

MAXPRO® NVR PE (Professional Edition)

32/48/64-Channel Enterprise Network Video Recorder (NVR)

Honeywell's MAXPRO NVR PE is an open, flexible and scalable Enterprise IP video surveillance system. Utilizing Honeywell's high definition cameras, MAXPRO NVR PE is a powerful, high definition IP recording system with support for standards, remote viewing clients for enterprise installations.

Open – Broad Device Integrations

- Integrates to full line of Honeywell IP cameras and HVE encoders
- Support for ONVIF Profile S and Profile G, PSIA, real time streaming protocol (RTSP) standards
- Native device integrations supporting equiP® Series cameras' new features: 4K resolution, H.265 video compression codec, 3D PTZ control, 360° camera and multi-imager camera support, and intelligence events

Easy to Install and Use - Turnkey Solution

- Pre-installed with all required software and pre-licensed for 32, 48 or 64 channels with no extra channel license costs
- Easy 3-Click* wizard to live video for auto configuration – quick and efficient IP system install
- Simple and logical configuration pages make setup a breeze even for the novice installer
- Supports simultaneous recording, live monitoring, search and system management for up to 64 IP cameras including high definition formats with easy to use clients
- Easy to use desktop clients, web client and mobile apps
- Intelligence events from cameras can be viewed at the alarm panel, and trigger recording on MAXPRO NVRs for further investigation
- Learn One, Know them All - Common feature-rich user experience across the MAXPRO NVR Family and MAXPRO VMS / Viewer provides familiarity across a broad range of Honeywell products saving training costs

*With default settings and in a local area network for specific models

Scalable Integrated Security Solution

- Multiple MAXPRO NVRs deployed for system expansion using a distributed architecture and integrated with the MAXPRO Viewer multi-site software or MAXPRO VMS enterprise video management system



MAXPRO NVR PE
Rev B Server

HD



- Integration with Honeywell WIN-PAK® and Pro-Watch® Access Control Systems providing an integrated Access Control, Intrusion and Video solution

Enterprise Class NVR Hardware

- Provides the processor and RAID enclosure in one chassis, resulting in both space and cost savings
- RAID 5 and 6 support for video storage is available through a hardware-based RAID controller, removes the loading on the processor that software RAID can bring
- Convenient web browser interface to manage the RAID controller
- Rack mountable with dual redundant power supplies and mirrored 2.5" operating and application solid state drives (SSDs) for high availability
- 8 removable storage drives with more reliable and robust SAS hard drives used for video storage
- Dual 1 GB NICs are optimized to separate record and viewing data to ensure 100% recording and smooth playback even with multiple client connections

MARKET OPPORTUNITIES

The continual growth of IP networks and the demand for high definition video have led to the need for convergence of building security systems and IT systems for many companies across the globe. This has resulted in a strong demand for an all-IP end-to-end enterprise security system deployment. MAXPRO NVR PE provides an open, flexible and scalable system with operational power to address the needs of a wide variety of enterprise applications. The 2U rack mount small form factor, high performance, and reliability of the MAXPRO NVR PE unit makes it an ideal solution in installations where digital video is mission critical.

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SOFTWARE FEATURES

Multi-Platform Support

- Allows local or remote operations including live and recorded video monitoring, configuration and system management in a single desktop client interface.
- Support for Web Client on Windows PC (Internet Explorer, Chrome and Firefox browsers) and Mac (Safari browser). Supports live, playback/search of recorded video for up to 4K resolution on all cameras, taking snapshots and viewing presets for PTZ cameras.
- Support for mobile monitoring clients on iOS and Android Phones and Tablets with MAXPRO NVR apps: Login securely with https communication, Create favorite salvos (cameras up to 3x3 on tablets and 2x4 on phones per salvo), View Live and Recorded Video, Perform PTZ control through Presets and Monitor & Manage Alarms, Support Touch ID on iOS devices for fast and secure login.

*H.265 is not currently supported on Web client and mobile Apps.

