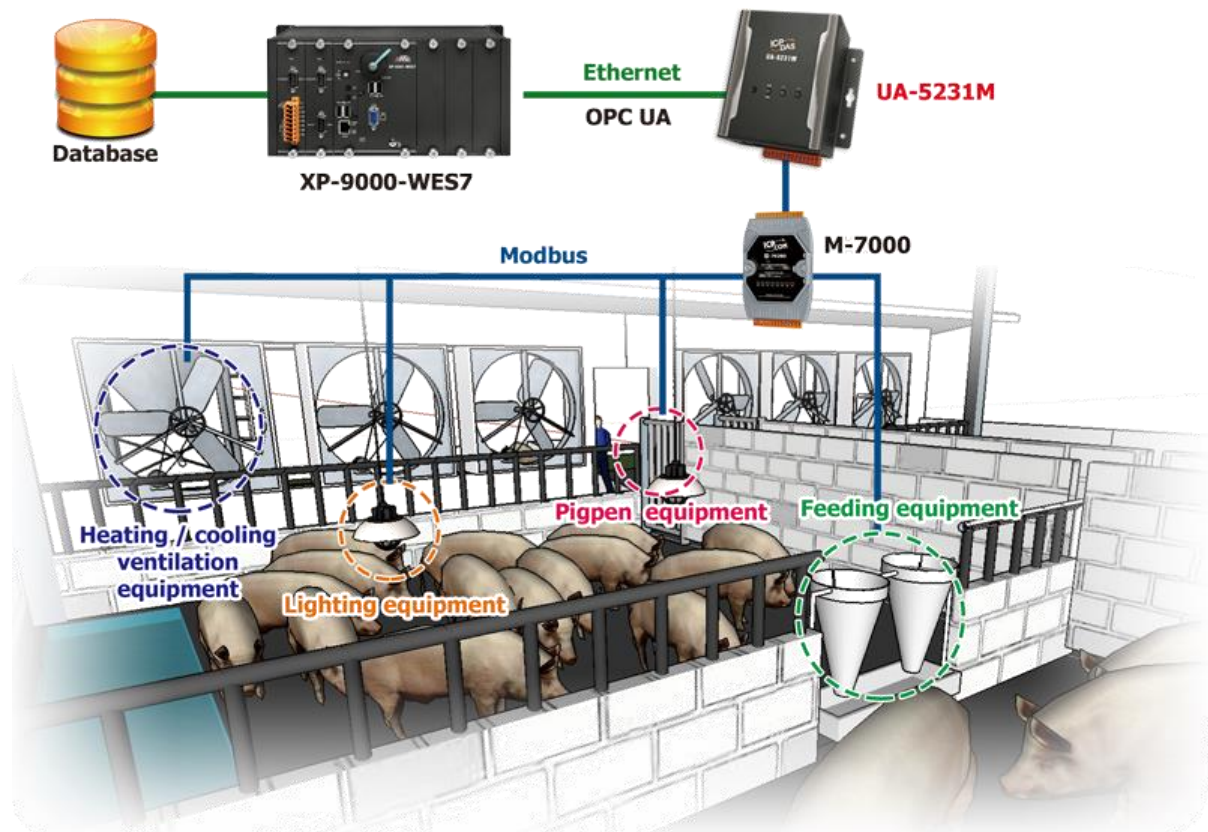