



Internet of Things
IIoT Gateway Solution
ICO300-MI



Brief

Celebrating our 25 years in business, we at Axiomtek are looking back at the progress that technology has brought to our world since the 1990's when we first opened our doors for business. Clearly, the world has changed for the better with the help of technology advancements. The Internet as we know it today, has paved the way for the Internet of Things. This issue is dedicated to looking at this significant progress in communications, connectivity and analytics that has led to the smart and connected world we are living in.

Changing How We Do Our Business: The Internet of Things

Originally created in the 1960's for the U.S. Military as a means of communicating and transferring a large amount of data, the Advanced Research Projects Agency Network (ARPANET) was a precursor to the modern Internet. The Internet first broke into the mainstream in the early 1990s, with the creation of the server and client software that is known as the World Wide Web and the language HTML by Tim Berners-Lee. It offered the public a revolutionary new way to upload, store, search for and obtain information, and communicate with others around the world. We have come a long way since then. With new advancements in communications technology, businesses have started to embark upon the next revolutionary way to connect not just through human interface devices but also allow for device-to-device communications to achieve optimization for various purposes.

The Internet of Things (IoT) concept connects the physical objects, i.e., sensors, hardware, etc., together through the existing internet, allowing for the exchange of valuable data and information for operational purposes and future improvements. To utilize the IoT concept, various industries can use IoT gateway products to help bridge data transfer from edge devices to the servers or other devices. Embedded

controllers, sensors, actuators can all now communicate and provide valuable data for analysis. The results are enhanced productivity levels and reduced human error rates. The IoT concept has a vast impact on all industries and has widely become the way of the future especially for factory automation, security and surveillance, and power utilities/renewable energy operations.

For example, smart factories can utilize the IoT to work within the entire production line process, controlling operations, processing and transferring important information needed in order to improve efficiency and productivity.

Most factory operations use the programmable logic controllers (PLC) to issue commands in the assembly line and control repeated functions based on data received from sensors and the programming logic. Current controllers available in the market have communications capabilities and are able to transfer key operational information from the assembly line to the control room. Companies that are implementing the IoT concept are looking for embedded controllers, IoT gateway devices and Human-Machine Interfaces (HMI) systems with high levels of reliability, quality, and flexibility in design and customization, ruggedness, and communications capabilities to accelerate their business transformation and achieve their established goals.

The ICO300-MI is Axiomtek's IIoT(Industrial IoT) gateway solution with key features including the IoT Gateway Solutions with software stack for manageability, connectivity and security; wireless connectivity; isolated Ethernet ports and low power consumption. For embedded controllers and industrial computers, Axiomtek's rBOX, eBOX and IPC and product lines offer many useful features including high performance CPUs, wireless connectivity, wide operating temperature ranges, wide voltage ranges, rich I/O options, and expandable storage space. For Human-Machine Interface use, Axiomtek's GOT product line key features include options for resistive or capacitive touchscreen; high brightness; enhanced graphical display; connectivity; water/dust/corrosion-resistant designs and expandable I/O options.

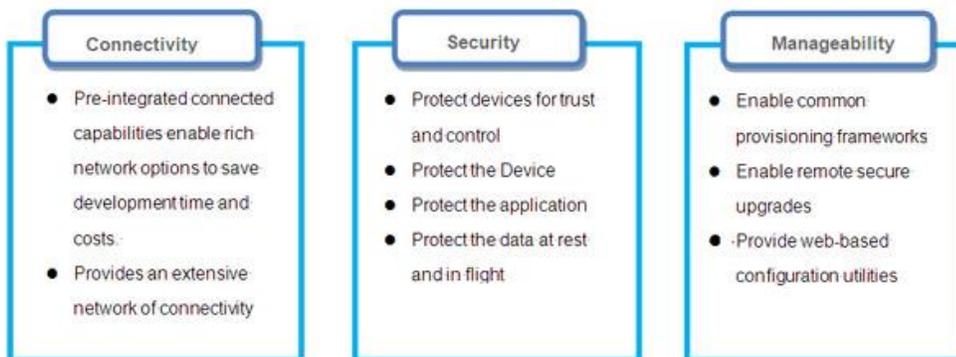
Axiomtek ICO300-MI

The application-ready din-rail embedded industrial IoT platform utilizes low power Intel® Atom™ processor E3815 (1.46 GHz) and supports DDR3L system memory maximum up to 4GB, delivering high performance and low power consumption. It simplifies the development process and achieves accelerated business transformation of IoT environment. This intelligent Intel® Atom-based IoT gateway system provides a perfect

solution for IoT & M2M, industrial and embedded applications such as power plant automation, facility monitoring systems, intelligent transportation systems and other harsh environments.

Axiomtek's new industrial gateway system features low power consumption Intel® Atom processor, wireless connectivity, rich expansions, and robust design, ideal for machine or factory automation and smart IoT gateway. The slim-type **ICO300-MI** comes with robust IP40-rated housing and is designed to withstand temperatures range from -20°C to +70°C in extreme environments.

Furthermore, the ultra-lightweight and compact design is well suited for any space-limited application. The wide range 12~24 VDC power input with terminal block, overvoltage and reverse protection can lower the risk of data loss under human manipulation.



The application-ready machine to machine platform, **ICO300-MI**, supports Intel® Moon Island Gateway solution for the Internet of Things (IoT). Customers could connect their widely distributed systems via wireless network such as 3G/GPRS. It also avails users to manage a variety of systems effortlessly with a wide range of industrial interfaces for both new and existing installation into the Internet of Things environment. It simplifies the process of deployment of IoT gateways and achieves accelerated business transformation.

About Axiomtek Co., Ltd.

[Axiomtek](http://www.axiomtek.com) Co. Ltd. is one of the world's leading designers/manufacturers of PC-based industrial computer products. From our roots as a turnkey systems integrator specializing in data acquisition and control systems, Axiomtek has mirrored the PC evolution in various industries by shifting our focus toward the design and

manufacture of PC-based industrial automation solutions.

Axiomtek Co., Ltd. established in 1990, has more than 60 distributor partners globally. Axiomtek offers Industrial PCs (IPC), Single Board Computers and System on Modules (slot CPU card, small form factor embedded boards & SoM), Fanless & Rugged Embedded System (eBOX, tBOX and rBOX), Industrial Firewall Platform, Industrial Gateway Solution, Touch Panel Computers (TPC), Medical PCs (MPC), Human Machine Interface (HMI), Digital Signage and Players (DS), Industrial Network and Network Appliances (NA).

As an associate member of the Intel® Internet of Things Solutions Alliance, [Axiomtek](https://www.axiomtek.com) continuously develops and delivers cutting edge solutions based on the latest Intel® platforms.