Enhanced Monitoring with Desktop Clients

- Multi-zoom views on HD video and support for Profile cameras to create virtual cameras by digitally zooming into the field of view. Example: Zoom in on a cash register in one view of the HD camera while at the same time monitoring the cash operator in the zoom out view of the HD camera.
- Ability to investigate events and alarms by simultaneously viewing alarm videos at various stages. For every alarm, users can view the video captured during pre-alarm, on-alarm, and post-alarm, and also view live video from the camera which triggered the alarm.
- Enriched video viewing experience through the intuitive video rendering engine that optimizes CPU utilization by altering the video frame rate.
- Cost-effective enhanced H.264 and H.265 HD video rendering on remote desktop clients with support for monitoring of up to 23 1080p HD cameras in real time (30 fps)/690 fps 1080p HD with no-time lapse using the GPU capabilities of in-built processor graphics with 6th generation Intel® Core™ Processors for client systems. Up to 4 1080p HD @ 30 fps/120 fps on local client.
- Video Surround feature simplifies the process of tracking subjects through a set of surrounding cameras.
- Create, save and name salvos under My Salvos or Shared Salvos. Support for aspect ratio - 16:9, 4:3 and Stretched for video salvos.
- Support for 3D Positioning to allow the operator to pan, tilt and zoom into a specific region of interest efficiently by just clicking the live view window.
- IP PTZ control and digital zoom on fixed cameras. 360° viewing experience and 180° stitched view of equiP multi-imager cameras providing heightened situational awareness and increased video surveillance coverage.
- Support for auto switching of streams utilized by the client with multi-stream cameras, saving workstation hardware cost by displaying more cameras simultaneously with lower resolution streams instead of the primary HD streams.

- Support for On-Demand Live Streaming to save connectivity costs by stopping camera streaming to the NVR when no NVR clients request live viewing.
- Network throttling options for optimized streaming and client rendering under low bandwidth without interrupting critical business data transfers in the same network.

React Fast and Protect your Assets

- Fast search by date/time, enhanced time line, time jump, bookmarks, SMART Motion search, calendar, preview, film strip view and events. Increase productivity with more efficient search/investigation: Get to the relevant video in few clicks without having to review hours of recordings.
- SMART Motion search - Fast and efficient forensic search and investigation for objects/motion on recorded video using Honeywell SMART motion detection Analytics algorithms on the Client PC without impacting the NVR Server load.
- Capture and export clips and still images in simple .wmv, .asf, .mpvc and .bmp formats. Clips (.wmv) signed with digital signature for authentication.
- MAXPRO Video Container (.mpvc) format support - only playable in MAXPRO desktop clients and standalone Clip Player, quicker exports of raw video and support for estimating clip size and split to multiple clips to ensure clip storage media matches, include clip player with exported clip for easier review of video evidence and efficient investigation.
- Clip Player - Portable standard secure player for archived and exported clips (*.mpvc), 360 camera de-warping and 2x2 Salvo support, Smooth playback support with up to 256x review speed, No software installation required to run on a Windows PC, option to include with clip export.
- Email notification on camera, system and operator events.

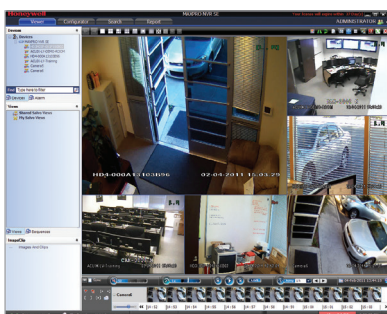
Enhanced Recording Engine

- Separate event video, continuous recording and archived video retention times.
- Flexible Motion detection (VMD) options with Server (SMART VMD) or Camera based motion events support. Reduced false alarms with object based motion detection analytics with SMART VMD.
- Video Archival - Archive large amounts of recorded Video data for long term storage either scheduled or manually, review through NVR desktop client or standalone Clip Player.
- Multi-stream support - Support multiple streams from camera for varying resolutions and frame rates for live, recording, low bandwidth desktop clients, web clients and mobile apps.
- Single channel license* for Encoders and Multi-imager 360 cameras (* - Max system capacity of 64 channels).
- Support for scheduled backfilling of the recordings from the edge storage of equiP 1080p IR PTZ, 1080p WDR and 4 MP WDR cameras to the NVR using ONVIF Profile G for robust recording against temporary network failure.
- 1+1/N+M recorder failover and failback automatically or manually with MAXPRO VMS.

