

Case Study

Global chemical leader upgrades analog technology



the **CLIENT**

A global leader in the chemical & specialty gas industry recently approached the Unlimited Technology, Inc. team with a question on how to upgrade their massive existing analog CCTV infrastructure and bring it up to date with the latest IP based camera technology.

the **CHALLENGE**

The main problem was figuring out how to use the significant amount of existing copper coaxial cabling infrastructure that was still in operational condition. The cost it would take to replace the cabling is often times complicated by hazardous working locations such as class 1 division 1 areas that require special conduit, fittings & housings due to the presence of combustible gases or materials. When budget planning for an upgrade from an existing CCTV system, the labor portion can sometimes be well over 50% of the total cost of the project.

the **SOLUTION**

Our answer to this problem was to find a way to minimize the largest piece of cost impact that we could control. Working closely with the customer, the Unlimited Technology design team and application engineers came up with a cost-effective solution of using Coax to Ethernet adapters. These adapters do not require any programming as they have no dip switches, MAC address or IP settings, and they create a seamless network bridge automatically-similar to a cable modem.

As a leader in the global security sector, Unlimited Technology provides reliable solutions that utilize the latest state-of-the-art technologies for our valued clients. We are proud to serve as a leading partner in the chemical industry. Our philosophy is designing and implementing dynamic security innovations while giving attention to a higher level of customer support. We listen to each client's unique needs, recommend the right security solutions, and deliver a successful project.

**Custom
Application
Engineering**

**Physical Hardware
and Locksmithing**

**Project
Management**

**Network
Integration**

**Custom System
Fabrication**

**System
Commissioning and
Training**

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the RESULTS

Removing the requirement for new cabling and infrastructure by installing Coax to Ethernet adapters, the Unlimited Technology team was able to save the client a significant amount of budget dollars while also reducing the safety risk profile that would have existed if we needed to upgrade the infrastructure and work within the many hazardous plant locations. Another benefit with using existing coaxial cabling such as RG-59 or RG-06 is that it has a higher bandwidth with lower noise to signal loss ratio than traditional twisted-pair CAT5/6 network cable. It can also be utilized for much further distances, typically well over 1000 feet whereas network cable is limited to 330 feet.

A new feature that is being used more widely is edged-based technology such as on-camera recording and video analytics. These types of features are found only on newer IP based cameras but the benefits reach far outside of the normal security functions of motion detection or trip wire functions. One benefit is the ability to count people or to identify if objects are taken or placed in a different location. By utilizing existing analog infrastructure along with some converters and state of the art IP based cameras with edge computing technology, it is easy to move to the 21st century with security and budget in mind.



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