

DELAWARE D.O.T. USES MAGNUM DX900 INDUSTRIAL ROUTERS FOR TRAFFIC CONTROL

A Transportation Application

TECHNOLOGY TODAY

In today's traffic control environment, the need for management and video security systems is increasing at an accelerating pace. Traffic control management also has many complexities not always found in other industries. Networking management products must be able to survive harsh, outdoor conditions. Additionally, existing serial protocols are often in place and need to be interconnected with Ethernet as well with routing protocols. While traditional serial data lines have been used for relaying traffic information, increasingly Ethernet networking is used in the traffic control industry to accommodate the rising bandwidth demands of IP-based video information.

ABOUT DELAWARE D.O.T.

The Delaware Department of Transportation (DelDOT) is responsible for thousands of miles of roads and highways. DelDOT's responsibilities also include the traffic signals and the intersections off the main highway exit ramps. Recently, DelDOT has been working to expand its capacity to manage traffic flow, reduce congestion and enhance security--not just on the busiest thoroughfares but throughout remote locations

THE CHALLENGE

Delaware DOT wanted to extend its traffic flow management and video monitoring at some of its more isolated locations. Many of these locations lacked fiber or high speed connections back to the DelDOT Traffic Operations Center (TOC) and had serial connections to the traffic controllers in the remote traffic cabinets. Many of the video surveillance cameras at these locations also required serial connections to the legacy analog camera controls.

While connecting to these legacy devices and networks, DelDOT also needed to enable IP networking--ideally from the same networking equipment. Ethernet ports would be required to connect to newer pole-mounted IP cameras that would enable high speed video traffic and accident monitoring. In addition, the Ethernet ports would connect to Dynamic Message Signs (DMS) with IP messaging. The signs are located along the roads to alert drivers of upcoming accidents, traffic delays, and general information such as travel times to popular locations.

THE SOLUTION

To provide traffic control networking to its more isolated locations, DelDOT selected the Magnum DX900 Industrial Routers. DelDOT liked the DX900's hardened package rated for outdoor use, and the product's ability to offer all of the different functions DelDOT needed in one box. The DX900 offers four serial ports: one of which is used to connect to the 170 traffic controller in the remote traffic cabinet (see diagram, this page). Other serial ports are connected to legacy analog serial camera controls. There is at least one analog monitoring camera at each of these remote locations.

The DX900 Industrial Router also offers four Ethernet ports. The Ethernet ports connect to new high-bandwidth IP cameras that have Ethernet ports.

Magnum DX Routers at Delaware DOT