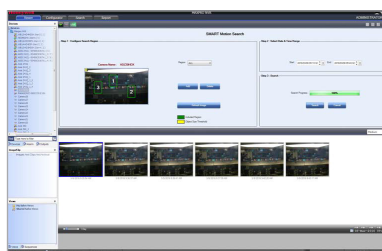
More Great Software Features

- Easy to use and enhanced camera configuration and discovery workflow - Reduce over configuration using NVR System Load and Storage Calculator and ensure the system is configured to meet requirements for retention and reliability.
- Status Monitor - Save operational costs with an integrated Dashboard to easily monitor the health and recording status of all the MAXPRO NVRs from any workstation or PC in the network.
- Role-based operator privileges supporting Windows and local users.
- Advanced security features with encryption support for communication between desktop client to NVR and secure https login for Web Client and Mobile apps.
- Keyboard control with UltraKey Plus and UltraKey Lite over Ethernet.
- Event history and operator log reporting with export to PDF, Crystal Reports, Excel or Word.
- Local and multi-language support.
- Support for secured communication between MAXPRO NVR and VMS, server and client.

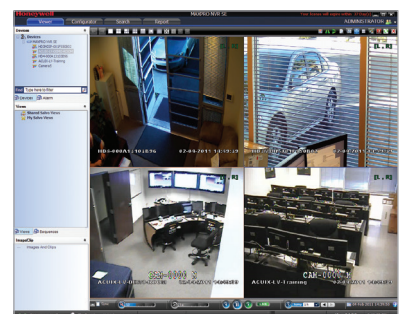
6 Split



SMART Motion Search



Quad



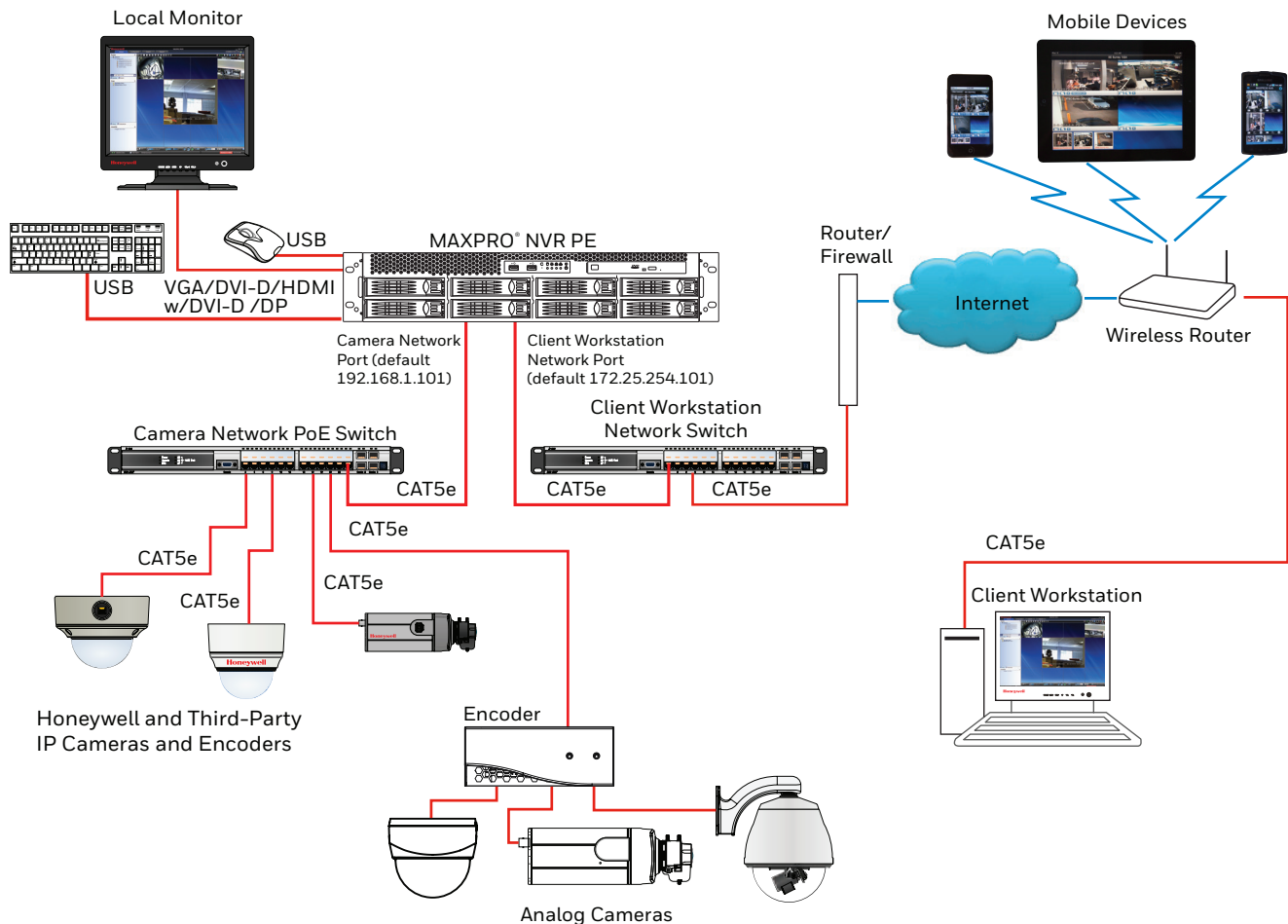
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HARDWARE FEATURES

