

Leveraging Legacy Cabling in Elevators: How Lantronix Media Converters Enabled Connection and Powering of Wireless Access Points in a Challenging Environment

Company Type: Healthcare

Headquarters: Texas, USA

Lantronix Products Deployed: [Ethernet over Coax Extenders](#)

Summary

A major, multi-building hospital in Texas was looking to provide wireless coverage for medical staff using Spectralink mobile devices. The mobile devices help hospital staff communicate with other team members, access patient information, and do many tasks that used to happen at a desktop computer workstation. One area where they couldn't easily provide Wi-Fi to connect the devices was in their elevators. You've probably experienced losing cell phone reception in an elevator, but that is not an option for hospital staff. It was imperative staff remain connected to care for patients quickly and effectively.

Wi-Fi signals do not easily penetrate elevators. Since the elevators continually moved up and down, the installer determined that each elevator car needed a dedicated access point to provide Wi-Fi. However, this was difficult to achieve since wireless access points require connectivity to both Ethernet and power. Most elevators do not have the infrastructure to connect to Ethernet and power a wireless access point. It would be costly for the hospital to rewire the elevator cabling or install new elevators to provide direct Ethernet access. Elevators usually have a lifespan of over 20 years. The hospital administration needed another solution to make their communication plan happen.

The Solution

Instead of rewiring the cabling, the low voltage contractor recommended leveraging the existing elevator cabling and connecting Ethernet extenders to install the wireless access points.

One issue with connecting the wireless access points to Ethernet is that the elevators were too far away from the Ethernet networking equipment as there is a 100-meter limitation for Ethernet cabling.

Lantronix's [Ethernet over Coax Extenders](#) with PoE+ offered the right solution for this application to connect to the Ethernet and power the wireless access points via Power over Ethernet.



First, the installer set up coaxial cables from the equipment room to the elevator machine room and connected Lantronix's Ethernet over Coax Extender with PoE+ local units to the coax cable.

Next, on the ceilings of the elevator cabs, the team installed the wireless access points. Then the Lantronix's Ethernet over Coax Extender with PoE+ remote units were connected to the coax cable, with an Ethernet cable connected to the wireless access point inside the cab. No power outlets were needed in the elevator cab since the local unit provided power over the coax to the remote and wireless access points.



Lantronix Solutions Benefits

This installation was a new project type for the low voltage contractor, with a complex pathway for cabling. But the result proved beneficial to the medical staff at the hospital since they are better able to keep in touch with other staff and patients without dropping important communication once they enter an elevator within the facility.

Providing power and connectivity for necessary communications networks is not always convenient. Sometimes the precise location where new devices are needed is just out of reach of the existing network equipment, and power may not be available where it is necessary. Lantronix's Ethernet over Coax Extenders with PoE+ are an ideal solution for leveraging existing coaxial cabling, extending the network, and providing power for access points, security cameras, or other IP devices.

Lantronix's Ethernet over Coax Extenders with PoE+ are different from other products allowing extension of Ethernet over coax because they:

- Support 10/100/1000 networks
- Provide full PoE+ power to the connected device
- Fit with either an RJ-45 or an SFP connection on the remote end (for Ethernet extension when PoE is not required)
- Allow remote monitoring of the devices
- Feature [Auto Power Reset \(APR\)](#), which monitors connected devices and automatically reboots them if they become unresponsive. APR saves operational costs by remotely resolving simple power glitches without sending a technician to the site to power cycle the connected device.

Lantronix also offers [Ethernet over 2-Wire Extenders](#) with PoE+ for connecting and powering devices over a single pair of wires or category-rated Ethernet cables for applications where twisted-pair cabling exists. As part of our broad media conversion portfolio, we have solutions that allow you to connect, extend, and power a diverse assortment of devices while leveraging your existing cable infrastructure.

For more information on Lantronix, visit [transition.com](https://www.transition.com)