 x 1 DB-9 x 1 for CANbus DB-9 x 1 for RS-232/422/485 DB-15 x 1 for 13 DIO 2-pin terminal block for 12-24V power input Power ON/OFF switch x 1 Antenna hole x 4
Expansion	M.2 E-Key 2230 x 1 for WiFi/Bluetooth M.2 B-Key 3042/3052 x1 for 4G/5G M.2 M-Key 2280 x1
Indicator	Power LED x 1
OS Support	Linux (NVIDIAJetpack 5.0 and 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)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 149°F (-25°C ~ 65°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



Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- TBD



BOXER-8640AI

AI@Edge Fanless Embedded AI System with NVIDIA® Jetson AGX Orin™ 32GB

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



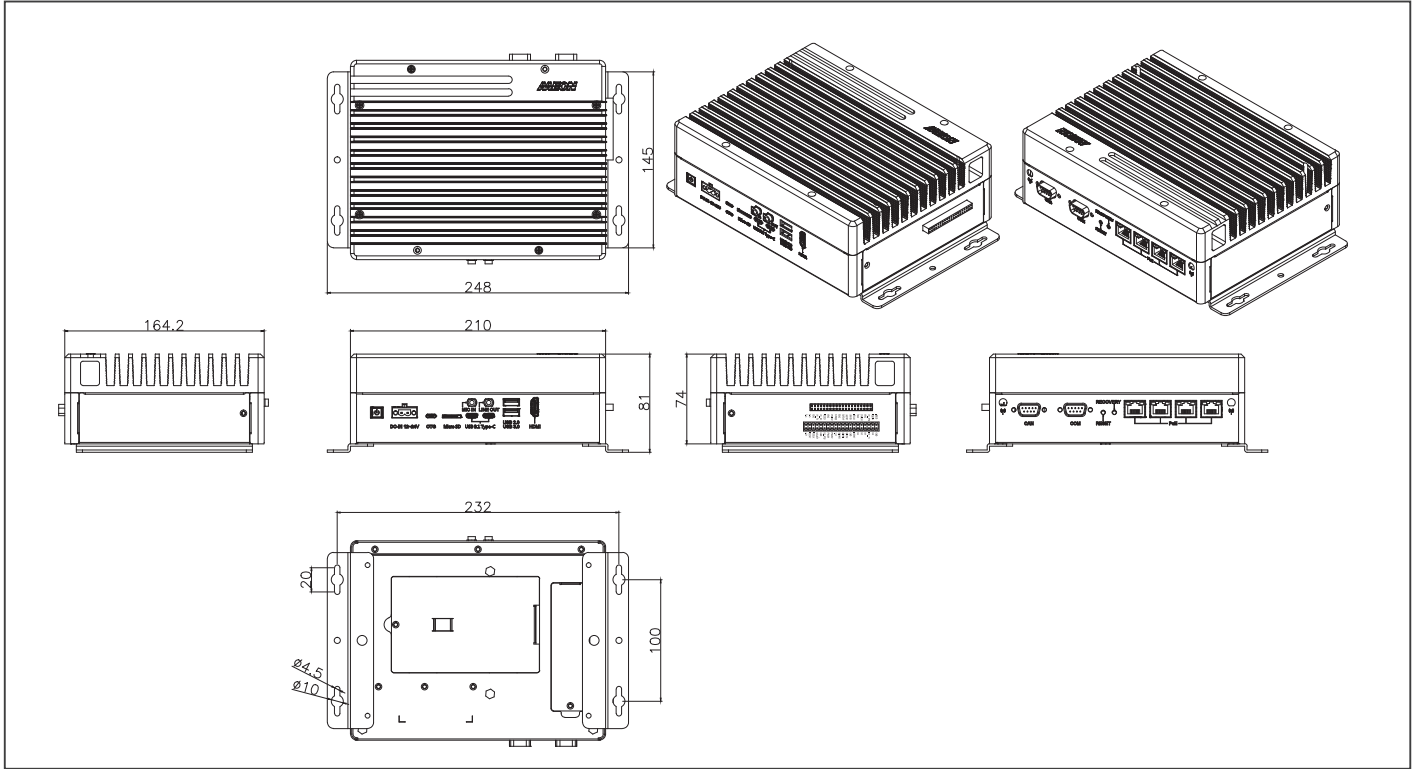
Specifications

System	
AI Accelerator	NVIDIA® Jetson AGX Orin™ 32GB
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 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



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-JP502E-A1-1010	NVIDIA® Jetson AGX Orin™	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	Linux (NVIDIA Jetpack™ 5.0 or above)

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™
- 32GB LPDDR5
- 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



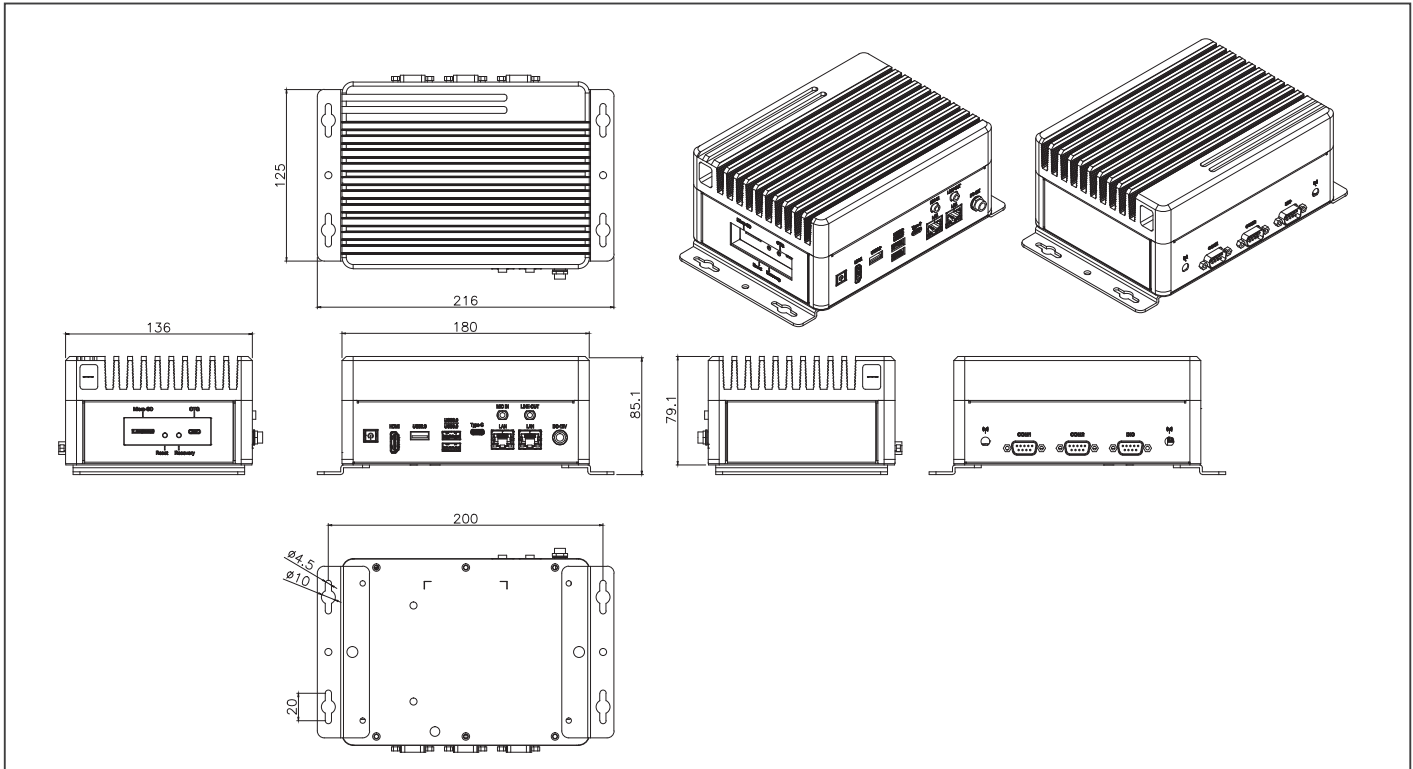
Specifications

System	
AI Accelerator	NVIDIA® Jetson AGX Orin™
CPU	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 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 2 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 2.41" (180.0 mm x 136.0 mm x 61.1 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



Dimension

Unit: mm



Ordering Information

PART NUMBER	AI SOLUTION	LAN	USB	RS-232/422/485	DIO	STORAGE	DISPLAY	MOUNTING	POWER	OPERATION SYSTEM
BOXER-8641AI-JP502E-A1-1010	Jetson AGX Orin	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	12VDC w/ lockable connector	Linux (NVIDIA Jetpack 5.x up)

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 PoE Embedded AI System with NVIDIA® Jetson AGX Orin™

Front View

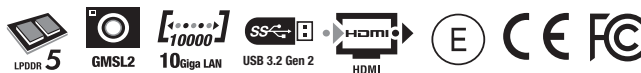


Rear View



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)



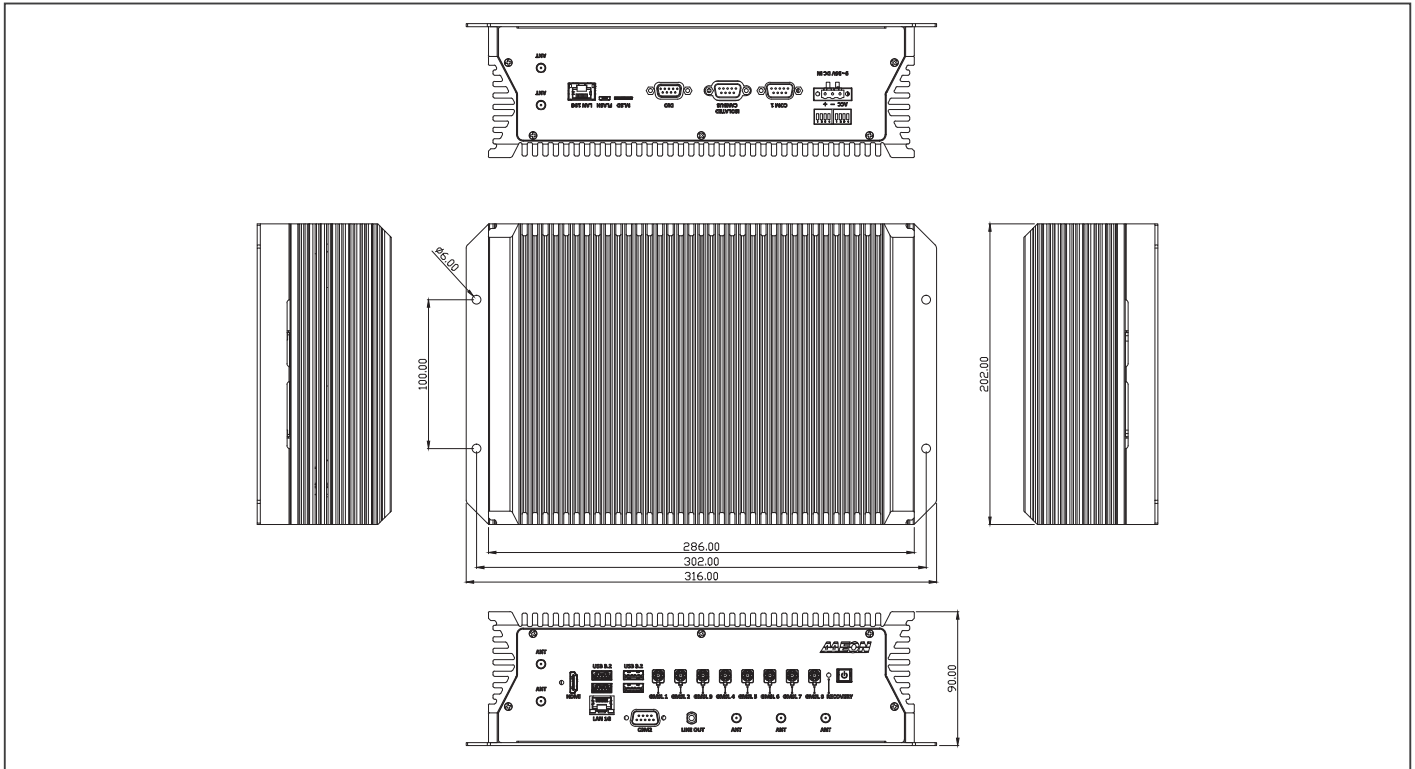
Specifications

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



Dimension

Unit: mm



Optional Accessories

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

Packing List

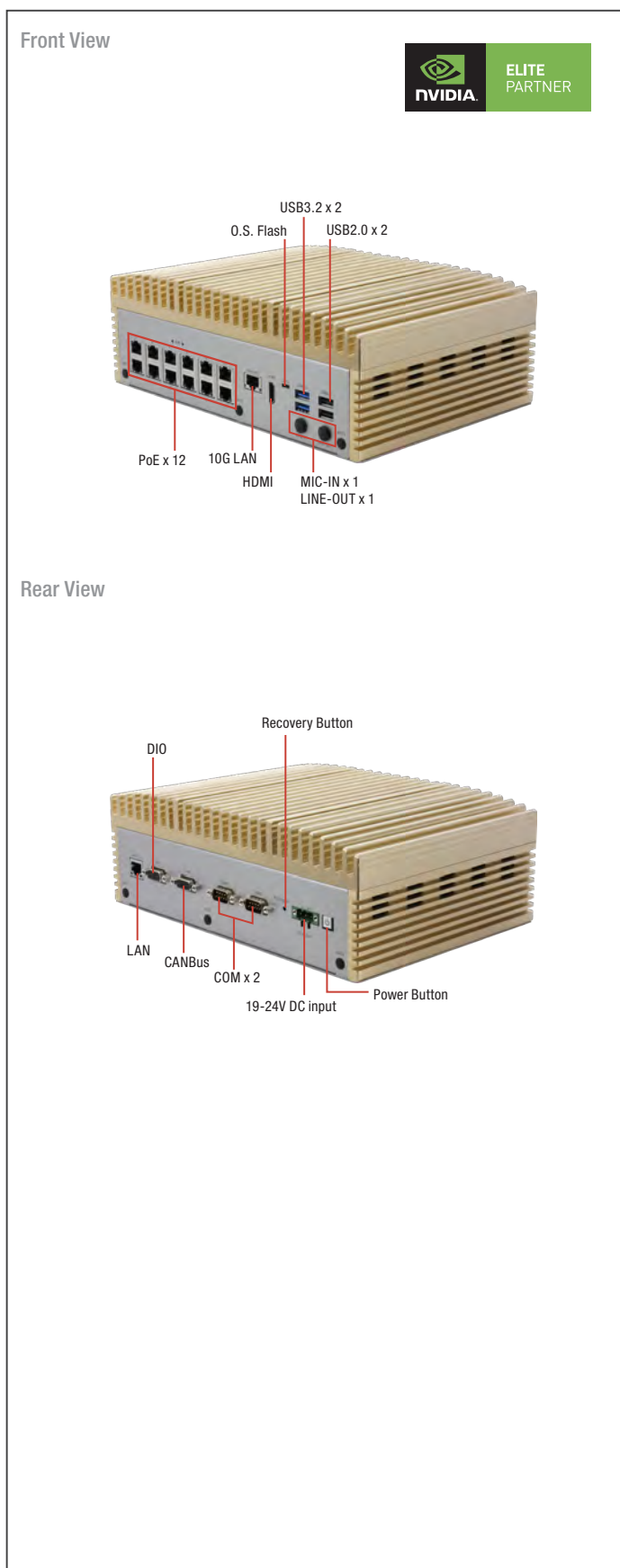
- **BOXER-8645AI**
- **Power Connector x 1**
- **Screw Package x 1**

Ordering Information

- TBD

BOXER-8646AI

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



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



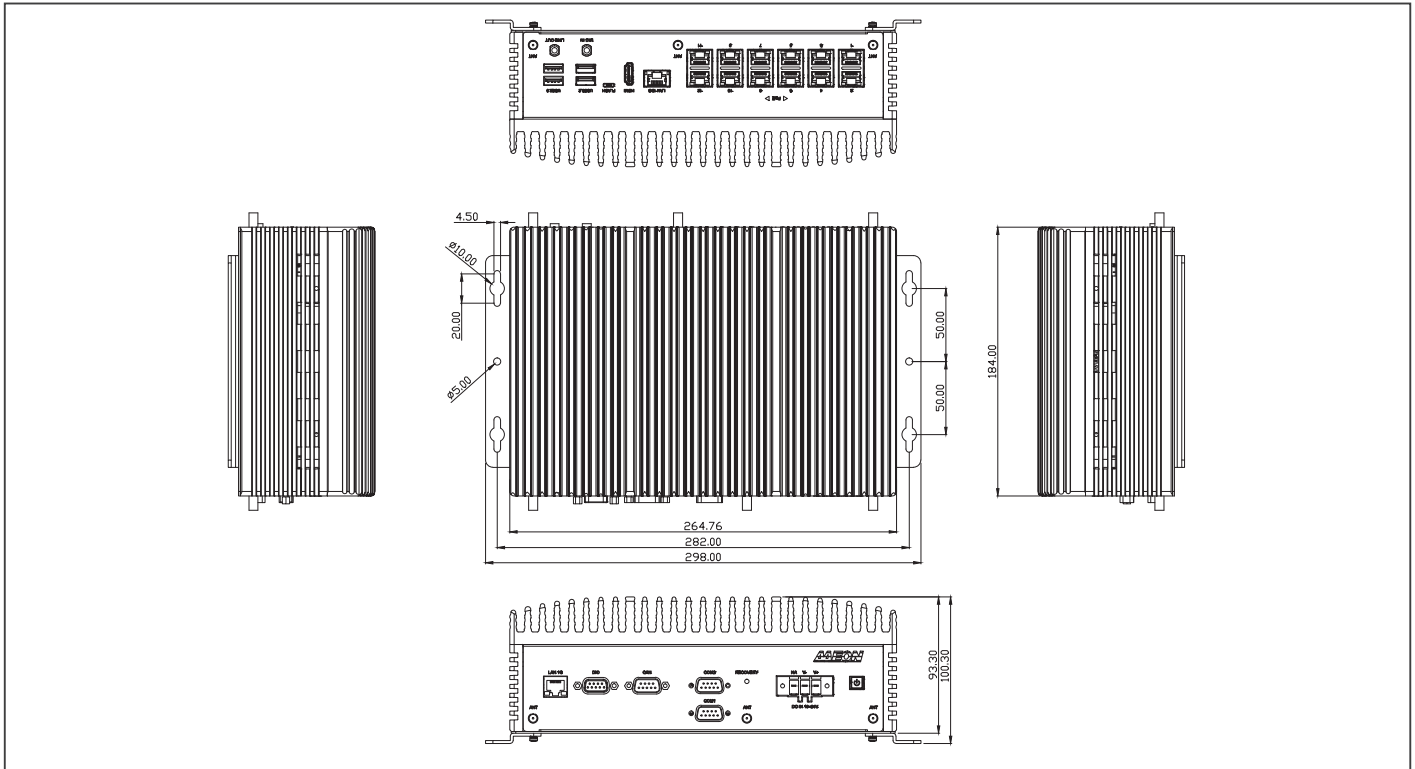
Specifications

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-JP502E-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-8652AI

PRELIMINARY

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

Front View



Rear View



Features

- NVIDIA® Jetson Orin™ NX
- 8GB LPDDR5x
- Support M.2 Key E x 1, M.2 Key B x 1, M.2 Key M x 1
- Support DB-9 x 1 for CANbus
- Support GbE LAN x 2



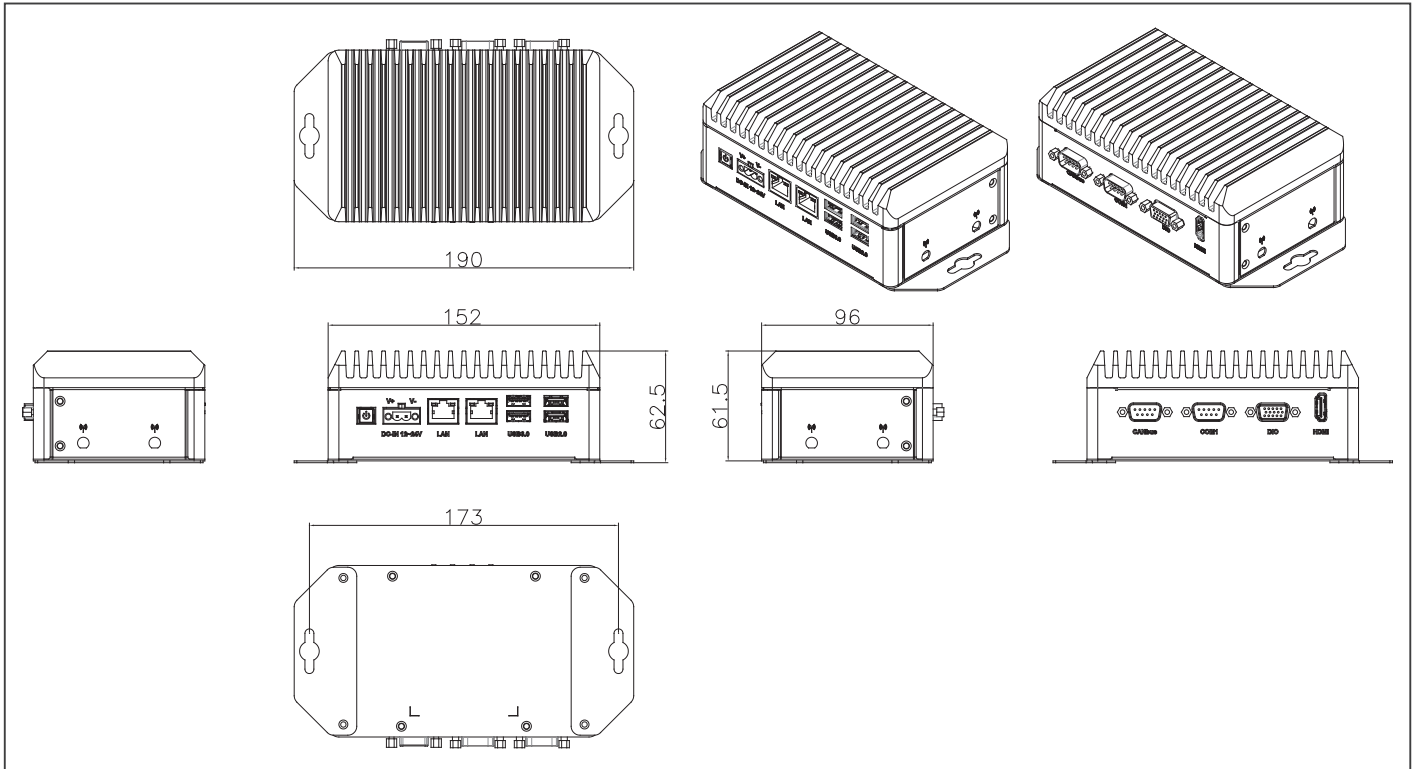
Specifications

System	
AI Accelerator	NVIDIA® Jetson Orin™ NX
CPU	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU
System Memory	8GB 256-Bit LPDDR5x 102.4GB/s
Storage Device	M.2 M Key x 1
Display Interface	HDMI Type A for HDMI 2.0 x 1
Ethernet	RJ-45 x 2 for 10/100/1000 Base-T
I/O	RJ-45 x 2 for 10/100/1000 Base-T USB Type A x 3 for USB 3.2 Gen 1 USB Type A x 1 for USB 2.0 HDMI type A for HDMI v2.0 x 1 DB-9 x 1 for CANbus DB-9 x 1 for RS-232/422/485 DB-15 x 1 for 13 DIO 2-pin terminal block for 12-24V power input Power ON/OFF switch x 1 Antenna hole x 4
Expansion	M.2 E-Key 2230 x 1 for WiFi/Bluetooth M.2 B-Key 3042/3052 x1 for 4G/5G M.2 M-Key 2280 x1
Indicator	Power LED x 1
OS Support	Linux (NVIDIAJetpack 5.0 and 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)	TBD
Gross Weight	TBD
Net Weight	TBD
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	1Grm / 5~500Hz
Anti-Shock	20G peak acceleration
Certification	CE / FCC class A



Dimension

Unit: mm



Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- TBD

BOXER-8301AI-CML

Industrial Computer in Tower Chassis with 10th Generation Intel® Core™ Processors

Front View



Rear View



Features

- 10th Generation Intel® Core™ Processors with Intel® Q470E Chipset
- DDR4 2933Mhz Long-DIMM x 4, Max. 128GB
- Built in NVIDIA RTX™ A4000
- GbE x 1, 2.5GbE x 1, 10GbE x 2
- Hot Swappable 3.5" SATA HDD/SSD Support
- HDMI 2.0a x 1, DP 1.2 x 1, VGA x 1



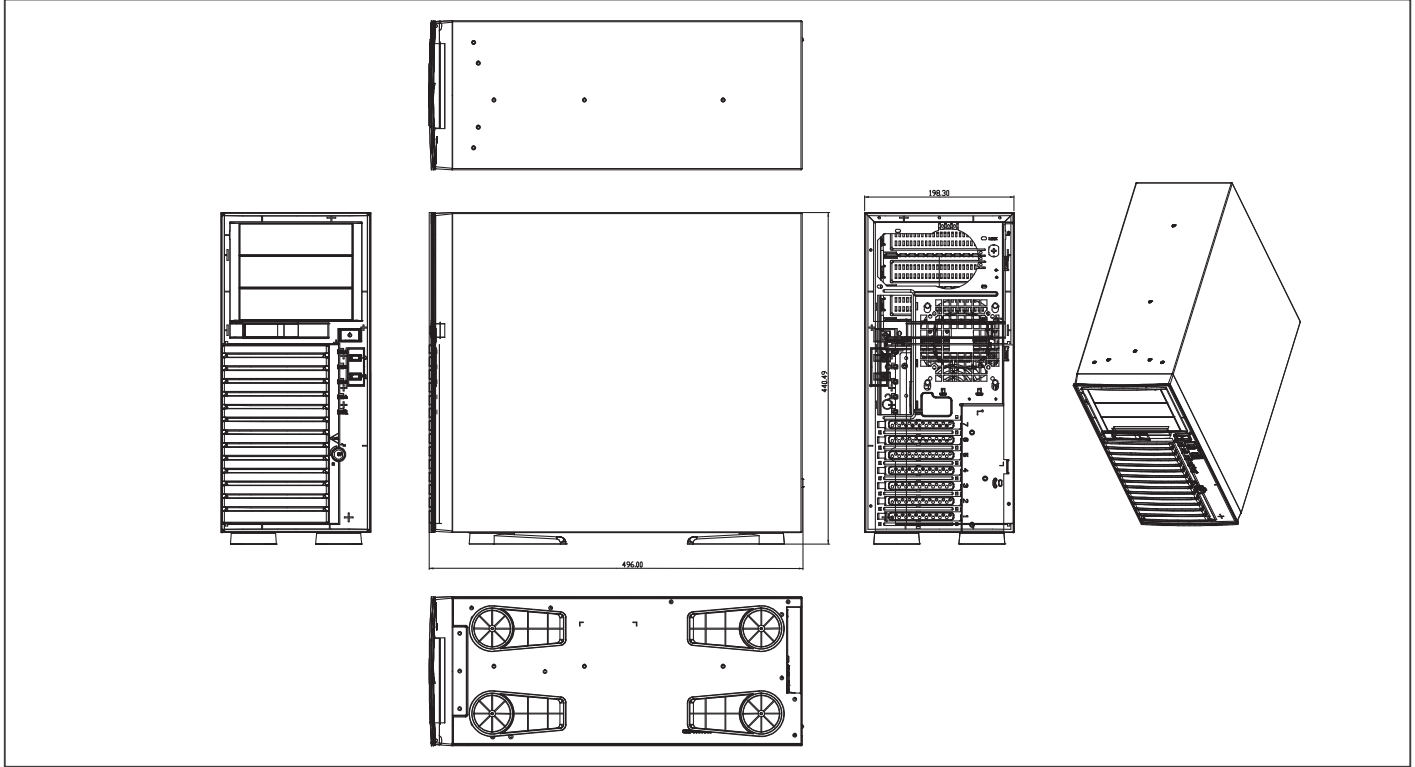
Specifications

System	
CPU	10th Generation Intel® Core™ Desktop Processors
Chipset	Intel® Q470E
System Memory	DDR4 2933Mhz Long-DIMM x 4, up to 128GB
Storage Device	Hot Swappable 3.5" SATA HDD/SSD Bay x 4 M.2 2242/2260/2280 M-Key x 1
Display Interface	HDMI 2.0a x 1, 4096 x 2160 @60Hz DP 1.2 x 1, 4096 x 2160@60Hz VGA x 1, 1920 x 1200@60Hz
Ethernet	Intel® I225LM with 10/100/1000/2500 Mbps Intel® I219LM with 10/100/1000 Mbps, support AMT / vPro Intel® X550-T2 with 10GbE/5GbE/2.5GbE/1GbE/100Mb
I/O	USB 3.2 Gen 2 x 4 USB 3.2 Gen 1 x 2 (Front Panel) USB 2.0 x 2 RJ-45 x 4 for LAN (i225 x 1, i219 x 1, X550-T2 x 1) DB-9 x 2 for RS-232/422/485 Audio for Line-in, Line-out, Mic-in PS2 x 1 Power Button x 1 Reset Button x 1 Alarm Mute x 1
Expansion	PCIe Gen 3 [x16] x 1 PCIe Gen 3 [x4] x 2 M.2 2230 E-Key x 1 (PCIe [x1]/USB 2.0) M.2 3042/3052 B-Key w/SIM Slot (PCIe [x1]/USB 3.0/USB 2.0) Built in NVIDIA RTX™ A4000 x 1
Indicator	Power Status x 1 HDD Activity x 1 LAN Activity x 2 Fan Failure and Overheat x 1
OS Support	Windows® 10 IoT Enterprise (LTSC 2019 Multi-Language English)
Power Supply	
Power Requirement	600W ATX Power Supply Input Voltage: 90 ~ 264Vac Input Frequency: 47 ~ 63Hz Input Current: 115Vac @6A, 230Vac @3A
Mechanical	
Mounting	—
Dimensions (W x D x H)	18.3" x 7.8" x 16.7" (465mm x 198mm x 425mm)
Gross Weight	39.68 lb. (18Kg)
Net Weight	33.07 lb. (15.5Kg)
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	Random, 1Grms, 5~500Hz, Anti-vibration design
Anti-Shock	SSD: 5G @Half-sine, 11ms
Certification	CE/FCC Class B, VCCI Class B



Dimension

Unit: mm



Ordering Information

Part Number	CPU	PCH	LAN	FAN	USB	RS-232/422/485	Audio	Storage	Display	Expansion	Power	Operation Temp
BOXER-8301AI-CML-A1-1010	—	Q470E	4	Fan System	USB 3.2 Gen2 x 4 USB 3.2 Gen1 x 2 USB 2.0 x 2	2	Mic-in x 1 Line-in x 1 Line-out x 1	3.5" SATA Drive Bay x 4 M.2 2242/2260/2280 M-Key x 1	HDMI x 1 DP x 1 VGA x 1	PCIe Gen 3 [x16] x 1 PCIe Gen 3 [x4] x 2 M.2 2230 E-Key x 1 M.2 3042/3052 B-Key w/SIM Slot Built in NVIDIA RTX™ A4000 x 1	DC In 19~36V with 3-pin terminal block	0°C ~ 40°C with 0.5m/s airflow

Packing List

- Key for Front Bezel x 1
- Screw Package x 1
- NVIDIA RTX™ A4000 x 1
- BOXER-8301AI-CML x 1

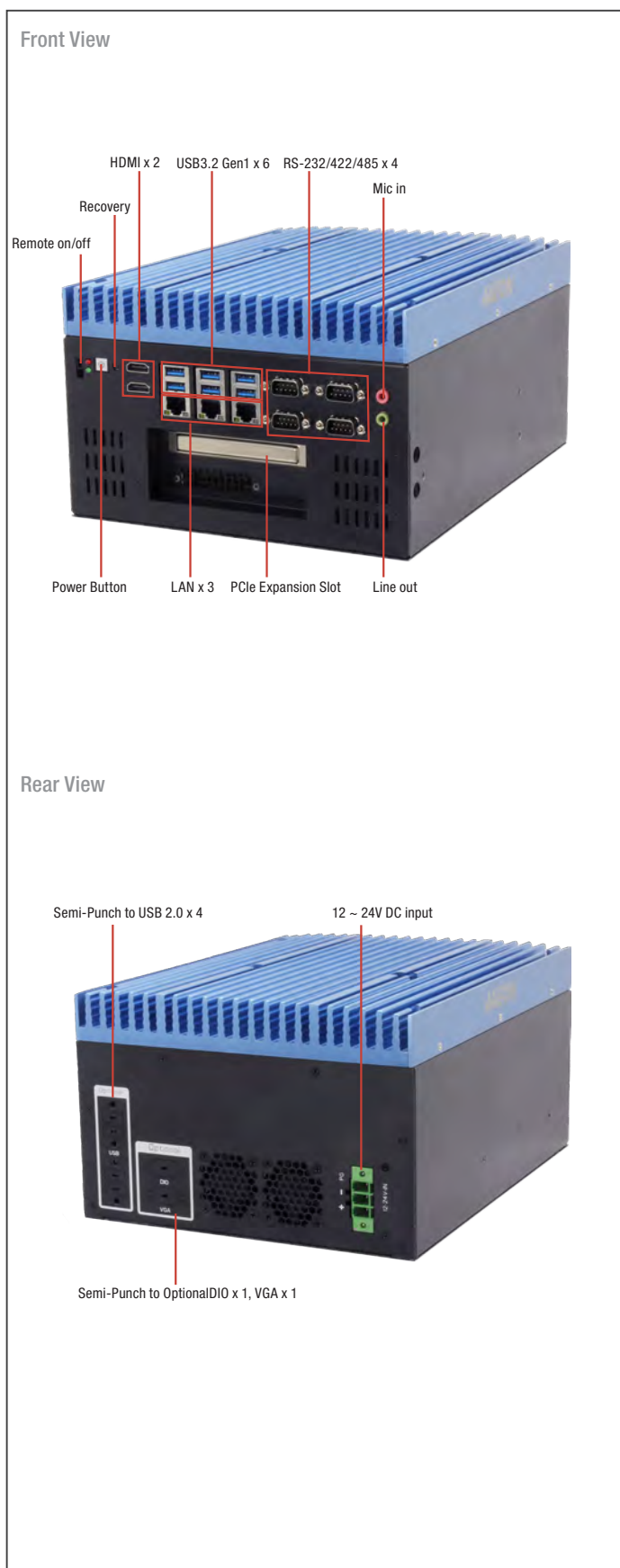
Optional Accessories

- NVIDIA RTX™ A2000



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)



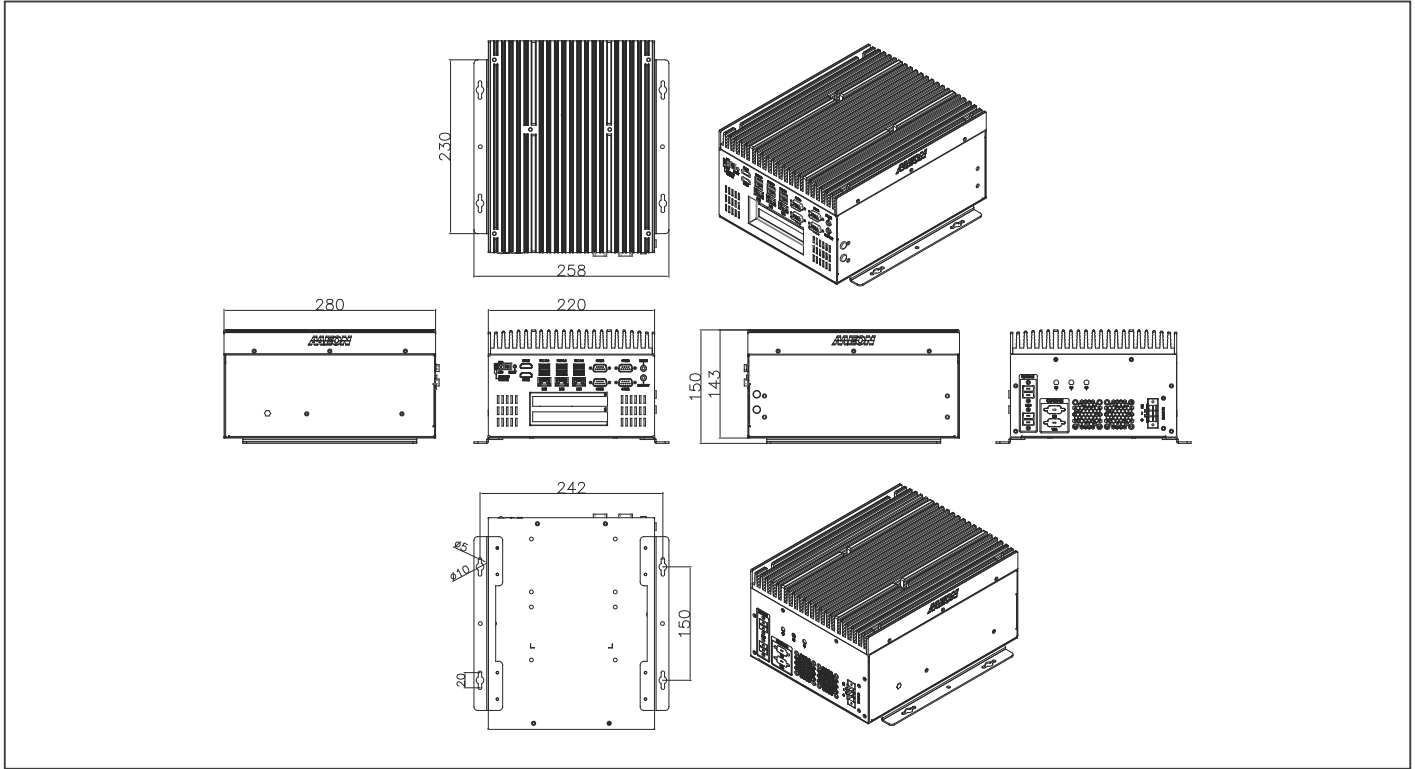
Specifications

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 x1 (PCIe + USB with 1 SIM Slot) Half-size M.2 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)



BOXER-8623AI

PRELIMINARY

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



Features

- NVIDIA® Jetson Orin Nano™
- GbE PoE/PSE 802.3af x 2 ports
- Storage: 2.5" SATA Drive Bay, M.2 2230 E key
- Optional for OOB by request
- Operating temperature: -25°C ~ 70°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 2230 E Key x 1, 2.5" SATA drive bay x 1
Display Interface	HDMI 1.4 type A x 1
Ethernet	RJ-45 x 1 for GbE LAN RJ-45 x 2 for GbE PoE/PSE 802.3af/each (Max.30W)
I/O	USB 3.2 Gen 1 type A x 3 USB 2.0 type A x 1 DB-9 for RS232(Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 RS232(Rx/Tx)/RS485 x 1 and DIO x 9 HDMI 1.4 type A x 1 Micro USB OTG x 1 for OS Flash Power button x 1 Recovery button x 1 Antenna x 4
Expansion	Full size mini-PCIe slot x 1 (USB + PCIe + SATA), Default: PCIe M.2 2230 E Key x 1 2.5" SATA Drive Bay x 1 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	Wall Mount (default)
Dimensions (W x D x H)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 158°F (-25°C ~ 70°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

Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- BOXER-8623AI-JP51T-A1-1010



Front View



Launching in Q1

Rear View

Features

- NVIDIA Jetson Orin NX
- GbE LAN x 5
- Operating temperature: -25°C ~ 70°C
- Storage: 2.5" SATA Drive Bay, M.2 2230 E key
- Optional for OOB function by request
- Wide power input: 12V ~ 24V



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 2230 E Key x 1, 2.5" SATA Drive Bay x 1
Display Interface	HDMI 1.4 type A x 1
Ethernet	RJ-45 x 5 for GbE LAN
I/O	USB 3.2 Gen 1 type A x 3 USB 2.0 type A x 1 DB-9 for RS232(Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 RS232(Rx/Tx)/RS485 x 1 and DIO x 9 HDMI 1.4 type A x 1 Micro USB x 1 for OS Flash Power button x 1 Recovery button x 1 Antenna x 2
Expansion	Full size Mini-PCIe slot x 1 (USB + PCIe) 2.5" SATA Drive Bay 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 up)
Power Supply	
Power Requirement	12V ~ 24V DC in with 2 pins terminal block x 1
Mechanical	
Mounting	Wall Mount (default)
Dimensions (W x D x H)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 158°F (-25°C ~ 70°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	3.5Grm / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A

Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- BOXER-8650AI-JP51T-A1-1010



BOXER-8651AI

PRELIMINARY

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, M.2 3052 B Key x 1
- USB 3.2 Gen 2 x 2 & USB 2.0 type A x 2
- COM, DIO, CANBus
- Operating temperature: -25°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 RAM, M.2 2230 E Key x 1
Display Interface	HDMI 2.1 type A x 1
Ethernet	RJ-45 x 1 for GbE LAN
I/O	USB 3.2 Gen 1 type A x 2 USB 2.0 type A x 2 DB-9 for RS232(Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 DB-15 for RS232(Rx/Tx)/422/RS485 x 1 and DIO x 8 HDMI 2.1 type A x 1 Micro USB x 1 for OS Flash Power button x 1 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 (Wifi/BT/Storage) x 1 SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 5.0 up)
Power Supply	
Power Requirement	12V DC in with 2 pins terminal block x 1
Mechanical	
Mounting	Wall Mount (default)
Dimensions (W x D x H)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 131°F (-25°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	3.5Grm / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A

Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- BOXER-8651AI-JP51M-A1-1010



Front View



Launching in Q1

Rear View

Features

- NVIDIA® Jetson Orin™ NX
- GbE PoE/PSE 802.3af x 2 ports
- Storage: M.2 2280 M Key x 1
- Optional for OOB function by request
- Operating temperature: -25°C ~ 70°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 2.1 type A x 1
Ethernet	RJ-45 x 1 for GbE LAN RJ-45 x 2 for GbE PoE/PSE 802.3af/each (Max.30W)
I/O	USB 3.2 Gen 1 type A x 3 USB 2.0 type A x 1 DB-9 for RS232(Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 DB-9 for 232(Rx/Tx)/422/485 x 1 DB-9 for DIO x 8 HDMI 2.1 type A x 1 Micro USB x 1 for OS Flash Power button x 1 Recovery button x 1 Antenna x 4
Expansion	M.2 2280 NVMe M Key x 1 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 up)
Power Supply	
Power Requirement	12V~24V DC in with 2 pins terminal block x 1
Mechanical	
Mounting	Wall Mount (default)
Dimensions (W x D x H)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 158°F (-25°C ~ 70°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	3.5Grm / 5~500Hz / Operation
Anti-Shock	50G peak acceleration
Certification	CE/FCC class A

Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- BOXER-8653AI-JP51T-A1-1010



BOXER-8621AI

PRELIMINARY

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, M.2 3052 B Key x 1
- USB 3.2 Gen 2 x 2 & USB 2.0 type A x 2
- COM, DIO, CANBus
- Operating temperature: -25°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 RAM, M.2 2230 E Key x 1
Display Interface	HDMI 2.1 type A x 1
Ethernet	RJ-45 x 1 for GbE LAN
I/O	USB 3.2 Gen 1 type A x 2 USB 2.0 type A x 2 DB-9 for RS232(Rx/Tx/CTS/RTS)/RS485 x 1 and CANBus FD x 1 DB-15 for RS232(Rx/Tx)/422/RS485 x 1 and DIO x 8 HDMI 2.1 type A x 1 Micro USB x 1 for OS Flash Power button x 1 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 (Wifi/BT/Storage) x 1 SIM Slot x 1
Indicator	Power LED x 1
OS Support	Linux (NVIDIA Jetpack 5.0 up)
Power Supply	
Power Requirement	12V DC in with 2 pins terminal block x 1
Mechanical	
Mounting	Wall Mount (default)
Dimensions (W x D x H)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-13°F ~ 140°F (-25°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

Optional Accessories

- TBD

Packing List

- TBD

Ordering Information

- TBD



02



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02

IoT Gateway Solutions



Front View



COM Port Pinout	PIN	COM1 Definition	COM2
1	—	SG	—
2	—	D2-	—
3	—	D2+	—
4	—	SG	—
5	—	D1-	—
6	—	D1+	—
7	—	—	—
8	—	—	—
9	—	—	—

Rear View



Features

- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- Gigabit Ethernet port x 2
- USB2.0 x 1, RS-485 x 2, Programmable LED x 4
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector (For RF Module) x 1
- Debug Port x 1
- DC9-30V Power Input
- Pre-Install Linux Debian
- Supports Modbus / MQTT Library (by request)

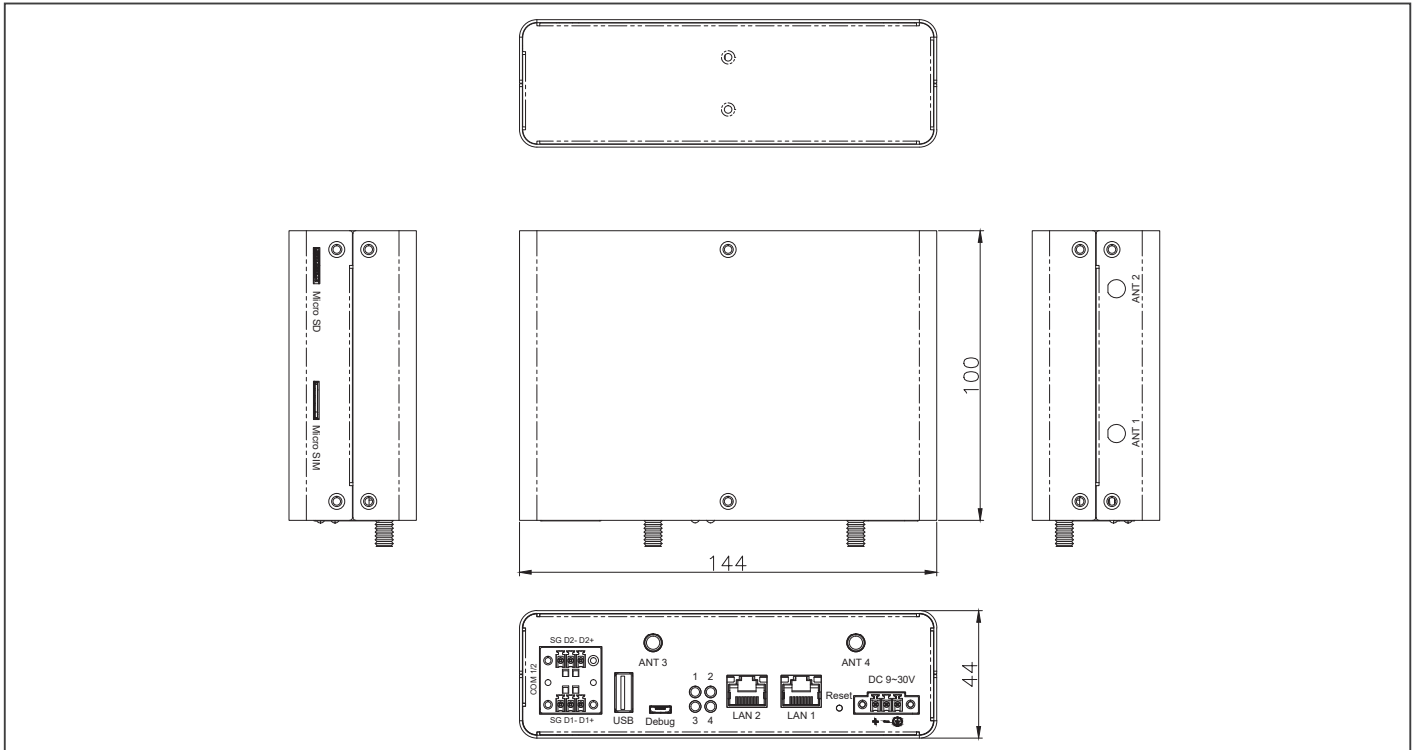


Specifications

System	
Processor	ARM Cortex-A8 800 MHz RISC Processor
Memory	Onboard DDR3L 1GB
Storage	eMMC 16GB
Real Time Clock	RTC, with 3V CR2032 Lithium battery x 1
Security	—
Indicators	Programmable LED control x 4
Cellular	Mini PCIe Connector x 1
Wireless Lan	—
Operating System	Debian 9
Support Protocol	Modbus / MQTT Library (by request)
I/O Interfaces	
Serial Port	RS-485, Phoenix Connector x 2
Ethernet	Gigabit Ethernet, RJ-45 x 2
USB	USB 2.0, Type A x 1
ADC	—
DI/DO	—
CAN Bus	—
Display	—
Power Connector	3 Pin 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	DC9-30V
Power Consumption	2.28 W (Full Loading)
MTBF (Hours)	855590
Environmental and Mechanical	
Dimension	5.67" x 3.94" x 1.73" (144 x 100 x 44mm)
Weight	512 g
Mount Options	Wallmount, Din Rail (Optional)
Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	COM	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-3352-A10-A002	ARM Cortex-A8 800MHz	Onboard DDR3L 1GB	Fanless	RS-485 x2 (phoenix)	eMMC 16GB, MicroSD x1	GbE x 2	USB 2.0 x 1	Mini PCIe slot x 1, SIM card socket x 1	DC9-30V	0°C – 60°C @ 0.5 m/s airflow	3G/4G LTE module (optional)
SRG-3352-A10-A003	ARM Cortex-A8 800MHz	Onboard DDR3L 1GB	Fanless	RS-485 x2 (phoenix)	eMMC 16GB, MicroSD x1	GbE x 2	USB 2.0 x 1	Mini PCIe slot x 1, SIM card socket x 1	DC9-30V	0°C – 60°C @ 0.5 m/s airflow	Pre-Install OPC UA & Activation License

Packing List

- SRG-3352

Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration

Optional Accessories

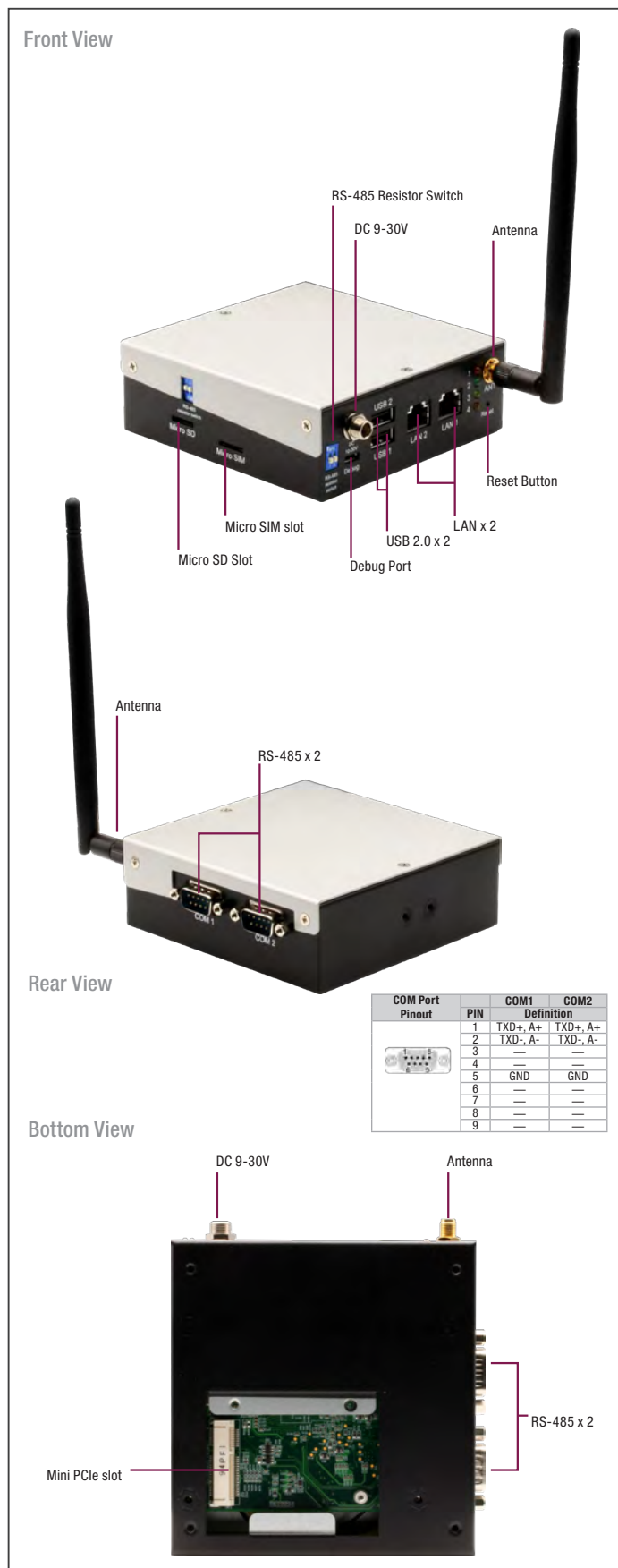
- **1255300368**
Power Adapter. AC/DC. 100-240VAC. 12VDC/3A. 36W. AOEM. ADS036T-W120300. (phoenix connector)
- **9741EG2560**
PCIe mimi card. 4G LTE. module kit. Global Band W/SIM holder. W/Cable & antenna. Quectel. EG25-G
- **9751335201**
Din rail kit. 44 x 48.3mm
- **9751335202**
Wallmount kit. 100 x 35mm

Note: All sp

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Site Web : www.es-france.com



Features

- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- Gigabit Ethernet port x 2
- USB2.0 x 2, RS-485 x 2, Programmable LED x 4
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector(For RF Module) x 1
- NB-IoT connector x 1
- Board to Board connector x 1
- Debug Port x 1
- DC9-30V Power Input
- Onboard WiFi/Bluetooth Module
- Pre-Install Linux Debian
- Supports Modbus / MQTT Library (by request)

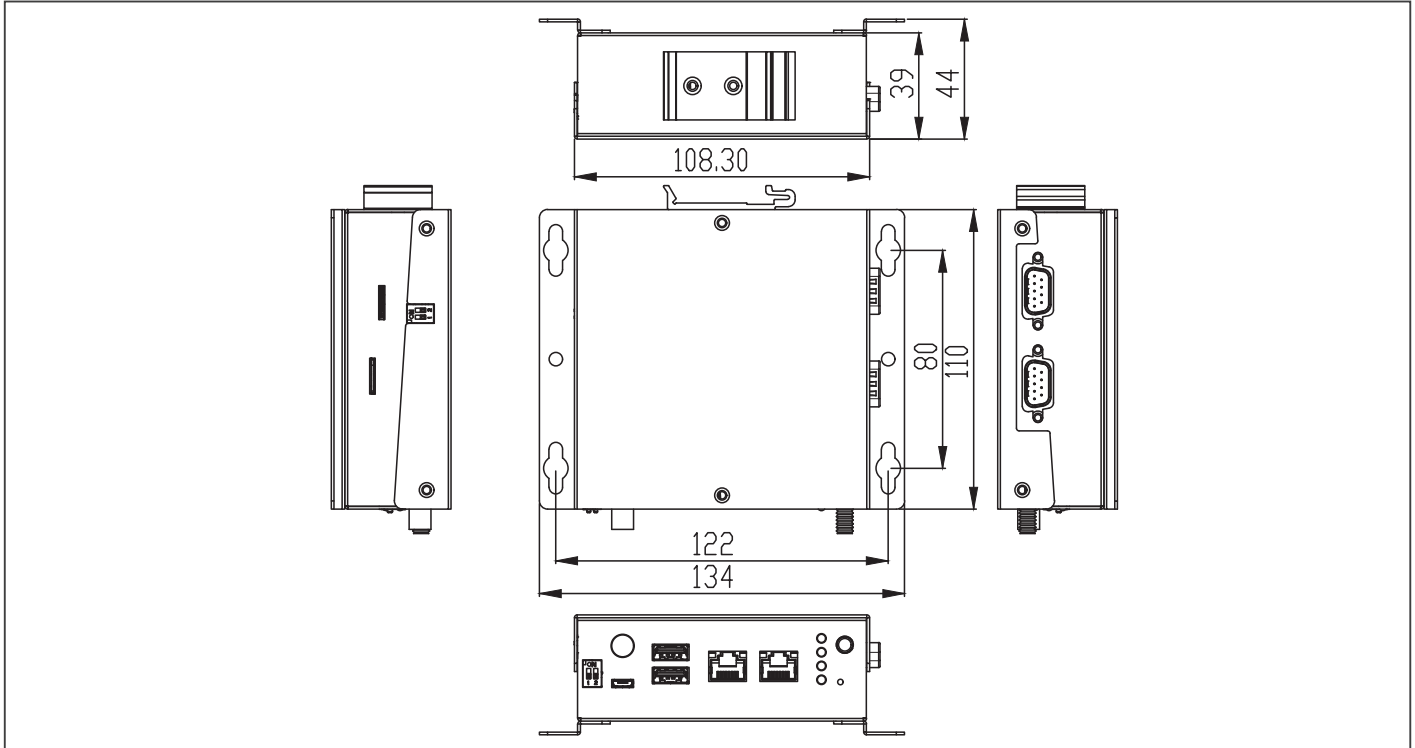


Specifications

System	
Processor	ARM Cortex-A8 800 MHz RISC Processor
Memory	Onboard DDR3L 1GB
Storage	eMMC 16GB
Real Time Clock	RTC, with 3V CR2032 Lithium battery x 1
Security	—
Indicators	Programmable LED control x 4
Cellular	Mini PCIe Connector x 1
Wireless Lan	Onboard WiFi 802.11 b/g/n, Bluetooth4.2 / BLE
Operating System	Debian 10
Support Protocol	Modbus / MQTT Library(by request)
I/O Interfaces	
Serial Port	RS-485, DB9 Connector x 2
Ethernet	Gigabit Ethernet, RJ-45 x 2
USB	USB 2.0, Type A x 2
ADC	—
DI/DO	—
CAN Bus	—
Display	—
Power Connector	Lockable DC Jack
Debug Port	Micro USB x 1
Expansion Slot	SIM card slot x 1 Micro SD slot x 1
Other Interface	—
Power Supply	
Power Requirement	DC9-30V
Power Consumption	3.36 W (Full Loading)
MTBF (Hours)	855590
Environmental and Mechanical	
Dimension	4.3" x 4.33" x 1.54" (109 x 110 x 39 mm)
Weight	430 g
Mount Options	Wallmount, Din Rail (Optional)
Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	COM	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-3352C-A10-A001	ARM Cortex-A8 800MHz	Onboard DDR3L 1GB	Fanless	RS-485 x 2 (DB9)	eMMC 16GB, MicroSD x1	GbE x 2	USB 2.0 x 2	Mini PCIe slot x 1, SIM card socket x 1	DC 9-30V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module (optional)

Packing List

- SRG-3352C

Optional Accessories

- 1255300366
Power Adapter. AC/DC. 100-240VAC. 12VDC/3A.36W.
- 9741EG2560
PCIe mimi card. 4G LTE. module kit. Global Band W/SIM holder. W/Cable & antenna. Quectel. EG25-G
- 9651352C02
DIN rail kit. 47x25mm. SRG-3352C series
- 9651352C01
Wall mount kit. 110x26mm. SRG-3352C series

Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration



SRG-IMX8P

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

Front View



Rear View



With Antennas installed



(Antennas: Optional Accessories)

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

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

Features

- i.MX8M Plus Quad Cortex-A53 1.6 GHz RISC Processor
- Onboard DDR4L 2GB / eMMC 16GB (Optional 4GB RAM/ eMMC 32GB)
- USB 3.0 x 2
- Gigabit Ethernet port x 2
- CAN-FD x 2CH
- Mini PCIe connector (For RF Module) x 2
- Micro SD Card Slot x 1
- Support RTC, TPM 2.0
- Wide Voltage DC9V-36V
- Wide Temperature -20 °C ~ 70 °C
- Pre-Install Linux Debian
- Supports Modbus/MQTT Library (by request)



Specifications

System	
Processor	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor (NPU Optional)
Memory	Onboard DDR4L 2GB (Optional 4GB)
Storage	eMMC 16GB (Optional 32GB)
Real Time Clock	RTC x 1, with 3V CR2032 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 10
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 x1 (Output)
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

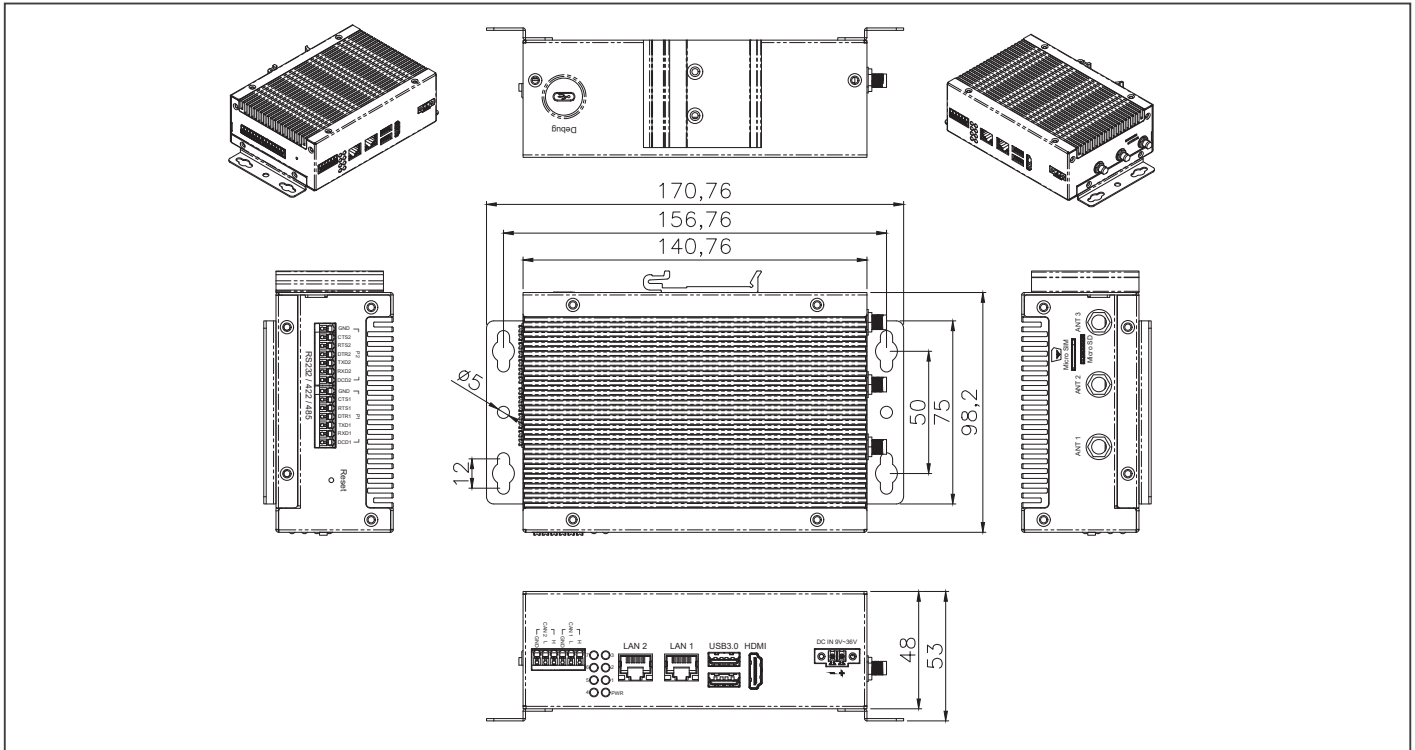
Packing List

- SRG-IMX8P



Dimension

Unit: mm



Ordering Information

Part Number	CPU	NPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-IMX8P-A10-0216	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	N/A	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-A10-0432	ARM NXP i.MX8M Plus Quad-Core Cortex-A53 1.6GHz Processor	1X	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

