

PRO-WATCH[®] VMS

Video Management System

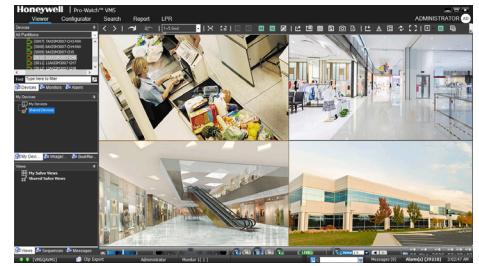
Honeywell's Pro-Watch VMS (video management system) controls multiple sources of video subsystems to collect, manage and present video in a clear and concise manner. Pro-Watch VMS intelligently determines the capabilities of each subsystem across various sites, allowing video management of analog or digital video devices through a unified configuration and viewer. The subsystems can be analog matrix switches or digital/network video recorders allowing both analog or digital input to be viewed on an analog or digital monitor. Users can benefit from using traditional analog systems and IP-network systems at the same time to ensure maximum use of their initial investments. These subsystems range from Honeywell matrix switchers, DVR/NVRs and third-party systems.

Pro-Watch VMS supports emerging technologies in the industry, like 4K resolution, H.265 smart video compression codec, multi-imager cameras and fisheye cameras. Customers can fully utilize the advantages of superb video quality with 4 times the details over 1080p HD, 30%~50% less storage expense (when compared to H.264 compression), and seamless 180° and 360° surrounding surveillance. Furthermore, Pro-Watch supports the native integration with Honeywell equiP[®] series, 30 Series and 60 Series IP cameras. The advanced camera features, like "Click & Drag" 3D PTZ control, license plate recognition, intelligence events and bounding boxes on objects detected by specific video analytics, help surveillance operators to efficiently protect people, property and services.

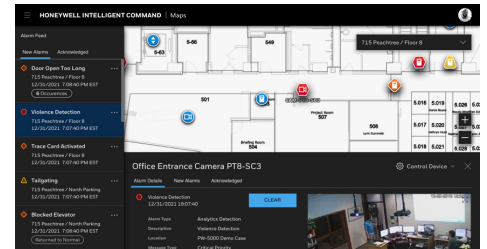
Pro-Watch supports VMS redundancy and 1+1/N+M NVR failover features. Once there is a failure on NVR equipment, system database or network, the redundant and failover feature can continue to support the system functions with minimal interruption. Incidents will be reported in a system log for future auditing and reporting.

Pro-Watch VMS, combined with Honeywell's Intelligent Command's powerful web-based platform and intuitive graphical interface, is an integral part of the Pro-Watch Integrated Security Suite which allows greater unified command and control with expanded situational awareness features. MAPS feature works with GIS/CAD for map navigation across sites, buildings and floors with camera and access device placement for live view, playback and alarm indication. The bulk camera firmware and password updates feature along with System Health Dashboards across all devices enable customers to manage their facilities efficiently and with ease.

Pro-Watch VMS is highly scalable so users can easily expand their video surveillance network from small to medium single instances to enterprise level supporting thousands of devices. Additionally, Pro-Watch VMS can be integrated with other Honeywell security management solutions including access control, intrusion detection systems and other powerful AI analytics.



Pro-Watch VMS



Pro-Watch Intelligent Command



MARKET OPPORTUNITIES

Pro-Watch VMS is ideal for facilities requiring at-risk critical infrastructure protection such as airports, seaports, large multi-site commercial buildings, casinos, and other high-profile facilities. It is the perfect client-server video management solution for locations requiring the use of both digital and analog technologies.

Pro-Watch VMS products contain no content or material from any companies or their subsidiaries prohibited under US National Defense Authorization Act (NDAA) Section 889 and can be used as part of video systems which comply with NDAA Section 889.

