



Heavy-duty Industrial Solutions



FANLESS EMBEDDED SYSTEM
TRANSPORTATION EMBEDDED SYSTEM
INDUSTRIAL BAREBONE SYSTEM
ETHERCAT MASTER CONTROLLER
INDUSTRIAL GATEWAY & FIREWALL

**To bring smart, innovative and sustainable
embedded solutions
to our connected world.**



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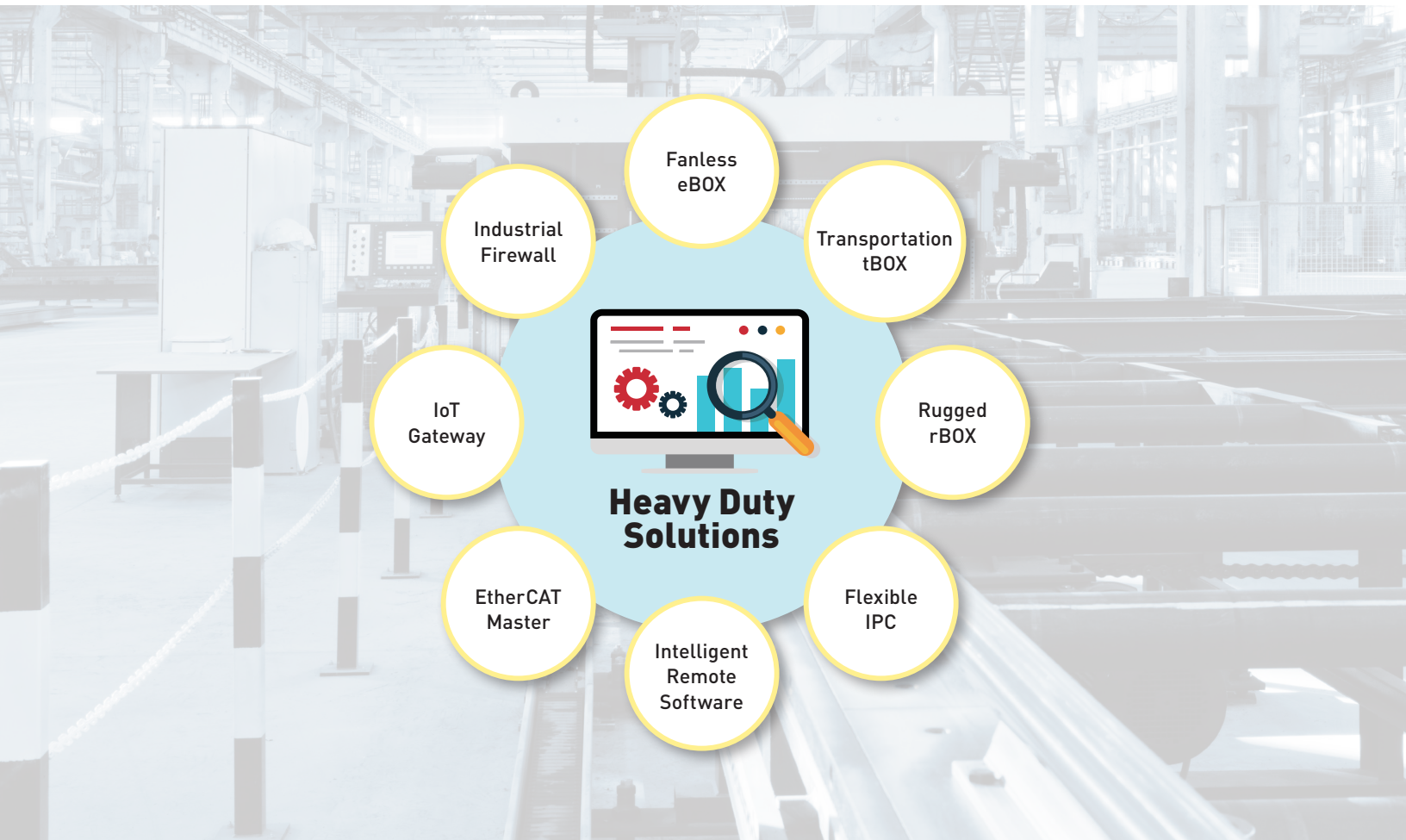
HEAVY DUTY

Heavy-duty Industrial and Embedded Computers for Mission-critical Applications

Axiomtek has been a leading supplier of applied computing platforms for more than 25 years. We have been providing comprehensive and highly integrated industrial computing systems for a variety of industrial applications. Our computing platforms feature:

- Flexibility for CPU types
- Extensive expansion capabilities
- Low-power consumption
- Wide operating temperature ranges
- Fanless designs
- Scalable storage interfaces
- Easy to use mechanisms
- Fast time-to-market

To fulfill the diverse needs of our customers, Axiomtek offers a complete range of industrial and embedded systems.

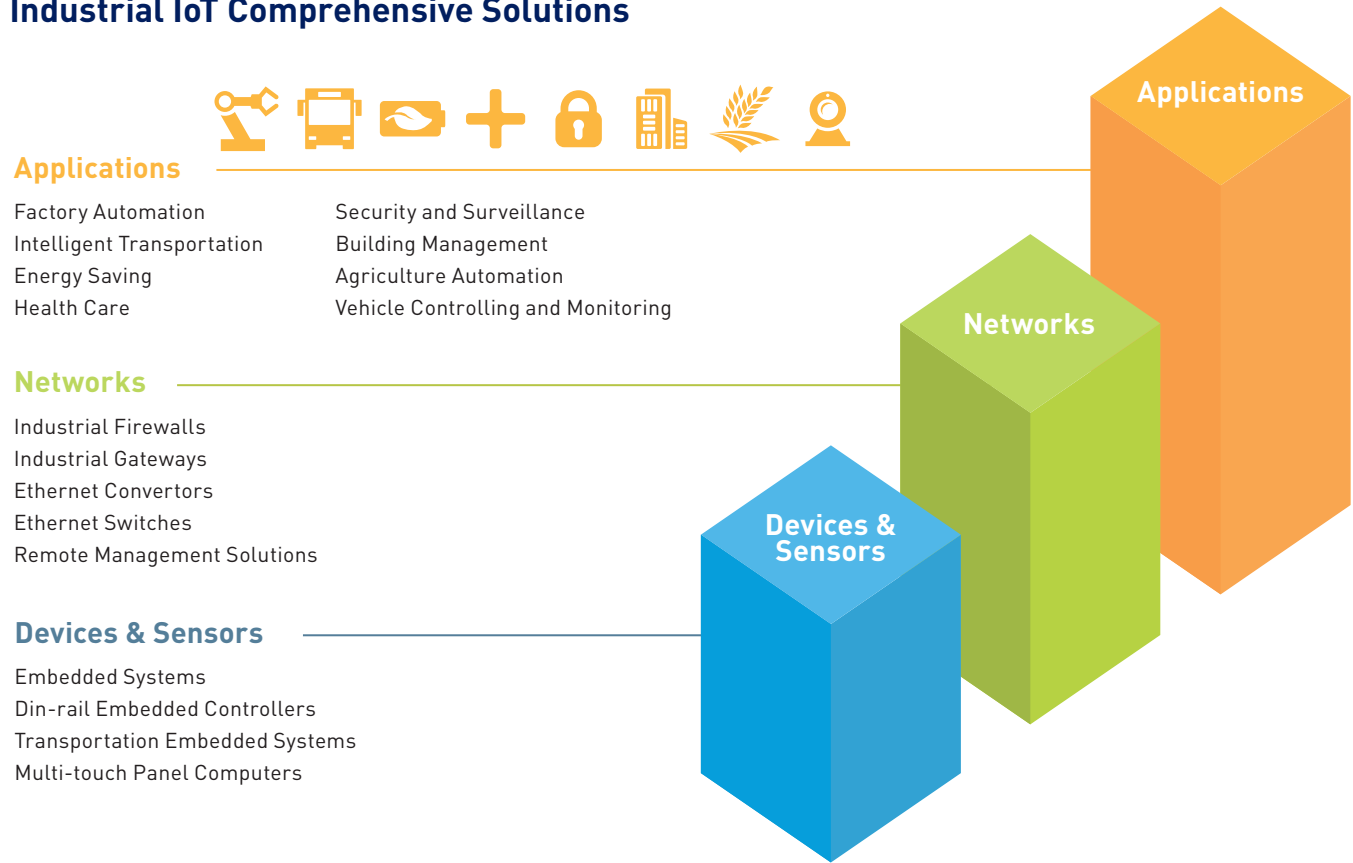


Software Services

To optimize system resource demand, reduce total cost of ownership, and improve system reliability and system design time-to-market, Axiomtek offers a wide range of Microsoft Windows®, Embedded Linux and QNX family-based products and services including:

