

## HUS-XPRO Servers (v.4.3)

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### ENTERPRISE IP SOLUTION MANAGEMENT SERVERS

The HUS-XPRO is an all-inclusive enterprise IP solution management server developed by Honeywell. IP Surveillance System is an essential component for enterprises to perform professional security monitoring and recording to protect their properties. Using IP network for data transmission eliminates the need of proprietary boxes resulting in cost reduction in system deployment and management. Honeywell IP Surveillance Solution allows local and remote control on any surveillance monitoring sites – from mid-range applications with several hundreds of cameras, to even the large scale ones equipped with more than ten thousand. Designed to escalate surveillance mobility and flexibility, video data can be shared and transferred to different sites. To extend a complete IP-based and centralized security system, the HUS-XPRO can be integrated with various Honeywell security products including high definition IP cameras, network video recorder HUS-NVR-5100A-E and HUS-NVR-7200A-E for large-scale applications, and HUS-NVR-1032-E and HD-NVR-108/116 for mid-scale architecture. To deploy an hybrid solution, simply apply the HUS-XPRO together with DVRs HD-16DVR-D or HVR-9000, and HVAE-0100/0400, HUSS-E4V or HUSS-E2X/E4X/E8X encoders. IP SAN unified storage system is also available. As an integrated solution, the HUS-XPRO can be integrated with not only video products, but also the reputable access control systems Pro-Watch® and WIN-PAK®, as well as intrusion system VISTA.

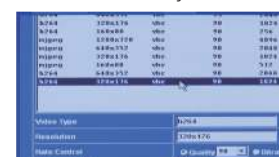
#### HUS 4.3 Highlights

- ONVIF 1.0.1, 1.0.2, Profile S compliant
- Support BACnet protocol to communicate with integrated building management solutions (IBMS)
- Integration with Honeywell Experion® Process Knowledge System (PKS), an advanced automation platform by Honeywell Process Solutions (HPS).
- HUS-SDK to communicate with 3<sup>rd</sup> systems to send / receive video and alarm singles
- HUS-COM to communicate with 3<sup>rd</sup> subsystems to send / receive alarm singles
- Support GB/T28181-2011 (for China only)
- High reliability by hot redundancy and standby
- Support Video Analytics
- Various storage options available - NVR, IP SAN, DVR and client storage
- Minimize video loss with Network Failure Recovery (NFR) function
- Multi-layer platform with high interoperability for easy communications and operations
- Live video display with different layouts
- Surrounding / Alternative view and digital zoom in/out
- Recording and playback on customization
- Instant playback from live view window
- Alarm / Event / Status / Log Management
- Digital virtual matrix (thousands x thousands)
- E-map support with GIS / AutoCAD / Common Image
- Rules engine driving for emergency processing
- HUS-D4-E-Pro supports playback, including NVR, IP SAN, DVR recording playback

The HUS-XPRO servers operate based on Windows® server operating system which composes of full HUS management software and hardware.



Instant Playback



H.264



Rules Engine



E-map



Device Discovery



Alternative View



Surrounding View

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### Market Opportunities

Deploying the HUS-XPRO IP Surveillance Solution is an ideal application for facilities that require critical infrastructure protection such as city surveillance, airports, seaports, large multi-site commercial buildings and other high-end facilities. It is also a perfect video management solution for locations that require centralized management of both digital and analog systems with access control and intrusion system integration.

### BENEFITS

#### Stable Platform Architecture

- Advanced system architecture to intelligently allocate data resources for efficient management and reliable operation
- Hot redundancy to minimize system downtime
- 128-/256-channel NVR and IP SAN solutions available for more flexible storage
- Privilege levels selectable for most suitable authorization rights for different zones

#### Powerful Emergency Response

- Quickly locate emergency sites with icon flashing on E-Map
- Rules Engine drives proper response to various threaten situations
- Powerful management system to link video, intrusion and access information for actions across the entire security system when emergency happens

#### Superb Integration Capability

- Integration with HUS-NVR-1032
- Integration with Pro-Watch®, WIN-PAK® access management system providing superior access control with alarm / event monitoring
- Integration with VISTA series intrusion system providing proactive alarm management
- Integration with analog MAXPRO-Net and VideoBloX matrix
- Integration with MX8000 intrusion system receiver
- Integration with 3<sup>rd</sup> party system via BACnet protocol to communicate with IBMS
- Integration with Experion PKS. PKS can view live videos from HUS and control PTZ

