

Roadside Cabinet Monitoring with Ethernet Micro RTU Controller

2011-07-27

Location / Country :Italy

Product Solutions:

[ioLogik E2210](#)

Ethernet Micro RTU Controller with 12 digital inputs and 8 digital outputs

Introduction

Project Introduction

Many industries rely on roadside cabinets to provide service to multiple households at a specific area. Different types of equipment may be installed, such as traffic devices, vehicle sensors, or telecom servers. Originally, roadside cabinets were primarily used to serve rural and remote areas, but they are now common in urban areas as well. They can be found next to a highway or next to a sidewalk, almost anywhere a person may look.

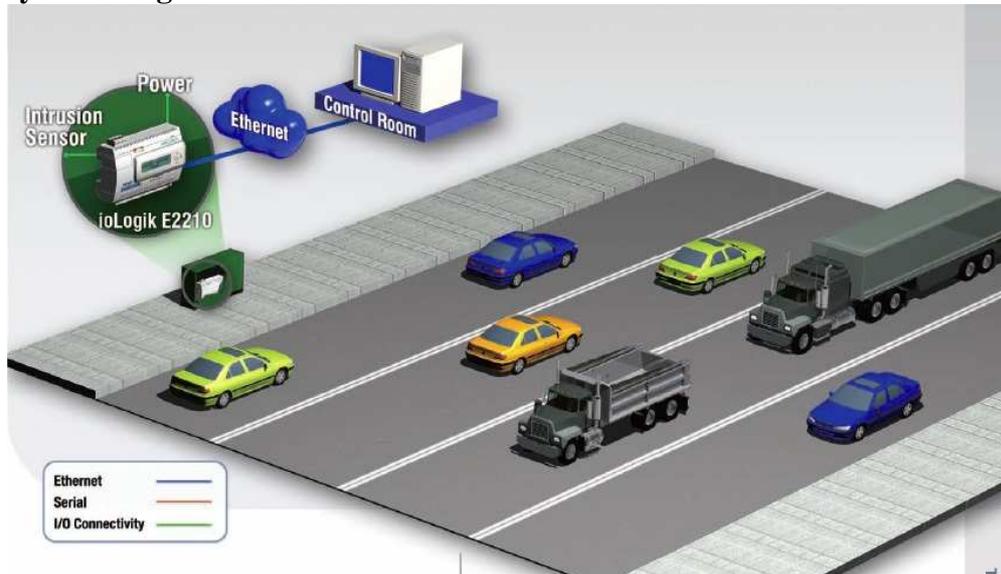
System Requirements

A client wanted to establish an intelligent transportation system, which meant that the traffic control equipment in various roadside cabinets had to be monitored in real-time. In addition, the cabinet itself needed to be monitored to minimize downtime. The most effective method of communication was over Ethernet IP networks. However, monitoring hundreds of cabinets along the highway would require an overwhelming amount of CPU and network resources, as well as programming effort. A solution was required that satisfied the following requirements:

- Event-driven alarm messages
- At least two digital input channels
- Output channel to reset power
- Ethernet interface
- Easy mass deployment and firmware upgrade

Moxa Solution

System Diagram



The widespread popularity of Ethernet made it an ideal medium for roadside cabinet monitoring. Fiber cable was already installed along the highway to transmit traffic signals and video feeds to a control center. An ioLogik E2210 was installed in each cabinet to monitor door and power status. Since the ioLogik provides digital output channels, it was also used to reset power remotely if there was an equipment malfunction. Furthermore, mass deployment was easily achieved since the ioLogik supported TFTP for configuration over Ethernet.

Why Moxa

- Report by exception to reduce network bandwidth
- TFTP, ioAdmin for mass deployment and management
- Free MXIO library for software development
- Click&Go logic provides front-end intelligent
- Push technology is perfect for large scale system
- Built-in Real-time clock provides precise time stamp