

The Cisco and Pelco Industrial Wireless Video Surveillance Solution

Assuring Safety and Security in Industrial Environments

Today's process companies increasingly require high-quality, real-time data on system and employee activities. Objectives include:

- Proactively assuring safety of plant, assets, and workers
- Meeting regulatory requirements
- Monitoring potentially dangerous processes and procedures
- Monitoring facilities for maintenance issues

To accomplish these goals, companies in oil and gas, chemical, and other industries need to assure a stream of real-time surveillance information to support trouble-free processing of expensive, hazardous, and highly regulated products. Today's wireless video surveillance systems help provide more consistent oversight, leverage existing installations, and improve plant security.

The Cisco and Pelco Industrial Wireless Video Surveillance Solution

The Cisco and Pelco solution provides intelligent video monitoring and security based on the Cisco Unified Wireless Network. Designed for explosion- and dust ignition-proof environments, both indoors and out, it is deployed on top of the existing network backbone and extends throughout the plant. Using Pelco's Digital Sentry software, security administrators centrally view and manage live and recorded video, camera controls, and video export via a single user interface. The solution:

- Can be rapidly and cost-effectively deployed to critical areas
- Is based on an open standards platform that integrates with existing analog and digital camera installations, as well as DCS and SCADA systems
- Provides instant alerting for problem areas or system failures
- Integrates with security systems such as fire or burglar alarms
- Is configurable to meet a wide range of requirements, including sensitive or hazardous environments
- Meets the Intrinsically Safe Equipment (IE) standard
- Can operate in one or many geographically dispersed sites

The Wireless Network in the Plant

Based on the Cisco Unified Wireless Network Architecture, the solution supports video surveillance on both standard wireless configurations and the Cisco Wireless Mesh. It also includes RF connection via the 802.11n standard to the control room and corporate IT systems. This platform:

- Is less expensive to install than a wired network (which can cost up to US\$3,000 per foot of cable in industrial environments)

- Maintains a strong and reliable signal under harsh conditions or interference
- Saves on man-hours with a centralized wireless network management system
- Improves productivity by eliminating trips around the plant to replace surveillance tapes

Video Management in the Plant

The Cisco and Pelco solution provides flexible, controlled video management that maximizes surveillance based on new and existing technologies. In heterogeneous environments, plant managers may utilize analog or IP-based cameras that communicate wirelessly with purpose-built digital video recorders (DVRs) or network video recorders (NVRs)—including high-performance systems managing up to 32 cameras at 30 frames per second—or third-party servers.

A Centralized Video Matrix Solution

Each camera is monitored and managed via a single graphical user interface. As a video matrix solution supporting multiple monitors, this interface enables:

- Configuration and management of highly diverse and complex security systems
- Quick search of recorded audio and video
- An export wizard for easy access to video evidence
- Network health monitoring, video analytics, and archiving options

Plant Event and Alarm Management

An event and alarm management database engine allows users to integrate video data with intelligence captured by transactional devices such as video analytics applications, truck scales, HVAC systems, fire systems, and burglar systems. This gives users a single access point to critical security data to better protect assets and aid loss prevention.

Flexible Configuration and Administration

The solution ensures system effectiveness and consistent functionality with camera-by-camera configuration of frame rates, resolution, and motion recording. Users may also set up an enterprise configuration to support an unlimited number of systems and cameras in any location.

Financial and Productivity Benefits

The Cisco and Pelco Wireless Industrial Video Surveillance solution helps to assure proactive safety and security for process industry plants. Benefits include:

- Simple, cost-effective, and scalable wireless deployments
- Increased plant safety and security through ubiquitous video monitoring and alerting
- Secure monitoring and recording of processes, machinery, and quality
- Support for indoor, outdoor, and hazardous area applications
- Preserved legacy video and camera systems
- Choice of software analytics to monitor multiple behaviors
- Provides an open platform for deploying additional applications, such as voice, mobile worker, and location-based asset tracking



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

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