Experion Industrial Security
Integrated Security Management Platform

Experion® Industrial Security is an integrated security management platform for Access Control, Video Surveillance, Real-Time Mustering and Perimeter Intrusion Detection. Providing fast integrated information to the operators improves situational awareness and enhances decision-making capabilities and incident response. As an integral component of Experion, Experion Industrial Security sets new benchmarks in operational efficiencies, cost-effectiveness and performance, enhancing the safety and security of people and assets onsite.

Solution that Meets Today's Site Challenges

Security and safety are key elements for plant operations. As multiple layers of security need to be deployed today to mitigate increasing threat levels, rising complexity can affect a plant's operational cost effectiveness and efficiency. Experion Industrial Security provides an integrated security platform that makes managing industrial plant security operations efficient and effective, ensuring the security and safety of people and assets .

Powered by Honeywell Enterprise Buildings Integrator, Experion Industrial Security is a scalable platform integrating multiple physical security systems to provide a single user interface and improved situational awareness. With seamless integration to the Honeywell Temaline Access Control system, Honeywell Digital Video Manager (DVM) video surveillance solution and support for open protocols, Experion Industrial Security provides a rich user interface to the operators.

Process plants today require critical security information/alarms that can potentially impact plant operation and safety. Experion Industrial Security integrates seamlessly with the Experion Process Knowledge System (Experion PKS) to provide this critical information to the process operators at their Experion PKS operator station or at dedicated Experion Industrial Security Station Points. Access points and perimeter sensor points can be integrated into Experion PKS graphics, enabling monitoring of critical security points in Experion PKS.

Experion Industrial Security is in many ways similar to Experion PKS, including the user interface, providing a familiar operating environment for process operators. This reduces learning time for operating the Experion Industrial Security station. a feature that is of great value for small facilities where multitasking is a key requirement.

Experion Industrial Security provides a scalable solution that accommodates configurations ranging from a single node system to an extended system with multiple servers and stations connected across a LAN or WAN. The platform can scale to integrate multiple Experion Industrial Security systems at a site or spread across multiple locations to provide locally independent as well as centrally managed systems using Distributed System Architecture (DSA).

Experion Industrial Security is powered by Enterprise Building Integrator, a trusted platform deployed in thousands of facilities across the globe in various verticals. Some of the largest critical facilities use Enterprise Building Integrator for managing security needs.

Integrated Security for Operational Efficiency

Standalone security systems deployed in a plant pose a challenge to operators as they would need to work through multiple systems to access information when needed. Experion Industrial Security provides multiple benefits:

- It is highly scalable, enabling site-wide security from day one of construction through ongoing operations of the fully operational facility in multiple locations.
- It reduces custom engineering, providing seamless integration to the Honeywell Temaline access control system and Honeywell Digital Video Manager, allowing enhanced features.
- It, integrates with existing systems already on site, using open standards.
- It increases incident detection rates and improves response times by combining alarms from multiple systems. A perimeter alarm and a video analytics alarm can confirm an intrusion.
- It reduces operator workload and dependency on manual actions by enabling automated actions in one system based on the information or alarm from other integrated systems.For example, on an access denied event, it will record the related video; or on a perimeter alarm it will move a Pan-Tilt-Zoom (PTZ) camera to the alarm zone and automatically start recording.
- It enables enhanced forensics and easy information search related to an alarm across the systems with integrated alarm summary and report tools.
- It enables quick access to the sensor/access point information with enhanced graphics containing floor plans or site layout with marked equipment locations and status.
- It utilizes rich HMIWeb graphics, similar to those used by Experion PKS, which can be built combining video information with sensor information.