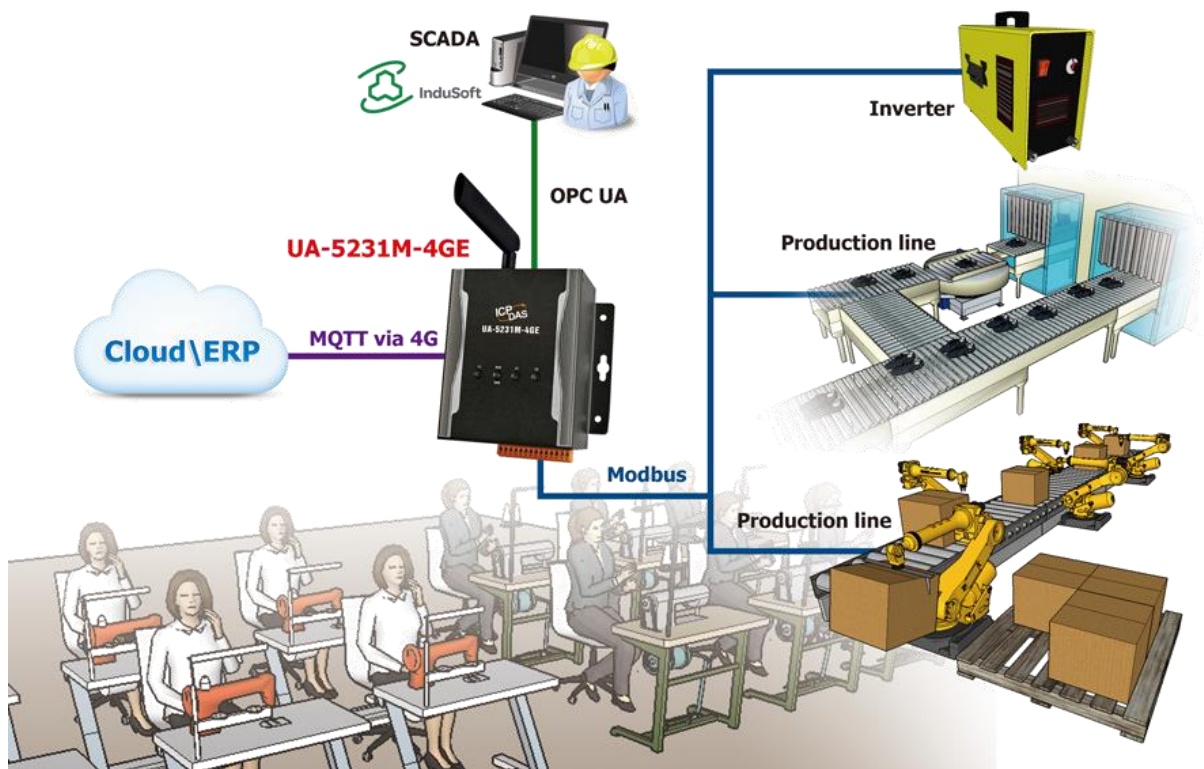# . Farm Automation Solution

