

## All-in-One RTU For Trackside DC/AC Power Monitoring System

2011-07-08

**Location / Country :** Denmark

### **Product Solutions:**

[ioLogik W5340](#)

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

### **Introduction**

Project Introduction

A railway in Denmark was using a train signaling system that was beginning to show its age. Many of the existing devices were at the end of their expected service life, and the aging system was becoming a troubling source of train delays and signaling errors. Clearly, it was time for the railway operator to replace their signaling system, but with what?

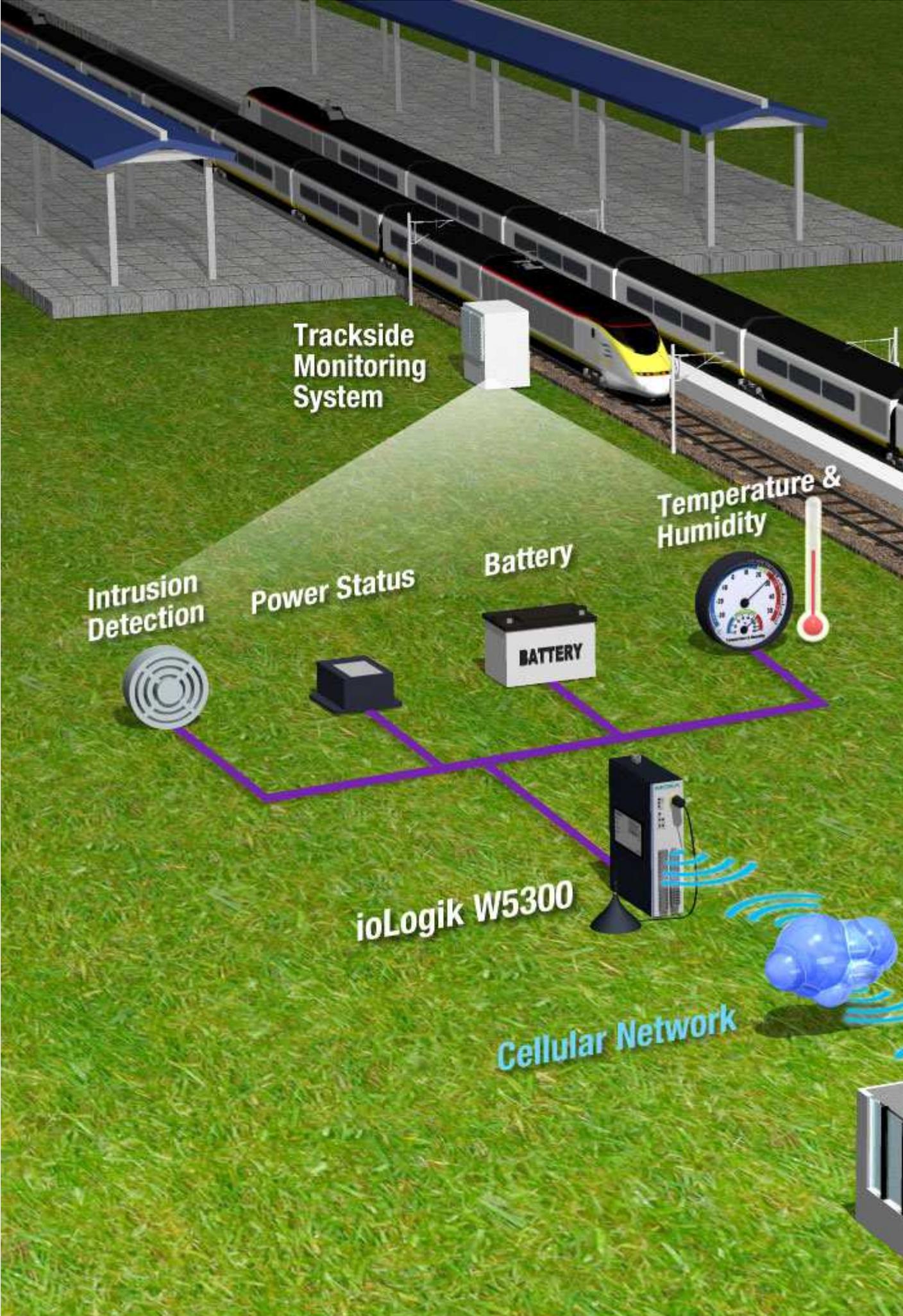
Ultimately, the Danish railway operator turned an obstacle into an opportunity by choosing to take this occasion to completely upgrade their signaling system to modern standards. Their new signaling system would use the latest technology and leverage the size of Denmark's railway network to achieve excellent economies of scale and maximize cost-effectiveness. With a new, advanced signaling system, Danish trains will run with stronger reliability, at higher speeds, with greater safety, and better integration across the entire country's train network.

### System Requirements

- Wide temperature design for operations in harsh environments.
- A device that can combine data logging, GPRS modem, and alarms in one
- Support for AI and DI on the same box

Moxa Solution

## **System Diagram**



The Danish railway uses GPRS as the communications link between remote cabinets and control centers, so the AC/DC cabinet of the railway signaling system must include a telemetry and data logging solution in order to wirelessly transmit system logs and alarms over the GPRS network. In addition, the operator needed to monitor voltage and current of AC and DC power in the trackside cabinet. Intrusion detection and battery status monitoring must also be included. The cabinet will use a fixed IP address with a VPN for secure communications.

The operator discovered that Moxa's all-in-one GPRS RTU was an excellent fit for all of their requirements. Moxa's ioLogik W5000 series includes a complete suite of protocols, ports, and technology that meets each of the system requirements on just one device. The ioLogik W5000 can send real-time alarm messages via e-mail, TCP, UDP, SMS, or SNMP trap, giving customers tremendous flexibility in how to integrate their alarm system with the broader railway signaling network.

Another key advantage of the ioLogik W5000 is its ability to work in a wide operating temperature range. Thanks to the ioLogik's ruggedness, there's no need for an additional heater or cooling system in the trackside cabinet.

#### Why Moxa

- Seamless connection between SCADA and GPRS RTU using Moxa Active OPC server
- Easy data logging and time stamps
- All-in-one design reduces costs and saves cabinet space