Automated Production Line for Beverage

The development of industrial IoT means more machines and on-site devices are connected to the Internet. This creates a great challenge for data collection and processing. Equipped with powerful edge computing capabilities, the InGateway902 excellently relieves the pressure of massive data and enhances productivity.

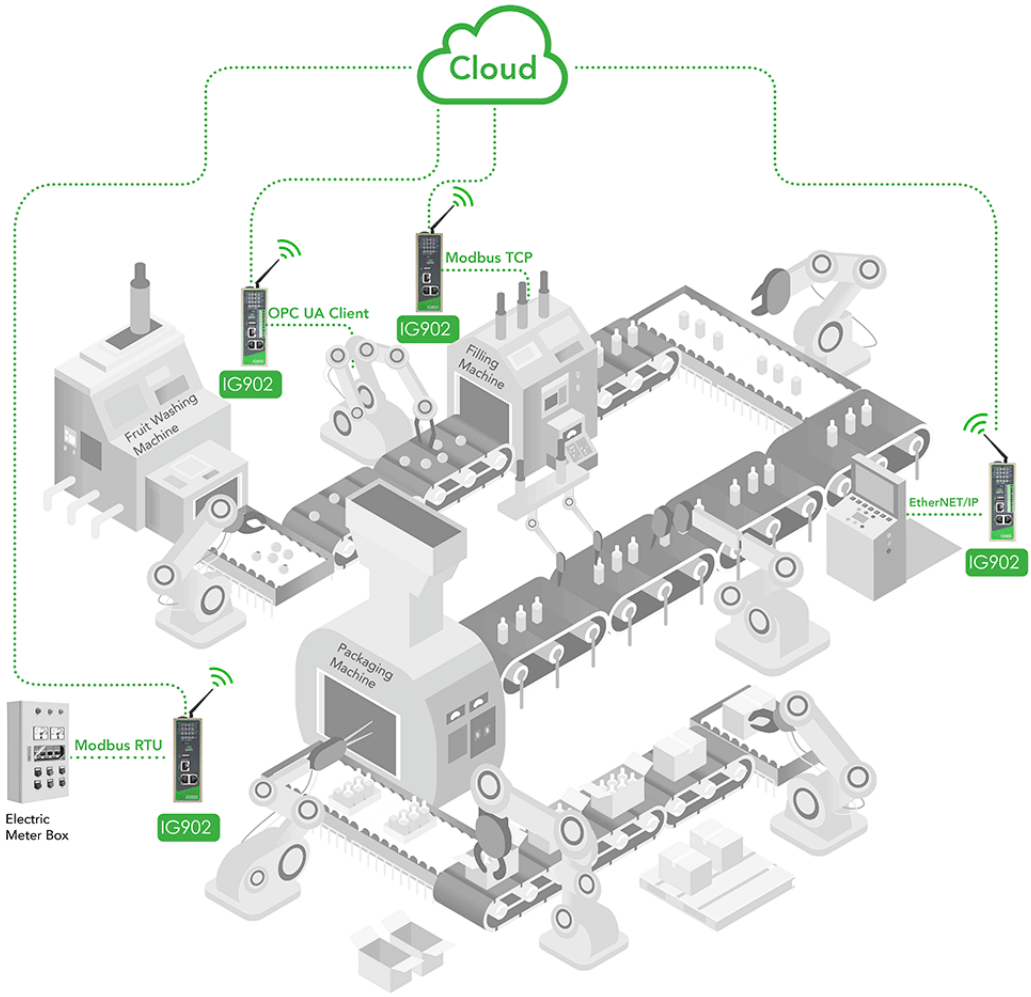
Background

With the development of IoT, more machines and on-site devices need to be connected to the Internet. Faced with increasing data to be uploaded to the cloud, how can we ensure quick access while reducing the pressure of cloud computing?

In different industrial production processes, due to various brands for automated devices, diverse industrial interfaces, non-uniform protocols and poor openness, data collection is challenging. Then how can we deal with it?

Solution

In the case of beverage production line, the IG902 edge gateway addresses the problems of industrial data collection from these aspects:



- Different production links in the beverage's automated production line need different machines for their respective process, such as the fruit clean machine, the crusher, the filling machine, the packaging machine, etc. The edge computing gateway acquires operation and production efficiency data of the machinery (e.g. Profinet protocol + SMS alarm app).
- 4G Industrial robots are assigned tasks of fruit sorting, bottle filling, packaging and stacking. The gateway acquires data of the robots? operation status in real time, track their health status and efficiency improvement (e.g. OPC UA protocol + data uploading resumption after breakpoint and data storage).
- The conveyer moves the production materials and bottled beverage to different links, during which the gateway acquires the data of those conveyers
  (e.g. EtherNET/IP protocol + IO alarm).

- Analysis of power consumption during the automated production of beverage. The IG902 collects power data from various production facilities and conduct power consumption analysis (e.g. Modbus protocol, data pre-processing and data cleaning).

Why InGateway902?



- Microsoft Azure IoT and AWS Greengrass certified
- Efficient and fast deployment for IoT applications
- Support multiple industrial protocols including Modbus RTU, Modbus TCP, OPC UA Client, EtherNET/IP
- Python-based development environment
- Reliable communication with 4G/3G, Ethernet, and multiple DSLs
- Rugged design, EMC level 3