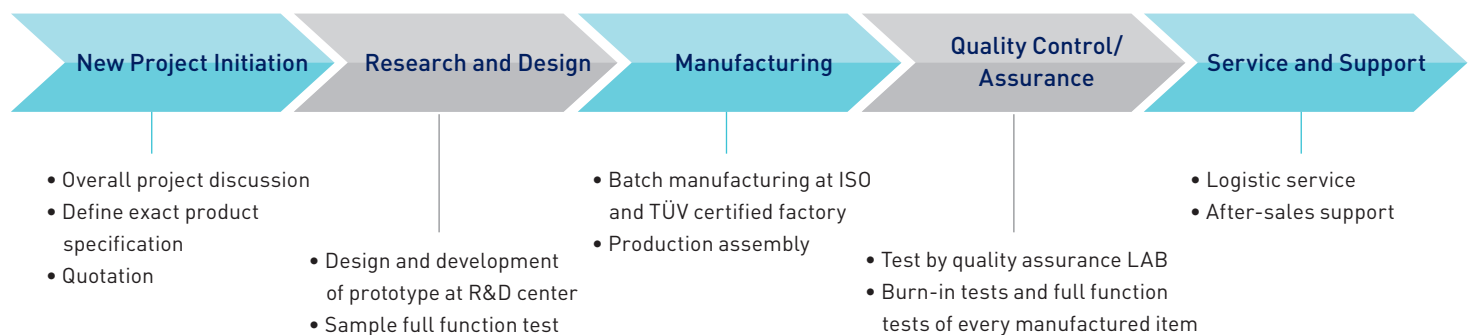
- Windows® 10
- WES7
- Windows® CE
- WE8S
- Windows® 7
- Embedded Linux
- Windows® 8.1
- Windows® XP Embedded
- QNX Neutrino RTOS

Industrial IoT Comprehensive Solutions



OEM/ODM Services

Axiomtek is committed to serving global solution integrators with flexible tailor-made designs and manufacturing services by offering design and value-added services that can help assist OEMs with their mission critical projects. We can provide our customers with a full or partial custom solution to help take the development and deployment headaches away. Our goal is to work as an extended part of our customer's team to help them achieve their goals and shorten time to market. Axiomtek's experienced engineering team consists of R&D, design and application engineers who have helped many of our customers meet their project's challenges and successfully deployed their applications within their tight deadlines. The team is standing by and ready to provide valuable insights for your project needs.



Contact us at info@axiomtek.com.tw for more information on our products and design services. Let us help you with your project needs.

eBOX *Fanless Embedded System*

Axiomtek offers a full range of expandable, low power consumption/high performance vertical market targeted embedded systems (eBOX). The eBOX products are designed to operate reliably within mission critical environments. The eBOX products are tailored to meet all your needs with useful features including powerful computing capabilities, fanless operation, wide operating temperature ranges, low power consumption, superior reliability, flexible I/O configurations, and long product life cycles and support.

FEATURES

Flexible Selection of CPUs

The eBOX products have many scalable features including performance options. Both socketed and ball grid array (BGA) types of onboard CPUs are supported. From the low power consumption Intel® Atom™ and AMD processors to the high performance Intel® Core™ processors, and AMD G-Series APU, our customers can opt for different CPU types based on performance requirements or cost consideration.

Fanless Operation and Noiseless Design

Axiomtek's eBOX products are robust computers without rotating parts- this unique design significantly increases reliability, extends mean time to repair (MTTR), and reduces maintenance costs.

Wide Operating Temperature Ranges

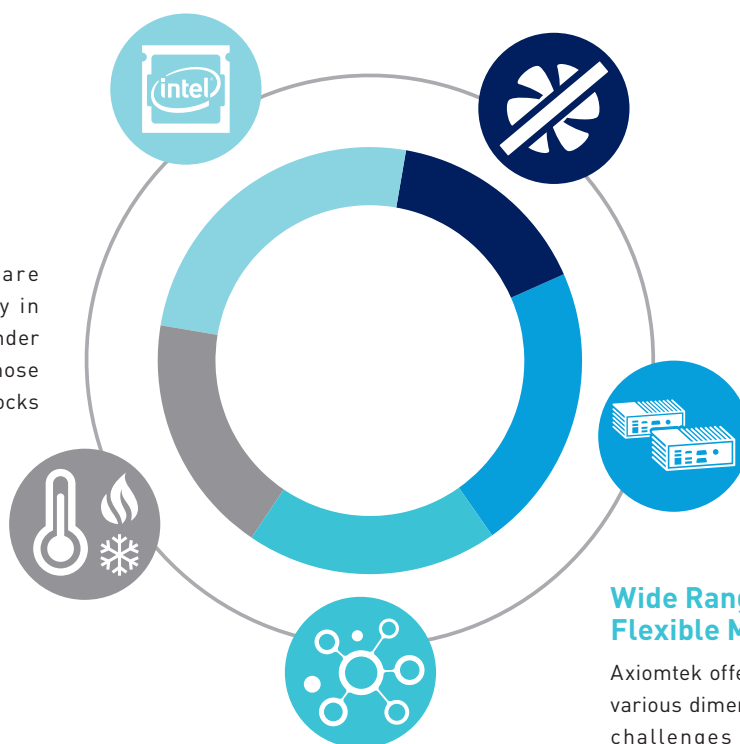
Axiomtek's eBOX systems are designed to operate reliably in extended temperatures and under extreme conditions, such as those faced with potential thermal shocks and high humidity.

Rich and Customizable I/O Options with High Expansion Capabilities

The versatile eBOX products support wireless communications and are equipped with RS-232/422/485 ports, USB 2.0 ports, USB 3.0 ports, digital I/Os, IEEE 1394, DVI, VGA, HDMI, DisplayPort, CFast™, Gigabit Ethernet, PS/2, PCI/PCIe expansion, Mini PCI Express, and audio for different applications.

Wide Range of System Sizes and Flexible Mounting Configurations

Axiomtek offers diverse embedded systems with various dimensions to meet different operational challenges including those faced by space constraints or harsh operating environments. Axiomtek's eBOX products offer flexible mounting options. They can be DIN-rail mounted, VESA mounted or wall-mounted.



APPLICATION



eBOX560-300-FL

- Materials Management
- Network Connection
- Signage Announcement
- Data Collection



eBOX671-885-FL

- AOI Inspection
- EtherCAT Master Controller
- Production Monitoring
- Device Control



eBOX670-883-FL

- Network Control
- Surveillance
- Data Collection & Analysis
- Sensors Control

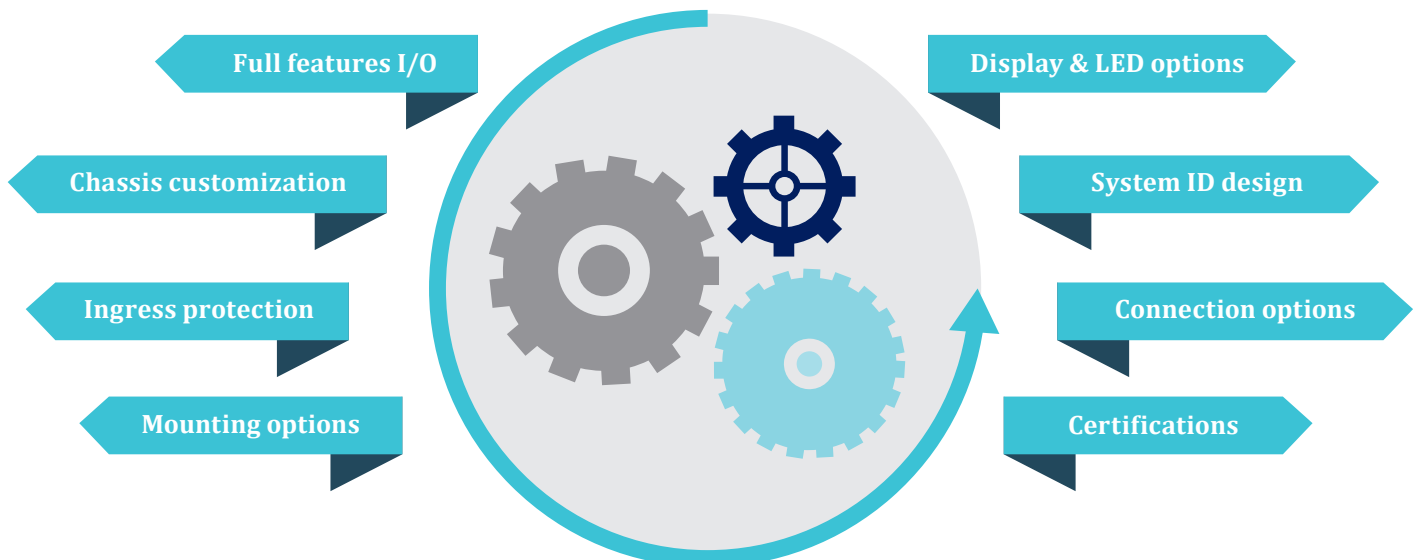


eBOX626-853-FL

- Data Collection
- Wireless Connection
- Security Sensors
- RFID Reader

Customize Your Unique System

Axiomtek's eBOX products are designed to offer our customers with the highest return on their investments. It was carefully developed, with focus on high scalability, product longevity and rich features that will help reduce the total cost of ownership. The eBOX systems are application-ready and highly customizable to meet specific project needs.



tBOX *Transportation Embedded Systems*

Certified by the strict railway/vehicle/marine safety and EMC criteria, the tBOX products are designed for transportation industry applications. The tBOX products feature wide operating temperature ranges, powerful computing performance, and high vibration resistance. The tBOX products can work in various applications including fleet management, passenger infotainment systems, onboard and wayside surveillance systems, onboard device controls, gateway and dispatching systems, and more.