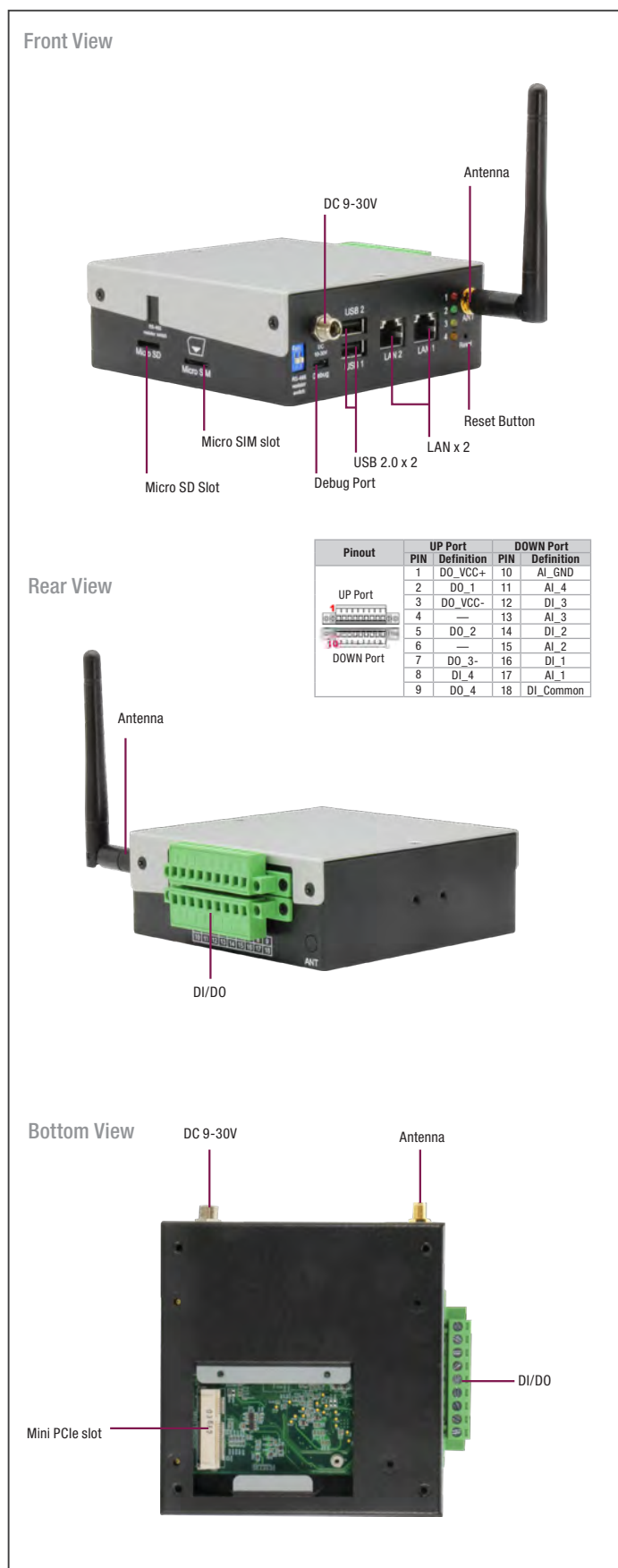


Wallmount Illustration

Optional Accessories

- 9741EG2560**
 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.
- 1702031802**
 POWER CORD.3P-250V 10A.1.8M.EU.
- 170203180J**
 POWER CORD.3P-250V 13A.1.8M.IUK
- 1702031811**
 POWER CORD.3P-125V 10A.1.8M.TWN
- 170203180E**
 POWER CORD. 3P-125V 7A.1.8M..JPN
- 9651IMX802**
 DIN rail kit. SRG-IMX8P series
- 9651IMX801**
 Wall mount kit.SRG-IMX8P series





Features

- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- USB 2.0 x 2, Gigabit Ethernet port x 2, Programmable LED x 4
- 4 Channel Isolated Digital Input
- 4 Channel Isolated Digital Output
- 2 Channel Analog Input
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector x 1 (For RF Module)
- NB-IoT connector x 1
- Debug Port x 1
- DC9-30V Power Input
- Onboard WiFi/Bluetooth Module
- Pre-Install Linux Debian
- Supports Modbus/MQTT Library (by request)

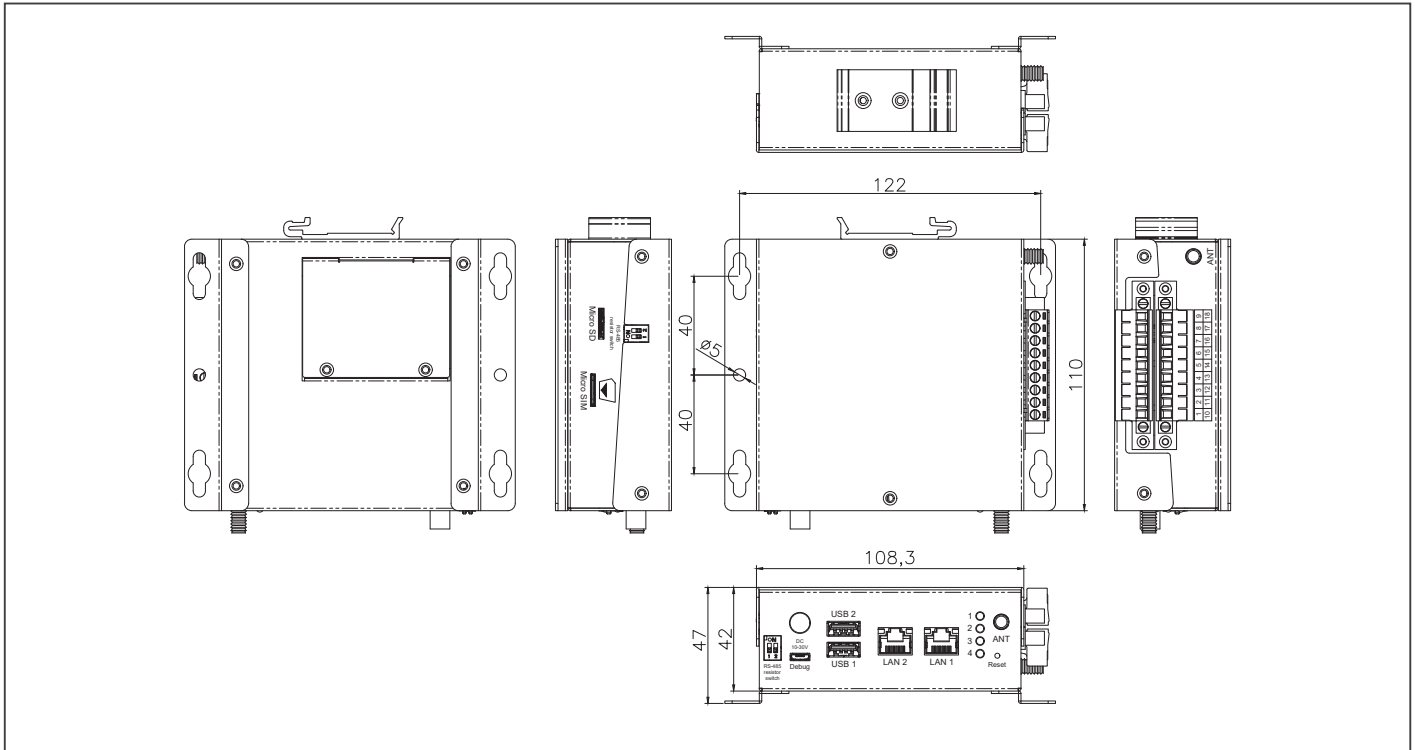


Specifications

System	
Processor	ARM Cortex-A8 800 MHz RISC Processor
Memory	Onboard DDR3L 1GB
Storage	eMMC 16GB
Real Time Clock	RTC x 1, with 3V CR2032 Lithium battery
Security	TPM 2.0
Indicators	Programmable LED control x 4
Cellular	Mini PCIe Connector x 1
Wireless Lan	Onboard WiFi 802.11 b/g/n, Bluetooth 4.2 / BLE
Operating System	Debian 10
Support Protocol	Modbus / MQTT Library (by request)
I/O Interfaces	
Serial Port	—
Ethernet	Gigabit Ethernet x 2, RJ-45
USB	USB 2.0 x 2, Type A
ADC	Differential x 2 CH or Single-End x 4 CH, Phoenix Connector Input Range: 0~15V, 0~20mA Resolution: 16 bit
DI/DO	Isolation DI x 4 CH, Phoenix Connector Voltage Level: ON: 9~24V, OFF: 0~8V Isolation DO x 4 CH, Phoenix Connector Load Voltage: DC 24V Max Load Current: 100mA/ channel
CAN Bus	—
Display	—
Power Connector	Lockable DC jack
Debug Port	Micro USB x 1
Expansion Slot	SIM card slot x 1 Micro SD slot x 1
Other Interface	—
Power Supply	
Power Requirement	DC9-30V
Power Consumption	3.36 W (Full Loading)
MTBF (Hours)	855590
Environmental and Mechanical	
Dimension	4.3" x 4.33" x 1.54" (109 x 110 x 39 mm)
Weight	430 g
Mount Options	Wallmount, Din Rail (Optional)
Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-ADIO-A10-0001	ARM Cortex-A8 800MHz	Onboard DDR3L 1G	Fanless	4 Channel Isolated Digital Input / Output 2 Channel Analog Input (Phoenix)	eMMC 16Gb, MicroSD x1	GbE x 2	USB 2.0 x 2	Mini PCIe slot x 1, SIM card socket x 1	DC 9-30V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module (optional)

Packing List

- SRG-ADIO

Optional Accessories

- **1255300366**
Power Adapter. AC/DC. 100-240VAC. 12VDC/3A.36W.
- **9741EG2560**
PCIe mimi card. 4G LTE. module kit. Global Band W/SIM holder. W/Cable & antenna. Quectel. EG25-G
- **9651352C02**
DIN rail kit. 47x25mm. SRG-3352C series
- **9651352C01**
Wallmount kit. 110x26mm. SRG-3352C series

Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration

Note: All sp



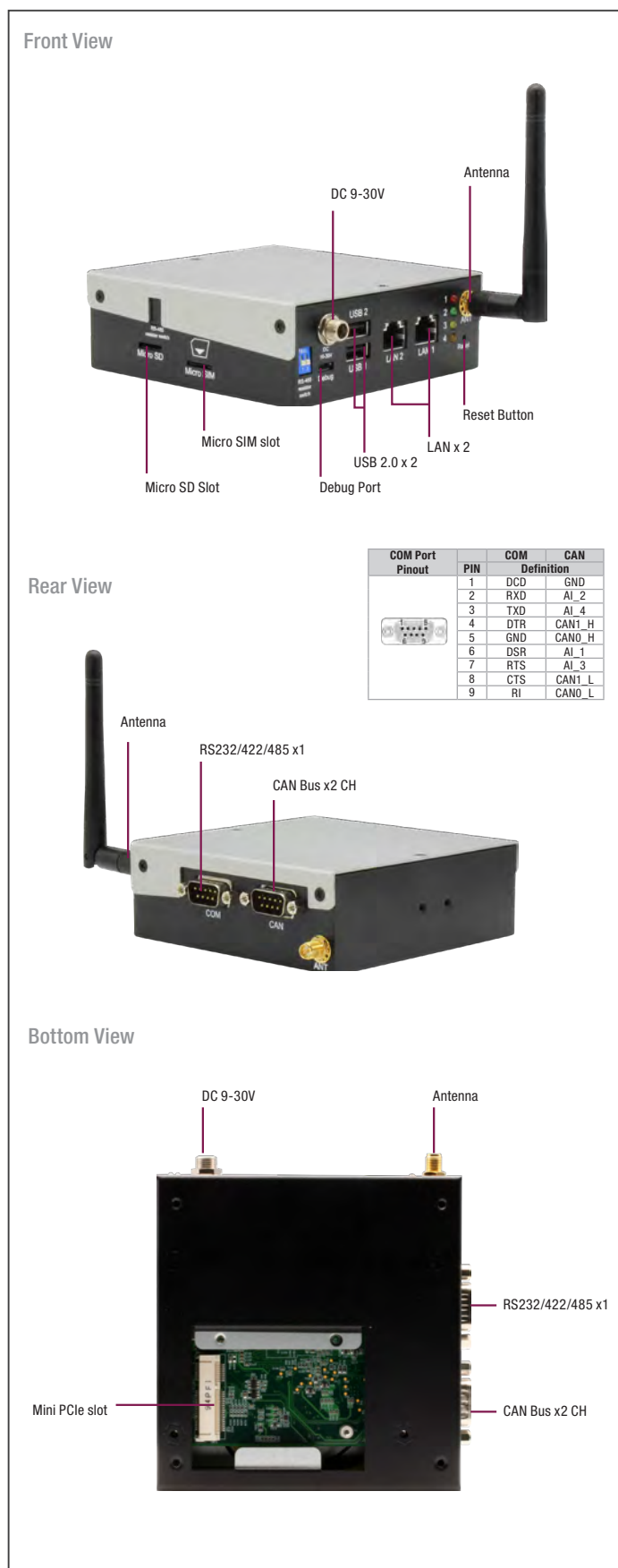
ES France - Mobilité & Systèmes Embarqués
127 rue de Buzenval BP 26 - 92380 Garches



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Site Web : www.es-france.com



Features

- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- Switchable RS-232/422/485 x 2 (Optional)
- Gigabit Ethernet port x 2, Programmable LED x 4, USB 2.0 x 2
- 2 Channel Analog Input, 2 Channel CANBus (Optional)
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector x 1 (For RF Module)
- NB-IoT connector x 1
- Debug Port x 1
- DC9-30V Power Input
- Onboard WiFi/Bluetooth Module
- Pre-Install Linux Debian
- Supports Modbus/MQTT Library(by request)

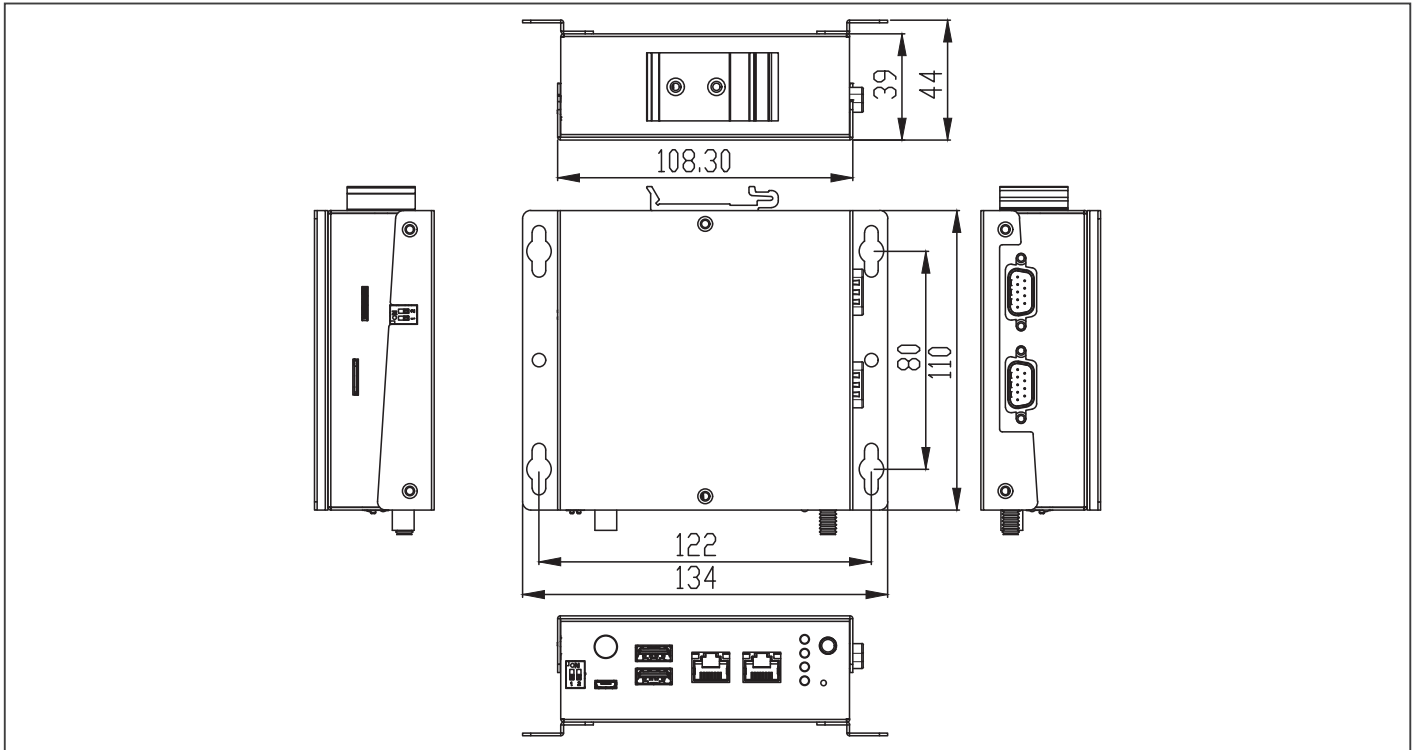


Specifications

System	
Processor	ARM Cortex-A8 800 MHz RISC Processor
Memory	Onboard DDR3L 1GB
Storage	eMMC 16GB
Real Time Clock	RTC x 1, with 3V CR2032 Lithium battery
Security	TPM 2.0
Indicators	Programmable LED control x 4
Cellular	Mini PCIe Connector x 1
Wireless Lan	Onboard WiFi 802.11 b/g/n, Bluetooth 4.2 / BLE
Operating System	Debian 10
Support Protocol	Modbus / MQTT Library (by request)
I/O Interfaces	
Serial Port	Switchable RS232/422/485 x 2, DB9 Connector (Optional)
Ethernet	Gigabit Ethernet x 2, RJ-45
USB	USB 2.0 x 2, Type A
ADC	Differential x 2 CH or Single-End x 4 CH, DB9 Connector (Optional) Input Range: 0~15V, 0~20mA Resolution: 16 bit
DI/DO	—
CAN Bus	CAN Bus x 2 CH, DB9 Connector (Optional)
Display	—
Power Connector	Lockable DC jack
Debug Port	Micro USB x 1
Expansion Slot	SIM card slot x 1 Micro SD slot x 1
Other Interface	—
Power Supply	
Power Requirement	DC9-30V
Power Consumption	3.36 W (Full Loading)
MTBF (Hours)	855590
Environmental and Mechanical	
Dimension	4.3" x 4.33" x 1.54" (109 x 110 x 39 mm)
Weight	430 g
Mount Options	Wallmount, Din Rail (Optional)
Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-ACAN-A10-0001	ARM Cortex-A8 800MHz	Onboard DDR3L 1G	Fanless	RS-232/422/485 x 2 (DB9)	eMMC 16GB, MicroSD x1	GbE x 2	USB 2.0 x 2	Mini PCIe slot x 1, SIM card socket x 1	DC 9-30V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module (optional)
SRG-ACAN-A10-0002	ARM Cortex-A8 800MHz	Onboard DDR3L 1G	Fanless	RS-232/422/485 x 1 (DB9) CAN Bus x 2 CH (DB9)	eMMC 16GB, MicroSD x1	GbE x 2	USB 2.0 x 2	Mini PCIe slot x 1, SIM card socket x 1	DC 9-30V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module (optional)

Packing List

- SRG-ACAN

Optional Accessories

- **1255300366**
Power Adapter. AC/DC. 100-240VAC. 12VDC/3A.36W.
- **9741EG25G0**
PCIe mimi card. 4G LTE. module kit. Global Band W/SIM holder. W/Cable & antenna. Quectel. EG25-G
- **9651352C02**
DIN rail kit. 47x25mm. SRG-3352C series
- **9651352C01**
Wallmount kit. 110x26mm. SRG-3352C series

Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration

Note: All sp



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Standard IoT Gateway System with 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 3200MHz, SO-DIMM x 2, up to 64GB
- USB 3.2 Gen 1 x 3, USB 3.2 Gen 2 x 1
- HDMI 2.0b x 1 (Output)
- GbE x2 (Intel I219, I211) + 2.5 GbE x1 (Intel I225)
- M.2 3052 B Key x1, M.2 2280 M Key x1, M.2 2230 E Key x1
- DC 9 ~ 36V Power Input



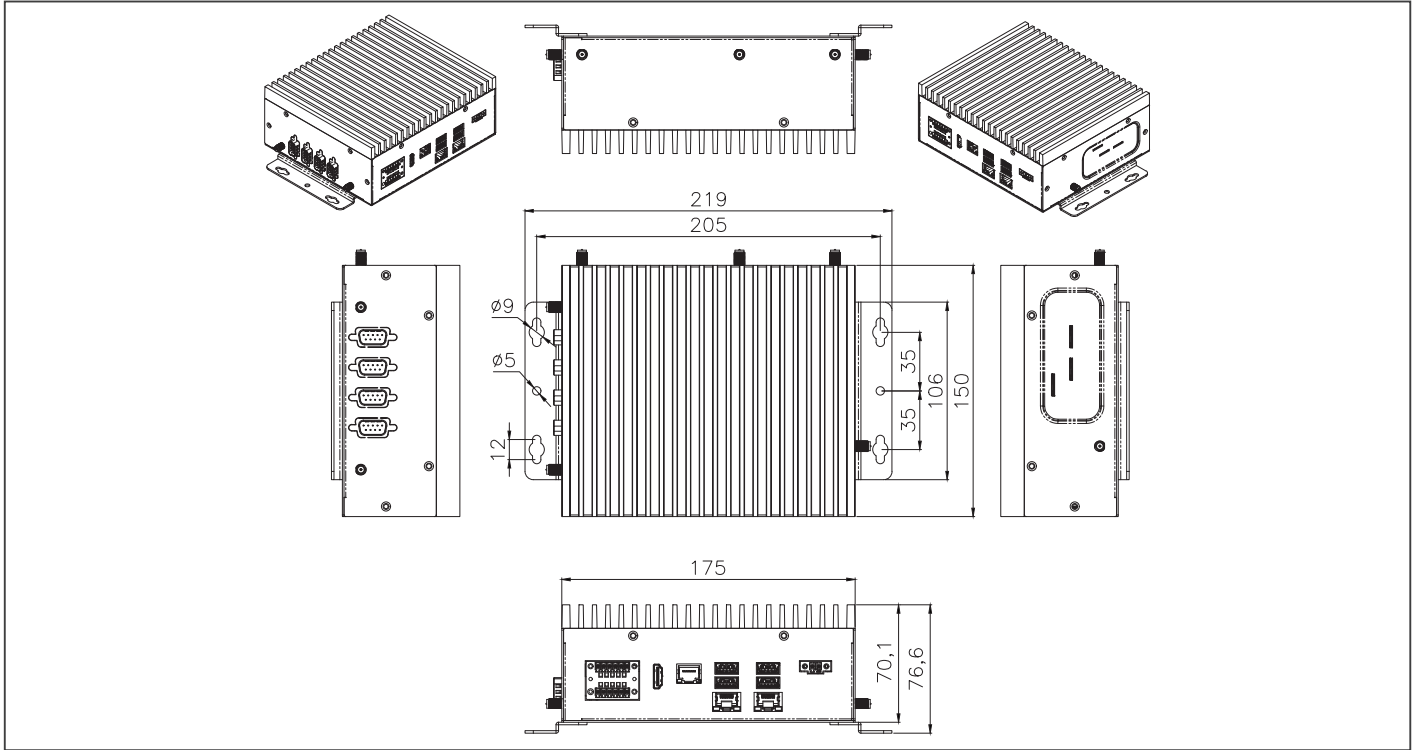
Specifications

System	
Processor	11th Generation Core Intel® i7-1185G7E SoC 11th Generation Core Intel® i5-1145G7E SoC 11th Generation Core Intel® i3-1115G4E SoC 11th Generation Core Intel® Celeron 6305E SoC TDP 12W Only
Memory	DDR4 3200MHz, SO-DIMM x 2, Up to 64GB
Storage	M.2 2280 M Key slot x 1 (PCIe4) 2.5" SATA SSD/HDD bay x 1
Real Time Clock	RTC x 1, with 3V CR2032 Lithium battery
Security	TPM 2.0
Indicators	—
Cellular	M.2 3052 B Key slot x 1 (4G/5G)
Wireless Lan	M.2 2230 E Key slot x 1 (Wi-Fi 802.11 ac/b/g/n, BT 5.0)
Operating System	Windows 10 IoT Enterprise / Linux (by request)
Support Protocol	—
I/O Interfaces	
Serial Port	RS-232/422/485 x 4, DB9 (Optional)
Ethernet	Intel @i211-LM,10/100/1000Base x 1,RJ45 Intel @i219-LM,10/100/1000Base x 1,RJ45 Intel @i225-LM,10/100/1000Base x 1,RJ45 (Support Vpro)
USB	USB3.2 Gen 2 x 1, Type A USB3.2 Gen 1 x 3, Type A
ADC	—
DI/DO	8 bit, Phoenix Connector
CAN Bus	CAN 2.0 B x 2 CH, Phoenix Connector
Display	HDMI 2.0b x 1
Power Connector	2 Pin 3.81mm Pitch Phoenix Connector
Debug Port	—
Expansion Slot	Micro SIM slot x 1 Micro SIM slot x 2 (Optional)
Other Interface	SATA 3.0 x 1 (Internal) SATA Power connector x 1 (5V) (Internal)
Power Supply	
Power Requirement	DC 9 ~ 36V (Optional DC12V), AT Type
Power Consumption	67 W (Full Loading)
MTBF (Hours)	306,575
Environmental and Mechanical	
Dimension	8.1" x 6.1" x 2.8" (207 x 155 x 72 mm)
Weight	3.3lb (1500g)
Mount Options	Wall Mount (Optional)
Operation Temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-TG01-A10-0701	11th Generation Core Intel® i7-1185G7E SoC	DDR4 3200MHz, SO-DIMM x 2, Up to 64GB	Fanless	HDMI 2.0b x 1 RS-232/422/485 x 4, DB9 CAN 2.0b x2 DIO x8	SATA 3.0 x 1 M.2 M Key 2280 x1	GbE x 2 2.5 GbE x1	USB 3.2 Gen 2 x 1 USB 3.2 Gen 1 x 3	M.2 B Key 3042 x 1 M.2 E Key 2230 x 1 Micro SIM slot x 1	DC 9 – 36V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module WiFi/BT module (optional)
SRG-TG01-A10-0501	11th Generation Core Intel® i5-1145G7E SoC	DDR4 3200MHz, SO-DIMM x 2, Up to 64GB	Fanless	HDMI 2.0b x 1 RS-232/422/485 x 4, DB9 CAN 2.0b x2 DIO x8	SATA 3.0 x 1 M.2 M Key 2280 x1	GbE x 2 2.5 GbE x1	USB 3.2 Gen 2 x 1 USB 3.2 Gen 1 x 3	M.2 B Key 3042 x 1 M.2 E Key 2230 x 1 Micro SIM slot x 1	DC 9 – 36V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module WiFi/BT module (optional)
SRG-TG01-A10-0301	11th Generation Core Intel® i3-1115G4E SoC	DDR4 3200MHz, SO-DIMM x 2, Up to 64GB	Fanless	HDMI 2.0b x 1 RS-232/422/485 x 4, DB9 CAN 2.0b x2 DIO x8	SATA 3.0 x 1 M.2 M Key 2280 x1	GbE x 2 2.5 GbE x1	USB 3.2 Gen 2 x 1 USB 3.2 Gen 1 x 3	M.2 B Key 3042 x 1 M.2 E Key 2230 x 1 Micro SIM slot x 1	DC 9 – 36V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module WiFi/BT module (optional)
SRG-TG01-A10-0C01	11th Generation Core Intel® Celeron 6305E SoC	DDR4 3200MHz, SO-DIMM x 2, Up to 64GB	Fanless	HDMI 2.0b x 1 RS-232/422/485 x 4, DB9 CAN 2.0b x2 DIO x8	SATA 3.0 x 1 M.2 M Key 2280 x1	GbE x 2 2.5 GbE x1	USB 3.2 Gen 2 x 1 USB 3.2 Gen 1 x 3	M.2 B Key 3042 x 1 M.2 E Key 2230 x 1 Micro SIM slot x 1	DC 9 – 36V	0°C ~ 60°C @ 0.5 m/s airflow	3G/4G LTE module WiFi/BT module (optional)

Packing List

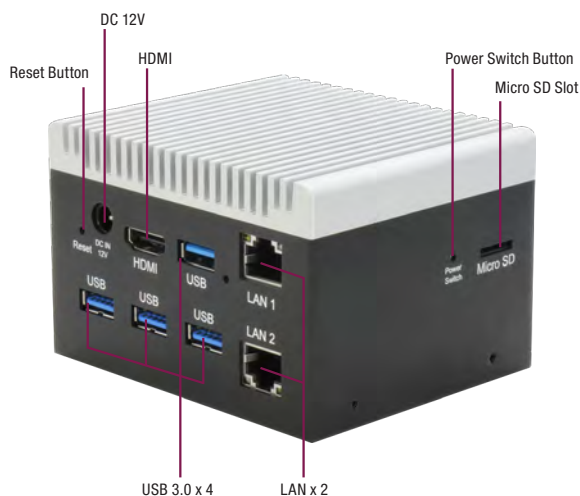
- SRG-TG01

Optional Accessories

- **1255300611**
Power Adapter.DC.100/240V.12V.5A.60W.2P Phoenix.
P=3.81mm.
- **9686Y00124**
M. 2 3042 LTE Cat4 module, Global Band. SIMCOM.
SIM7600G-H with antenna
- **9741364A00**
M.2 2230 Wireless.802.11 ac/a/b/g/n + BT
5.0.2T2R,Enli QCNFA364A.w/2 sets of cable and
antenna
- **TBD**
Wallmount kit. SRG-TG01 series
- **1702031802**
POWER CORD.3P-125V 10A.1.8M.USA
- **1702031803**
POWER CORD.3P-250V 10A.1.8M.EU
- **170203180J**
POWER CORD.3P-250V 13A.1.8M.UK
- **1702031811**
POWER CORD.3P-125V 10A.1.8M.TWN
- **170203180E**
POWER CORD. 3P-125V 7A.1.8M.JPN



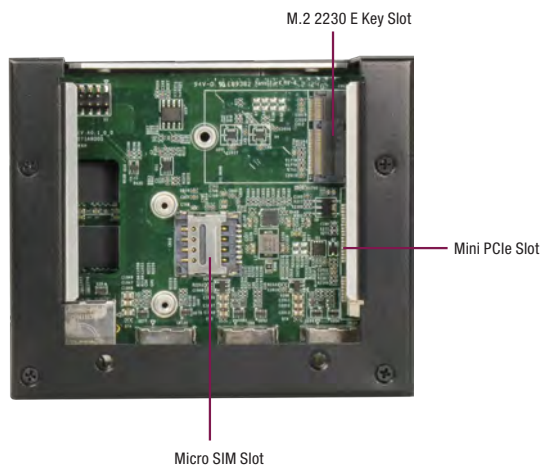
Front View



Rear View



Bottom View



Features

- Intel Atom X5-E3940 Quad Core 1.6GHz
- Onboard LPDDR4 4 GB / eMMC 32G
- Built-in Micro SD Card Slot x 1
- HDMI output x 1
- Gigabit Ethernet RJ-45 x 2 LAN port
- USB 3.0 x 4
- M.2 E key x 1 (For Wifi/BT Module)
- Mini PCIe connector x 1 (For 4G LTE Module)
- CE-RED Certified

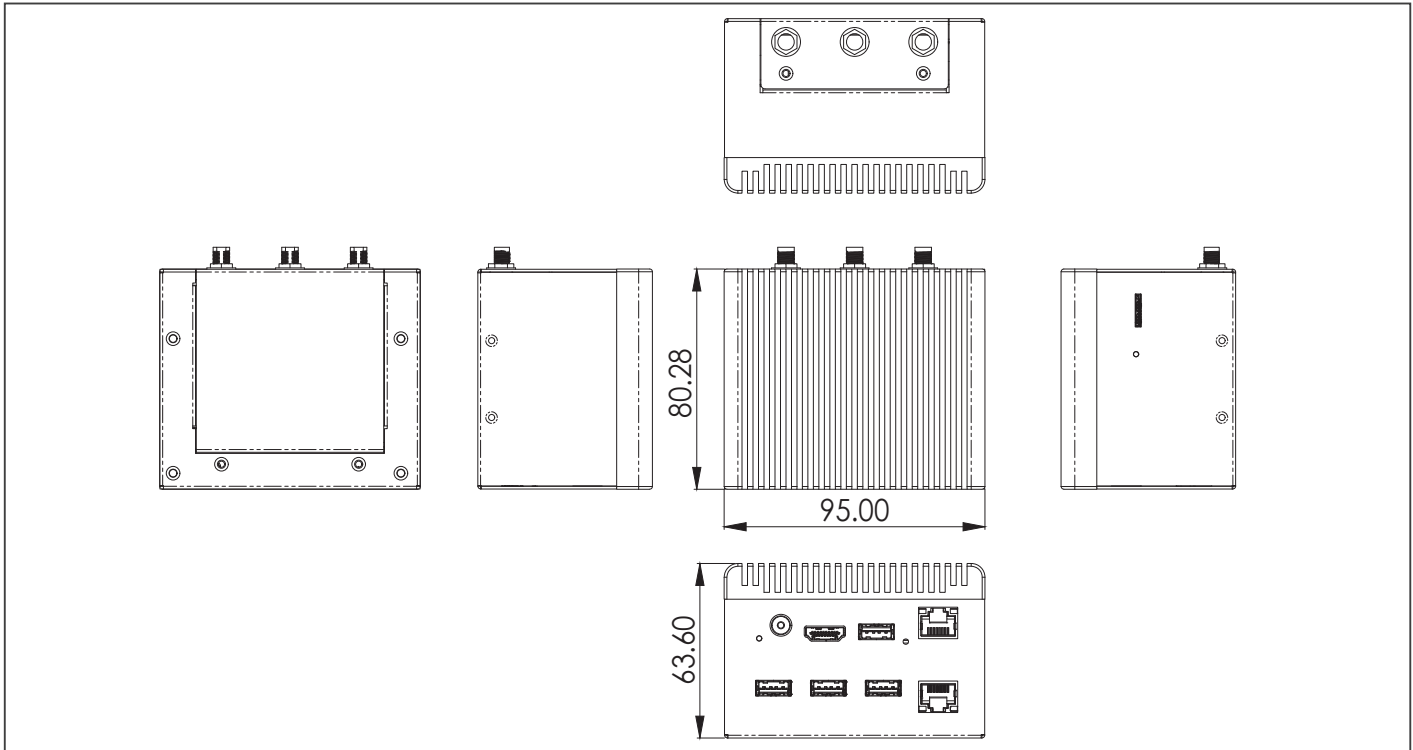


Specifications

System	
Processor	Intel Atom X5-E3940 Processor SoC / Intel HD 500 Graphics
Memory	Onboard LPDDR4 1866MHz 4GB / 8GB (Optional)
Storage	eMMC 5.1 32GB / 64GB (Optional)
Real Time Clock	RTC x 1, with 3V CR2032 Lithium battery
Security	—
Indicators	—
Cellular	Mini PCIe Connector x 1
Wireless Lan	M.2 2230 E Key slot x 1
Operating System	Windows 10 IoT Enterprise / Linux (by request)
Support Protocol	—
I/O Interfaces	
Serial Port	—
Ethernet	Gigabit Ethernet x 2, RJ-45
USB	USB 3.0 x 4, Type A
ADC	—
DI/DO	—
CAN Bus	—
Display	HDMI 1.4 x 1
Power Connector	DC Jack
Debug Port	—
Expansion Slot	SIM card slot x 1 Micro SD slot x 1
Other Interface	Power switch button x 1 Reset switch button x 1 Antenna x3 (Optional)
Power Supply	
Power Requirement	12V DC-In @ 3A-5A 5.5/2.5 mm
Power Consumption	20 W (Full Loading)
MTBF (Hours)	516,789
Environmental and Mechanical	
Dimension	3.16" x 3.7" x 2.5" (80.28 x 95 x 63.6 mm)
Weight	1.94lb (880g)
Mount Options	Wall Mount / DIN Rail (Optional)
Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-APL-A10-0432	Intel Atom X5-E3940, 1.6GHz	Onboard LPDDR4 1866MHz 4GB	Fanless	HDMI x 1 (Output)	eMMC 32GB, MicroSD x1	GbE x 2	USB 3.0 x 4	Mini PCIe slot x 1, M.2 2230 E Key slot x 1 SIM card socket x 1	DC 12V	0°C ~ 60°C @ 0.5 m/s airflow	4G LTE & Wi-Fi/BT Module (Optional)
SRG-APL-A10-0832	Intel Atom X5-E3940, 1.6GHz	Onboard LPDDR4 1866MHz 8GB	Fanless	HDMI x 1 (Output)	eMMC 32GB, MicroSD x1	GbE x 2	USB 3.0 x 4	Mini PCIe slot x 1, M.2 2230 E Key slot x 1 SIM card socket x 1	DC 12V	0°C ~ 60°C @ 0.5 m/s airflow	4G LTE & Wi-Fi/BT Module (Optional)
SRG-APL-A10-0464	Intel Atom X5-E3940, 1.6GHz	Onboard LPDDR4 1866MHz 4GB	Fanless	HDMI x 1 (Output)	eMMC 64GB, MicroSD x1	GbE x 2	USB 3.0 x 4	Mini PCIe slot x 1, M.2 2230 E Key slot x 1 SIM card socket x 1	DC 12V	0°C ~ 60°C @ 0.5 m/s airflow	4G LTE & Wi-Fi/BT Module (Optional)
SRG-APL-A10-0864	Intel Atom X5-E3940, 1.6GHz	Onboard LPDDR4 1866MHz 8GB	Fanless	HDMI x 1 (Output)	eMMC 64GB, MicroSD x1	GbE x 2	USB 3.0 x 4	Mini PCIe slot x 1, M.2 2230 E Key slot x 1 SIM card socket x 1	DC 12V	0°C ~ 60°C @ 0.5 m/s airflow	4G LTE & Wi-Fi/BT Module (Optional)
SRG-APL-A10-WB-0432	Intel Atom X5-E3940, 1.6GHz	Onboard LPDDR4 1866MHz 4GB	Fanless	HDMI x 1 (Output)	eMMC 32GB, MicroSD x1	GbE x 2	USB 3.0 x 4	Mini PCIe slot x 1, M.2 2230 E Key slot x 1 SIM card socket x 1	DC 12V	0°C ~ 60°C @ 0.5 m/s airflow	Wi-Fi/BT Module

Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration

Packing List

- SRG-APL

Optional Accessories

- **9741EG2560**
PCIe mini card. 4G LTE module. For Global Band. with cable & antenna. Quectel. EG25-G
- **9651882200**
M.2 2230 E Key Wireless module. 802.11a/b/g/n/ac.with BT5.0.Enli.RTL-8822CE
- **9651SAPL01**
Wall mount kit. 80x18mm. SRG-APL series
- **9651SAPL02**
DIN rail kit. 47x25mm. SRG-APL series
- **1255300365**
12V/3A.36W.FSP.FSP036-DHAN3.Power Adapter
- **1702031802**
POWER CORD.1.8M. for USA
- **1702031803**
POWER CORD.1.8M. for EU
- **170203180E**
POWER CORD.1.8M. for Japan.



Standard Gateway Board With Broadcom BCM2711 Quad-Core Cortex-A72 SoC @ 1.5GHz

Front View



Rear View



Features

- Broadcom BCM2711 quad-core Cortex-A72 SoC @ 1.5GHz
- Onboard DDR4L 1GB / eMMC 8GB (Optional 2GB RAM/16GB eMMC)
- USB 3.0 Type-A x 2
- Gigabit Ethernet port x 2
- CAN-FD x 1
- 5G/4G LTE M.2 3042/3052 B Key x1
- Support RTC, TPM 2.0
- Wide Voltage DC9V-24V
- Wide Temperature -20 °C ~ 70 °C



Specifications

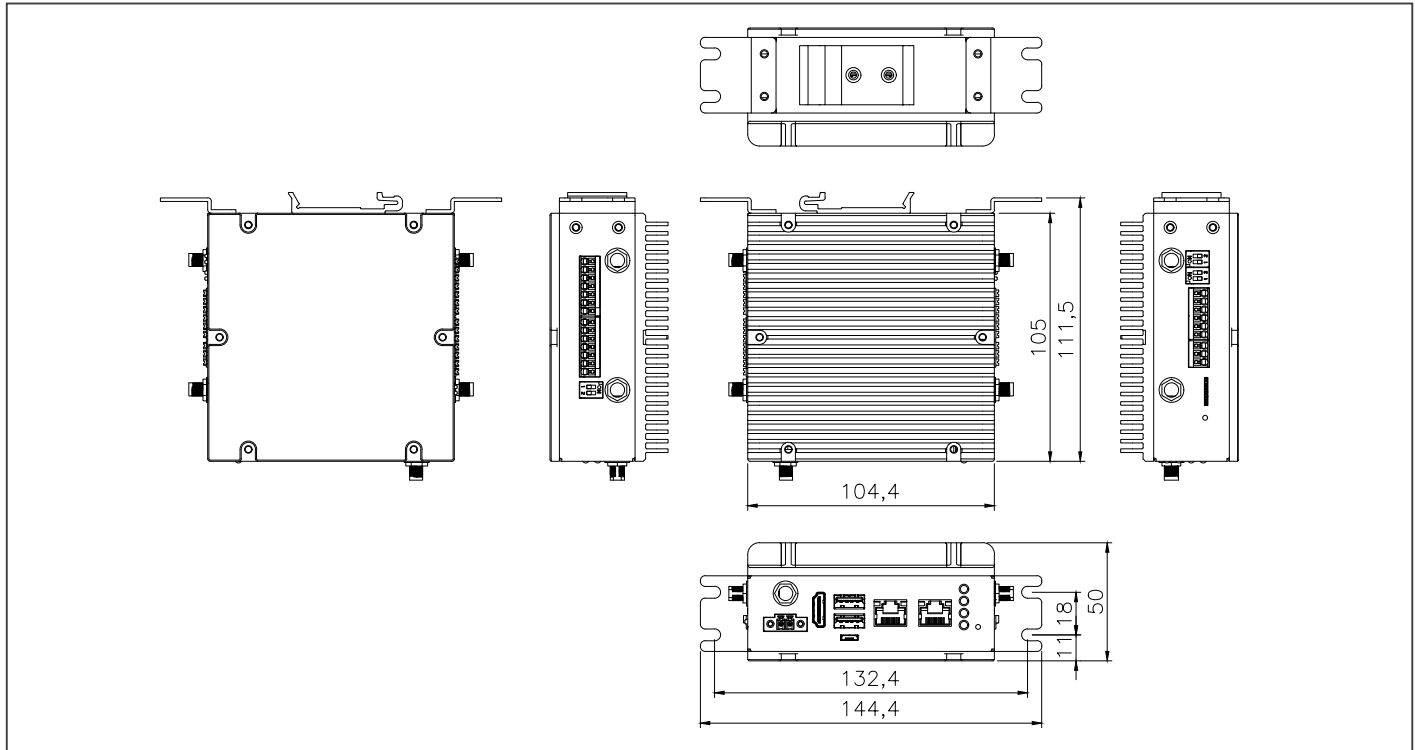
System	
Processor	Broadcom BCM2711 quad-core Cortex-A72 SoC @ 1.5GHz
Memory	Onboard DDR4L 1GB (Optional 2GB)
Storage	eMMC 8G (Optional 16GB)
Real Time Clock	RTC x 1, with 3V CR2032 Lithium battery
Security	TPM 2.0
Indicators	Programmable LED control x 3
Cellular	M.2 3042/3052 B Key x1 (USB Signal)
Wireless Lan	Onboard Wifi 802.11 b/g/n/ac, BT 5.0 (Optional)
Operating System	Raspberry Pi OS / Debian 10 (by request)
Support Protocol	Modbus / MQTT Library (by request)
I/O Interfaces	
Serial Port	RS-232/422/485 switchable x 2, phoenix connector RS-485 with isolation x 2, wafer box (Optional)
Ethernet	Gigabit Ethernet x 2, RJ-45
USB	USB 3.0 Type-A x 2 Micro USB 2.0 OTG x 1
ADC	—
DI/DO	Dix1 / DOx 1 with Isolation, wafer box (Optional)
CAN Bus	CAN-FD x 1, phoenix connector
Display	HDMI x 1 (Output)
Power Connector	2 pin 3.81mm pitch phoenix connector
Debug Port	UART x1 (Pin Header)
Expansion Slot	SIM card slot x 1 Micro SD slot x 1(Optional)
Other Interface	Software button x 1 (Share with DI) Reset button x 1 Hardware watchdog
Power Supply	
Power Requirement	DC 9-24V
Power Consumption	TBD
MTBF (Hours)	TBD
Environmental and Mechanical	
Dimension	5.51" x 4.13" x 1.96" (140x105x50mm)
Weight	0.99 lb (450g)
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% ~ 90% relative humidity, non-condensing

Packing List

- SRG-CM4

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	Ports	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-CM4-A10-0108	Broadcom BCM2711 quad-core Cortex-A72 SoC @ 1.5GHz	Onboard DDR4L 1GB	Fanless	RS-232/422/485 switchable x 2 CAN-FD x1 HDMI x 1	eMMC 8GB, MicroSD x1(Optional)	GbE x 2	USB 3.0 x 2 Micro USB 2.0 OTG x1	M.2 3042/3052 B Key x1 SIM card socket x 1	DC 9-24V	-20°C ~ 70°C @ 0.5 m/s airflow	4G/5G LTE module (optional)
SRG-CM4-A10-0216	Broadcom BCM2711 quad-core Cortex-A72 SoC @ 1.5GH	Onboard DDR4L 2GB	Fanless	RS-232/422/485 switchable x 2 CAN-FD x1 HDMI x 1	eMMC 16GB, MicroSD x1(Optional)	GbE x 2	USB 3.0 x 2 Micro USB 2.0 OTG x1	M.2 3042/3052 B Key x1 SIM card socket x 1	DC 9-24V	-20°C ~ 70°C @ 0.5 m/s airflow	4G/5G LTE module (optional)

Optional Accessories

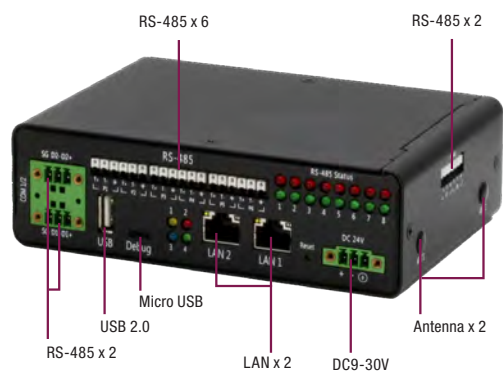
- **9686Y00124**
M. 2 3042 LTE Cat4 module, for global market.
SIMCOM. SIM7600G-H with LTE antenna
- **1255300611**
Power Adapter. DC. 100/240V. 12V. 5A. 60W. 2p phoenix
P=3.81mm. FSPFSP060-DHAN3/9NA0608085.
- **1702031802**
POWER CORD. 3P-125V 10A 180D. 1.8M. USA. FANJET.
YP12/YC-12
- **1702031803**
POWER CORD. 3P-250V 10A 180D. 1.8M. EU. FAN-JET.
YP-22/YC-12
- **170203180J**
POWER CORD. 3P-250V 13A. UK type. 1830mm
- **1702031811**
POWER CORD. 3P-125V. 10A. 180D. 1.8M. TWW/BSMI.
FANJET. YP-12/YC-12
- **170203180E**
Power cord. 3P. 125V/7A. 1.8M. PSE YP12/YC12
Certificat
- **TBD**
DIN rail kit. SRG-CM4 series
- **TBD**
Wall mount kit. SRG-CM4 series



SRG-4858P

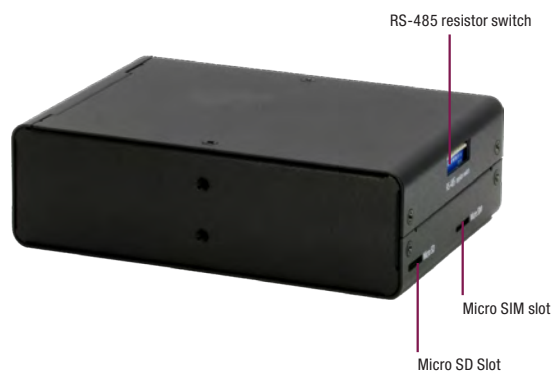
Standard IoT Gateway System With RS-485 x10 ports I/O Function

Front View



COM Port Pinout	PIN	COM1 Definition	COM2
1	—	SG	—
2	—	D2-	—
3	—	D2+	—
4	SG	—	—
5	D1-	—	—
6	D1+	—	—
7	—	—	—
8	—	—	—
9	—	—	—

Rear View



Features

- ARM Cortex-A8 800 MHz RISC Processor
- Onboard DDR3L 1 GB / eMMC 16GB
- Gigabit Ethernet port x 2
- USB2.0 x 1, RS-485 x 10, Programmable LED x 4
- RTC x 1, Micro SD Slot x 1, SIM Slot x 1
- Mini PCIe connector (For RF Module) x 1
- Debug Port x 1
- DC9-30V Power Input
- Pre-Install Linux Debian
- Supports Modbus / MQTT Library (by request)



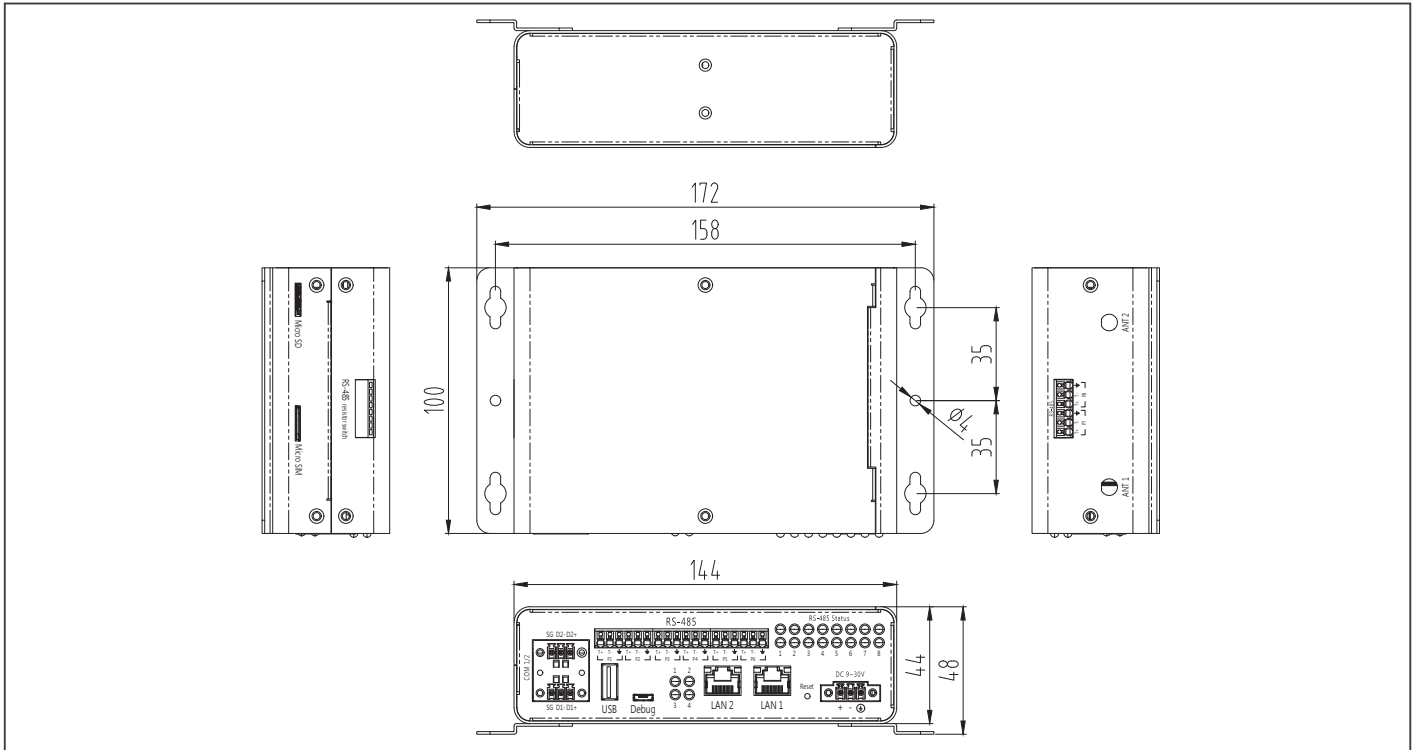
Specifications

System	
Processor	ARM Cortex-A8 800 MHz RISC Processor
Memory	Onboard DDR3L 1GB
Storage	eMMC 16GB
Real Time Clock	RTC, with 3V CR2032 Lithium battery x 1
Security	—
Indicators	Programmable LED control x 4
Cellular	Mini PCIe Connector x 1 (USB signal)
Wireless Lan	—
Operating System	Debian 10
Support Protocol	Modbus / MQTT Library (by request)
I/O Interfaces	
Serial Port	RS-485 x 10, Phoenix Connector
Ethernet	Gigabit Ethernet x 2, RJ-45
USB	USB 2.0 x 1, Type A
ADC	—
DI/DO	—
CAN Bus	—
Display	—
Power Connector	3 Pin 3.81mm Phoenix Connector
Debug Port	Micro USB x 1
Expansion Slot	Micro SIM slot x 1 Micro SD slot x 1
Other Interface	Antenna x 2 (Optional)
Power Supply	
Power Requirement	DC9-30V
Power Consumption	6.36 W (Full Loading)
MTBF (Hours)	855590
Environmental and Mechanical	
Dimension	5.67" x 3.94" x 1.73" (144 x 100 x 44mm)
Weight	512 g
Mount Options	Wallmount, Din Rail (Optional)
Operation Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 95% relative humidity, non-condensing



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	COM	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Others
SRG-4858P-A10-0001	ARM Cortex-A8 800MHz	Onboard DDR3L 1GB	Fanless	RS-485 x10 (phoenix)	eMMC 16GB, MicroSD x1	GbE x 2	USB 2.0 x 1	Mini PCIe slot x 1, SIM card socket x 1	DC9-30V	0°C – 60°C @ 0.5 m/s airflow	3G/4G LTE module (optional)

Packing List

- SRG-4858P

Installation Scenario



DIN-Rail Mount Illustration



Wallmount Illustration

Optional Accessories

- **1255300368**
Power Adapter. AC/DC. 100-240VAC. 12VDC/3A. 36W. AOEM. ADS036T-W120300. (phoenix connector)
- **9741EG2560**
PCIe mini card. 4G LTE. module kit. Global Band W/SIM holder. W/Cable & antenna. Quectel. EG25-G
- **9751335201**
Din rail kit. 44 x 48.3mm
- **9751335202**
Wallmount kit. 100 x 35mm

Note: All sp

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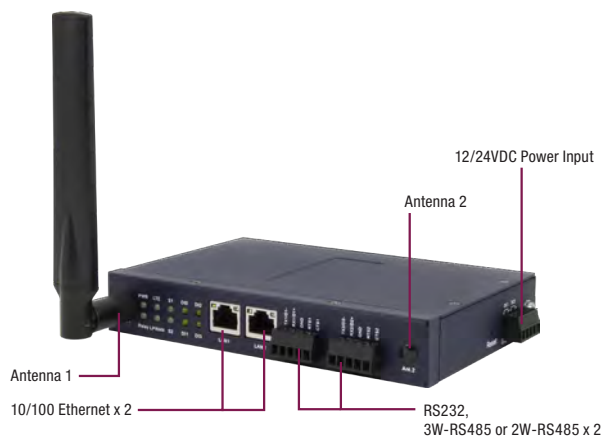
Tél. 01 47 95 99 80
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Site Web : www.es-france.com

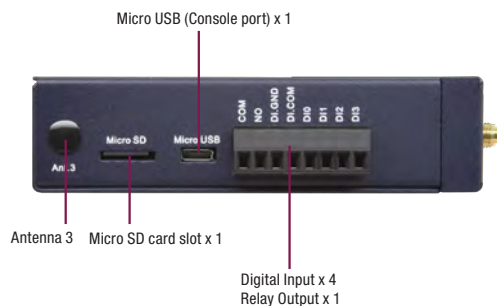
SPG-M041

Gateway System with ARM Cortex M4F 180MHz

Front View



Right Side View



Rear View



Features

- Dual wireless connectivity (LTE 4G as default)
- Wireless: CAT-NB/M1, Wi-SUN upon request
- GPS support (via 4G LTE or CAT-NB/M1 module)
- Dual 10/100 Mbps Ethernet ports
- Multiple I/O interface connections for data collection
- Embedded Real-Time OS support
- Data logger with time stamp
- Firmware over the air (FOTA) support
- Wide operating temperature range -20°C to 70°C



Specifications

System	
CPU/MCU	ARM Cortex M4F
External flash	128 M-bit flash
Storage	External Micro SD slot, Max. 32GB
Operating system	Embedded real-time OS: Zephyr Version: 3.0.99
LED indicator(s)	10
Real time clock	Yes
I/O Interfaces	
Ethernet	10/100Mbps Ethernet x 2, RJ45
Serial Port	RS232, 3W-RS485 or 2W-RS485 x 2, Terminal Block (Software selectable)
Digital Input	4, Terminal Block
Relay Output	1, Terminal Block
SD card	Micro SD card slot x 1
Power Input	12/24 VDC Power input x 2, Terminal Block
Power Supply	
Ports/Channels	Dual DC power inputs for power redundancy
Power supply rated voltage	12 / 24 VDC
Power supply voltage range	9.6 – 31.2 VDC
Input current	12V/2.29W, 24V/3.14W, Normal used
Reverse polarity protection	Yes
Voltage variation protection	Yes
Mechanical	
Enclosure	Metal housing
Dimension	6.29 x 4.17 x 1.06 (160 x 106 x 27mm)
Weight	1.11 lb (504g)
Mounting/Installation	DIN mount
Environmental	
Operating Temperature	-20 to 70°C (-4 to 158°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Humidity	5% to 95% Non-condensing
Certification	
Regulations	CE, FCC

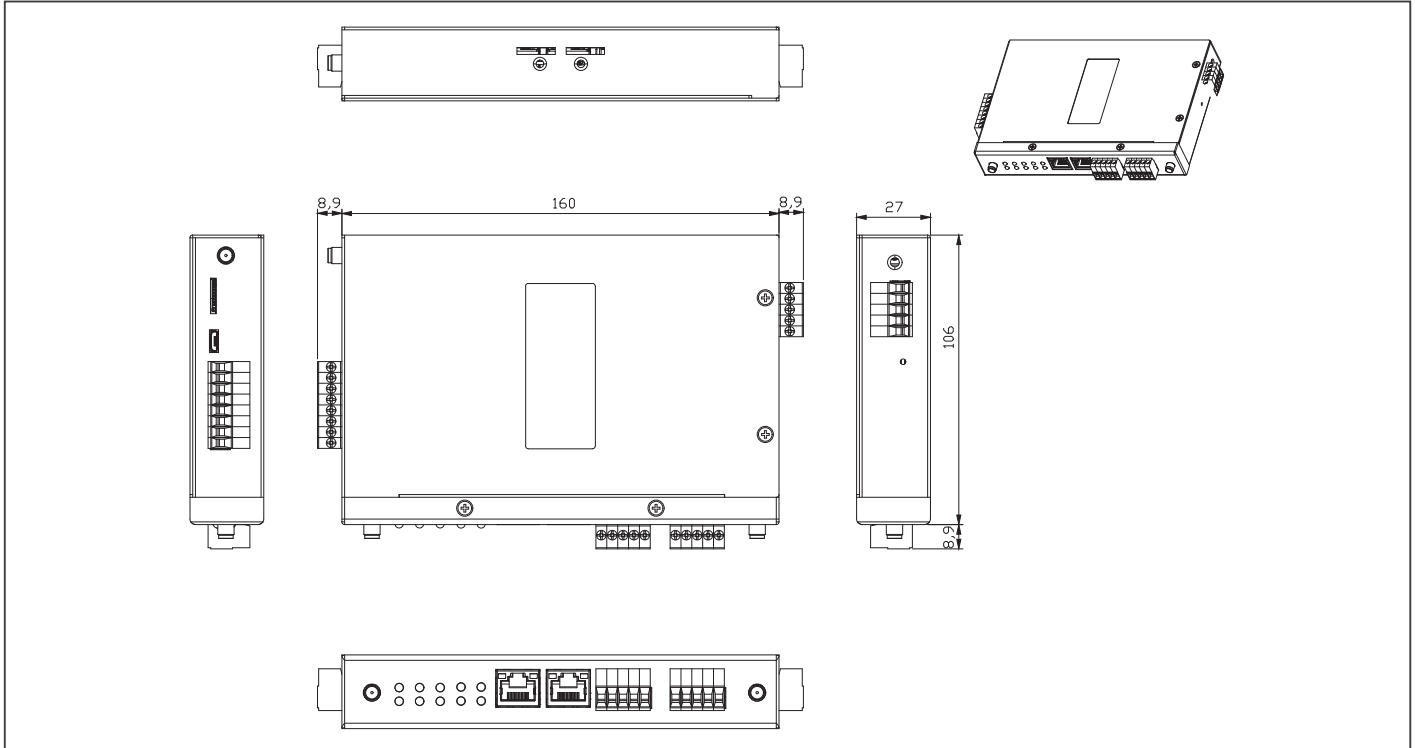
Packing List

- SPG-M041



Dimension

Unit: mm



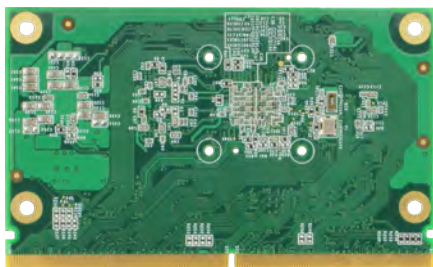
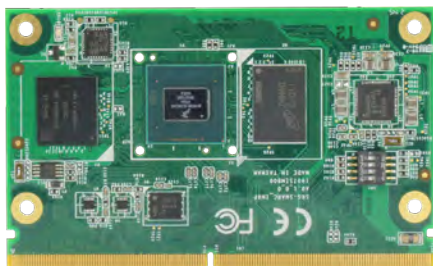
Ordering Information