The farm automation solution controls the on-site cooling/heating/ventilation environmental equipment, lighting equipment, feeding equipment, and pigpen equipment through UA-5231M and the connected M-7000 modules. The upper controller XP-9000 manages daily feeding and drinking equipment of every pigpen and integrates the data of the water supply, feed volume and diet to the database, and then analyses the data and adjusts the application to plan the best breeding solution.

• Factory Automation Solution

The factory automatic solution uses the UA controller to obtain the information such as the safety status of the production line and the temperature, voltage and current status of the inverter, then transmits them to the SCADA control system for real-time factory management. Besides, the 4G wireless can help to integrate the machine status, temperature, product yield, production parameters, electricity consumption, etc. into the ERP system via the MQTT protocol for managing the production of the global factories.
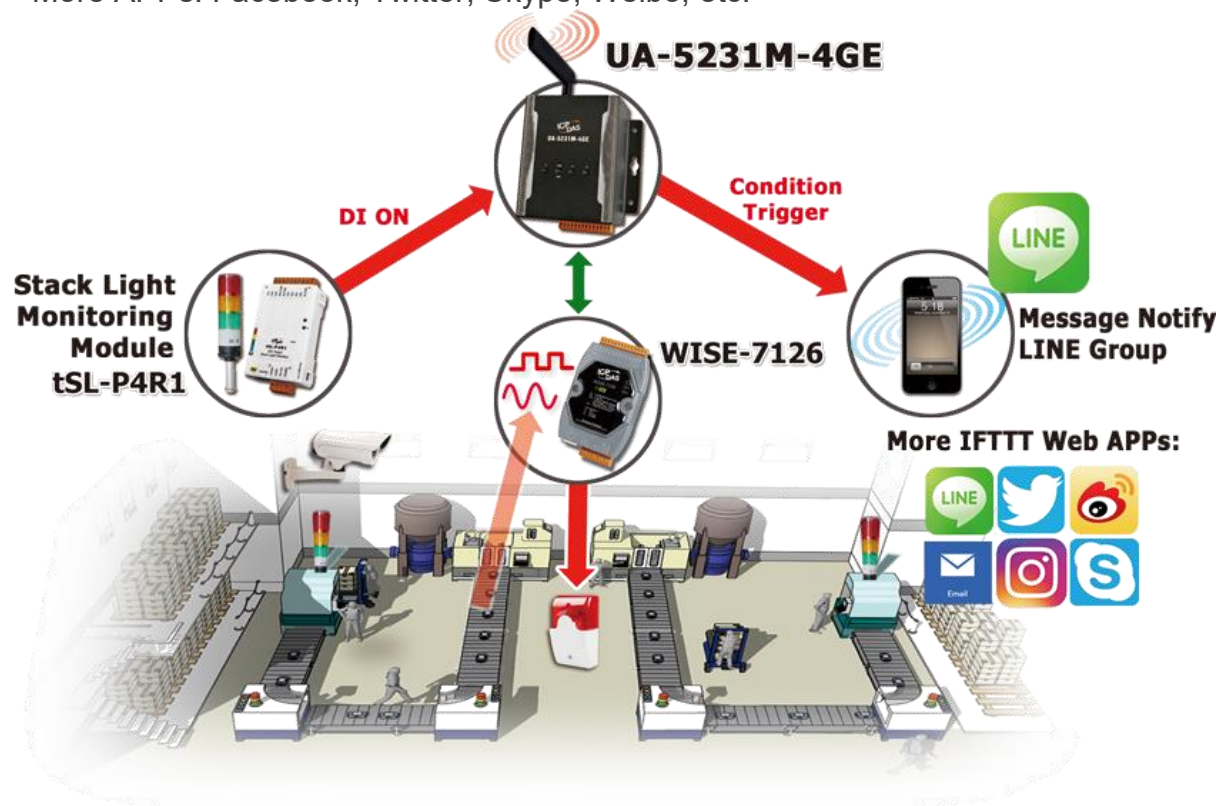
- # Alert Message Notify LINE Group Application

This security application provides active and non-active signal triggers for buildings, factories, etc. Through the IFTTT platform, it can send the message notification to the users favourite APPs and instantly alert them to the device information.

Application Features:

• DI or Switch Status Change Notification
• Message to Personal/Group of LINE APP
• More APPs: Facebook, Twitter, Skype, Weibo, etc.

· CO2 Concentration Monitoring & Notification Application

This application for indoor air quality management combines with LED displays, fresh air equipment, etc. When the CO2 concentration exceeds the limit, the system will display information on the LED display, force to ventilation, and sends notifications via IFTTT platform to pre-assigned web software, such as Gmail, e-mail, Office 365 Mail, etc.

Application Features:

• Dead Band Boundary Trigger (High: Danger Alert, Low: Safety Notification)
• PC/Mobile Mail Notification (Gmail, e-mail, Office 365 Mail, Dropbox, etc.)

IIoT Factory Application of MES

The Manufacturing Execution System (MES) communicates the factory equipment via OPC UA Client, and the OPC UA Service of the UA-5200 series can seamlessly integrate the system and equipment. The MES is the main solution for today's factory system, and the UA-5200 series IIoT Communication Server is the best choice for the IIoT factory solution.

