

## Performance 4K Embedded NVRs

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

HEN16304/HEN16384/HEN32304/HEN32384/ HEN323164 HEN64304/HEN643164/HEN643324/ HEN643484

Introducing Honeywell's Performance 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 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

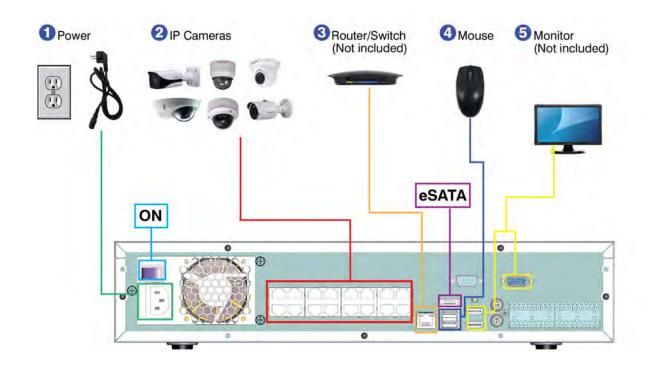
### FEATURES AND BENEFITS

- H.265/H.264/ MJPEG/MPEG4 codec decoding
- 2 HDMI/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

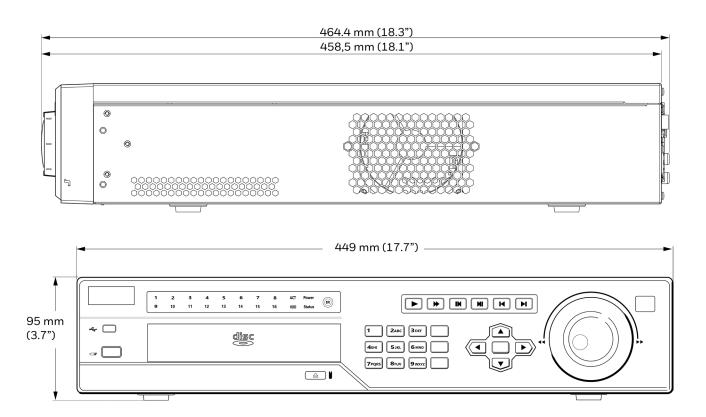
- Supports recording a video clip of events for distribution
- Supports uploading still images at the time of the event through email and/or FTP
- Configurable to automatically detect and respond to motion in the scene, alarm inputs, and network failure or tampering
- Maximum incoming and outgoing bandwidth 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/1 Channel Output, RCA
TWO-WAY COMMUNICATION	Supported
DISPLAY	
INTERFACE	2 HDMI (1 HDMI up to 3840 × 2160); 1 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	
RECORDING COMPRESSION	H.265/H.264/MJPEG/MPEG4
	H.265/H.264/MJPEG/MPEG4  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)
COMPRESSION	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
COMPRESSION	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	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
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 × 1920); 4 × 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 × 1400); 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 × 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 × 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
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 × 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
COMPRESSION  RESOLUTION  FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING INTERVAL  VIDEO DETECTION AND ALAR	12 MP (4000 × 3000); 8 MP (3840 × 2160); 6 MP (3072 × 2048); 5 MP (2560 × 1920); 4 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  10 to 300 seconds  RMS  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 ALAR  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  RMS  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	-10°C to 55°C (14°F to 131°F)	
RELATIVE HUMIDITY	10% to 90%, non-condensing	
STORAGE TEMPERATURE	-20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity	
PHYSICAL		
DIMENSIONS	440 mm × 454 mm × 95 mm (17.3" × 17.9" × 3.7")	
WEIGHT (WITHOUT HDD)	7.0 kg (15.4 lb.)	
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

ONVIF support and open API software integration. Refer to www.onvif.org for the ONVIF specification and the Honeywell Open Technology Alliance website (http://www.security.honeywell.com/hota/) to learn more about our open and integrated solutions.



RECOMMENDED CAMERAS	
RUGGED 4K IR MINIDOME IP CAMERAS	H4D8PR1
4K IR BULLET IP CAMERAS	HBD8PR1
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
INDOOR BOX IP CAMERAS	HCW2G; HCL2G; HCW4G; HCD8G
BULLET IP CAMERAS	HBD3PR2; HBW2PR2; HBW4PR2; HBW2PR1; HBW4PR1; HBL2GR1; HBW2GR1; HBW2GR3; HBW4GR1; HBD8GR1; HBD1PR1; HBD3PR1
BALL/MICRO DOME IP CAMERAS	H2W2PRV3; H2W4PRV3; HEW2PRW1; HEW4PRW3; HEW2PR1; HEW4PR3; HEW2PR2; HEW4PR2; HED1PR3; HED3PR3

## ORDERING

HEN16304	NVR, 16-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 480 fps, 0 TB
HEN16384	NVR, 16-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 480 fps, 8 TB
HEN32304	NVR, 32-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 960 fps, 0 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
HEN64304	NVR, 64-Channel, H.265, 4K 12 MP, 8 SATA, 16 PoE, 1920 fps, 0 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.honeywell.com/security/uk

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