- Record and monitor up to 64 channels at 1920 fps @ 4CIF/VGA or 1920 fps @ 720p HD or 1920 fps @ 1080p (4 Mbps bitrate) HD per MAXPRO NVR PE. Network bandwidth/throughput supported per NVR with Incoming: 256 Mbps, Outgoing: 425 Mbps; Total: 681 Mbps.
- Archival support of 25 channels @ 4 Mbps bitrate each / 100 Mbps total archival throughput capacity per MAXPRO NVR PE, with outgoing archival storage throughput of 275 Mbps
- Multi-stream support with maximum 128 streams per MAXPRO NVR PE. Support for configuring 1 preferred stream for continuous recording and 1 preferred stream for live video / motion based recording per camera
- Supports One-Way Audio (for specific IP cameras) with live, playback and clip export on desktop clients for up to 64 IP channels.
- Includes dual 1 GB NICs optimized to separate record and viewing data to ensure 100% recording and smooth playback even with multiple client connections.
- Redundant power supplies and separate RAID 1 Operating System 2.5" solid state drives (SSDs) from storage drives.
- 8 x RAID 5/6 removable storage drives
- Reliable and robust SAS hard drive options (1 TB, 2 TB, 3 TB, 4 TB, 6 TB, or 8 TB hard drives) providing raw storage capacities up to 64 TB.
- Includes HDMI w/ DVI-D to HDMI adapter or VGA or DVI-D or Display port for single monitor support for local client and rendering performance using GPU of up to 4 1080p HD @ 30 fps/120 fps on local client
- 2U rack mount form factor with optional locking front bezel. Rack rails included for use with four post racking systems.

