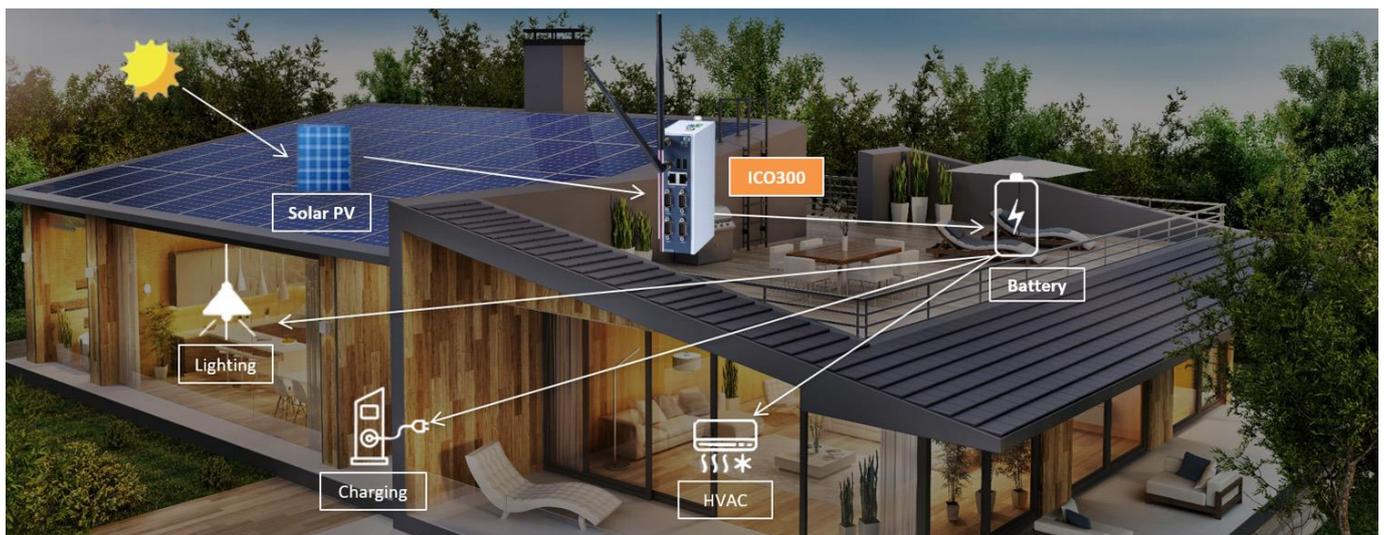


# Microgrid System

Demand for renewable energy is on the rise. New computer technologies, such as energy storage batteries and smart controllers, have become increasingly more advanced and accessible. The batteries, microgrids, and energy conversion processes require computers to control the operations and functions that impact bottom-line performance. Increased access to operational and usage data improves data analysis, impacting connected device and sensor power grid management. This, in turn, can lower operating costs. Axiomtek designs and manufactures industrial computers and gateway products using highly reliable, scalable, high-performance Intel technologies to support the complex needs of this growing market.

## Case Study

The customer, located in the USA, is one of the largest renewable energy solution providers in the world. The customer is dedicated to developing solar energy and microgrid system for several years. With the development of solar panels and battery systems, the last mile to complete the microgrid system is to build up a management system and maximize energy independence. The customer needs a ruggedized and extra reliable gateway system in order to monitor the system 24/7. This intelligent IoT gateway should provide an extended operating temperature range for any harsh operating environment. In addition, stable 4G connectivity is also a must for users to remotely manage the system. The customer has adopted Axiomtek's ICO300 to build its microgrid system to monitor the status of the inverter, battery and home appliances, allowing them to stay connected all the time.



**Axiomtek Co., Ltd.**

8F, No.55, Nanxing Rd., Xizhi Dist., New Taipei City 221, Taiwan

TEL +886-2-8646-2111 FAX +886-2-8646-2555

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

## Our Solutions

Axiomtek offers pretested, prevalidated gateway devices that help ease smart grid network deployment. Axiomtek has proposed its ICO300, an intelligent IoT gateway built on the Intel® Atom® E3827 processor. It comes with two 1GbE ports, four RS-232/422/485 ports and a PCIe Mini Card slot for 4G modules. One SO-DIMM DDR3L-1333/1600 socket can provide up to 8GB of system memory. It also supports a wide operating temperature of -40°C to +70°C and wide operating voltage from 12 to 24 VDC. In order to provide a longer service life, we have modified internal parts for the customer, such as RTC battery, resistor and capacitor.