Part Number	Platform	LAN	COM	Digital Input	Digital Output	Expansion slot	Power	Others
SPG-M041-A10-0000	ARM Cortex M4	10/100 Ethernet x 2	RS-485 / RS-232 x 2 (Selectable)	DI x 4	Relay x 1	Mini PCIe slot x 1	12/24 VDC	Embedded Real-Time OS: Zephyr

Optional Accessories

Part Number	Description
1255X00072	Power Adapter. AC/DC. 100-240VAC. 12VDC/3A.36W.
9741EG25G0	PCIe mimi card. 4G LTE. module kit. Global Band W/SIM holder. Quectel. EG25-G
9697PT0003-D	PCIe mimi card. CAT-NB/CAT-M1. EXS62
170X000099	Antenna, LTE / CAT-NB and M1, Full Band
978966660G	Antenna. GPS





Features

- i.MX8M Plus Cortex-A53 Quad-core 1.6GHz Processor
- Compliant SMARC 2.1 Standard System-on-Module
- DDR4L 2GB/4GB, eMMC 16GB/32GB (model variant)
- USB 3.0 x 2, Gigabit Ethernet x 2, CANbus x 2
- Yocto, and Android and mainline Linux support
- Wide Temperature -20 °C ~ 70 °C



Specifications

System	
Form Factor	SMARC (82 x 50 mm) with MXM3 connector
Processor	NXP i.MX8M Plus Cortex-A53, Quad-core, 1.6GHz NXP i.MX8M Plus Cortex-A53, Dual-core, 1.6GHz (model variant)
RAM	2GB/4GB LPDDR4 (model variant)
Storage	16GB/32GB eMMC (model variant)
Network	Gigabit Ethernet x 2
Display	HDMI 2.0a x 1 dual channel 24-bit LVDS x 1 MIPI-DSI 4-lane shared with second LVDS channel x 1
Video input	2-lane MIPI-CSI x 1 4-lane MIPI-CSI x 1
Connectivity	UART x 2 CAN bus x 2 I ² C x 3 SD/SDIO x 1 JTAG x 1
USB	USB 3.0 x 2
PCIe	PCIe Gen3 x 1
Audio	I ² S x 1
Power Supply	
SD card	5V DC
Environmental and Mechanical	
Power Input	67.6 x 31.0 mm
Serial Port	0°C ~ 60°C
Digital Input	5% ~ 95% relative humidity, non-condensing

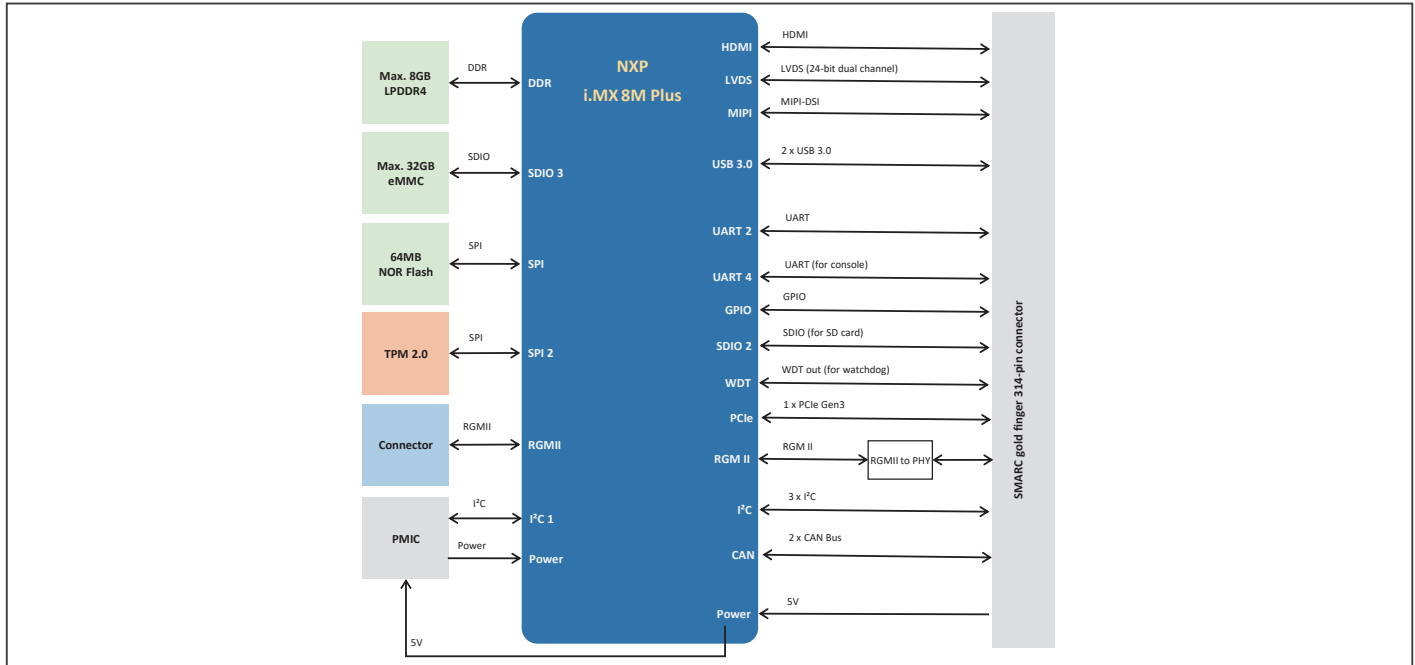
Packing List

- iEC-SIM8

Optional Accessories

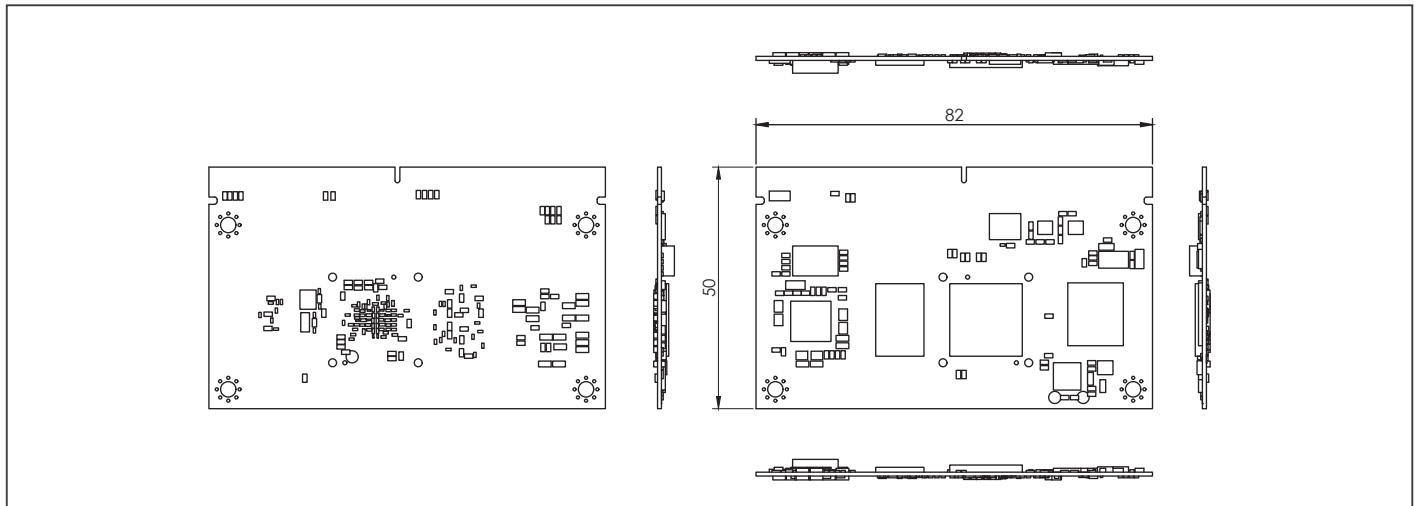
Part Number	Description
iEC-SC39	SMARC carrier board, LAN x 1, 1 x LAN with PoE, 2 x RS-485, 2 x DI, 1 x relay, 2 x USB 3.0, 1 x HDMI, 12/24VDC

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Interfaces	Storage	LAN	Power	Operation Temp
iEC-SIM8-A10-0000	NXP i.MX8M Plus ARM Cortex-A53 Quad-core 1.6GHz	LPDDR4 4GB	2 x USB3, 2 x UART, 2 x CAN bus, 1 x I2S, 3 x I2C, 1 x HDMI, 1 x LVDS, 1 x MIPI-DSI, 2 x MIPI-CSI, 1 x PCIe, 1 x JTAG	eMMC 32GB	GbE x 2	5V DC	-20°C ~ 70°C @ 0.5 m/s airflow
iEC-SIM8-A10-0001	NXP i.MX8M Plus ARM Cortex-A53 Quad-core 1.6GH	LPDDR4 2GB	2 x USB3, 2 x UART, 2 x CAN bus, 1 x I2S, 3 x I2C, 1 x HDMI, 1 x LVDS, 1 x MIPI-DSI, 2 x MIPI-CSI, 1 x PCIe, 1 x JTAG	eMMC 16GB	GbE x 2	5V DC	-20°C ~ 70°C @ 0.5 m/s airflow



Launching in Q1

Features

- Genio 350 Cortex-A53 Quad-core 2.0GHz Processor
- Built-in 800MHz GPU and 700MHz APU (AI Processing Unit)
- DDR4L 2GB/4GB, eMMC 16GB/32GB (model variant)
- USB 2.0 x 2, RMII x 1
- Android, Yocto and mainline Linux support



Specifications

System	
Form Factor	200-pin SO-DIMM
Processor	MediaTek Genio 350/MT8365 ARM Cortex-A53, Quad-core, 2.0GHz
RAM	2GB/4GB LPDDR4 (model variant)
Storage	16GB/32GB eMMC (model variant)
Network	RMII x 1
Display	LVDS x 1 DPI x 1
Video input	MIPI-CSI x 2
Connectivity	UART x 1 SPI x 1 I ² C x 3 SD/SDIO x 1 JTAG x 1
USB	USB 2.0 OTG x 1 USB 2.0 host x 1
PCIe	—
Audio	—
Power Supply	
SD card	5V DC
Environmental and Mechanical	
Power Input	67.6 x 31.0 mm
Serial Port	0°C ~ 60°C
Digital Input	5% ~ 95% relative humidity, non-condensing

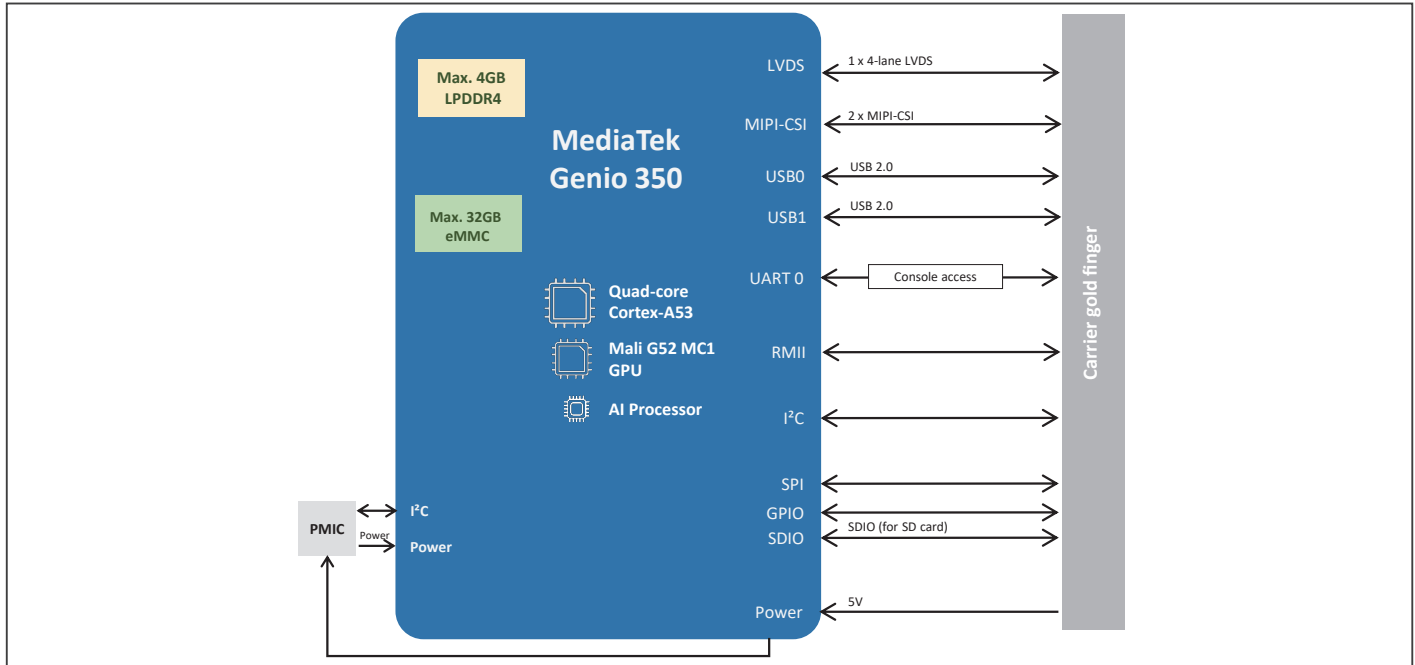
Packing List

- iEC-SI35

Optional Accessories

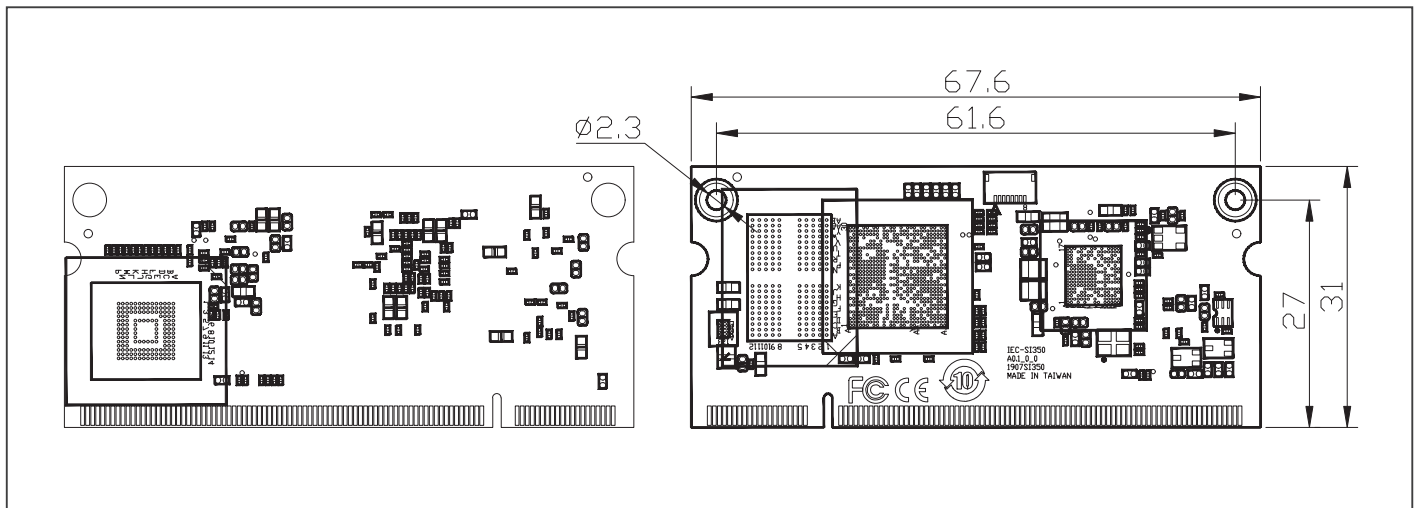
Part Number	Description
iEC-SC11	SOM carrier board, 1 x LAN, 2 x USB 2.0, 1 x RS-485, 12/24VDC

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Interfaces	Storage	LAN	Power	Operation Temp
iEC-SI35-A01-0000	MTK Genio 350 ARM Cortex-A53, Quad-core, 2.0GHz	LPDDR4 4GB	1 x USB2, 1 x UART, 3 x I2C, 1 x LVDS, 2 x MIPI-CSI	eMMC 32GB	RMII	5V DC	0°C – 60°C @ 0.5 m/s airflow
iEC-SI35-A01-0001	MTK Genio 350 ARM Cortex-A53, Quad-core, 2.0GHz	LPDDR4 2GB	1 x USB2, 1 x UART, 3 x I2C, 1 x LVDS, 2 x MIPI-CSI	eMMC 16GB	RMII	5V DC	0°C – 60°C @ 0.5 m/s airflow

03



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03

Compact Fanless BOX PC Solutions



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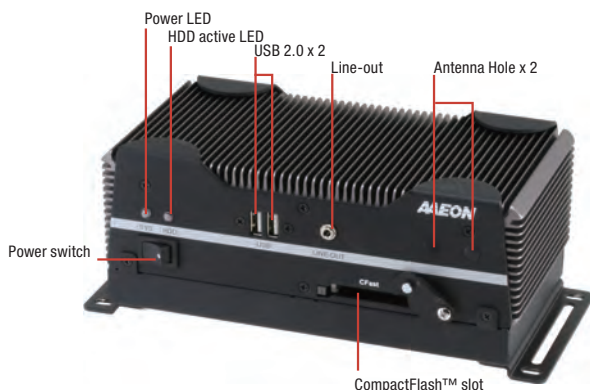


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Site Web : www.es-france.com

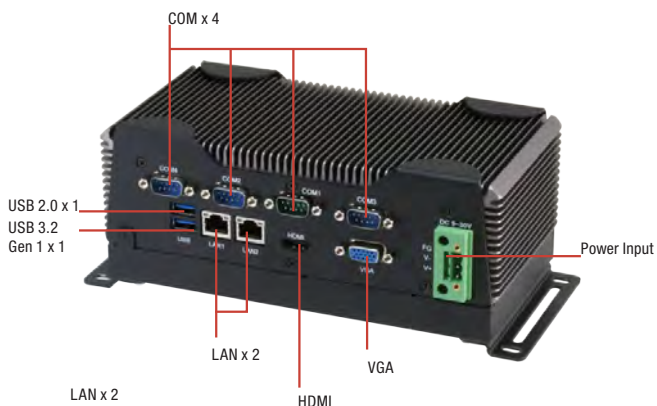
BOXER-6614

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



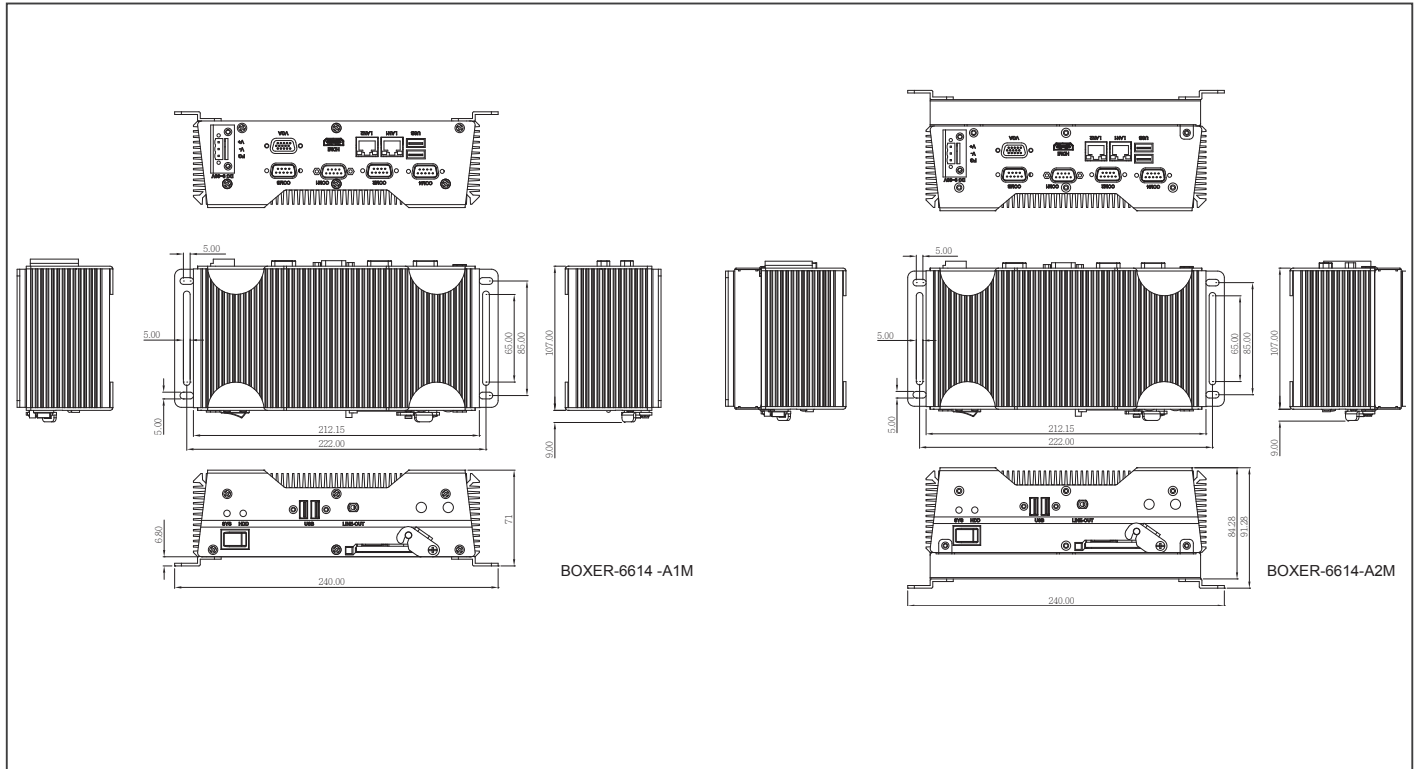
Specifications

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
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)	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)
Environmental	
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
- 1702031802 Power Cord (US Type)
- 1702031804 - 3 pin for 6614-A1M/A2M
- 1702031805 Power Adapter, AC, 100/240V, 12V/7A, 84W, FSP, FSP084-DHAN3
- 1702031806 Power Cord (European Type)
- 1702031807 Power Cord (Japanese Type)
- 9741681003 Din Rail Mount Kit



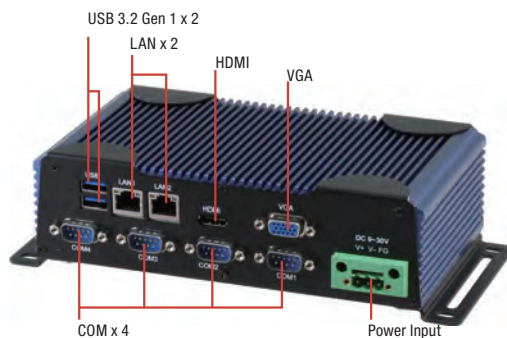
BOXER-6615

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



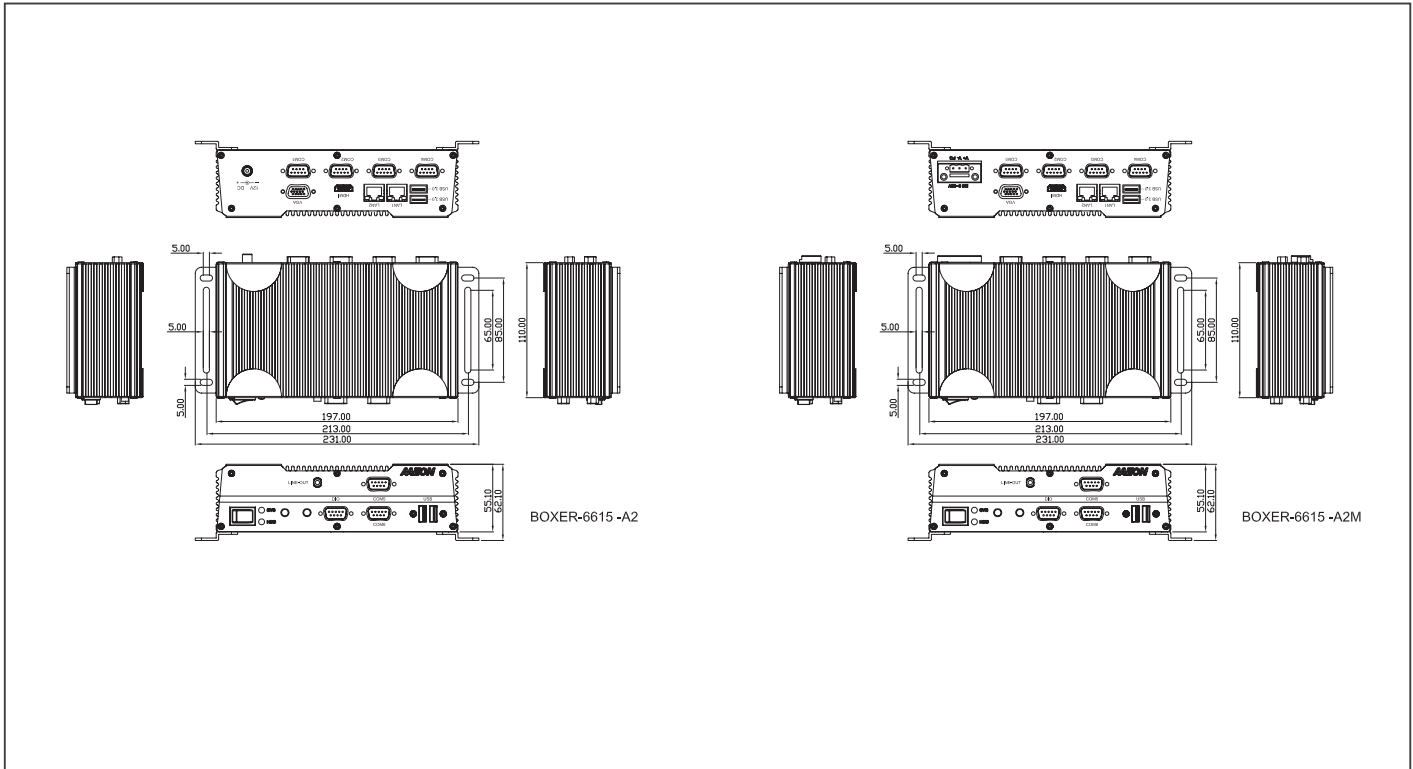
Specifications

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

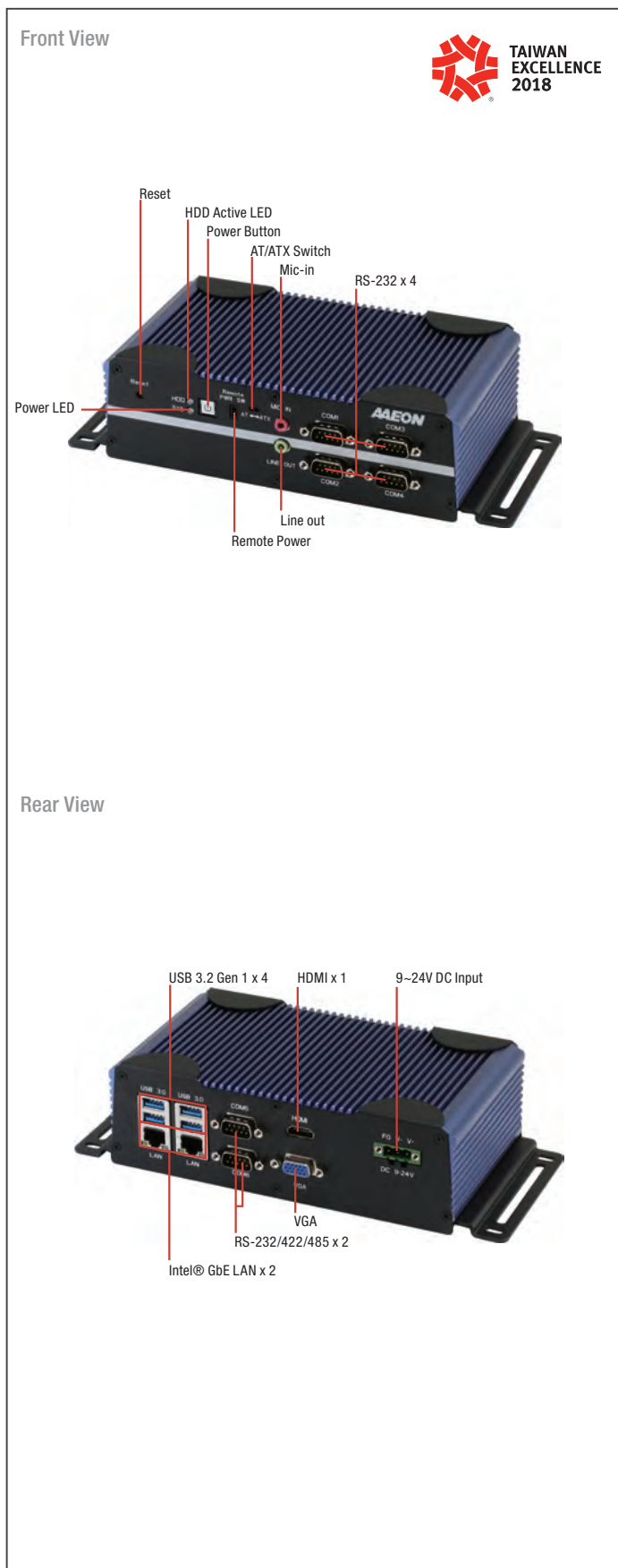
Optional Accessories

- **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



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



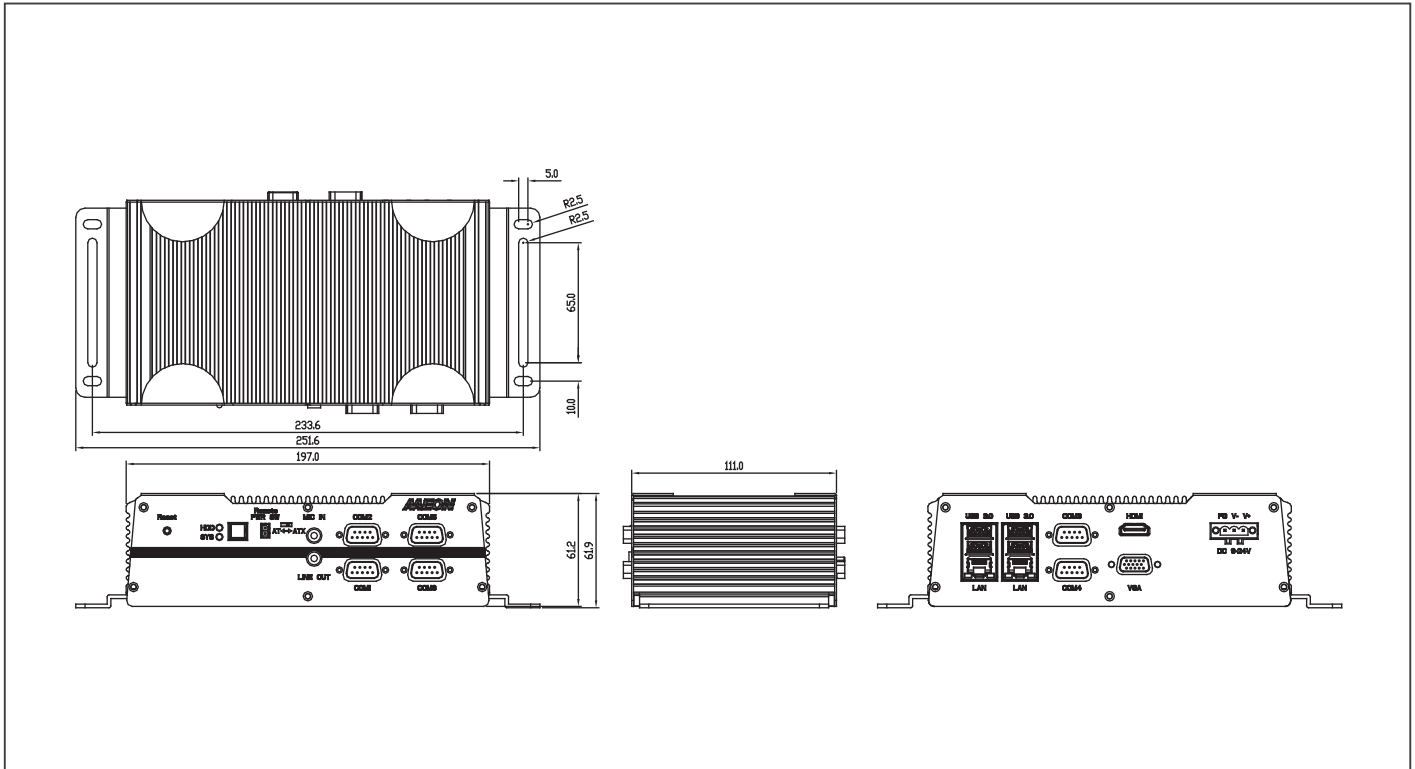
Specifications

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

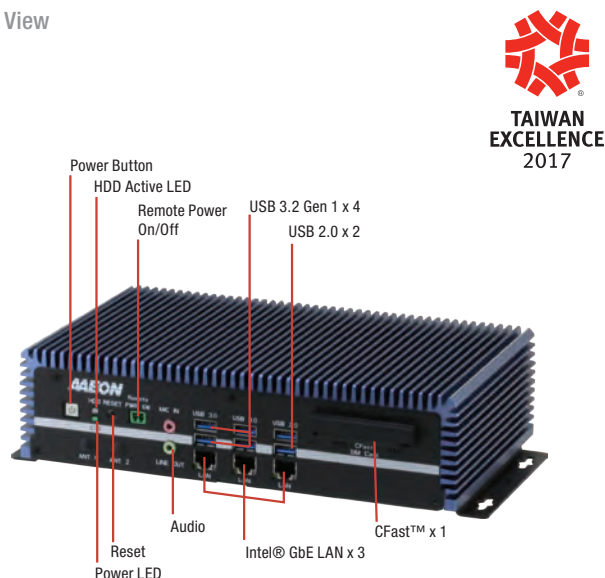
- **1255900849**
12V 84W Power Adapter
- **1702031802**
Power Cord (US Type)
- **1702031803**
Power Cord (Europe)
- **170203180E**
Power Cord (Japan)
- **9741640404**
Din Rail Mount Kit



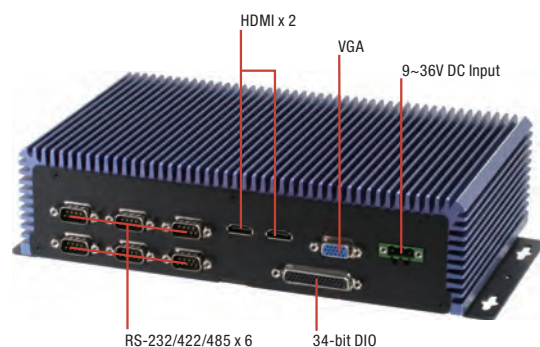
BOXER-6639

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 6
- Compact Size and Easy Access Design
- Wide Range DC 9~36V Input
- 34-bit Digital Input and Output



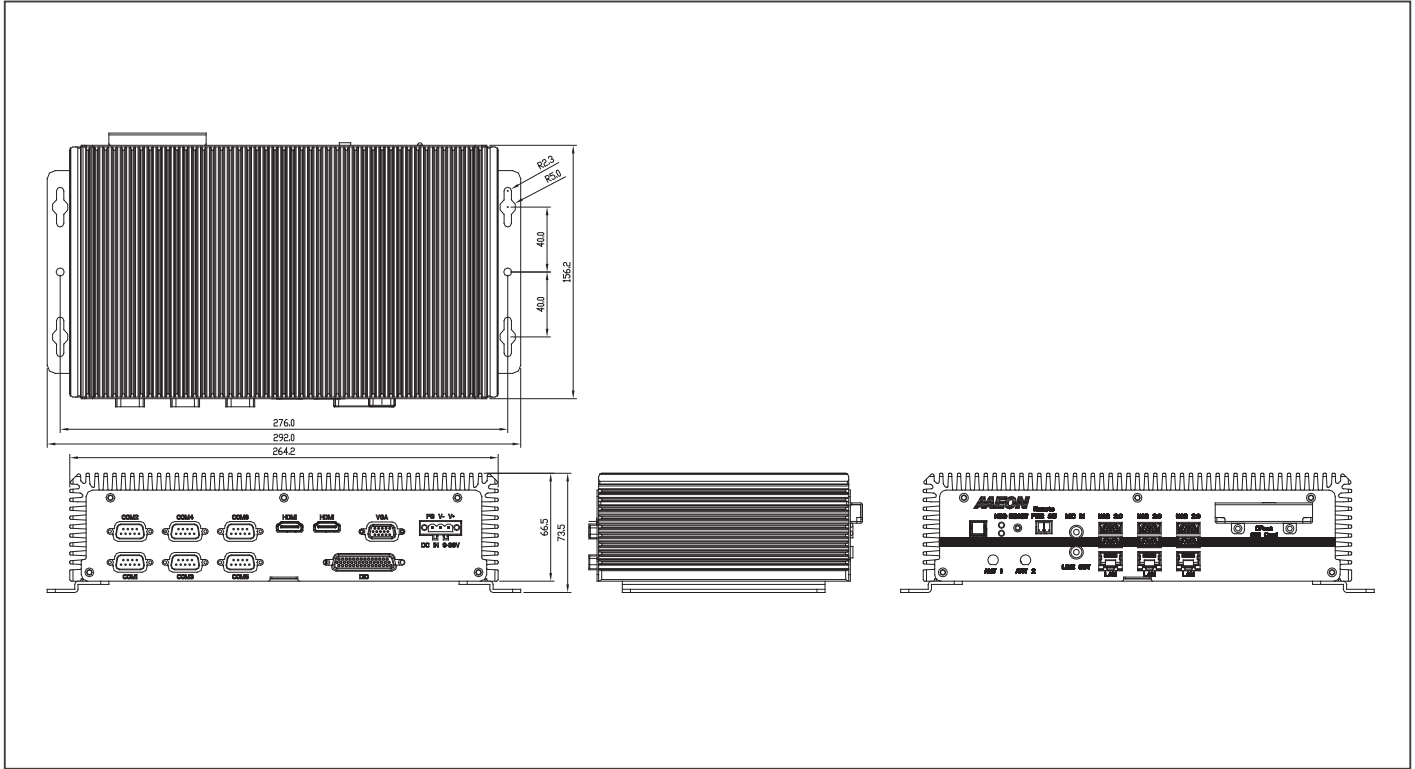
Specifications

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, SATA HDD/SSD (Optional: x2)
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)
Power Supply	
Power Requirement	9 - 36V with 3-pin terminal block
Mechanical	
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)
Environmental	
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, 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, 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

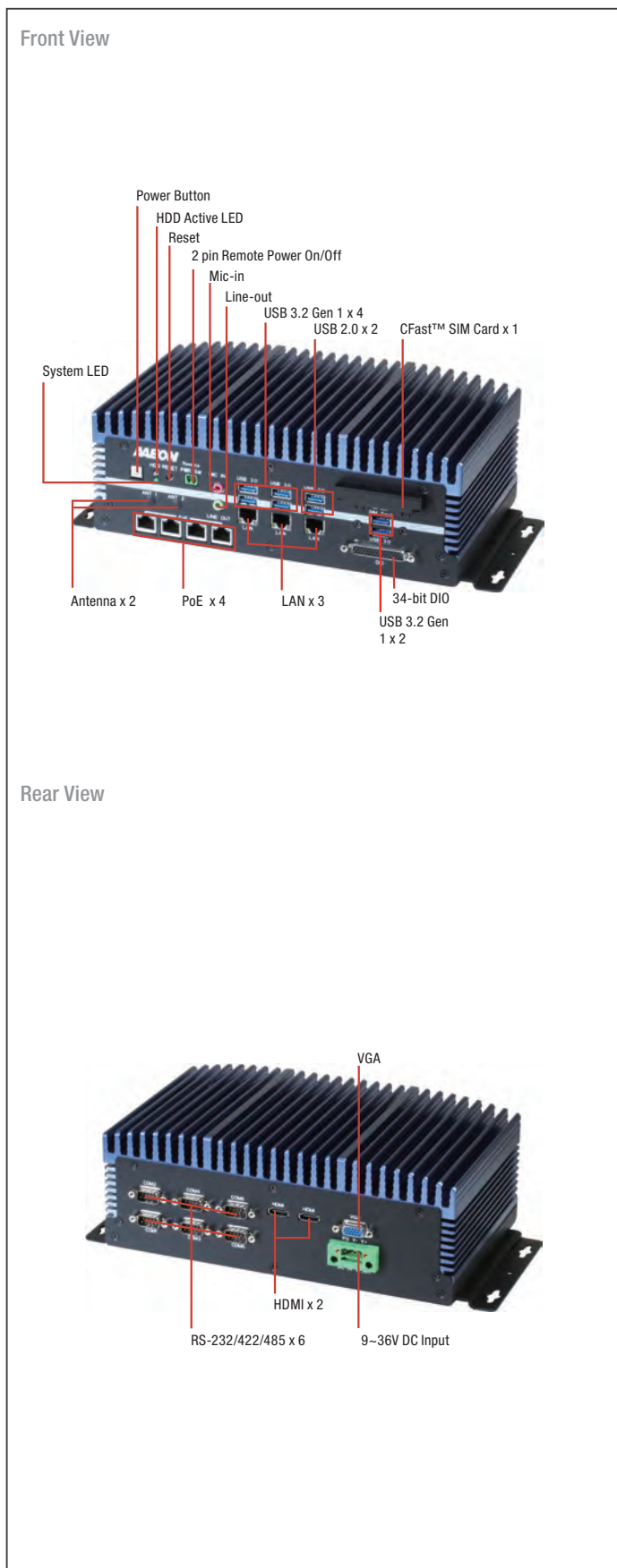
Optional Accessories

- **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



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



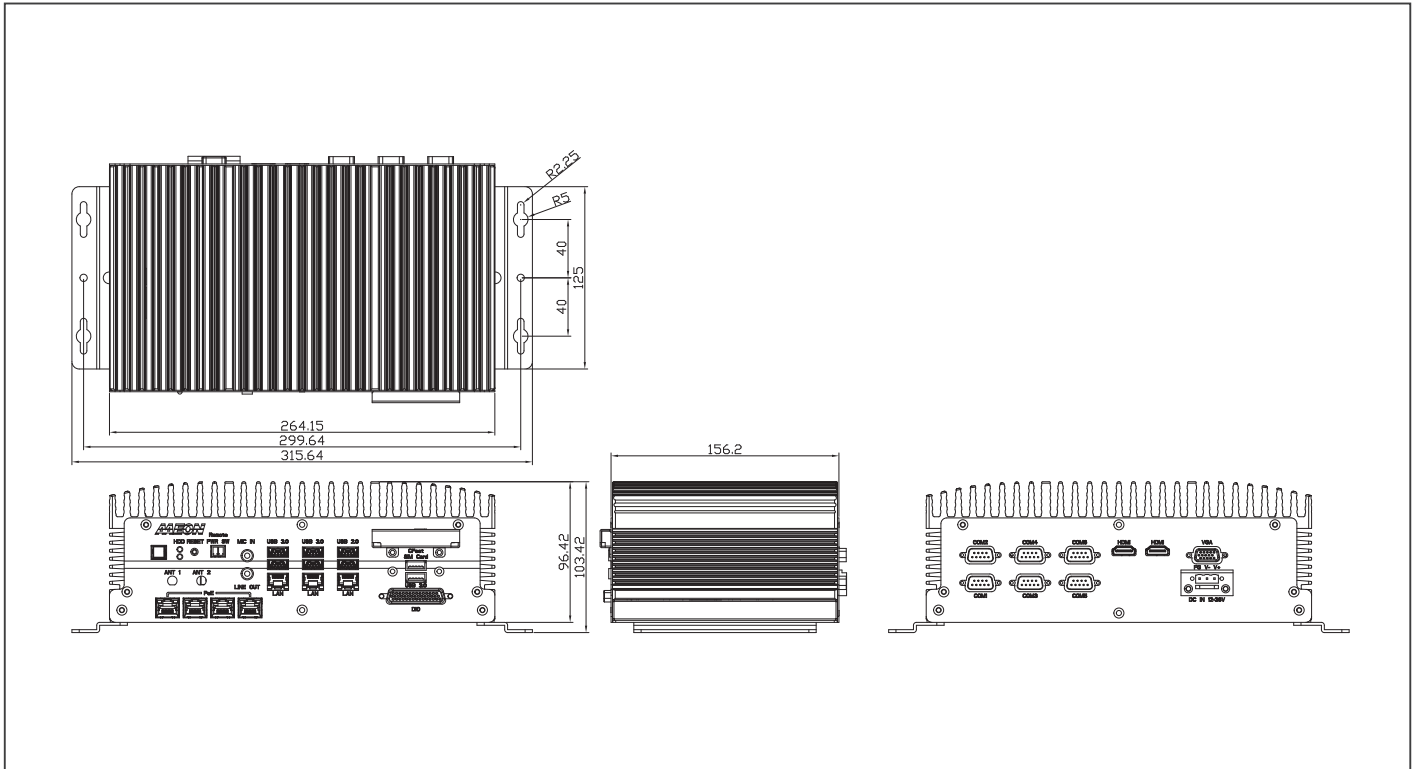
Specifications

System	
CPU	7th Generation Intel® Core™ Processor family: 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 6th Generation Intel® Core™ Processor family: 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	7th Generation Intel® Core™ Processor family: Windows® 10 IOT (64bit), Ubuntu 16.04 above, Fedora 25 above, CentOS 7.3 above 6th Generation Intel® Core™ Processor family: 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
Power Supply	
Power Requirement	12 - 36V with 3-pin terminal block
Mechanical	
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)
Environmental	
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
Anti - Shock	—



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 3
- 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)



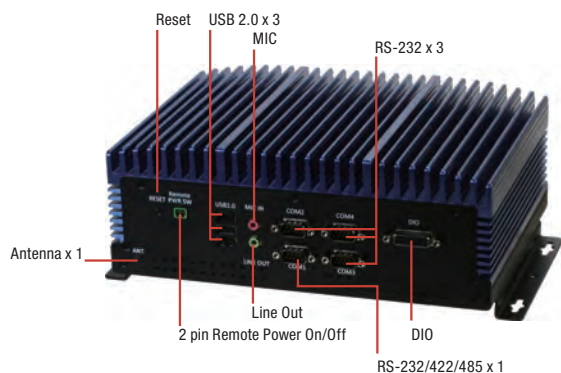
BOXER-6640

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
- Support 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



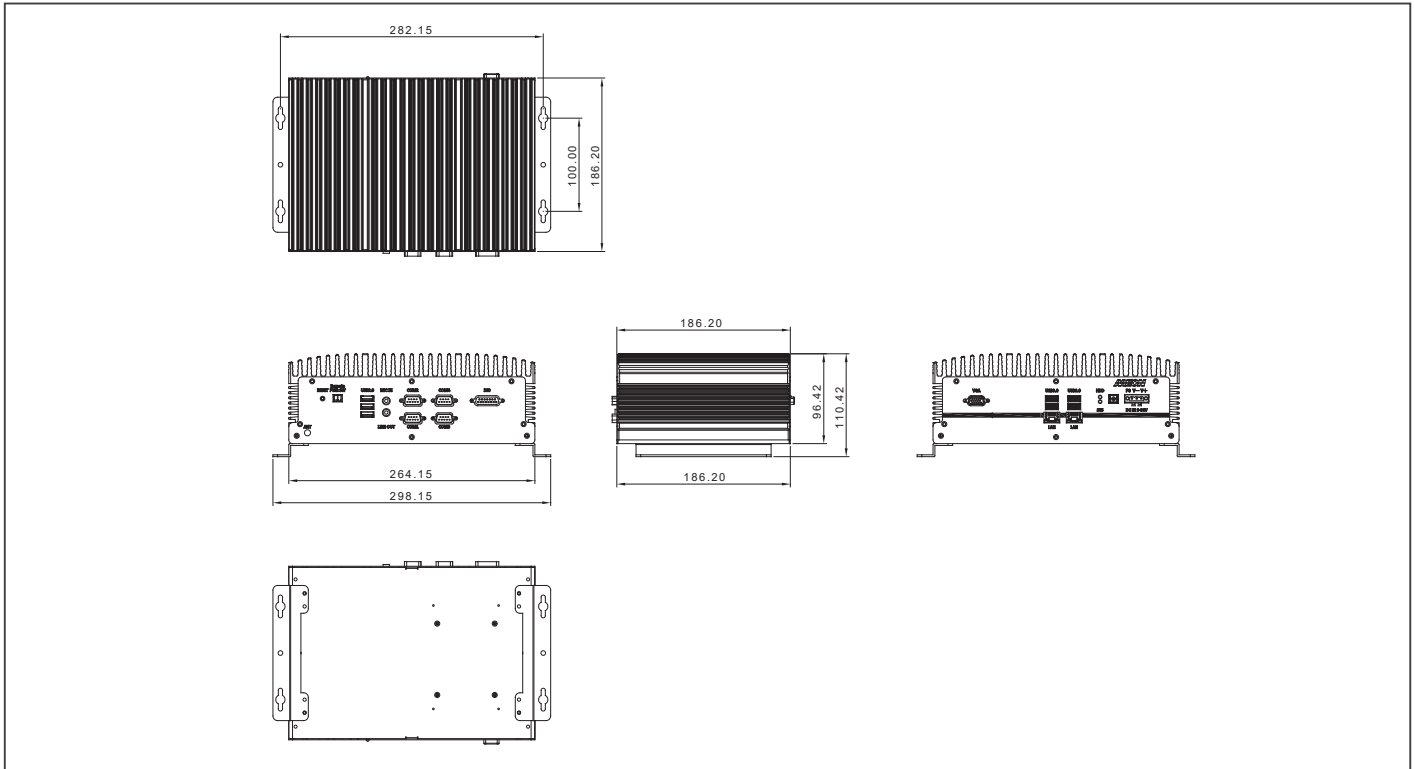
Specifications

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)
Power Supply	
Power Requirement	3-pin Phoenix DC Input 9~36V
Mechanical	
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)
Environmental	
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

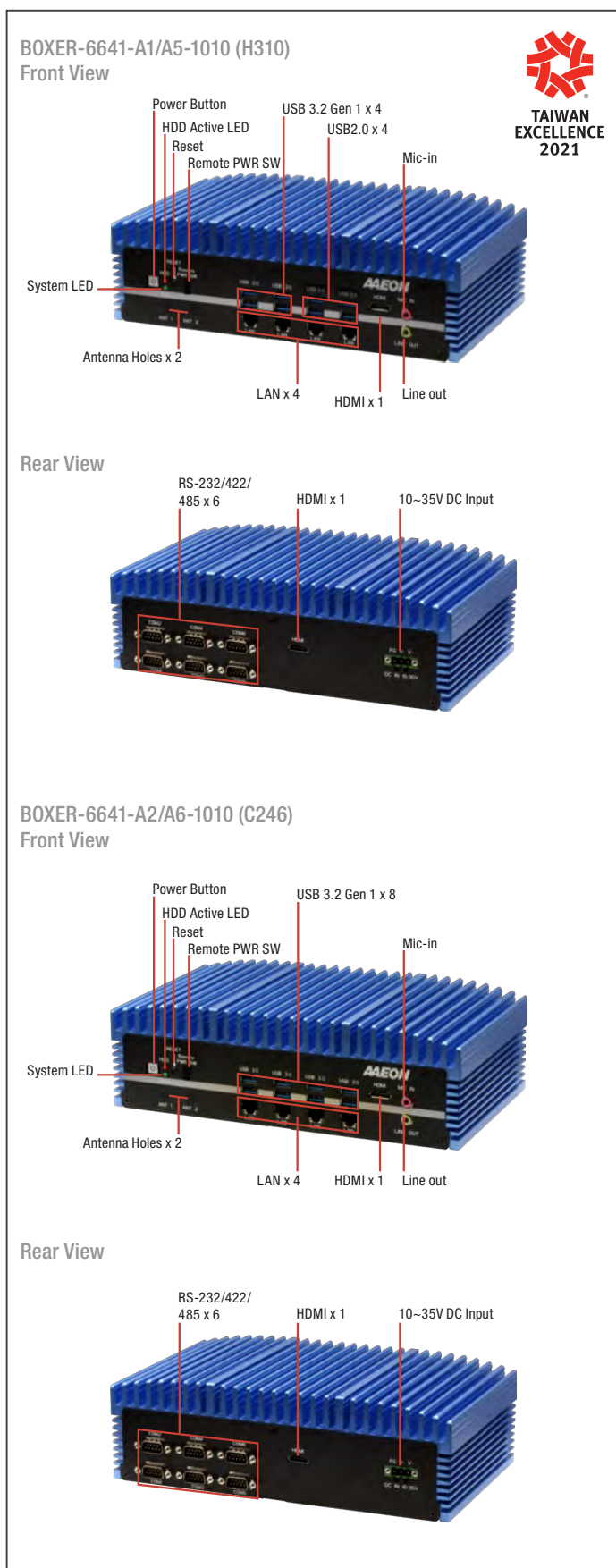
Optional Accessories

- **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



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



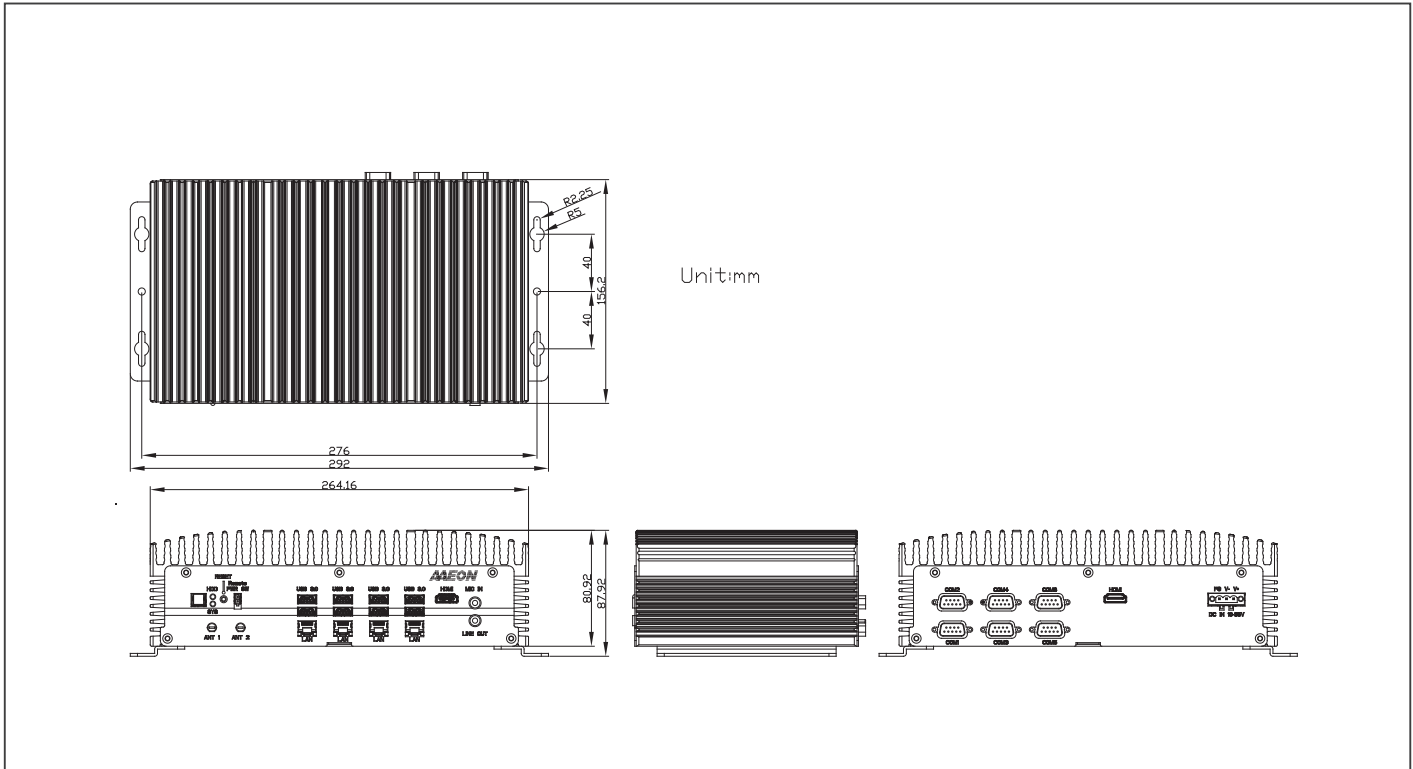
Specifications

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, USB2.0 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
Power Supply	
Power Requirement	3-pin DC Input 10~35V
Mechanical	
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)
Environmental	
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	—
Certification	CE/FCC class A



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-A1-1110(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-A2-1110(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-A5-1110(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-A6-1110(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



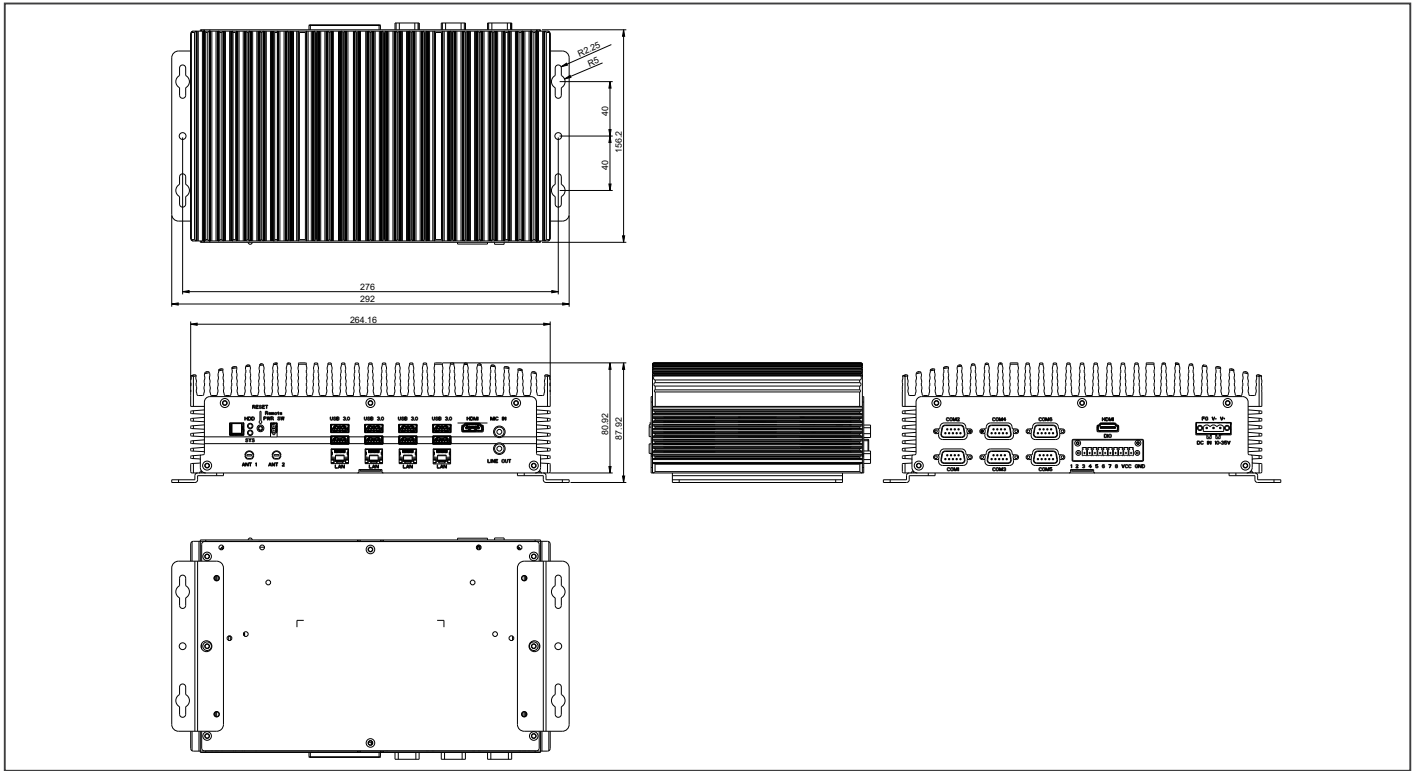
Specifications

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
Power Supply	
Power Requirement	3-pin DC Input 10~35V
Mechanical	
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)
Environmental	
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

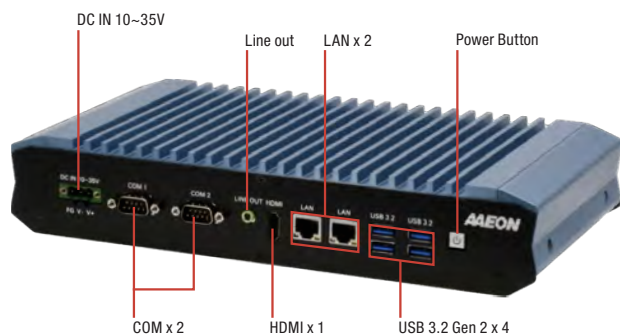
- 125590120B
120W Power Adapter
- 1702031802
Power Cord (US)
- 1702031803
Power Cord (EU)
- 170203180E
Power Cord (JP)