SYSTEM DIAGRAM



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SPECIFICATIONS

OPERATIONAL	
MAXPRO NVR SOFTWARE - VERSION 4.5 OR ABOVE	
DATABASE	Microsoft® SQL Server® 2012 Express
OPERATING SYSTEM	Windows 10 IoT Enterprise for Embedded Systems
IMAGE COMPRESSIONS SUPPORTED	MJPEG, MPEG-4, H.264, H.265
SUPPORTED HONEYWELL IP CAMERAS AND ENCODERS	Supports Performance Series IP, equalP® Series cameras. Refer to www.security.honeywell.com/hota/compatibility/index.html
SUPPORTED THIRD PARTY IP CAMERAS AND ENCODERS	Refer to the MAXPRO NVR Compatibility for a comprehensive list of compatible products to which this device is integrated. www.security.honeywell.com/hota/compatibility/index.html
AUDIO SUPPORT	1-way audio for specific IP camera models. Refer to www.security.honeywell.com/hota/compatibility/index.html
MAXIMUM NUMBER OF DESKTOP CLIENT CONNECTIONS	Desktop Client - 38 per unit from 19 remote workstations + 1 local on NVR
SALVO LAYOUTS	Desktop Client - Full, 2x2, 1x5, 3x3, 2x8, 1x12, 4x4. Web Client - 2x2, 1x1, 1x2, 1x3. Mobile app (Phone) - 2x2, 2x4, 1x2, 1x1. Mobile app (Tablet) - 3x3, 2x2, 1x1.
PICTURE CONTROLS PER CAMERA	Sharpness, blur, brightness, contrast, hue, saturation, maintain aspect ratio, stretched, original size and picture mirror
OSD	Concealed text option
PLAYBACK CONTROLS PER CAMERA – DESKTOP CLIENT	FWD/REV Play x (1, 2, 4, 8, 16) Slow FWD/REV Play x (1/2, 1/4, 1/8)
SEARCH TYPES	Time/date timeline, time jump FWD/REV, bookmarks, calendar, preview, film strip, event search and SMART Motion Search
RECORDING SCHEDULE	Constant and event based with H/M/D and holiday and exception days
RECORDING METHODS PER CAMERA	Constant, event based and user activated
LIVE SETTINGS PER CAMERA	Compression format, resolution and frame rate
RECORD SETTINGS PER CAMERA	Same as live or reduced frame rate
CLIP FORMAT	Honeywell MPVC playable with standalone MAXPRO Clip Player for faster and secure exports. WMV with digital certificate for authentication playable with Windows media player. ASF for faster exporting of longer than an hour backup clips in native compression format.
VIDEO CLIP AUTHENTICATION	Digital signature, verification tool provided
MOTION DETECTION LOCATION	Camera based for supported models or Server based (SMART VMD) for all models (except 360 fisheye /panomorph views)
EVENT RECORDING	Pre and post duration setting
OPERATOR REPORTING	Per user, configurator, session and viewer
EVENT REPORT	Per camera or recorder events
OPERATORS	1024

OPERATIONAL	
MAXPRO NVR PE HARDWARE	
PROCESSOR	Intel® Core™ i7-4790, 3.6 GHz, Intel® HD Graphics 4600
MEMORY	8 GB
POWER SUPPLY	Dual Redundant 820 W
OS HARD DRIVE	2x 2.5" 128 GB SSD, RAID1
STORAGE CAPACITIES	4 TB to 64 TB raw storage
STORAGE HARD DRIVE OPTIONS	8 field upgradable 1 TB or 2 TB or 3 TB or 4 TB or 6 TB or 8 TB SAS hard drive options
OPTICAL	22x DVD-RW
NETWORK	Dual 1 Gigabit Ethernet
CHASSIS WITH LOCKING BEZEL	2U 8 bay including rack mount kit
RAID CARD	6 GB/s SAS/SATA RAID Card, PCI Express x8, supports RAID levels up to 6+0
REAR PANEL CONNECTIONS	
MOUSE AND KEYBOARD	2x USB
USB	2x Front, 4x Back
NETWORK	2x RJ45
MONITOR OUTPUT	HDMI cw DVI-D to HDMI adapter or VGA or DVI-D or Display port
ELECTRICAL	
INPUT VOLTAGE	110/220 VAC 50/60 Hz
OPERATING VOLTAGE	110V/220V Auto Sensing
POWER DISSIPATION	Average BTU rating = 880 BTU/HR Peak BTU rating = 2800 BTU/HR
MECHANICAL	
CONSTRUCTION	Chassis: Black matte paint
DIMENSIONS (W X H X D)	16.9" x 3.5" x 26" (430 mm x 88.8 mm x 660 mm)
WEIGHT	Shipping: 65 lbs / 29.5kg
ENVIRONMENTAL	
TEMPERATURE OPERATING	32°F to 95°F (0°C to 35°C)
RELATIVE HUMIDITY	5-95% non-condensing
REGULATORY	
EMISSIONS	FCC part 15B Class A; EN 55022 class A
IMMUNITY	EN 50130-4
SAFETY	ANSI / UL 60950-1; CAN/CSA C22.2 No 60950-1; IEC 60950-1
ROHS	EN 50581
COUNTRY OF ORIGIN	Assembled in the USA
WARRANTY	
WARRANTY AND ADVANCED REPLACEMENTS	Refer to http://www.honeywellvideo.com/support/warranty/index.html

