Fuel Pipeline Monitoring via GPRS
2011-08-23

Location / Country : South Africa

Product Solutions:
ioLogik W5340

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

Introduction
Project Introduction

The customer is an IT solution provider with over 10 years of experience in wireless technology. Its services include IT system consulting, project management, and facility management. The company faced a challenge during the development of a fuel pipeline monitoring system for one of its clients. Since Ethernet cables had not been installed along the pipeline, the company would be deploying wireless technology and needed to ensure a reliable wireless network over long distances. In this case, cellular communication is the best wireless solution for creating a pipeline monitoring system.

System Requirements

-Supports GPRS communication
-Combines AIs, DIs, and DOs
-Supports private, dynamic IP addresses
-Seamlessly connects to SCADA system
-Supports GPRS device configuration over the air

Moxa Solution

System Diagram
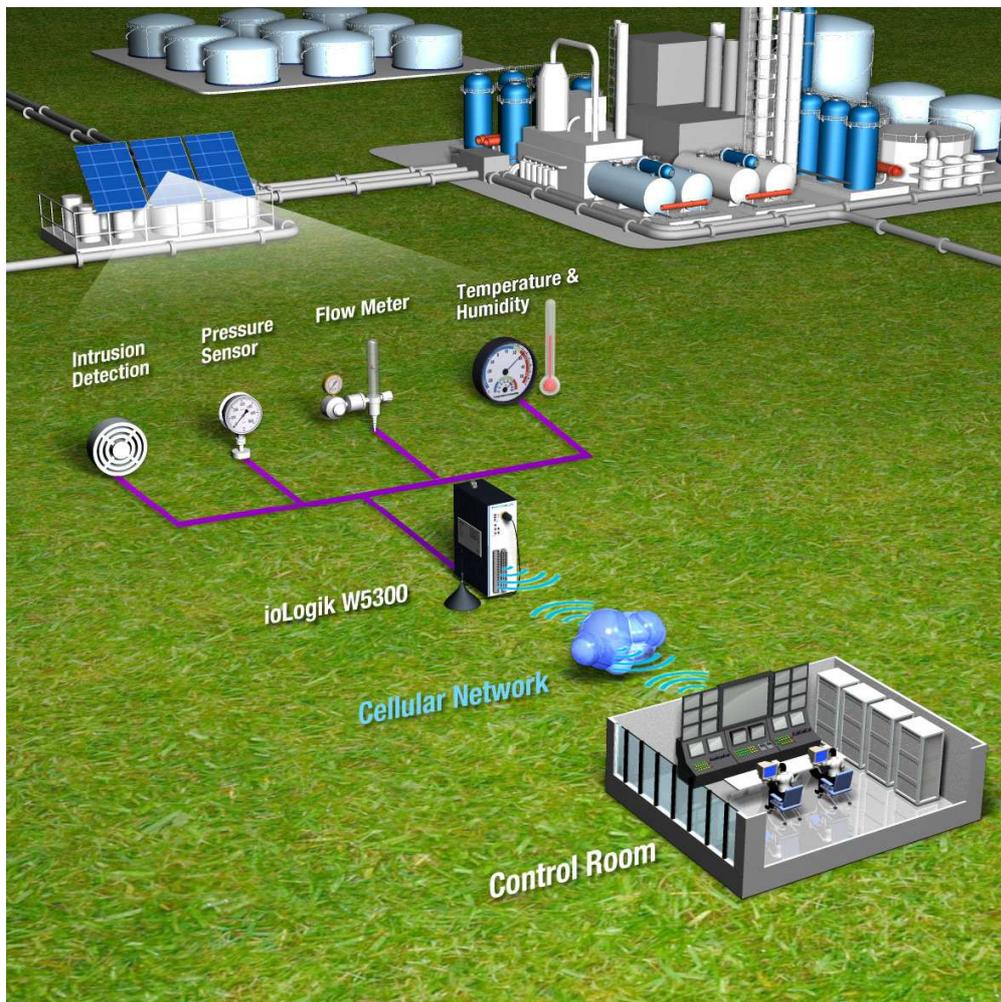
Moxa provides a variety of GPRS I/O solutions to meet the requirements of different applications. As a component provider as well as a complete solution provider, Moxa delivers a comprehensive package with competitive product design and value-added software such as Active OPC Server and DA-Center to enhance deployment efficiency.

The ioLogik W5000 series is a compact cellular RTU controller for remote monitoring and data acquisition applications. This series includes both standard and wide temperature models that can withstand tough environmental conditions. The ioLogik W5000 series supports DIOs, AIs, relay outputs, and serial communication. Most importantly, this series comes with unique functions for pipeline monitoring applications, including a counter function for monitoring flow speed, and a calculation function for value accumulation and deviation. With this functionality built-in, front-end data processing no longer requires additional programming. Moxa's patented Click&Go™ logic offers an easy-to-use and menu-driven interface to configure these functions without programming.

Another value-added tool is Moxa's patented Active OPC Server, an innovative OPC server that incorporates push technology for sending I/O status updates. The push architecture used by Active OPC Server can reduce system traffic by at least 80%, and it allows the RTUs to take advantage of dynamic, private IP data plans for savings in operational costs. The Active

OPC Server not only establishes seamless communication between the SCADA system and Moxa's GPRS I/Os, but also interacts with the DA-Center software using the standard OPC protocol to enable data exchange with any ODBC-compliant IT database. With this functionality, users can log data from the Active OPC Server without any socket programs required.

Why Moxa

- Easy deployment with all-in-one solution
- Bridges GPRS I/Os and SCADA via free Moxa Active OPC Server
- Optimized data transmission with direct push technology