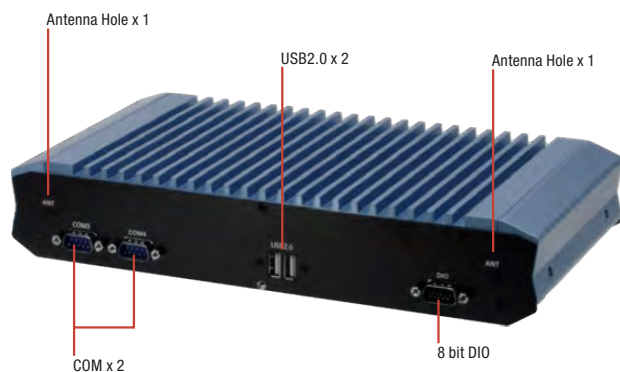
BOXER-6642-CML

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
- Support TPM 2.0
- Wide Range 10-35V DC input
- Wide Range 0 ~ 45°C Operating Temperature



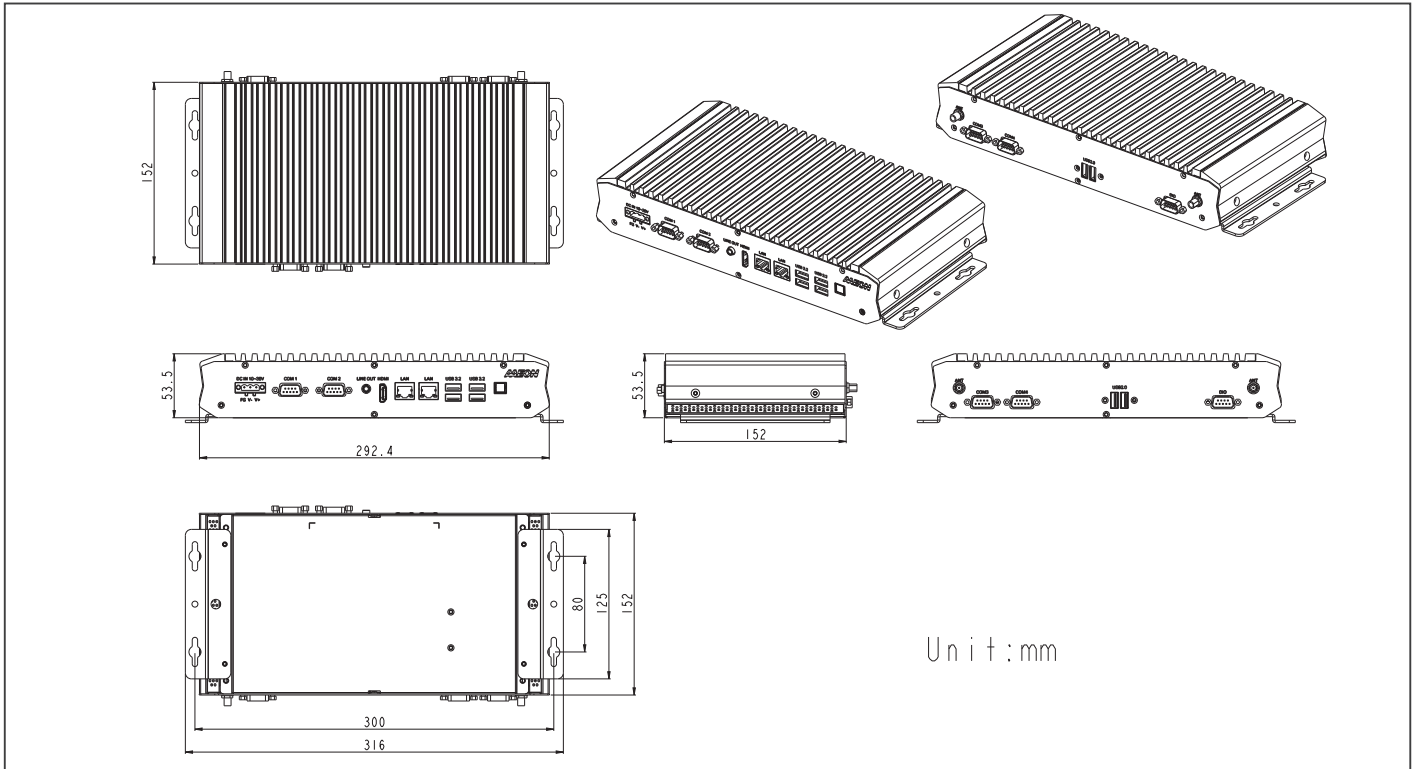
Specifications

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

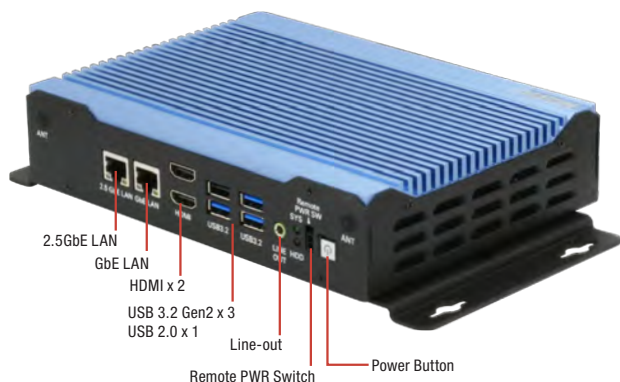
- 1255X00059
120W Power Adapter
- 1255302300
230W Power Adapter
- 1702031802
Power Cord (US Type)
- 1702031803
Power Cord (Europe)
- 170203180E
Power Cord (Japan)



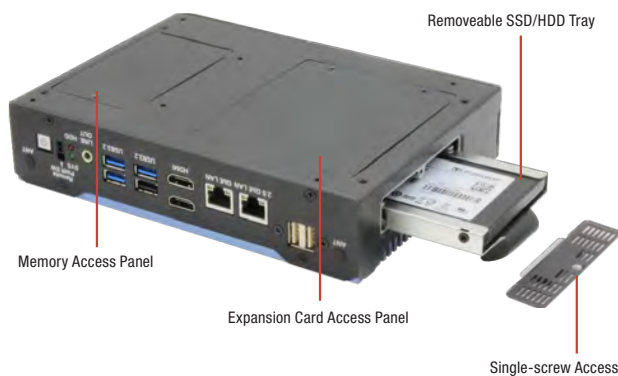
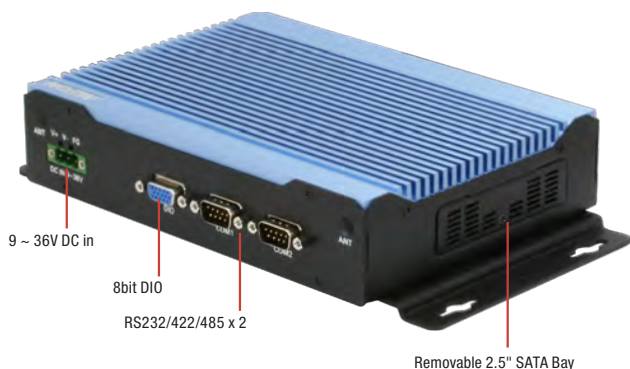
BOXER-6643-TGU

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
- Support 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



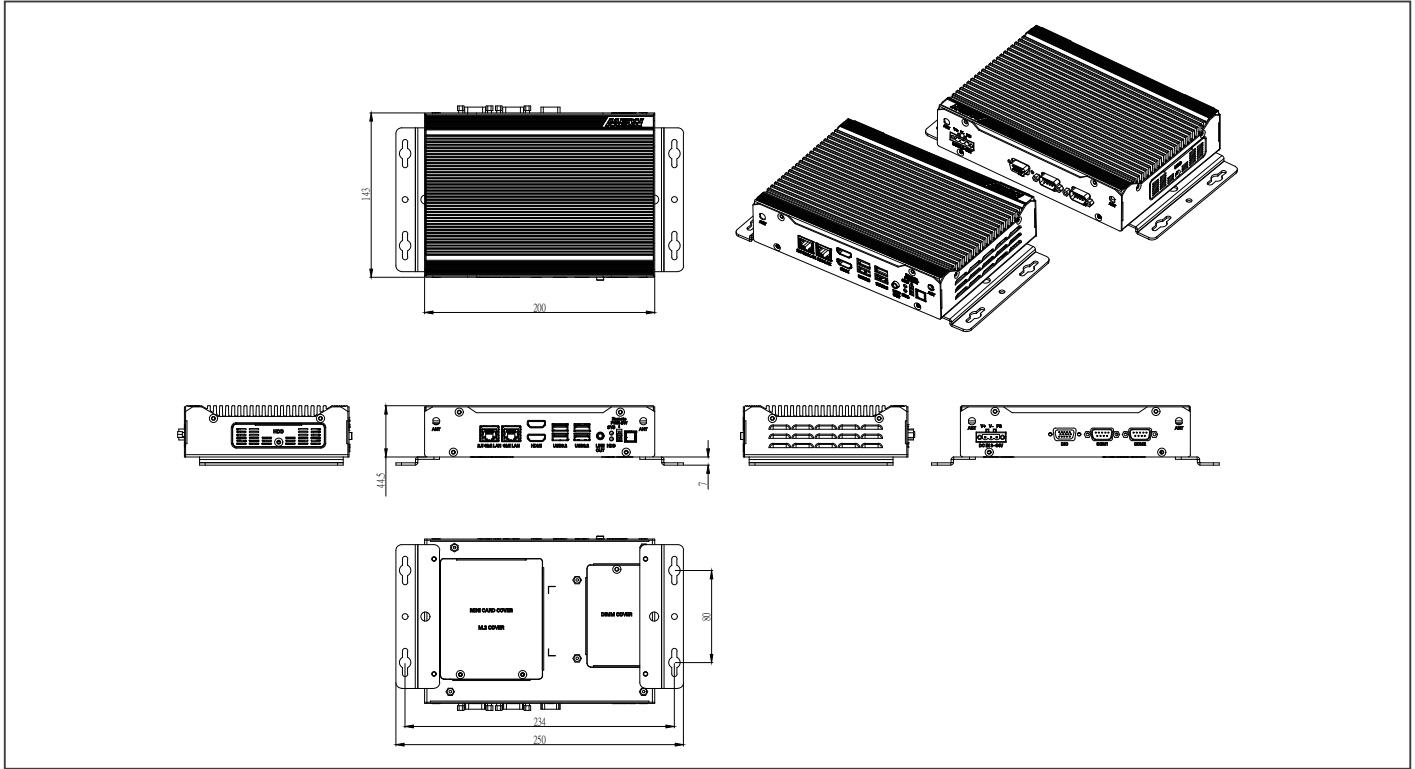
Specifications

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 Generation Intel® Processor

Front View



Rear View



Features

- Intel 12th 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)
- Support SuperSpeed+ USB3.2 Gen2 10Gbps x 8 (A2)
- Support M.2 3052 for 5G Module
- Support Quadruple LAN (GbE x 3, 2.5GbEx1), vPRO and iAMT
- Onboard TPM 2.0



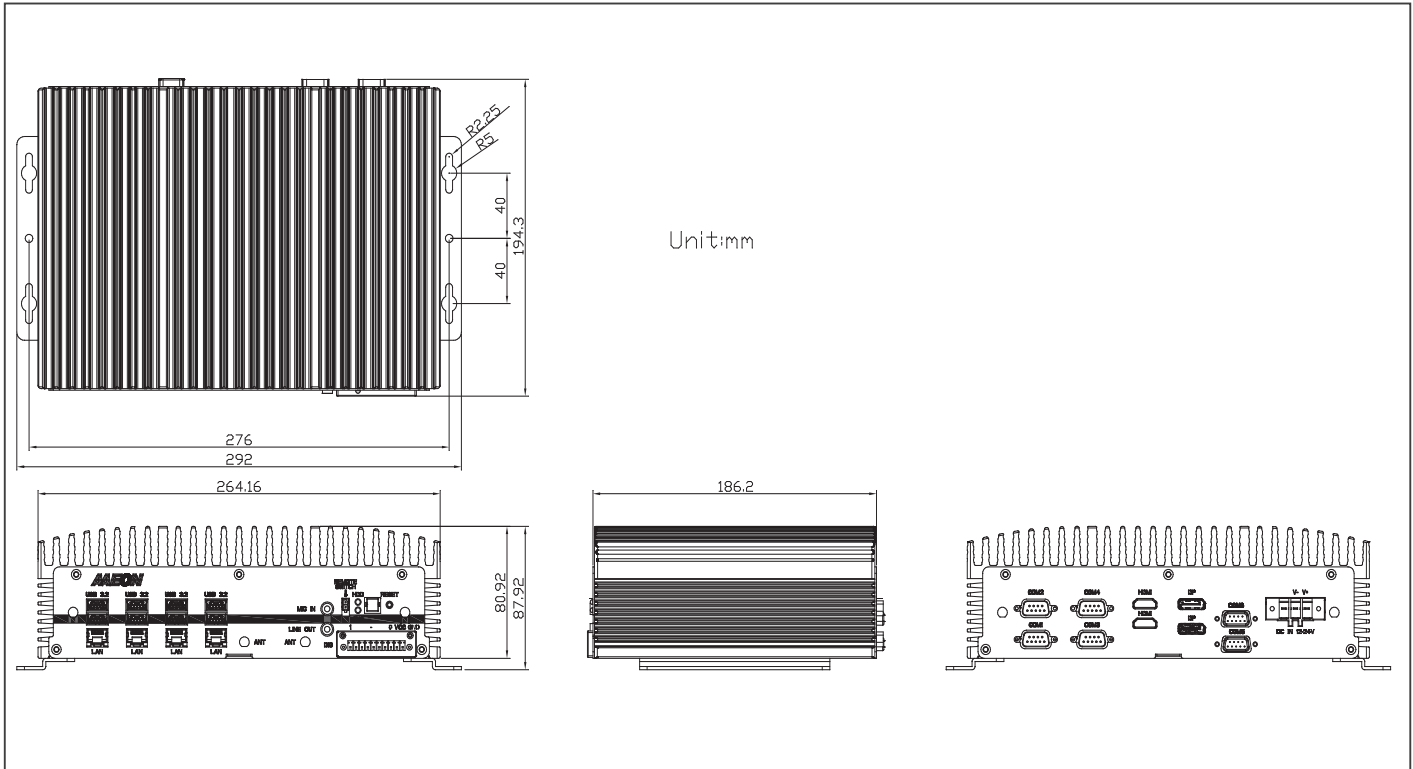
Specifications

System	
CPU	i9-12900E i7-12700TE i7-12700E i5-12500TE i5-12500E i3-12100TE i3-12100E G6900TE G6900E
Chipset	Intel H610E/Q670E
System Memory	DDR5 4800MHz Slot x2, max up to 64GB
Display Interface	HDMI Type A x2 for HDMI 1.4b DisplayPort x2 for DP1.4a *A2 model supports four display outputs at the same time
Storage Device	2.5" SATA-III Drive Bay x 2 (A2 sku supports RAID 0/1) M.2 2280 M key for NVMe SSD x 1 (extra heatsink is needed, refer to optional accessories) (A2 sku only)
Ethernet	Intel® I210AT, 10/100/1000 Base-TX x 2 Intel® I219LM, 10/100/1000 Base-TX x 1 Intel® I226LM, 2.5GbE Base-TX x 1
I/O	USB 3.2 Gen2 5Gbps x 4 (A1 sku) USB 3.2 Gen2 10Gbps x 8 (A2 sku) USB2.0 x 4 (A1 sku) Audio x 1 (MIC-in, Line-out) DB-9 x 6 for RS-232/422/485 SMA Antenna Hole x6 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)
Power Supply	
Power Requirement	3-pin DC Input 12~24V
Mechanical	
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)
Environmental	
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. 32G)/ 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	H610E	4	USB 3.2 (5Gbps) x4	4	—	6	8 bit	Mic-in Line-out	2.5" SATA-III Drive bay x 2	HDMI x 2 DP x 2	M.2 E-Key 2230 x1 M.2 B-Key 3052 x1 w/ SIM Slot x1	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	Q670E	4	USB 3.2 (10Gbps) x8	—	—	6	8 bit	Mic-in Line-out	2.5" SATA-III Drive bay x 2(RAID 0/1) M.2 2280 M Key for NVMe SSD 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	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 (Recommand for 35W CPU)
- **1702031802**
Power Cord (US Type)
- **1702031803**
Power Cord (Europe)
- **170203180E**
Power Cord (Japan)
- **1255903300**
330W Power Adapter (Recommand 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



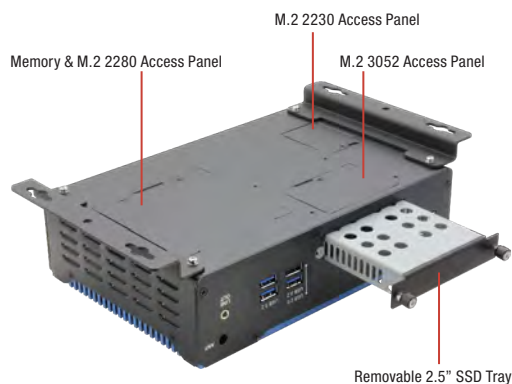
BOXER-6646-ADP

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

Front View



Rear View



Features

- 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
- SuperSpeed+ USB 3.2 Gen2
- Wide Range 10~35V DC input
- Wide Operating Temperature -20~60°C
- Compact Size
- Onboard TPM 2.0



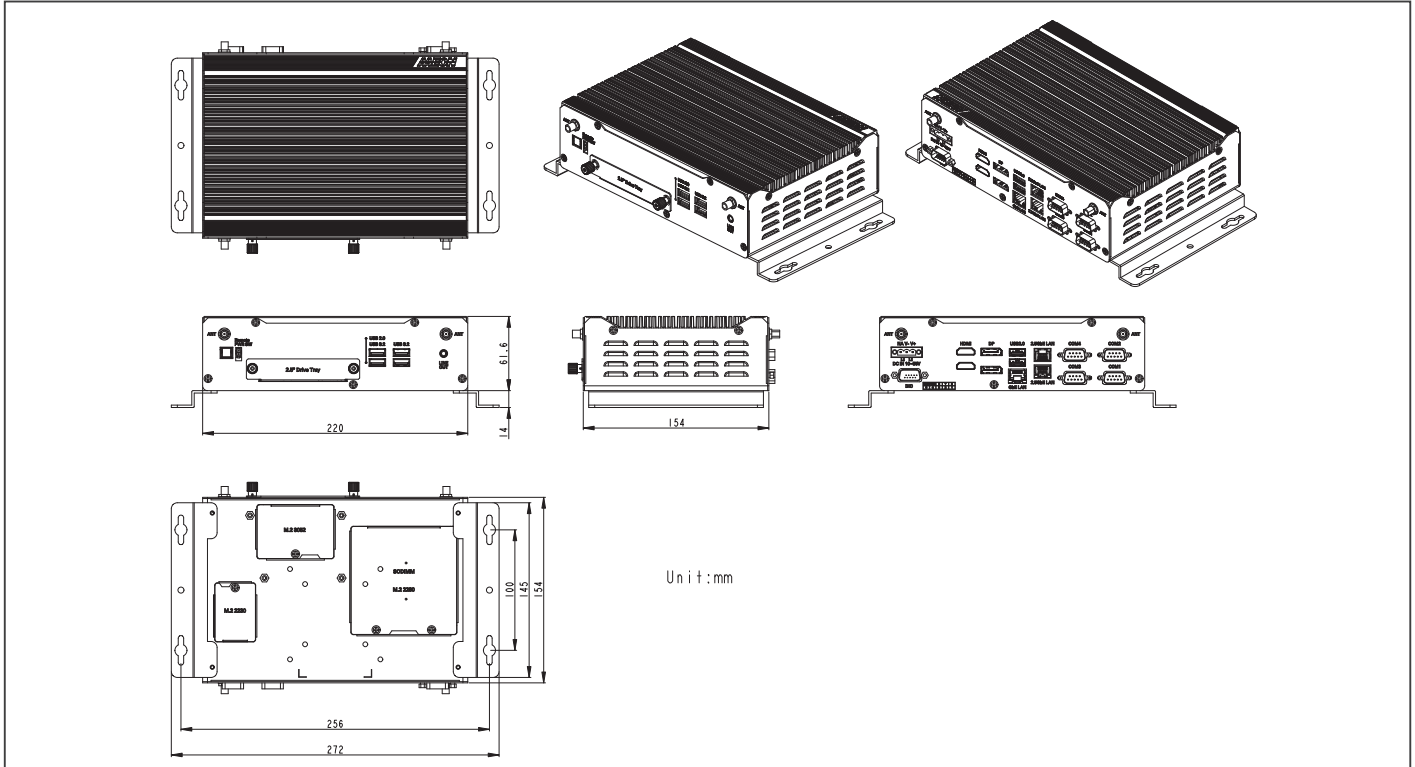
Specifications

System	
CPU	Intel® Core™ i7-1270PE Intel® Core™ i5-1250PE Intel® Core™ i3-1220PE
Chipset	Intel® System on Chip
System Memory	DDR5 SODIMM slot x 2
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



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	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	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	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

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)
- PN by request
Wide Temp. M.2 2280 NVMe PCIe Gen4x4 SSD with heatsink (256G/512G/1T/2T)



BOXER-6617-ADN PRELIMINARY

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



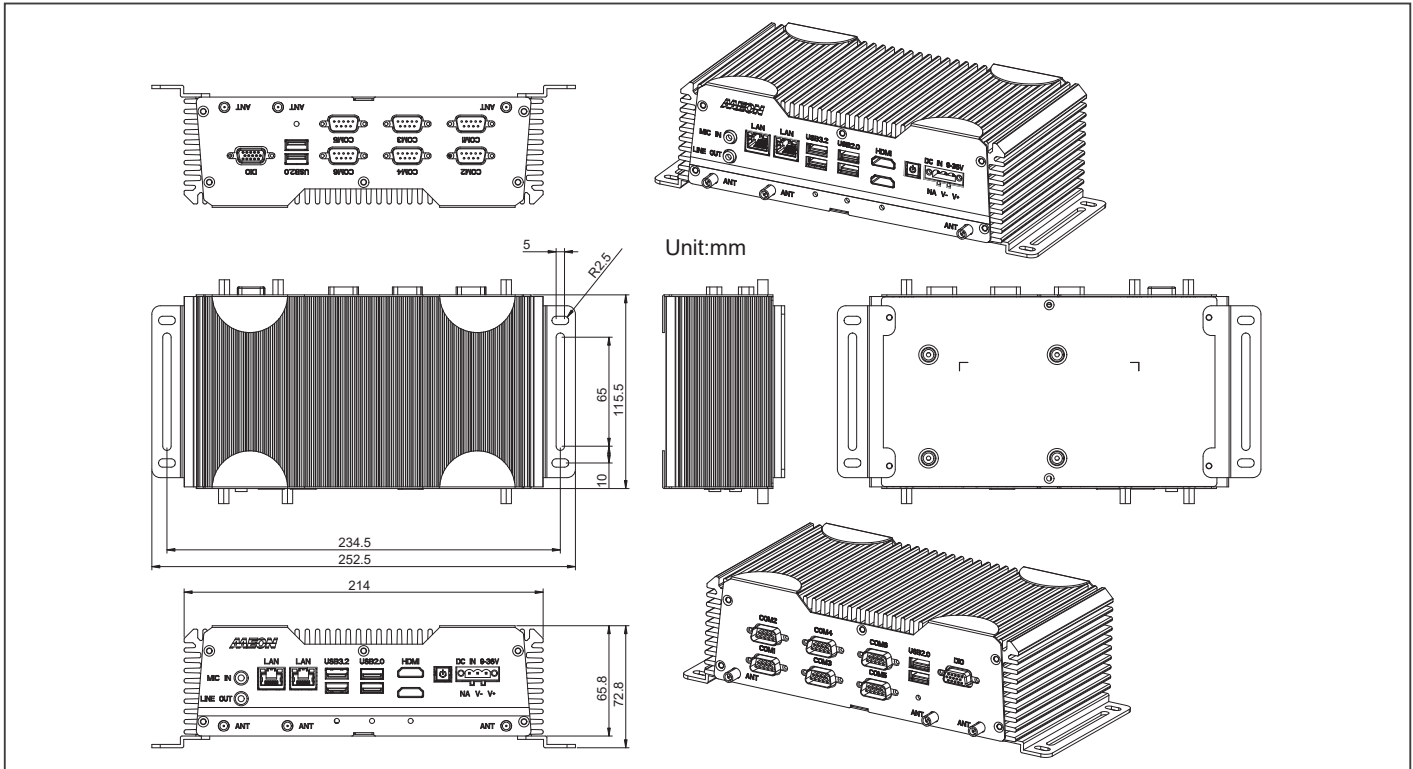
Specifications

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



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



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127 rue de Buzenval BP 26 - 92380 Garches



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04

Ultra Slim Fanless BOX PC Solutions



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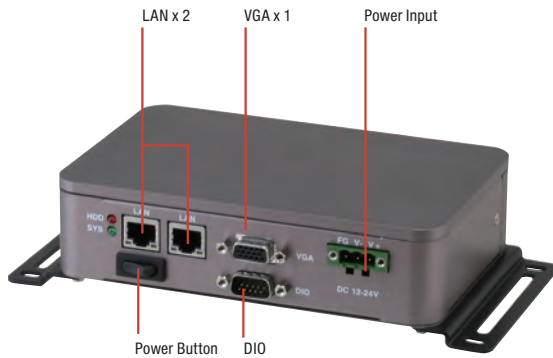


e-mail : mse@es-france.com
Site Web : www.es-france.com

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



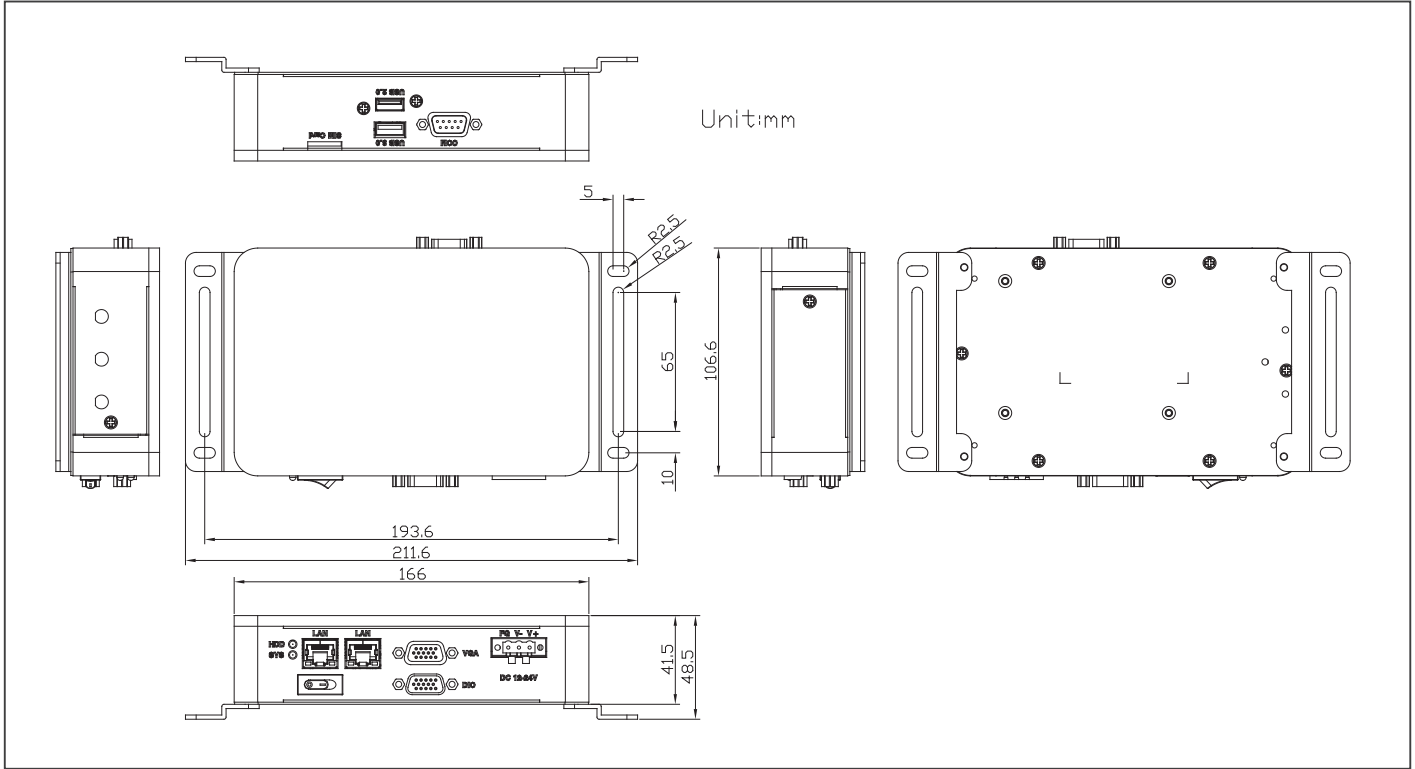
Specifications

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

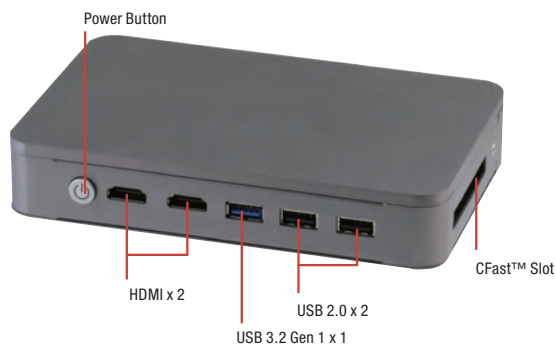
- 125530040F
Power Adapter
- 1702031802
Power Cord (US type)
- 1702031803
Power Cord (European Type)
- 170203180E
Power Cord (Japanese Type)
- 9741238H00
WiFi Module & Antenna
- 9741EG25G0
4G Module & Antenna (for global)
- 9741640403
VESA Mount Kit
- 9741640404
Din rail Mount Kit



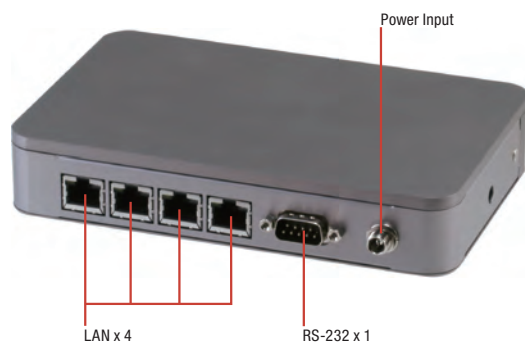
BOXER-6404

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



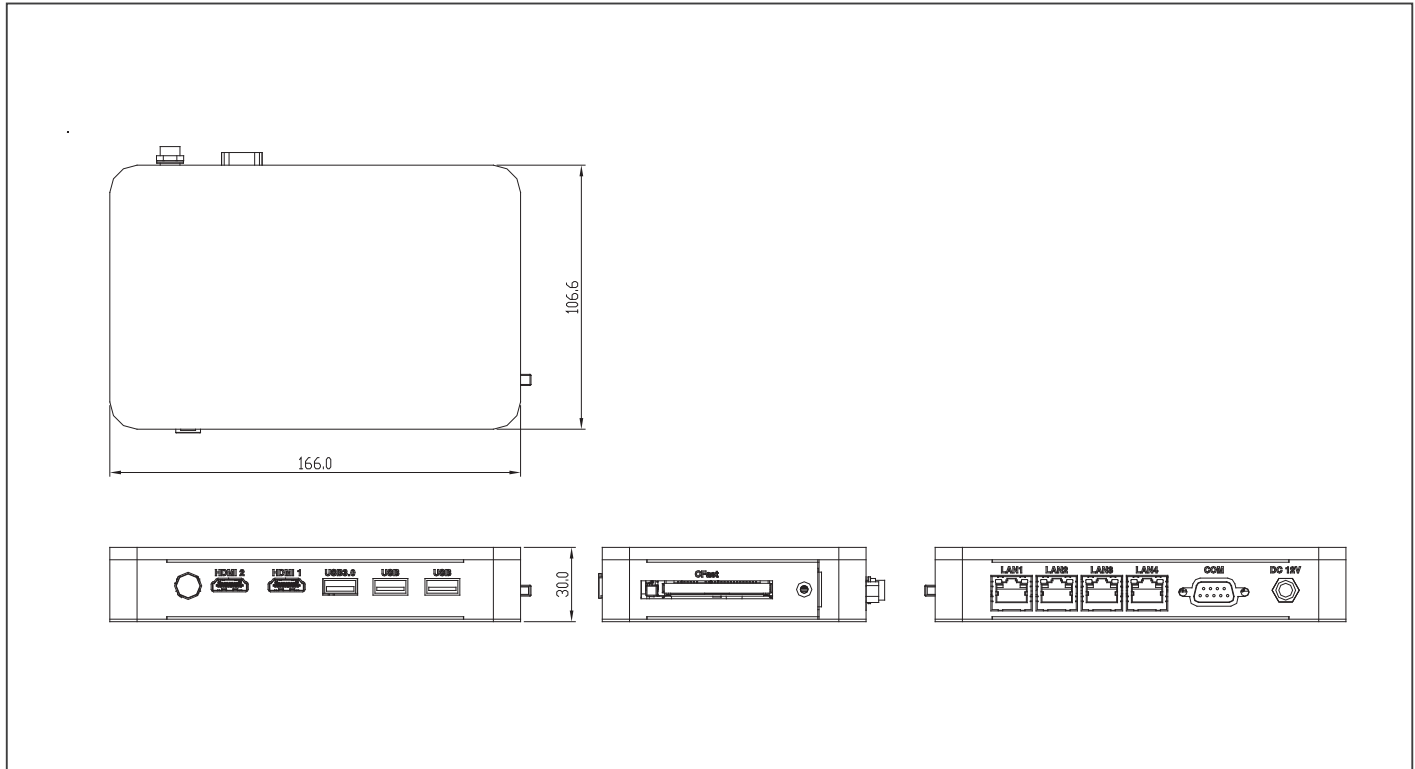
Specifications

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

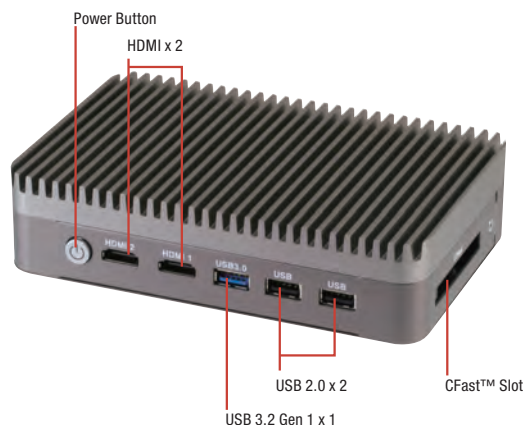
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)
- **9741236A00**
WiFi Module & Antenna
- **9741EG25G0**
4G Module & Antenna (for global)
- **9741640400**
VESA Mount Kit
- **9741640401**
DIN Rail Mount Kit
- **9741640402**
CFast™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



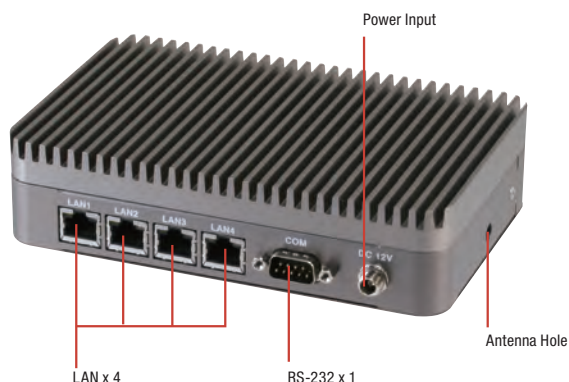
BOXER-6404WT

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



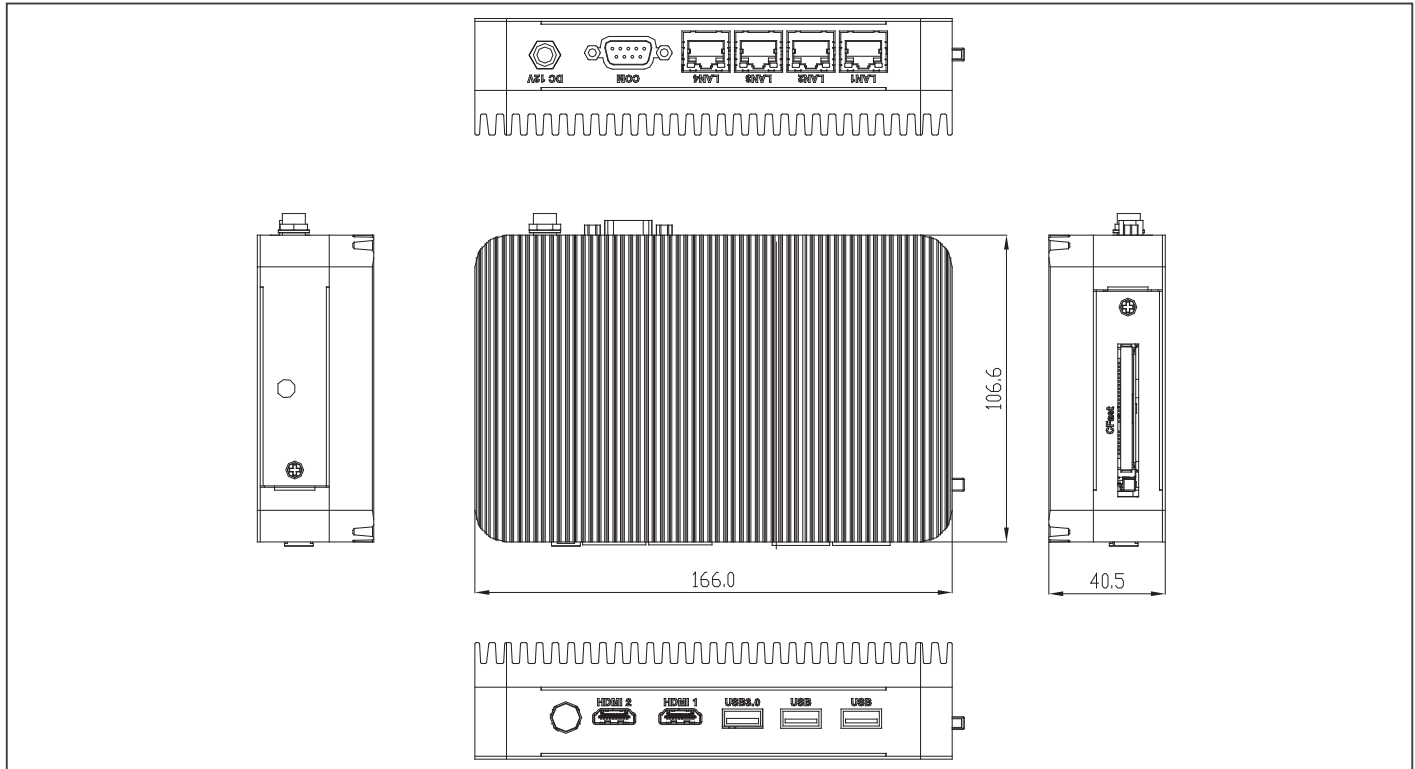
Specifications

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	USB 2.0	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

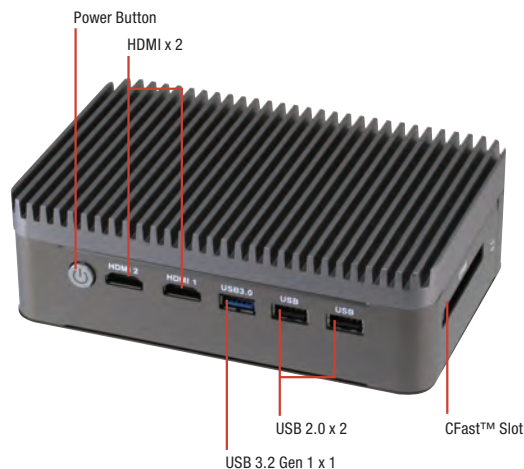
- 1702031802
Power Cord (US type)
- 1702031803
Power Cord (European Type)
- 170203180E
Power Cord (Japanese Type)
- 9741236A00
WiFi Module & Antenna
- 9741EG25G0
4G Module & Antenna (for global)
- 9741640400
VESA Mount Kit
- 9741640401
DIN Rail Mount Kit
- 9741640402
CFast™ Cover Kit



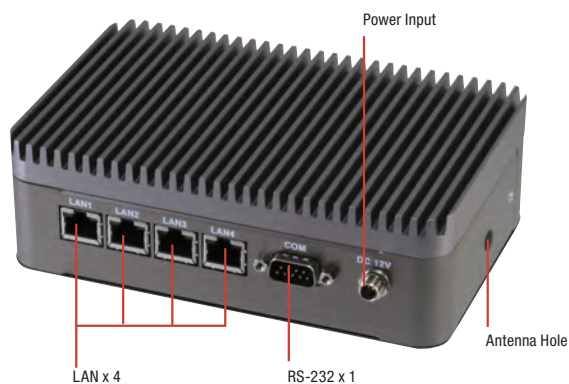
BOXER-6404M

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



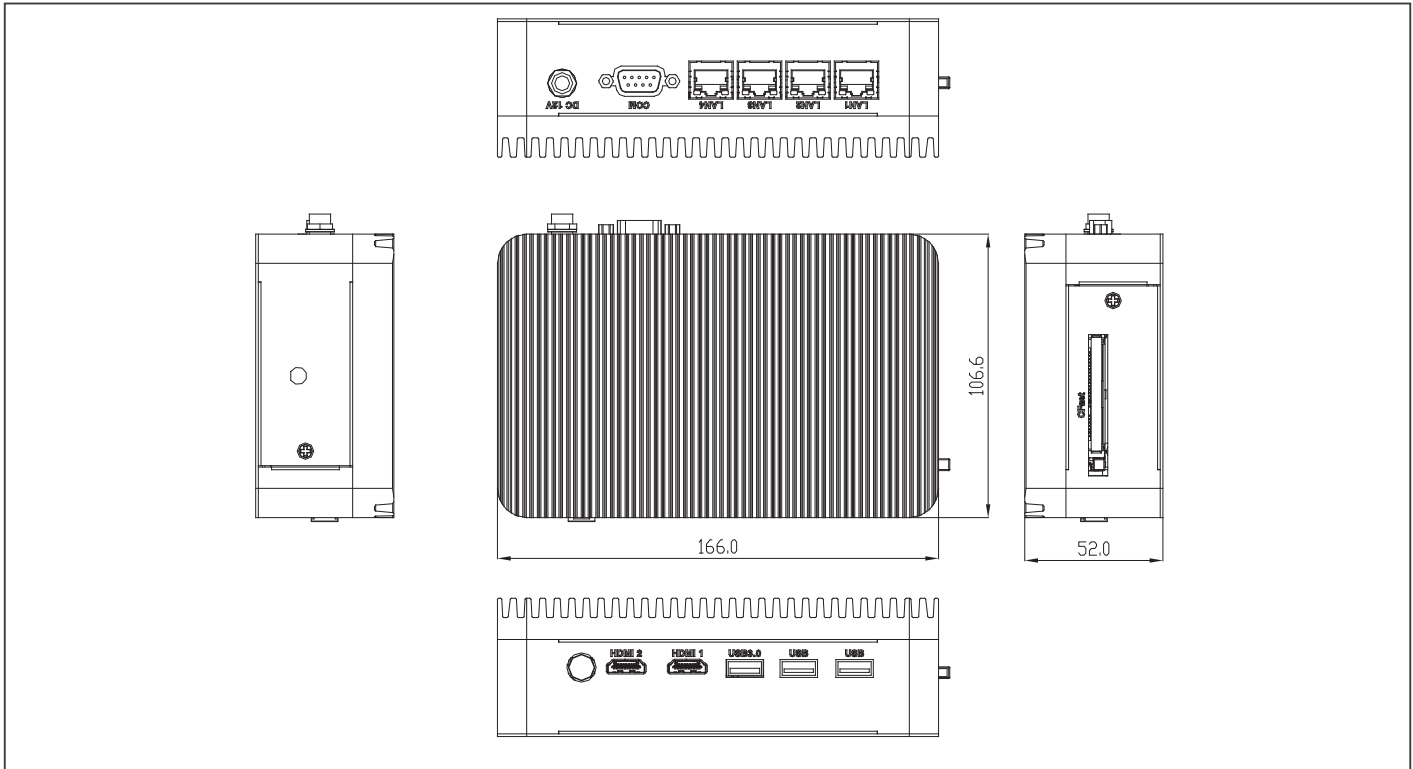
Specifications

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	USB2.0	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

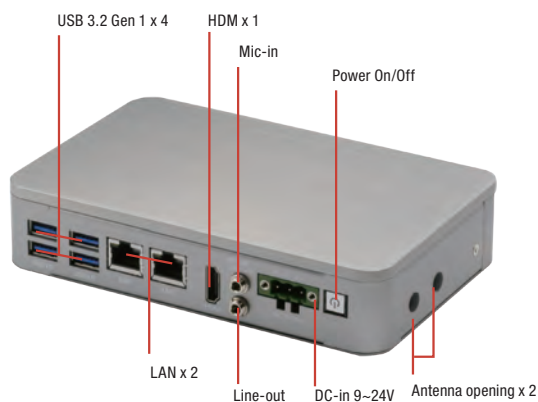
- 1702031802
Power Cord (US type)
- 1702031803
Power Cord (European Type)
- 170203180E
Power Cord (Japanese Type)
- 9741236A00
WiFi Module & Antenna
- 9741EG25G0
4G Module & Antenna (for global)
- 9741640400
VESA Mount Kit
- 9641640401
DIN Rail Mount Kit
- 9741640402
CFast™ Cover Kit



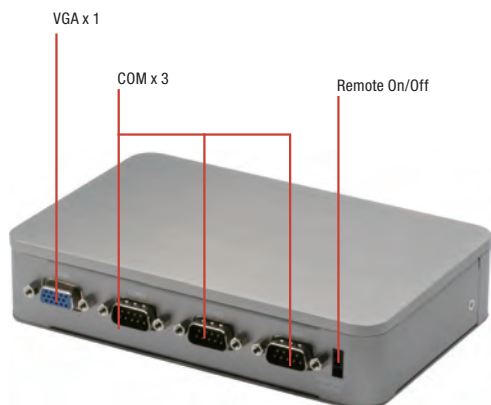
BOXER-6405

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



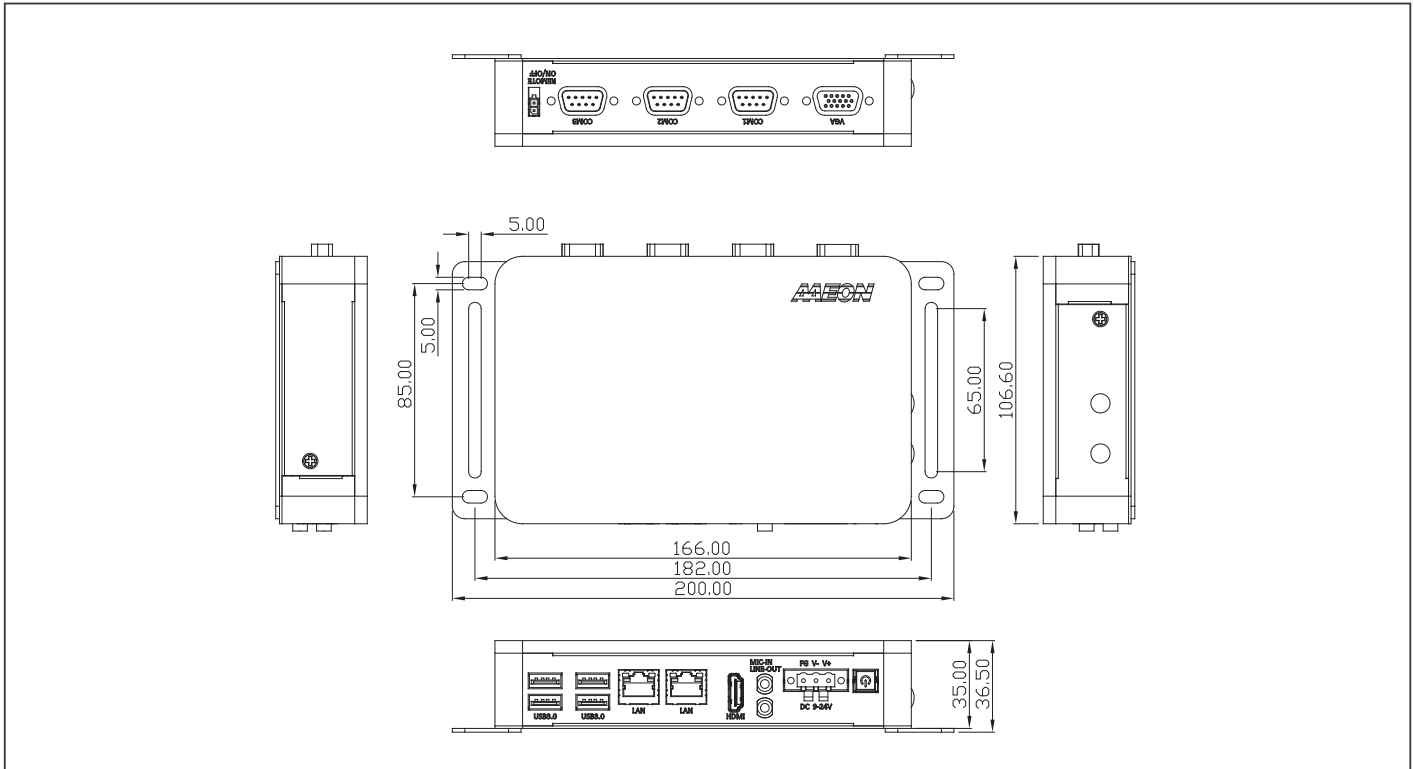
Specifications

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 Minicard x 1 Half-size Minicard 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 Minicard x 1 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-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



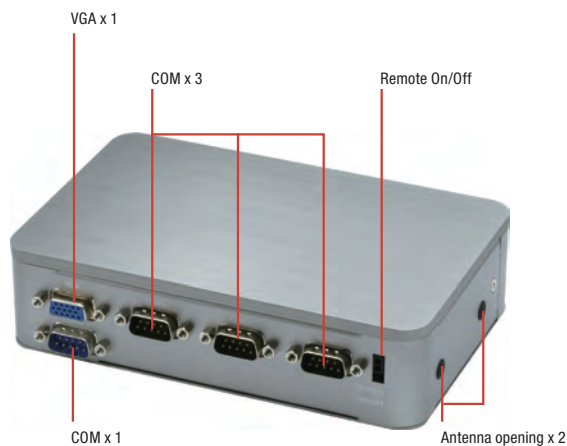
BOXER-6405M

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



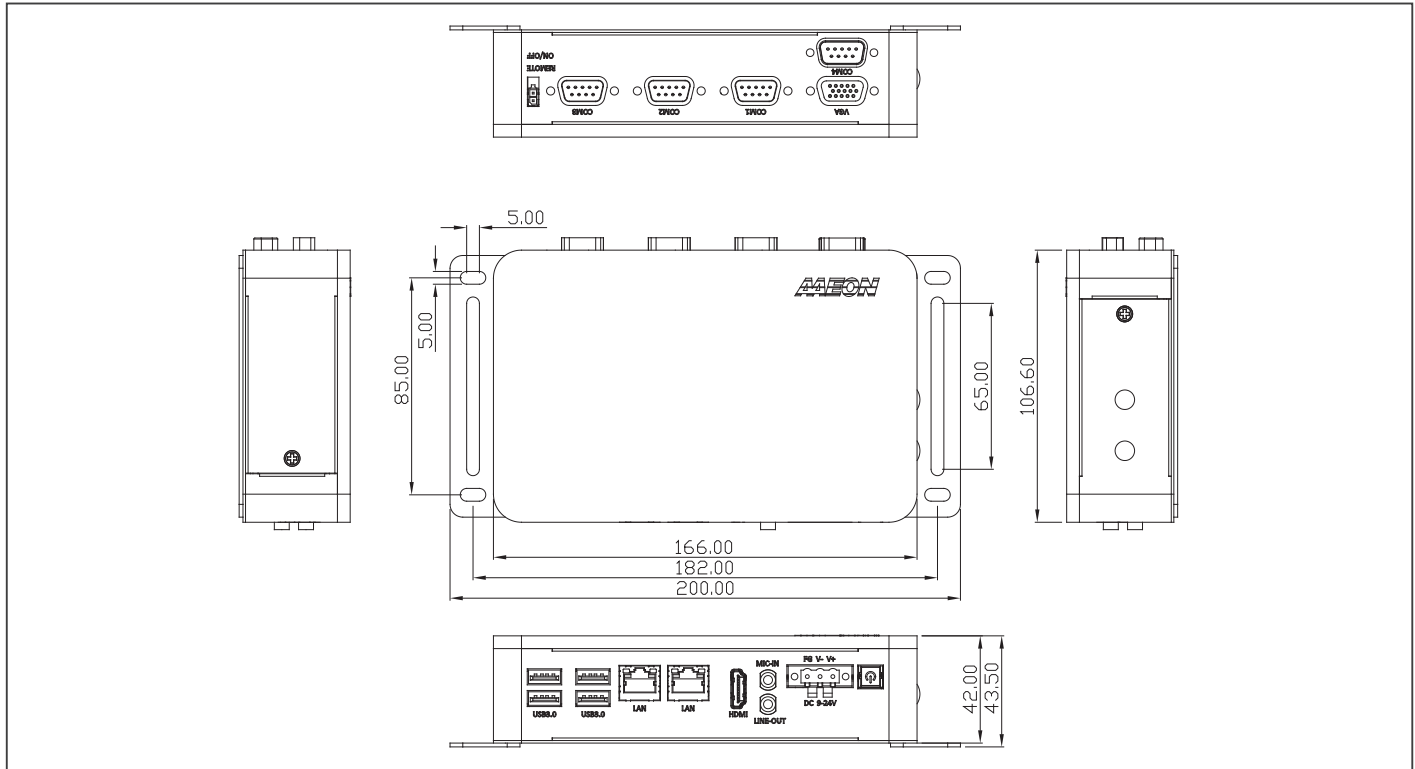
Specifications

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

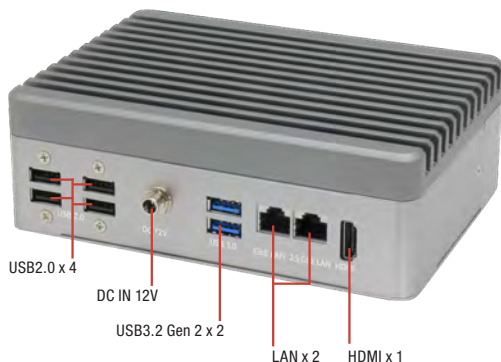
- **125530040F**
Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)
- **9741238H00**
WiFi Module & Antenna
- **9741EG25G0**
4G Module & Antenna (for global)
- **9741640404**
Din Rail Mount Kit



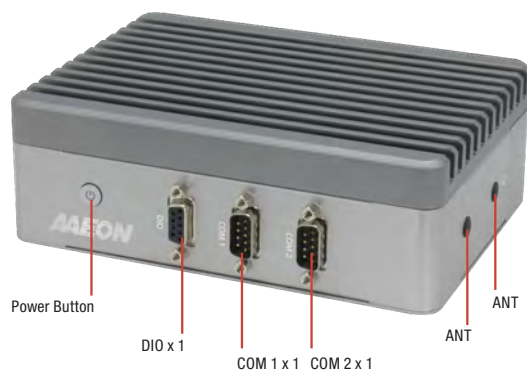
BOXER-6450-TGU

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



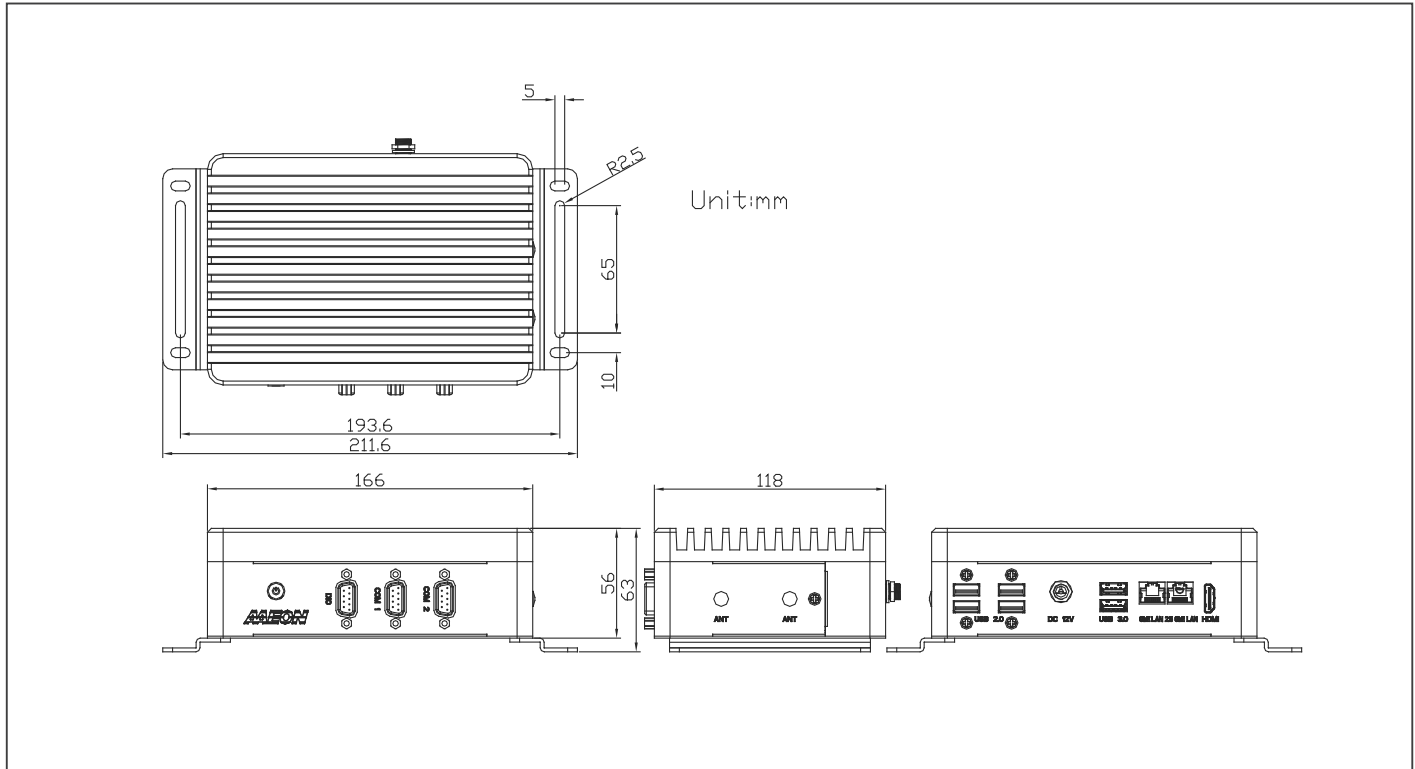
Specifications

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



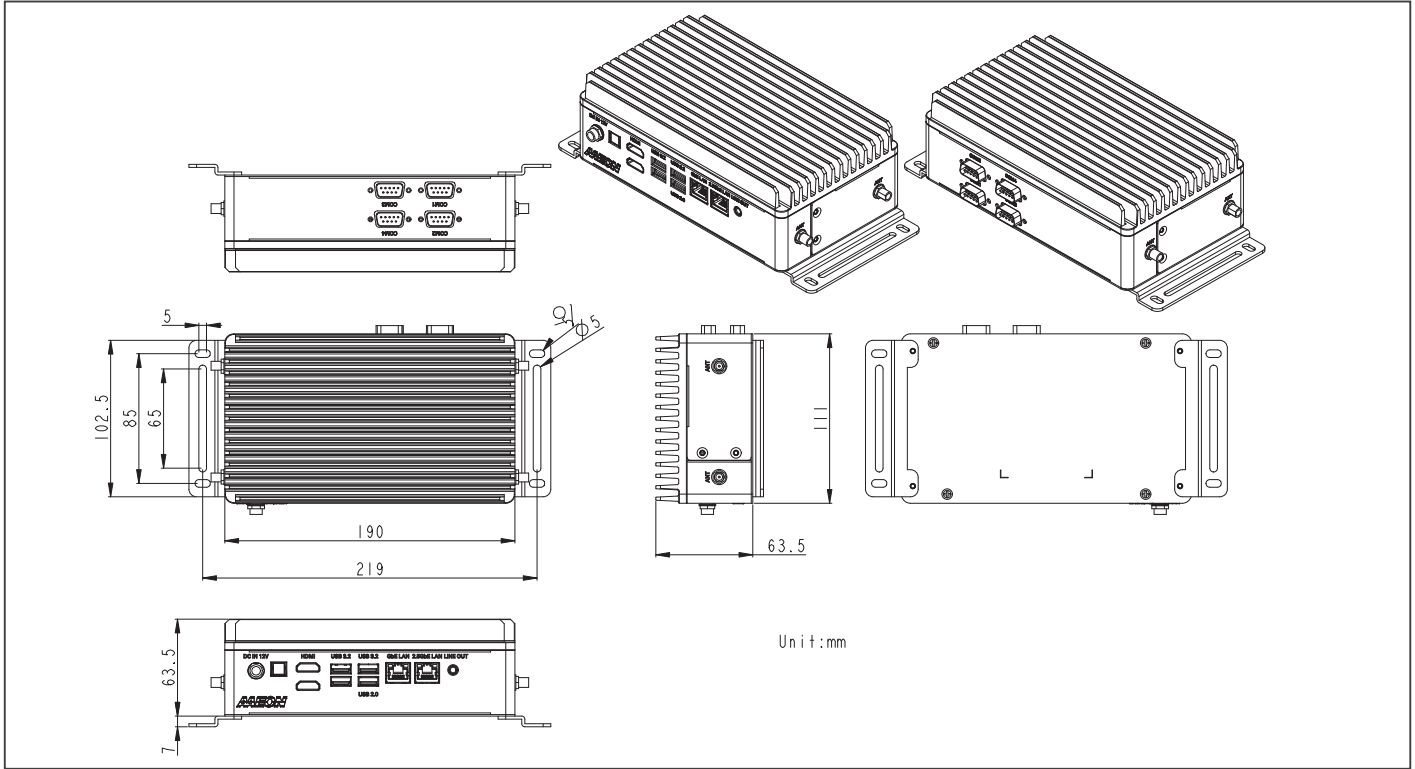
Specifications

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)