RECORDING AND MONITORING PERFORMANCE	1920 fps @ 4CIF/VGA or 1920 fps @ 720p HD or 1920 fps @ 1080p (4 Mbps bitrate) HD. 1-way audio for up to 64 IP channels. Network bandwidth/throughput - Incoming: 256 Mbps, Outgoing: 425 Mbps, Total: 681 Mbps. Rendering performance using GPU of up to 4 1080p HD @ 30 fps/120 fps on local client. Note: OnCam Grandeye 360 Cameras are not supported with GPU rendering and use CPU rendering by default.
MAX VIDEO STREAMS SUPPORT	Web Client: Live - 64 streams, Playback - 32 streams. Note: Live streams consumed are per camera being viewed live and duplicate live views of the same camera in multiple or same web client instance are allowed without consuming additional streams. Playback streams consumed are per playback stream being viewed and each playback stream being viewed consumes 1 additional stream. Desktop Client: Live - 256 streams, Playback/Video retrieval sessions - 32, Sync playback - 9 streams. 256 live streams limit excludes 1 stream used per camera if Smart VMD is enabled. Maximum live streams per camera is 15 with Smart VMD enabled. Mobile App: 16 streams of 1080p HD @ 5 fps each. Note: During archival operations, maximum no of playback streams recommended from Desktop Client and Web Client is 16 streams.
SERVER BASED VMD (SMART VMD) PERFORMANCE - CHANNELS SUPPORTED	Channels at max fps: 64 ch at 1920 fps @ 4CIF/VGA or 64 ch at 1920 fps @ 720p or 64 ch at 1920 fps @ 1080p or total 128 Megapixel. All Channels at fps: 64 ch at 1920 fps @ 4CIF/VGA or 1920 fps @ 720p or 1920 fps @ 1080p or total 128 Megapixel.
ARCHIVAL PERFORMANCE	25 channels @ 4 Mbps bitrate each / 100 Mbps total archival throughput capacity. Outgoing archival storage throughput of 275 Mbps.
MULTI-STREAM PERFORMANCE	Support for maximum 128 streams. Support for configuring 1 preferred stream for continuous recording and 1 preferred stream for live video / motion based recording per camera.

