

CASE STUDY

INDUSTRIAL ETHERNET HARDWARE ONBOARD DENVER BUS TRANSIT SYSTEM



BACKGROUND

The Denver Regional Transportation District (RTD) Transit Police Division is always looking for ways to increase safety and security. Recently, their internal legacy analog-based system was upgraded to eliminate the manual need of uploading video data. With this upgrade, HD Panasonic cameras were installed inside and outside each bus across the Denver fleet for recording, file transfer, viewing, and management. These cameras have been integrated with Antaira Technologies' LNP-800AGH-24-T industrial Power over Ethernet (PoE) unmanaged switches along with other hardware and software components. Antaira Technologies' Ethernet switches provide power via Ethernet to the video surveillance cameras to capture footage inside and outside the buses.

SYSTEM ADOPTION METHOD & BENEFIT

Antaira's LNP-800AGH-24-T PoE+ unmanaged Ethernet switch solution allows the Denver RTD bus fleets to operate flawlessly. The LNP-800AGH-24-T supports PoE, which is a system that transmits electrical power along with data to the Panasonic surveillance cameras over standard twisted-pair cables in the bus fleet's Ethernet network. Each Antaira switch has the ability to support a low power input range of 12 to 36VDC that can generate up to 30 Watts of Power Sourcing Equipment (PSE) power output per port. This internal switch booster is key for buses, as many only have a 12VDC battery available onboard the vehicle. With the LNP-800AGH-24-T there are eight ports available for delivering PSE that will provide power to the surveillance cameras and in-vehicle recorders both inside and outside the bus. Additionally, the Ethernet switches are designed to endure shock and vibration and have an extended operating temperature.

The main benefit of Antaira's solution allowed the Denver RTD to upgrade their networking hardened technology while integrating with modern video surveillance and management systems.

ANTAIRA SOLUTIONS

LNP-800AGH-24-T

8-Port Industrial PoE+ Unmanaged Ethernet Switch

- 8*10/100/1000Tx (30W of PSE per port)
- 12 to 36VDC Power Input
- 9.6Kb Jumbo Frame Support
- Supports Auto-Negotiation & Auto-MDI/MDI-X
- Extended Operating Temp. (-40°C to 75°C)
- IP30 rated & DIN-rail mountable



CASE STUDY

INDUSTRIAL NETWORKING SWITCHES ON DENVER'S LIGHT RAIL SYSTEM



BACKGROUND

The Denver Regional Transportation District (RTD) is focused on maintaining and improving public safety and security measures. Recently, their light rail system was upgraded to include an entirely new surveillance system integrated with other new hardware and software devices. One of the most critical components of a light rail system is its industrial networking infrastructure. This infrastructure connects components such as Power over Ethernet (PoE) surveillance cameras, DVR video systems, and automated ticketing kiosks. Antaira Technologies' LMP-1002G-SFP-T industrial Power over Ethernet (PoE) managed switches power the PoE Panasonic cameras on the light rail platforms monitoring nearby areas for passengers' safety.

SYSTEM ADOPTION METHOD & BENEFIT

Antaira's LMP-1002G-SFP-T high-port count PoE+ managed Ethernet switch solution allows the Denver RTD light rail system to seamlessly monitor the surrounding areas at each station's platform. The LMP-1002G-SFP-T supports IEEE 802.3 at/af PoE for a maximum of 30 Watts per port with two Gigabit fiber connections which are ideal for powering up Panasonic PoE HD cameras. These switches also support the ring network redundancy function protocol that has a <50ms network recovery time. All the data from the Panasonic surveillance cameras is captured and transferred through Antaira's LMP-1002G-SFP-T switch in real-time and is then sent to a control room. Since Antaira's switch is a fully managed Layer 2 device, remote monitoring can take place. This is helpful to the Denver RTD because if a dangerous situation arises on a platform, the live video surveillance feed being monitored in a control room will allow for someone to dispatch for assistance at the platform. Additionally, the Ethernet switches are designed to endure shock and vibration and have an extended operating temperature.

The key benefit of Antaira's solution allowed the Denver RTD to flawlessly operate with new industrial networking technology to remotely monitor and control light rail platforms for the public's safety.

ANTAIRA SOLUTIONS

LMP-1002G-SFP-T

10-Port Industrial PoE+ Managed Gigabit Ethernet Switch

- 8*10/100/1000Tx (30W of PSE per port)
- 2*100/1000 SFP Slots
- Network Redundancy Support: RSTP/MSTP & G.8032 ERPS (Recovery time <50ms)
- Configuration: Web console, Telnet, CLI command
- Power Input: 48 to 55VDC
- Temperature Range: -40°C to 75°C