BOXER-6406-ADN PRELIMINARY

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

Front View

Launching in Q2

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



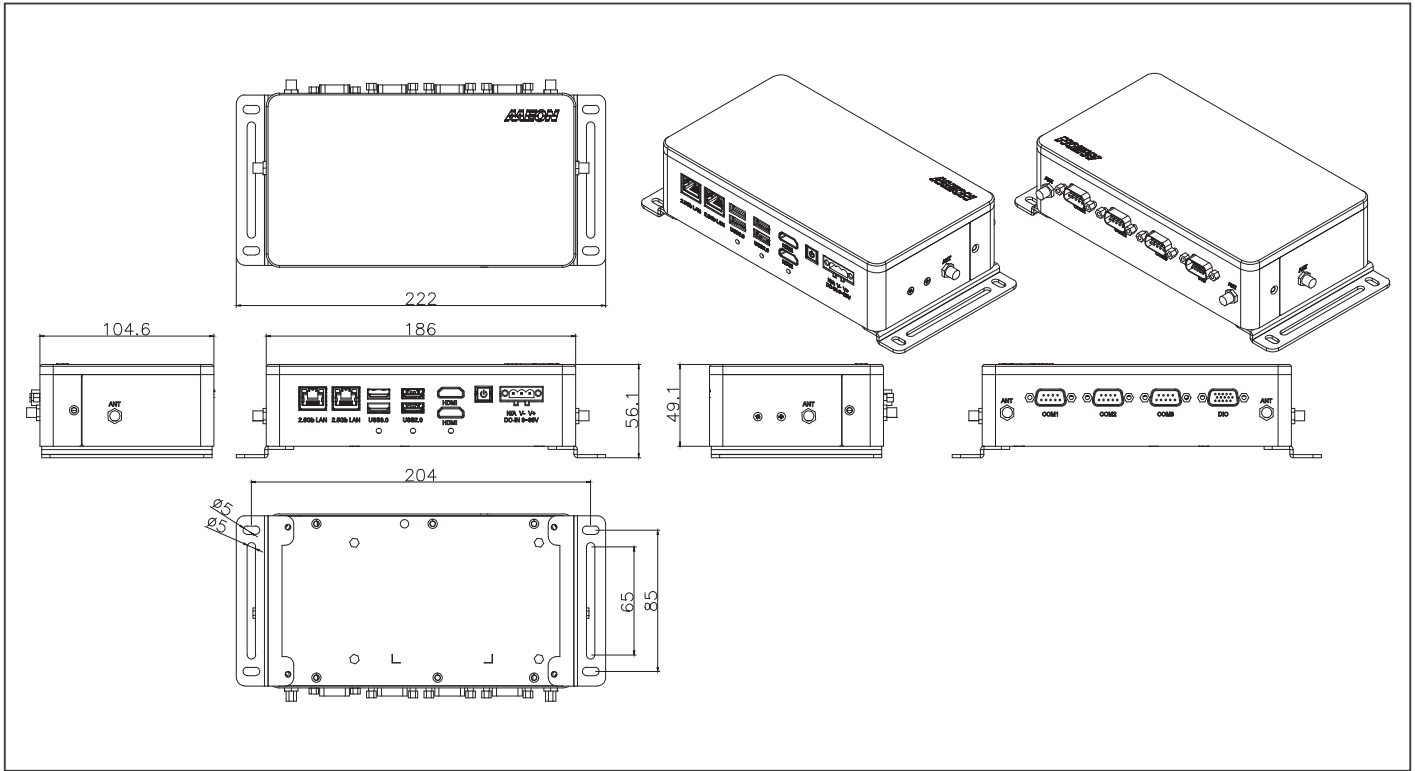
Specifications

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 DB15 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)	TBD
Gross Weight	TBD
Net Weight	TBD
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

- **1255900603**
12V 60W Power Adapter
- **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)



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Din Rail Fanless BOX PC



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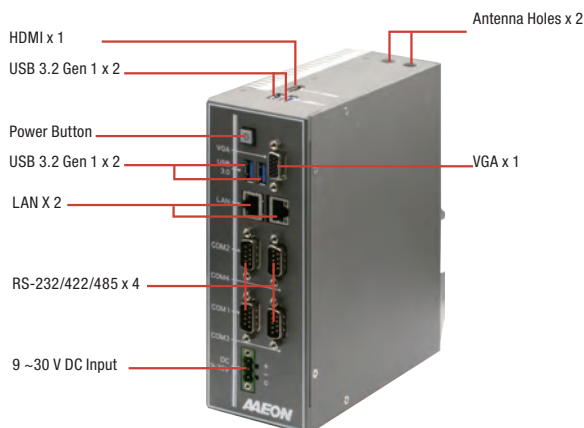


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BOXER-6750

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



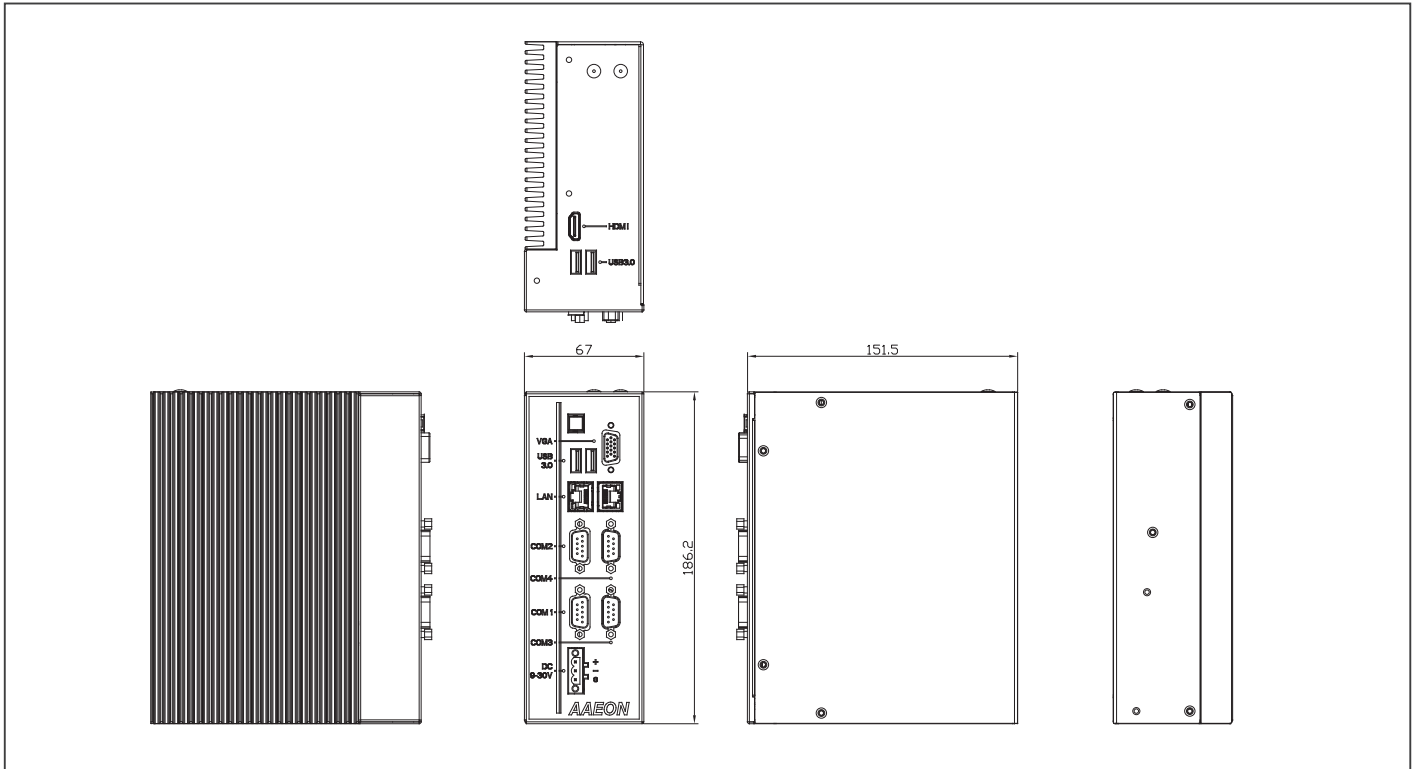
Specifications

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-6710

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



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



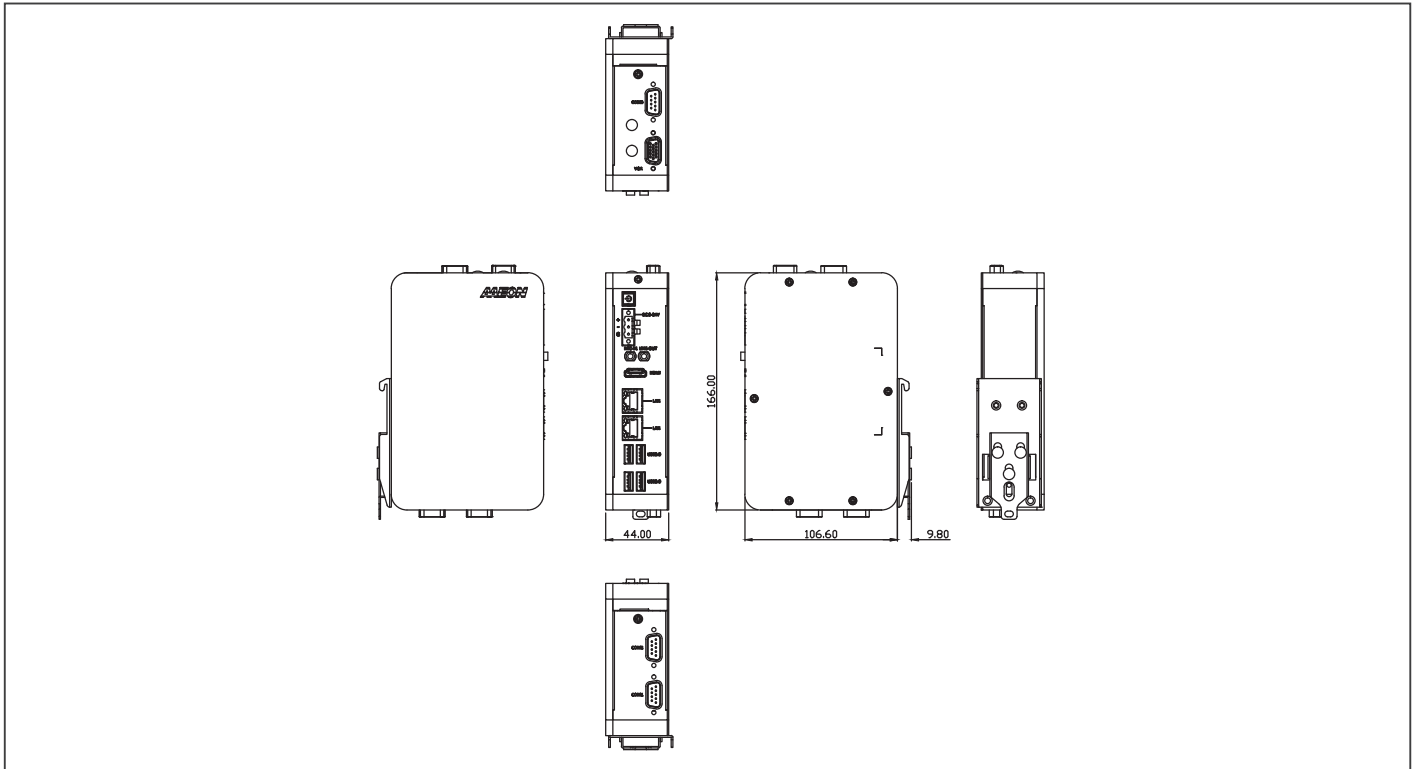
Specifications

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)



BOXER-6751-ADP PRELIMINARY

Din Rail Fanless Embedded BOX PC with 12th Generation Intel® Core™/Celeron® Processors

Front View

Launching in Q2

Rear View

Features

- 12th Generation Intel® Core™/Celeron® Processors (Formerly Alder Lake P U15)
- DDR4 SODIMM, Max. 32GB
- USB 3.2 Gen2 (10Gbps) x 3 + USB 2.0 x 3
- Intel 2.5GbE LAN x 1 (i226-LM) + GbE LAN x 1 (i219-LM)
- RS-232/422/485 x 2
- HDMI x 2 Dual Display Output
- 8-bit Digital Input and Output x 1
- Supports M.2 3052 B Key for 5G module
- TPM 2.0 onboard
- Wide Range DC 9~36V Input With Power Protection
- Wide Temperature -20 °C ~ 60 °C
- Din-Rail Mount Design



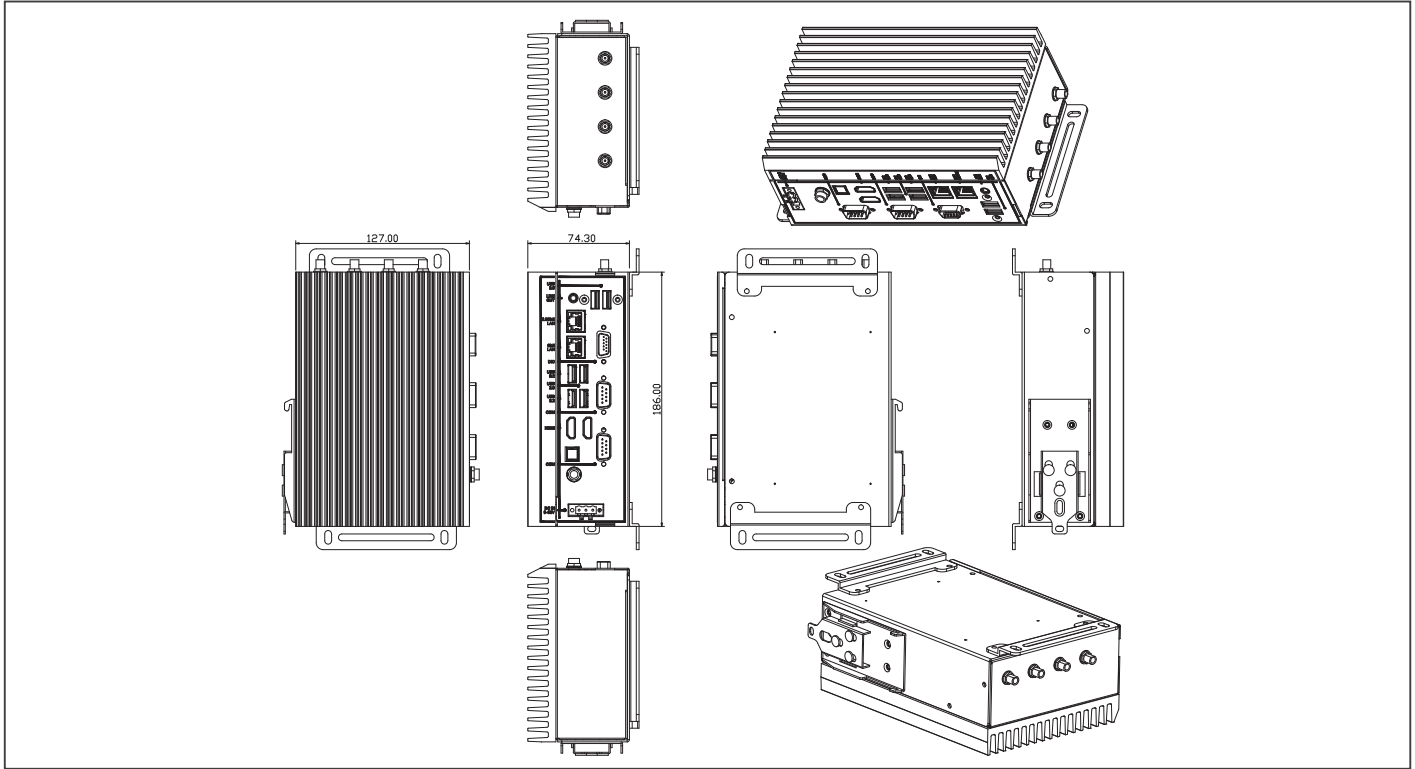
Specifications

System	
CPU	Intel® Core™ i7-1265UE Intel® Core™ i5-1245UE Intel® Core™ i3-1215UE Intel® Celeron® 7305E
Chipset	Intel® SoC
System Memory	DDR4 SODIMM x 1, up to 32GB
Display Interface	HDMI Type A x 2 for HDMI 1.4b
Storage Device	2.5" SATA-III Drive Bay x 1 M.2 2280 M Key x1 (PCIe[x4])
Ethernet	RJ-45 x 1 for 2.5GbE LAN i226-LM RJ-45 x 1 for GbE LAN i219-LM
I/O	USB Type-A x 3 for USB 3.2 Gen2 USB Type-A x 3 for USB 2.0 DB-9 x 2 for RS-232/422/485 DB-15 x 1 for DIO 8 bit HDMI x 2 for HDMI 1.4b Audio x 1 for Line-Out Power Button x 1 3pin Terminal Block for DC in x 1 Antenna opening x 4
Expansion	M.2 2230 E-Key x 1 (For WiFi/Bluetooth) M.2 3052 B-Key w/ SIM x 1 (For LTE/5G) M.2 2280 M-Key x1 (For 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" (74.3 mm x 186 mm x 127 mm)
Gross Weight	TBD
Net Weight	TBD
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® Celeron® 7305E	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 Optional Wallmount	9~36V	-20°C ~ 60°C
BOXER-6751-ADP-A2-1010	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 Optional Wallmount	9~36V	-20°C ~ 60°C
BOXER-6751-ADP-A3-1010	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 Optional Wallmount	9~36V	-20°C ~ 60°C
BOXER-6751-ADP-A4-1010	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 Optional Wallmount	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)



BOXER-6711-ADN PRELIMINARY

Din Rail Mount Embedded BOX PC with Intel Atom® X7211E/Intel® Processor N-Series Processors

Launching in Q3

Features

- Slim Design: Min. width 44mm
- 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 / Display Port x 1
Storage Device	M.2 2280 M Key Slot x1 (PCIex2) 2.5" SATA HDD/SSD x1
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 Type-A x2 for USB3.2 Gen2 USB Type-A x2 for USB 2.0 DB-9 x 3 for RS-232/422/485 DB15 x 1 for 8-bit DIO 3pin Terminal Block for DC in x 1 Power Button with LED x 1
Expansion	M.2 2280 M Key x 1 (PCIex2) M.2 2230 E Key x 1 Full-Size Minicard 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)	TBD
Gross Weight	TBD
Net Weight	TBD
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

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

- TBD

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 x 1 (PCIex2) M.2 2230 E Key x 1 Full-Size Minicard 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 x 1 (PCIex2) M.2 2230 E Key x 1 Full-Size Minicard 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 x 1 (PCIex2) M.2 2230 E Key x 1 Full-Size Minicard 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)



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Expandable Fanless BOX PC Solutions



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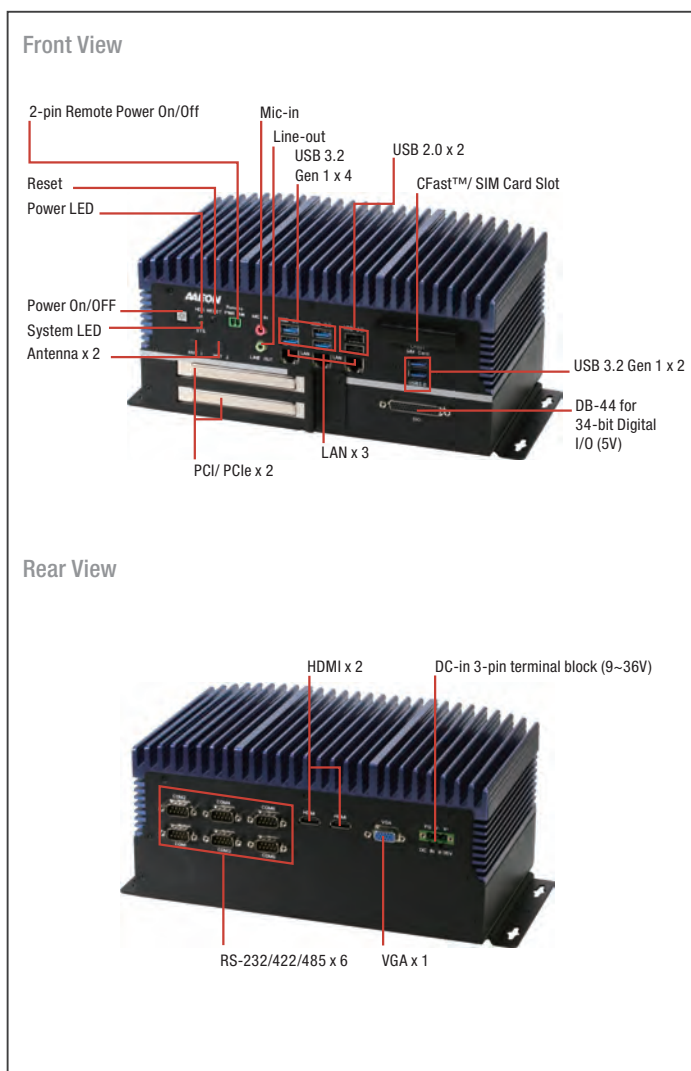
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BOXER-6839

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)
Indicator	Power LED HDD active LED
OS Support	7th Generation Intel® Core™ Processor family: Windows® 10 IOT (64bit) Ubuntu 16.04 above Fedora 25 above CentOS 7.3 above 6th Generation Intel® Core™ Processor family: 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
Power Supply	
Power Requirement	9 - 36V with 3-pin terminal block
Mechanical	
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)
Environmental	
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

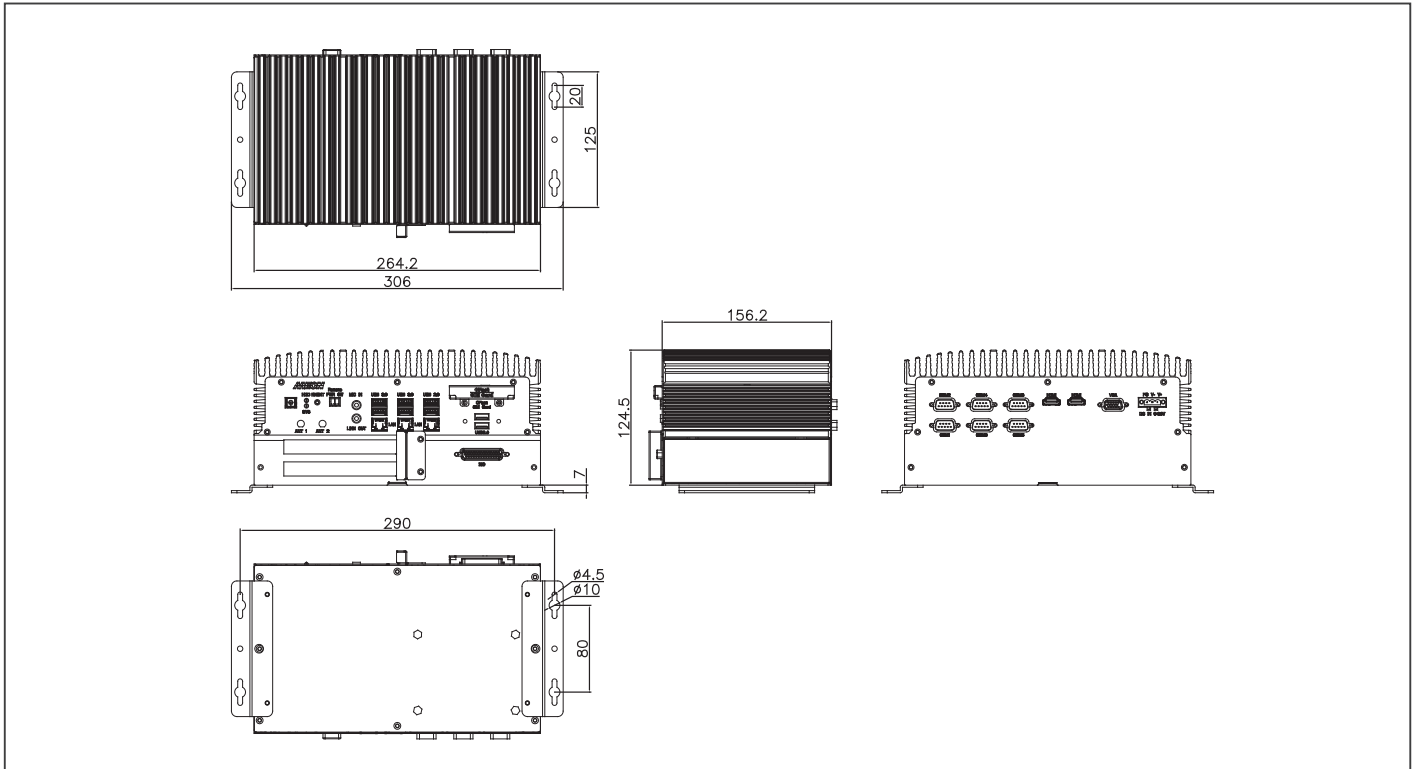
Specifications

System	
CPU	7th Generation Intel® Core™ Processor family: 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 6th Generation Intel® Core™ Processor family: 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

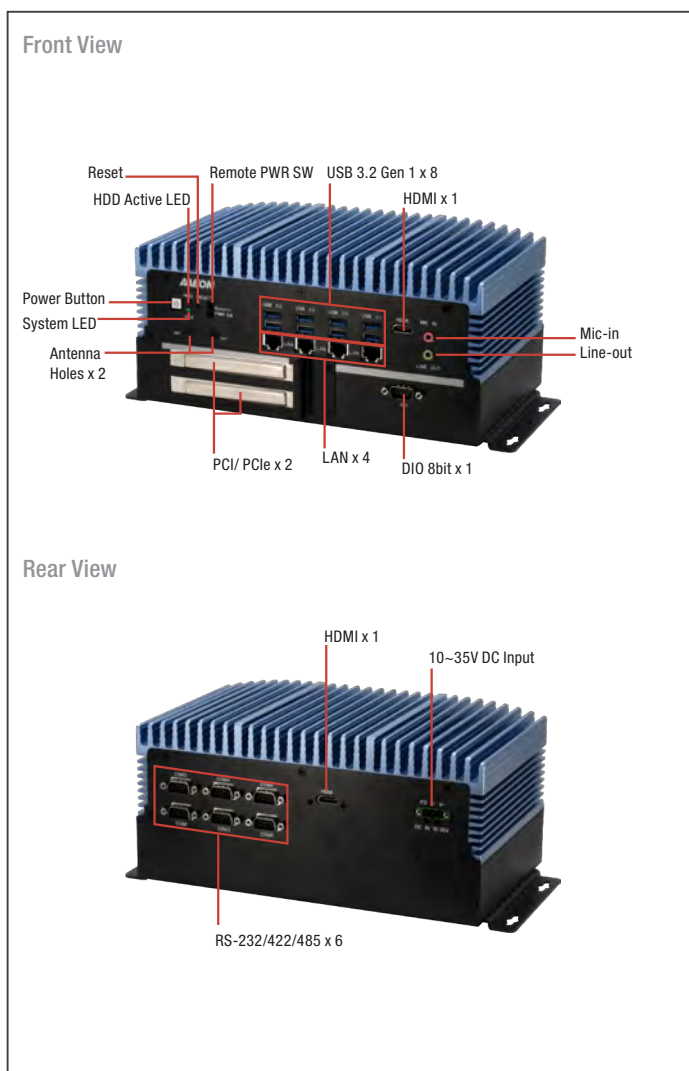
Optional Accessories

- **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
Power Supply	
Power Requirement	3-pin Phoenix DC Input 10~35V
Mechanical	
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)
Environmental	
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

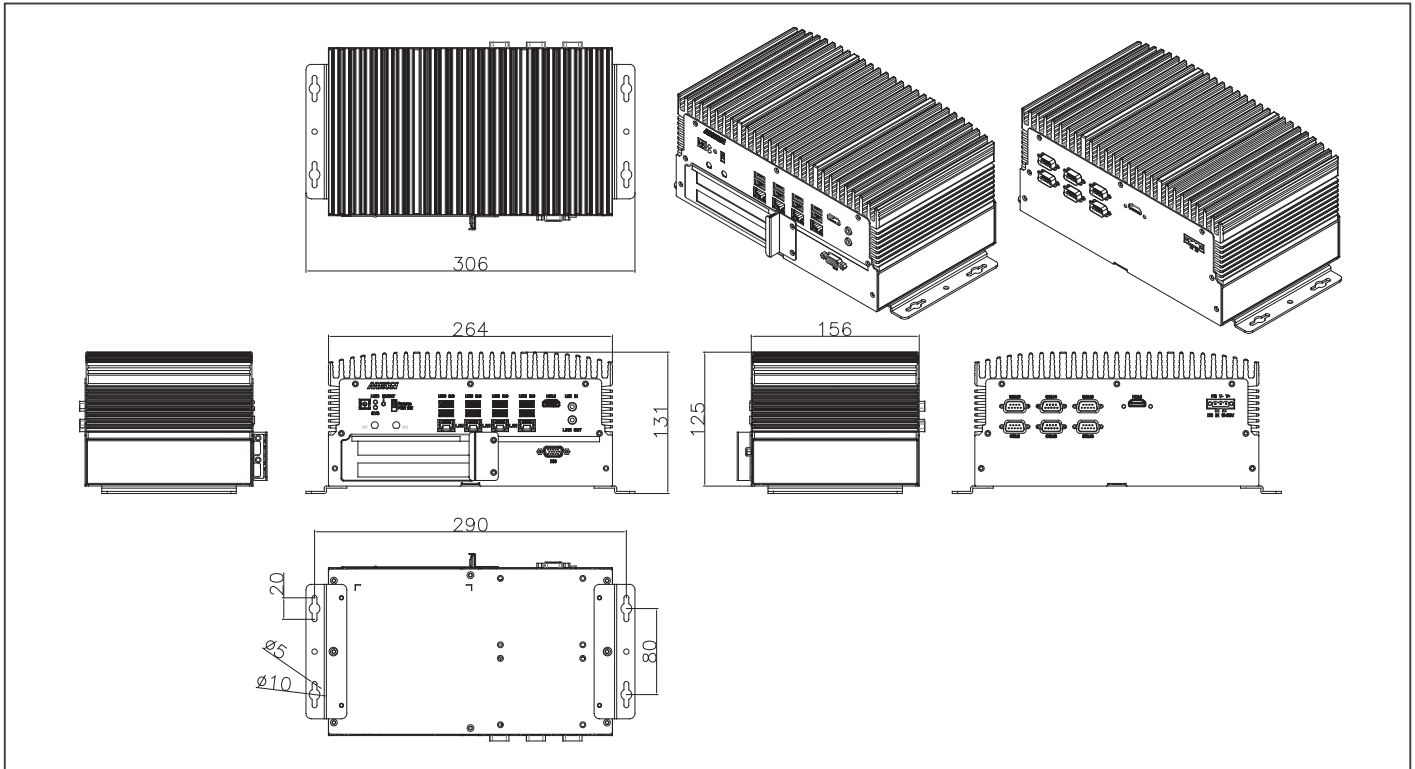
Specifications

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

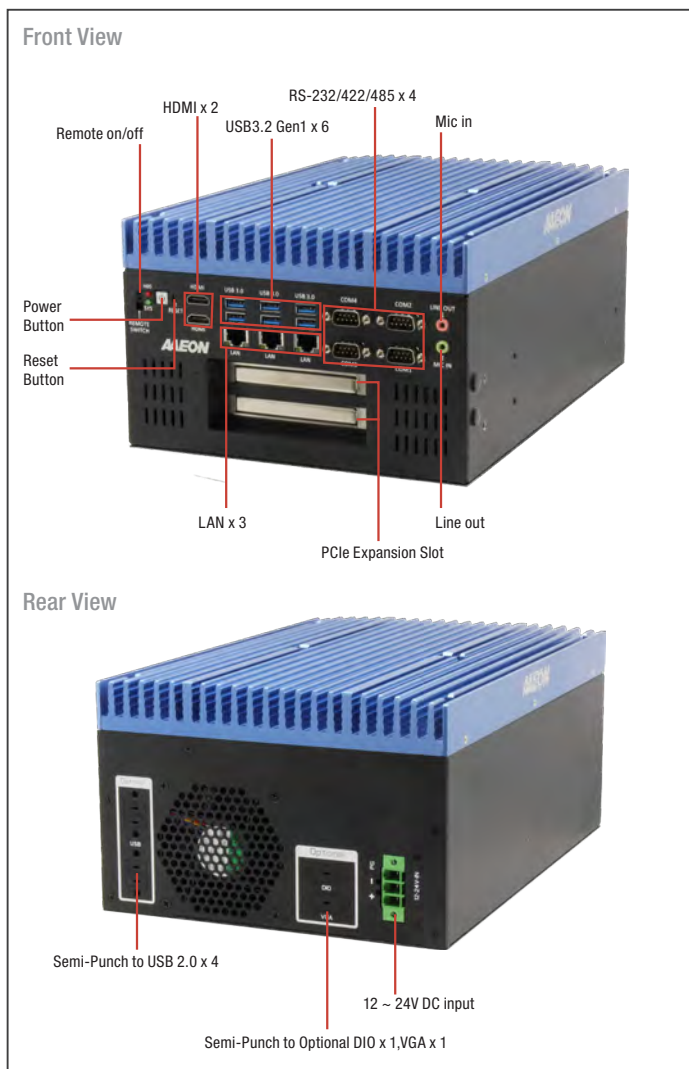
Optional Accessories

- 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
Power Supply	
Power Requirement	DC In 12~24V x1 for 3-pin Terminal block
Mechanical	
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)
Environmental	
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

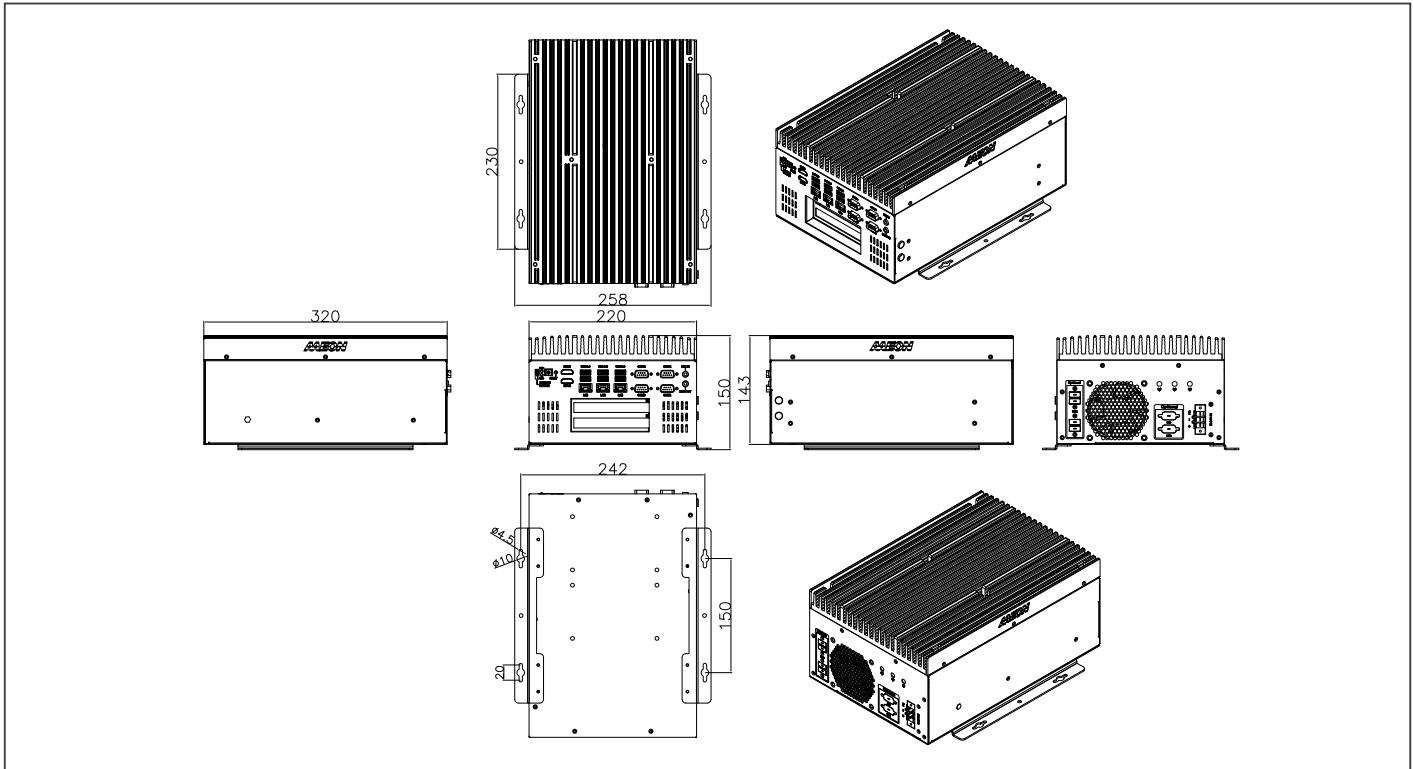
Specifications

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
- **9741E62560**
4G Module & Antenna (for global)

Note: All sp



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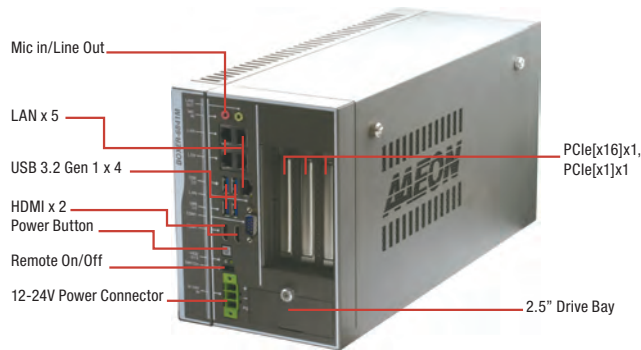


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BOXER-6841M-A1

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



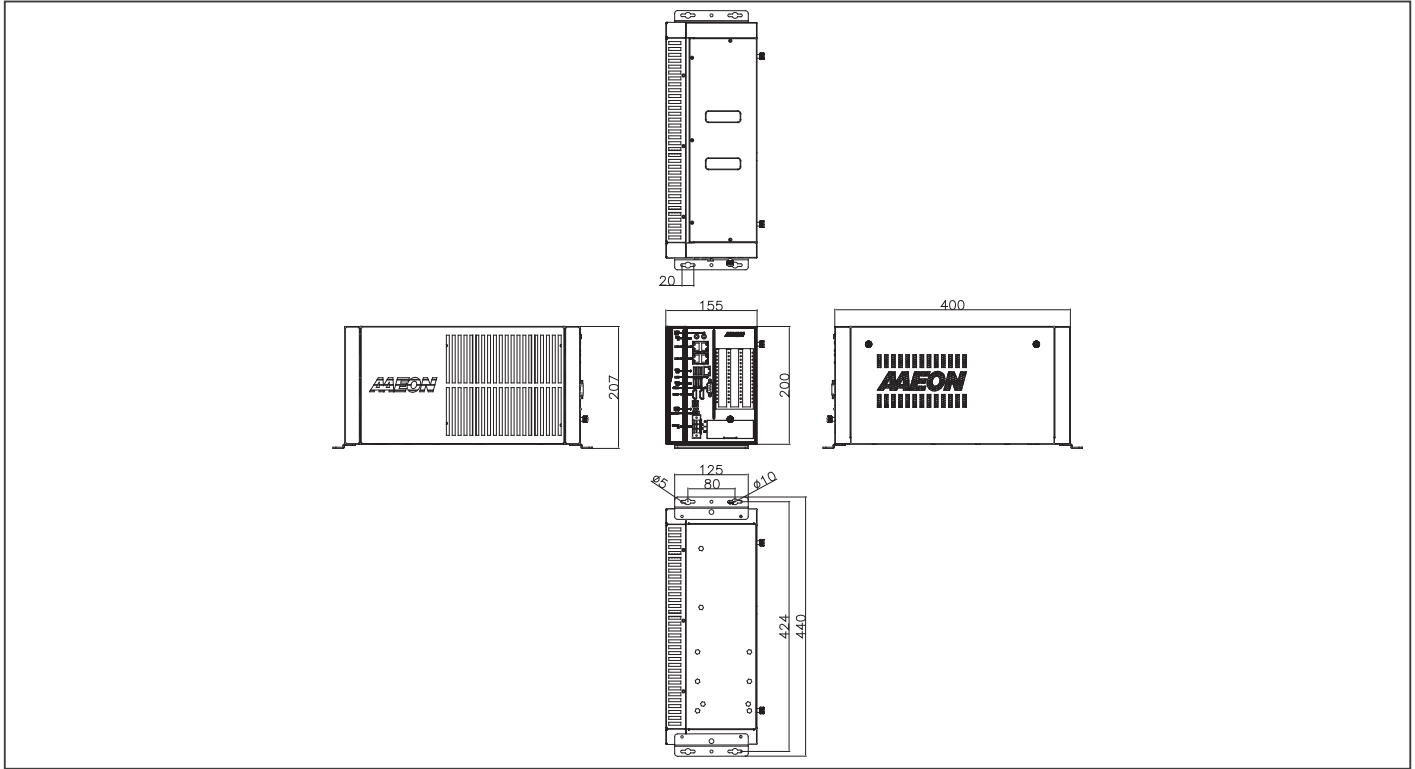
Specifications

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
Power Supply	
Power Requirement	DC-In 12~24V - CPU < 65W, No Graphic Card: 120W Adapter - CPU ≤ 65W, 180W Graphic Card: 330W Adapter
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)
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

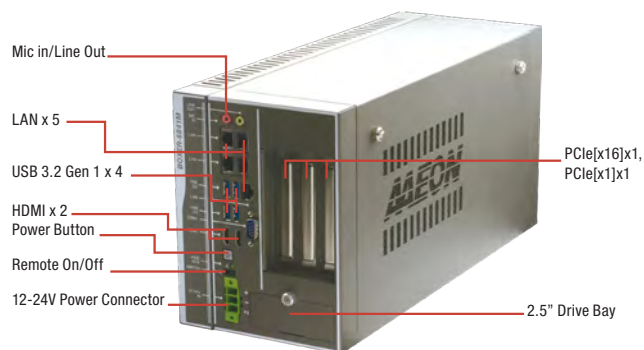
- **1255901209**
120W Power Adapter
- **1255903300**
330W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)
- **9741238H00**
WiFi Module & Antenna
- **9741EG25G0**
4G Module & Antenna (for global)
- **9741EC25A0**
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

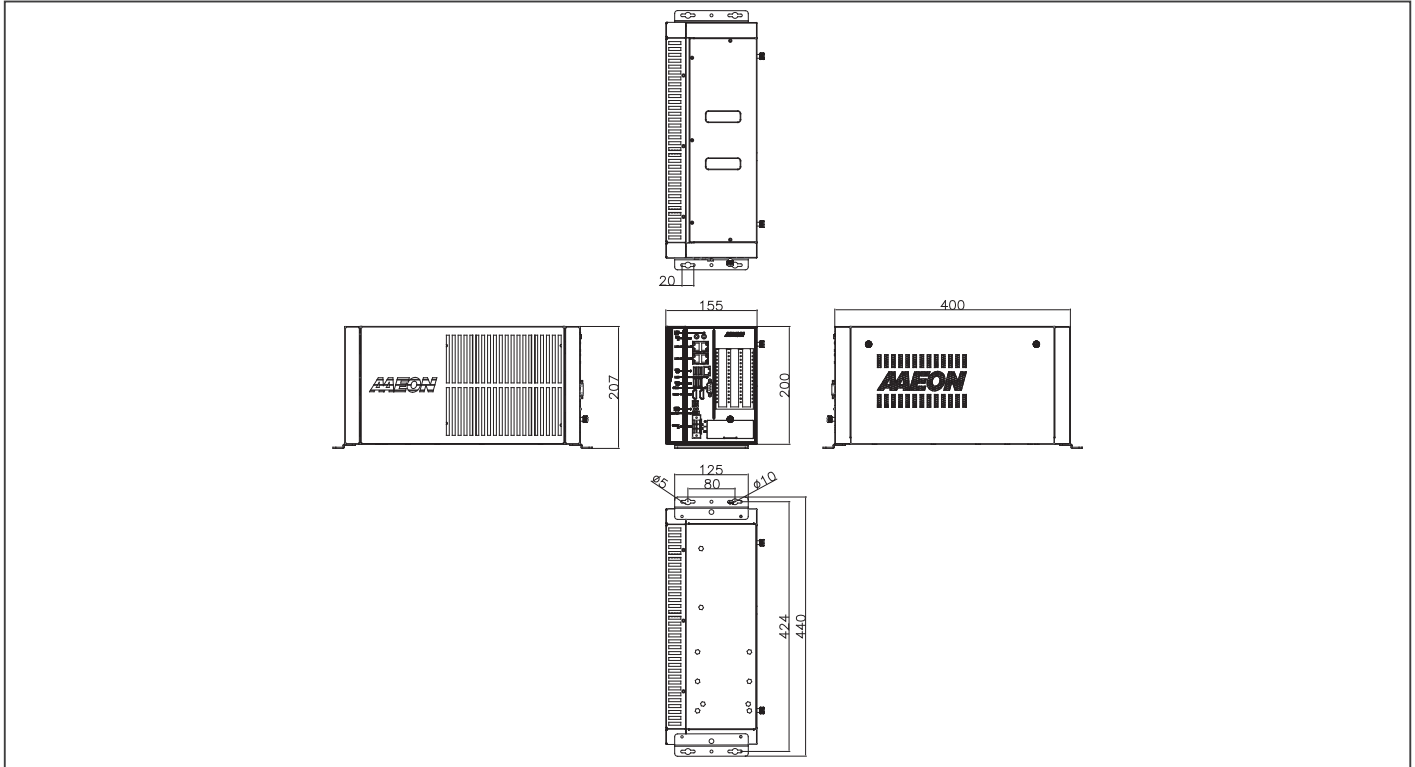


Specifications

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
Power Supply	
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
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)
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 Minitcard 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

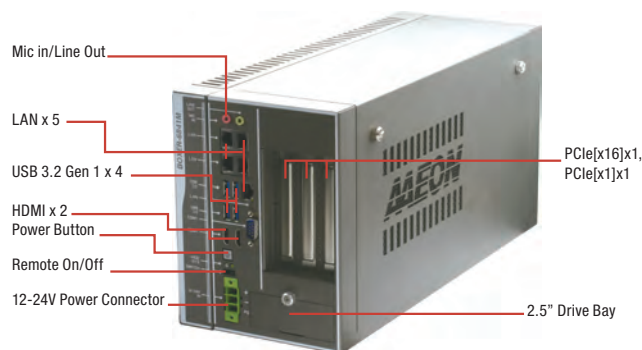
- **1255901209**
120W Power Adapter
- **1255902400**
240W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)
- **9741238H00**
WiFi Module & Antenna
- **9741EG25G0**
4G Module & Antenna (for global)
- **9741EC25A0**
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



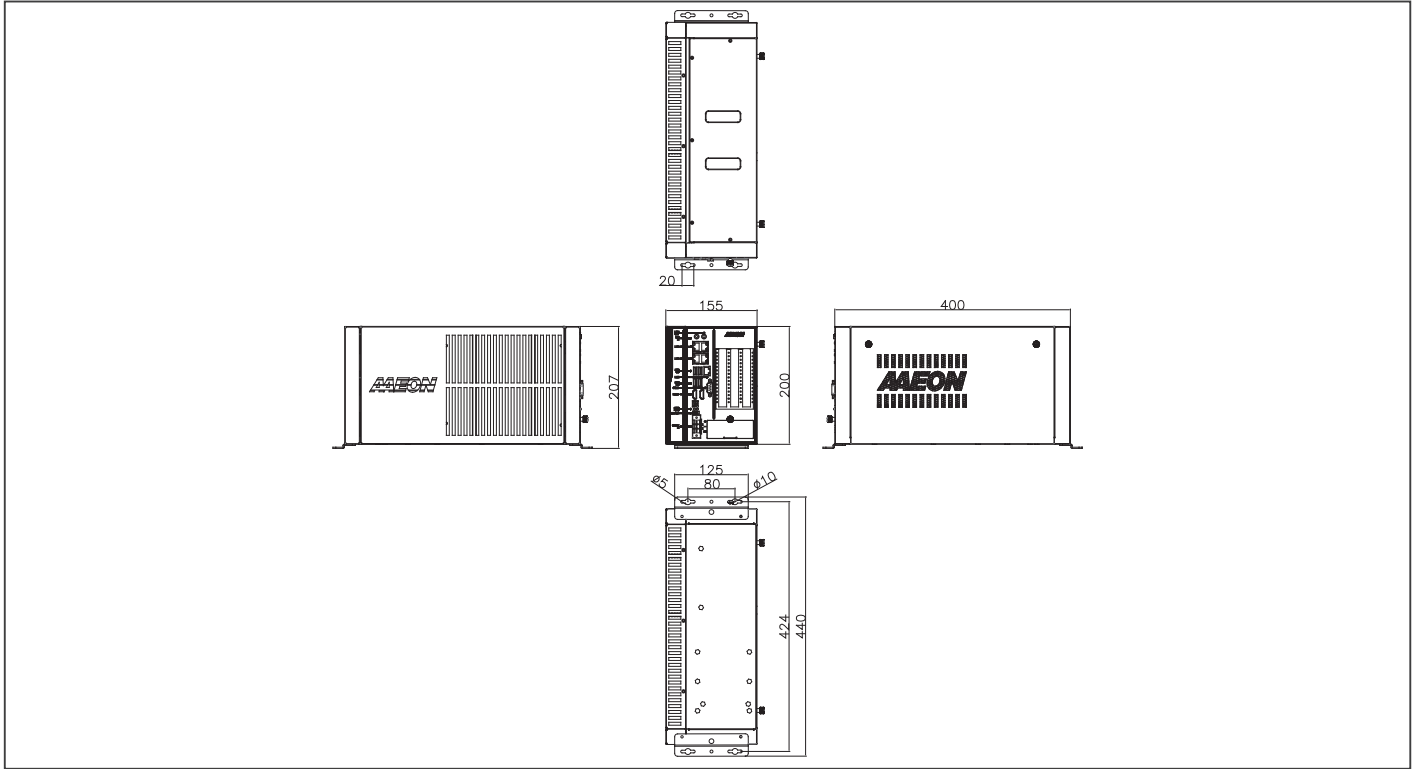
Specifications

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
Power Supply	
Power Requirement	DC-In 12~24V - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 180W Graphic Card: 330W Adapter
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, 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

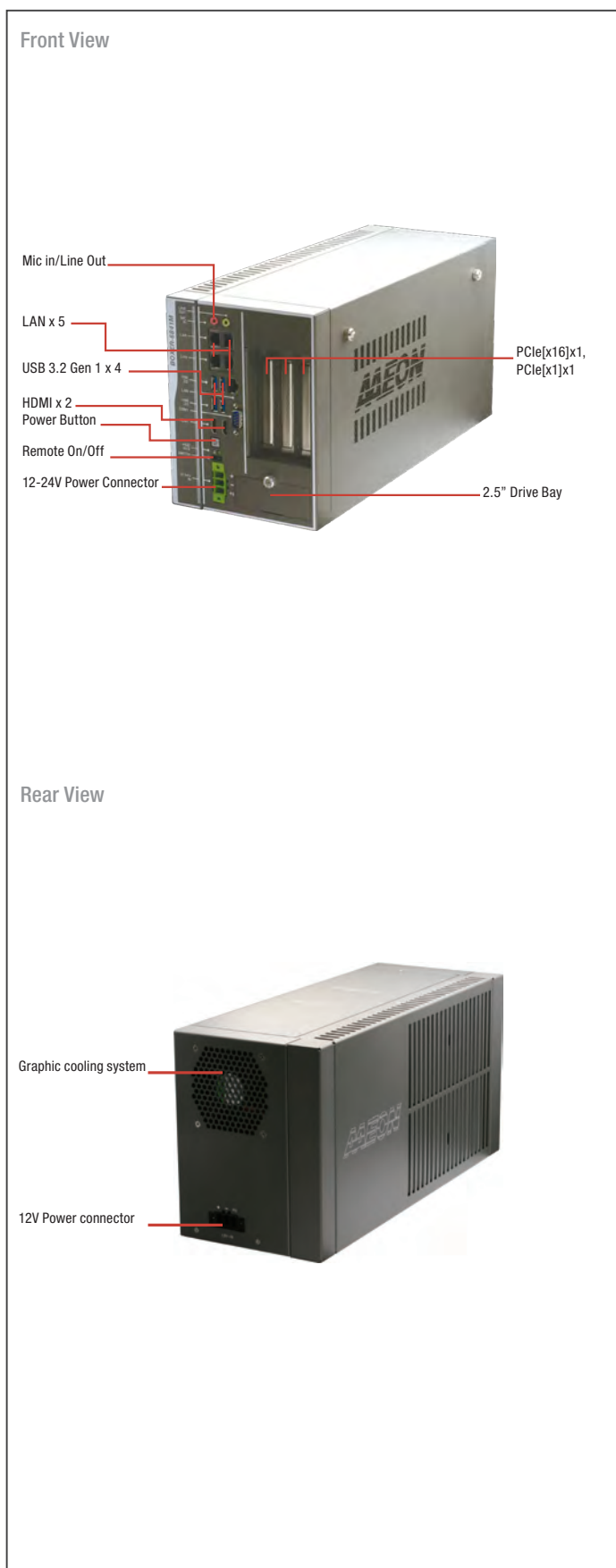
- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A3

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)



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



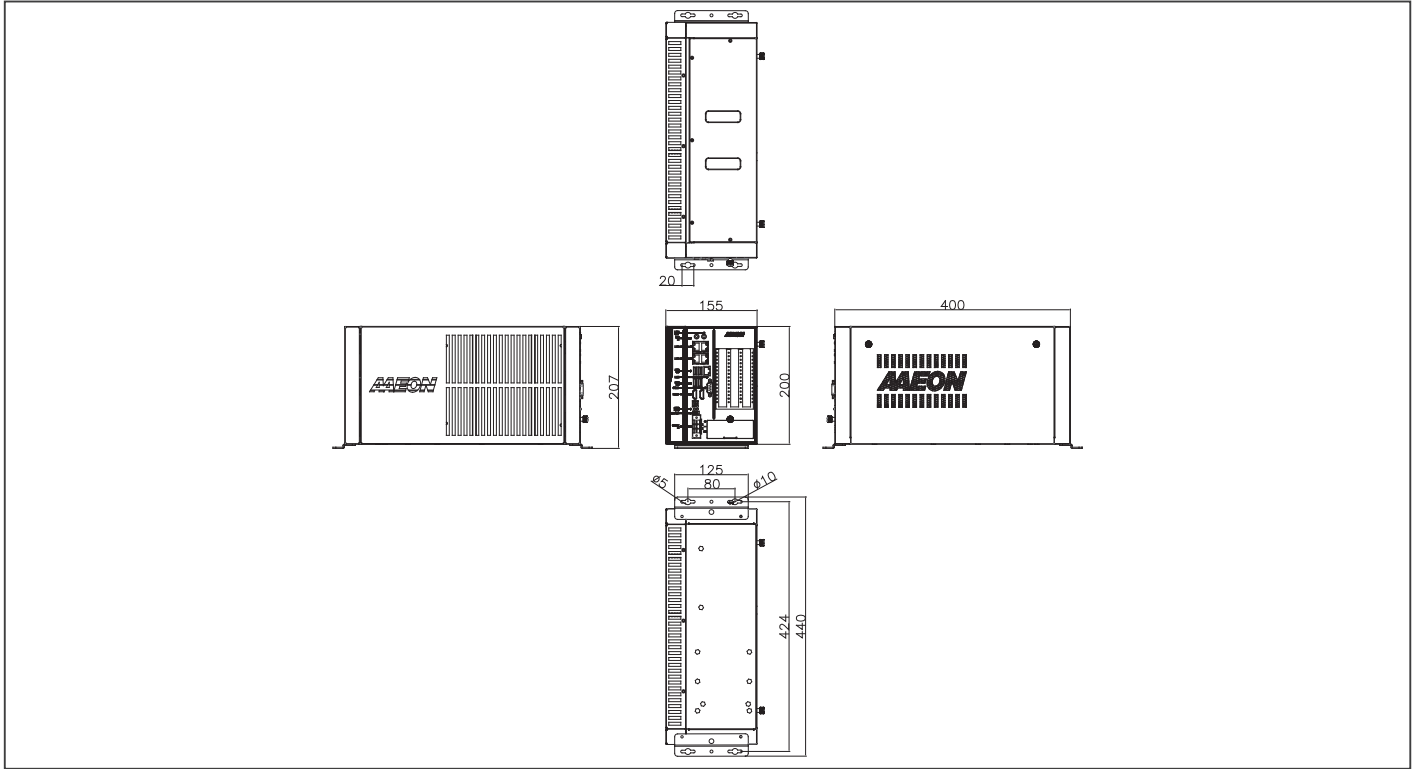
Specifications

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

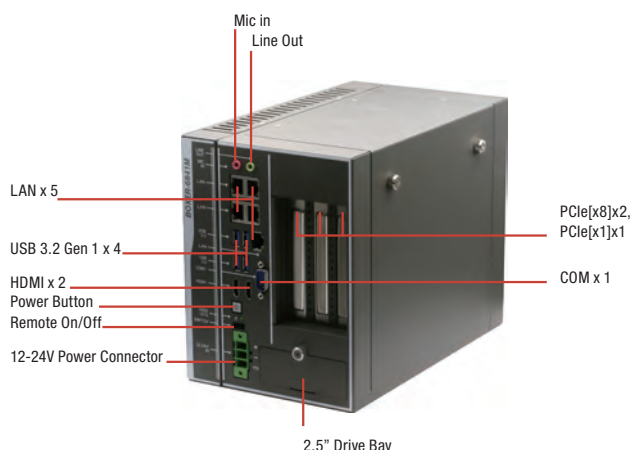
- **1255901209**
120W Power Adapter
- **1255902400**
240W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)
- **9741238H00**
WiFi Module & Antenna
- **9741EG25G0**
4G Module & Antenna (for global)
- **9741EC25A0**
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

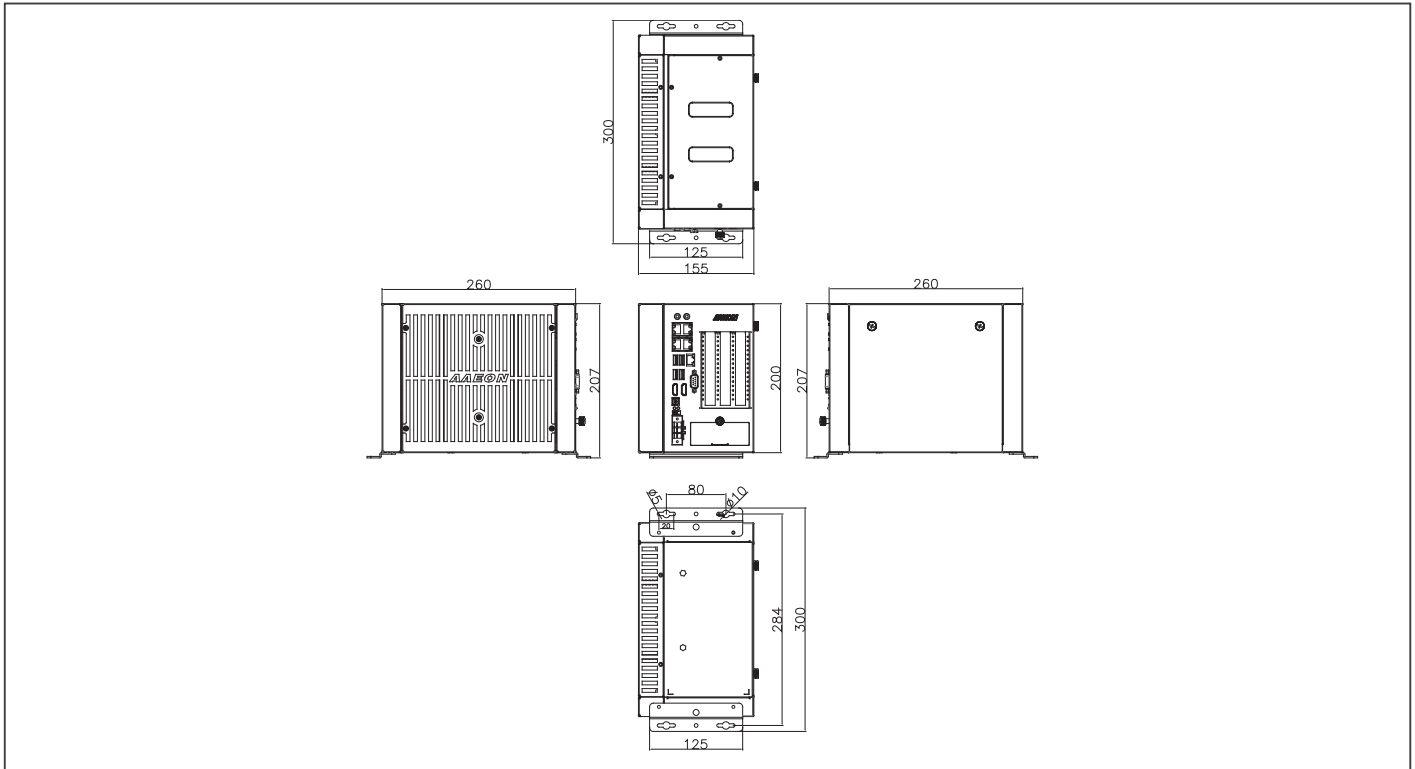


Specifications

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
Power Supply	
Power Requirement	DC-In 12-24V - CPU = 35W: 120W Adapter - 35W < CPU ≤ 73W: 240W Adapter
Mechanical	
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)
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-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

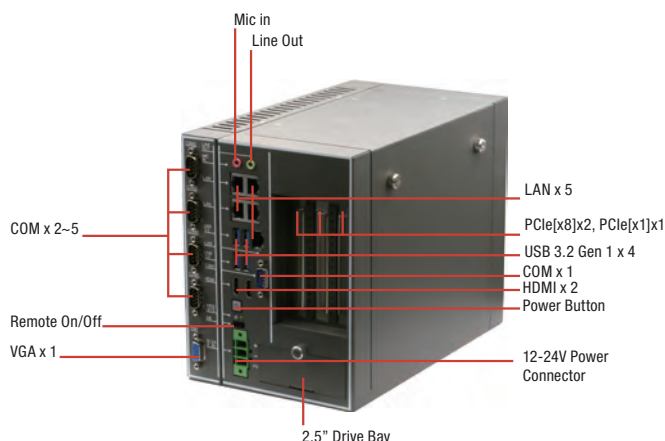
- **1255901209**
120W Power Adapter
- **1255902400**
240W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)
- **9741238H00**
WiFi Module & Antenna
- **9741EG25G0**
4G Module & Antenna (for global)
- **9741EC25A0**
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