#### Utmost Efficiency

- Immediate access to live and playback video on any screen upon needed
- Quick and effective alarm / event notification and verification process
- Automatic live video pop up on E-map when alarm / event trigger

#### High Reliability

- 24/7/365 stable system operation
- Hardware and software are strictly qualified and verified by Honeywell
- Honeywell network designed for recommendation

#### Full Scalability

- Support unlimited number of cameras, clients and devices
- Support 256 level privileges definition for different users
- Support multi-level / multi-site / multi-database connection

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#### BENEFITS

##### High Availability

- Hot standby redundancy for HUS-XPRO management server
- Core service module support with N+1 hot backup
- Encoder network failure recovery (NFR) available with HD-NVR108/106, HD-16DVR-D, HVR-9000, HUSS-E2X/E4X/E8X, HD-SDI-DVR304/308

##### Low Cost Ownership

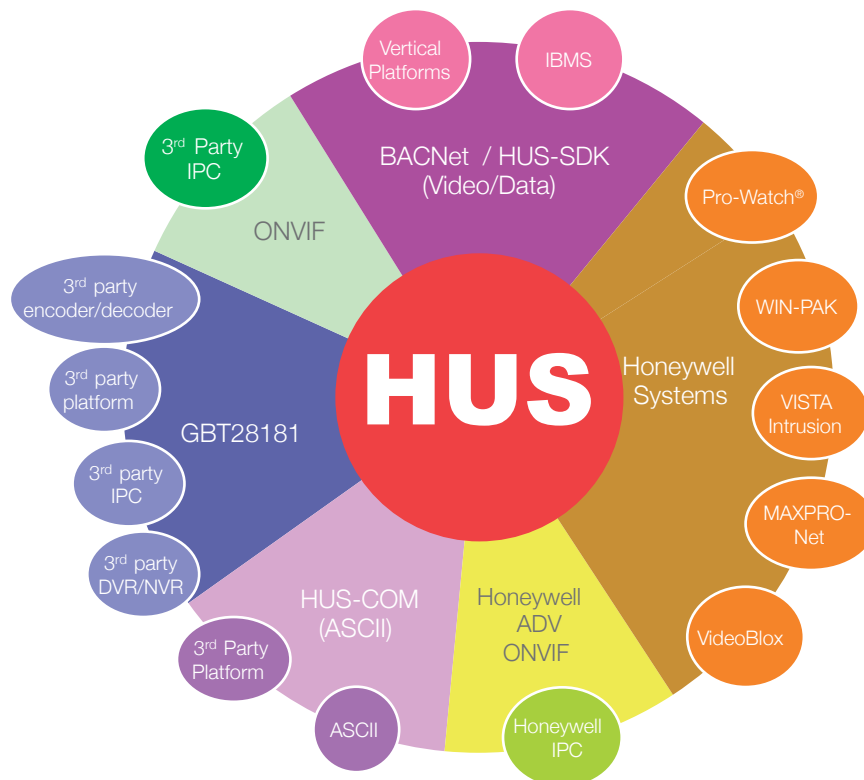
- Compliance with ONVIF global standardization for IP devices interoperability
- High profile H.264 to make the best use of network and storage resources
- Optimized network resources usage with levels of video service, multicast and dual streaming

##### Simple Operation

- CCTV IP keyboard for full range control of live view and PTZ tracking
- Unified client operation interface to ease users' every access in need
- Intuitive and clear multi-window display for processing at the first time

##### Easy Management

- Web accessible configuration provides unified access to all devices in the system
- Devices classified and status monitoring in groups for easy management
- Ready-to-use product with system software pre-installed



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### ENTERPRISE IP SOLUTION MANAGEMENT SERVERS

#### FEATURES

As the central management of Honeywell IP Solution, the HUS-XPRO accelerates the primary security processes of event detection, verification and investigation adaptable to different tasks through an integrated bundle of functions.

