Smart Water Grid and Pump Station Monitoring

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System Introduction

Under the impetus of Internet of things technology, water supplies will be equipped with an intelligent water network. Water pumping stations are the most important node in a water network, the booster pumping station can influence the public water, the drainage pumping station can ensure normal drainage during flood season to protect people from the floods. With the rising costs of life and an increase in areas of water, the supervision of the water pumping station must rely on science and technology, to reduce the inspection cycle or achieve unmanned control. By installing the water network information system, the relevant department can see the operating status of the pump station, and can also record the efficiency parameters to provide the basis for equipment maintenance, and significantly increase management efficiency.

System Requirements

- Transmit the data via the GPRS, upload the data to the monitoring

center on a regular basis.
- The event must have its own time scale with a second level calibration mechanism.
- When triggering the event, multi-center reporting must be supported.
- Secure data during abnormal communication, must replenish and report data during restoring the communication.
- Can remotely monitor the system status and upgrade the software functions.

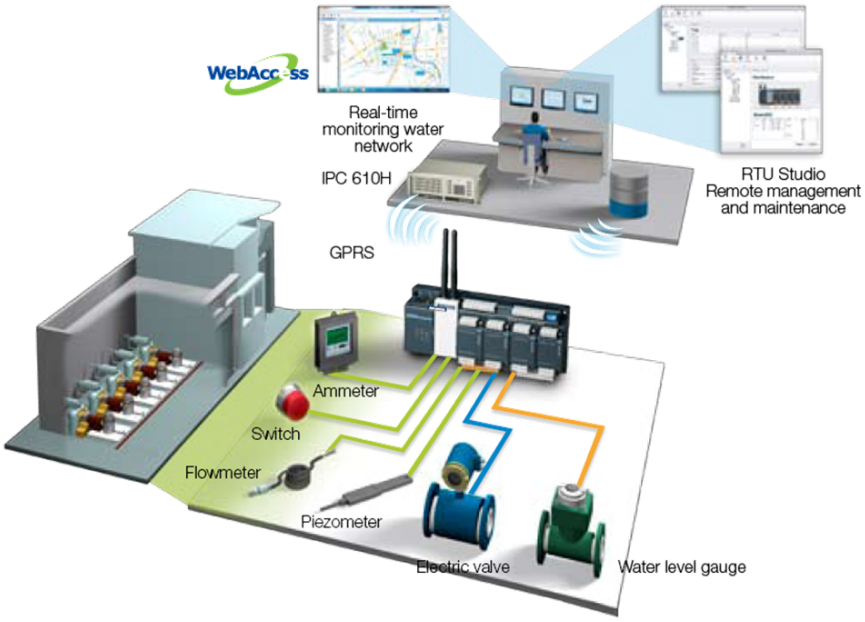
System Description

The open system architecture of the ADAM-3600 can easily build a GPRS remote communication system, the integrated I/O can be used to monitor the current, voltage & frequency and start/stop state of the pump, pressure and flow of inlet and outlet, water level, outlet water quality and inlet valve. The built-in real-time Linux operating system of the ADAM-3600 can be used to calibrate the time via a LAN or GPS, to make the data or events to have precise time. The ADAM-3600 is also equipped with an SD card, which can store the data, and will not lose the information during disrupted communication, and can replace the data and send it to the center when communication is restored. The ADAM-3600 includes iRTU Studio so can perform remote configuration, upgrades and updates, to save manpower and materials.

Project Implementation

ADAM-3600-C2G	8AI / 8DI / 4DO / 4-Slot Expansion Wireless Intelligent RTU
Advantech WebAccess	Browser-based HMI/SCADA Software
IPC 610H	4U Rackmount Chassis with Visual Alarm Notification

System Architecture


WebAccess
Real-time
monitoring water
network
IPC 610H
RTU Studio
Remote management
and maintenance
GPRS
Ammeter
Switch
Flowmeter
Piezometer
Electric valve
Water level gauge