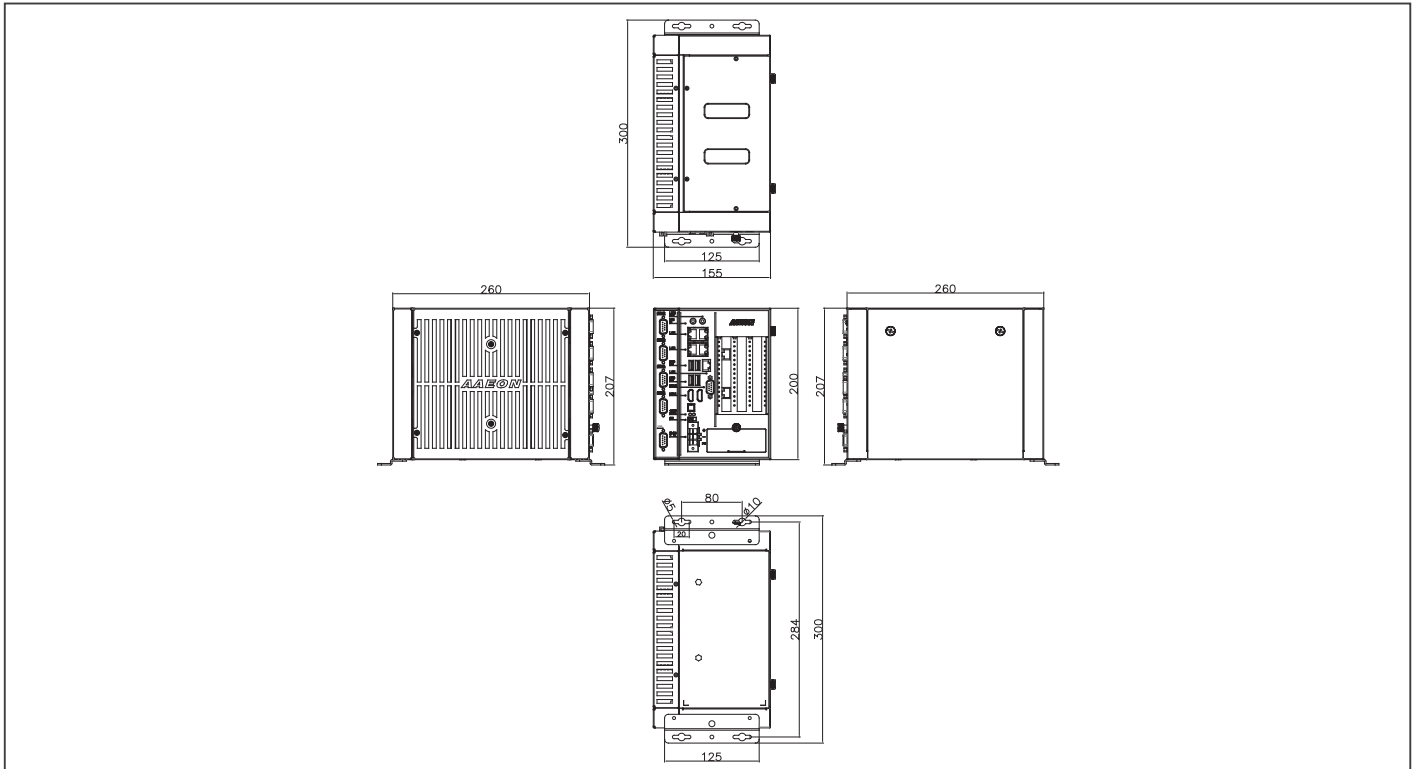
Specifications

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
Power Supply	
Power Requirement	DC-In 12~24V - CPU = 35W: 120W Adapter - 35W < CPU ≤ 73W: 240W Adapter
Mechanical	
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)
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, 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-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

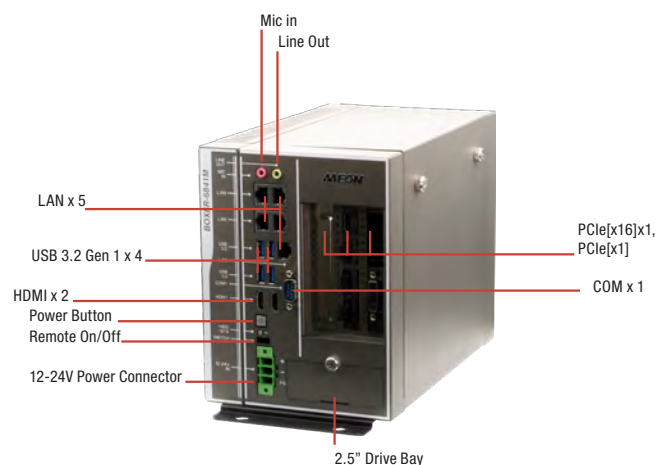
Optional Accessories

- **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



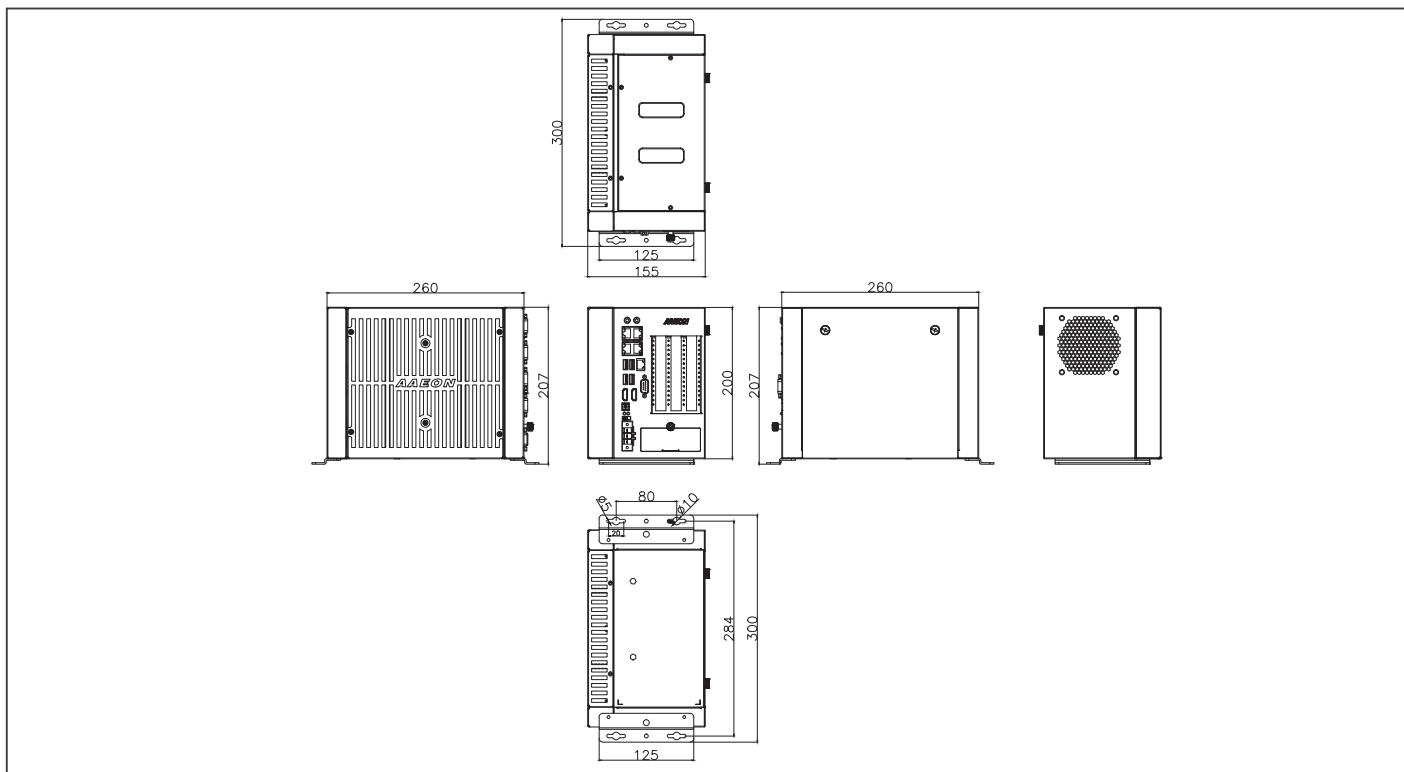
Specifications

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
Power Supply	
Power Requirement	DC-In 12~24V - CPU < 73W, No Graphic Card: 120W Adapter - CPU ≤ 73W, 180W Graphic Card: 330W Adapter
Mechanical	
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)
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, 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-A7-1010	—	C236	5	4	1	—	—	MIC-in, Line-out	2.5" Drive Bay x2	HDMI x2	Full-size Minitcard 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

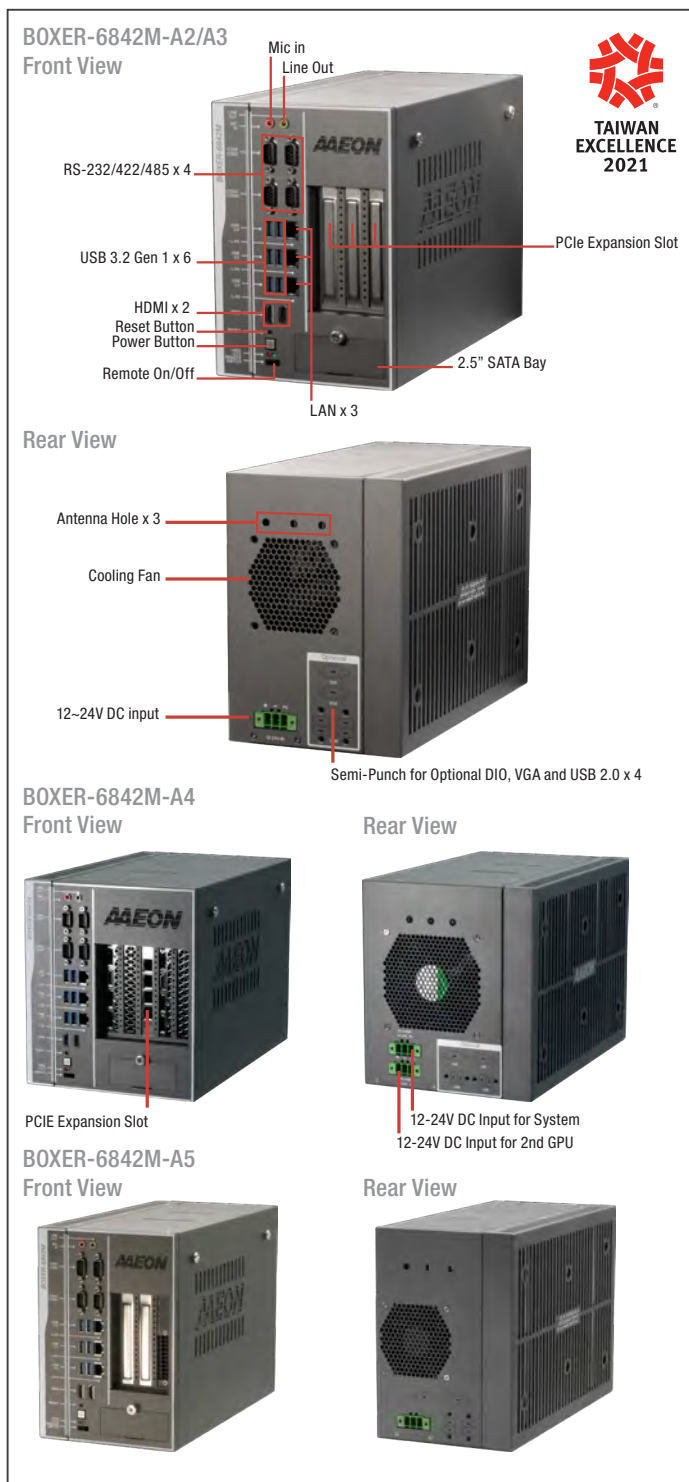
- Wallmount Bracket x 2
- 3 Pin DC-in Power Connector x 1
- Screw Package x 1
- Thermal Pad Package x 1
- BOXER-6841M-A7

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/ 2PCIEx8 (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
Power Supply	
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
Mechanical	
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)
Environmental	
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, 1Gmm, 5~500Hz
Anti - Shock	—
Certification	CE / FCC class A

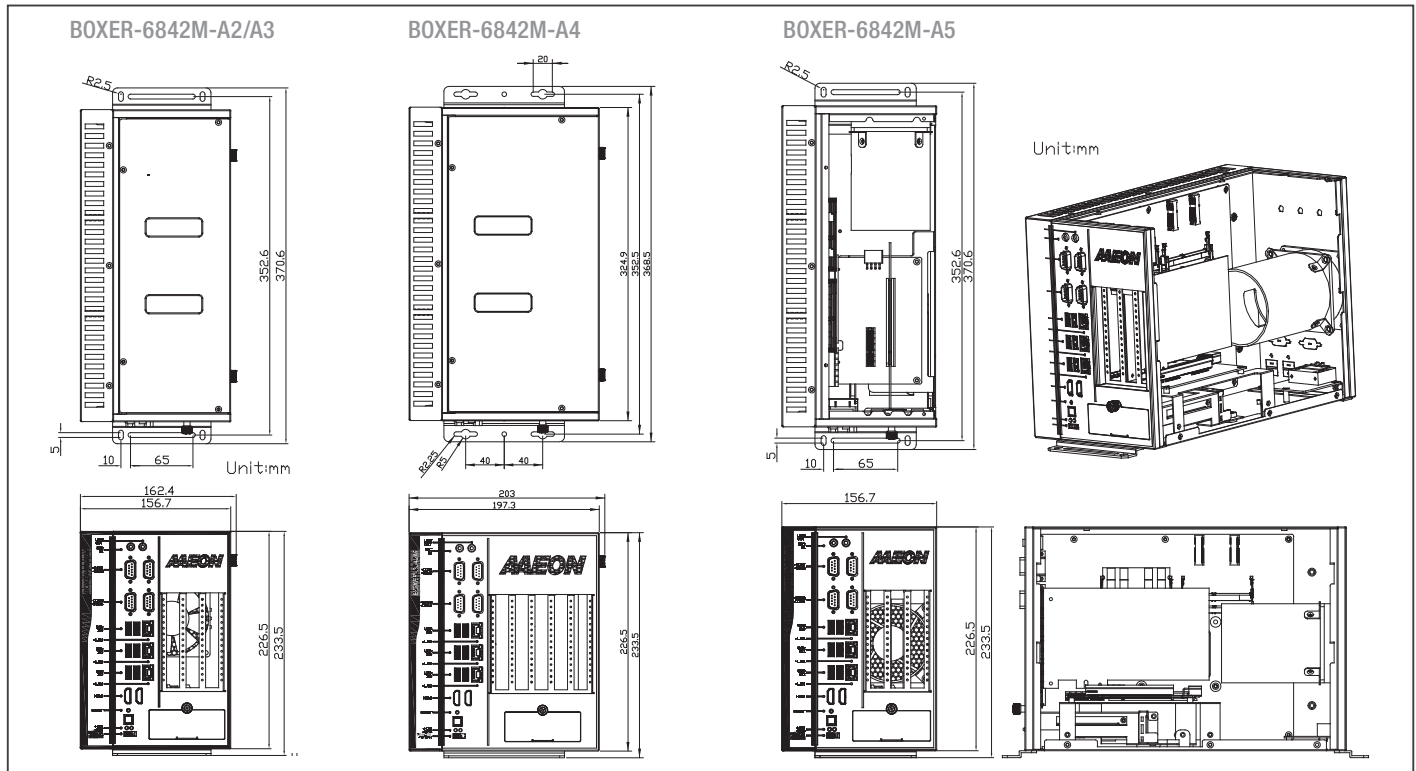
Specifications

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
Display Interface	HDMI x 2



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
- 9741EG2560
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 PRELIMINARY

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

Front View



Rear View



Features

- 12th Generation Intel® Core™/Celeron® Processor G Series (formerly Alder Lake)
- DDR5 U-DIMM x 4
- HDMI x 2 + DP x 2
- PCIe [x16] + PCIe [x4] or Dual PCIe [x8] (in [x16] slot) + PCIe [x4]
- Available as Fanless System or Fan System with PWM Function
- Supports Dual Graphics Cards with Dual Power Inputs
- Support NVIDIA L4



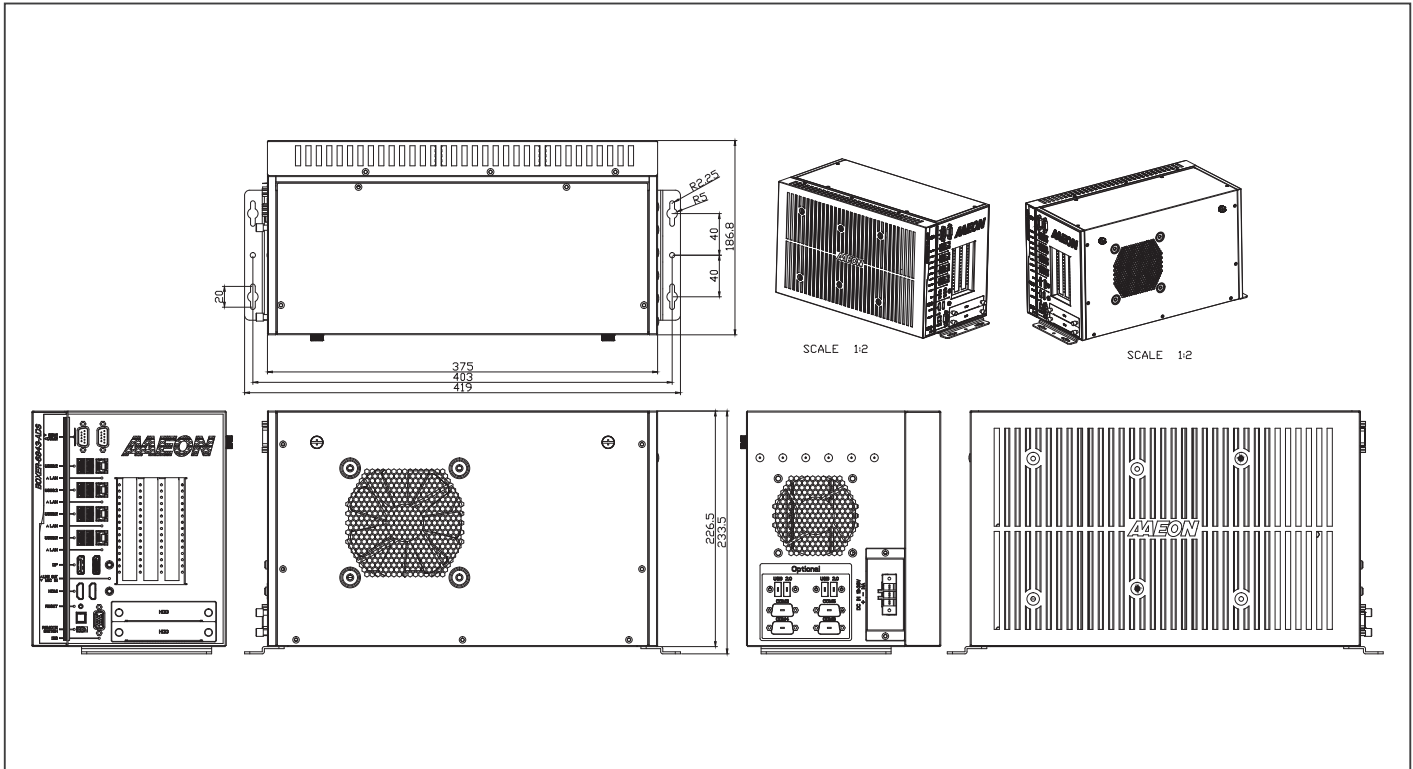
Specifications

System	
CPU	12th Generation Intel® Core™/Celeron® Processor G Series, LGA-1700 Socket Type (formerly Alder Lake) TDP Max. 65W (LGA 6+0, LGA 8+8) Intel® Core™ i9-12900TE/i9-12900E Intel® Core™ i7-12700TE/i7-12700E Intel® Core™ i5-12500TE/i5-12500E Intel® Core™ i3-12100TE/i3-12100E Intel® Celeron® Processor G6900TE/G6900E
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)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-4°F ~ 131°F (-20°C ~ 55°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	PCH	LAN	FAN	Graphic Card	USB	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation Temp
BOXER-6843-ADS-A1-1010	—	Q670E	4	Fan	—	USB 3.2 Gen 2 x 8	6	8-bit	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 M.2 2280 NVMe SSD slot x 2	HDMI x 2 DP x 2	Full-Size Mini Card x 1 M.2 2230 E-Key x 1 M.2 3052 B-Key w/SIM x 1 PCIe [x4] x 1, PCIe [x16] x 1	Wallmount	DC In 19~36V with 3-pin terminal block	-20°C ~ 55°C with 0.5m/s airflow
BOXER-6843-ADS-A2-1010	—	Q670E	4	Fan	—	USB 3.2 Gen 2 x 8	6	8-bit	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 M.2 2280 NVMe SSD slot x 2	HDMI x 2 DP x 2	Full-Size Mini Card x 1 M.2 2230 E-Key x 1 M.2 3052 B-Key w/SIM x 1 PCIe [x4] x 1, PCIe [x8] x 2 (in [x16] slot)	Wallmount	DC In 19~36V with 3-pin terminal block	-20°C ~ 55°C with 0.5m/s airflow
BOXER-6843-ADS-A3-1010	—	Q670E	4	Fan	NVIDIA L4	USB 3.2 Gen 2 x 8	6	8-bit	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 M.2 2280 NVMe SSD slot x 2	HDMI x 2 DP x 2	Full-Size Mini Card x 1 M.2 2230 E-Key x 1 M.2 3052 B-Key w/SIM x 1 PCIe [x4] x 1, PCIe [x8] x 2 (in [x16] slot)	Wallmount	DC In 19~36V with 3-pin terminal block	-20°C ~ 55°C with 0.5m/s airflow
BOXER-6843-ADS-A4-1010	—	Q670E	4	Fanless	—	USB 3.2 Gen 2 x 8	6	8-bit	Mic-in Line-out x 1	2.5" SATA Drive bay x 2 M.2 2280 NVMe SSD slot x 2	HDMI x 2 DP x 2	Full-Size Mini Card x 1 M.2 2230 E-Key x 1 M.2 3052 B-Key w/SIM x 1 PCIe [x4] x 1, PCIe [x8] x 2 (in [x16] slot)	Wallmount	DC In 19~36V with 3-pin terminal block	-20°C ~ 55°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-6843-ADS

Optional Accessories

- **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)
- **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)
- **9651500Q00**
5G Module & Antenna (for USA & EMEA, Asia)





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



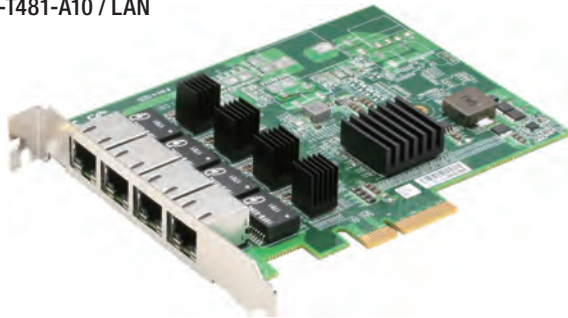
Specifications

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

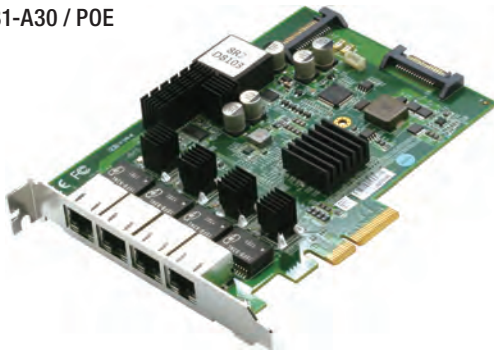
PER-T481-A10 / LAN



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





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

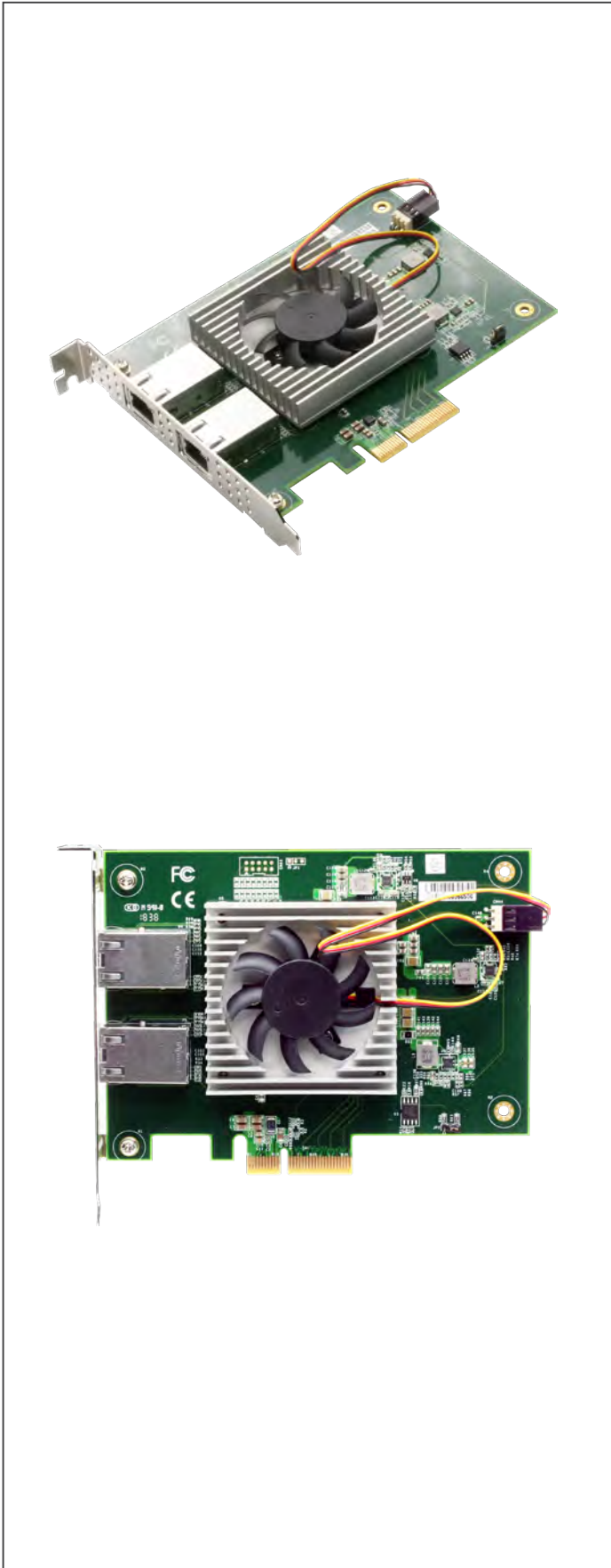


Specifications

System	
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
Power Supply	
Power Requirement	From PCIe bus
Mechanical	
Dimensions (W x D)	3.94" x 2.8" (100mm x 71mm)
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-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

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BOXER-6839-ADS PRELIMINARY

Fanless Embedded Box PC with 12th Gen Intel® Core™/Celeron® Processor G Series Socket Type Processors



Specifications

System	
CPU	12th Gen Intel® Core™/Celeron® Processor G Series 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® 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
Storage Device	2.5" SATA III Drive Bay x 2 (Supports RAID 0/1) M.2 2280 M-Key x 1 (NVMe, additional heatsink required, refer to optional accessories)
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 (10Gbps) x 8 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

Features

- High Computing Power
- 12th Gen Intel® Core™/Celeron® Processor G Series Processors
- Dual-Channel DDR5 SODIMM, Total Max. 64GB
- Four Independent Displays (HDMI x 2, DP x 2)
- USB 3.2 Gen 2 (10Gbps) x 8
- M.2 3052 B-Key for 5G Module
- LAN x 4 (GbE x 3, 2.5GbE x 1)
- Onboard TPM 2.0
- PCIe [x4] & PCI Expansion

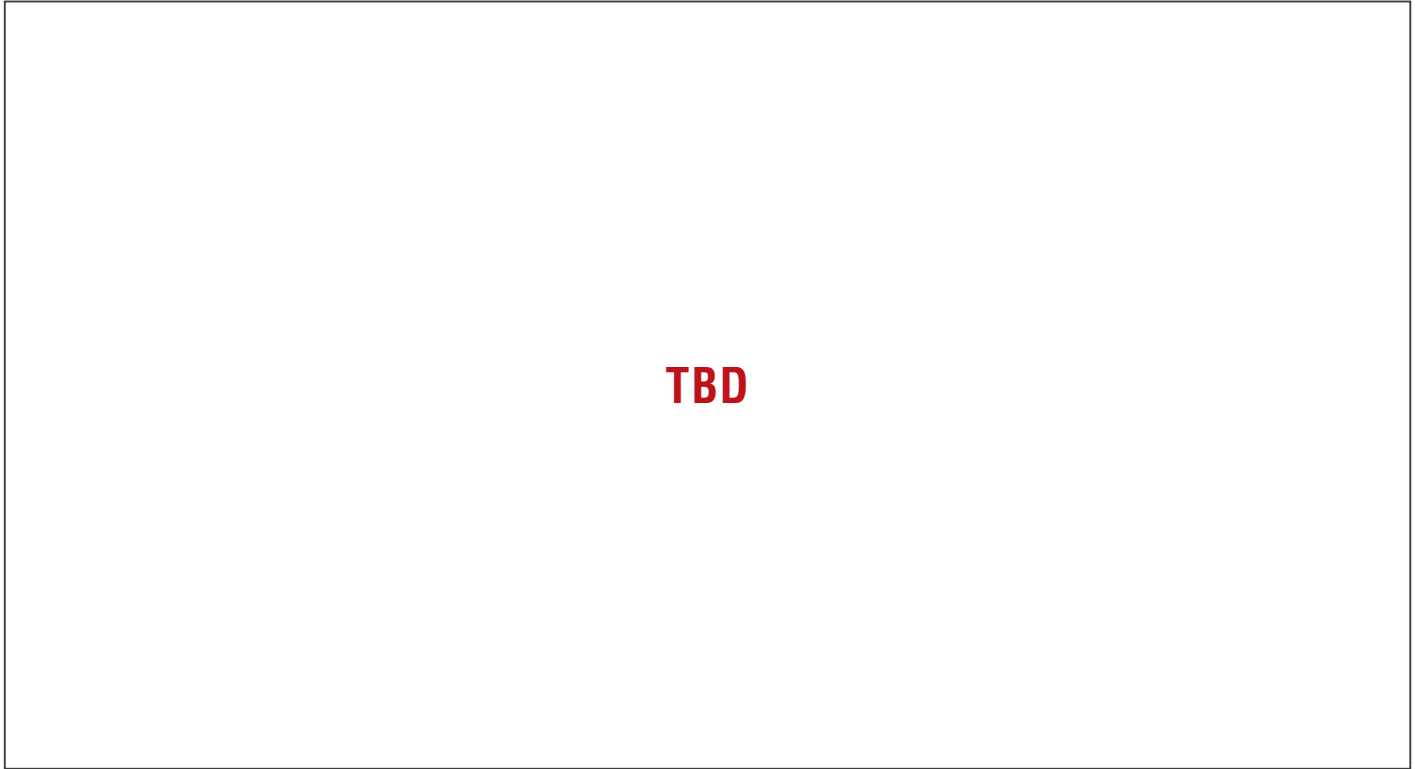


Indicator	System LED x 1 HDD LED x 1
OS Support	Windows® 10 IoT Enterprise 64-bit Windows® 11 PRO 64-bit Linux Ubuntu 20.04 (Kernel 15.5 or above)
Power Supply	
Power Requirement	3-pin DC Input 12-24V
Mechanical	
Mounting	Wallmount
Dimensions (W x H x D)	TBD
Gross Weight	TBD
Net Weight	TBD
Environmental	
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. 32G)/ 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	RS-232/422/485	Digital I/O	Audio	Storage	Display	Expansion	Mounting	Power	Operation temp.
BOXER-6839-ADS-A1-1010	Q670E	4	USB 3.2 Gen 2 (10Gbps) x 8	6	8 bit	Mic-in Line-out	2.5" SATA III 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 x 1 PCIe [x4] x 1 + PCIe [x1] x 1	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-6839-ADS-A2-1010	Q670E	4	USB 3.2 Gen 2 (10Gbps) x 8	6	8 bit	Mic-in Line-out	2.5" SATA III 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 x 1 PCIe [x4] x 1 + PCIe [x1] x 1	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-6839-ADS-A3-1010	Q670E	4	USB 3.2 Gen 2 (10Gbps) x 8	6	8 bit	Mic-in Line-out	2.5" SATA III 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 x 1 PCI x 2	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-6839-ADS x 1
- Wallmount Kit x 1
- Screw Pack x 1
- 3 Pin DC-In Power Connector x 1
- Remote Power On/Off 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.USA.FANJET.YP12/YC-12 (USA)
- **170203180E**
Power Cord. 3P. 125V/7A. 1. 8M. PSE YP12/YC12 Certificat (JPN)



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Smart In-vehicle & AMR BOX PC



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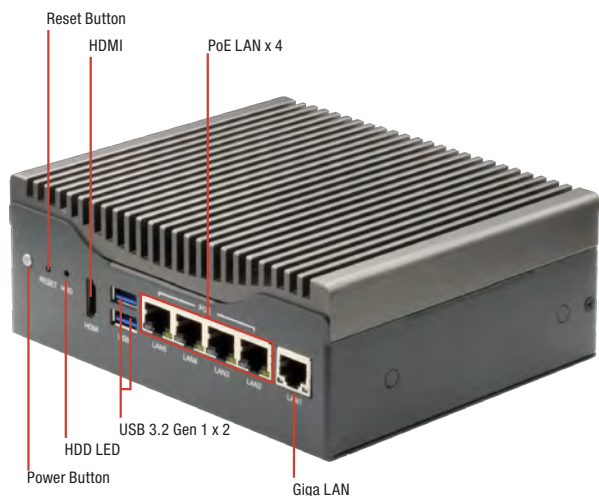


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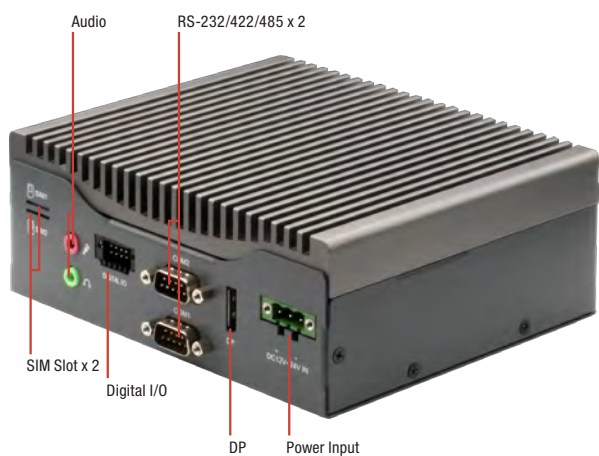
VPC-3350S

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



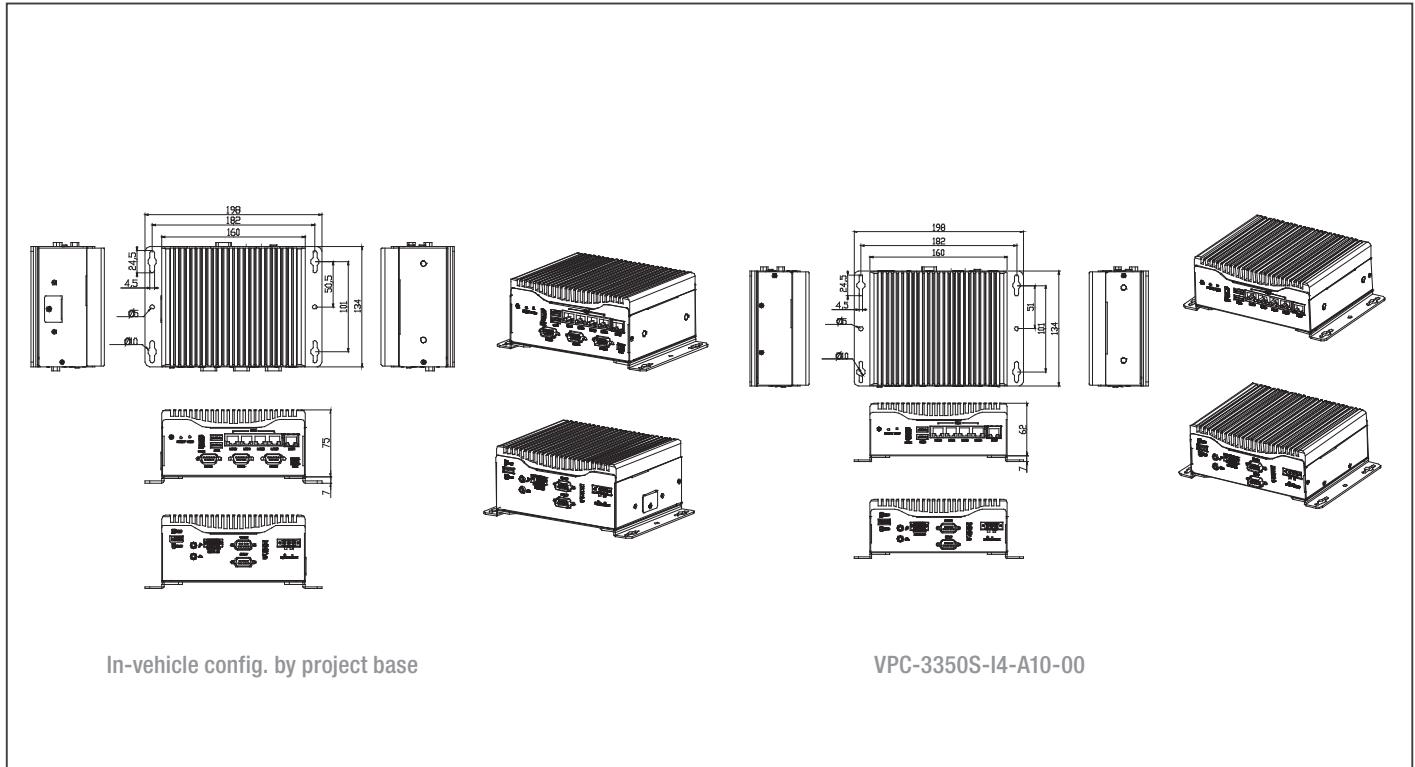
Specifications

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



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

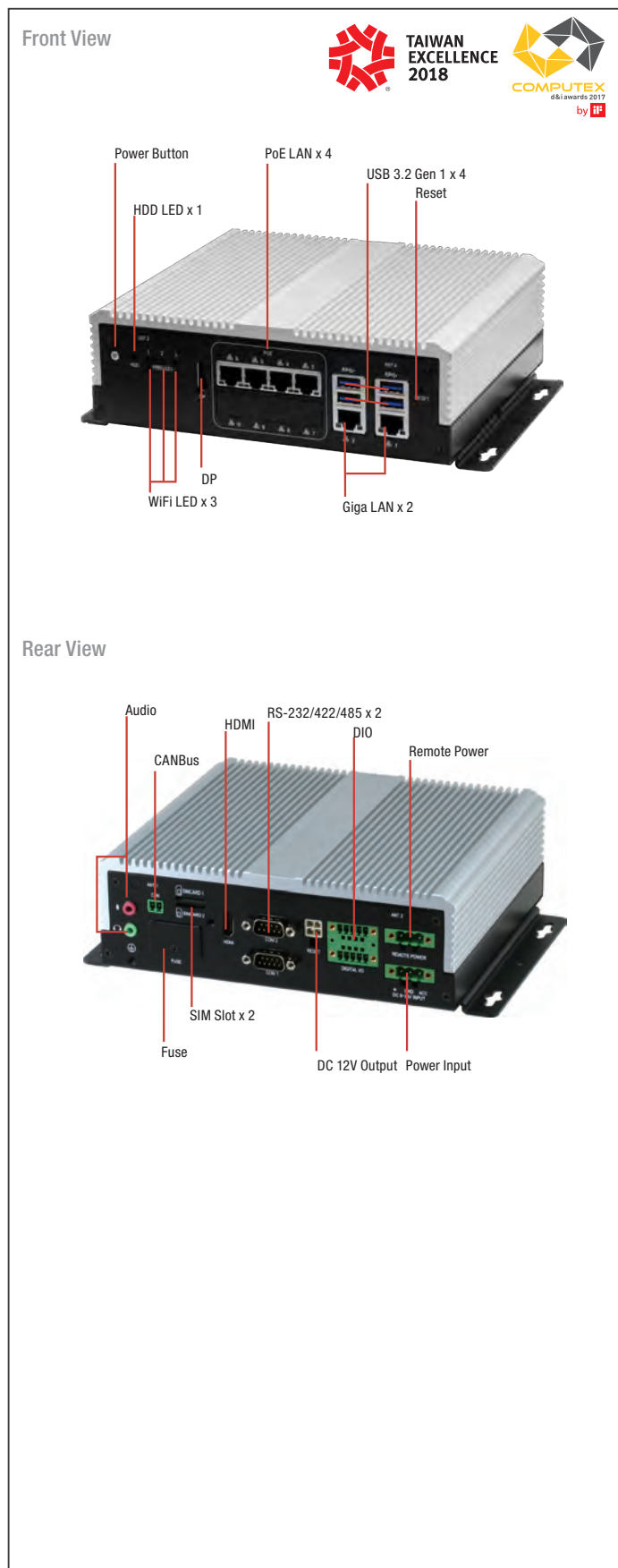
Optional Accessories

- **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**
PCle 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® Processor



Features

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



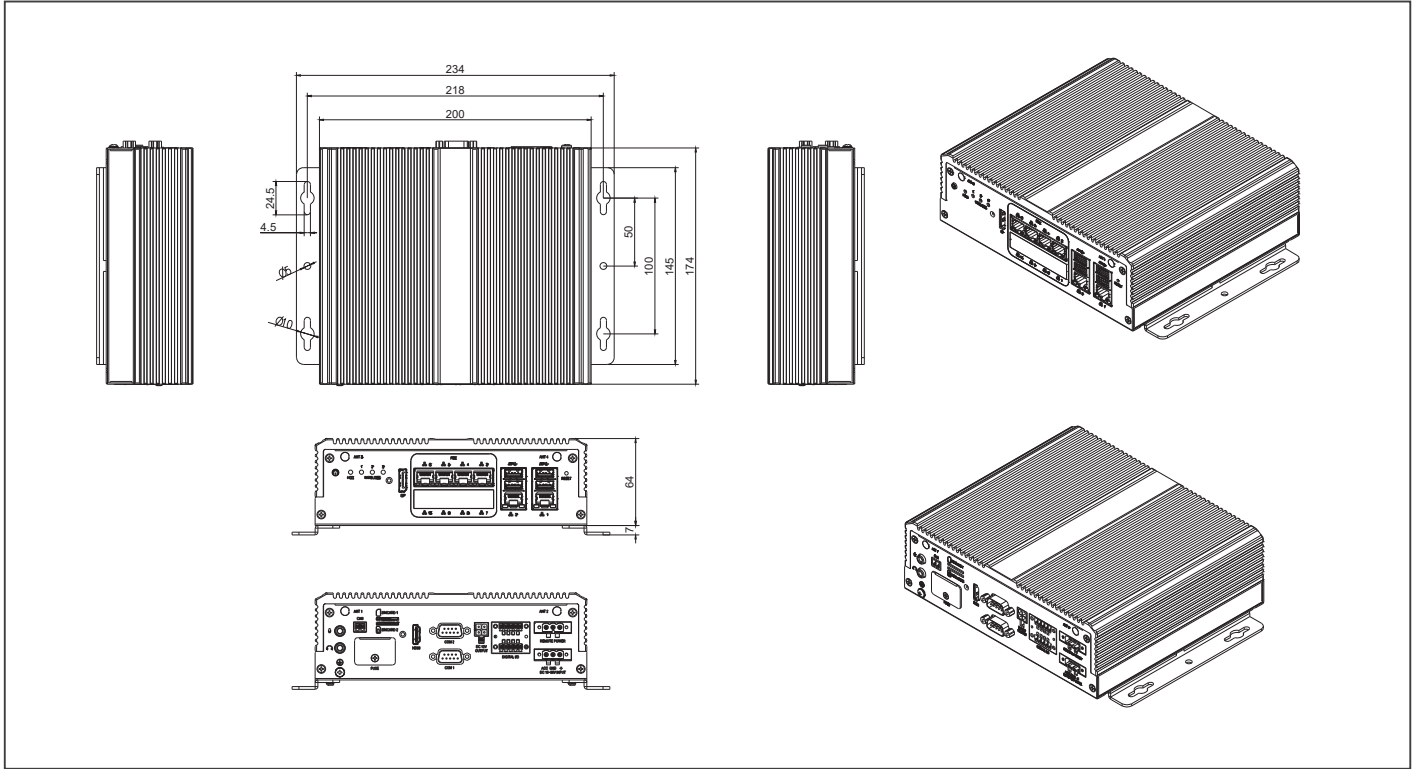
Specifications

System	
Form Factor	Multi-PoE & Fanless Appliance
Processor	Intel® 7th Gen. Core™ i3/i5/i7 Processor (Default: i3-7100U; Project base: i5-7300U, i7-7600U)
Chipset	—
Main Memory	Up to 32GB, DDR4 260-pin SODIMM
Display	HDMI x 1, DP x 1
Ethernet	LAN x 2 + 4 PoE Ports, RTL8111E 10/100/1000 Base
Smart PoE	4 ports, sharing 60W of power budget for every four PoE ports.
RAID support	0/1
Expansion Slot	Mini-Card slot x 3 (USB2.0 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 GbE port (RJ-45) x 2 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 3,000 VDC), 4-ch digital output (Compatible 5 V/TTL, 31 mA max. per channel) DC 12V/1A Output x 1 RS-232/422/485 x 2 HDMI x 1 CanBus connector x 1, Audio Line-out x 1, Mic-In x 1 SIM slot x 2
Storage	
HDD Tray	2.5" SSD x 2
CF/CFast/mSATA Slot	mSATA Slot x 1 (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 (2.6 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	Form Factor	Power
VPC-5600S-143-A11-W1	Intel® i3-7100U	260-pin SODIMM	Fanless	Supporting 2.5" SSD x 2	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,
- Power cable x 2 (for SATA)
- 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



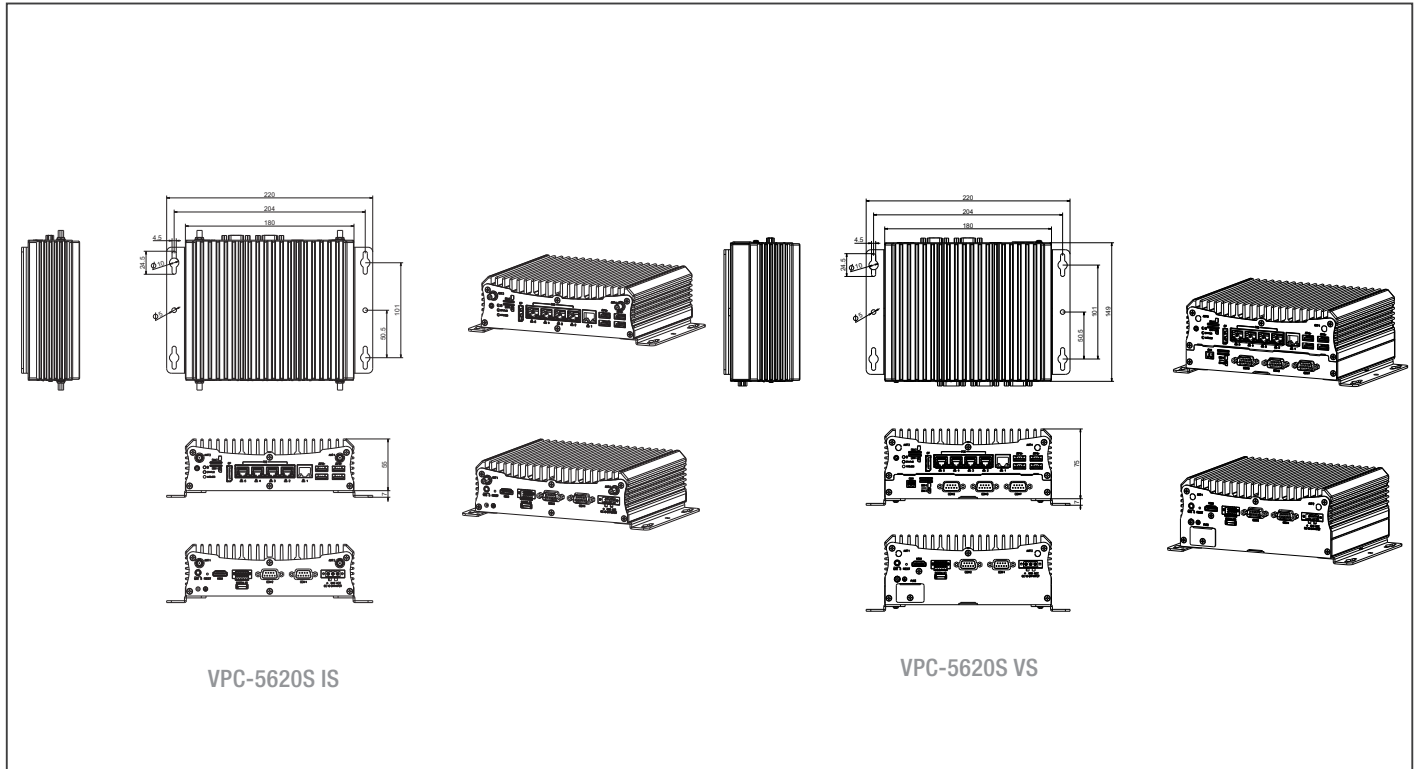
Specifications

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



VPC-5620S IS

VPC-5620S VS

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

Launching in Q3

Rear View

Features

- 12th Gen Intel® Core™ i7 Processor (formerly Alder Lake P U15)
- DDR5 SODIMM x 2, max. 64GB
- RJ-45 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*4) / M.2 2230 E Key
- M.2 3052 B Key x 2 (USB 2.0, USB 3.0)
- Rich I/O for peripherals with lockable HDMI and USB
- Onboard TPM 2.0
- 9~36V DC in with protection circuit and Ignition delay on/off
- -40 ~ 70 °C Operating Temperature
- MIL-STD-810G and E-Mark Certified



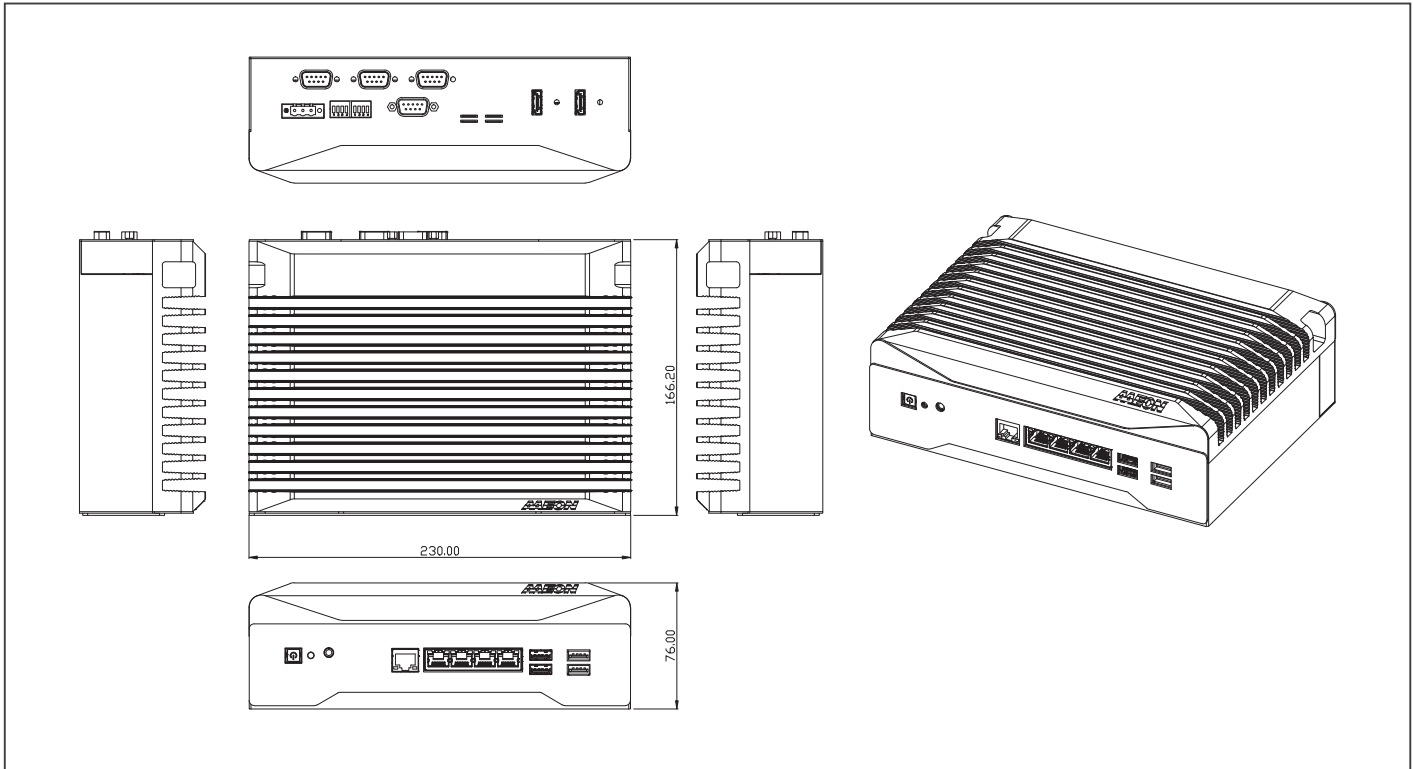
Specifications

System	
Form Factor	Multi-PoE & Fanless Appliance
Processor	Default: 12th Generation Intel® Core™ i7-1265UE Processor (formerly Alder Lake P U15) Project Based: Core™ i5-1245UE Core™ i3-1215UE Celeron® Processor 7305E
Chipset	—
Main Memory	Up to 64GB, DDR5 262-pin SODIMM x 2
Display	HDMI x 2
Ethernet	2.5GbE x 1 (Intel i226LM)
Smart PoE	2.5GbE ports x 4, IEEE 802.3 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 Type-A x 2 for USB3.2 Gen2 USB Type-A x 2 for USB 2.0 2.5GbE port x 1 (RJ-45) 2.5GbE PoE LAN x 4 (IEEE 802.3 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 x 2 for HDMI 1.4b 3-pin Terminal Block x 1 for power input 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-810G
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	9.06" x 6.54" x 2.99" (230 mm x 166.2 mm x 76 mm)
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	Power
VPC-5640S-IS-A10-00	Intel® Core™ i7-1265UE	—	Fanless	M.2 2280 M Key Slot x 1 (PCIex4) 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 Gen2 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 Slot x 1 (PCIex4) 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 Gen2 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

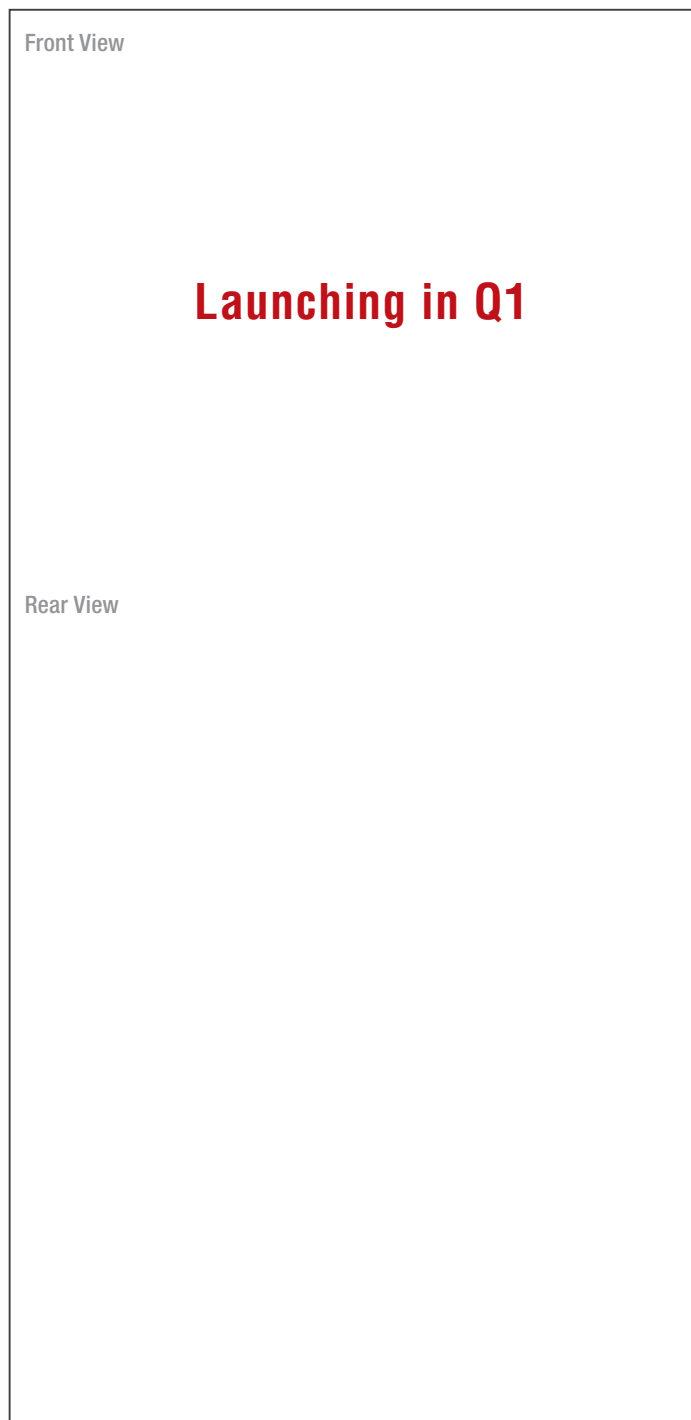
Packing List

- 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.USA.FANJET.YP12/YC-12 (USA)
- **170203180E**
Power Cord. 3P. 125V/7A. 1. 8M. PSE YP12/YC12 Certificat (JPN)





Features

- NVIDIA® Jetson AGX Orin™
- 32GB LPDDR5x
- PoE/PSE GbE LAN
- 10G LAN x 1
- Multi-expansion option: M.2 Key E / M.2 Key B / M.2 Key M
- Support CANbus 2.0 A/B x 2



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 LPDDR5x 205GB/s
Storage Device	64GB eMMC 5.1 x 1 M.2 Key M 2280 (PCIe[x4]) x 1
Display Interface	HDMI Type A for HDMI 2.0 x 1
Ethernet	RJ-45 for PoE (802.3af/at, total 100W) x 8 RJ-45 for 10G x 1
I/O	USB Type A for USB 3.2 Gen 1 x 1 USB Type A for USB 2.0 x 3 Line-in x 1 Line-out x 1 HDMI type A for HDMI v2.0 x 1 DB-9 for two CANbus x 1 DB-9 for RS-232/422/485 x 2 DB-15 for 13 DIO x 1 Power ON/OFF switch x 1 Antenna hole x 7
GNSS	GPS/Glonass/Galileo/Beidou
Sensor	G-sensor, Gyro
Expansion	M.2 Key E 2230 for WiFi/Bluetooth (PCIe[x1] + USB) x1 M.2 Key B 3042/3052 for 4G/5G x 1 SIM 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 DC in 9-36V ACC Ignition delay on/off
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	TBD
Net Weight	TBD
Environmental	
Operating Temperature	-4°F ~ 140°F (-20°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	MIL-STD-810G, 514.6C Procedure 1, Category 4 Trucker/Semitrailer on US highway (Figure 514.6C-1-Category 4-Common carrier) by SSD
Anti-Shock	MIL-STD-810G, Method 516.6, Procedure 1, flight vehicle equipment by SSD
Certification	CE / FCC class A

Packing List

- Wallmount Bracket x 2
- Power Connector x 1
- Screw Package x 1
- BOXER-8647AI

Ordering Information

- TBD

Optional Accessories

- **1255X00052**
200W Power Adapter
- **1702031802**
Power Cord (US type)
- **1702031803**
Power Cord (European Type)
- **170203180E**
Power Cord (Japanese Type)



Focus • Agility • Competitiveness



ES France - Mobilité & Systèmes Embarqués
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Site Web : www.es-france.com

08



ES France - Mobilité & Systèmes Embarqués
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08

UP

bridge
the gap

UP Systems



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

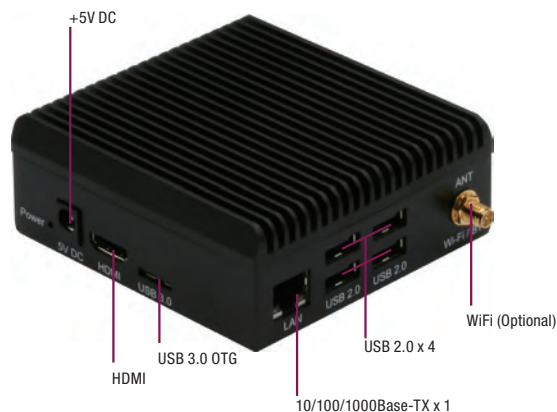


Tél. 01 47 95 99 80
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e-mail : mse@es-france.com
Site Web : www.es-france.com