Application Features:

• Convenient for System Integration
• Unified Access Interface

● Pumping Station IoT Application

This application is mainly about how to manage the pumping device data from stations. UA-5231 series uploads the data of all pumping stations to the control centre and manages/configures with the IWS software. In this case, the UA-5231 shortens the configuring and adjusting time. Without the complicated PC configuration, the UA-5231 directly connect the Modbus and OPC UA Server by completing all configuration easily and efficiently on the web.

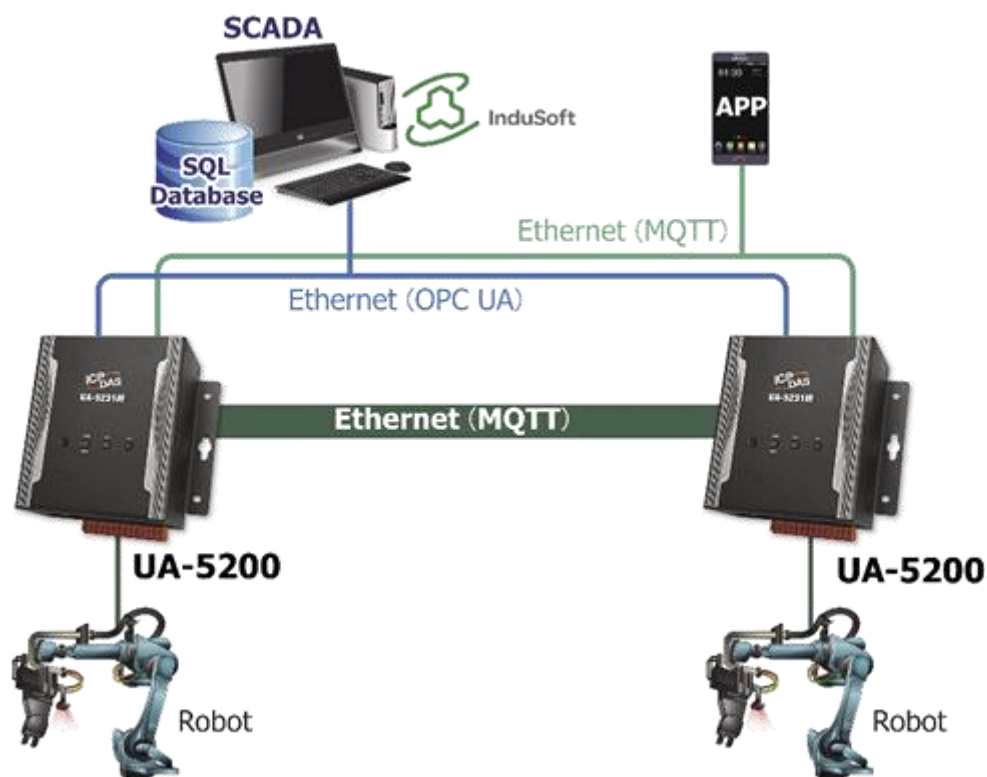## Application Features:

• Cross Web Domain
• Security

• Robotic Arm Co-operation Application

This application allows two robotic arms interactive communication and coordinated operation via MQTT and do the data analysis plus system monitoring/control with a SQL database, Big Data or SCADA through the OPC UA.

Application Features:

• Asynchronous Transmission
• Mobile Monitoring

• BA Smart Building IoT Application

This IoT application mainly combines the video intercom indoor host HA-401 with the lighting control, air conditioning, security, temperature, humidity, PM2.5, CH4, HCHO, and other harmful substance sensing devices to create a safe and comfortable environment.

If there happens a special situation, UA can quickly trigger the event, send a message to notify the Web APP (ex: LINE, Weibo, Twitter, etc.). The dual UA architecture can reduce the system burden.

Application Features:

• Reduce System Burden
• APP Message Notify