

# Performance Series Focus 4K ENVRs

# 8-/16-/32-Channel 4K ENVRs

HEN08144/HEN16144/HEN16184/HEN321124

Introducing Honeywell's Performance Series Focus 4K Embedded NVRs, our newest affordable, fully featured NVRs offering Ultra HD 4K video resolution. Choose an 8-, 16-, or 32-channel NVR, with multiple hard drive options plus the ability to expand to up to 16 TB of internal storage, for an ideal and flexible solution to fit your surveillance situation.

### 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 H.265/H.264 decoding
- De-warp fisheye camera video in local and web user interface for 360 degree situational awareness

### Dynamic, Accessible Monitoring

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

#### Convenient, Flexible Storage Options

- Internal storage supports 2 HDDs expandable up to 16 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

### FEATURES AND BENEFITS

- H.265/H.264/ MJPEG/MPEG4 codec decoding
- HDMI/VGA simultaneous video output
- UL listed
- Supports up to 4 alarm input channels and 2 alarm relay output channels
- Supports sending notifications through email, FTP, and/or HTTP
- 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 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



#### Easy to Use

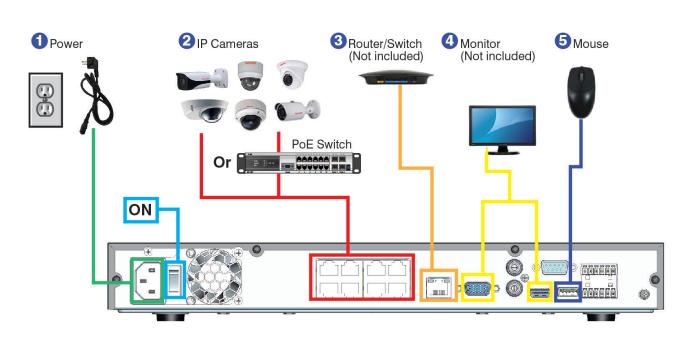
- The Quick wizard and PoE support (for up to 8/16 channels) make setup fast and easy
- Quick physical installation with the help of a simple NVR design and easy-to-understand quick installation guides
- Simple remote configuration and firmware updating through the Honeywell Viewer web client and the Honeywell Config tool

#### **Market Opportunities**

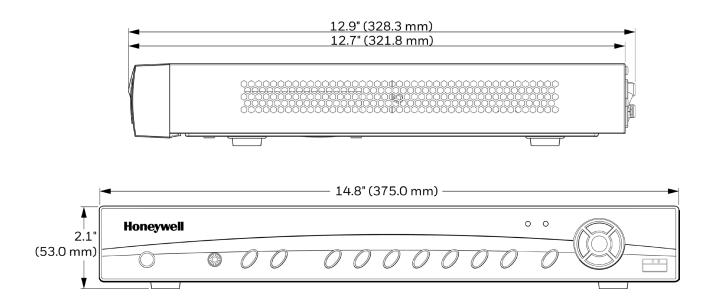
The flexible storage options and high recording and networking performance of the Focus 4K Embedded NVRs make these NVRs perfect for a wide range of security applications.

