tyco | **American Dynamics**

victor and VideoEdge
Security Management Solution

Powerful Features That Matter

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Decrease Reaction Time.
Increase Awareness.
Improve Your Security.

The victor Video Management System (VMS) and VideoEdge Network Video Recorder (NVR) platforms allow users to see and prevent more events before they occur. Save administrator resources with powerful features like person-based intelligent search, narrowing down search time from minutes to seconds and gain the upper hand against potential threats. Leveraging high-performance smart video searching, video intelligence, and case management along with an extensive feature set, users gain greater situational awareness.

VideoEdge network video recorders are available with a full range of purpose-built appliances to manage surveillance in comprehensive environments both onsite and remotely. Maintain dozens of cameras per network video recorder with capabilities for both IP and hybrid installations. The flexibility of VideoEdge provides users with powerful analytics to gather employee and consumer information that aid in forensic investigation or business intelligence. Mix and match hundreds of VideoEdge IP or hybrid NVRs to accommodate thousands of cameras into one cohesive victor VMS ecosystem.

Designed with a scalable portfolio of clients, customizing a victor solution for any business is simple. From the easy-to-use victor Express to the command and control of victor Professional, the VMS allows your company to use smarter technologies that include tools to reduce bandwidth costs. Combine deployments into victor Enterprise to manage a robust infrastructure in support of thousands of VideoEdge network video recorders. Bring together access control, intrusion, and fire systems correlated with video into one powerful, intuitive interface that operates in seamless harmony. victor is your always on, always available, secure video surveillance solution.

Innovative Features at Work

When you combine the powerful capabilities of victor with the intelligence of VideoEdge NVRs, you reach new heights in video management with actionable insight to save time, money, and lives.

Far beyond a traditional VMS, the victor and VideoEdge solution provides end-to-end command, control, and flexibility that empowers you to oversee your business more safely and intelligently than ever before. Regardless of the size of your operation, victor's scalable models are designed to manage and optimize security operations and logistics, while orchestrating responses to any situation.

In this guide we provide a list of the best features available across live monitoring, integrations, alarm management, investigation, video intelligence, system management, recording and storage efficiency, and cybersecurity.

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Centralized Command and Control Heightens Situational Awareness

victor provides end-to-end surveillance functionality that helps you manage your business more securely and intelligently than ever before. Using interactive maps that pinpoint locations and collaboration tools that allow you to immediately share critical video across the enterprise, victor helps you orchestrate organized responses to any situation.

