

Dispersed E-police Networking by 3G for Traffic Surveillance



>>> Background

-E-police is a kind of enforcement tool widely used in recent years around the world. It can effectively help traffic police to gather data about traffic violations. By deploying E-polices on roads, traffic accidents are greatly reduced. The e-police transfers signals to CPU through sensor, then keeps signals in register temporarily. Via networking, pictures can be downloaded by traffic command center. This process requires the networking must be reliable enough and respond rapidly.

-For downtown area, fiber based networking solutions are widely used. (For more information, please refer to

High Reliable Fiber Ring Solution for Wind Turbine Remote Monitoring); for unattended areas such as suburban regions, cellular can be the best choice considering that wire deployment is not convenient and not easy to change.

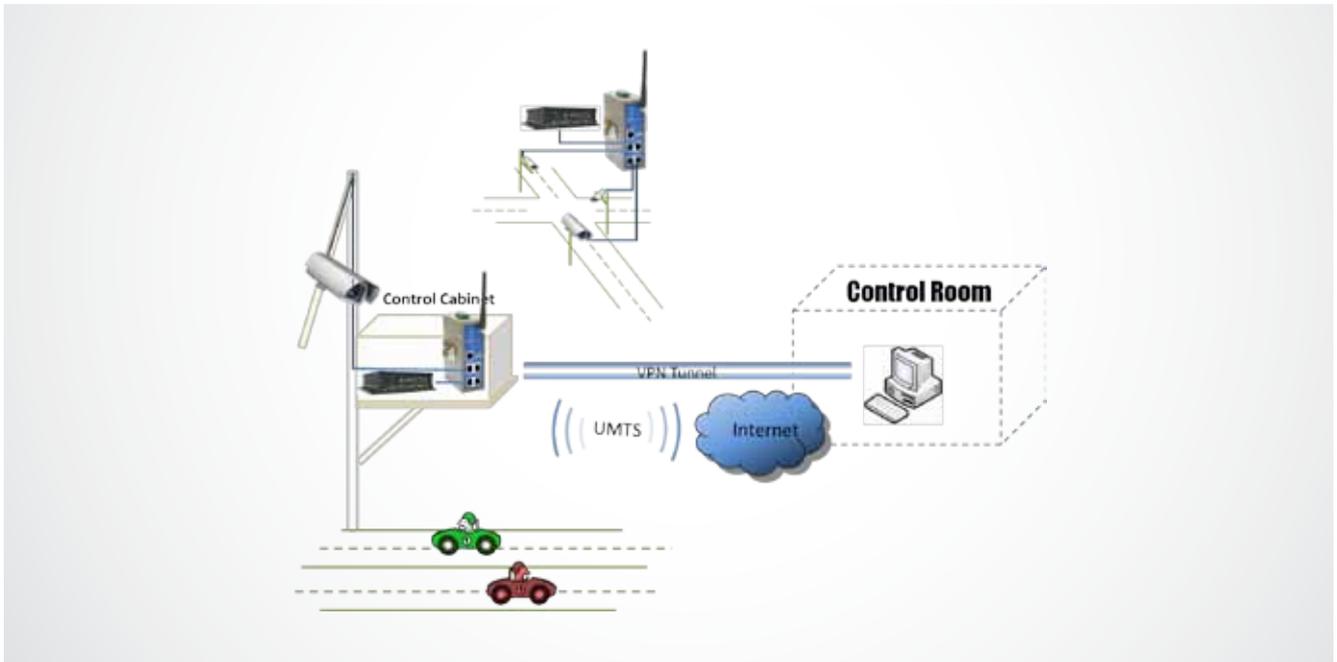
-The project introduced below was how we used cellular to help the traffic bureau in one of the biggest cities for e-police networking.

InHand Products and Solutions

>>> Products



InRouter 7XX Series Industrial Cellular Router



Network topology

>>> Description of solution

-In this project, there were almost 600 monitoring points dispersed everywhere in the city. And the government wanted to expand the monitoring area to suburban regions. However, they encountered the first difficulty: how to network the cameras? Because there was no cable access, and to extent cable or fiber to these areas might cost too much, so cellular became a very good choice. And what they needed was actually a reliable solution which could survive under harsh nature conditions in the unattended areas.

-Based on the requirement, InHand Networks provided 3G solution for e-police system in suburban area. At the remote site, IP Cameras connected with industrial PC or PLC through InRouter714WH01's switch ports, which saved an extra switch. All data packages were sent through the highly secured VPN tunnel built by InRouter714WH01. Wherever there was cellular signal, the pictures and analysis data could be sent within several minutes.

>>> Features of Product and Solution

- Wireless communication: easier deployment and lower cost compared with cable based solutions, especially for suburban areas
- Support VPN technology and provide access to operators' private networks
- Variety of product models to choose: Standard Model; Four Ethernet Port Model
- Industrial-grade design makes IR700 series are adaptive in harsh environments:
 - DIN-Rail Mount
 - Wide operation temperature: -25~70°C(-13~158°F)
 - Power Input: 12~48V DC, Industrial Terminal Block
 - Immunity to EMI
- Support link detection and auto-recovery, can redial to internet if failed