

# Performance Series 4K ENVRs

# 16-/32-/64-Channel 4K ENVRs

HEN16384/HEN32384/HEN323164/HEN643164/ HEN643324/HEN643484

Introducing Honeywell's Performance Series 4K Embedded NVRs, our newest affordable, fully featured NVRs offering Ultra HD 4K video resolution. Choose a 16-, 32-, or 64-channel NVR, with multiple hard drive options plus the ability to expand to up to 64 TB of internal storage, for an ideal and flexible solution to fit your surveillance situation.



#### HD

### Fully-featured NVRs

- High decoding capability for Ultra 4K HD viewing and recording
- View 4/8/16 channels simultaneously with synchronized real-time playback on your monitor (depending on your model)
- Up to 12 MP (4K) resolution live view, preview and playback
- Up to 16 channels at 1080p, or 8 channels at 4 MP, or 4 channels at 8 MP H.265/H.264 decoding
- De-warp fisheye camera video in local and web user interface for 360 degree situational awareness

#### Easy to Use

- The Quick wizard and PoE support (for up to 16 channels) make setup fast and easy
- Quick physical installation with the help of a simple NVR design and easy-to-understand quick installation guides
- Simple remote configuration and firmware updating through the Honeywell Viewer web client and the Honeywell Config tool

### **Market Opportunities**

The flexible storage options and high recording and networking performance of the Performance Series 4K Embedded NVRs make these NVRs perfect for a wide range of security applications.

### Convenient, Flexible Storage Options

- Internal storage supports 8 HDDs expandable up to 64 TB (8 TB each)
- Store video clips and snapshots to external storage, such as the client's PC, through the Internet connection
- Store video clips and snapshots to external network storage servers, such as an FTP site
- Store video clips and snapshots to a USB memory device

#### Dynamic, Accessible Monitoring

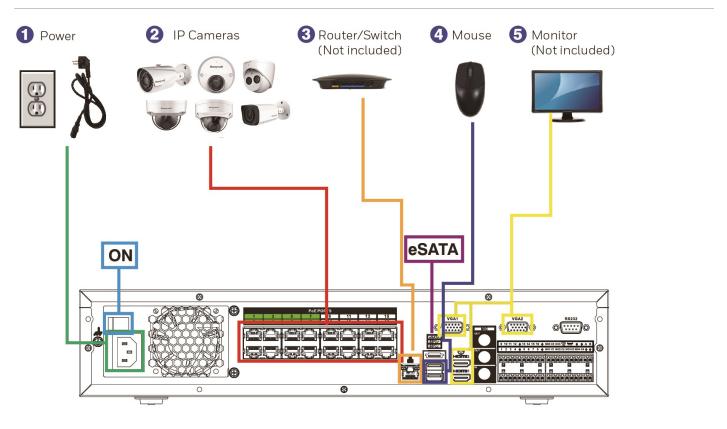
- Monitor from anywhere using the mobile apps for both Apple® and Android™ devices (smartphones, tablet computers, and laptops)
- Protect the NVR's video and network setup with password-protected access
- Conceal up to 4 areas of a scene from viewing and recording

### FEATURES AND BENEFITS

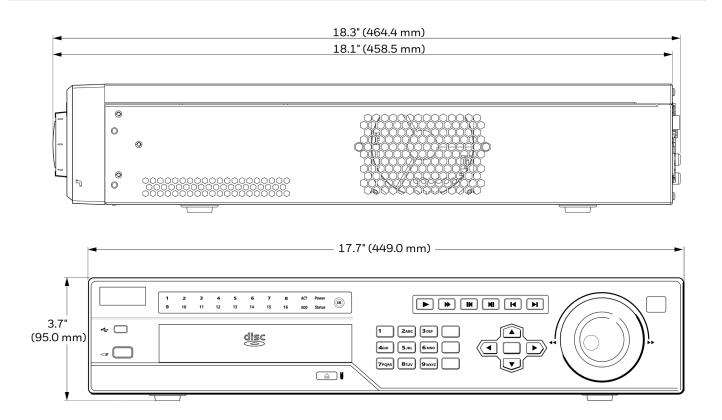
- H.265/H.264/ MJPEG/MPEG4 codec decoding
- 2 HDMI/2 VGA simultaneous video outputs (the second HDMI output is programmable)
- Supports up to 16 alarm input channels and 6 alarm relay output channels
- Supports sending notifications through email, FTP, and/or HTTP
- UL listed
- Supports recording a video clip of events for distribution
- Supports uploading still images at the time of the event through email and/or FTP
- Configurable to automatically detect and respond to motion in the scene, alarm inputs, and network failure or tampering
- Maximum incoming and outgoing bandwidth of 320 Mbps
- Supports visual or auditory notifications (a flashing light, bell, or siren)
- Supports fisheye video de-warping in local and web user interface

