## Video Management System

Honeywell's MAXPRO VMS (video management system) controls multiple sources of video subsystems to collect, manage and present video in a clear and concise manner. MAXPRO 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 3rd party systems.

MAXPRO VMS supports emerging technologies in the industry, like 4K resolution, H.265 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%~40% less storage expense (when compared to H.264 compression), and seamless  $180^{\circ}$  and  $360^{\circ}$  surrounding surveillance. Furthermore, MAXPRO supports the native integration with Honeywell equIP® series IP cameras. The advanced camera features, like "Click & drag" 3D PTZ control and intelligence events, help surveillance operators to efficiently protect people, property and services.

MAXPRO has database redundant and 1+1/N+M NVR failover features for unforeseen/maintenance scenarios in enterprise and critical infrastructure applications. 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.

Control of MAXPRO VMS can be through a traditional joystick controller, mouse or even through third party interface. The extremely powerful rules engine (Macro's) allows customization of the system to respond and control in the best possible manner for the application. MAXPRO 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, MAXPRO VMS includes integration with Honeywell's Pro-Watch® security management system, Active Alert®



MAXPRO VMS Client Viewer 2x2



MAXPRO VMS Client Viewer 4x4

and People Counter video analytics, as well as other Honeywell products and solutions. The feature-rich user interface truly offers a unified management platform across many disparate systems to further embody Honeywell's concept of "Learn One, Know Them All."

### MARKET OPPORTUNITIES

MAXPRO 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.

## Video Management System

### FEATURES

# Scalable Security System for Flexible Deployment

- A single MAXPRO Server can support numerous recording sub systems (NVR/DVRs)
- Distributed architecture in the form of multiple MAXPRO 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
- Honeywell H.265, multiimager and explosionproof 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 MAXPRO NVR failover and failback 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.
- Synchronous playback across MAXPRO NVRs for efficient crosssite 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 MAXPRO NVRs for further investigation
- Honeywell Video Analytics (HVA) integration
- License Plate Recognition event management with HBL6GR2 for efficient vehicle management

#### 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.
- GPU 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.
- 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

#### Intuitive Graphical User Interface for Efficient Site Management

 Feature-rich and userfriendly Client interface to view video from numerous different recorders from a single point

- Web client option for simple, no license, no software install applications
- 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
- Support for maps with Maxpro Graphics Package (MGP)

### 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.

## RECOMMENDED HARDWARE SPECIFICATIONS

MAXPRO VMS MINIMUM WORKSTATION SPECS	2 MONITOR WORKSTATION	4 MONITOR WORKSTATION		
PROCESSOR	Intel Core i 7-6700, 3.4GHz			
OPERATING SYSTEM	Microsoft Windows® 7 Professional and Windows® 10 Enterprise 32-/64-bit			
COMPUTER TYPE	Workstation			
SYSTEM MEMORY (RAM)	8 GB			
DVD DRIVE	DVD +/- RW			
DISK	500 GB 7200RPM SATA3			
VIDEO ADPATER	Integrated Intel HD graphics 530 or NVIDIA Quadro NVS 300 512 MB	Integrated Intel HD graphics 530 and NVIDIA Quadro NVS 315 1 GB PCIE x 16 LP		
NETWORK CONNECTION	1 Gbit/sec or greater			
VIRTUAL ENVIRONMENT	Virtual environment not supported on Client machines			

For detailed recorder versions, hardware and software compatibility please check the following link http://www.security.honeywell.com/hota/compatibility/index.html

## Video Management System

### ARCHITECTURE

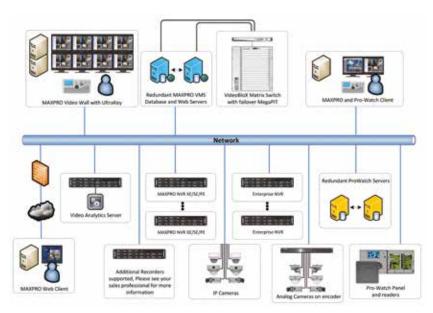
MAXPRO VMS is based on client-server architecture for maximum flexibility, customization and integration. It offers one-click migration support from analog matrix systems. The MAXPRO VMS client enables the monitoring of sites and the configuration of video devices such as cameras, monitors, keyboards,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

This diagram illustrates the MAXPRO VMS architecture and associated components.

#### **Cyber Security Features**

- Enhanced password security non-recoverable passwords, enforcing complex passwords, password expiry, and no default passwords
- Addressed Unauthenticated / Unauthorized channels
- Secured firewall configuration
- Secured Web client enabled HTTPS and SSL, and protection from CSRF and XSS attacks
- Restricted folder and Registry access to operators
- Secured Assemblies Digital signing
- Secure communication with the new equIP Cameras using Honeywell proprietary protocol
- Support for Digest Authentication in multicast stream between camera and MAXPRO VMS client