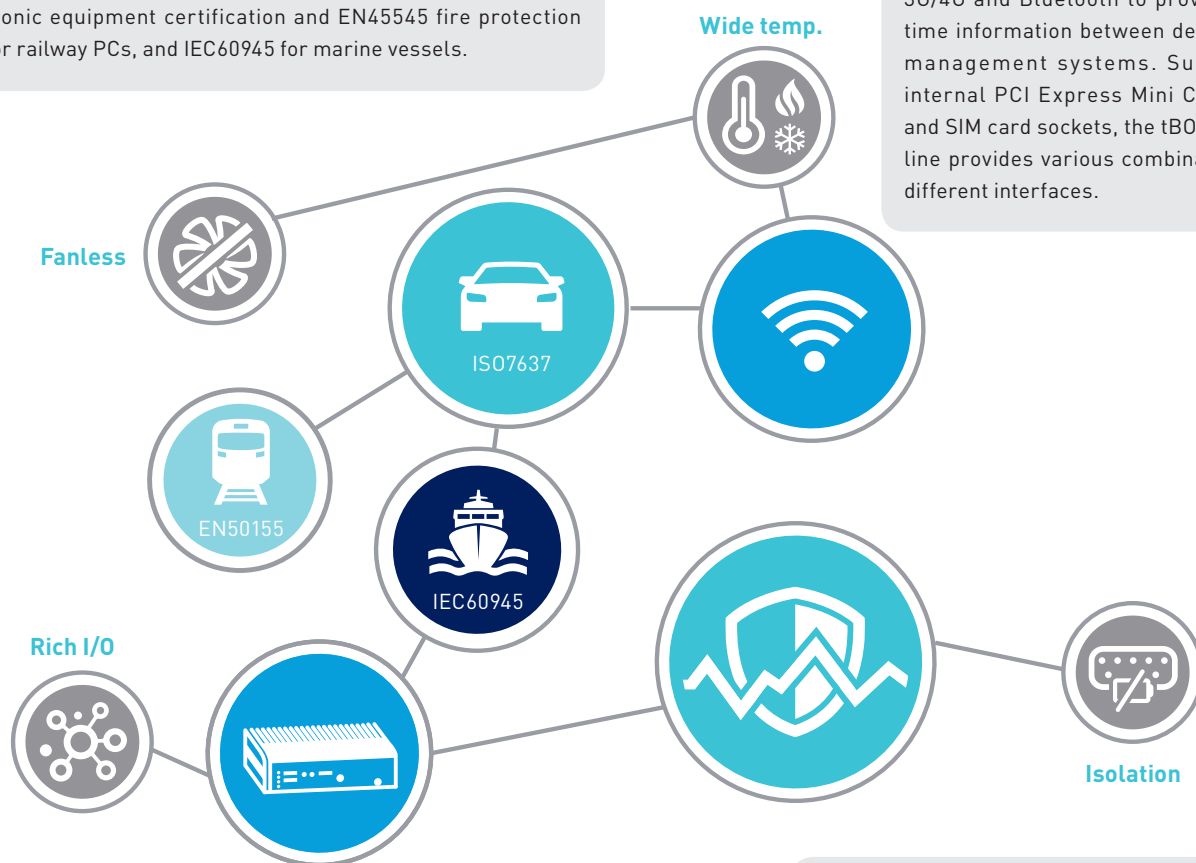
FEATURES

Railway/Vehicle/Marine Standards Certified

To ensure its implementation for transportation applications, the tBOX products are certificated by E-Mark (e13) and ISO7637 power standard for vehicle PCs, EN50155/EN50121 for electromagnetic/electronic equipment certification and EN45545 fire protection test for railway PCs, and IEC60945 for marine vessels.

Seamless Communication and Great Expansion

The tBOX products support wireless communication through GPS, Wi-Fi, 3G/4G and Bluetooth to provide real-time information between devices and management systems. Supporting internal PCI Express Mini Card slots and SIM card sockets, the tBOX product line provides various combinations for different interfaces.

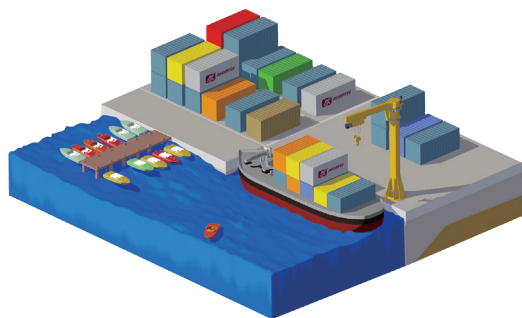


Unique Mechanism Design

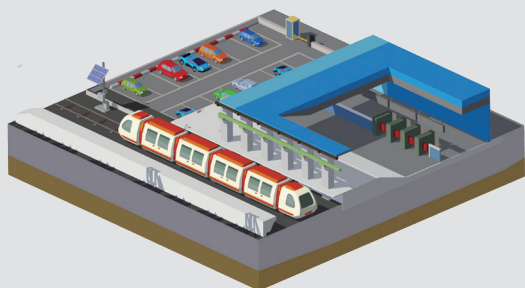
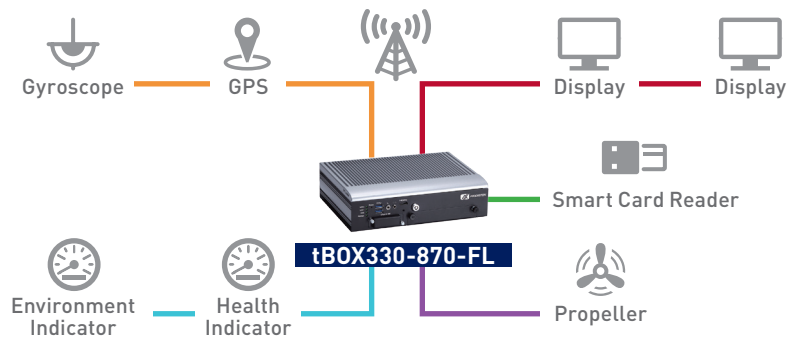
- CAN bus interface allows users to directly access to vehicle data
- Onboard processor and memory provides vibration resistance
- M12 connectors provide protection against vibration and shock
- Isolated connectors prevent ESD and provide increased system protection
- Lockable or screw-type connectors keep all cables tightly secured
- Swappable storage drive bay provides easy data backup and maintenance

Unique Anti-Vibration Mechanism Design

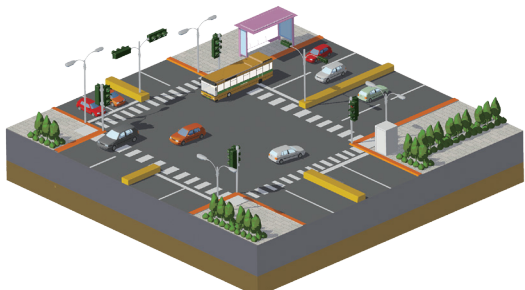
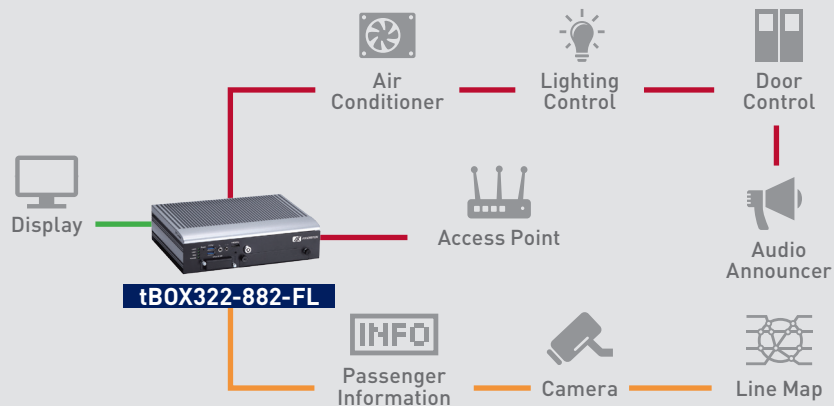
Axiomtek's transportation embedded computing systems are equipped with a unique anti-vibration design (3Grms with CompactFlash™ card or SSD and 2Grms with HDD) to endure heavy vibration, sudden jolts and shaking.