PRO-WATCH® VMS Video Management System

FEATURES

Scalable security system for flexible deployment

- A single Pro-Watch Server can support numerous recording sub systems (NVR/ DVRs)
- Distributed architecture in the form of multiple Pro-Watch servers in a parent-child topology facilitates “Enterprise” style deployment, where Child VMS server users & roles, workstations, sites, and partitions can be easily added to Parent VMS server through advanced discovery

Open integrated platform for end-to-end solution

- Auto-discovery of cameras connected to supported recorders
- 60 series and 30 series cameras, edge storage, multi-imager and explosion-proof camera support
- Support for equiP camera multicast stream reduces camera loading and network loading with live view on multiple clients
- Integration with Honeywell Pro-Watch® Access Control Systems providing an integrated Access Control, Intrusion and Video solution

Redundant server and recorder failover for 24/7 operational continuity

- Redundant server option increases system reliability.
- 1+1/N+M Pro-Watch NVR failover and fallback automatically or manually. View and playback on one client panel

Smart search, playback and clip export for efficient forensic investigation

- Ability to investigate events and alarms by simultaneously viewing alarm video at various stages. For every alarm, users can view the video captured during pre-alarm, on-alarm, post-alarm, and also view live video from the camera which triggered the alarm through a single 2x2 salvo
- Commentable bookmarks allow users to tag scenes of interest in the timeline to easily return to the scene with multiple cameras' views
- Search and find video through event view or timeline. Preview search allows viewing a snapshot at various times to quickly narrow the scene of interest
- Smooth reverse and synchronous playback across Pro-Watch NVRs for efficient cross-site investigation
- Incident management mode allows creating a package of clips multiple cameras at different times that can be played back sequentially

Intelligent analytics for proactive threat detection and operation efficiency boost

- Intelligent events from cameras can be viewed at the alarm panel and trigger event recording on Pro-Watch NVRs for further investigation
- Annotation with bounding boxes on objects detected by IntrusionTrace and LoiterTrace from equiP camera & ADPRO NVR in both live view and playback for visual notification and verification
- Honeywell Video Analytics (HVA) integration with automatic camera stream selection for optimal performance
- Integration with augmented vision face recognition analytics from Idemia
- Integration with video analytics from Ipsotek
- License plate recognition event management with rich details and easy report generation for efficient vehicle management with Honeywell VehicleTrace™ enabled cameras

Powerful desktop clients for enhanced monitoring and fast response

- Viewing, creating, saving and naming salvos with up to 8x8 cameras each under My Salvos or Shared Salvos. Support for aspect ratio - 16:9, 4:3 and stretched for video salvos
- Surrounding cameras mode with presets, makes following subjects of interest simple and efficient by allowing the nearest camera of interest to be immediately in view
- Quick and responsive alarm actions can be initiated from the preview pane options
- Innovative “One-Click” or “Mouse Drag” 3D PTZ control experience that does away with legacy PTZ controls of continuous clicking
- 360° de-warping “spreads” the distorted fisheye image into natural panoramic and/or multiple tile views. Operators can view and focus on zones of interest on live and recorded video
- Enriched video viewing experience through intuitive video rendering engine optimizes CPU utilization by altering the video frame rate for low bandwidth throttling
- NVIDIA and Intel GPU based rendering support for H.264 and H.265 decoding up to 60 frames per second (1080p camera) with smooth display on 4K monitors reduces the number of workstations needed for monitoring large sites with 30+ cameras
- Control any analog or digital monitor from a single workstation or joystick keyboard. Allows the system to be used as a true analog and digital matrix

- Ability to play recorded video together with audio stream and ability for operators to talk to camera audio output through bi-directional audio support
- Monitor control allows controlling all monitors from a single client (monitor wall control)
- Remote monitor mode allows sharing and controlling a remote monitor while still viewing locally

Unified mobile apps

- Unified mobile apps for iOS® and Android™ allows to access cameras and doors from one single point while on the move

Intuitive graphical user interface for efficient site management

- Feature-rich and user-friendly client interface to view video from numerous different recorders from a single point
- Operators can log on using their local language and the built-in messaging system allows operators to share video scenes via instant messages
- Role-based operator privileges
- An extremely powerful macro programming language is available to fully customize actions based on events
- Support for active directory user authentication

Effective privacy protection options for data privacy compliance

- Body pixilation and blurring in live view to protect customer and employee privacy from abuse of surveillance data
- 4-eye dual user authentication for playback of original video record, for example, with simultaneous logon from two groups of managers and worker' council representatives
- Selective unmasking for clip export of selected cameras and date/time with only the face of a person of interest unmasked while other people's faces are anonymized

ARCHITECTURE

Pro-Watch VMS is based on client-server architecture for maximum flexibility, customization and integration. It offers one-click migration support from analog matrix systems. The Pro-Watch VMS client enables the monitoring of sites and the configuration of video devices such as cameras, monitors, keyboards, etc. The Pro-Watch VMS server consists of the Pro-Watch VMS framework controller and database, and other core components.