System Architecture

Experion Industrial Security is a highly configurable integrated security management system. It is already in operation in a range of industries such as large refinery complexes, chemical and other industrial plants, off-shore platforms and FPSOs, terminals, pipelines, power plants, mines, pulp and paper mills and pharmaceutical facilities. Experion Industrial Security can be inexpensively tailored to meet specialized industry requirements.
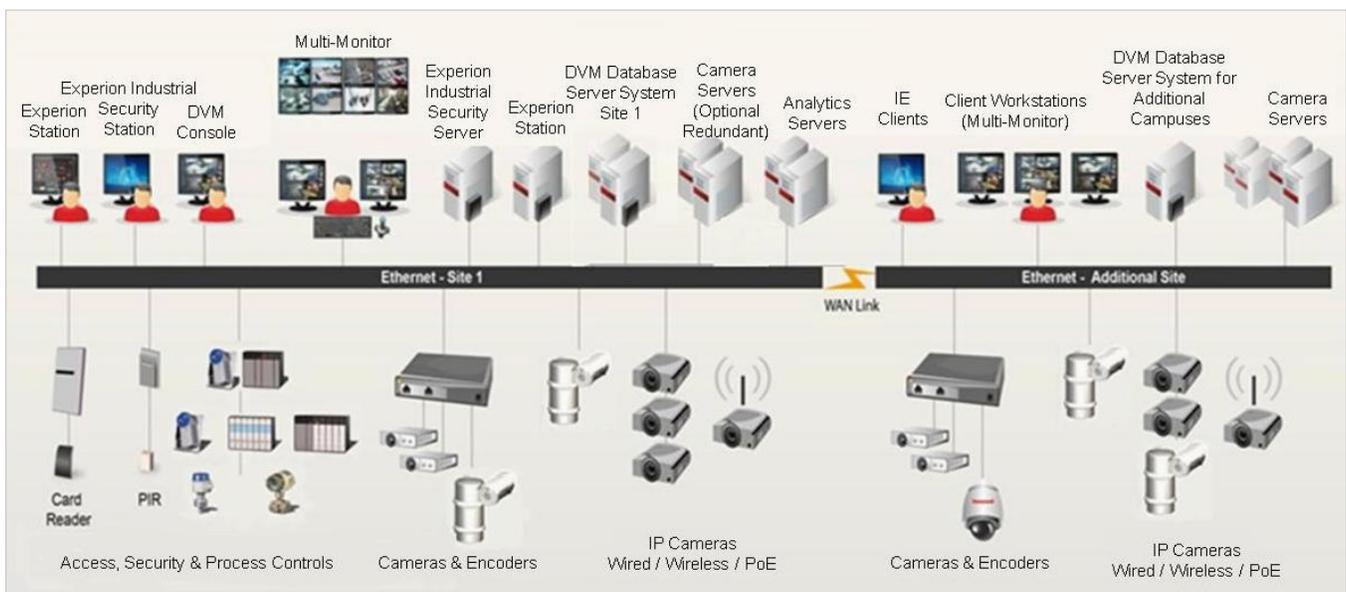
Experion Industrial Security runs on industry-standard PCs, server hardware and operating systems using either Windows 7, Windows 2003, or the Windows 2008 R2 Server operating systems.

Experion Industrial Security servers support virtualization using VMware, enabling reduction in hardware cost, downtime and easy hardware and software upgrade/migration.

Experion Industrial Security supports multiple station connections for easy access of information to multiple stake holders or users. A single server can support up to 80 concurrent station connections.

High Availability Architecture

For systems requiring superior fault tolerance, Experion Industrial Security can be configured for high-availability architecture applications to operate in a redundant configuration. If the primary server encounters a problem, the standby server automatically assumes control and reconnects controllers and clients without loss of data.

This redundancy support is similar to Experion redundancy and also insulates against design faults seen in other solutions. Experion Industrial Security does not replicate all operating system software between the two servers, ensuring that malware or driver and operating system problems are not replicated on the backup system.

Redundant configurations are also available for Honeywell Digital Video Manager and at the controller level with Honeywell Temaline access control system, thus delivering exceptional high system availability for your security system.

Distributed System Architecture

Very large or geographically distributed sites can be connected together to operate as a single system using Honeywell's Distributed System Architecture. Alternatively, this architecture allows autonomous Experion Industrial Security systems to communicate alarms and cardholder information through a network with a minimum of engineering effort.

Distributed System Architecture enables multiple facilities to be operated in an efficient and consistent way across the entire organization without sacrificing the independence of each site.

Video integration with Honeywell Digital Video Manager

Digital Video Manager (DVM) is a scalable, digital advanced video surveillance solution that delivers increased operational efficiencies, reduced lifecycle costs and improved decision-making functionality. Digital Video Manager uses network infrastructure and off-the-shelf computer and networking hardware enabling lower capital and lifecycle costs. With its network based architecture, cameras can be located anywhere in the plant and connected back to DVM.

The DVM platform seamlessly integrates with Experion Industrial Security, allowing viewing, control and management of multiple cameras from the operator station.

The integration of DVM with Experion Industrial Security delivers multiple benefits:

- Experion Industrial Security alarms and events can automatically trigger a camera to move to a predefined preset position and trigger video recordings to start. The alarm video can be sent or displayed on defined stations or dedicated alarm monitor, enabling quick access to recent events by operators and remote personnel.