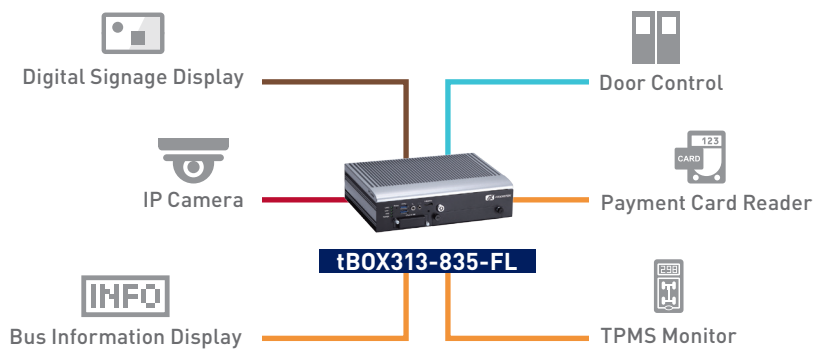
IEC60945
Marine PC



EN50155/EN50121
Railway PC



e-Mark/ISO7637
In-Vehicle PC



— VGA/DVI/HDMI — DIO — Ethernet — USB — Serial — CAN Bus

rBOX

DIN-rail Ruggedized Embedded Systems

Axiomtek's ruggedized rBOX products are tested to provide reliable operation in challenging environments. The product line has passed heavy industrial EMI/EMS (Electro-Magnetic Susceptibility/ Electro-Magnetic Interference) tests, and is also in compliance with multiple safety standards including ATEX /C1D2 certification (anti-explosive). The rBOX DIN-rail fanless embedded systems are suitable for intelligent computing and communication solutions in mission critical environments, such as power plant automation and facility monitoring systems.

FEATURES

Compact Size with Flexible Mounting Options

Axiomtek's rBOX products have a compact design, making the product line ideal for both indoor and outdoor industrial environments where space is limited. Axiomtek's rBOX products also offer flexible mounting options including DIN-rail mounting or wall-mounting.



Fanless



Wide Operating Temperature Ranges

Axiomtek's rBOX embedded systems are designed to withstand extended temperature ranges from -40°C to +70°C and can reliably operate under extreme environmental conditions such as thermal shock and high humidity.



Rich I/O

Remote IoT Management Software — AXView 2.0

To streamline the implementation of management applications, Axiomtek's rBOX products support the AXView 2.0 monitoring software package. Customers can utilize this software to quickly and easily establish their own management systems. AXView 2.0 contains:

- Local Hardware Monitoring
- Local SRAM Backup
- Store Apps
- Service Cloud
- Remote Management
- SNMP, MQTT, MODBUS, SNMP Trap, and Email



Low Power

Cableless and Front Access I/O Design

The rBOX products feature a cableless and front access I/O design, which provides extra convenience for wiring and maintenance. The rBOX products come with rich I/O options including:

- Isolated COM ports are ideal for power utility applications and devices
- Isolated CAN bus is used in vehicles to connect to engine control units
- Digital I/Os enable users to connect digital devices such as digital cameras, camcorders, and screens

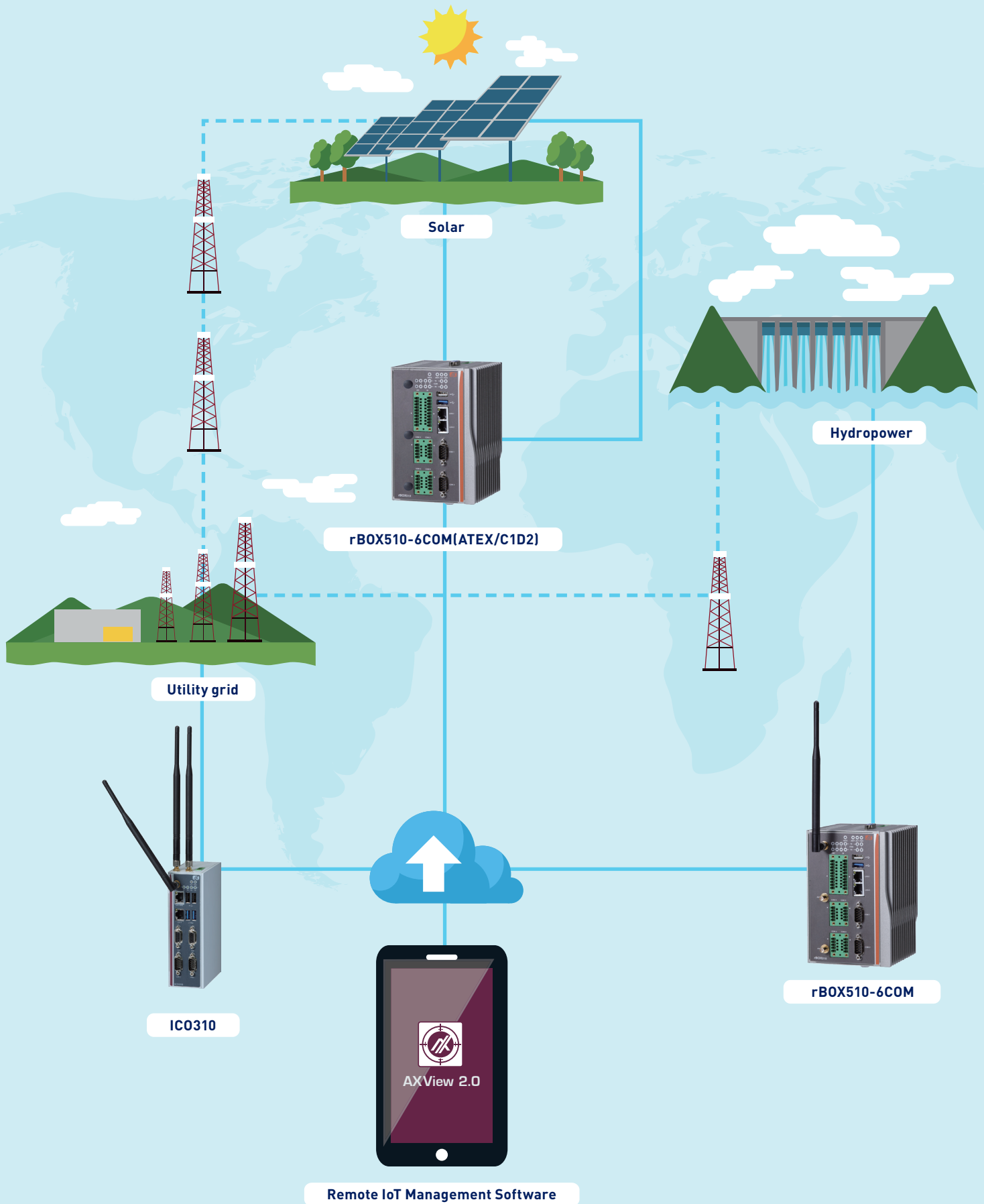
Extensive Safety Certifications

Axiomtek's rBOX products comply with the following certifications:

- UL508 (Industrial Control Equipment)
- UL60950-1/ EN60950-1/ IEC60950-1 (Information Technology Equipment)
- EN61000-6-2/ EN61000-6-4 (Electromagnetic compatibility)
- EN50121-4 (Railway AP)
- ATEX/C1D2 (Anti-explosive certification)



APPLICATION



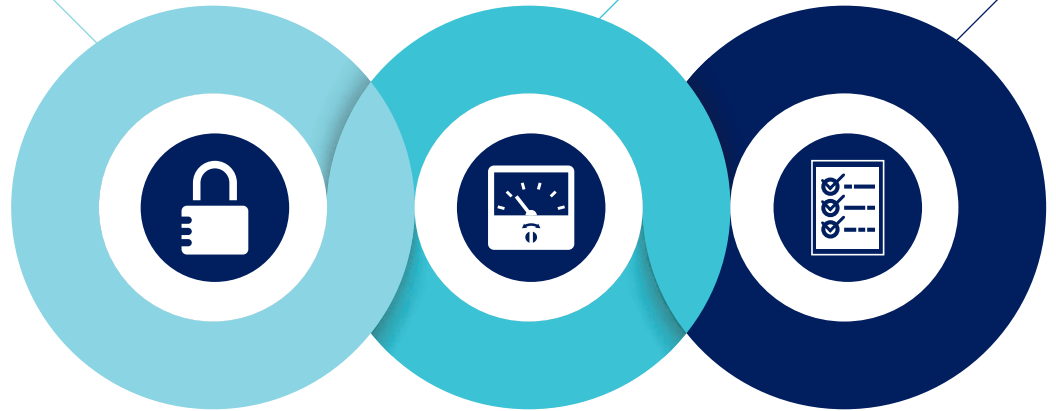
IPC *Fanless Industrial Barebone Systems*

Axiomtek has a full range of fanless, barebone industrial PCs that are suitable for different environments and applications. These industrial PCs deliver powerful computing performance, expansibility, high storage capacity, reliability, solid design, and cost-effectiveness. Axiomtek's IPC products offer CE marking, popular interfaces and rich I/O options.

