

Building Beijing Water Pipeline Remote Monitoring Systems

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GPRS Micro RTU Controller with 4 AIs, 8 DIOs, and 2 relay outputs

Introduction

Project Introduction

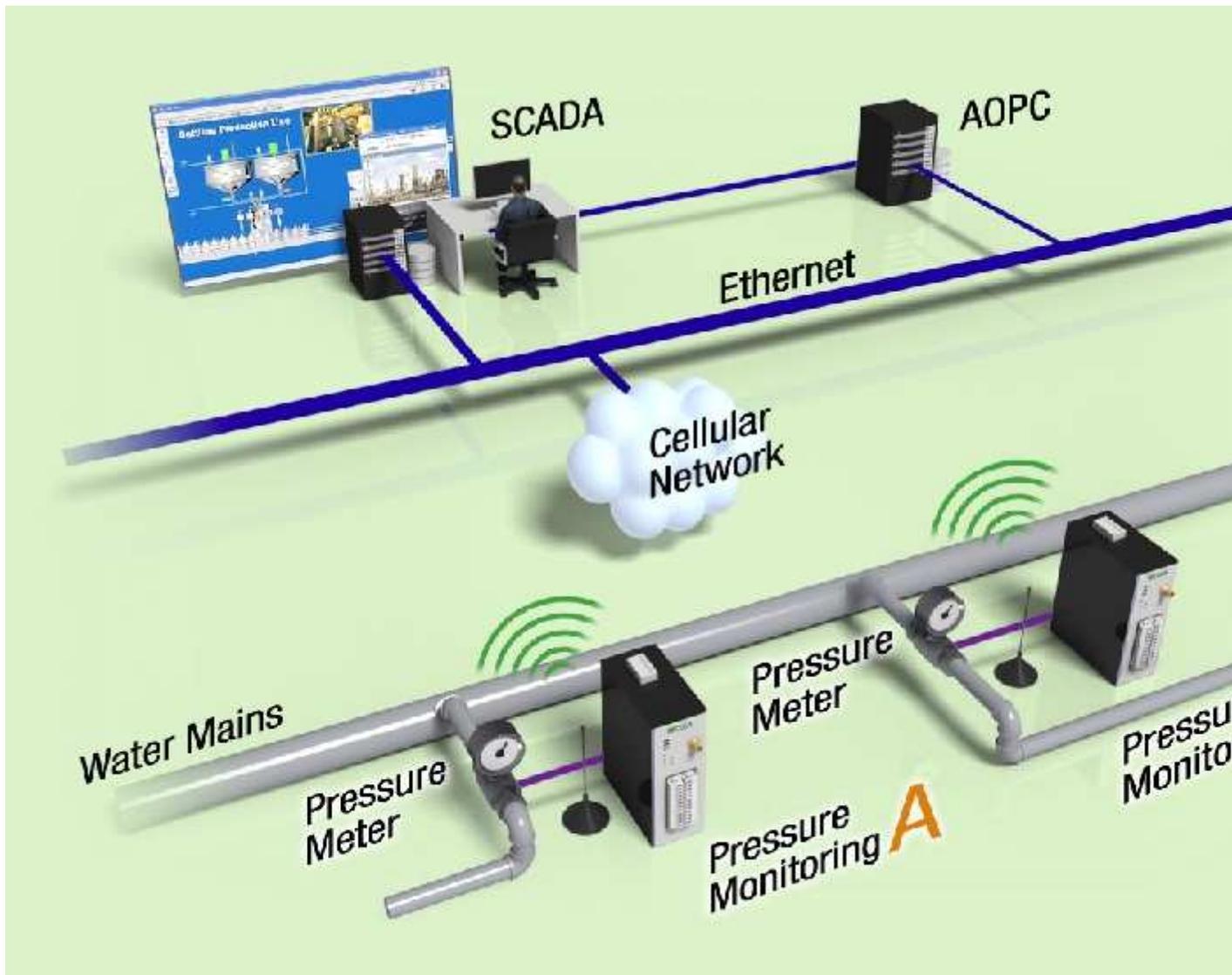
Water pipeline pressure needs to be kept at 0.3 Mpa in order to deliver a reliable stream of tap water to homes, businesses, and factories. Water companies use real-time monitoring systems in order to achieve consistent water pressure management that can quickly respond to any sudden drops of water pressure.

System Requirements

- Monitor all the distributed pressure points of a widely distributed water pipeline network
- Monitor and display in real-time data from every pressure value on the central SCADA system HMI
- Stable cellular communications network
- High expandability

Moxa Solution

System Diagram



Moxa's ioLogik W5340 is a cellular RTU solution designed specifically for remote monitoring systems. Compared with RF monitoring solutions, cellular offers a more cost efficient way to build a remote monitoring solution. Traditional cellular products use polling to request data, which requires a static and public IP. Moxa's ioLogik W5340 can actively update pressure values to the SCADA system regardless of what kind of IP address it uses. In addition, active reporting provides a way to get real-time data from the remote location, which is impossible with a polling system. As a simple comparison, it takes a traditional polling architecture two to three minutes to obtain four different pressure values from different monitoring sites. The ioLogik W5340 can use active communications to obtain the status in just a few seconds. Moreover, the ioLogik W5340 also supports local intelligence, so control logic can be executed and stored in the front-end device for a truly PC-free solution.

The ioLogik W5340 includes free Active OPC Server software that integrates seamlessly with any SCADA system. In addition to Active OPC Server, the free Moxa DA-Center software allows users to feed the I/O data straight into a database or quickly produce Excel files for data analysis.

Why Moxa

- All-in-one cellular solution
- Real-time data acquisition with active report technology
- Easy to implement and maintain
- Seamless connection to SCADA via Active OPC server