

Video surveillance in SCADA for enhanced safety and security

Pelco cameras with IGSS


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Beyond security

The security of personnel and property are growing concerns for most industries. Industries with utilities frequently encompass large areas and distributed systems. Workers, contractors and visitors are often surrounded by potentially dangerous materials and situations.

Consequently, surveillance and remote monitoring & control functions have become critical for many companies. They seek solutions that can strengthen site-wide security and tighten access control to secured areas. They also require the ability to closely monitor critical processes, high-value equipment and strategic production materials. These tasks can all be accomplished thanks to IGSS integration to Pelco cameras, operators are able to view video feed on their SCADA screens.

Simple and smart security in SCADA

The ability to seamlessly interface with Pelco cameras is a standard feature of Schneider Electric's IGSS, making our security solution simpler, smarter and more secure. It provides operators with:

- > Greater flexibility and control over the security and management of company assets
- > Rapid detection of potential security events
- > Integrated tools to help supervise people and equipment
- > Central viewing of remote events, helping them to make more informed decisions

An integrated solution

Traditional methods of access control and monitoring your personnel and equipment in hazardous or secure areas are often difficult to manage, prone to human error and neglect and slow to produce critical information. Regulatory bodies have become involved and are now stepping up demands for site managers to find better ways of addressing these issues.

A simple yet highly effective option is the integration of camera/video surveillance on operators' SCADA screens. This additional capability:

- > Provides a visual validation of the actual equipment, perimeter, zone or site in question, helping to improve the quality of decision-making
- > Visualises the situation before responding to process or security incidents
- > Effectively supervises the security of plant and assets
- > Helps minimise risks to field staff in potentially hazardous situations

The benefits of video integration in SCADA

- > Confines the need for site visits to genuine security/process incidents, resulting in optimised management of field staff, lower travel costs and a reduced carbon footprint
- > Improves the effectiveness of intervention through more informed insight into the scale of a problem and, consequently, reduces risk to staff in potentially hazardous conditions
- > Hastens emergency response times with less disruption to operations thanks to richer, context-sensitive assessments



Remote monitoring functions via cameras.

Monitor critical infrastructure

The Water and Wastewater industries, in particular, are eager for integrated security monitoring functions such as IGSS video surveillance capabilities.

Application scenario for Water and Wastewater

In the case of a water utility with a multitude of pump stations, if leakage of a dosing chemical at a water supply facility is detected, video can show the scale and nature of the problem more intuitively than I/O data alone. When the RTU senses a very low alarm on a chemical tank and the operator observes, that this level drop is abnormal, a remote visual inspection can ascertain whether the tank has sprung a leak.

If it has, the operator can then alert field staff to divert from their current maintenance task to this critical alarm, and instruct them to implement safety procedures when accessing the site. In this case, video can help alert operators to the possible risks at the site prior to a first-hand investigation so field staff can go in better prepared.



The integration of IP cameras with SCADA creates a new level of synergies for organisations by complementing SCADA data with visual information to assist operators in qualifying security threats. This, in the hands of experienced operators, can result in more effective decision-making, quicker response times and improved analysis post-incidents."



*Water and Wastewater industry:
Video feed shows the scale
and nature of a problem more
intuitively than I/O data alone.*

A cost effective security solution

The Schneider Electric Solution*

Pelco is a world leader in the design, development and manufacture of video and security systems and equipment for any industry. With a long and prestigious history of offering high quality products and exceptional customer service, Pelco has become the most sought-after product supplier in the security industry. The ability to integrate Pelco cameras allows live video to be viewed within IGSS. Operators can also control cameras from a SCADA Client, thereby integrating facilities management with remote security monitoring.

For large-scale applications, the integration of different security functions with the process control system gives users added value. For instance, an event such as an intrusion can trigger an automatic response such as video feed appearing on an operator's workstation. If predefined alarm conditions occur, the cameras can pan to the pre-programmed positions to display the areas of interest.

The advantages of being able to use Pelco cameras in IGSS include:

- > The convenience of having video displays directly on operators' SCADA screens.
- > User-friendly controls like Pan, Tilt, Zoom (PTZ), Brightness and Contrast facilitate operator efficiency.
- > Additional features such as pop-up display for motion/intrusion detection and linking of events.
- > The video streaming bandwidth (kilobytes per second) can be adjusted and selected from amongst several levels.
- > Cameras can also be controlled remotely from a SCADA Client.

Pelco cameras' streaming interface is designed to be easy-to-use and to integrate smoothly into existing projects with minimal engineering effort.

With real-time video surveillance in IGSS, operators can have live video on their screens direct from IP cameras located across remote, as well as central, locations.

Video in IGSS facilitates timely, direct situation assessments. Because it is linked to process data, operators can assess 'before' and 'after' footage of an incident to gain a richer basis for event analysis and decision-making. This additional layer of protection can become a vital part of a security, safety and process optimisation solution.

Improving security, safety and asset management

User-friendly controls like Pan, Tilt and Zoom and event-triggered display features make Schneider Electric's enhanced solution an intuitive set of 'eyes on site' for the operator.

Our integrated security solution can help you remotely monitor many different kinds of high-value assets. Because you can flexibly manage multiple areas, you can monitor critical tools, machinery and other items as your processes and priorities change. By tracking the usage levels of particular assets, you can also make more informed decisions regarding their replacement or upgrades and thus better manage your capital and operating expenditures. It may also assist you in meeting increasingly stringent compliance requirements imposed by regulatory bodies.

** Pelco cameras are not included in IGSS and must be purchased separately.*

Easy to use • Simple to integrate • Efficient to engineer

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Publication & design: Schneider Electric

Package ref. SE1043EDK_01