



Unlock the Data to Realize Edge-to-cloud Digital Transformation

System Requirements

- Gateways with high reliability to ensure the seamless data transmission
- Robust root file system to prevent the gateway from getting bricked during a firmware update failure
- Wi-Fi and LTE connections to maximize data preprocessing and transmission capabilities in harsh environments

Why Moxa

- UC-3100 Series gateways support various wireless options and protocols
- Software functions for quick and easy configuration
- Extensive on-site support

Moxa Products



UC-3100 Series

- Arm Cortex-A8 1 GHz IIoT gateway
- Integrated Wi-Fi and LTE



ThingsPro Edge Software

- Comprehensive device data processing to prepare field data for cloud platforms
- Pre-integrated protocols and cloud solutions
- Web-based GUI for data visualization and remote monitoring of device configuration



Moxa Industrial Linux (MIL)

- Debian-based distribution that can use all standard Debian packages
- Crash-free robust file system
- Over-the-air (OTA) software updates

A component manufacturer in Taiwan is troubled by the lack of transparency in their production process which is causing high lead times and production delays. Other issues include manual monitoring of field data, which means, if an abnormal situation arises, there is not enough information and time to respond or take action. Equipment in the field is controlled by a PLC but the field data, such as temperature, was collected by on-site operators by inspection. The data is not available to the system in real time, affecting the accuracy of the quality control process and leading to many defective products.

To solve these issues, the component manufacturer collaborated with Moxa to design an edge-to-cloud solution with real-time alerts to reduce production lead time, increase the transparency of information, and boost overall efficiency. With Moxa's solution, the customer can now easily monitor field data in real time and have a good control over their production process. They have also been able to realize their smart manufacturing and digital transformation goals.

Moxa Solution

A key challenge in this case was achieving robust and secure data transfer from operational technology (OT) devices to IT-based cloud services. Certified by AWS and Azure, Moxa's robust, cloud-ready UC-3100 Arm-based computer is the ideal choice for rapid application development and deployment in the field. Embedded with ThingsPro Edge software, UC-3100 can work as an industrial IoT gateway to simplify the development of data-acquisition solutions for large-scale deployments and transfer the data collected to public clouds such as Azure, AWS and MQTT broker. UC-3100 comes with Moxa Industrial Linux (MIL), a stable Debian distribution that provides a crash-free robust file system and Over-the-air (OTA) software updates. Moxa's edge-to-cloud UC-3100 solution also simplifies connectivity so that customers can be prepared for any network interruption, allowing them to focus on gaining real-time insights into their field devices and transform their business.

