

CASE STUDY



Government Agency Simplifies 10,000 IP Camera Deployment Using NVT Phybridge PoE Innovations

Summary

A government agency was relying on an outdated analog surveillance system and wanted to modernize to a comprehensive IP solution. The massive surveillance upgrade would take place across 360 customs offices and border crossing locations, with the objective of increasing their ability to identify risks and reducing response time to threats. The agency was also looking to improve efficiency by automating most of the processing of imports and exports coming in and out of the country at key locations. The customer wanted to minimize the amount of paperwork required, eliminate personnel interactions, and reduce wait times as individuals go through customs; with the objective of increasing economic growth and foreign trade.

Challenge

The agency determined that over 10,000 existing analog cameras needed to be upgraded to IP. The customer was uncertain how to proceed, as the immense scale of the project presented critical challenges:

- High costs associated with ripping-and-replacing the existing Coax-based infrastructure, as well as the physical space required to install new IDF closets to support IP cameras beyond the 330ft reach limitation of standard PoE switches
- The estimated time of four years to deploy the new surveillance system across the 360 locations.
- High risk and network complexity concerns to establish a network platform to support IP surveillance.
- Loss of revenue and safety concerns caused by disruption to government import and export operations on a massive scale across the country.

Solution

Unsatisfied with the traditional approach to network design, the customer discovered the opportunity to leverage its existing Coax-based infrastructure to support the new IP surveillance system. Due to the success of past installations, the system integrator confidently recommended the NVT Phybridge Ethernet over Coax (EoC) solution. The NVT Phybridge team in LATAM assisted the customer in scheduling a no-obligation proof of concept to test the solution in their environment. After a few simple setup steps, the enterprise-grade CLEER24 managed switch transformed the existing and reliable Coax infrastructure into a power-packed IP/PoE backbone, capable of supporting the new IP cameras with up to 6,000ft (1,830m) reach – that's 18 times farther than standard Ethernet switches. The solution completely eliminated the high cost, high risk and time-consuming process of ripping-and-replacing the existing Coax-based infrastructure.

Result

The government agency was able to achieve its digital transformation objectives; deploying over 10,000 new IP cameras in just 10 months, compared to the initially estimated 4 years. The new IP surveillance system now provides high-resolution viewing and recording capabilities; giving officials better recognition and identification of potential safety threats at over 360 key customs and border crossing locations. Thanks to NVT Phybridge switch technology, the agency experienced:

- Over \$3 million saved in infrastructure costs as the customer avoided the traditional rip-and-replace upgrade model. The CLEER24's long reach capabilities ensured that the customer could support IP cameras in all areas without installing new IDF closets.
- Zero disruption during the modernization to IP; ensuring the country's import and export operations were not affected.
- An 80% reduction in deployment time; as the digital transformation was completed in 10 months compared to the initial forecast of 48 months (4 years).
- A robust and simplified network platform that is flexible and easy-to-manage, as the customer maintained a physically separate and cyber-secure point-to-point network topology.
- An environmentally responsible modernization by repurposing the existing coax-based infrastructure and eliminating costly IDF closet requirements, which prevented over 60 tons of e-waste.

Along with increasing security at the locations, the agency was able to leverage new business intelligence and technology to implement a new automated customs process. The integration of QR readers within the import and export locations has allowed the agency to:

- Reduce the average time spent by an individual at a border crossing location by 50%.
- Reduce the amount of paperwork required during the import/export process.
- Eliminate personnel interaction; further increasing safety and labour cost savings.

NVT Phybridge Power over Ethernet Switches and Extenders

Enable IP Cameras, IP Phones, or Any IEEE-Compliant Device



PoLRE: Single-Pair UTP up to 1,200ft (365m)



FLEX: Multi-Pair UTP up to 2,000ft (610m)



CLEER: Coax up to 6,000ft (1,830m)

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