FEATURES

Convenient Front Facing I/Os and LED Indicator

Axiomtek's IPC products are easy to maintain and upgrade with its convenient front-facing I/O access and flexible expansion options. The system also features a front LED indicator, which displays power status and HDD activity.



APPLICATION

License Plate Recognition



Message Sign Control System



Traffic Signal



Fence Machine



Camera



IPC922-215-FL

Control Room

Wide Voltage Range DC Power Input

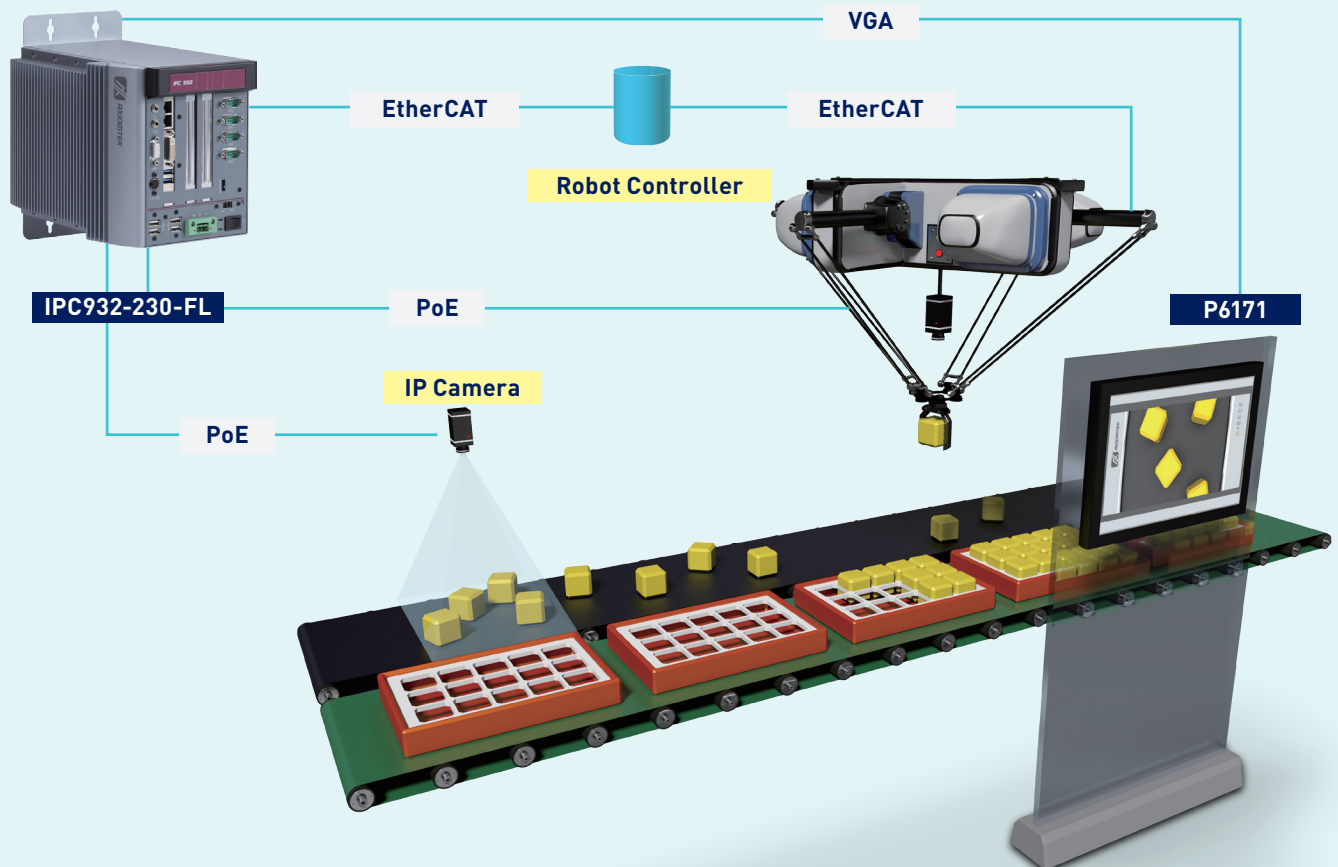
Axiomtek's fanless barebones systems use industrial-grade Phoenix type or DC-jack power connector plugs, making them easier to apply to applications that require wide voltage ranges.

Rich and Customizable I/O Options with High Expansion Capabilities

Adopting the easy access PCI and PCIe slots and multiple connectors, Axiomtek's barebone IPC systems can support a diverse amount of devices and equipment. The system comes with abundant I/O interfaces including 10/100/1000Mbps Ethernet ports, RS-232/422/485 ports, audio, Digital I/Os and USB ports. Axiomtek also offers a series of peripheral products such as keyboards, LCD displays, and industrial add-on cards.

APPLICATION

Automated Optical Inspection



EtherCAT Master Controller

Industrial PCs and Embedded Computers with EtherCAT Master Stack Support

Axiomtek's EtherCAT Master Controllers are verified for interoperability with IntervalZero KingStar, EtherCAT Master solutions and RTX real-time extension module. These controllers are designed to reduce total cost of ownership with its long product life cycles, high reliability and key features that require less maintenance. They are ideal for industrial motion control, factory automation, multi-task machine control and Internet of Things (IoT) applications.

Simple, Low Cost, Robust

EtherCAT supports line, star, and tree topology for providing network communication between devices. As an added convenience, no switches are needed for the Line topology. Axiomtek's EtherCAT Master Controllers need only one EtherCAT port to cascade down to all distributed slave devices which reduce costs on cables and enhance motion control, allowing for a more effective network integration.

Flexible Topology

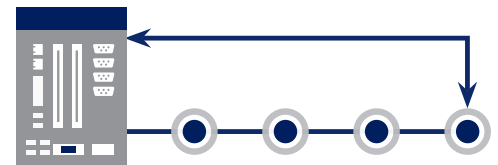
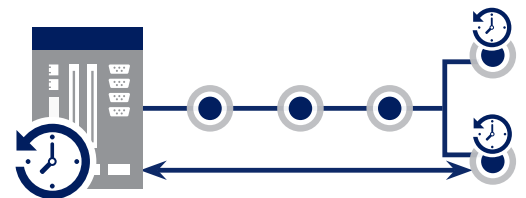
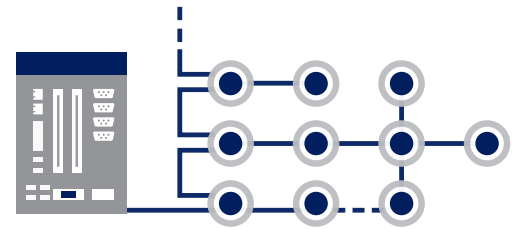
EtherCAT supports almost all kinds of topologies: line, tree, star, or daisy-chain and offers great flexibility for cable types. Up to 65,535 devices can be connected to one EtherCAT segment, so network expansion is nearly unlimited.

Distributed Clocks for High-Precision Synchronization

The EtherCAT solution for synchronizing nodes is based on the distributed clocks, which have a high degree of tolerance for jitter in the communication system. The position measurements are triggered by the precise slave clock which ensures greater accuracy level.

High Reliability

EtherCAT enables cable redundancy to help support smooth operation and reduce down time. By connecting a cable from the last node to an Ethernet port on the master device and with recovery time less than 15 μ s, even motion applications with extremely short cycle time can continue working smoothly when a cable breaks.



ADVANCED FEATURES

- 4th generation quad-core Intel® Core™ i7/i5 or Celeron® processor
- Windows® 7
- IntervalZero KingStar IO EtherCAT master solution
- Acontics EtherCAT master stack
- IntervalZero Windows real-time extension RTX
- EtherCAT communication cycle 250 μ s

AVAILABLE MODELS



IPC932-230-FL-ECM



eBOX671-885-FL-ECM



eBOX560-880-FL-ECM

AXView 2.0 *Remote Management Software*

AXView 2.0 comes with cloud service and M2M protocols. It is a highly integrated software management system that provides remote management architecture and an easy-to-use application programming interface.

Local Hardware Monitoring and Agent

Agent is a software service that monitors local hardware behaviors, triggers event alerts when abnormalities happen and shares machine information with remote management systems and the AXView 2.0 service cloud.