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

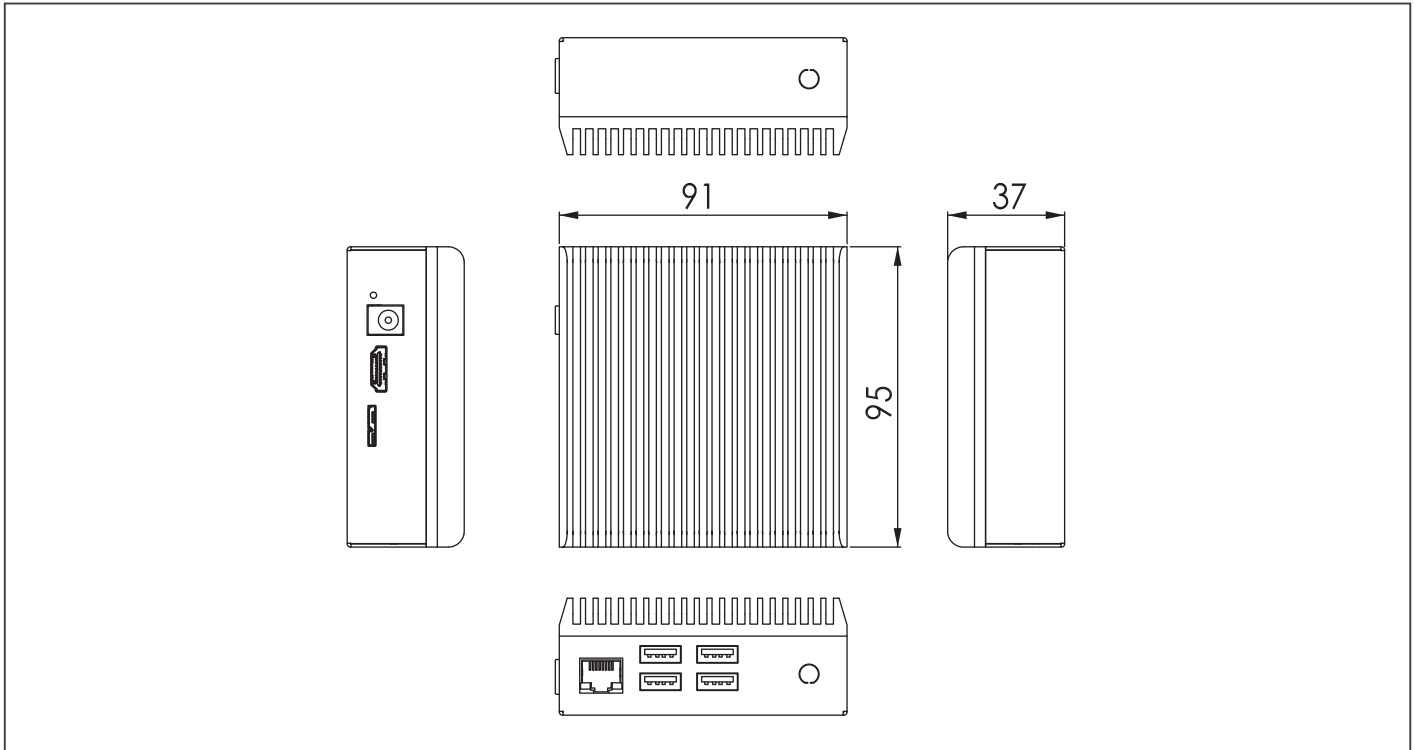


Specifications

System	
CPU	Intel Atom® x5-Z8350 Processor (2M Cache, 1.44 GHz up to 1.92 GHz)
Memory	Onboard DDR3L memory
Graphics	Intel® HD Graphics 400, 12 EU Gen 8, up to 500MHz Support DX*11.1/12, Open GL*4.2, Open CL*1.2 OGL ES3.0, H.264, HEVC (decode), VP8
Storage	Onboard eMMC
Ethernet	GbE LAN x 1
WiFi/BT	Wi-Fi (Optional)
Audio	HDMI x 1
USB	USB 2.0 x 4, USB 3.0 x 1 (OTG)
Expansion Slot	—
I/O Placements	
Power	DC-in Jack x 1
USB	USB 2.0 x 4, USB 3.0 x 1 (OTG)
Display Port	HDMI x 1
Ethernet	GbE LAN x 1
COM	—
Environment	
Power	5V/4A DC Only
Form Factor	3.74" x 3.58" x 1.46" (95mm x 91mm x 37mm)
Gross Weight	—
Operating Temperature	32°F ~ 104°F (0°C ~ 40°C)
Operating Humidity	0% ~ 90% relative humidity non-condensing
Certification	CE/FCC Class A
OS Support	Windows® 10, Linux, Windows® 10 IoT Core

Dimension

Unit: mm



Ordering Information

Product SKU	Description
UP-GWS01-A20-0216-A11	UP-GWS01.Intel CPU x5-z8350.2G memory.16G eMMC.w/o VESA.A1.1
UP-GWS01-A20-0232-A11	UP-GWS01.Intel CPU x5-z8350.2G memory.32G eMMC.w/o VESA.A1.1
UP-GWS01-A20-0432-A11	UP-GWS01.Intel CPU x5-z8350.4G memory.32G eMMC.w/o VESA.A1.1
UP-GWS01-A20-0464-A11	UP-GWS01.Intel CPU x5-z8350.4G memory.64G eMMC.w/o VESA.A1.1
UP-GWS01-A20-1432-A11	UP-GWS01.Intel CPU x5-z8350.4G memory.32G eMMC.w VESA.A1.1

Packing List

- UP-GWS01

Optional Accessories

- **UP-WIFIKIT-A20-4001**
WiFi module KIT, IEEE 802.11 a/b/g/n, 2.4GHz and 5GHz, w/ Cable and Antenna
- **UP-WIFIKIT-A20-7001**
WiFi module KIT, IEEE 802.11 b/g/n, 2.4GHz, w/ Cable and Antenna
- **1255300203**
5V/4A Power Adapter
- **1709100802**
USB 3.0 OTG cable, Micro B to Micro B



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



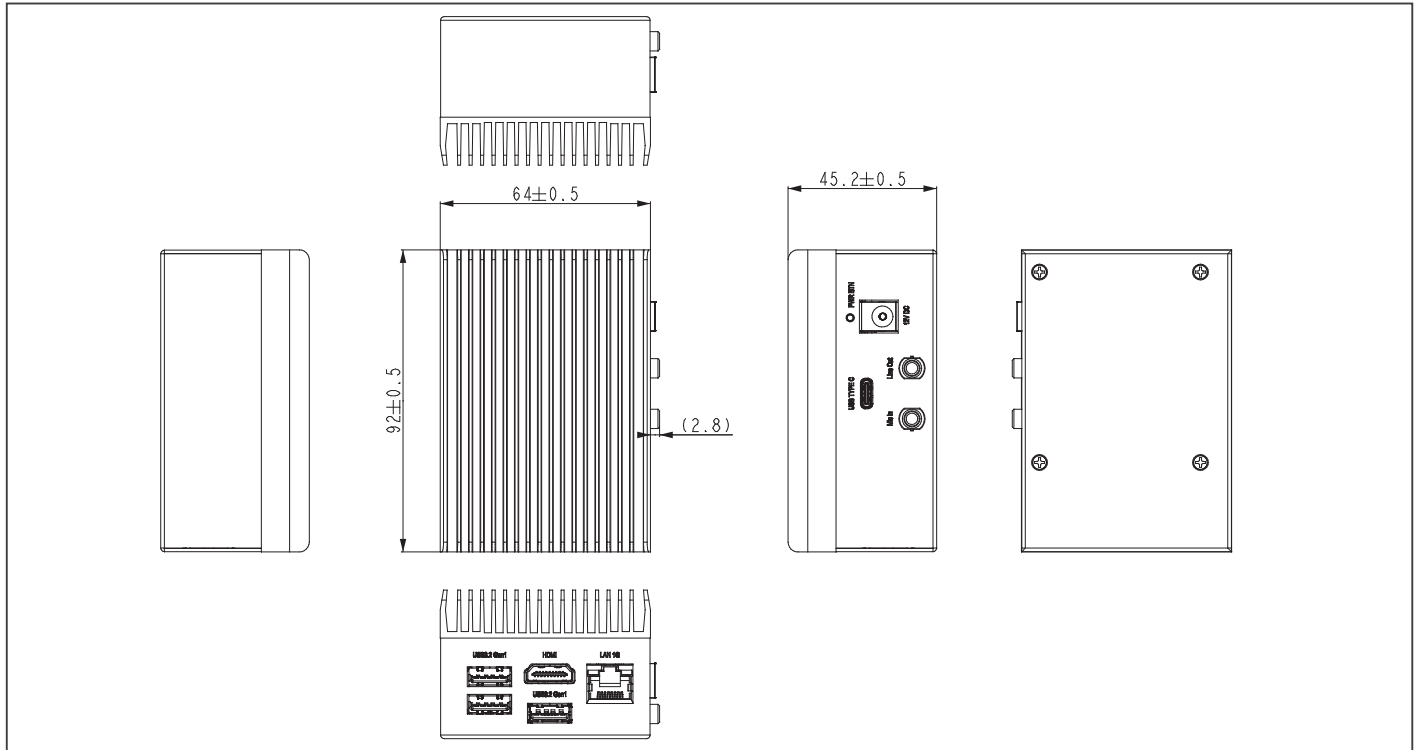
Specifications

System	
CPU	Intel® Pentium® N4200/ Celeron® N3350/ Atom® E3950
Memory	Onboard LPDDR4 Memory up to 8GB
Graphics	Intel® Gen 9 HD, supporting 4K Codec Decode and Encode for HEVC4, H.264, VP8
Storage	Onboard eMMC Storage up to 64GB
Ethernet	Gb Ethernet (full speed) RJ-45 x 1
WiFi/BT	—
Expansion Slot	—
Security	TPM 2.0
OS Support	Microsoft Windows 10 (full), Windows IOT Core Yocto project 3.1 Kernel 5.4 Ubuntu 18.04
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 DP via USB type C
Ethernet	RJ45 x1
COM	—
Audio	Line out x 1 Mic in x 1
GPIO	—
POWER Supply	
Power requirement	12V DC-in @5A
Power supply type	DC Jack, 5.5-2.1mm /phoenix co-lay
Power Consumption (Typical)	12V @ 1.25A (15Watt)
MECHANICAL	
Mounting	VESA MOUNTING
Dimensions (WxHxD)	3.62" x 2.52" x 1.78" (92 x 64 x 45.2 mm)
Net Weight	0.64lb (290g)
Gross Weight	1.21lb (549g)
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

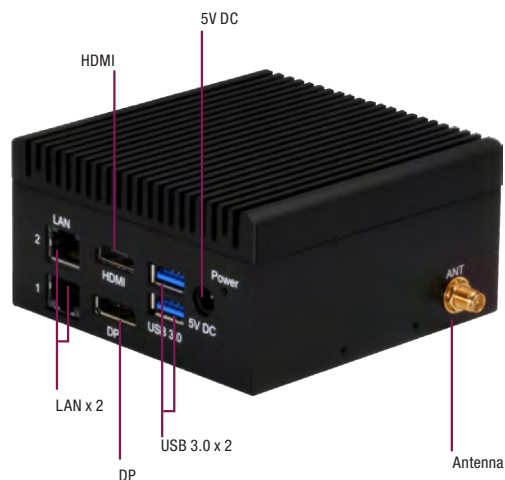
- UP 4000 Edge

Optional Accessories

Part Number	Description
125530060L	(TF)PowerAdapter.DC.100/240V.12V.5A.60W.Powertron.PS1065-120IB500.For UPC-PLUS
9651UPED00	(TF).VESA kit.UP4000-EDGE, A.1



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)

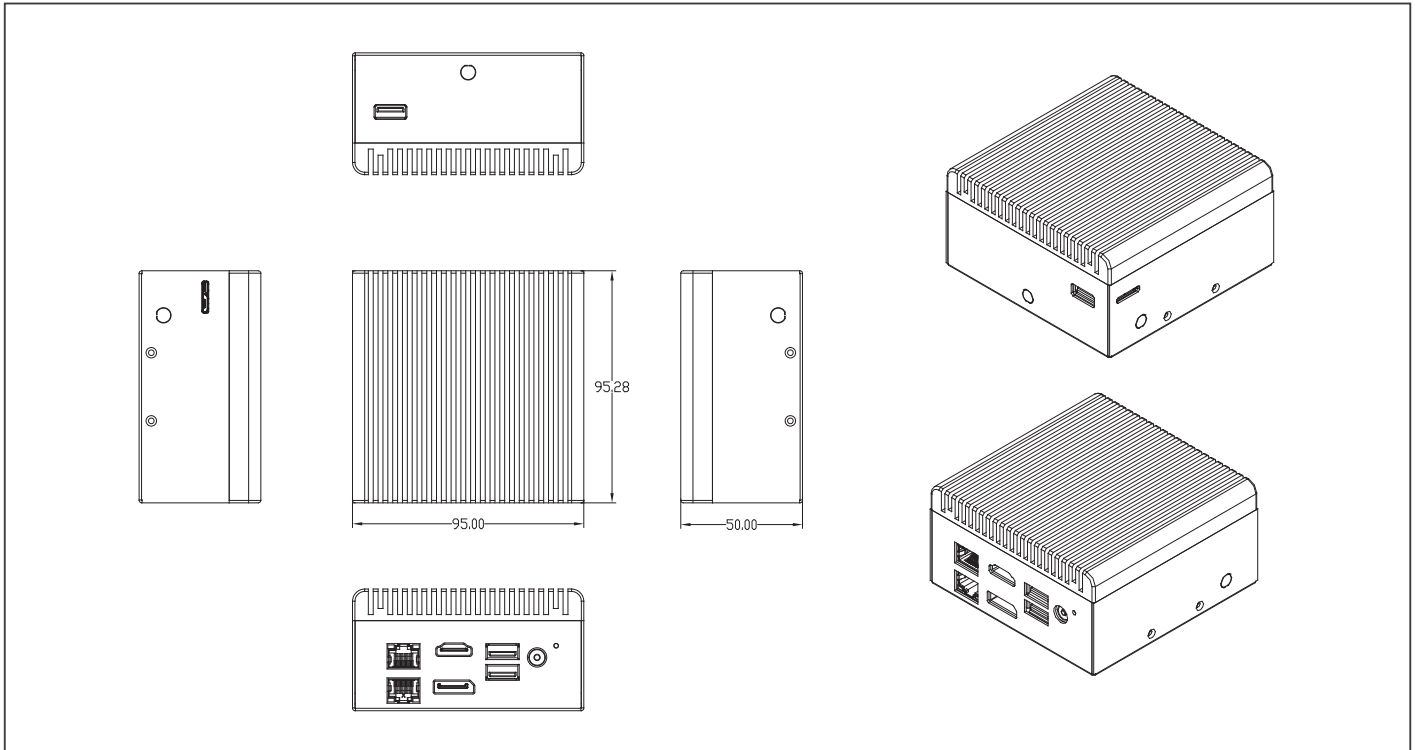


Specifications

System	
CPU	Intel® Pentium® N4200/ Celeron® N3350 Processor SoC/Atom® E3950
Memory	Onboard Single/ Dual Channel LPDDR4 memory, Max. 8GB
Graphics	Intel® Graphics, GEN 9
Storage	eMMC ver 5.0 x 1, Max. 128G Optional: Full-sized Mini-PCIe x 1 SATA3 x 1
Ethernet	Realtek® 8111G x 2
WiFi/BT	Optional: M.2 2230 x 1
Audio	HDMI x 1, DP x 1
USB	USB3.0 x 3
Expansion Slot	Full-sized Mini-PCIe x 1 (PCIe & SATA + USB2.0) M.2 2230 x 1
I/O Placements	
Power	DC-in Jack x 1, Power Button x 1
USB	USB3.0 x 2, USB3.0 OTG x 1/ USB3.0 x 1
Display Port	HDMI x 1, DP x 1
Ethernet	Realtek® 8111G x 2
COM	—
Environment	
Power	5V DC Only
Form Factor	3.74" x 3.74" x 1.97" (95mm x 95mm x 50mm)
Gross Weight	—
Operating Temperature	32°F ~ 113°F (0°C ~ 45°C)
Operating Humidity	0% ~ 90% relative humidity non-condensing
Certification	CE, FCC Class A, UL
OS Support	Windows® 10, Linux, Android 7.0, Windows® 10 IoT core

Dimension

Unit: mm



Ordering Information

Product SKU	Description
UPS-GWS01C2F-A20-0232	UPS-GWS01, CPU N3350(F1), w/2G memory, 32G eMMC board w/o VESA plate
UPS-GWS01C2F-A20-1232	UPS-GWS01, CPU N3350(F1), w/2G memory, 32G eMMC board w/ VESA plate
UPS-GWS01C2F-A20-0432	UPS-GWS01, CPU N3350(F1), w/4G memory, 32G eMMC board w/o VESA plate
UPS-GWS01C2F-A20-1432	UPS-GWS01, CPU N3350(F1), w/4G memory, 32G eMMC board w/ VESA plate
UPS-GWS01P4F-A20-0432	UPS-GWS01, CPU N4200(F1), w/4G memory, 32G eMMC board w/o VESA plate
UPS-GWS01P4F-A20-1432	UPS-GWS01, CPU N4200(F1), w/4G memory, 32G eMMC board w/ VESA plate
UPS-GWS01P4F-A20-0864	UPS-GWS01, CPU N4200(F1), w/8G memory, 64G eMMC board w/o VESA plate
UPS-GWS01P4F-A20-1864	UPS-GWS01, CPU N4200(F1), w/8G memory, 64G eMMC board w/ VESA plate
UPS-GWS01X7F-A20-0864	UPS-GWS01, CPU E3950(F1), w/8G memory, 64G eMMC board w/o VESA plate
UPS-GWS01X7F-0464-AI	UPS-GWS01.CPU E3950(F1).4GB memory.64GB eMMC.AI core X w/o OS

Packing List

- UPS-GWS01

Optional Accessories

- **1702020910**
Power cord for EU
- **1702020911**
Power cord for US
- **1255300362**
30W.5VDC/6A power adapter
- **PER-TAICX-A10-003**
AI Core X mPCIe card with single Myriad X .w/o heat sink



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



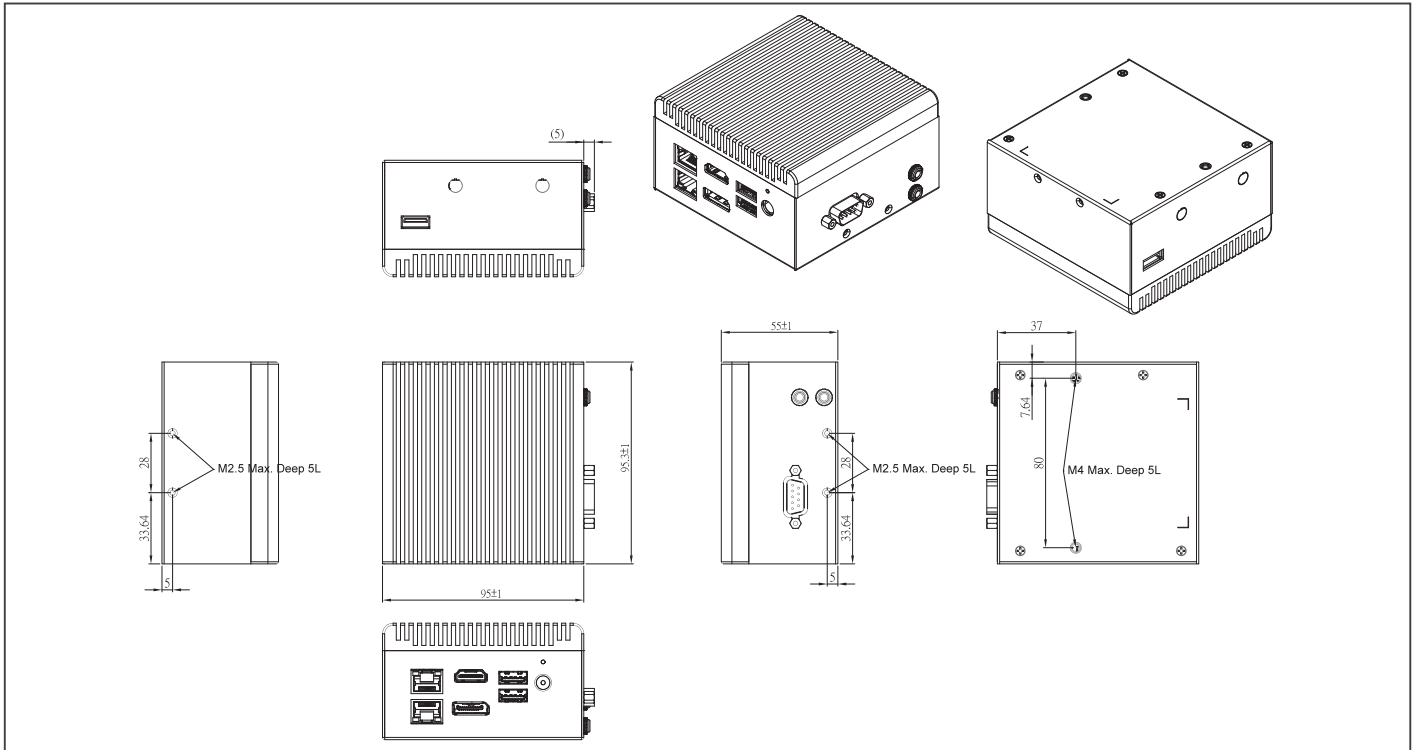
Specifications

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	—
Expansion Slot	M.2 2230 E-Key x 1 (PCIe x2, USB2.0 x1) M.2 2280 M-key x 1 (PCIe x2) SATA3 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 (from 10 pin wafer x 1) USB 3.2 Gen 2 Type A x 3
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
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
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

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



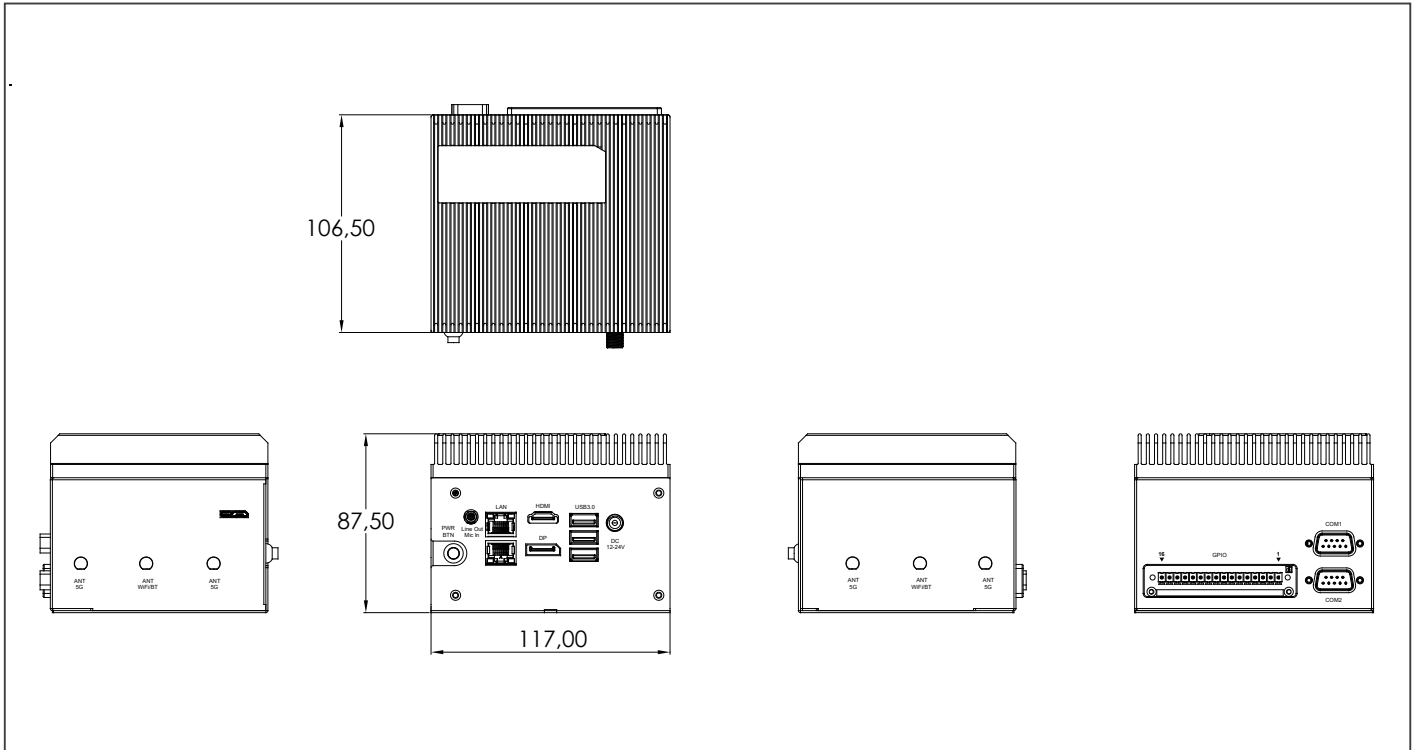
Specifications

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
- SATA3 x 1
- TPM 2.0
- 12V DC-in, 6A
- Supports Intel AX210 WiFi 6 via M.2 2230



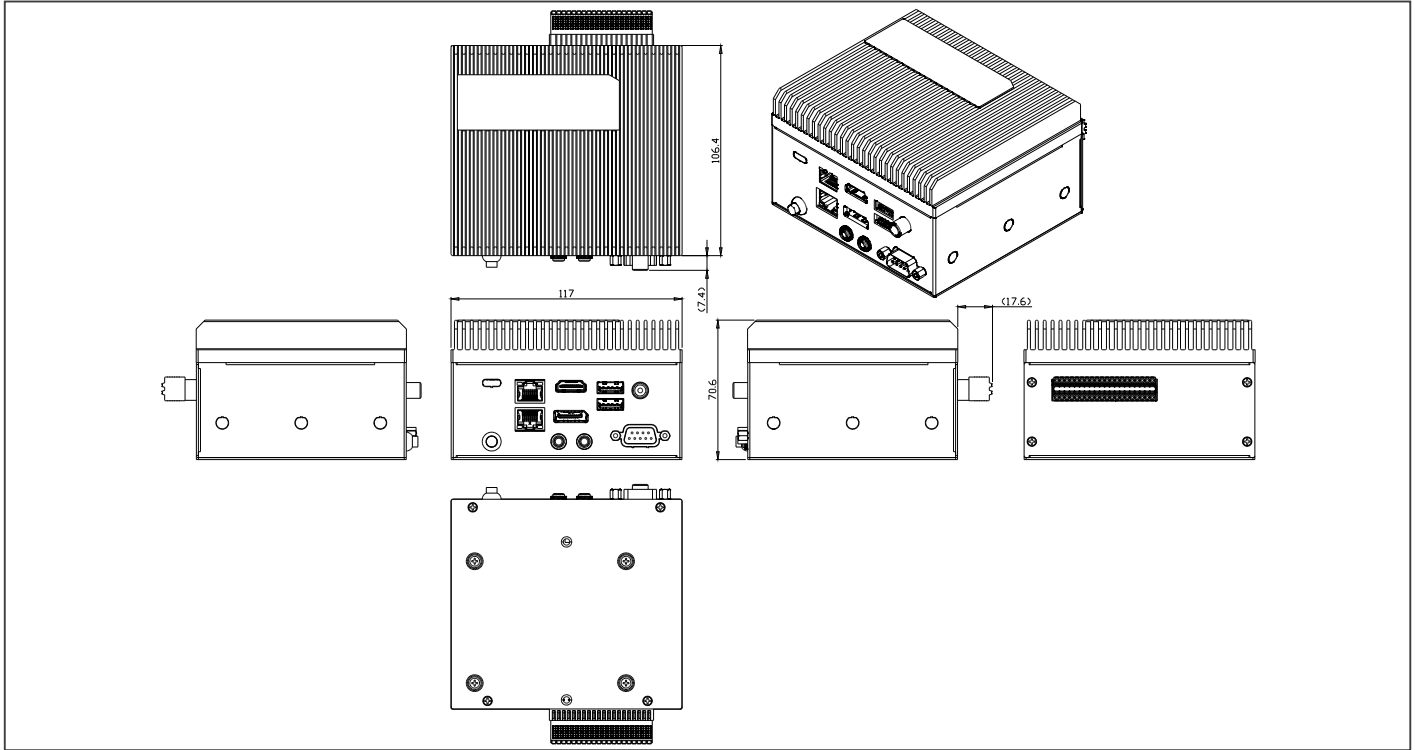
Specifications

System	
CPU	Intel® Atom® X6413E / X6425RE, Celeron® N6210 (no PSE), Pentium® J6426 Processor SoC
Memory	Onboard DDR4, Max 8GB Single Channel: 2 GB Dual Channel: 4 GB, 8 GB
Graphics	Intel® UHD Graphics
Storage	Onboard eMMC 32G/64G Optional with M.2 2280 M-key x 1, SATA3 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
Audio	Line out x 1 Mic in x 1
USB	USB 3.2 Gen 2 Type A x 2 USB 3.2 Gen 2 Type C (support OTG) x 1 (Limited to Atom series)
Expansion Slot	40 pin GPIO x 1 M.2 2230 E-key x 1 M.2 2280 PCIe Gen3.0x2 M-key x 1 SATA3 x 1 M.2 3052 B-key x 1 Nano SIM slot x 1 TPM 2.0 (Limited to Atom series)
I/O Placements	
Power	DC-in Jack x 1, Power Button x 1
USB	USB 3.2 Gen 2 Type A x 2 USB 3.2 Gen 2 Type C (support OTG) x 1 (Limited to Atom series)
Display Port	HDMI 2.0b x 1 DP 1.2 x 1
Ethernet	RJ45 x 2
COM	RS232/RS422 x 1 (Limited to Atom series)
Environment	
Power	12V DC-in (Lockable plug)
Form Factor	4.6" x 4.2" x 2.8" (11.7 x 10.6 x 7 cm)
Gross Weight	2.31lb (1.05Kg)
Operating Temperature	With Heatsink: 32°F ~ 140°F (0°C ~ 60°) 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 20.04 LTS, Yocto 3.1



Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Storage	USB 3.2 Type C	COM Port	TPM 2.0	LAN
UPN-EDGE-EHLCN2-A10-0232	PC Client: N6210 (No PSE)	2GB	32GB	No	No	No	i211-AT / i225-V
UPN-EDGE-EHLPJ4-A10-0432	PC Client: J6426	4GB	32GB	No	No	No	i211-AT / i225-V
UPN-EDGE-EHLX4E-A10-0432	Embedded: X6413E	4GB	32GB	Yes	Yes	Yes	i210-IT / i225-IT
UPN-EDGE-EHLX4RE-A10-0864	Industrial: X6425RE	8GB	64GB	Yes	Yes	Yes	i210-IT / i225-IT

Packing List

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

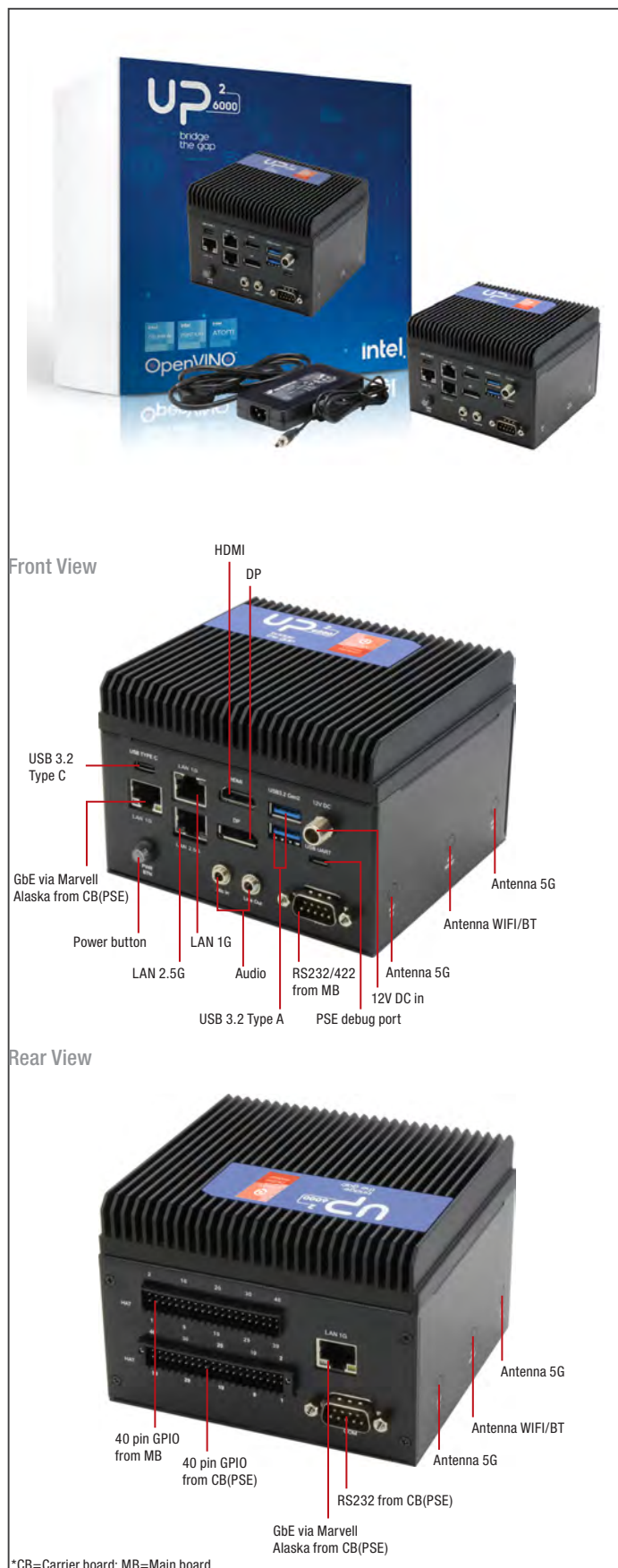
Optional Accessories

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 6000 Edge Computing Kit

UP Squared 6000 Edge Computing Kit with Intel® Atom® Processor SoC



Features

- Intel® Atom® x6425RE Processor SoC
- Onboard LPDDR4 Memory 8GB
- Onboard eMMC Storage 64GB
- GbE x 3, 2.5GbE x 1
- USB 3.2 x 3 (Type A x 2, Type C x 1)
- 40 pin GPIO x 2 (1x from MB, 1x from CB(PSE))
- DP 1.2 / HDMI 2.0b
- COM x 2 (1x from MB, 1x from CB(PSE))
- M.2 2230 E-Key / M.2 2280 M-Key / 3052 B-Key x 1
- SATA3 x 2 (1x from MB, 1x from CB)
- TPM 2.0
- 12V DC-in, 6A



Specifications

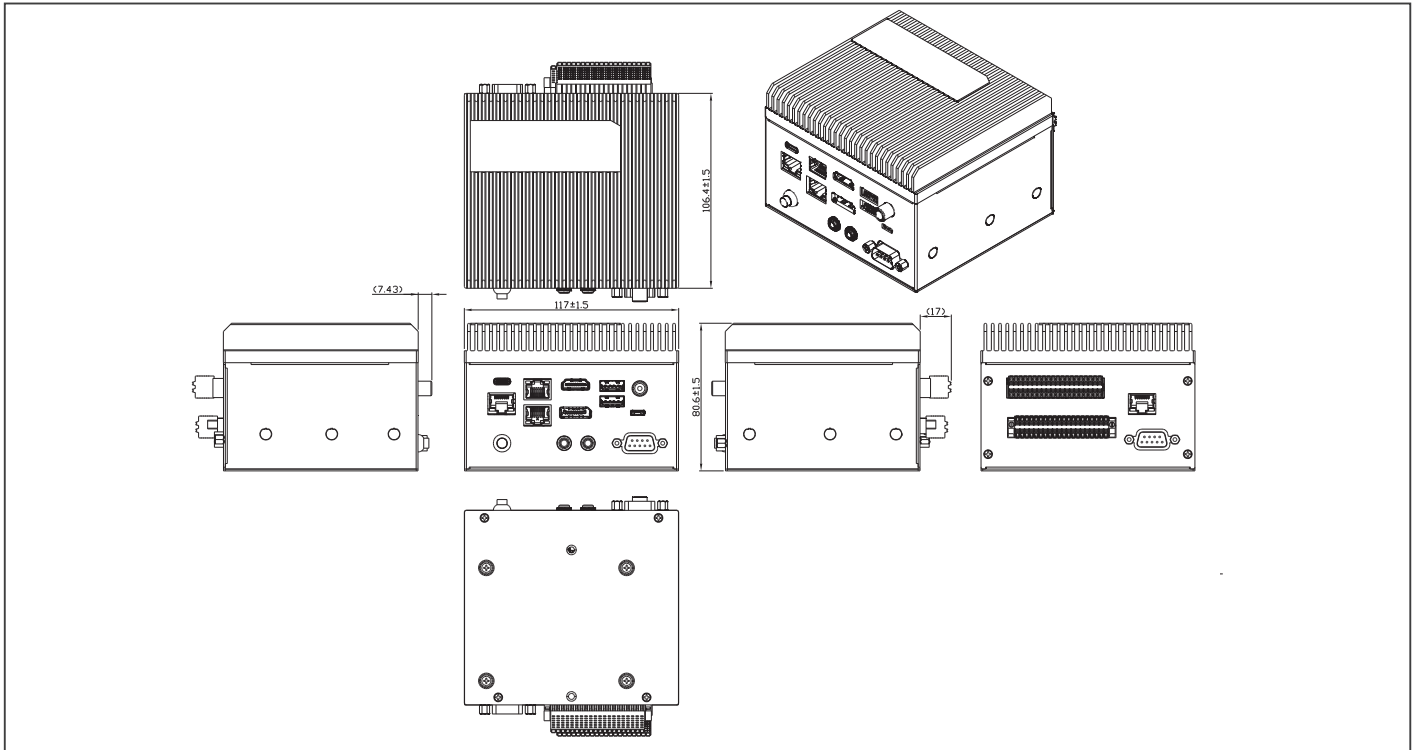
System	
CPU	Intel® Atom® X6425RE Processor SoC
Memory	Onboard 8GB DDR4
Graphics	Intel® UHD Graphics
Storage	Onboard eMMC 64G
Ethernet	GbE x 3 (Intel® i210-IT x 1, Marvell Alaska x 2 from PSE), 2.5GbE x 1 (i225-IT)
WiFi/BT	Optional with M.2 2230 E-key x 1
Audio	Line out x 1 Mic in x 1
USB	USB 3.2 Gen 2 Type A x 2 USB 3.2 Gen 2 Type C (support OTG) x 1 Micro USB (PSE debug port) x 1
Expansion Slot	40 pin GPIO x 2 (1x from MB, 1x from CB(PSE)) M.2 2230 E-key x 1 M.2 2280 PCIe Gen3.0x2 M-key x 1 SATA3 x 2 (1x from MB, 1x from CB) M.2 3052 B-key x 1 Mini PCIe slot x 1 (via USB only) Nano SIM slot x 2 TPM 2.0
I/O Placements	
Power	DC-in Jack x 1, Power Button x 1
USB	USB 3.2 Gen 2 Type A x 2 USB 3.2 Gen 2 Type C (support OTG) x 1 Micro USB (PSE debug port) x 1
Display Port	HDMI 2.0b x 1 DP 1.2 x 1
Ethernet	RJ45 x 4
COM	RS232/RS422 x 1 (From MB) RS232 x 1 (From CB(PSE))
Environment	
Power	12V DC-in (Lockable plug)
Form Factor	4.6" x 4.2" x 3.2" (11.7 x 10.6 x 8.2 cm)
Gross Weight	2.65lb (1.2Kg)
Operating Temperature	32°F ~ 122°F (0°C ~ 50°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE/FCC Class A, RoHS Compliant, REACH
OS Support	Preinstalled Software, Ubuntu 20.04 LTS and 5.13 Kernel Intel® Distribution of OpenVINO™ toolkit 2021 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 Squared 6000 Edge Computing Kit

Dimension

Unit: mm



Ordering Information

Part Number	Description
UPN-EDGE-EHLX4RE-A10-0864-FDK	UP Squared 6000 system.Atom x6425RE CPU.8GB RAM.64GB eMMC.FDK image pre-load

Optional Accessories

Part Number	Description
1255X00032	12VDC/6A Adapter (already included in Kit)
1702031803	Power cord for EU (already included in Kit)
1702031802	Power cord for US (already included in Kit)
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

Packing List

- UP Squared 6000 Edge Computing Kit
- Quick Start Guide
- 40Pin Phoenix Connector x 2
- 12V/6A Power adapter x 1
- Power Cord for EU x 1
- Power Cord for US x 1
- Ubuntu License sticker x 1



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 (formerly Alder Lake-N)



Features

- 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
- RS232 / 422 /485 x 2
- M.2 2230 E-Key / M.2 2280 M-Key / M.2 3052 B-Key x 1
- SATA III x 1
- TPM 2.0
- 12V DC-in, 6A

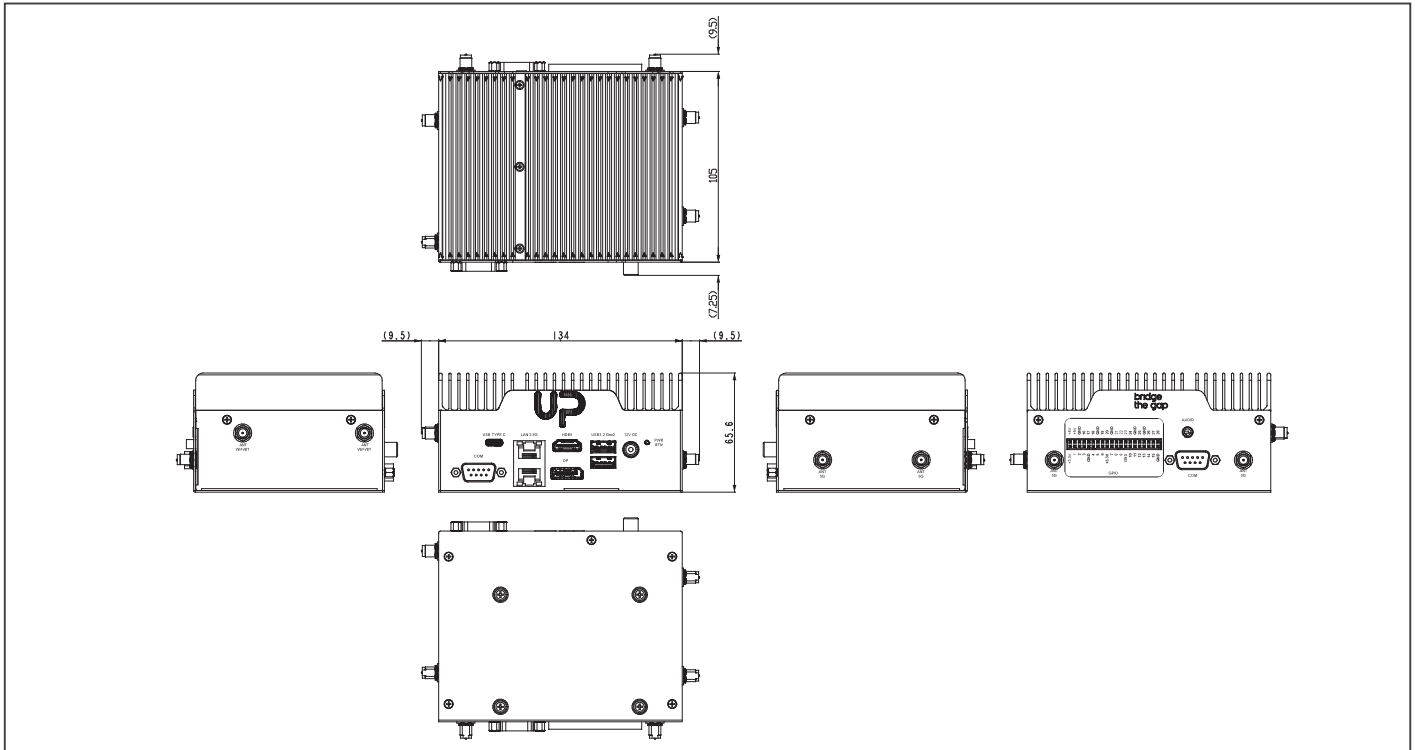


Specifications

System	
CPU	Intel® Core™ i3-N305 Intel Atom® x7425E Intel® Processor N97 Intel® Processor N50 (formerly Alder Lake-N)
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® i225/i226)
WiFi/BT	Optional: M.2 2230 E-Key
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) SATA III 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 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 (Line out + MIC in) x 1
GPIO	40 pin GPIO x 1
POWER Supply	
Power requirement	12V DC-in, 6A
Power supply type	AT/ATX
Power Consumption(Typical)	26W~35W
MECHANICAL	
Mounting	VESA 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°) / 0.5 airflow
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
MTBF	422,053
Certification	CE/FCC Class A, RoHS Compliant, REACH

Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Storage
UPN-EDGE-ADLN50-A10-0432	Intel®Processor N50	4GB	32GB
UPN-EDGE-ADLN97-A10-0432	Intel®Processor N97	4GB	32GB
UPN-EDGE-ADLN97-A10-0864	Intel®Processor N97	8GB	64GB
UPN-EDGE-ADLN25E-A10-0864	Intel Atom® x7425E	8GB	64GB
UPN-EDGE-ADLNi3-A10-1664	Intel®Core™ i3-N305	16GB	64GB

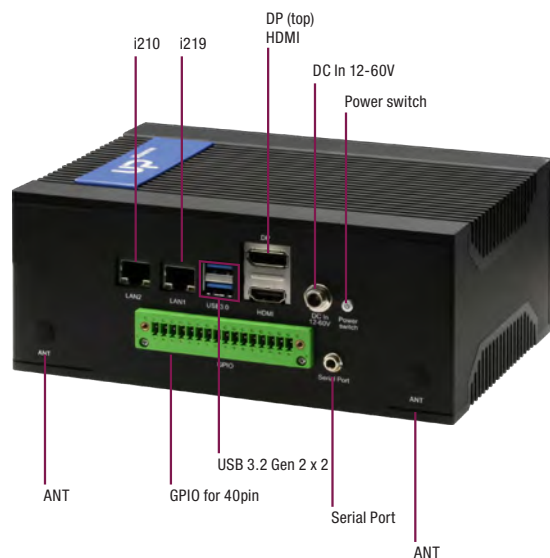
Optional Accessories

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/UPN-EDGE-ADLN01

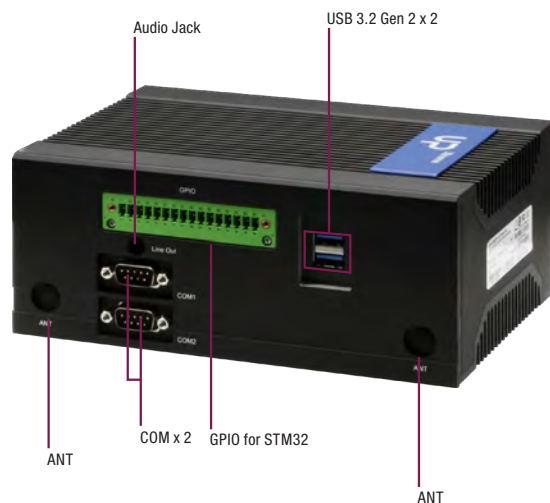
Packing List

- UP Squared Pro 7000 Edge

Front View



Rear View



Features

- Intel® WHL-U Core™ i7/i5/i3/Celeron Processor SoC
- Onboard DDR4 memory, Max 16GB
- eMMC 64GB
- HDMI 2.0 x 1 (Support 4K at 60 Hz)
- COM ports (RS-232/422/485) x 2
- 16pin GPIO connectors (1 x GPIO for STM32, 1 x GPIO for 40pin HAT)
- Audio Jack x 1 (line out + Mic)
- 12-60V DC-in
- Fanless Chassis design

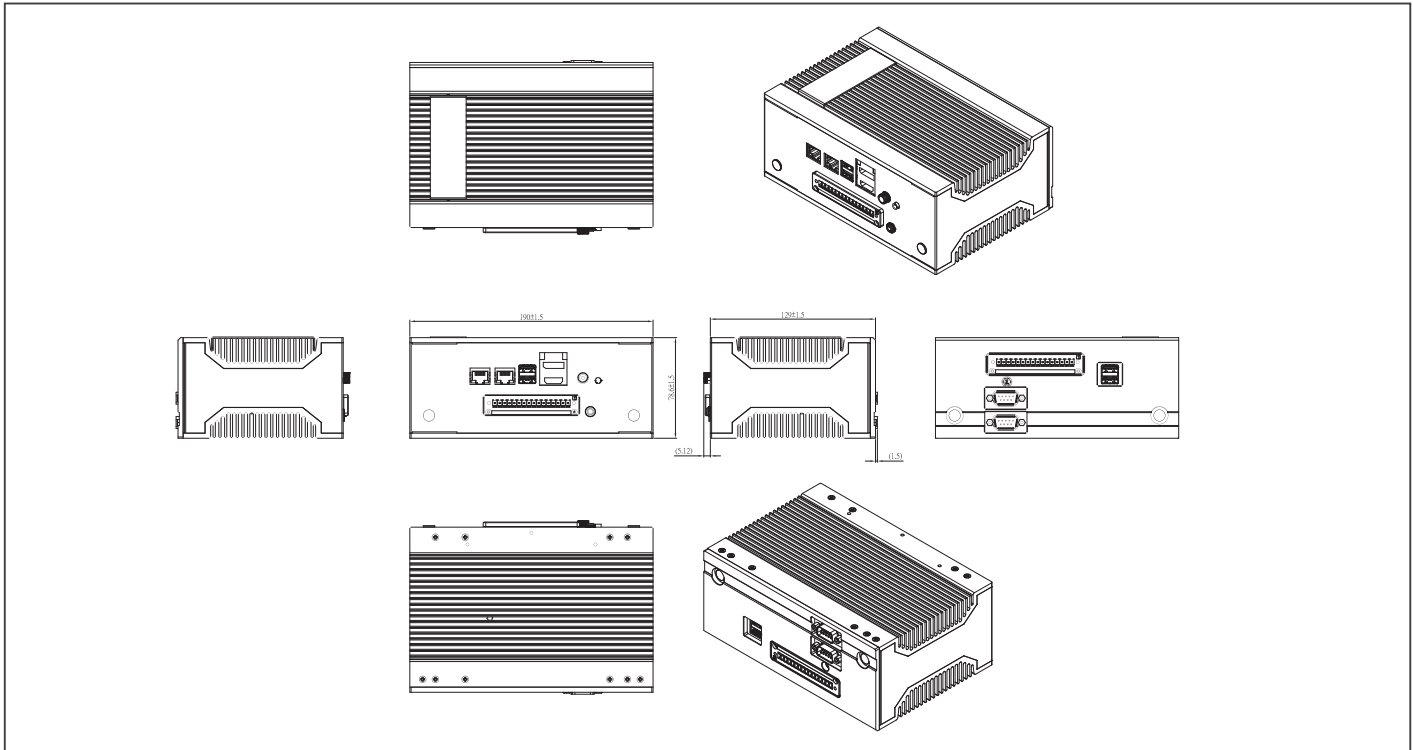


Specifications

System	
CPU	8th generation Intel® Core™ i7/i5/i3/Celeron Processor SoC
Memory	Onboard DDR4 memory, Max 16GB Single Channel: 4GB Dual Channel: 8GB, 16GB
Graphics	Intel® Graphics, GEN 9
Storage	eMMC 64GB
Ethernet	i7/i5 SKU LAN (i210 AT) x 1, LAN (i219 LM) x 1 i3/Celeron® LAN (i210 AT) x 1, LAN (i219 V) x 1
WiFi/BT	Optional
Audio	Line out + MIC x 1
USB	USB 3.2 Gen 2 x 4
Expansion Slot	M.2 2230 E Key x 1 M.2 2280 M Key x 1 mPCIe slot x 1 100pin connector x 1 40 pin HAT x 1 SATA3 connector x 1 (support 2.5" HDD/SSD expansion)
I/O Placements	
Power	DC-in Jack x 1, Power Button x 1
USB	USB 3.2 Gen 2 STACK Connector for 2 ports (Front) x 1 USB 3.2 Gen 2 STACK Connector for 2 ports (Rear) x 1
Display Port	HDMI 2.0 x 1 (Support 4K at 60 Hz), DP 1.2 x 1, 16pin GPIO connectors (1 x GPIO for SMT32, 1 x GPIO for 40pin HAT)
Ethernet	RJ45 connector x 2
COM	RS-232/422/485 x 2
Environment	
Power	12V - 60VDC
Form Factor	7.48" x 5.12" x 3.1" (190mm x 130mm x 78.6mm)
Gross Weight	6.61lbs (3kg)
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
Certification	CE/FCC Class A, RoHS Compliant, REACH
OS Support	Win 10, Linux Ubuntu 18.04 with Kernel 5.0, Linux Yocto 2.7 with Kernel 4.19

Dimension

Unit: mm



Ordering Information

Part number	CPU	RAM	Storage	LAN	USB	RS-232/422/485	Power	Operation Temp.	Others
UPX-EDGEI7-A10-1664-F01	Core™ I7-8665UE	16GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V	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)	—
UPX-EDGEI5-A10-0864-F01	Core™ I5-8365UE	8GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		—
UPX-EDGEI3-A10-0864-F01	Core™ I3-8145UE	8GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		—
UPX-EDGEI7-A10-0464-F01	Celeron® 4305UE	4GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		—
UPX-EDGEI7C1-A10-1664-F01	Core™ I7-8565U	16GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		—
UPX-EDGEI7-A10-1664-FX1	Core™ I7-8665UE	16GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		With foundation kit image preload, AI Core X 2280
UPX-EDGEI5-A10-0864-FX1	Core™ I5-8365UE	8GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		With foundation kit image preload, AI Core X 2280
UPX-EDGEI3-A10-0864-FX1	Core™ I3-8145UE	8GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		With foundation kit image preload, AI Core X 2280
UPX-EDGEI7-A10-1664-FX1	Core™ I7-8665UE	16GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		With foundation kit image preload, AI Core X 2280
UPX-EDGEI3-A10-0864-FX1	Celeron® 4305UE	4GB	64GB	GbE x 2	USB 3.2 Gen 2 x 4	2	12-60V		With foundation kit image preload, AI Core X 2280

Packing List

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

Optional Accessories

- **125530065A**
19Vdc/3.42A.65W power adapter
- **1702031830**
Power cord for USA
- **9741364A00**
Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna (Enli.QCNFA364A)
- **PER-TAIX2-A20-2280**
AI Core XM 2280.N/A.M.2 2280 B+M key card. with Dual Myriad X
- **9741159H00**
(TF)Wireless LAN kit.IEEE 802.11.b/g/n.w/ BT 4.0/3.0.(AzureWave.AW-NB159H).w/ cable.&antenna (mini card)
- **9741EC25E0**
(TF)PCIe mimi card.4G LTE.module kit .for Europe.W/Cable & antenna.Quetcel EC25-E

Note: All sp


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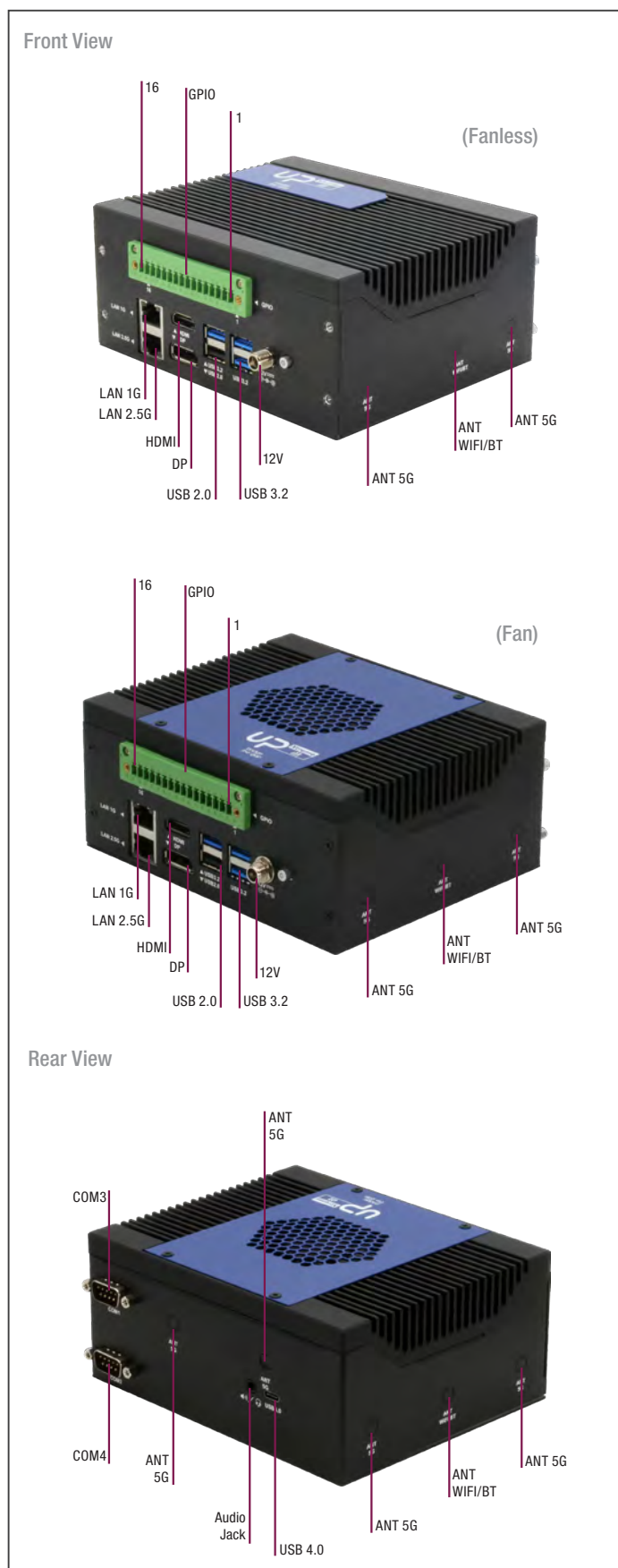
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08-18

UP Xtreme i11 Edge

UPX-EDGE i11 system is powered by 11th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC (formerly Tiger Lake UP3)



Features

- 11th generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC (formerly Tiger Lake UP3)
- DDR4 SO-DIMM Slot x 2 (up to 64GB)
- 16pin GPIO connector x 1
- SATA storage
- Support 5G via M.2 3052
- Support AI Accelerator via M.2 2280
- Support Intel WiFi 6 via M.2 2230
- Support USB 4.0
- Support LAN up to 2.5Gbps
- Fanless/Fan design available



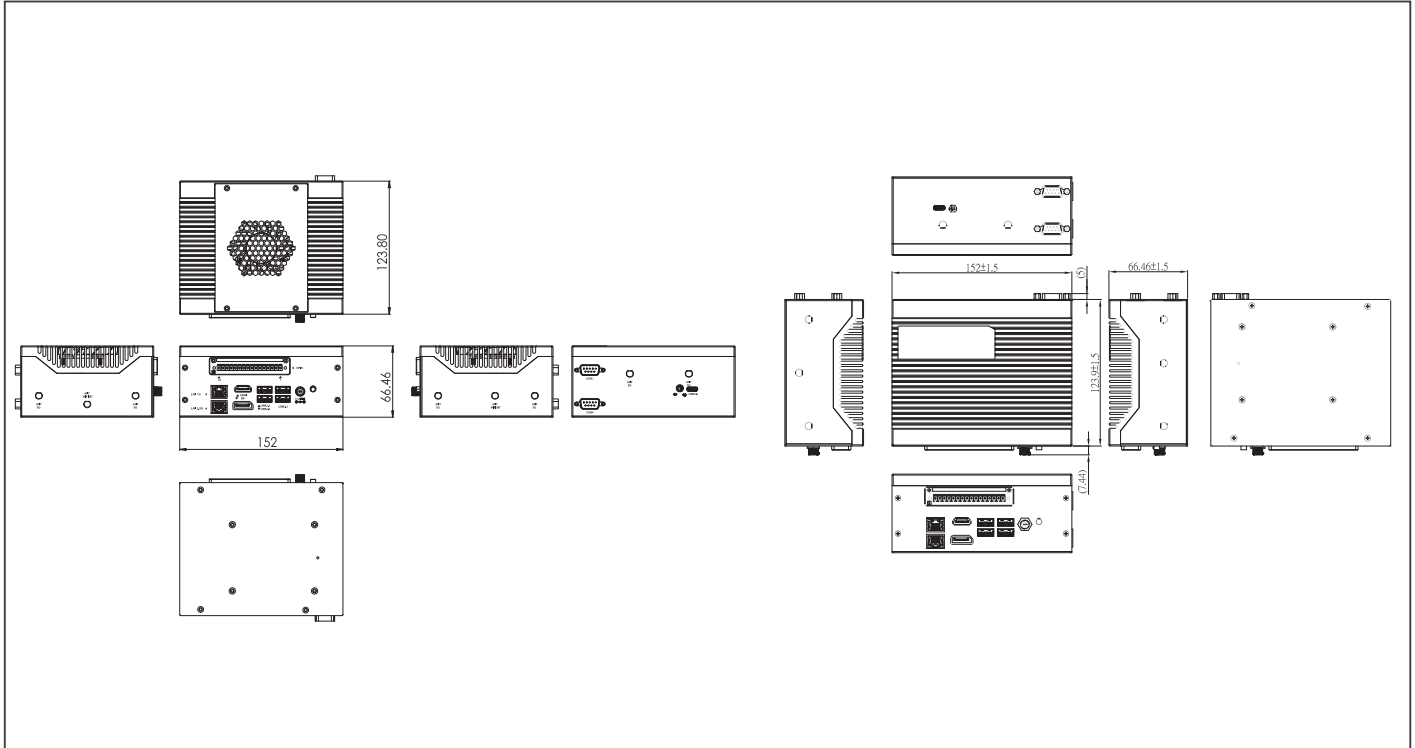
Specifications

System	
CPU	11th Gen Intel® Core™ Processor SoC Core i7-1185G7E Core i7-1185GRE Core i5-1145G7E Core i5-1145GRE Core i3-1115GRE Celeron® 6305E
Memory	DDR4 SO-DIMM Slot x 2 (up to 64GB 3200Mhz)
Graphics	Intel® Iris® Xe graphics
Storage	SATA CONN x 1 with POWER CONN (2.5" SSD) M.2 2280 M Key NVMe(PCIe [x2])
Ethernet	Intel® i225IT x 1, Intel® i219 (vPRO) x 1
WiFi/BT	Optional
Audio	Realtek ALC888s x 1 (Mic in /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 Micro-SIM SATA3.0 with power connector x 1 (2.5" SSD) PCIe x 4 slot (Optional)
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	124mm x 152mm x 66.5mm
Gross Weight	GW: 2.3kg
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
Certification	CE, FCC Class A
OS Support	Windows 10 /IOT, Yocto 3.1, Ubuntu 20.04.02