Easily and cost-effectively add video walls, unmanned security monitors, or public view stations as needed anywhere your security ecosystem reaches.
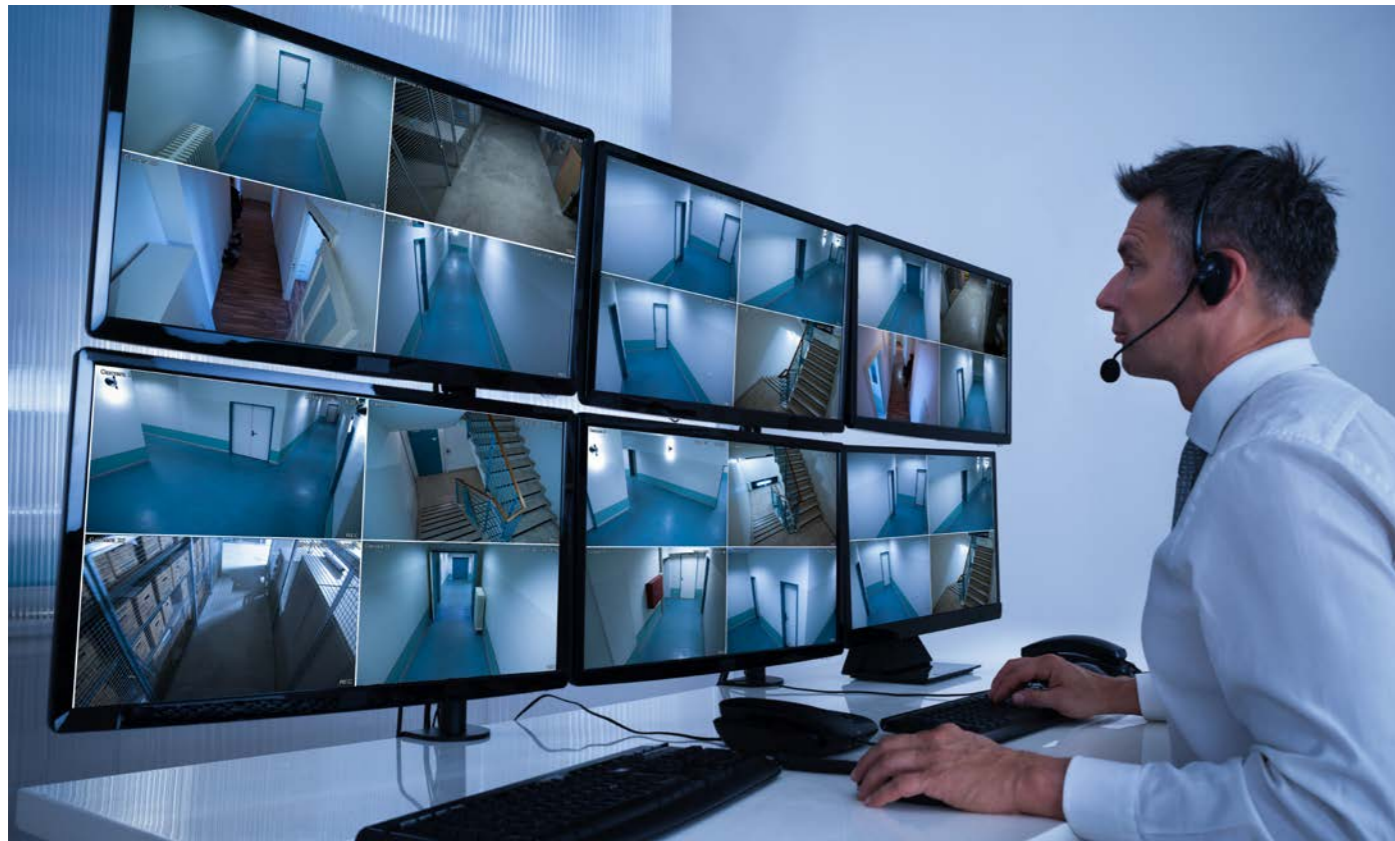
Live Monitoring Features

Live Video Surveillance

Efficiently monitor a vast infrastructure by displaying hundreds of high-quality live video panes in a variety of layouts with a full camera support toolkit.

Video Wall

Share and communicate information between operators – even pushing live streams and events between video wall monitors – to ensure rapid response.

Manage Multiple Monitors with Built-In Virtual Matrix

Install up to four monitors per workstation to maximize visibility across an infrastructure without adding additional video management hardware.

Pan Tilt Zoom (PTZ) Keyboard

Eliminate the need to dispatch service to reposition fixed cameras with low latency PTZ control and mechanical zoom.

victor Client Surveillance Keyboard

Intuitive PTZ control and management via an easy USB setup.

Tours and Presets

Manually configure positioning and timing of fixed and PTZ cameras to automate live surveillance.

Text Overlay

Include the transcript of a video stream that provides context to a situation, such as receipts for Points of Sale (POS), numerical values for weigh stations, and gaming venue loyalty systems.

GIS Map Support

Improve awareness of site surroundings and reduce map setup time by accessing Open Street Map images.

Client to Client Video Push

Undergo efficient team review when sharing video and events between operators with a single function.

Interactive Maps Support

Improve awareness of the surrounding area with an intuitive system navigation that can locate geographic landmarks for reference.

Virtual PTZ Zoom/Rolling Mouse

Swiftly one-touch zoom in and out with the scroll wheel, or drag and drop for a simplified user experience.

PTZ Control Queueing and Locking

Provide priority users the ability to lock PTZ controls, or queue users for navigation to prevent competing commands from causing usability issues.