### Key Features

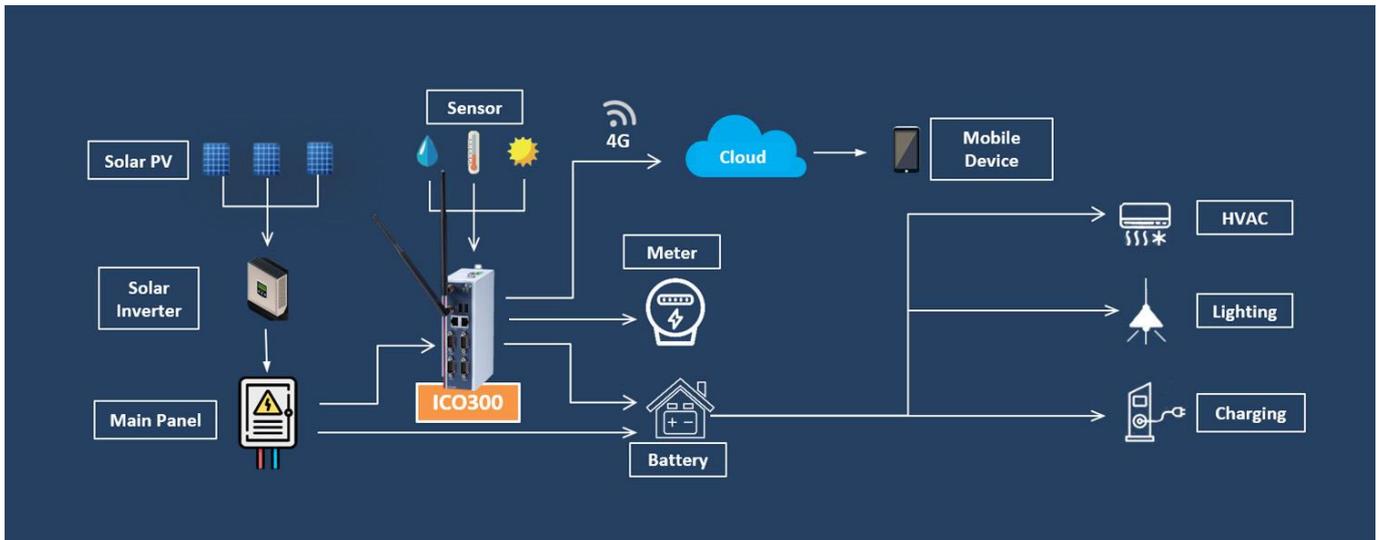
Intel® Atom® E3827 processor (Bay Trail)

Two 1GbE ports, four RS-232/422/485 ports, two USB 2.0 and 1 VGA

Wide operating temperature from -40°C to +70°C

Wide operating voltage 12 to 24 VDC

More than the 5-year product service life



Axiomtek's ICO embedded controllers can be programmed to prevent overcharging, monitor operational functions, communicate key data and status, and optimize energy use based on usage patterns and setting preferences.

## About Axiomtek Co., Ltd.

Axiomtek has experienced extraordinary growth in the past 30 years because of our people, our years of learning which resulted in our tremendous industry experience, and our desire to deliver well-rounded, easy-to-integrate solutions to

**Axiomtek Co., Ltd.**

8F, No.55, Nanxing Rd., Xizhi Dist., New Taipei City 221, Taiwan

TEL +886-2-8646-2111 FAX +886-2-8646-2555

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



our customers. These factors have influenced us to invest in a growing team of engineers including software, hardware, firmware and application engineers. For the next few decades, our success will be determined by our ability to lead with unique technologies for AIoT and serve our key markets with innovatively-designed solution packages of hardware and software – coupled with unmatched engineering and value-added services that will help lessen the challenges faced by our systems integrator, OEM and ODM customers and prospects alike. We will continue to enlist more technology partners and increase collaborations with our growing ecosystem who are leaders in their fields. With such alliances, we will create synergy and better deliver solutions, value and the expertise our customers need.

**Axiomtek Co., Ltd.**

8F., No.55, Nanxing Rd., Xizhi Dist., New Taipei City 221, Taiwan

TEL +886-2-8646-2111 FAX +886-2-8646-2555

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