- Experion Industrial Security's rich custom displays can combine security points and related video data together. Standard camera objects can be added to graphics, which can pop up to show live video, camera and recording controls as well as allowing quick access to the recordings.

- Recordings triggered by events in Experion Industrial Security or DVM alarms can be directly accessed from the Experion alarm and event summary display, drastically reducing the time required by the operator to search for related recordings.

- An operator can see and control cameras on multiple DVM systems including remote sites, while camera access can be restricted using the operator's access level and assigned area profiles.

- Integrated operator-based and station-based security to access DVM makes it easy to manage access restrictions and system security.

- With tighter integration of Experion Industrial Security and DVM, cameras and servers are represented as points, enabling enhanced graphics and functionality.

- Schedules can be defined and applied to cameras for triggering actions, such as activating recording and video analytics.

- Recordings triggered by alarms in Experion Industrial Security or by operators can include not only what happened after the event (post-event recording), but also what happened prior to the event (pre-event recording). This allows video to capture of what caused the event, not just what happened as a result.

- Integration of video also allows remote verification of cardholders against their stored photo image for additional access control to regulated areas.

Digital Video Manager also has advanced Video Analytics algorithms allowing specific behaviors of people or vehicles to be detected by cameras, and sending alarm and alarm video to Experion Industrial Security stations.

In the advanced DVM user interface, the facility (asset) model is automatically replicated from the integrated Experion system; cameras are automatically sorted in the facility model based on their assigned areas creating a common operating environment across systems.

Access Control

Experion Industrial Security provides comprehensive access control and security management which is easy to configure and manage. Experion Industrial Security integrates with Honeywell Temaline access control system to provide an advanced level of access control system. Each card or access card group can be assigned up to 64 behavior models or access rights. The access rights define the rights the cardholder has to enter or exit zones during defined time periods.

Access events generated for every card swipe are stored.The data include the date, time, entry/exit point, cardholder name and whether access was granted or denied. If access was denied, an associated message indicates the reason for denial.

Alarms are generated based on the defined levels for access.events like access denied, door or turnstile forced opened etc. These alarms are displayed in an integrated alarm summary and such access alarms can trigger associated camera movements, or recording in the case of integration with Honeywell DVM.

The entry/exit point readers with display also can be used to capture attendance data, which can be exported on a periodic basis to time and attendance software using ODBC, or can be directly interfaced with an enterprise system such as SAP.

Workforce Management

Experion Industrial Security offers integration with workforce management systems using open protocols. The access control system sends the event information to the workforce management system, while the various policies configured in the workforce management system can be enforced by allowing or restricting entry to specific zones.

Temaline Advanced Functionalities:

Superior Fault Tolerance at Controller Level

A pair of Temaline controllers can be configured in a shared load architecture; during normal system operation each TemaServer manages its devices. Should one of the TemaServers fail, the remaining TemaServer takes over the management of the orphaned devices without any degradation or loss of system functionality.

Muster Stations

Temaline Muster Station provides the ability to electronically manage a muster point in the event of an emergency. Any TemaServer (controller) or TemaKey (reader) equipped with a graphic display can be configured as a Muster Station. Each Muster Station supervises specific zones of the plant and displays a list of cardholders still present in these zones, including detail on their last recorded zone location.

Temaline Advanced Access Controls

The Temaline Access control system provides a series of advanced access control functionalities:

Antipassback: The antipassback functionality. would not allow a cardholder to enter a zone again without first exiting the zone preventing unauthorized use of card. Antipassback can be local to the entry/exit point or can be global - applicable for the entire facility or plant. A cardholder cannot reenter a plant if he has not exited the plant earlier.

Dual Transit: Dual transit control can be implemented for high security zones; access to these zones would be granted only when two valid cards are presented to the reader.

Escort: With the escort functionality, transit to a given zone will be granted only if the cardholder (for example, a visitor or contractor) is escorted by a second cardholder who is enabled for this function (for example, a guard or a field engineer.)

Number of Cardholders in a Zone: This control can define the minimum or maximum number of card holders that can be present in a zone. Appropriate control action can be initiated when the threshold is reached. Once the maximum count of people allowed in a particular zone is reached, the system would not allow further entry to the zone. Similarly if a minimum count of two people is defined for a high risk zone, an alarm can be raised if there is only a single person present.