Surveillance Tracking

Quickly switch between cameras when following persons of interest with intuitive PTZ control and management.

Surveillance Pane Layout Editors

Create and use custom layouts best suited to operator needs.

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Integrate Today, Protect Tomorrow

Known industry-wide as one of the best integration programs, victor and VideoEdge offer robust partnership capabilities with many other security, life safety, and building management systems. Using the victor client as your single point for all alarm and event management – including video, access control, intrusion, fire, and building management subsystems – one user interface minimizes operator training and learning curve, and offers the most complete protection.

Our Connected Partner Program brings complementary integrations quickly to market, including solutions that help reduce operating costs and increase revenue. This opportunity provides the structure to create customized integrations based on your specific system requirements that go beyond the traditional boundaries of yesterday's security systems.

Integration Features

API-Based SDK
Capable of integrating directly with products from other manufacturers, while adding video value, the Application Interface and Software Development Kit available for victor and VideoEdge simplify integrations.

Web Services Interface
Access the video management system from a web browser for lightweight computing and convenient surveillance.

victor Integration Driver Service
A secure RESTful API allows third-party applications to trigger custom alerts in victor Client.

Third-Party Camera Support
Install cameras ideal for your environment with brand agnostic support.

Access Control Integrations
Avoid disjointed subsystems by combining card readers and wearables with video management products for a truly integrated solution.

POS Integration
Decrease fraud investigation time by providing video correlated to POS transactions that assist in identifying improper cashier behavior and anomalies.

General Purpose Input/Output Data Integration
Reduce threats, false alarms, and investigation processes with instant event management from disparate systems such as loss prevention.

LDAP Support
The Lightweight Directory Access Protocol is a manufacturer agnostic directory that allows user accounts to be uploaded, downloaded, and stored for simplified setup.

ONVIF Profile S Support
Directly incorporate networked video products into the security infrastructure when adding multiple Profile S conformant devices to the system.

Intercom SIP Audio
Leverage existing IP audio security devices to send and receive calls from across a network to increase communication capabilities.

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Streamline Critical Event Management
with Enhanced Visibility

A timely response to incidents can improve the success of event management. Monitor thousands of cameras, doors, intrusion points, or any integrated alarm from your security command center all correlated to video. Door contact alarms, motion detection, analytics, POS/text data, or gun shot acoustic alerts

can notify security staff in real time, or automate tasks such as launching live video layouts and displaying security instructions. Protect first responders and reduce unnecessary evacuations by verifying alarms with live high-quality video.

Alarm Management Features

Event Assessment
Save time and ensure compliance with automated layouts including maps, procedures, cameras, and tours based on different alarm and event triggers.

Event Viewer
Reduce operator stress while improving procedural compliance by prioritizing events and a large array of alerts displaying specific live video in the case of an incident.

Video Guard Tour
Operators are able to configure pre-programmed tours and prompts between cameras via a decision tree flowchart.

SMTP Alarm Notification
The SMTP or Simple Mail Transfer Protocol sends alarms via email to designated users, allowing operators to receive important messages while away from the command center.

Send Email of Journal Reports
Automate the transmission of reports to save operator time and ensure information is being sent through the necessary channels.

Customizable Alarms
Configure alarms based on your security and business needs to ensure enhanced surveillance and return on investment.

Event Hub
Streamlines and brings together event creation, action pairing, and scheduling in a comprehensive event summary view.

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Drive Compliance and Mitigate Risks with Actionable Evidence

victor's unique investigation tools help you save time searching for, exporting, and managing video evidence that can be instrumental in driving consistent policy execution, process compliance, and incident mitigation.

Export and consolidate incident information in one package – complete with video, still images, narrative, and more – to deliver to local authorities or for internal risk management and insurance purposes. Investigator Mode lets you quickly transition from live surveillance to recorded video. The innovative Smart Search feature provides forensic regions of interest search capabilities based on a defined area(s) in a camera's field of view that help you quickly locate relevant video.