##### Video Management

- Manage live video from IP cameras and video encoders to display on any client or video wall
- Manage video streaming from IP cameras and video encoders to NVR / IP SAN
- Record searching by time, camera number, event, devices or complex conditions
- Archive evidence at local storage / central storage / remote site
- Virtual matrix operation with CCTV IP keyboards or client workstations
- Live view, record and playback video synchronized with audio
- Surrounding view supports one camera as key view and 12 related cameras as supplementary
- Alternative view to bind two cameras together to be backup view for each other
- Digital zoom in/out support with both live view and historical video record view
- Instant playback historical video record for past 30 seconds from live view window directly
- Different playback mode: 8 / 16 / 32 / 64x, frame by frame, backward playback
- Accelerate investigation with agile replay controls: play & pause & shuttle
- Snapshot video image for immediate action output files
- Configurable tours and patrols on workstation monitors or video walls

##### Intrusion and Access System Integration

- Uniform interface to configure and manage video, intrusion and access systems
- Standard processing events and interactions across video, intrusion and access systems
- Monitor device status icon and live video pop up when alarm/event trigger

##### Event Management

- Events classified by types and security levels for easy searching
- Events can be managed according to status to ensure proper handling
- Event notifications at different security levels can be easily identified by different colors

##### Rules Engine Management

- Build the most complicated preplans according to customers' different needs
- Drive workflow and enable operator to confirm critical tasks by automatic checklist display
- Automatically execute corresponding response at different situations e.g. email notification

##### E-Map System

- Allocate event accurately on the map with video verification
- Navigate complex sites to get video live view rapidly wherever needed
- Support GIS, BMP, JPEG, Common Image and Auto CAD format map import
- Support multi-layer E-map navigation and nesting application
- Alarm / event trigger up to 4 live videos for verification

##### Intelligent Video Analytics

- Supports up to 36 intelligent analysis features

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### FEATURES

#### User Management

- Access privilege to system resources can be controlled individually by user or user group
- Manage user privileges one at a time or through common profiles
- Customized user preferences interface and restore last scenario when user log in
- Allow or block camera viewing, searching, replay and data export
- Actions from log-in to different operations can be audited and reported to enable high level security management

#### System Configuration and Maintenance

- Maintain database of system functions including error, alarms, user actions and reporting
- Support device discovery for searching undefined devices and configuring into HUS
- Continuously monitor system health status of key system components: Servers, NVRs, encoders, decoders, IP cameras, sub-systems and databases with notification to users immediately when abnormal situation is detected.

### SPECIFICATIONS

Product Model	HUS-XPRO-MAS-E	HUS-XPRO-SLA-E	HUS-XPRO-RPK-E	HUS-XPRO-RDB-E
	HUS Central Management Server	HUS Central Management Slave Server	HUS Central Management Local Site Redundancy Package Kit	HUS Central Management Remote Sites Redundancy Database Package
System Capacity				
Server	Dell PowerEdge Server × 1		Dell PowerEdge Server × 2	Dell PowerEdge Server × 2
Processor	Quad-Core Intel E5-2403 Series Processors			
Cache	10MB			
Memory	8 GB ,1333 MHz			
Network	2 Gigabit Ethernet RJ-45 Ports			Two disaster site established between private network and bandwidth more than 10Mbps
Hard Disk	3.5" SATA (7200 RPM): 500GB		Storage disk array with 2 SAS RAID controller	3.5" SATA (7200 RPM): 250GB
Drive Bays	Up to 4 x 3.5" hot-swappable SAS or SATA drives		Storage disk array with 2 SAS RAID controller	3.5" SATA (7200 RPM): 250GB
Operating System	Windows Server 2008 Standard 64 bit		Windows Server 2008 Enterprise 64 bit	Windows Server 2008 Standard 64 bit
Database	SQL Server 2008 Standard	n/a	SQL Server 2008 Standard	SQL Server 2008 Standard
Operation				
W x H x D (mm)	434 x42.4 x 610 (1U)		2 servers (2U) + 1 disk array (3U)	2 servers (2U)
Weight	15kg		54kg (total)	30kg (total)
Power Input	100 - 240VAC, 50/60Hz			
Power Consumption	350W		1200W (total)	700W (total of 2 units)
Operating Temperature	10°C to 35°C			
Storage Temperature	-40°C to 65°C			
Relative Humidity	10% to 85% , non-condensing			
Regulatory				
Certification	CCC, CE, FCC, UL			

Note: Honeywell reserves the right, without notification, to make changes in product design or specifications.