Pro-Watch® VMS Intelligent Command

Pro-Watch® Intelligent Command is a powerful web-based platform and intuitive graphical user interface which transforms the video management experience to optimize security surveillance, enhance situational awareness and make properties more secure.

FEATURES

Scalable security system for flexible deployment

- Web-based application for stand-alone and integrated systems of video & access control
- Expand the number of thin client users for local or remote access anywhere
- Removal of the need for firewall or IT exceptions as well as software installation and support for workstations

Intuitive graphical user interface for efficient site management

- Integrated with Pro-Watch Intelligent Command's web-based GIS/CAD maps with drag-and-drop camera setup, easy cross-site navigation and HTML5 live video pop-up, alarms/events and instant playback, allow quick situational response
- Support for bulk camera firmware upgrade and password modification through Intelligent Command, for simplified device maintenance
- System health dashboard for video devices and Healthy Buildings safety compliance dashboard
- Incident workflow with attachments, Incident reports and standard operating procedures for efficient situational response

Map navigation to view security status of property and buildings

- GIS online map support including OpenStreet Maps or other web-based maps
- Easy cross-site navigation with instant in/out zoomable maps from global to local viewpoints
- Import multi-layered building floor plans for precision in identifying and locating events
- Leverage existing CAD drawings/floor plans and significantly reduce map engineering costs
- Devices quickly placed on GIS or floor plan maps via drag-drop or via configuring map structure
- HTML 5 live video and instant playback for quick situation response

Incident workflow and standard operating procedures for rapid decision making and situation response

- Compliance with standard policies through customizable workflows
- Quick search and filter functionality for alarms or specific situational notifications
- Unified alarm management in alarm details pane including acknowledgement, history, and rollover
- Attach and secure various forms of evidence to incidents
- Automatic documentation of any incident workflow trail including location, time, evidence, assignment, operator comments, and standard operating procedures
- Generate incident report package and export in pdf to authorities

Embedded tools to drive compliance metrics and centralized device management

- Use System Health Dashboard to identify device failures rapidly and address instantly
- Healthy Building Dashboard single view of metrics on occupancy and crowd estimation, no mask detection and social distancing violations
- Accelerate multiple video device firmware updates simultaneously
- Simplify device maintenance and password updates across multiple devices at once

INTELLIGENT COMMAND IS COMPATIBLE WITH

- Pro-Watch VMS
- Pro-Watch NVRs*

**in conjunction with the VMS*

CYBER SECURITY FEATURES

- Enhanced password security: non-recoverable passwords, enforcing complex passwords, password expiry, no default passwords.
- Addressed Unauthenticated / Unauthorized channels
- Secured firewall configuration
- Secured Web Client – enabled HTTPS and TLS 1.2; protection from CSRF and XSS attacks
- Restricted folder and Registry access to operators
- Secured assemblies – digital signing
- Secure communications with equiP cameras using Honeywell proprietary protocol and 30 Series cameras with TLS1.2 encrypted video streams
- Support for Digest Authentication in multicast stream between camera and Pro-Watch VMS client