Length of stay in a zone: This control allows verification of the amount of time a cardholder can remain in a security-sensitive or high risk zone. An alarm can be raised along with an optional audible alarm at the location if a cardholder overstays the defined time.

Path Control: This functionality enforces the path the cardholder needs to take by restricting or allowing access to zones at which

the cardholder would first need to swipe a card reader before entering a plant zone.

Cardholder Management

With the large number of employees, contractors and visitors that need access to various areas of a facility, cardholder management performs an important task. Experion Industrial Security provides an easy-to-use cardholder management system with a database that supports a virtually unlimited number of cardholders. Cardholders have 94 pre-configured user fields to hold commonly required information such as employee number or department. However, all of the user fields can be configured to match site, corporate, or legislative requirements.

Cardholder management supports multiple features that enable effective card holder management.

Key Features of Cardholder Management

- Assign multiple cards to an individual cardholder to allow a flexible approach to dealing with situations such as lost cards, forgotten cards, etc
- Enable easy management of access requirements for contractors or visitors by issuing cards with single transits for visitors or with defined expiration dates for contractors.
- Save time with simultaneous editing of multiple cardholders using the "multi-select" capability - a very useful feature when you need to change some information which applies to many cardholders.
- Reduce the operator's task by creating templates for adding a card to a particular group .
- Enable easy cardholder search by cardholder name or any searchable field or multiple fields for all cardholders on a project who are currently "active."
- Update card holder data from external systems such as PeopleSoft Human Resources database or SAP Enterprise Management System, removing any requirement for duplicate entries while keeping information updated.
- Generate photo badges and store employee images and signatures along with cardholder details. This information can be used for dual verification. The cardholder details can be called up on card swipe at a particular reader using video integration. The image on record can be compared with video

to grant access or for verification of authorized card usage.

- For high security requirements, Temaline also supports multiple credential readers like card+PIN, Biometric readers and IRIS Scan readers which work on standard wiegand protocol.

Cardholder Data can also be either exported from or imported to Experion Industrial Security, allowing integration to and from external systems in either ASCII, XML or direct from any ODBC compliant database.

Visitor Management

Experion Industrial Security reception manager provides an optional solution for managing visitors to a facility, and provides seamless integration to Temaline access control systems, providing levels of security and visitor control that cannot be provided by stand-alone solutions.

In addition to capturing visitor data, the visitor management package also permits issuing visitor access cards and temporary staff cards, while the powerful reporting capabilities help identify the location of visitors present in the facility at any given time.

Visitor pre-registration functionality helps speed up the visitor check-in process by allowing staff to enter details for their visitors prior to their arrival.

Third Party Integration with Open System Standards

In addition to being based on a range of open technologies, Experion Industrial Security supports a variety of open systems standards such as OPC, BACnet, and Modbus for integrating other third party systems or subsystems. Experion Industrial Security provides read-only ODBC access to its real-time database as well as the relational cardholder database, which may be used to extract information using ODBC compliant reporting tools or enterprise management systems.

Operator Interface

In critical situations, it is important to provide real-time data to a user in a clear and concise format. Station, the Experion Industrial Security operator interface, displays high-resolution color graphics that can be tailored to the requirements of each individual facility. Extensive use of Web-style menus, toolbars, and icons allow intuitive navigation and fast access to important

information. The operator interface is designed to accommodate novice and experienced operators alike.

The operator interface allows a user to perform the following tasks:

- Display and control field equipment (access point, cameras etc)
- Acknowledge alarms on a priority basis
- Display point status and history information
- Display information about cardholders
- Define and alter time schedules
- Initiate printing of reports
- View, archive and retrieve event logs
- Monitor data communications channels
- Configure system parameters
- Select and control Digital Video and CCTV cameras
- Display information from Internet and Intranet sites
- Record and play back digital video
- View and track moving assets or people

Responding to alarms is crucial, and the operator always needs to see the most important alarm. In Station, there is a dedicated alarm line which indicates the most recent, highest priority, unacknowledged alarm.

Operator Security

Experion Industrial Security offers sophisticated methods for controlling access to sensitive data. Each operator has a unique identification and password that defines their security profile. All passwords are encrypted when stored and transferred.

The profile is also built to provide single sign-on user authentication using the user's Windows User Group Account, or via an LDAP server, to ensure operators have quick consistent access into Experion Industrial Security. Each operator has defined access to an area in a facility and a level of control on the systems. The system supports six different levels of operator security.