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### ORDERING

HUS XPRO Central Management	
HUS-XPRO-MAS-E	HUS Central Management Master Server: Includes Server, Windows Server 2008 Standard 64bit, SQL Server 2008 Standard 64bit, HUS software. License covers 300 video channels and 20 user clients
HUS-XPRO-SLA-E	HUS Central Management Slave Server: Includes Server, Windows Server 2008 64bit Standard, HUS software. License covers 300 video channels and 20 user clients
HUS-XPRO-RPK-E	HUS Central Management Local Site Redundancy Package Kit: Includes 2 PC servers, 2 Windows Server 2008 Enterprise 64bit, 2 SQL Server 2008 Standard 64bit, HUS software, 1 Storage Disk Array. License covers 300 video channels and 20 clients
HUS-XPRO-RDB-E	HUS Central Management Remote Sites Redundancy Database Package Kit: Includes 2 PC servers, 2 Windows Server 2008 Standard 64bit, 2 SQL Server 2008 Standard 64bit, HUS software. License covers 300 video channels and 20 clients
HUS XPRO Software License Module	
HUS-SLM-VID	HUS Video Extension Package: each package supports additional 100 video channels
HUS-SLM-INT	HUS Intrusion Extension Package: each package supports additional 128 alarm zones
HUS-SLM-ACS	HUS Access Extension Package: each package supports additional 64 card readers
HUS-SLM-CLT	HUS Client Extension Package: each package supports 5 additional user clients
HUS-SLM-IVA	HUS Intelligent Video Analysis Package: each package supports additional 4 channels video analytics standard base license, only software
HUS-SLM-RDN	HUS IP Storage N+1 Redundancy Package: each package supports HUS IP Storage N+1 redundancy backup license, only software
HUS XPRO Integration Interface	
HUS-SDK	HUS SDK Software Development Kit (Software Development Kit), including alarm event information output, licensing equipment control instruction, real-time video streaming, historical video search
HUS-COM	HUS COM Communication interface Protocol (Communication Protocol), including ONVIF standard agreement, ASCII Communication Protocol
HUS-TPI	HUS TPI Third party integrated interface (Third - party Integration), includes Honeywell after verification and test designated system or equipment
HUS XPRO System Support Agreement	
SSAHUS300	SSA to HUS Management Server: One year software support service extension to management server. Includes support to 300 channel IP video
SSAHUS300R	SSA to HUS Management Redundancy Server: One year software support service extension to redundancy management server. Includes support to 300 channels IP video
SSAHUSVEX	SSA to HUS Video Extension Package: One year software support service extension to 100 channels IP video license
SSAHUSINT	SSA to HUS Intrusion Extension Package: One year software support service extension to 128 alarm zones license
SSAHUSACS	SSA to HUS Access Extension Package: One year software support service extension to 64 readers license

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### VIDEO ANALYTICS FEATURES

Event	Base	Standard	Premium	People Counting	Smart Impressions
<b>People Events</b>					
Person entered restricted zone	✓	✓	✓		
Person exited restricted zone	✓	✓	✓		
Person loitering in restricted zone		✓	✓		
Person started moving in wrong direction	✓	✓	✓		
Person stopped moving in wrong direction	✓	✓	✓		
Person on fence line		✓	✓		
Person started running			✓		
Person stopped running		✓	✓		
People converged		✓	✓		
People passed by		✓	✓		
Person trespassing - tripwire	✓	✓	✓		
Person running in wrong direction			✓		
Person in sterile zone		✓	✓		
<b>Car traffic events</b>					
Car started moving in wrong direction	✓	✓	✓		
Car stopped moving in wrong direction	✓	✓	✓		
Car entered restricted zone	✓	✓	✓		
Car parked in restricted zone		✓	✓		
Car speeding			✓		
Car made illegal u-turn		✓	✓		
Car parked in handicapped zone		✓	✓		
Car pulled off channels		✓	✓		
Car needs assistance		✓	✓		
Car exited restricted zone	✓	✓	✓		
Car trespassing - tripwire	✓	✓	✓		
Car in sterile zone		✓	✓		
<b>Video/Camera Events</b>					
Video signal lost	✓	✓	✓	✓	✓
Video signal restored	✓	✓	✓	✓	✓
<b>Counting Events</b>					
Person counted as entering		✓	✓	✓	✓
Person counted as exiting		✓	✓	✓	✓
Car entered lot		✓	✓		✓
Car exited lot		✓	✓		✓
Car counted in lane		✓	✓		✓
<b>Premium Events</b>					
Object left unattended			✓		
Object removed			✓		
Possible theft			✓		
<b>Smart Impressions</b>					
Entering target zone			✓		✓
Staying in target zone			✓		✓