Create reports to identify trends and easily analyze large amounts of data. Convert that data to charts or graphs to provide actionable business intelligence that allows you to proactively address concerning trends.
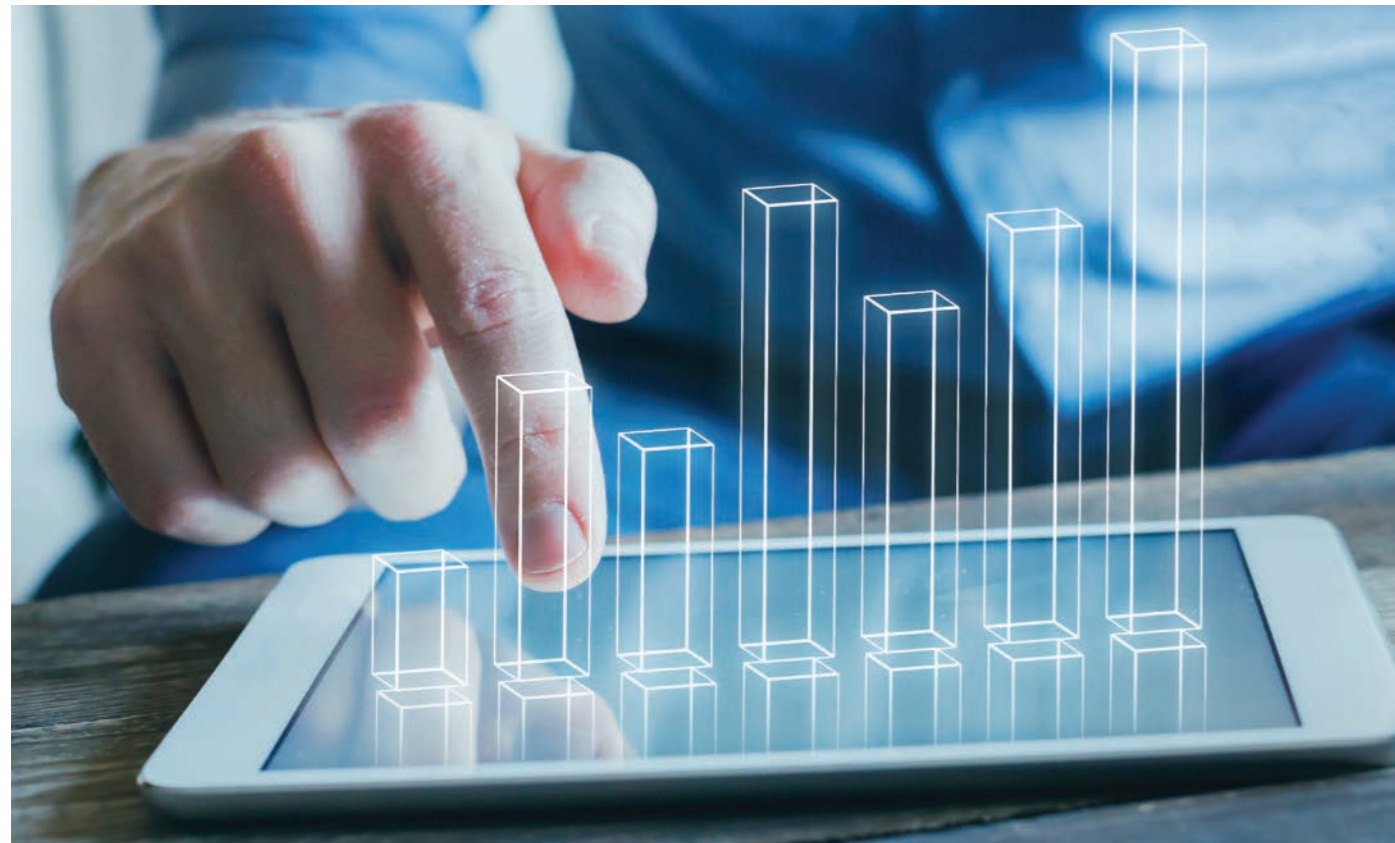
Investigation Features

Intelligent Person Search
Allows video system operators to locate subjects of interest in just a few moments from still images within the victor Client.