Remote Management

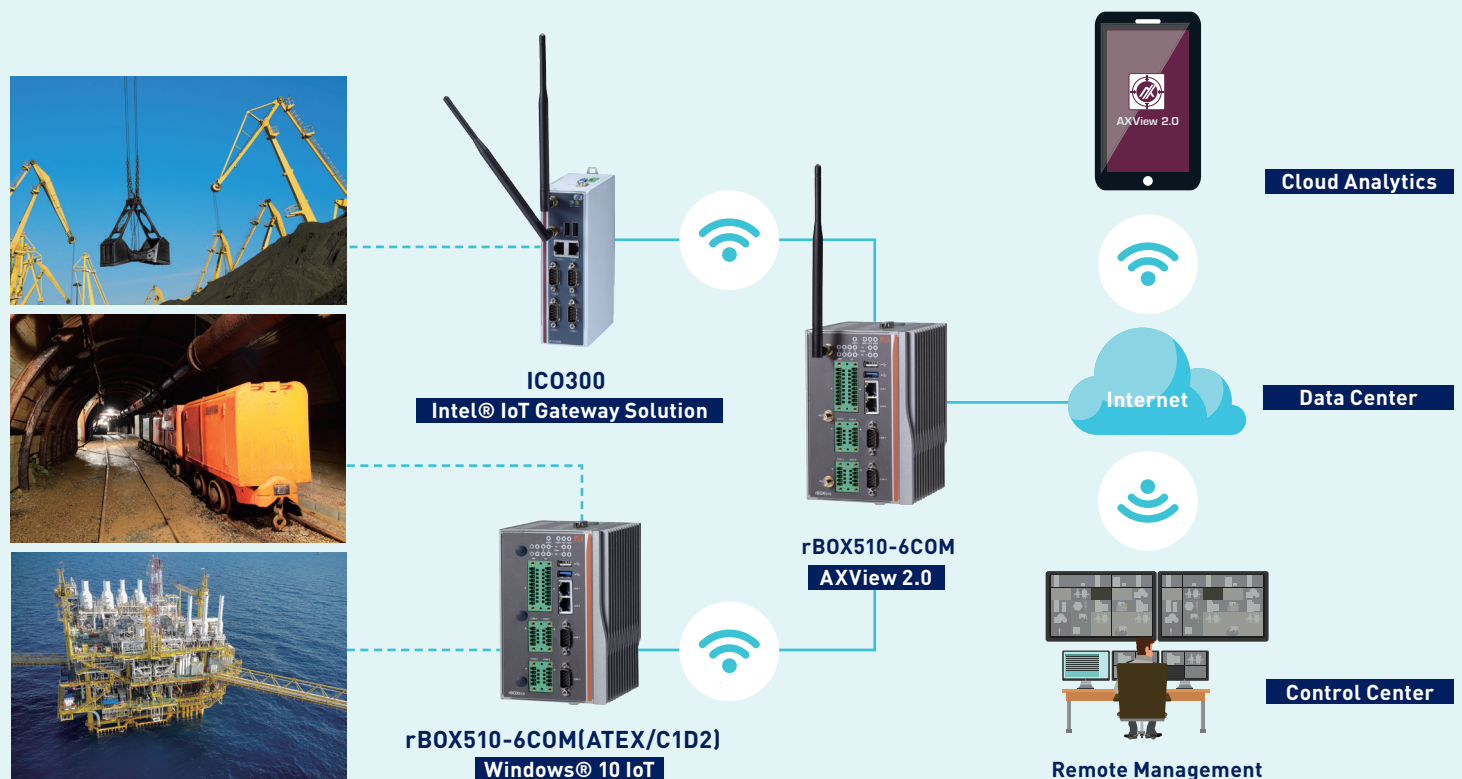
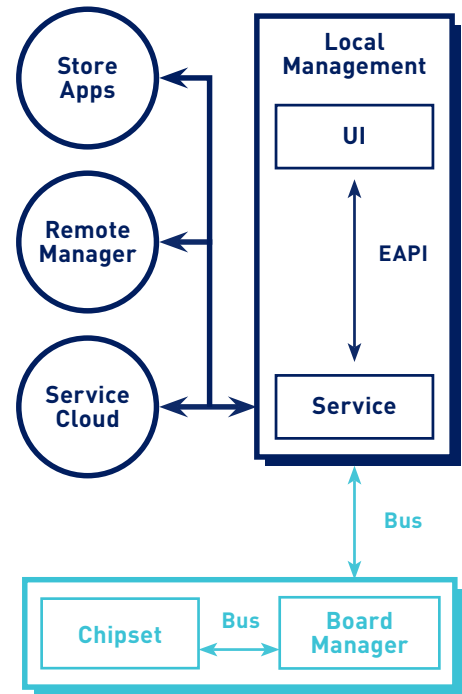
Remote management system can play the role of alert receiver. If you're using a phablet, simply use the AXView store app to connect to the service cloud by entering the IP address. Once the service cloud connects, any event alert sent by the agent will be pushed to your phablet automatically.

Service Cloud

Service Cloud is a new feature of AXView 2.0 suite comparing to version 1.0. It's designed to store, forward and review machine data for behavior analysis.

Embedded Application Programming Interface (EAPI)

AXView 2.0 supports EAPI compliance with PICMG EAPI standards and extends its features to support access to special system information, hardware health status, system behavior and unique system designs such as battery backup memory area, panel backlight, DIO and dual hardware watchdogs.



IIoT Gateway

Robust Fanless DIN-rail Intel® IoT Gateway Solutions

Axiomtek's smart IIoT Gateway platforms come with the low power Intel® processor, wireless connectivity, rich expansions and robust design. The intelligent IC0300-MI is based on Intel® Gateway Technology and has been upgraded with Wind River Intelligent Device Platform XT v3.1. The robust IC0310 features PoE PD function, which can simplify network installation and minimize the total costs of replacement and maintenance. Axiomtek's IIoT gateway series provide a wide array of intelligent IoT solutions as follows:

- IoT management : Intel IoT Gateway Solution (MI), AXView2.0
- IoT OS : Win 10 IoT Core Pore
- Protocol : MODBUS



Industrial Firewall

Robust Industrial Firewall Appliances

While the automation industry has simplified development and maintenance through the use of transmission control protocol/Internet protocol (TCP/IP), this has also left their equipment exposed to cyber-attacks and malware. Axiomtek's feature-rich industrial firewall appliances offer firewall and VPN features - making them suitable for Ethernet security applications in sensitive remote control or monitoring networks such as oil, gas, water and wastewater, power or factory automation systems.

ADVANCED FEATURES

- All-in-one Firewall/NAT/Router
- Security protection: Firewall, IDP, Botnet
- Secure connection: VPN, SSL VPN, WAN connection checking
- IPv4/IPv6 dual mode
- Wide operating temperature ranges from -40°C to +70°C



IFW330

Selection Guide

IPC

NEW



Feature	IPC932-230-FL	IPC934-230-FL	IPC922-215-FL
CPU Level	4th Gen Intel® Core™ i7/i5/i3 and Celeron®	4th Gen Intel® Core™ i7/i5/i3 and Celeron®	Intel® Celeron® Bay Trail-D J1900
System Memory	2 x 204-pin SO-DIMM DDR3-1333/1600 up to 16 GB	2 x 204-pin SO-DIMM DDR3-1333/1600 up to 16 GB	1 x 204-pin SO-DIMM DDR3L-1333 up to 8GB
Chipset	Intel® Q87	Intel® Q87	SoC Integrated
Serial	2 x RS-232 2 x RS-232/422/485	2 x RS-232 2 x RS-232/422/485	4 x RS-232/422/485
Display	1 x DVI-I	1 x DVI-I	1 x VGA
Ethernet	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps
USB	2 x USB 3.0 4 x USB 2.0	2 x USB 3.0 4 x USB 2.0	4 x USB 2.0
Storage	2 x 2.5" SATA HDD 1 x CFast™	2 x 2.5" SATA HDD 1 x CFast™	1 x 2.5" SATA HDD 1 x CFast™
Expansion	HAB100: 1 PCIe x1 & 1 PCIe x4 HAB103: 1 PCIe x4 & 1 PCI HAB108: 2 PCI HAB110: 1 PCIe x4 & 1 PCIe x16	HAB104: 4 PCI HAB105: 2 PCI & 1 PCIe x1 & 1 PCIe x16	HAB103: 1 PCI & 1 PCIe x4 (PCIe x4 slot only support PCIe x1 signal) HAB108: 2 PCI
Power Supply	150W ATX 10-30VDC	150W ATX 10-30VDC	120W ATX 18-28VDC
Operating Temperature	-10°C ~ +50°C (+14°F ~ +122°F) with W.T. HDD/SSD/CFast™	-10°C ~ +50°C (+14°F ~ +122°F) with W.T. HDD/SSD/CFast™	-10°C ~ +50°C (+14°F ~ +122°F) with W.T. HDD/SSD/CFast™
Certification	CE	CE	CE

* All specifications and photos are subject to change without notice.