# 16-/32-/64-Channel 4K ENVRs Technical Specifications

### SYSTEM DIAGRAM



### DIMENSIONS



# 16-/32-/64-Channel 4K ENVRs Technical Specifications

SYSTEM	
MAIN PROCESSOR	Quad-core embedded processor
OPERATING SYSTEM	Embedded LINUX
VIDEO	
INPUTS	HEN163*4: 16 Channels IP HEN323*4: 32 Channels IP HEN643*4: 64 Channels IP
AUDIO	
AUDIO INPUT/OUTPUT	1 Channel Input/2 Channel Outputs, RCA
TWO-WAY COMMUNICATION	Supported
DISPLAY	
INTERFACE	2 HDMI (1 HDMI up to 3840 × 2160); 2 VGA
RESOLUTION	3840 × 2160; 1920 × 1080; 1280 × 1024; 1280 × 720; 1024 × 768
DISPLAY SPLIT	HEN163*4: 1/4/8/9/16 HEN323*4: 1/4/8/9/16/25/36 HEN643*4: 1/4/8/9/16/25/36/64
OSD	Camera title; Time; Video loss; Camera lock; Motion detection; Recording
PROGRAMMABLE VIDEO OUTPUT	2nd HDMI output
FISHEYE VIDEO DE-WARPING	Supported in local and web user interface
RECORDING	
MECONDING	
COMPRESSION	H.265/H.264/MJPEG/MPEG4
	H.265/H.264/MJPEG/MPEG4 12 MP ( $4000 \times 3000$ ); 8 MP ( $3840 \times 2160$ ); 6 MP ( $3072 \times 2048$ ); 5 MP ( $2560 \times 1920$ ); 4 MP ( $2560 \times 1440$ ); 3 MP ( $2048 \times 1520$ ); 1080p ( $1920 \times 1080$ ); 720p ( $1280 \times 720$ ); D1 ( $704 \times 576 / 704 \times 480$ ); CIF ( $352 \times 288 / 352 \times 240$ )
COMPRESSION	$\begin{array}{c} \textbf{12 MP} (4000 \times 3000); \textbf{8 MP} \\ (3840 \times 2160); \textbf{6 MP} (3072 \times 2048); \textbf{5 MP} (2560 \times 1920); \textbf{4} \\ \textbf{MP} (2560 \times 1440); \textbf{3 MP} (2048 \times 1520); \textbf{1080p} (1920 \times 1080); \\ \textbf{720p} (1280 \times 720); \textbf{D1} (704 \times 576 / 704 \times 480); \textbf{CIF} (352 \times 288 \times 1000); \textbf{CIF} (352 \times 288 \times 10000); \textbf$
COMPRESSION RESOLUTION	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240) 1–15 fps (12 MP and 8 MP);
COMPRESSION  RESOLUTION  FRAME RATE	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240)  1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions)
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE	$\begin{array}{l} \textbf{12 MP} (4000 \times 3000); \textbf{8 MP} \\ (3840 \times 2160); \textbf{6 MP} (3072 \times 2048); \textbf{5 MP} (2560 \times 1920); \textbf{4} \\ \textbf{MP} (2560 \times 1940); \textbf{3 MP} (2048 \times 1520); \textbf{1080p} (1920 \times 1080); \\ \textbf{720p} (1280 \times 720); \textbf{D1} (704 \times 576 / 704 \times 480); \textbf{CIF} (352 \times 288 / 352 \times 240) \\ \textbf{1-15 fps} (12 \text{ MP and 8 MP)}; \\ \textbf{1-25/30 fps} (\text{rest of the resolutions}) \\ 320 \text{ Mbps} \end{array}$
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE <sup>1</sup>	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240)  1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions)  320 Mbps  16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual;
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240)  1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions) 320 Mbps 16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240)  1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions)  320 Mbps  16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop  1 to 120 minutes (default 60 min)
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING  INTERVAL  POST-EVENT RECORDING	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1920); 4 MP (2560 × 1920); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240) 1-15 fps (12 MP and 8 MP); 1-25/30 fps (rest of the resolutions) 320 Mbps 16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop 1 to 120 minutes (default 60 min) 1 to 30 seconds 10 to 300 seconds
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING INTERVAL	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1920); 4 MP (2560 × 1920); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240) 1-15 fps (12 MP and 8 MP); 1-25/30 fps (rest of the resolutions) 320 Mbps 16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop 1 to 120 minutes (default 60 min) 1 to 30 seconds 10 to 300 seconds
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING INTERVAL  VIDEO DETECTION AND ALARMS	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240)  1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions)  320 Mbps  16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop  1 to 120 minutes (default 60 min)  1 to 30 seconds  Recording; PTZ; Tour; Alarm; Video
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING INTERVAL  VIDEO DETECTION AND ALARMS  TRIGGER EVENTS	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 MP (2560 × 1440); 3 MP (2048 × 1520); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576 / 704 × 480); CIF (352 × 288 / 352 × 240)  1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions) 320 Mbps 16 kbps ~ 20 Mbps, per channel Schedule (Regular/Continuous, Motion Detection, Alarm); Manual; Stop 1 to 120 minutes (default 60 min) 1 to 30 seconds  Recording; PTZ; Tour; Alarm; Video Push; Email; FTP; Snapshot; Buzzer Motion Detection—MD Zones: 396