Automatic Face Redaction
Faces on exported clips can be pixilated to protect an individual's privacy when an individual is in the camera's view, but not critical or part of an event.

Smart Search
Find specific video clips based on metadata from behaviors, analytics, and event details within a forensic region of interest.

Incident and Case Management
Manage video-related investigations effectively with clip builders, including audio, external electronic content integrators, and additional third-party tools that collate data into a single location.

Investigator Mode
Operators can utilize a full forensic search and investigation module to queue video for export or mark to use in an incident report.

Evidence Presentation Building
Reduce the complexity of reviewing event-related evidence by packaging all incident materials into one simple presentation.

Search Across Multiple NVRs Simultaneously
Reduce investigation time by accessing several connected NVRs at once when looking for specific recorded video.

Thumbnail Search
Identify video of interest via thumbnail pictures rather than lists to dramatically reduce investigation time for events such as those that involve vandalism or property damage.

Incident Timeline Movie Builder
Pull together multiple camera views from several VideoEdge NVRs into a concise video clip.

Data Visualization and Trend Analysis
Efficiently create and analyze system data or analytic metadata by converting large amounts of information into easily digestible charts or graphs, providing new business intelligence.

Path Analysis via Camera Heat Maps
Enable better staffing, product placement, and promotional displays from video motion activity data based on start and end time.

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Better Intelligence Improves Incident Response

Powerful video analytics are bundled into VideoEdge NVRs and integrated with victor VMS software to greatly improve operational efficiency and decision-making information. The analytics engine can also track movement, loitering, entering, and occupancy with confidence. Detect suspicious objects and abnormal behavior to identify trends that help mitigate threats, and pinpoint exact location of alarms on maps to arm security teams with life-saving details.

By simply allocating an AI and analytics license to a camera, the NVR will immediately begin collecting behavioral metadata that can be leveraged for reporting key performance indicators and trigger real-time alarms. Expand upon the current amount of analytics channels available to include four channels for license plate recognition and up to 16 channels for video intelligence with the Tyco Analytics Appliance.

Video Intelligence and Analytics Features

Area Occupancy
Provide metrics into footfall, traffic trends, or occupancy counts.

Color Filtering
Hone in on objects or people by searching video based on color attributes.

Crowd Counting
Trigger events, alarms and notifications based on the number of people in a specified space with large quantities of people for effective crowd control.

Crowd Formation
Set a region of interest and when a crowd of a certain size forms, an alert can be raised. Improve responsiveness to "flash mob" and other multiple offender crimes.

Direction
Gain visibility to critical situations, such as motorists driving the wrong way on a freeway, or vehicles crossing a security checkpoint in the wrong direction.

Dwell
Monitor and measure time spent around areas of interest, enabling the operator to provide insights and meaningful data for increasing business and retail operations.

Enter/Exit
Count objects or people entering or exiting a specific area at different times. Generate reports and trigger alarms as needed.

Facial Recognition
Set up real-time alerts and forensic searches from a database of known identities, for quick quick identification of VIPs or to detect known faces of interest to mitigate risk.

Illustra Video Analytics Support
Activate business intelligence and forensic assistance at the edge by interfacing with Illustra Video Intelligence Analytics within the victor VMS.

License Plate Recognition
Identify, track, and analyze vehicles at entry and exit points without adding a server to the infrastructure.

Linger
Detect if people are loitering in certain areas for suspicious or non-permissible periods of time.

Mask Detection
Detect when people entering a building are wearing a mask or not, allowing for quick and efficient response to ensure the overall health and safety of those within the building or area.

Object Abandoned
Abandoned objects can be a huge concern in high-traffic areas. Detect changes in a scene or region of interest and immediately alert authorities.

Object Detection
Detect items that have been added to a previously empty space, such as a hallway or restricted area.

Object Classification
Recognize a physical object and classify it as as a person, vehicle or bicycle for advanced alarm creation and faster forensic search.