Selection Guide

eBOX

NEW



NEW



NEW



Feature	eBOX560-300-FL	eBOX625-853-FL	eBOX626-853-FL	eBOX635-881-FL
CPU Level	Intel® Pentium® N3710 (1.6 GHz)	Intel® Celeron® N3160 (1.6 GHz)	Intel® Celeron® N3150 (1.6 GHz)	LGA1150 Socket 4th Gen Intel® Core™ i7/i5/i3 & Celeron® TDP max. up to 45W
System Memory	1 x 204-pin SO-DIMM DDR3L up to 8 GB	1 x 204-pin SO-DIMM DDR3L up to 8 GB	1 x 204-pin SO-DIMM DDR3L up to 8 GB	1 x 204-pin SO-DIMM DDR3-1333/1600 up to 8 GB
Chipset	SoC Integrated	SoC Integrated	SoC Integrated	Intel® H81
Serial	1 x RS-232/422/485 1 x RS-232	1 x RS-232/422/485 3 x RS-232	1 x RS-232/422/485 3 x RS-232	6 x RS-232/422/485
Display	2 x HDMI	1 x VGA 1 x HDMI	1 x VGA 1 x HDMI	2 x HDMI 1 x VGA 1 x DisplayPort
Audio	N/A	Yes	Yes	Yes
Ethernet	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps
USB	4 x USB 3.0	3 x USB 3.0 1 x USB 2.0	3 x USB 3.0 1 x USB 2.0	2 x USB 3.0 4 x USB 2.0
Expansion	1 x PCI Express Mini Card (USB+PCIe)	2 x PCI Express Mini Card 1 x SIM slot	2 x PCI Express Mini Card 1 x SIM slot	2 x PCI Express Mini Card (USB+PCIe signal) 1 x SIM slot
Storage	1 x 2.5" SATA HDD 1 x mSATA	1 x 2.5" SATA HDD 1 x mSATA	1 x 2.5" SATA HDD 1 x mSATA	1 x 2.5" SATA HDD 1 x CFast™
Power Supply	60W 90-264VAC adapter	36W 90-264VAC adapter	42.5W 9-36VDC	19/12V AC to DC adapter
Operating Temperature	-20°C ~ +50°C (-4°F ~ +122°F) with W.T. SSD & DRAM	-20°C ~ +60°C (-4°F ~ +140°F) with W.T. SSD & DRAM	-20°C ~ +60°C (-4°F ~ +140°F) with W.T. SSD & DRAM	-20°C ~ +50°C (-4°F ~ +122°F) with W.T. SSD, CPU TDP up to 45W
Certification	CE	CE	CE	CE

NEW



NEW



eBOX670-891-FL	eBOX671-885-FL	eBOX638-840-FL	eBOX311-841-FL
LGA1151 Socket 6th Gen Intel® Core™ i7/i5/i3 & Celeron®	LGA1150 Socket 4th Gen Intel® Core™ i7/i5/i3 & Celeron® TDP max. up to 45W	Intel® Celeron® J1900 (2.0 GHz)	Intel® Atom™ E3845 (1.91 GHz)
2 x 260-pin SO-DIMM DDR4-2133 up to 32GB	2 x 204-pin SO-DIMM DDR3-1333/1600 up to 16 GB	1 x 204-pin SO-DIMM DDR3L-1066/1333 up to 8 GB	1 x 204-pin SO-DIMM DDR3L up to 8 GB
Intel® Q170	Intel® Q87	SoC Integrated	SoC Integrated
2 x RS-232/422/485 2 x RS-232	2 x RS-232/422/485 2 x RS-232	6 x RS-232	2 x RS-232/422/485 (COM 1/2) (M12 type)
2 x HDMI 1 x DisplayPort	1 x DVI-I 1 x HDMI 1 x DisplayPort	1 x HDMI 1 x VGA	1 x VGA
Yes	Yes	Yes	N/A
4 x 10/100/1000Mbps	6 x 10/100/1000Mbps (4 x PoE ports included)	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps (M12 type)
2 x USB 2.0 6 x USB 3.0	6 x USB 3.0 2 x USB 2.0	4 x USB 2.0 1 x Internal USB 3.0	2 x USB 2.0 (M12 type)
2 x PCI Express Mini Card (USB+PCIe) 1 x SIM slot	2 x PCI Express Mini Card (USB+PCIe signal) 1 x SIM slot	1 x PCI Express Mini Card 2 x PCI or 2 PCIe x1	2 x PCI Express Mini Card
2 x 2.5" SATA HDD 1 x CFast™ 1 x mSATA	2 x 2.5" SATA HDD 1 x CFast™ 2 x mSATA	1 x 2.5" SATA HDD 1 x mSATA	1 x 2.5" SATA HDD 1 x CFast™ 1 x mSATA
9-36VDC	DC Input 24V	72W ATX 16-28VDC	9-36VDC (M12 type)
-40°C ~ +55°C (-40°F ~ +131°F) with W.T. SSD, CPU TDP up to 35W	-20 ~ +50°C (-4°F ~ +122°F) with W.T. SSD or CFast™, CPU TDP up to 45W	-10°C ~ +55°C (+14°F ~ +131°F) with W.T. SSD & DRAM	-20 ~ +60°C (-4°F ~ +140°F) with W.T. SSD & DRAM
CE	CE	CE	CE

* All specifications and photos are subject to change without notice.

Selection Guide

tBOX



Feature	tBOX810-838-FL	tBOX330-870-FL	tBOX313-835-FL	tBOX312-870-FL
CPU Level	Intel® Atom™ E3845 [1.91 GHz] Intel® Atom™ E3827 [1.75 GHz]	3rd Gen Intel® Core™ i7-3517UE [1.7 GHz, up to 2.8 GHz] 3rd Gen Intel® Core™ i3-3217UE [1.6 GHz]	Intel® Atom™ E3845 [1.91 GHz]	3rd Gen Intel® Core™ i7-3517UE [1.7 GHz, up to 2.8 GHz] 3rd Gen Intel® Core™ i3-3217UE [1.6 GHz]
System Memory	DDR3L-1333 4 GB DRAM	DDR3-1600 4 GB DRAM	DDR3L-1333 4 GB DRAM	DDR3-1600 4 GB DRAM
Chipset	SoC Integrated	Intel® QM77	SoC Integrated	Intel® QM77
Serial	2 x RS-232/422/485	3 x isolated RS-232/422/485	1 x RS-232 4 x isolated RS-422/485	3 x isolated RS-232/422/485
Display	1 x VGA	1 x VGA 1 x DVI-D	1 x VGA 1 x HDMI	1 x VGA 1 x DVI-D
Audio	N/A [Optional by module]	Yes [Screw-type]	Yes	Yes
Ethernet	2 x 10/100/1000Mbps [M12/RJ-45 optional]	4 x 10/100/1000Mbps	2 x 10/100/1000Mbps [8-pin M12 female A-coded] [RJ-45 optional]	4 x 10/100/1000Mbps [IEEE 802.3 at PoE, Max. 30W]
DIO	1 x DB9 8bit programmable DIO	1 x isolated DIO [4-IN & 4-OUT]	1 x isolated DIO [6-IN & 2-OUT]	1 x isolated DIO [4-IN & 4-OUT]
CANbus	N/A [Optional by module]	1 x isolated CAN Bus	1 x isolated CAN Bus	1 x isolated CAN Bus
USB	2 x USB 2.0	2 x USB 2.0 2 x USB 3.0	2 x USB 2.0	2 x USB 3.0 2 x USB 2.0
Expansion	2 x PCI Express Mini Card 1 x SIM slot	3 x PCI Express Mini Card 1 x SIM slot	3 x PCI Express Mini Card 2 x SIM slot	3 x PCI Express Mini Card 1 x SIM slot
Storage	1 x 2.5" SATA HDD/SSD 1 x mSATA	2 x 2.5" SATA HDD 1 x CFast™	1 x 2.5" SATA HDD/SSD 1 x CFast™ 1 x mSATA	2 x 2.5" SATA HDD/SSD 1 x CFast™
Power Supply	9-36VDC Typical 12/24VDC	14-32VDC Typical 24VDC	9-36VDC Typical 12/24VDC	9-36VDC Typical 12/24VDC
Operating Temperature	-40°C ~ +70°C [-40°F ~ +158°F] with W.T. SSD	-40°C ~ +70°C [-40°F ~ +158°F] with W.T. SSD	-40°C ~ +70°C [-40°F ~ +158°F] with W.T. SSD	-40°C ~ +70°C [-40°F ~ +158°F] with W.T. SSD
Certification	CE [Class A], EN50155, EN50121, eMark, ISO7637, DNV2.4, IEC60945	CE, IEC60945	CE, eMark, ISO7637	CE, eMark, ISO7637