Pro-Watch® VMS Video Management System

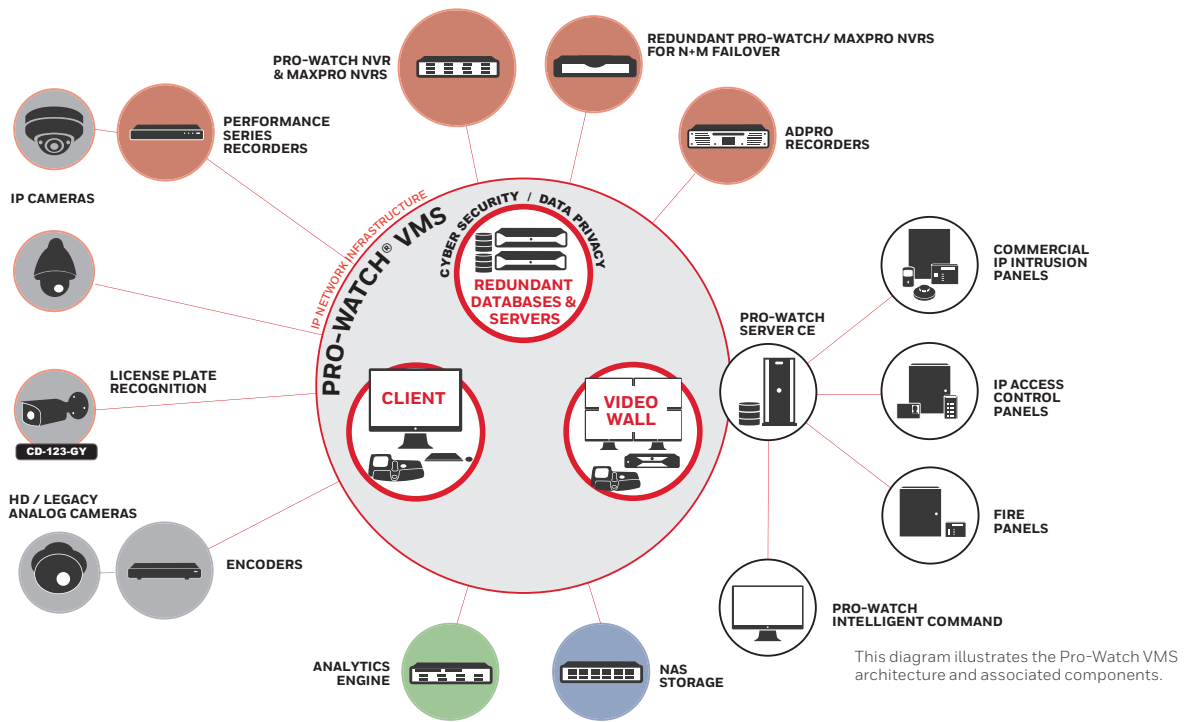


TABLE 1. RECOMMENDED HARDWARE SPECIFICATIONS

Pro-Watch VMS Minimum Server Specs	Standard Spec up to 5 Clients	Performance Spec 10 clients	Premium Spec 25 Clients and greater
PROCESSOR	Single Intel® Quad Core™ Xeon E3 1225V3 3.2 GHz S1150	Single Intel® Quad Core Xeon E-2134 3.5 GHz	Dual Intel® 8 Core Xeon's Silver 4110 2.1 GHz
OPERATING SYSTEM	Microsoft Windows® Server 2019 64-bit, Server 2016 64-bit		
COMPUTER TYPE	Server – dual power supply suggested		
SYSTEM MEMORY (RAM)	8 GB	16 GB	32 GB
DVD DRIVE	DVD +/- RW		
DISK	Two separate hard drives or two sets of RAID arrays		
	Disk/RAID set 1 utilizes 10K RPM SATA 150 GB or 10K-15K RPM SCSI 146 GB for Windows operating system, Pro-Watch VMS Server Software, and Microsoft SQL Server software		
	Disk/RAID set 2 utilizes 10K RPM SATA 150 GB or 10K-15K RPM SCSI 146 GB for Pro-Watch VMS database files and Microsoft SQL Server database files		
	Note: If fault tolerance is required, RAID set 1 is RAID 1, 10 or 0+1 and RAID set 2 is RAID 10 or 0+1		
VIDEO ADAPTER	Display adapter with video resolution 1024x768 pixels; 32-bit color or higher		
SERIAL PORTS	Only required if serial device are to be connected - Suggested 8 Port MOXA PCI-e serial RS-232		
NETWORK CONNECTION	1 Gbit/sec or greater		
VIRTUAL ENVIRONMENT	VM Ware ESXi version 5.5, vSphere and Hyper-V		

TABLE 2. RECOMMENDED WORKSTATION SPECIFICATIONS

Pro-Watch VMS Minimum Workstation Specs	2 Monitor Workstation	4 Monitor Workstation
PROCESSOR	Intel® Core™ i7-8700, 3.2 GHz	
OPERATING SYSTEM	Microsoft Windows® 10 Enterprise 64-bit	
COMPUTER TYPE	Workstation	
SYSTEM MEMORY (RAM)	16 GB	
DVD DRIVE	DVD +/- RW	
DISK	500 GB 7200RPM SATA3	
VIDEO ADAPTER	Integrated Intel UHD graphics 630	Integrated Intel UHD graphics 630 and NVIDIA Quadro P620
NETWORK CONNECTION	1 Gbit/sec or greater	
VIRTUAL ENVIRONMENT	Virtual environment not supported on client machines	