Object Removed
Trigger an alarm when an item within the region of interest is suddenly or unknowingly removed to avoid costly theft or confusion.

Queue Analysis
Sound an alarm when a line gets too long. Analyze the data to pinpoint times during the day when lines are empty, short, medium or long to better manage cashier lanes.

Perimeter
Draw an area of interest to trigger an alarm when the zone is approached or breached.

Social Distancing
Highlight and identify groups of individuals who fail to observe physical distance protocols.

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Focused on a Better User Experience

From the initial licensing and automatic device discovery tools that get your system quickly operational to the critical health monitoring of all systems, victor and VideoEdge simplify system management.

Whether using our intuitive local client, web client, or mobile apps, you can quickly view live or recorded video from one or multiple cameras for timely event management. When it's time to add cameras or new functionality, our centralized license management streamlines IP camera, analytics, and Software Service Agreement (SSA) licenses, including proactive expiration alerts to ensure you are always current.

To avoid costly downtime, victor offers system-wide health monitoring delivered through an intuitive dashboard that allows you to proactively identify system issues or outages that can disrupt business operations.
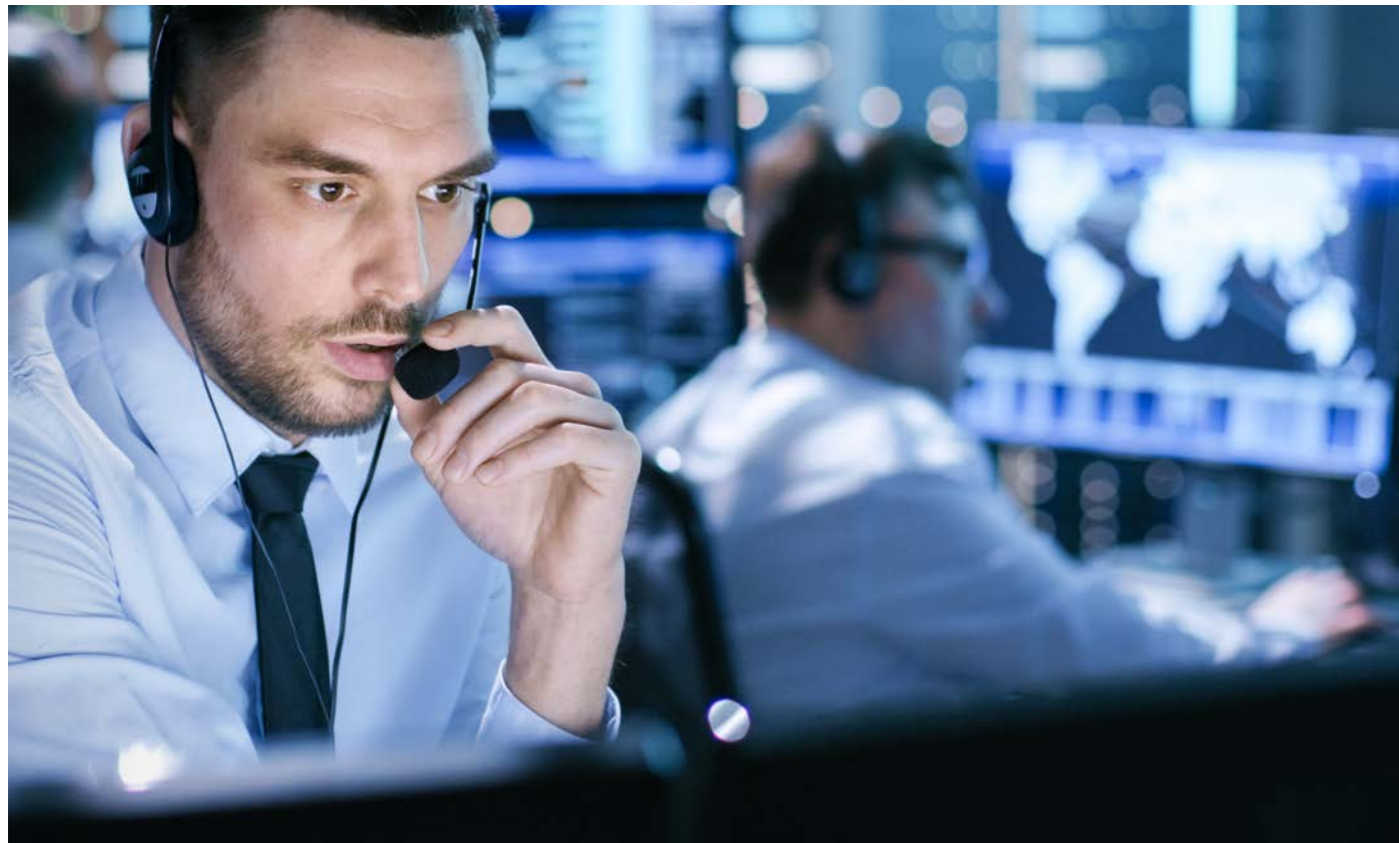
System Management Features