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SPECIFICATIONS

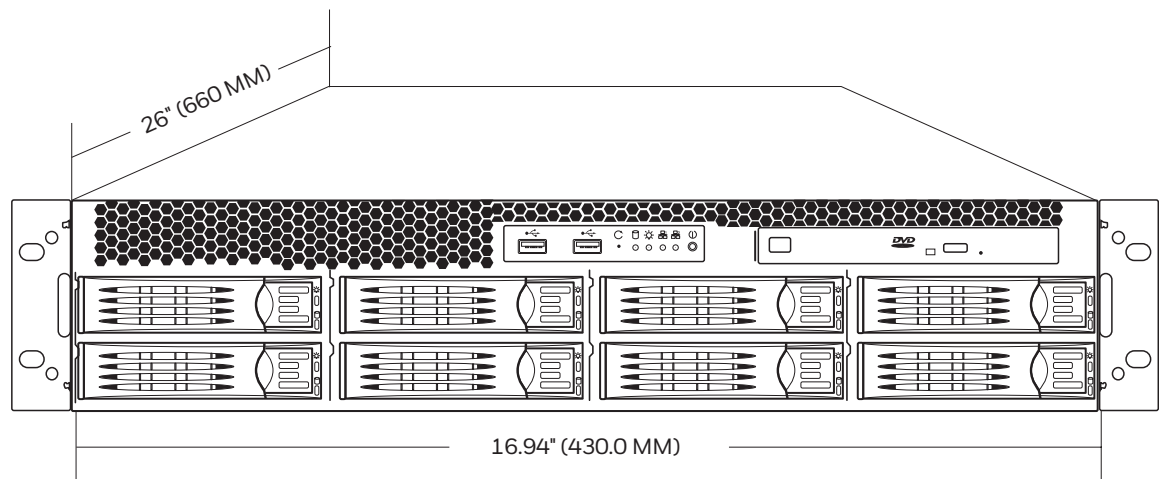
MAXPRO NVR Desktop Client Only Workstation—Specifications			
	With GPU Rendering Capability*		Without GPU Rendering Capability
	Minimum	Recommended	Recommended
PERFORMANCE CONFIGURATION	Up to 13 1080p HD Cameras, 1 Monitor (390fps @1080p HD)	Up to 23 1080p HD cameras, 2 Monitors (690fps @1080p HD)	Up to 9 HD Cameras (1 selected panel only, Throttle Frame Rate setting enabled)
PROCESSOR	Intel® Core™ i5-4460 or equivalent 4th generation Intel® Core™ Processors for client systems	Intel® Core™ i7-6700 or equivalent 6th generation Intel® Core™ Processors for client systems	Intel® Core™ 2 Duo Processor E6750 2.66 GHz or Quad Core Intel® Xeon® E5405 2.0 GHz
GRAPHICS ADAPTER	In-built Processor Graphics (GPU): Intel® HD Graphics 530, 4600, or equivalent		512 MB or higher Display Card (Optional)
SYSTEM MEMORY (RAM)	8 GB		4 GB
OS & APPLICATION – HARD DISK DRIVE OR PARTITION	Minimum 100 GB Partition drive or separate hard drive		
NETWORK INTERFACE	Minimum – 1 Gigabit network interface card		
OPERATING SYSTEM	Microsoft® Windows 7 Professional SP1, Windows 8.1, Windows 10 (64bit)		Microsoft® Windows 7 Professional SP1, Windows 8.1, Windows 10 (64bit/32bit)
OPTICAL DRIVE	DVD-RW		
MONITOR RESOLUTION	Video resolution 1280x1024 pixels, 32 bit		
KEYBOARD/MOUSE	102-key keyboard and mouse		

NOTE: The performance specifications above are recommended for systems with fixed or PTZ cameras only. Oncam Grandeye 360 cameras are not supported with GPU rendering and use CPU rendering by default. On Windows 7 workstations, GPU rendering is only supported through the motherboard monitor outputs and any additional graphics cards should be disabled in BIOS. On Windows 8.1, Windows 10 workstations with Intel GPU and any additional graphics cards, at least one monitor should be connected to the motherboard monitor output.

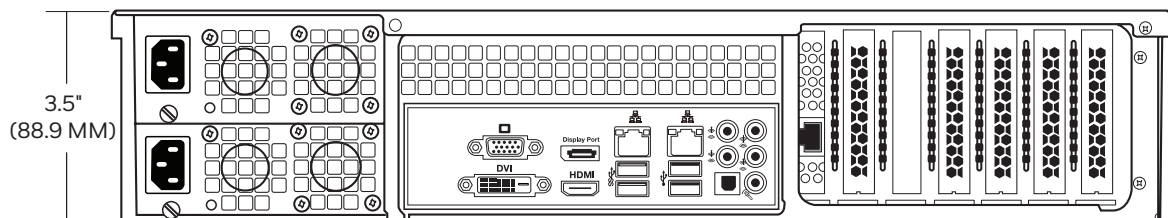
* - H.265 cameras are supported with GPU rendering only with v4.5 or newer version.

SPECIFICATIONS

Front View



Rear View



Honeywell