



System Overview

- 1

Responsive web app based on bootstrap and JavaScript MVC framework
- 2

Provide RESTful API to Web APP or Mobile APPs
- 3

Use Mosquitto to implement the MQTT protocol for distributing real-time messages
- 4

Record devices data from field controllers, AHUs and PM2.5 sensors via Modbus periodically
- 5

Connect to public weather data source via open API
- 6

Reporting server to provide reporting and analytics that can be embedded into the web application
- 7

Persistent storage for facilities, devices, historian data, rules, identity, users, roles
- 8

Long running service to monitor rules in database, trigger actions to field controllers and publish alert messages to MQTT broker
- 9

Fetch real-time device status and alerts from Modbus-MQTT Gateway and publish messages to the MQTT broker
- 10

Subscribe real-time control messages from MQTT broker and then send to field controllers via Modbus
- 11

Store real-time alerts and control messages to the MySQL database
- 12

Convert data between Modbus and MQTT
- 13

An industrial computer that contains a minimal Linux operating system and a fully configured application stack