Health Monitoring Dashboard
Quickly identify issues through intuitive dashboards that enable system-wide diagnostics to avoid outages or prolonged downtime.

Operator Auto Logoff
Guarantee compliance while saving bandwidth with a system that signs users out after a specific period of inactivity.

Configurable Video Loss Alarms
Decrease disruptive video loss alarms by altering sensitivity settings to only alert you after a specified period of time.

Web-Based Administrator and User Interface Options
Save installation time and access remote administration and provisioning functions for NVRs on a web-based user interface.

Camera and NVR Auto Discovery
Minimize set-up time with simplified camera and NVR configuration through plug-and-play capabilities.

Virtual VideoEdge
Support hundreds of cameras with industry-leading throughput from a single virtual environment. Ideal for IT-centric deployments.

NVR NIC Bonding
Increases system uptime by mitigating loss of service due to failure of a single physical link.

64-bit
Enhances video rendering and elevates client experience with faster response and increased resource management.

Firmware and Password Management
Reduce system appliance configuration, firmware, and other maintenance tasks.

Multi Stream Support
Improve user experience in constrained environments with the ability to select streaming parameters based on bandwidth and number of live view cameras.

Centralized License Management
Simplify camera, analytic, and SSA management across an entire infrastructure via a single user registration.

TCP from Camera
Configure cameras to use TCP to resolve camera connections prone to high packet loss.

SQL Database
Access databases that can scale with your business to quickly manage massive data sets collected from alarms and events.

Identity Management
Simplifies bulk enrollment across an enterprise and combines with a powerful, end-to-end facial biometric analytic engine.

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Smart Tools for Increasing Productivity

victor provides innovative solutions that increase response times while improving overall system performance. Operators can create tailored layouts that best suit their needs, while point-in-time bookmarks let them mark video for quick replay. To further save valuable time, lengthy surveillance operations can be easily captured and saved, including all operator surveillance panes, camera call-ups, and digital or mechanical PTZ. Routine video clip downloads can be scheduled to automatically occur during non-peak hours, freeing operators for other assignments and saving network bandwidth.

Smart Streaming automatically manages network bandwidth by selecting appropriate streams for video with no visible difference. This reduces client-side CPU and memory requirements, while delivering optimal user experience and significantly reducing network traffic. Scale further with the Tyco Transcoder that adds 14 additional transcoding channels to VideoEdge NVRs.

victor also supports enhanced dewarping for distortion-free video streaming of 180°, 360° panoramic 16:9, or active 4:3 views. Its edge-based technology keeps your cameras recording and stores data even when connection to the server is unavailable, seamlessly reconnecting when the issue is resolved. Always storage sensitive, victor's embedded policies help you control the retention time of video that has been recorded from a triggered alarm.

Recording and Storage Efficiency Features

Schedule Clip Download
Schedule routine video clip downloads during non-peak hours to save bandwidth, increase operator productivity, and lower overhead costs.

Push to Talk Audio
Be heard when necessary and keep offline conversations private by ensuring audio is only activated when required.