NEW



tBOX230-890-FL	tBOX323-835-FL	tBOX322-882-FL	tBOX321-870-FL
6th Gen Intel® Core™ i7-6600U (2.6 GHz, up to 3.4 GHz)/ 6th Gen Intel® Core™ i5-6300U (2.4 GHz, up to 3.0 GHz)/ 6th Gen Intel® Core™ i3-6100U (2.3 GHz)/ Intel® Celeron® 3955U (2.0 GHz)	Intel® Atom™ E3845 (1.91 GHz)	4th Gen Intel® Core™ i7-4650U (1.7GHz, up to 3.3 GHz) 4th Gen Intel® Core™ i3-4010U (1.7 GHz)	3rd Gen Intel® Core™ i7-3517UE (1.7 GHz, up to 2.8 GHz) 3rd Gen Intel® Core™ i3-3217UE (1.6 GHz)
2 x SO-DIMM DDR4 up to 16 GB	DDR3L-1333 4 GB DRAM	DDR3L-1600 4 GB/ 8 GB DRAM	DDR3-1600 4 GB DRAM
SoC Integrated	SoC Integrated	SoC Integrated	Intel® QM77
1 x RS-232 Up to 8 x isolated RS-232/422/485 (Optional by 2 x I/O card)	1 x RS-232 4 x isolated RS-422/485	2 x isolated RS-232/422/485	4 x isolated RS-232/422/485
1 x DVI-I	1 x VGA 1 x HDMI	1 x DVI-I 1 x HDMI	1 x VGA 1 x DVI-D
N/A (Optional by module)	Yes	Yes (M12 and screw-type)	Yes (M12 and screw-type)
1 x RJ-45 GbE LAN Up to 8 x M12 PoE GbE LAN, 15.4W per port (Optional by 2 x I/O card) or up to 8 x RJ-45 GbE LAN (Optional by 2 x I/O card)	2 x 10/100/1000Mbps (8-pin M12 female A-coded)	2 x 10/100/1000Mbps (8-pin M12 female A-coded)	4 x 10/100/1000Mbps (8-pin M12 female A-coded)
Up to 16-IN/16-OUT isolated DIO (Optional by 2 x I/O card)	1 x isolated DIO (6-IN & 2-OUT)	1 x isolated DIO (6-IN & 2-OUT)	1 x isolated DIO (4-IN & 4-OUT)
Up to 4 x CAN Bus (Optional by 2 x I/O card)	N/A	N/A	N/A
4 x USB 3.0	2 x USB 2.0	2 x USB 3.0 1 x USB 2.0 (M12 type)	2 x USB 3.0 1 x USB 2.0 (M12 type)
2 x full-size + 1 x half-size PCI Express Mini Card 1 x SIM slot	3 x PCI Express Mini Card 2 x SIM slot	3 x PCI Express Mini Card 2 x SIM slot	3 x PCI Express Mini Card 1 x SIM slot
2 x 2.5" SATA HDD/SSD 1 x mSATA	1 x 2.5" SATA HDD/SSD 1 x CFast™ 1 x mSATA	1 x 2.5" SATA HDD 1 x CFast™ 1 x mSATA	2 x 2.5" SATA HDD 1 x CFast™
9-36VDC Typical 12/24VDC	12-32VDC Typical 24VDC	14-32VDC Typical 24VDC	14-32VDC, 77-137.5VDC Typical 24VDC, 110VDC
-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD	-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD	-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD	-40°C ~ +70°C (-40°F ~ +158°F) with W.T. SSD
CE (Class A), eMark, ISO7637	CE, EN50155, EN50121	CE, EN50155, EN50121, EN45545-2, EN60950-1	CE, EN50155, EN50121, EN45545-2

* All specifications and photos are subject to change without notice.

Selection Guide

rBOX



Feature	rBOX101-6COM(ATEX)	rBOX510-6COM [ATEX/C1D2]	rBOX310-4COM	rBOX120-2COM
CPU Level	Intel® Atom™ Z510PT (1.1 GHz) or Z520PT (1.33 GHz)	Intel® Atom™ E3827 (1.75 GHz)	Intel® Atom™ N2800 (1.86 GHz)	Intel® Atom™ Z510PT (1.1 GHz) or Z520PT (1.33 GHz)
System Memory	1 x 200-pin SO-DIMM DDR2 up to 2 GB	DDR3L 4GB onboard	1 x 200-pin SO-DIMM DDR3 up to 4 GB	1 x 200-pin SO-DIMM DDR2 up to 2 GB
Chipset	Intel® US15WPT	SoC Integrated	Intel® NM10	Intel® US15WPT
Serial	6 x isolated RS-232/422/485	2 x RS-232/422/485 4 x isolated RS-232/422/485	4 x RS-232/422/485	2 x isolated RS-232/422/485
Display	1 x VGA	1 x VGA	1 x VGA	1 x VGA
Ethernet	1 x 10/100/1000Mbps 1 x 10/100Mbps	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps	3 x 10/100/1000Mbps
DIO	1 x isolated DIO (4-IN/4-OUT)	1 x isolated DIO (8-IN/8-OUT)	N/A	1 x isolated DIO (8-IN/8-OUT)
USB	2 x USB 2.0	1 x USB 3.0 1 x USB 2.0	2 x USB 2.0	2 x USB 2.0
Storage	1 x CompactFlash™ 1 x SD card up to 32 GB (optional)	1 x CompactFlash™ 1 x 2.5" SATA SSD (or 1 x mSATA)	1 x 2.5" SATA SSD or HDD 1 x CompactFlash™	1 x 2.5" SATA SSD or HDD 1 x CompactFlash™ 1 x SD card up to 32 GB (optional)
Expansion	N/A	N/A	1 x PCI Express Mini Card 1 x SIM slot	2 x PCI Express Mini Card 1 x SIM slot
Power Supply	12-48VDC	12-48VDC	12-48VDC	12-48VDC
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)	-40°C ~ +70°C (-40°F ~ +158°F)	-40°C ~ +70°C (-40°F ~ +158°F)	-40°C ~ +70°C (-40°F ~ +158°F)
Certification	Heavy Industrial CE FCC Part 18 UL/cUL60950-1 ATEX certification IEC60068 & EN50121-4 compliance	Heavy Industrial CE FCC Part 18 UL/cUL60950-1 ATEX & C1D2 certification IEC60068 compliance	Heavy Industrial CE FCC Part 18 IEC60068 compliance	Heavy Industrial CE FCC Part 18 IEC60068 & EN50121-4 compliance

NEW

Coming Soon

NEW



ICO500	ICO310	ICO300	ICO300-MI	IFW330
Intel® Atom™ Apollo Lake Entry Processor	Intel® Celeron® N3060 [2C@1.6 GHz] or N3160 [4C@1.6 GHz]	Intel® Atom™ E3815 [1.46 GHz] or E3827 [1.75 GHz]	Intel® Atom™ E3815 [1.46 GHz]	Intel® Atom™ E3815 [1.46 GHz]
1 x SO-DIMM DDR3L up to 8GB	1 x SO-DIMM DDR3L up to 8GB	1 x SO-DIMM DDR3L up to 4 GB [E3815], up to 8 GB [E3827]	1 x SO-DIMM DDR3L up to 4 GB	2 GB DRAM (IFW330), 1 x SO-DIMM DDR3L up to 4 GB (IFW330-G)
SoC Integrated	SoC Integrated	SoC Integrated	SoC Integrated	SoC Integrated
2 x RS-232/422/485	2 x RS-232/422/485	4 x RS-232/422/485	4 x RS-232/422/485	COM 1 Console & COM 2 reserve (IFW330), COM 1 Console/RS-232/422/485 & COM 2 RS-232/422/485 (IFW330-G)
1 x VGA	1 x VGA	1 x VGA	1 x VGA	1 x VGA
1 x 10/100/1000Mbps	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps	2 x 10/100/1000Mbps	3 x 10/100/1000Mbps
1 x DIO	1 x DIO	1 x DIO	N/A	1 x DIO
2 x USB 2.0	2 x USB 3.0 2 x USB 2.0	2 x USB 2.0	2 x USB 2.0	1 x USB 2.0
1 x mSATA	1 x mSATA 1 x 2.5" SATA SSD (or HDD)	1 x CompactFlash™ (or mSATA) 1 x 2.5" SATA SSD (or HDD)	1 x CompactFlash™ (or mSATA) 1 x 2.5" SATA SSD (or HDD)	2 GB CompactFlash™ (IFW330), 1 x CompactFlash™ (or mSATA) & 1 x 2.5" SATA SSD (or HDD) (IFW330-G)
2 x PCI Express Mini Card 1 x SIM slot	2 x PCI Express Mini Card 1 x SIM slot	1 x PCI Express Mini Card 1 x SIM slot	1 x PCI Express Mini Card 1 x SIM slot	N/A
12-24VDC	12-24VDC	12-24VDC	12-24VDC	12-24VDC
-20°C ~ +70°C [-4°F ~ +158°F]	-20°C ~ +60°C [-4°F ~ +140°F]	-20°C ~ +70°C [-4°F ~ +158°F]	-20°C ~ +70°C [-4°F ~ +158°F]	-40°C ~ +75°C [-40°F ~ +167°F]
CE, FCC	CE, FCC	CE, FCC, UL	CE, FCC, UL	CE, FCC

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