Pro-Watch® VMS Video Management System

TABLE 3. ORDERING INFORMATION

Pro-Watch VMS - Base Software and Licenses

PWSWVMSEE	Pro-Watch VMS Enterprise edition base software, supports unlimited cameras, redundancy, failover and VMS-in-VMS management, includes (5) view client lic.
PWSWVMSC	Pro-Watch VMS Corporate edition base software, supports maximum 1536 cameras, redundancy and failover, includes (3) view client licenses
PWSWVMSPE	Pro-Watch VMS Professional edition base software, supports maximum 256 cameras, includes (1) view client license
PWUGPECE	Upgrade Pro-Watch VMS Professional edition to Corporate edition
PWUGCEEE	Upgrade Pro-Watch VMS Corporate edition to Enterprise edition
PWSWVMSEE-B	Redundant Pro-Watch VMS Enterprise edition base software license
PWSWVMSC-B	Redundant Pro-Watch VMS Corporate edition base software license
SSAPWVMS	Annual software support agreement – Pro-Watch VMS base software
SSAPWRED	Annual software support agreement – redundant Pro-Watch VMS software
SSA24PWVMS	Annual 24/7 software support agreement – Pro-Watch VMS base software
SSA24PWRED	Annual 24/7 software support agreement – redundant Pro-Watch VMS software
SSAEUPWVMS	Annual End User 24/7 software support agreement – Pro-Watch VMS base software
SSAEUPWRED	Annual End User 24/7 software support agreement – redundant Pro-Watch VMS software

Pro-Watch VMS Add-on License

PWSUCLIP	Pro-Watch VMS selective unmasking clip export license
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Pro-Watch Client License – one license per connected workstation (Client application can run multiple instances)

PWSWCL	Pro-Watch View – single client license
PWSWCL-B	Redundant Pro-Watch View – single client license

Intelligent Command (with video only – no access control)

HNMINDRKFL	Intelligent Command Incident & Workflow
HNMDASHBOARDS	Intelligent Command Safety & Compliance Dashboard
HNMONLNEMAPS	Intelligent Command GIS/Online Web Map Integration
HNMVMS3PDM	Camera device management for 3P cameras

Intelligent Command (with access control and video)

PW55INDWRKFL	Intelligent Command Incident & Workflow
PW55DASHBOARDS	Intelligent Command Safety & Compliance Dashboard
PW55ONLINEMAPS	Intelligent Command GIS/Online Web Map Integration

VMS Third-Party Analytics

HNMANALYTICS	3P Analytics adaptor license
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TABLE 4. PRO-WATCH/MAXPRO VMS - HARDWARE

Server and Workstations

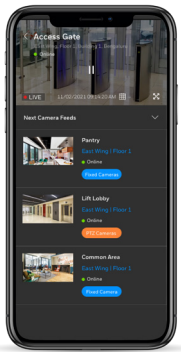
HMSP3	Pro-Watch/MAXPRO VMS Perf.Server, 1U, redundant power; Windows™ Server 2016, Xeon E-2134,16GB
HMW7T	Tower workstation for Pro-Watch /MAXPRO® with four monitor connections
HMW7TM	Mini workstation for Pro-Watch/MAXPRO with two monitors
HMW6R	2U rackmount, workstation for Pro-Watch/MAXPRO with four monitor connections

Pro-Watch® VMS Video Management System

TABLE 5. PRO-WATCH VMS RECORDER COMPATIBILITY

RECORDER MODELS	7.0 (Current Version)	6.X
PRO-WATCH NVR	✓	✓
PRO-WATCH VMS (VMS IN VMS)	✓	✓
MAXPRO NVR	✓	✓
HEN*3 4K / 8MP EMBEDDED ENVR	✓	✓
HEN*4 4K/12 MP EMBEDDED NVR	✓	✓
ADPRO IFT, IFT-E, IFT GATEWAY	✓	✓

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**HONEYWELL
SECURE**

View live and recorded video, manage alarms and overall site security.



For more information

buildings.honeywell.com/security

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