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Core	LAN	Memory	USB	COM Ports	Expansion Slot	GPIO	Display	Power	Operation Temp	Fan
UPX-EDGE-TGLI7-A10-0000	Intel Core i7-1185G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Yes.
UPX-EDGE-TGLI5-A10-0000	Intel Core i5-1145G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Yes.
UPX-EDGE-TGLI3-A10-0000	Intel Core i3-1115G7E	2	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Yes.
UPX-EDGE-TGLCR-A10-0000	Intel Celeron® 6305E	2	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Yes.
UPX-EDGE-TGLI7G7E-A10-0000	Intel Core i7-1185G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Yes.
UPX-EDGE-TGLI5G7E-A10-0000	Intel Core i5-1145 G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	Yes.
UPX-EDGEFL-TGLI7-A10-0000	Intel Core i7-1185G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	NO
UPX-EDGEFL-TGLI5-A10-0000	Intel Core i5-1145G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	NO
UPX-EDGEFL-TGLI3-A10-0000	Intel Core i3-1115G7E	2	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	NO
UPX-EDGEFL-TGLCR-A10-0000	Intel Celeron® 6305E	2	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	NO
UPX-EDGEFL-TGLI7G7E-A10-0000	Intel Core i7-1185G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	NO
UPX-EDGEFL-TGLI5G7E-A10-0000	Intel Core i5-1145 G7E	4	GbE x 2 (Intel i225 IT up to 2.5Gbps, Intel i219 up to 1Gbps)	SO-DIMM (Up to 3200Mhz, 64GB)	USB 3.2 Gen 2 x 3 USB 2.0 x 1, USB 4.0 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	16pin x 1	HDMI, DP, eDP, DP via USB type C	12V	32°F ~140°F (0°C ~ 60°C)	NO

Packing List

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

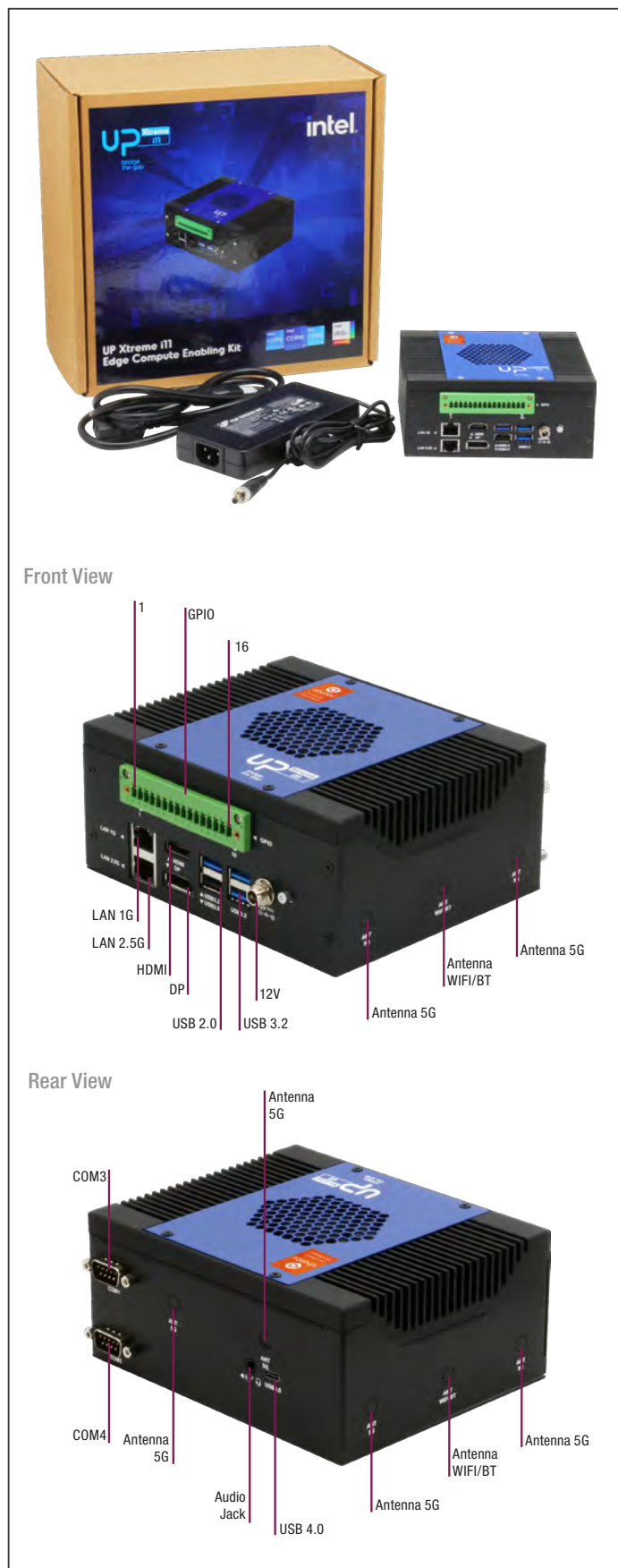
Optional Accessories

- **1255X00032**
(TF)AC/DC Adapter.Input AC.100~240V.Output DC.12V.MAX 72W.6.0A.180D.W/LOCK.EDAC. EA10681U(120)
(Remark)
- **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.U.SA. 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
- **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



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



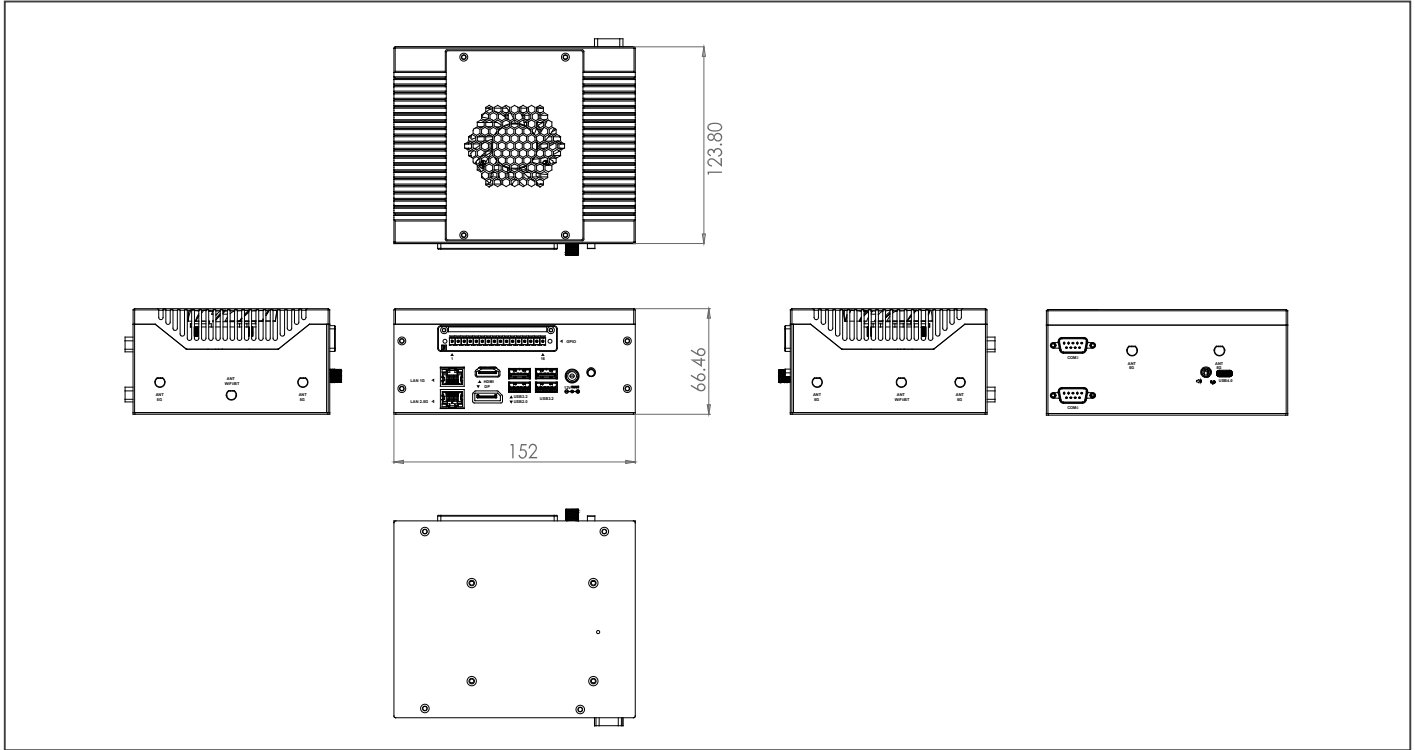
Specifications

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



Features

- 12th generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- Onboard Dual Channel LPDDR5 up to 32GB
- Support 4 independent display up to 4K at 60Hz
- Support 2 x M.2 2280 KEY M (PCIe Gen4)
- Support 5G via M.2 3052
- Support Intel AX210 WiFi 6
- TPM2.0
- USB4.0
- Up to 2.5Gbps LAN speed
- Wide Range Power 12-36V



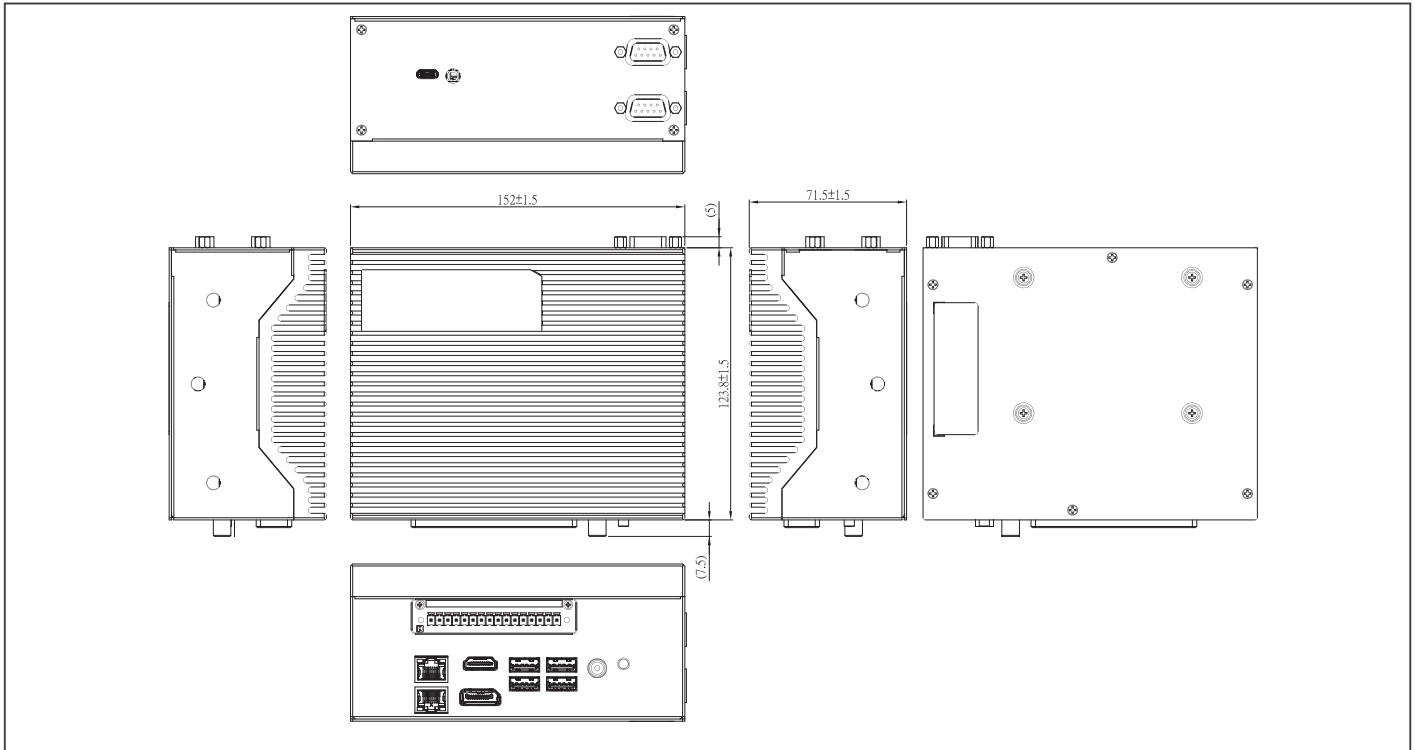
Specifications

System	
CPU	Intel Core i7-1270PE/i5-1250PE/i3-1220PE/Celeron-7305E
Memory	Onboard LPDDR5 Dual Channel up to 32GB
Graphics	Intel® Iris® Xe graphics
Storage	M.2 2280 (PCIe Gen4.0 x 4) M-key x2 SATA3 x1
Ethernet	Intel i226IT (TSN) x1/ Intel i219 (vPRO) x1
WiFi/BT	Optional via M.2 2230
Expansion Slot	M.2 2230 E-key x1 M.2 2280 (PCIe Gen4.0 x 4) M-key x2 SATA3 x1 M.2 3052 B-key x1 Nano SIM slot x1
Security	TPM 2.0
OS Support	Windows* 10 Enterprise 2021 LTSC Ubuntu 22.04 Yocto 4.0
I/O Placements	
USB	USB3.2 Gen2 Type A x3 USB2.0 Type A x1 USB4.0 Type C x1
Display Port	HDMI 2.0b x1 DP 1.4a x1 DP 1.4a via USB type C x1 eDP 1.4b x1
Ethernet	RJ45 x 2 for 1G/2.5GbE LAN
COM	x 2 (RS232/422/485)
Audio	Audio Jack x 1 (Mic-in, Line out)
GPIO	16 Pin terminal block connector x1
POWER Supply	
Power requirement	12-36V DC input (AT/ATX mode)
Power supply type	Lockable
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)
MECHANICAL	
Mounting	VESA Mount/Wall Mount
Dimensions (WxHxD)	152 x 123.8 x 71.5 mm
Net Weight	1.34kg
Gross Weight	1.76kg
Environment	
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)
MTBF	366,810
Certification	CE/FCC Class A, RoHS Compliant, REACH



Dimension

Unit: mm



Optional Accessories

Part Number	Description
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)
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
M0UPAD0020	(TF).WALLMOUNT_BRACKET.PMS BLACK C-13.UPX-EDGE-ADLP01

Packing List

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

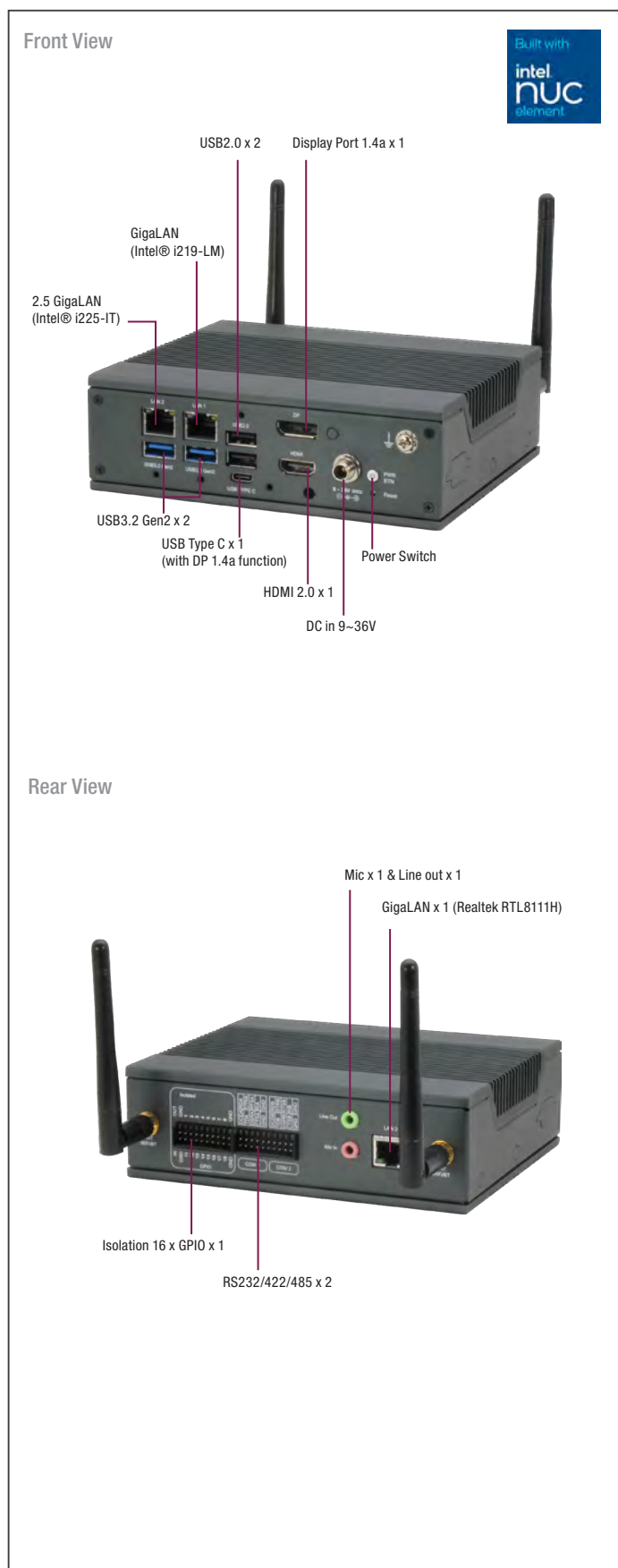
Ordering Information

Part Number	CPU	Core	Memory	Storage
UPX-EDGE-ADLP17-A10-16128	Intel Core i7-1270PE	4+8	16GB	128GB
UPX-EDGE-ADLP15-A10-16128	Intel Core i5-1250PE	4+8	16GB	128GB
UPX-EDGE-ADLP13-A10-08128	Intel Core i3-1220PE	4+4	8GB	128GB
UPX-EDGE-ADLPCR-A10-0864	Intel Celeron® 7305E	1+4	8GB	64GB



UP Element i12 Edge

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



Features

- 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)
- LAN port x 3 and 1 for 2.5Gbps
- Optional CANBUS 2.0B module
- Support OOB function in LAN1(for vPRO version)
- Fanless design



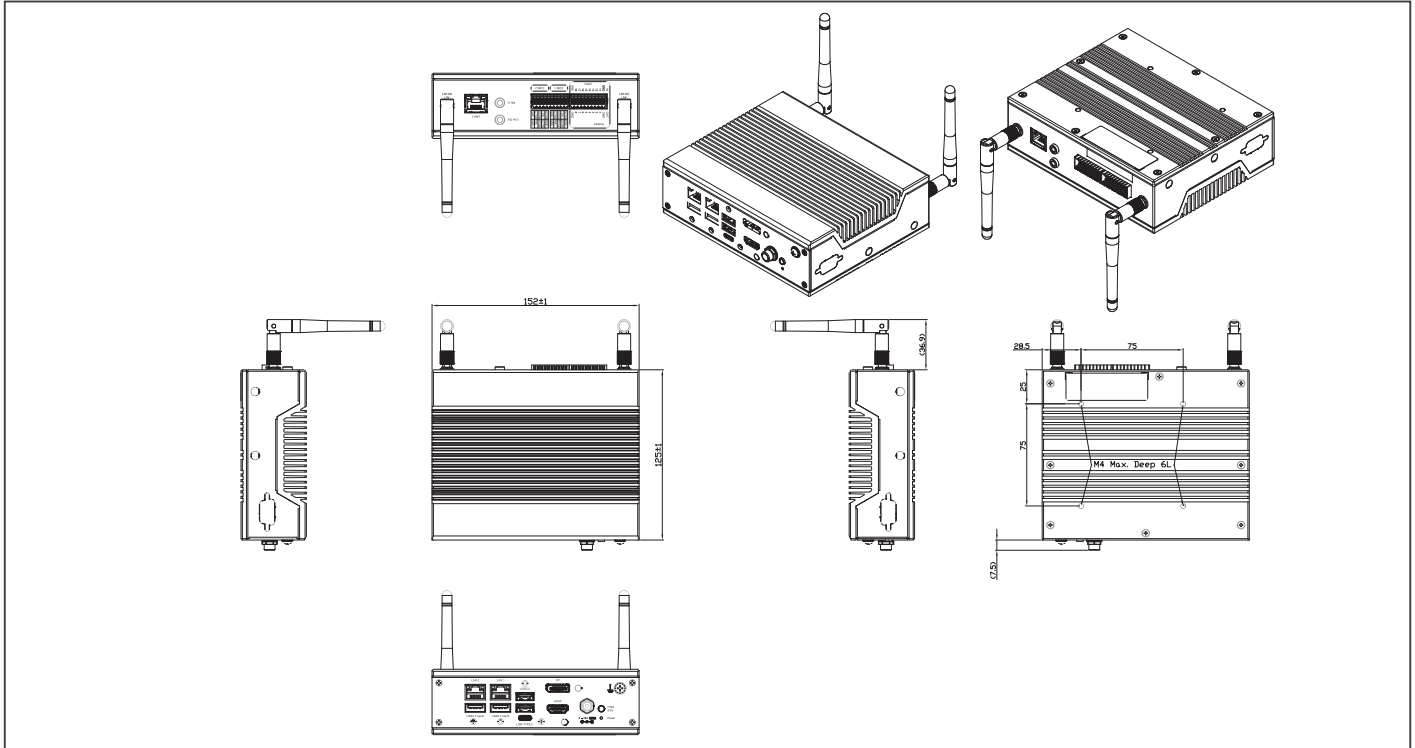
Specifications

System	
CPU	Intel® Core™ i3-1215U / i5-1235U / i7-1255U / Celeron® 7305 Processor SoC
Memory	Onboard LPDDR5, 4GB / 8GB / 16GB / 32GB
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-HB17-A10-1600	i7-1255U	16GB	—	—	—	2	16	Fanless
UPE-EDGE-HB15-A10-0800	i5-1235U	8GB	—	—	—	2	16	Fanless
UPE-EDGE-HB13-A10-0800	i3-1215U	8GB	—	—	—	2	16	Fanless
UPE-EDGE-HBCR-A10-0400	Celeron® 7305	4GB	—	—	—	2	16	Fanless
UPE-EDGE-HB15-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



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ES France - Mobilité & Systèmes Embarqués
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Turn-Key Chassis Solutions



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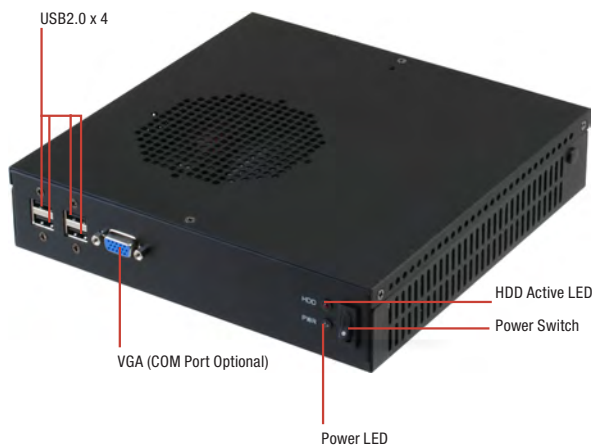


e-mail : mse@es-france.com
Site Web : www.es-france.com

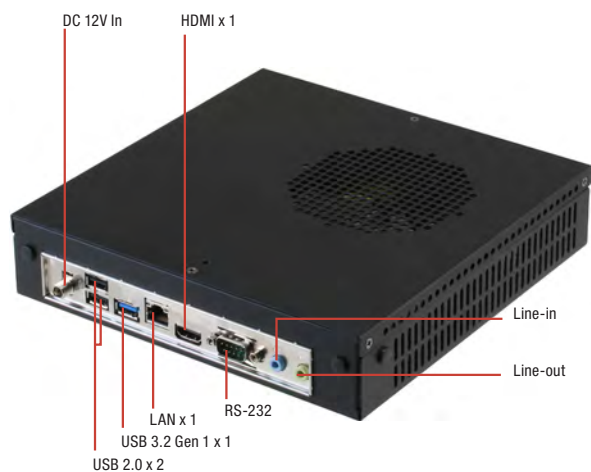
ACS-1U01-BT4

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



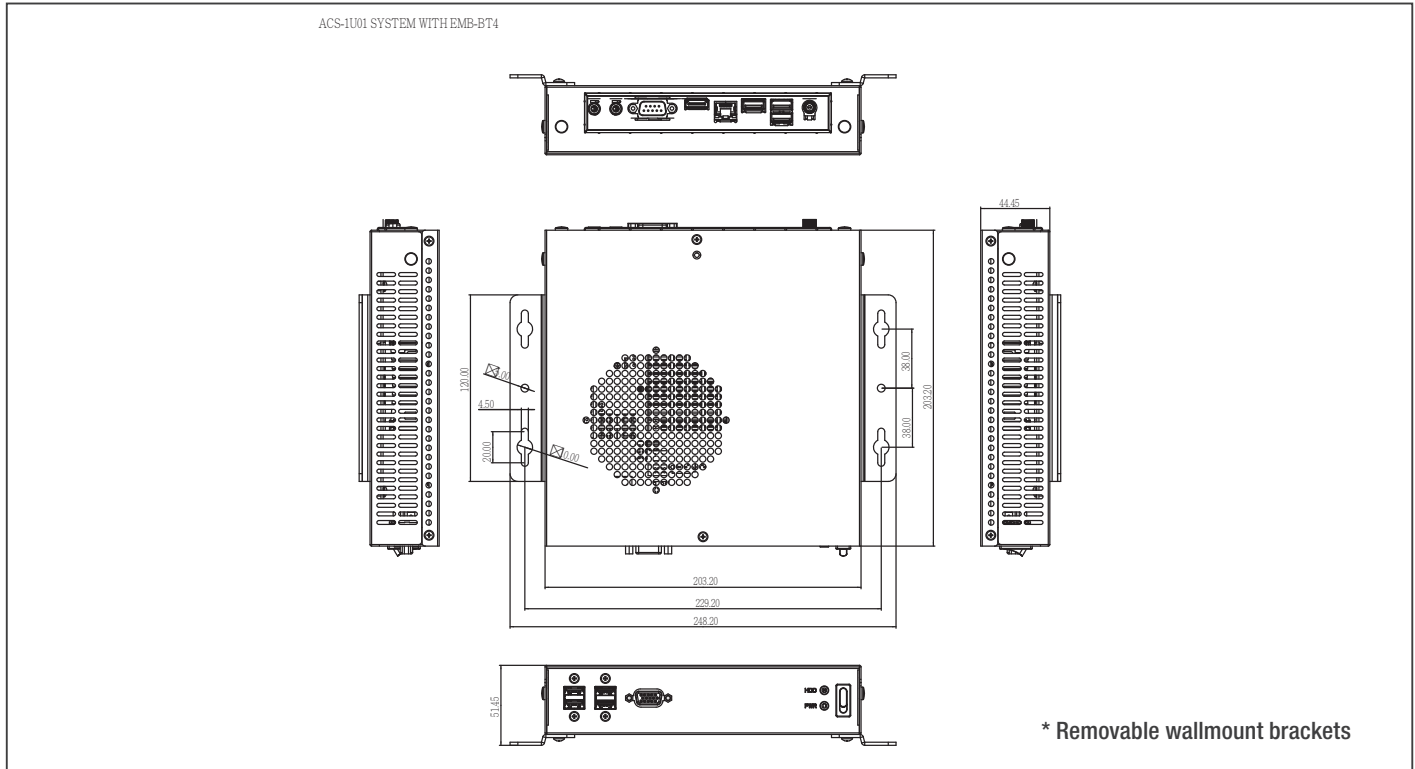
Specifications

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

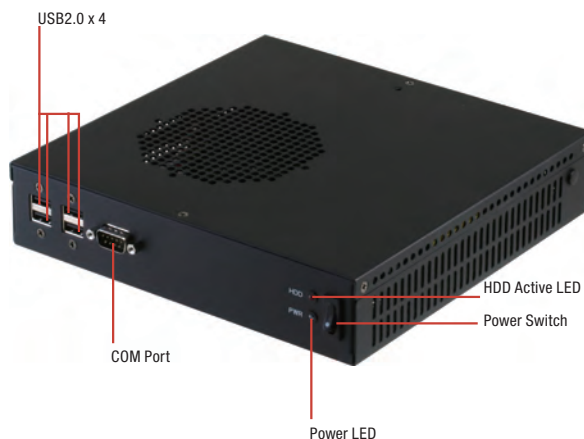
- **1702031802**
Power Cord (US & Taiwan Type)
- **1702031803**
Power Cord (European Type)
- **170203180B**
Power Cord (China Type)
- **170203180E**
Power Cord (Japanese Type)
- **1255300607**
60W Power Adapter



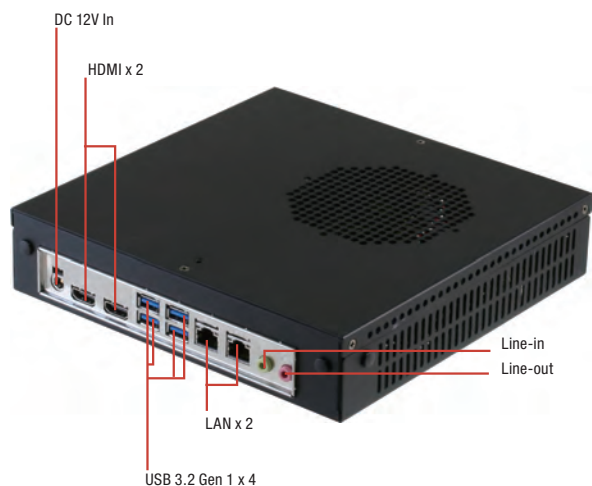
ACS-1U01-H110B

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



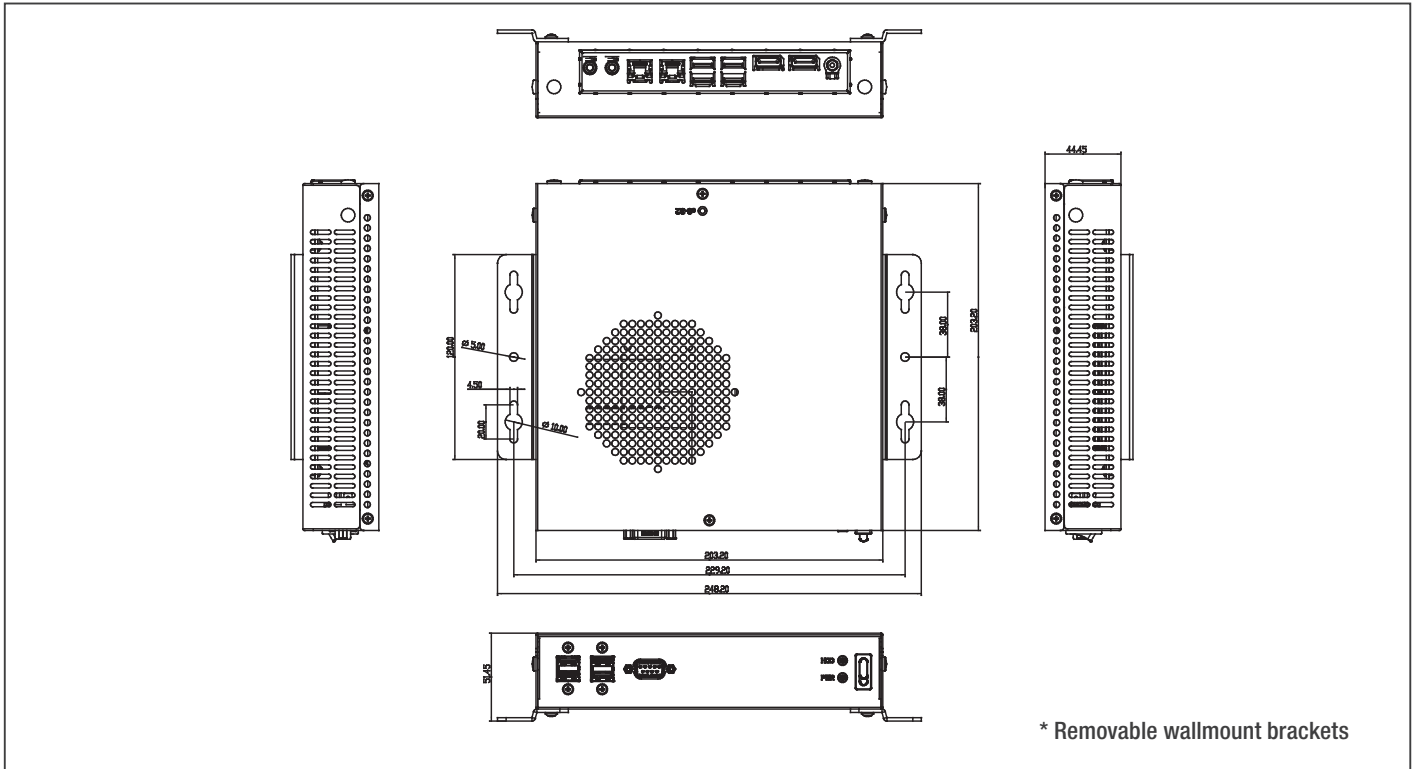
Specifications

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



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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Industrial Chassis



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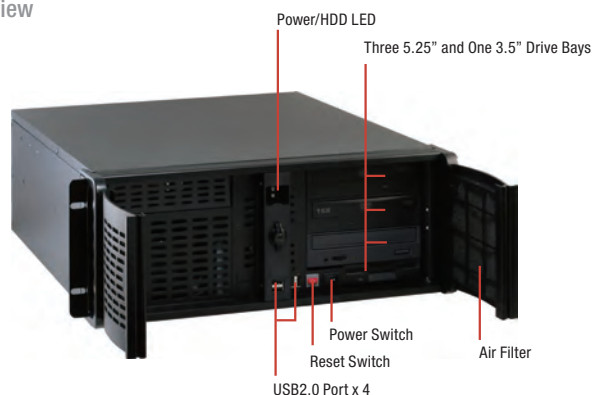


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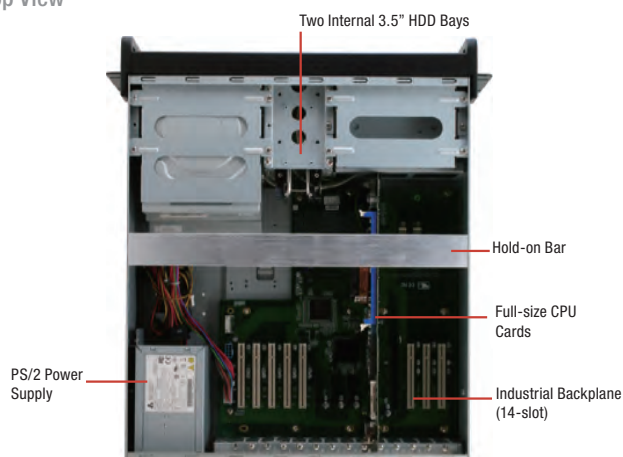
Front View



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

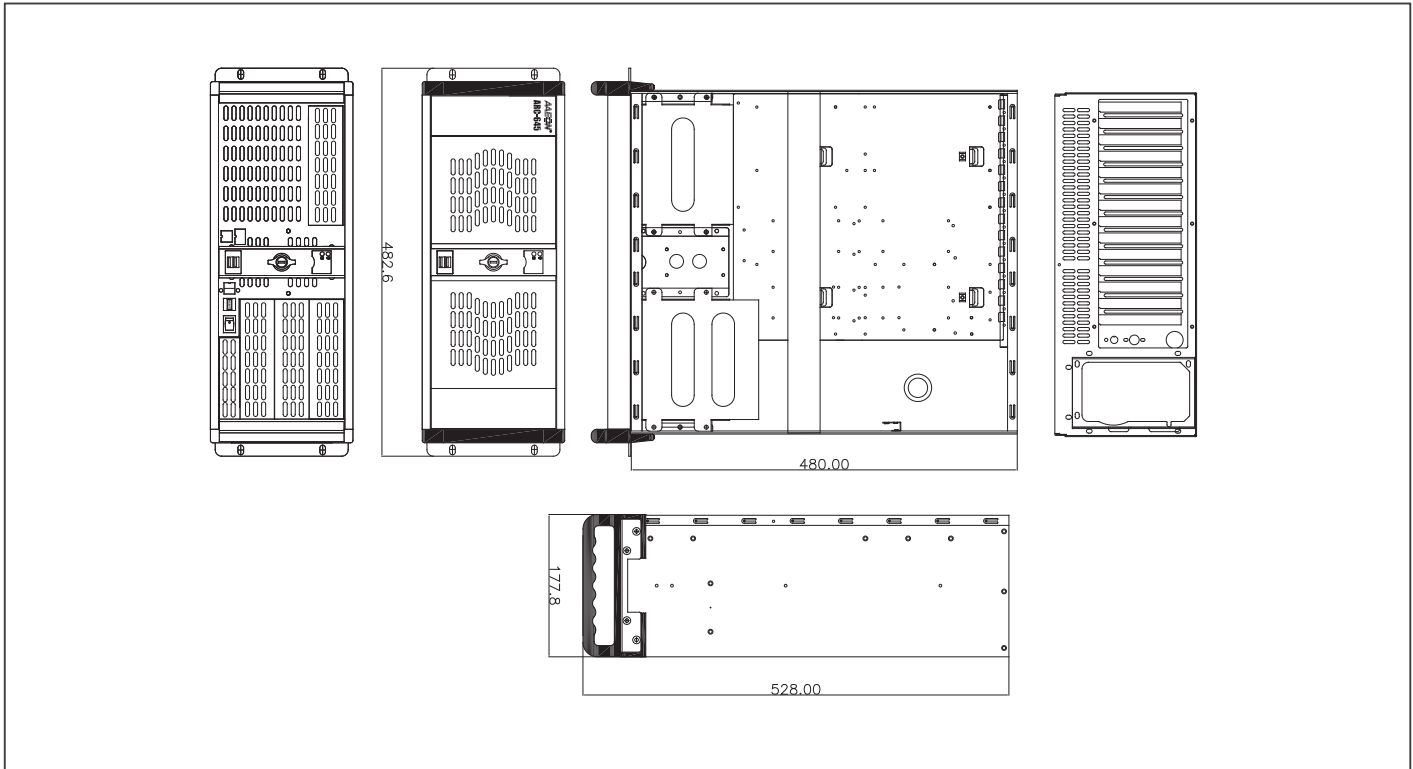


Specifications

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



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Robot Controller & Expansion



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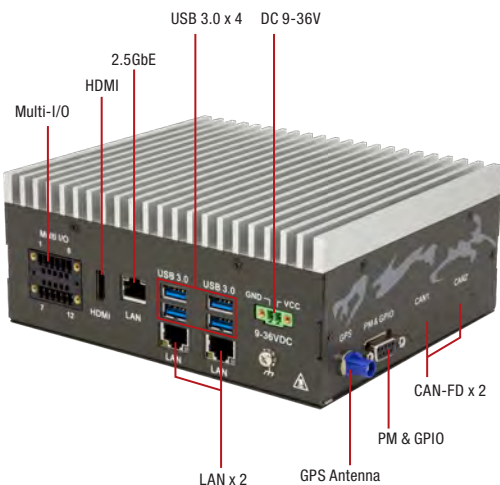


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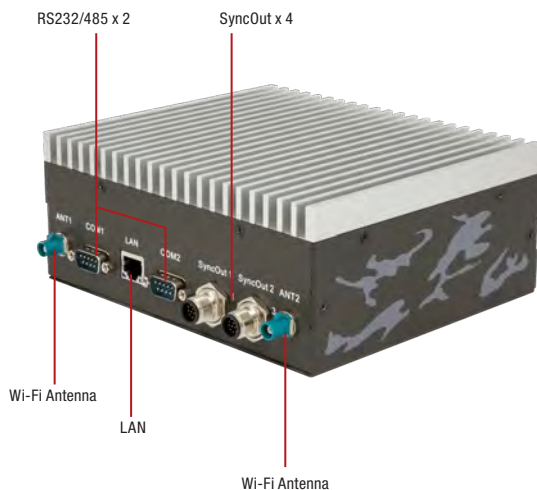
RBX-I2000

Robot Controller with Intel 11th Core™ i7/i5/i3/Celeron Processor with Time Synchronization feature

Front View



Rear View



Features

- Max. up to 64G DDR4 3200MHz dual channel memory, non-ECC type
- Support M.2 M Key PCIe Gen4 x4 NVMe SSD, max. up to 2TB capability
- Four channel CANbus interface, compatible with PEAK CAN module.
- Four syncout channel of PPS + ToD for external sensors.
- Built-in BMI160 6-axis IMU for robot odometry
- Comprehensive interface of RS-232/485, GPIO, PWM and power managed
- SyncBotic LiDAR based SLAM tool by using NDT algorithm
- Support ROS1, ROS2, Autoware, Apollo framework
- Integrated VHDL code for time stamp with GPS signal



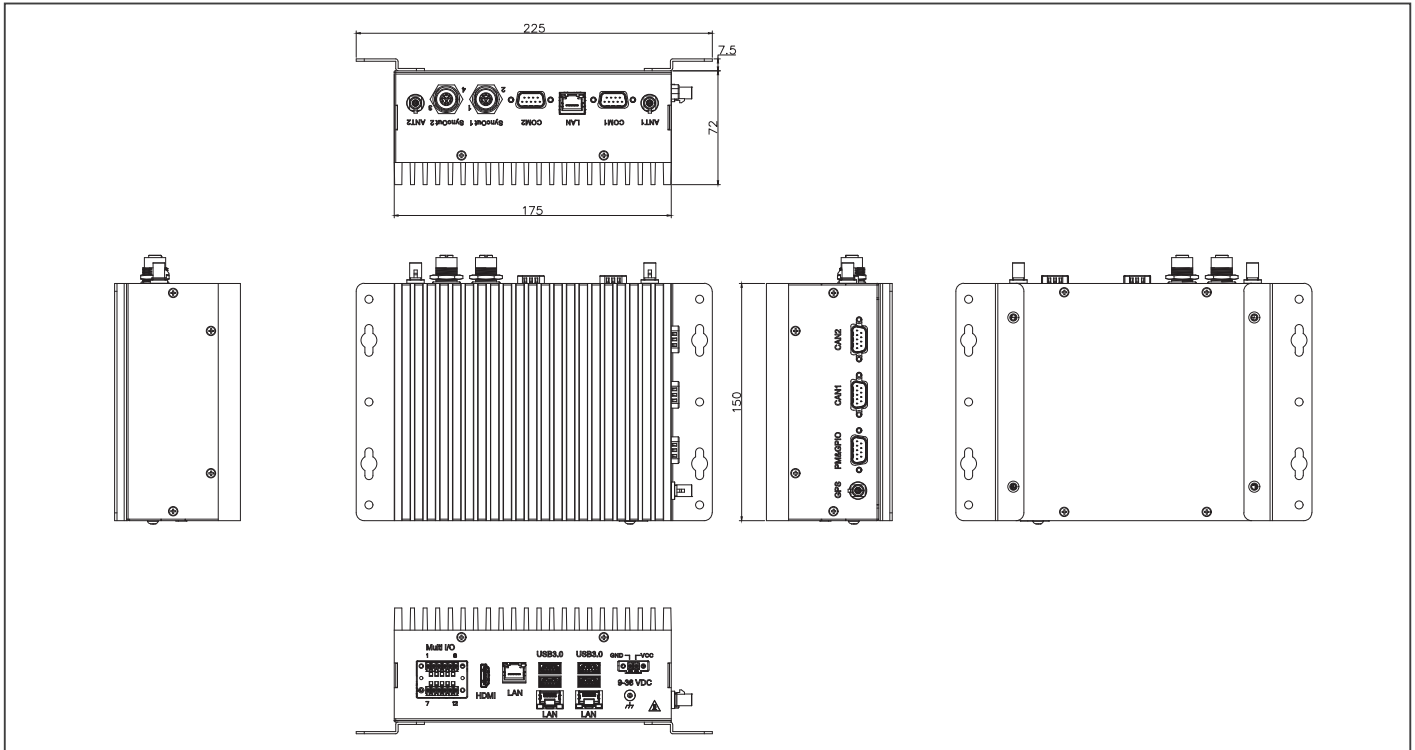
Specifications

System	
Processor	Intel® 11th Generation Core™ i7/i5/i3/Celeron SoC i7-1185G7E (4C, 1.7GHz, up to 4.4GHz, TDP-up 28W) i5-1145G7E (4C, 1.5GHz, up to 4.1GHz, TDP-up 28W) i3-1115G4E (2C, 2.2GHz, up to 3.9GHz, TDP-up 28W)
Memory	Max. up to 64G DDR4 3200MHz, SO-DIMM x 2, non-ECC type
Storage	M.2 2280 M Key slot x 1 (PCIex4), up to 2TB NVMe SSD 2.5" SATA SSD/HDD bay 3.0 x 1
Real Time Clock	RTC x 1, with 3V CR2032 Lithium battery
Security	TPM 2.0
Indicators	—
Cellular	—
Wireless Lan	M.2 2230 E Key slot x 1 (Wifi 802.11 ac/b/g/n, BT 5.0)
Operating System	Windows 10 IoT Enterprise / Linux (by request)
Robot Framework&Script	ROS 1/ ROS 2, LiDAR-base SLAM script (*NDT algorithm)
I/O Interfaces	
HDMI	HDMI 2.0 x 1, support 3840 x 2160 @ 30Hz)
Ethernet	10/100/1GBase-T(X) Ethernet port x 3 2.5Gigabit Ethernet port x 1
USB	USB 3.0 Gen1 x 4
Multi-I/O	8-bit DIO, 2-channel CAN interface
SyncOut	1pps + time date output x4 for robot external sensors *note (*note Support Velodyne VLP-16, Xsens MTI-670, stereo camera)
DB-9	RS232/485 x 2 CAN-FD x 2 PM&GPIO interface x1
Antenna	FAKRA Z code for Wi-Fi x 2 FAKRA C code for GPS x 1
Expansion Slot	Mini PCIe slot x 1, 3026 for GPS module Mini PCIe slot x 1, 3052 for PEAK CANbus
Power Connector	2 Pin 3.81mm Pitch Phoenix Connector
Other Interface	—
Power Supply	
Power Requirement	DC 9 ~ 36V (Optional DC12V), AT Type
Power Consumption	67 W (Full Loading)
Power Mode	Support system auto-power on
Environmental and Mechanical	
Dimension	6.88" x 5.9" x 2.8" (175 x 150 x 72mm)
Weight	4.4lb (2kg)
Mount Options	Wall Mount
Operation Temperature	32 °F ~ 122 °F (0 °C ~ 50 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operation Humidity	10% ~ 90% relative humidity, non-condensing
Vibration	3Grm/ operation – eMMC, MicroSD (IEC68-2-64)
Shock	30G peak acceleration (11 msec. duration, eMMC, microSD, or SSD) IEC 68-2-27
EMI	CE & FCC class A



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Thermal	Storage	LAN	USB	Expansion slot	Power	Operation Temp.	Time sync
RBX-I2000-A10-0701	11th Generation Core Intel® i7-1185G7E SoC	DDR4 3200MHz, SO-DIMM x 2, 32G DDR4	Fanless	1TB SSD	GbE x 4	USB3.0 Gen 1 x4	M.2 E Key 2230 x 1 Mini PCIe slot, 3052 x1 Mini PCIe slot, 3026 x1	DC 9 ~ 36V	0°C ~ 50°C @ 0.6 m/s airflow	Syncout x4
RBX-I2100-A10-0701	11th Generation Core Intel® i7-1185G7E SoC	DDR4 3200MHz, SO-DIMM x 2, 32G DDR4	Fanless	1TB SSD	GbE x 4	USB3.0 Gen 1 x4	M.2 E Key 2230 x 1 Mini PCIe slot, 3052 x1 Mini PCIe slot, 3026 x1	DC 9 ~ 36V	0°C ~ 50°C @ 0.6 m/s airflow	—
RBX-I2000-A10-0501	11th Generation Core Intel® i5-1145G7E SoC	DDR4 3200MHz, SO-DIMM x 2, 16G DDR4	Fanless	512G SSD	GbE x 4	USB3.0 Gen 1 x4	M.2 E Key 2230 x 1 Mini PCIe slot, 3052 x1 Mini PCIe slot, 3026 x1	DC 9 ~ 36V	0°C ~ 50°C @ 0.6 m/s airflow	Syncout x4
RBX-I2100-A10-0501	11th Generation Core Intel® i5-1145G7E SoC	DDR4 3200MHz, SO-DIMM x 2, 16G DDR4	Fanless	512G SSD	GbE x 4	USB3.0 Gen 1 x4	M.2 E Key 2230 x 1 Mini PCIe slot, 3052 x1 Mini PCIe slot, 3026 x1	DC 9 ~ 36V	0°C ~ 50°C @ 0.6 m/s airflow	—
RBX-I2000-A10-0301	11th Generation Core Intel® i3-1115G4E SoC	DDR4 3200MHz, SO-DIMM x 2, 16G DDR4	Fanless	256G SSD	GbE x 4	USB3.0 Gen 1 x4	M.2 E Key 2230 x 1 Mini PCIe slot, 3052 x1 Mini PCIe slot, 3026 x1	DC 9 ~ 36V	0°C ~ 50°C @ 0.6 m/s airflow	Syncout x4
RBX-I2100-A10-0301	11th Generation Core Intel® i3-1115G4E SoC	DDR4 3200MHz, SO-DIMM x 2, 16G DDR4	Fanless	256G SSD	GbE x 4	USB3.0 Gen 1 x4	M.2 E Key 2230 x 1 Mini PCIe slot, 3052 x1 Mini PCIe slot, 3026 x1	DC 9 ~ 36V	0°C ~ 50°C @ 0.6 m/s airflow	—

Packing List

- RBX-I2000 series controller
- Wi-Fi module x1
- GPS module x1
- Wall mount kit x1
- FAKRA Z Jack to SMA cable x2 (for wifi antenna)
- FAKRA C code to SMA cable x1 (for GPS antenna)

Optional Accessories

- **1255300611**
Power Adapter.DC.100/240V.12V.5A.60W.2p
phenix P=3.81mm.FSP.FSP060-
DHAN3/9NA0608085
- **1702031802**
POWER CORD.3P-125V 10A 180D.1.8M.USA.
FANJET. YP12/YC-12
- **1702031803**
POWER CORD.3P-250V 10A 180D.1.8M.EU.FAN-
JET. YP-22/YC-12
- **170203180J**
POWER CORD.3P-250V 13A.UK type.1830mm
- **1702031811**
POWER CORD.3P-125V.10A.180D.1.8M.TWN/BSMI.
FANJET.YP-12/YC-12
- **170203180E**
Power cord.3P.125V/7A.1.8M.PSE YP12/YC12
Certificate

AMR-TSMC PRELIMINARY

Multichannel Synchronized module card



Features

- Based on high speed VHDL to process the time synchronization
- Output 7-channels PPS and ToD signal
- Integrated u-blox high precision GPS module
- Xsens MTi-670 9-axis IMU with fusion engine
- SyncBotic python setting, monitor and demo script
- 16hr time keeping feature when power down
- Keep time data when move to indoor area
- Friendly register setting for output PPS and ToD data
- Provide I2C interface to update ECU/controller time information
- 0.2 deg roll/pitch and cm-level position accuracy
- Support all robot platform and easily install this card
- Wide operating temperature up to -40°C to 75°C (-40°F to 167°F)



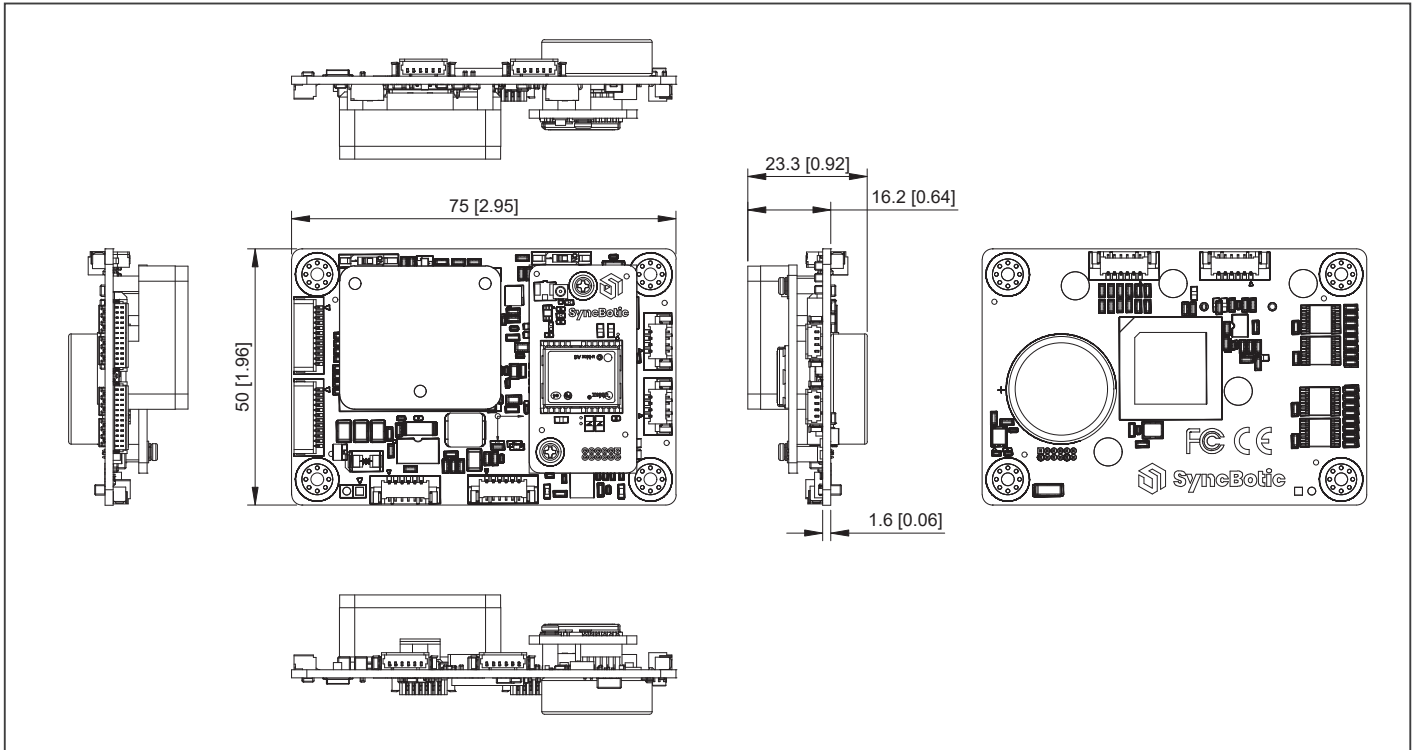
Specifications

Platform	
Processor	High speed FPGA/VHDL
GPS module	Support SyncBotic's GPS module. (Use U-blox M9N, F9P module)
IMU module	Xsens MTi-670 9-axis IMU
Board to board connector	PPS (packet per second) + ToD (Time of Day) output x7 PPS (packet per second) output x4 I2C + PPS for controller side to update the time information x1 RS-232 output (Xsens sync raw data output) x1
Xsens MTi670 9-axis IMU Specification	
Support list	Gyroscope, Accelerometer, Magnetometer, Barometer, orthogonality
Roll/Pitch	Static: 0.2° Dynamic: 0.5°
Yaw	Dynamic: 1°
Position	Horizontal: 1.0m Vertical: 2.0m
Velocity	3D: 0.05m/s
U-Blox GPS Specification	
Module type	L1/L2 or RTK U-blox GPS high precision module
Receiver type	GPS L1C/A, SBAS L1C/A, QZSS L1C/A, QZSS L1 SAIF, GLONASS L10F, BeiDou B1, Galileo E1B/C, GPS/QZSS L2C, GLONASS L20F, Galileo E5b, BeiDou B2I, RTK
Acquisition	Cold start: 26s Hot start: 2s Aided start: 3s
Re-convergence time	RTK ≤ 10S (* Only on RTK module card)
Power	
Storage Temperature	9-55V DC ±5%
Operation Humidity	1.2W at 12VDC input
Physical Characteristics	
Vibration	75 x 50 x 23mm (2.95 x 1.968 x 0.917 inch)
Shock	M2 screw x4
Environmental	
Operating Temperature	-40°C to 75°C (-40°F to 167°F)
Operating Humidity	Approx. 95% @40 (non-condensing)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Vibration	IEC 60068-2-64: 5Grms, 5-500Hz, 3 axes
Shock	Operating: 3G, half sine, 11ms duration
EMI	CE (EN 55032, EN 55035) & FCC class A (ANSI C63.4, 4a)



Dimension

Unit: mm



Optional Accessories

- **TBD**
6-pin Syncout cable x2, 6-pin power cable x1, IMU out/I2C out cable x1, PPS out cable x1, I-pex to SMA cable x1, M2 screw x4
- **TBD**
SyncBotic F9P GPS module x1, M2 screw x2

Ordering Information

Part Number	Description
AMR-TSMC-A10-0EL11	Multichannel synchronization with 11x channel, L1 GPS module
AMR-TSMC-A10-0EML1	Multichannel synchronization with 11x channel, RTK GPS module

Packing List

- AMR-TSMC x1



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Roadside Unit



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Front View



Features

- Intel® Atom® x7-E3950 Processor
- SO-DIMM DDR3L 8GB
- Mini PCIe connector (For 3G/4G Module) x 2
- M.2 2230 E key (For WiFi Module) x 1
- Support AI module
- Support C-V2X / DSRC
- Waterproof Enclosure Design

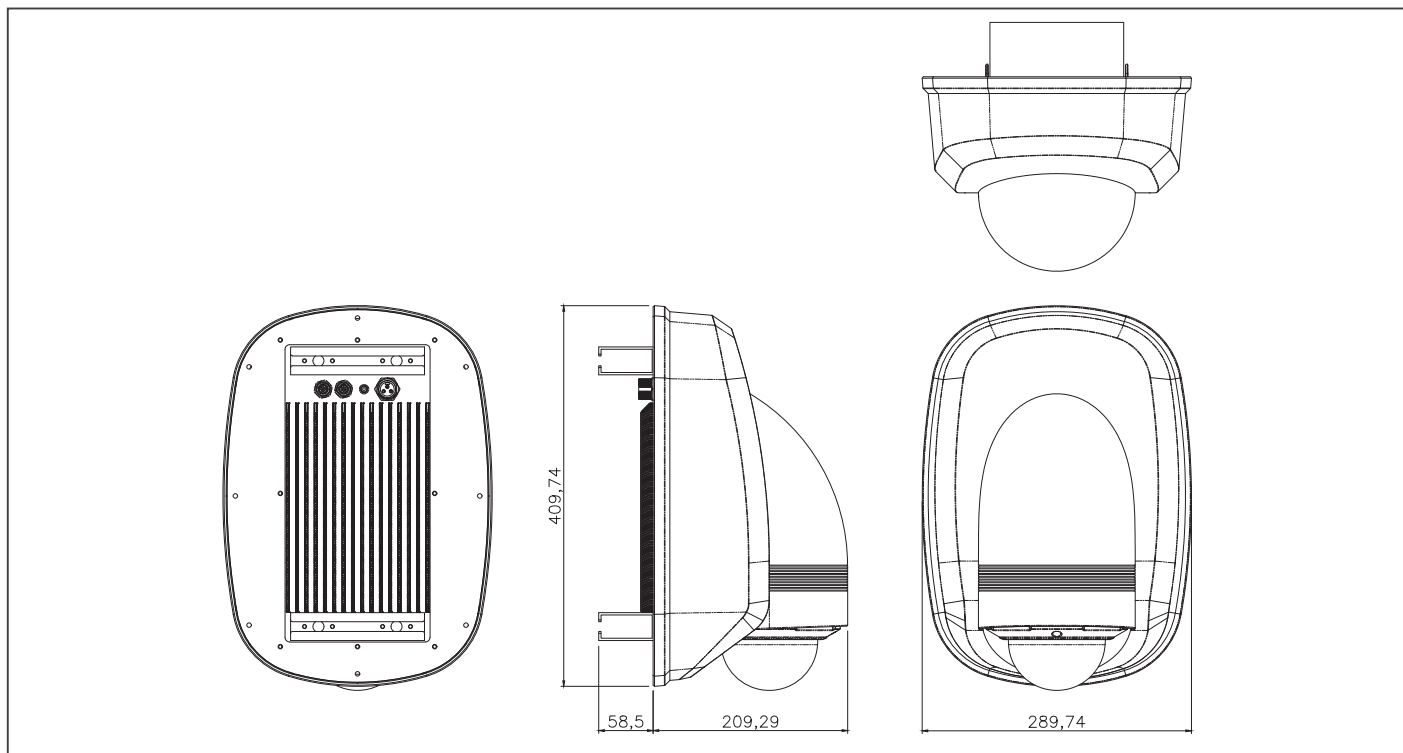


Specifications

System	
Processor	Intel® Atom® x7-E3950 Processor
Memory	SO-DIMM DDR3L 8 GB
Storage	Onboard eMMC 64 GB mSATA via M.2 2242 B Key slot x 1
Indicators	LED Power Light x 1
Operating System	Windows 10/ Linux (by request)
RF & AI	
Cellular	4G LTE CAT 4, Mini PCIe slot
Wireless Lan	WiFi 802.11 b/g/n/ac, M.2 2230 E key
VPU (Optional)	Intel Movidius Myriad X VPU, MA2485, M.2 2280 M key
C-V2X / DSRC (Optional)	3GPP Rel.14 Compliant LTE-V2X direct communications
External I/O	
Power Input	AC input x 1, waterproof connector Male type
Serial Port	RS-232 x 1, M12 waterproof connector Male type
SDI-12 (Optional)	SDI-12 port x 1, M12 waterproof connector Male type
Antenna	Internal 4G LTE antenna x 1 Internal Wi-Fi antenna x 2
Expansion Slot	Mini PCIe slot x 2, for 3G/4G LTE M.2 2230 E key x 1, for WiFi M.2 2280 M key x 1, for Myriad X VPU Micro SIM slot x 1
Other Interface	—
Power Supply	
Power Requirement	80-264 VAC
Physical Characteristics	
Enclosure	Plastic and Metal enclosure
Dimension	11.4" x 16.14" x 8.2" (290 x 410 x 209 mm)
Weight	TBD
Mounting/Installation	Pole mount, Wall mount (Optional)
Environmental	
Operating Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C)
Storage Temperature	-40 °F ~ 176 °F (-40 °C ~ 80 °C)
Operating Humidity	10% ~ 90% relative humidity, non-condensing

Dimension

Unit: mm



Ordering Information

Part Number	CPU	Memory	Storage	Serial Port	Power Input	Power	Operation Temp.	Others
IRSU-APL-A10-0001	Intel® Atom® x7-E3950	DDR3L 8GB	eMMC 64 GB, mSATA via M.2 2242 B Key slot x1	RS-232 x1	80-264 VAC, AC input x1	80-264 VAC	0°C ~ 60°C @ 0.5 m/s airflow	—

Packing List

- IRSU

Optional Accessories

- **9686Y00026**
M.2 2230 E Key WiFi module 802.11ac/a/b/g/n + BT4.2,-40~85C.SparkLan.WNFQ-261ACN(BT)
- **9741EG25G0**
PCIe mimi card.4G LTE.module kit.Global Band W/SIM holder.W/Cable & antenna.EG25-G
- **TBD**
Wall Mount Kit
- **TBD**
Pole Mount Kit





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