Alarm Management

Experion Industrial Security provides a comprehensive alarm

management solution, ensuring that operators are immediately notified of any attempted security violations. Operators can easily respond to
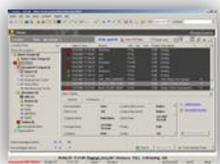
alarms and quickly find relevant information by using the dedicated function keys. All alarm acknowledgement actions are recorded in the system event file.

The alarm summary can be accessed quickly with a press of the function key on the station keyboard, or with the press of the the the alarms indicator on the bottom tab of the station screen. The alarm messages are color coded by priority. From the alarm summary, users can acknowledge alarms and access an associated display for each end point. Alarms can be sorted or filtered for certain characters.

Experion Industrial Security can annunciate alarms in multiple ways – an audible tone, dedicated alarm line on all displays, alarm indicator on bottom tab of the station and the alarm summary page. Alarms can also be printed on an alarm printer for physical alarm records. Alarms can drive an external communicator such as a light or siren.

Sophisticated alarm prioritization allows each alarm to be assigned a different priority and sub-priorities. Alarms can easily be sorted and filtered based on these priorities. It is possible to automatically escalate an alarm to the next highest priority level or generate an additional alarm if an operator does not acknowledge an alarm within a certain time, thus ensuring alarms are always handled promptly.

To ensure the alarm summary display remains less cluttered, the recurring alarm is displayed as a single alarm line with a visible count of recurrences. Experion Industrial Security automatically calculates alarm metrics to quickly identify the number of urgent, high and low priority alarms at each location. These alarm metrics can be analyzed historically, trended, and reported.

The Advanced Alarm Management feature provides a step by step guided response to the operator for handling alarms.. The operator can enter a response that indicates the actions taken to correct the situation, or can choose from a pre-configured list of responses. This ensures operators have the information they need to be fully responsible and accountable for handling alarms. The responses are logged to an event file for subsequent analysis.

Priority alarms can be configured to be routed to pagers, mobile devices, email and SNMP managers. This is ideal if operators need to move around the facility, but want to be notified of critical alarms. The alarms can be also sent to GSM mobile devices through a local GSM modem. This GSM support includes the ability to remotely acknowledge the alarm incident via an SMS

message, thereby confirming the incident has been seen and confirmed.

History and Trending

Experion Industrial Security provides continuous history about how operational data and points in the system have been changing with time.

Reporting

Experion Industrial Security allows data mining with a range of standard reports, the ability to create custom reports, the ability to export and import information and the ability to use other standard reporting systems.

Examples of standard reporting include:

- All points in alarm over a configurable time period
- All activities by a certain operator
- All movements of cardholders through selected doors/gates
- All movements through any doors/gates by a specified cardholder
- All information pertaining to access configuration information
- All information about a group of cardholders
- How often a point has changed state
- How many times a cardholder has used a card
- All cardholders in a specific location or zone
- Unused cards within a configurable date period
- Unused door access, enabling tighter compliance to Sarbanes Oxley standards

All standard reports can be generated on demand from the reporting subsystem or from a custom display. Reports may also be generated periodically, such as once per day, or may be initiated by an event. Experion Industrial Security also provides the ability to configure advanced custom reports to meet user requirements.

Advanced Security Option

Experion Industrial Security provides some extended functions for ensuring the safety of security staff. The Deadman Timer option monitors operator activity at a station. It provides a safeguard to ensure that an operator is actively at their post and that all alarms are acknowledged promptly. If there is no operator activity for a defined period, and the warning message to sign on is not acknowledged, Experion Industrial Security automatically signs off the operator then automatically controls an output to alert help. The Deadman Timer can also be used to check whether alarms have been acknowledged, and will alert others if alarms are not being promptly attended to even if there is other system activity. In addition, the Deadman Timer can even generate dummy alarms to keep the operators busy.

About Honeywell

Honeywell is the leading provider of control, safety, security solutions and advanced applications with expertise and experience both in process operations and business support domains. Honeywell delivers:

- Established capabilities in Process Control Network (PCN), IT infrastructure and security domains
- Impeccable life-cycle support track record
- Rich and tight integration with control, safety ,security and advanced applications framework
- Globally consistent standards and practices for consulting services, project implementation, sourcing, deployment and support services.

For More Information
Learn more about how Honeywell's Experion Industrial Security can help better business outcomes, visit our website at www.honeywellprocess.com or contact your Honeywell account manager.

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