Operator Point-In-Time Bookmarks
Import event videos into case investigations and mark video for instant replay when something of interest has occurred.

Dewarping Support for NVRs
Improve operator experience and video forensics for fisheye cameras on live or recorded video.

Smart Streaming
Reduce centralized client requirements while viewing more cameras simultaneously without increasing bandwidth usage.

Motion Recording
Save on storage requirements by setting recording on certain areas only when motion is detected.

Pre and Post Alarm Recording
Configure alarms to record video just before and after an alarm to guarantee the required video is saved for later investigation.

Video Retention Policies
Ensure compliance by setting an amount of time that recorded video is kept, then regain that storage space after expiration.

VideoEdge TrickleStor
Provides cost-effective redundancy by storing video on select Illustra cameras when network connectivity to the NVR is lost. When the connection is restored, a media backfill process restores the edge-recorded video to its place in the timeline.

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Ensure Reliability and Business Continuity

Sharing information while maintaining security is paramount. victor and VideoEdge protects video and confidential data, allowing you to give access to only those whose jobs require it. Leverage existing HR databases to centrally manage who has access to the system while ensuring autonomy and privacy compliance by partitioning, encrypting, and restricting access to data containing classified information.

victor and VideoEdge's user management policies combine with industry-leading cybersecurity and redundant/failover recording

to provide business continuity in the event of a natural disaster, cyber threat, physical attack, and other causes of outages. Our products are gated, analyzed, tested, and required to meet or exceed the rigorous standards of the Johnson Controls Cyber Solutions Product Security Program for every consecutive release. This holistic approach is aimed at providing peace of mind to our customers. Our security mindset begins at initial design concept and is supported through deployment, including a rapid incident response to meet the comprehensive and evolving cybersecurity environments.

Data Protection and Cybersecurity Features

Dual Operator Log-On Authentication
Two-step application log-on verification requires that a supervisor's credential is also presented each time operators attempt to access the system.

Secure By Default User Permissions
Default secure permission assures that users are initially configured with no system access, reducing the risk that a user is assigned more capabilities to the VMS and its functions than authorized.

Customizable User Account Access
Each operator within the system is assigned their own user account for a higher level of accountability and control.

Role-Based Permissions
User permission may be assigned by role, simplifying the management of authorizations as the level of access for a group of operators can be configured with a single step.

Central User Management
Central management of all user accounts and their permissions throughout the system eliminates the need to configure the user accounts for each device independently.

Media Encryption
This allows the NVR to protect against file tampering as well as remote and local sabotage.

Automatic Logout
Automatically logs an individual out of VideoEdge after a specified amount of time.

Restricting of Ports, Protocols, and Services
victor and VideoEdge user interfaces allow administrators to disable unused ports, protocols, and services, enabling the practice of "Least Functionality" which minimizes the risk of unauthorized access as unnecessary entry points will not be available to attackers.

VideoEdge Operating System
By leveraging a highly customized open Linux operating system, VideoEdge offers a robust, reliable, and stable recording platform.

Encrypted Command and Control
TLS provides additional privacy and data protection over IP security networks when executing commands.

SHA-256 Certificate Support
The system requires that all HTTPS certificates use a SHA-256 HASH algorithm enabling cryptographic validation of encrypted communications.

Redundancy and Failover Recording
Reliability is increased when a redundant server or failover NVR is configured. This assures that high-priority data is retained with minimum loss when a primary system goes offline.

Illustra Secure Video
Encrypt video being sent from an Illustra camera to VideoEdge. This is especially useful for video traveling across open networks.

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About Johnson Controls

Johnson Controls is a global diversified technology and multi-industrial leader serving a wide range of customers in more than 150 countries. Our 120,000 employees create intelligent buildings, efficient energy solutions, integrated infrastructure and next generation transportation systems that work seamlessly together to deliver on the promise of smart cities and communities. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat.

For additional information, please visit **www.americandynamics.net** or follow us on Facebook, Twitter, and LinkedIn.

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