PLAYBACK AND BACKUP	
SYNC PLAYBACK	1/4/8/16 (maximum 4-ch @ 8MP, 8-ch @ 4MP, or 16-ch @ 1080p simulateous playback)
SEARCH MODE	Time/Date; Alarm; Motion Detection (MD); Exact Search (accurate to a second); Smart Search
PLAYBACK FUNCTION	Play; Pause; Stop; Rewind; Fast play; Slow play; Next File; Previous File; Next Camera; Previous Camera; Full Screen; Repeat; Shuffle; Backup selection; Digital Zoom
BACKUP MODE COMPATIBILITY	USB Device; Network; Internal SATA burner; eSATA Device
NETWORK	
ETHERNET	1 RJ-45 port (10/100/1000 Mbps)
POE	16 ports (IEEE802.3af/at)
SUPPORTED PROTOCOLS <sup>2</sup>	HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search, P2P
MAXIMUM NUMBER OF USERS	128 users
NETWORK THROUGHPUT	Input 320 Mbps; Output 320 Mbps
SMART PHONE COMPATIBILITY	iPhone; iPad; Android
STORAGE	
INTERNAL HDD	8 SATA ports, up to 64 TB
EXTERNAL HDD	1 eSATA port
AUXILIARY INTERFACE	
USB PORTS	4 (2 rear USB3.0; 2 front USB2.0)
RS232	1 port (for PC communications and keyboard)
ELECTRICAL	
POWER SUPPLY	Single, 100~240 VAC, 50/60 Hz
POWER CONSUMPTION	NVRs: 17.5 W max (without HDD) PoE: 25.5 W for a single port (150 W total)
ENVIRONMENTAL	
OPERATING TEMPERATURE	14°F to 131°F (-10°C to 55°C)
RELATIVE HUMIDITY	10% to 90%, non-condensing
STORAGE TEMPERATURE	-4°F to 158°F (-20°C to 70°C), 0% to 90% relative humidity
PHYSICAL	
DIMENSIONS	17.3" × 17.9" × 3.7" (440 mm × 454 mm × 95 mm)
WEIGHT (WITHOUT HDD)	15.4 lb. (7.0 kg)
REGULATORY	
EMISSIONS	FCC Part 15B, EN55032: 2012 +AC: 2013, EN61000-3-2: 2014, EN61000-3-3: 2013
IMMUNITY	EN50130-4: 2011+A1: 2014, EN55024: 2010+A1: 2015
SAFETY	EU: EN60950-1 North America UL listed to UL/CSA 60950-1
ROHS	EN50581: 2012

- \* The \* = hard drive capacity in TB.
- 1. Actual bitrate is scene and motion dependent with H.264 stream.
- 2. Some development might be required in specific user cases to support some of these protocols in the field, as naturally protocols will mature over time.

### 16-/32-/64-Channel 4K ENVRs

### RECOMMENDED ACCESSORIES

RECOMMENDED CAMERAS	
RUGGED 4K IR MINIDOME IP CAMERAS	H4D8PR1; H4W8PR2
4K IR BULLET IP CAMERAS	HBD8PR1; HBW8PR2
4K IR BALL IP CAMERAS	HED8PR1
1080P IR PTZ IP CAMERAS	HDZP252DI
INDOOR 5 MP FISHEYE IP CAMERAS	HFD5PR1
3-INCH INDOOR MINIDOME IP CAMERAS	H3W2GR1; H3W2GR2; H3W4GR1
4-INCH RUGGED MINIDOME IP CAMERAS	H4D3PRV2; H4W2PRV2; H4W4PRV2; H4D3PRV3; H4W4PRV3; H4W2GR1; H4W2GR2; H4W4GR1; H4D8GR1; H4W2PRR2; H4W2PRR3
INDOOR BOX IP CAMERAS	HCW2G; HCL2G; HCW4G; HCD8G
BULLET IP CAMERAS	HBD3PR2; HBW2PR2; HBW4PR2; HBW2PR1; HBW4PR1; HBL2GR1; HBW2GR1; HBW2GR3; HBW4GR1; HBD8GR1; HBD1PR1; HBW3PR1; HBW2PER2; HBW4PGR1;
BALL/MICRO DOME IP CAMERAS	H2W2PRV3; H2W4PRV3; HEW2PRW1; HEW4PRW3; HEW2PR1; HEW4PR3; HEW2PR2; HEW4PR2; HED1PR3; HED3PR3; HEW4PER2; HEW2PER2; HEW2PER3; HEW4PER3B; HEW4PER2B; H2W2PC1M; H2W4PER3; H2W2PER3
PIN-HOLE IP CAMERA	HPW2P1

### ORDERING

HEN16384	NVR, 16-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 480 fps, 8 TB
HEN32384	NVR, 32-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 960 fps, 8 TB
HEN323164	NVR, 32-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 960 fps, 16 TB
HEN643164	NVR, 64-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 1920 fps, 16 TB
HEN643324	NVR, 64-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 1920 fps, 32 TB
HEN643484	NVR, 64-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 1920 fps, 48 TB

#### For more information

www.security.honeywell.com

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