# 8-/16-/32-Channel 4K ENVRs Technical Specifications

### SYSTEM DIAGRAM



### DIMENSIONS



# 8-/16-/32-Channel 4K ENVRs Technical Specifications

SYSTEM		
MAIN PROCESSOR	Quad-core embedded processor	
OPERATING SYSTEM	Embedded LINUX	
VIDEO		
INPUTS	HEN081*4: 8 Channels IP HEN161*4: 16 Channels IP HEN321*4: 32 Channels IP	
AUDIO		
AUDIO INPUT/OUTPUT	1 Channel Input/1 Channel Output, RCA	
TWO-WAY COMMUNICATION	Supported	
DISPLAY		
INTERFACE	1 HDMI (up to 3840 × 2160); 1 VGA	
RESOLUTION	3840 × 2160; 1920 × 1080; 1280 × 1024; 1280 × 720; 1024 × 768	
DISPLAY SPLIT	HEN081*4: 1/4/8/9 HEN161*4: 1/4/8/9/16 HEN321*4: 1/4/8/9/16/25/36	
OSD	Camera title; Time; Video loss; Camera lock; Motion detection; Recording	
FISHEYE VIDEO DE-WARPING	Supported in local and web user interface	
RECORDING		
COMPRESSION	H.265/H.264/MJPEG/MPEG4	
RESOLUTION	$\begin{array}{c} \textbf{12 MP} (4000 \times 3000); \textbf{8 MP} \\ (3840 \times 2160); \textbf{6 MP} (3072 \times 2048); \textbf{5 MP} (2560 \times 1920); \textbf{4} \\ \textbf{MP} (2560 \times 1440); \textbf{3 MP} (2048 \times 1520); \textbf{1080p} (1920 \times 1080); \\ \textbf{720p} (1280 \times 720); \textbf{D1} (704 \times 576 / 704 \times 480); \textbf{CIF} (352 \times 288 \\ / 352 \times 240) \end{array}$	
RESOLUTION FRAME RATE	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (352 × 288	
	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (352 × 288 / 352 × 240) 1–15 fps (12 MP and 8 MP);	
FRAME RATE	$\begin{array}{l} (3840 \times 2160); \mbox{ 6 MP } (3072 \times 2048); \mbox{ 5 MP } (2560 \times 1920); \mbox{ 4 MP } (2560 \times 1440); \mbox{ 3 MP } (2048 \times 1520); \mbox{ 1080p } (1920 \times 1080); \mbox{ 720p } (1280 \times 720); \mbox{ D1 } (704 \times 576 / 704 \times 480); \mbox{ CIF } (352 \times 288 / 352 \times 240) \\ \mbox{ 1-15 fps } (12 \ \mbox{ MP and 8 MP}); \mbox{ 1-25/30 fps } (rest of the resolutions) \end{array}$	
FRAME RATE RECORD BIT RATE	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (352 × 288 / 352 × 240) 1–15 fps (12 MP and 8 MP); 1–25/30 fps (rest of the resolutions) 320 Mbps	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup>	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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;	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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)	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING INTERVAL POST-EVENT RECORDING	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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 300 seconds 10 to 300 seconds	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING INTERVAL POST-EVENT RECORDING INTERVAL	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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 300 seconds 10 to 300 seconds	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING INTERVAL POST-EVENT RECORDING INTERVAL VIDEO DETECTION AND ALARMS	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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 Recording; PTZ; Tour; Alarm; Video	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING INTERVAL POST-EVENT RECORDING INTERVAL VIDEO DETECTION AND ALARMS TRIGGER EVENTS	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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 Recording; PTZ; Tour; Alarm; Video Push; Email; FTP; Snapshot; Buzzer Motion Detection–MD Zones: 396	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING INTERVAL POST-EVENT RECORDING INTERVAL VIDEO DETECTION AND ALARMS VIDEO DETECTION	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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 <b>S</b> Recording; PTZ; Tour; Alarm; Video Push; Email; FTP; Snapshot; Buzzer Motion Detection—MD Zones: 396 (22 × 18); Video Loss; Camera Blank	
FRAME RATE RECORD BIT RATE BIT RATE <sup>1</sup> RECORDING MODE RECORDING INTERVAL PRE-EVENT RECORDING INTERVAL POST-EVENT RECORDING INTERVAL VIDEO DETECTION AND ALARMAN VIDEO DETECTION ALARM INPUT	(3840 × 2160); <b>6 MP</b> (3072 × 2048); <b>5 MP</b> (2560 × 1920); <b>4</b> <b>MP</b> (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080p</b> (1920 × 1080); <b>720p</b> (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (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 300 seconds 10 to 300 seconds <b>S</b> Recording; PTZ; Tour; Alarm; Video Push; Email; FTP; Snapshot; Buzzer Motion Detection—MD Zones: 396 (22 × 18); Video Loss; Camera Blank 4 Channels	

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PLAYBACK AND BACKUP		
SYNC PLAYBACK	1/4/8/16 (maximum 4-ch @ 8 MP, 8-ch @ 4 MP, or 16-ch @ 1080p simultaneous 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	
NETWORK		
ETHERNET	1 RJ-45 port (10/100/1000 Mbps)	
POE	HEN081*4: 8 ports (802.3af/at) HEN161*4: 16 ports (802.3af/at) HEN321*4: 16 ports (802.3af/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	
AUXILIARY INTERFACE		
USB PORTS	2 (1 rear USB3.0; 1 front USB2.0)	
RS232	1 port (for PC communications and keyboard)	
ELECTRICAL		
POWER SUPPLY	Single, 100~240 VAC, 50/60 Hz	
POWER CONSUMPTION	HEN081*4: 15.2 W max (no HDD) HEN161*4: 14.5 W max (no HDD) HEN321*4: 14.5 W max (no HDD) PoE: 25.5 W for a single port (130 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	14.8" × 12.9" × 2.1" (375 mm × 327 mm × 53 mm)	
WEIGHT (WITHOUT HDD)	6.0 lb. (2.7 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.

# 8-/16-/32-Channel 4K ENVRs

### RECOMMENDED ACCESSORIES

#### SYSTEM INTEGRATION

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

HEN08144	NVR, 8-Channel, H.265, 4K 12 MP, 2 SATA, 8 PoE, 240 fps, 4 TB
HEN16144	NVR, 16-Channel, H.265, 4K 12 MP, 2 SATA, 16 PoE, 480 fps, 4 TB
HEN16184	NVR, 16-Channel, H.265, 4K 12 MP, 2 SATA, 16 PoE, 480 fps, 8 TB
HEN321124	NVR, 32-Channel, H.265, 4K 12 MP, 2 SATA, 16 PoE, 960 fps, 12 TB

For more information

www.honeywell.com/security

#### **Honeywell Security and Fire**

2700 Blankenbaker Pkwy, Suite 150 Louisville, KY 40299 1.800.323.4576 www.honeywell.com Honeywell reserves the right, without notification, to make changes in product design or specifications.

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