### MAXPRO VMS Typical System Design



## RECOMMENDED HARDWARE SPECIFICATIONS

MVMS R500 MINIMUM SERVER SPECS	STANDARD SPEC UP TO 5 CLIENTS	PERFORMANCE SPEC 10 CLIENTS	PERFORMANCE SPEC 25 CLIENTS AND GREATER			
PROCESSOR	Single Intel® Quad Core Xeon E3 1225V3 3.2 GHz S1150	Single Intel® 6 Core Xeon E5 2630V2 2.6 GHz	Dual Intel® 6 Core Xeon's E5 2630V2 2.6 GHz			
OPERATING SYSTEM	Microsoft Windows® Server 2016 64-bit, Server 2012 STD 64-bit, or Server 2008 R2 STD SP1 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, MAXPRO 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 MAXPRO 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 RS232					
NETWORK CONNECTION	1 Gbit/sec or greater					
VIRTUAL ENVIRONMENT	VM Ware ESXi version 5.5, vSphere and Hyper-V					

## Video Management System

## ORDERING

	MAXPRO VMS - PART NUMBERS AND LICENSING			
MAXPRO VMS - BA	ASE SOFTWARE AND LICENSES			
HNMSWVMS	VMS Base Software includes: MAXPRO VMS, SQL 2014 Express, includes Licenses for One (1) MAXPRO VIEW Client, with 64-channel interface to MAXPRO NVR Series, IP Engine, Enterprise NVR, MAXPRO-Net and VideoBloX Matrix Switch. (Add "-B" to P/N for redundant server licenses)			
SSAHNMBASE	Annual software support agreement - MAXPRO VMS Base software			
MAXPRO CLIENT	LICENSE – ONE LICENSE PER CONNECTED WORKSTATION			
	(CLIENT APPLICATION CAN RUN MULTIPLE INSTANCES) (ADD "-B" TO P/N FOR REDUNDANT SERVER LICENSES)			
HNMSWCL	MAXPRO View - Single Client License			
SSAHNMW1	Annual software support agreement - Single (1) Client			
SSAHNMW5	Annual software support agreement - Five (5) Client			
SSAHNMW10	Annual software support agreement - Ten (10) Client			
MAXPRO VMS BAS	SE CHANNEL LICENSE (ADD "-B" TO P/N FOR REDUNDANT SERVER LICENSES)			
HNM64	Additional 64 Base Channels			
HNM128	Additional 128 Base Channels			
HNM192	Additional 192 Base Channels			
HNM256	Additional 256 Base Channels			
HNM384	Additional 384 Base Channels			
HNM448	Additional 448 Base Channels			
HNM512	Additional 512 Base Channels			
	H ACTIVE ALERT® VIDEO ANALYTICS - ONE LICENSE PER ANALYTICS CHANNEL			
HNMHVAB	HVA - Base Package			
HNMHVAS	HVA - Standard Package			
HNMHVAP	HVA - Premium Package			
HNMHVASI	HVA - Smart Impressions			
HNMHVAPC	HVA - People Counter			
MAXPRO VMS SEF	RVER FAILOVER SOLUTION			
NFHALAN	Neverfail Server Failover Management			

MAXPRO VMS LITE - PART NUMBERS AND LICENSING				
MAXPRO VMS LITE	- BASE SOFTWARE AND LICENSES			
HNMSWVMSLT	MAXPRO VMS Lite Software includes: MAXPRO VMS, SQL 2014 Express, includes Licenses for One (1) MAXPRO VIEW Client, with 64-channel interface to MAXPRO NVR Series, IP Engine, Enterprise NVR, MAXPRO-Net and VideoBloX Matrix Switch. Expandable up to a maximum of three Clients and 128 Channels. No third party adapter support. (Add "-B" to P/N for redundant server licenses)			
SSAHNMLT	Annual software support agreement - MAXPRO VMS Lite software			
MAXPRO VMS LITE BASE CHANNEL LICENSE - ONE LICENSE PER VIDEO INPUT				
HNM64	Additional 64 Base Channels			
MAXPRO VMS LITE UPGRADE				
HNMUG	Upgrade MAXPRO VMS Lite to MAXPRO VMS			

MAXPRO VMS VERSION RECORDER COMPATIBILITY							
RECORDER MODELS	R500 B CURRENT RELEASE	R470 B46 PRIOR RELEASE	R450 B455 PRIOR RELEASE	R410 B424 PRIOR RELEASE	R310 B326 PRIOR RELEASE	R300 SP2 B215 PRIOR RELEASE	
MAXPRO NVR	✓	✓	✓	✓	✓	✓	
MAXPRO VMS (VMS IN VMS)	✓	✓	✓	✓	✓	✓	
ENTERPRISE	✓	✓	✓	✓	✓	✓	
IP ENGINE	*	×	×	×	✓	✓	
RAPIDEYE™	✓	✓	✓	✓	✓	✓	
FUSION	✓	✓	✓	✓	✓	✓	
HEN*2 EMBEDDED NVR	✓	✓	✓	*	×	*	
HEN*4 4K EMBEDDED NVR	✓	✓	×	*	×	*	
HRDP H.264	✓	✓	✓	✓	✓	✓	
HRDP MPEG4	✓	✓	✓	✓	✓	✓	

✓ Supported × Not Supported

### For more information

www.honeywell.com/security

### **Honeywell Security and Fire**

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