#### Notes

1. Base, standard and Premium package is a mutually exclusive relationship, can only choose one of them.
2. If only people counting feature is required, you may select the "People Counting" package only.
3. If only vehicle access counting and traffic statistics are required, you may select the "Smart Impressions" package only.
4. People Counting package is free-of-charge with purchase of Basic Package or Standard Package or Premium package.
5. Smart Impressions package is free-of-charge with purchase of Basic Package or Standard Package or Premium package.



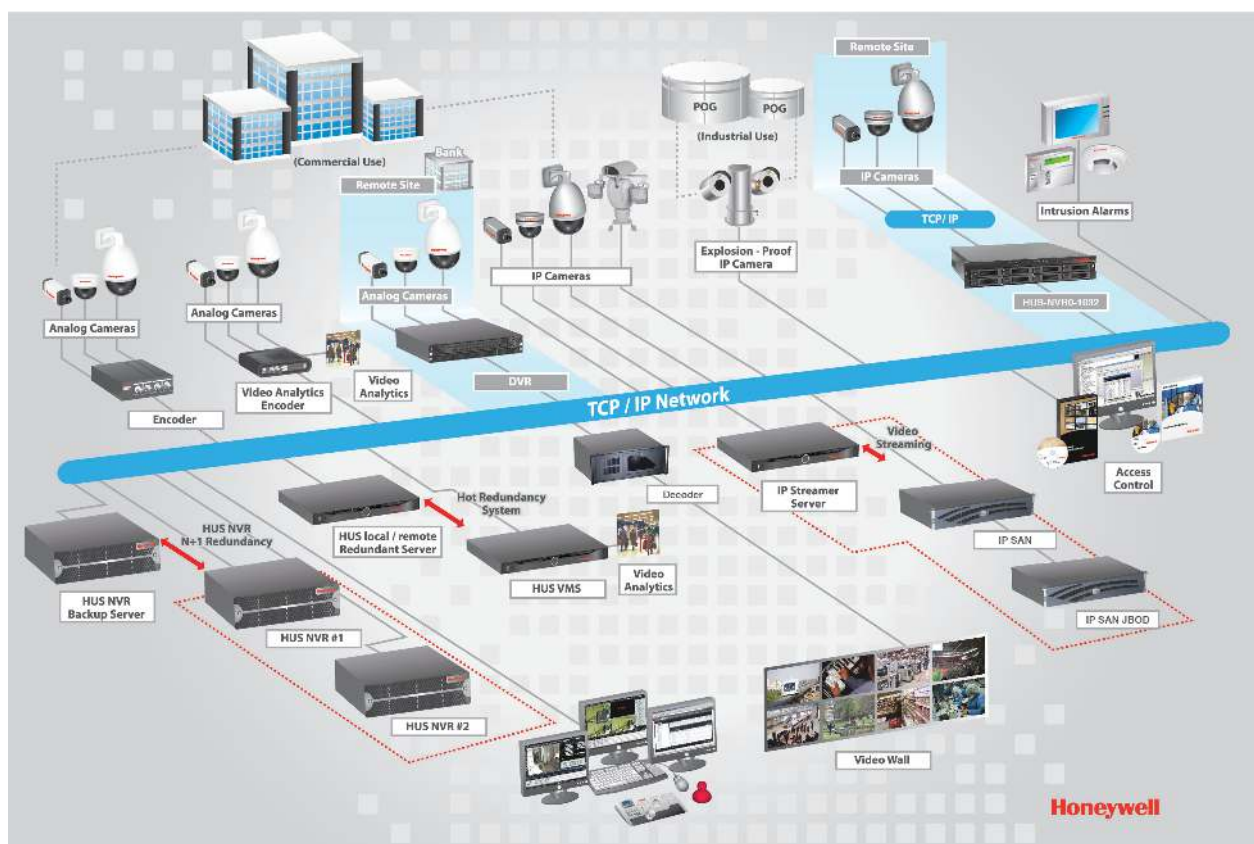
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### SYSTEM DIAGRAM

The following diagram illustrates the Honeywell IP Surveillance System architecture built with the HUS-XPRO servers and associated components.



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