

# Focus 4K Embedded NVRs

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

HEN08104/HEN16104/HEN32104

Introducing Honeywell's 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

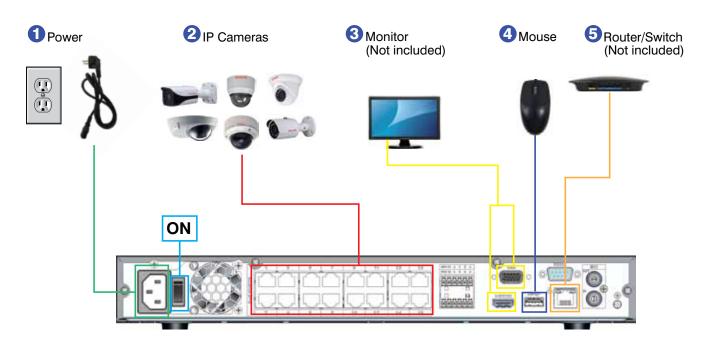
- The Quick wizard and PoE support (for up to 8/16 channels) make setup fast and easy
- Quick physical installation with the help of a simple NVR design and easy-to-understand quick installation guides
- Simple remote configuration and firmware updating through the Honeywell Viewer web client and the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

### **Market Opportunities**

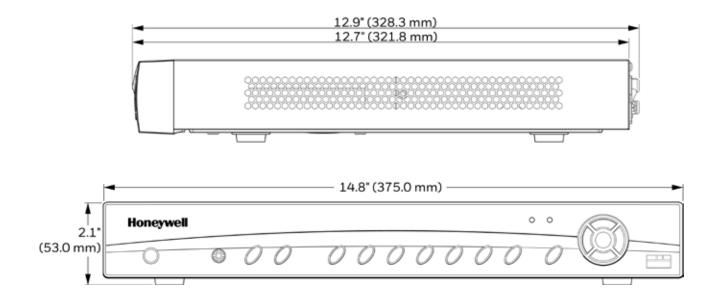
The flexible storage options and high recording and networking performance of the Focus 4K Embedded NVRs make these NVRs perfect for a wide range of security applications.

# 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	HEN08104: 8 Channels IP HEN16104: 16 Channels IP HEN32104: 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	HEN08104: 1/4/8/9 HEN16104: 1/4/8/9/16 HEN32104: 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
	<b>12 MP</b> (4000 × 3000); <b>8 MP</b>
RESOLUTION	(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)
RESOLUTION FRAME RATE	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
	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	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)
FRAME RATE RECORD BIT RATE	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>	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	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	2048); <b>5</b> MP ( $2560 \times 1920$ ); <b>4</b> MP ( $2560 \times 1440$ ); <b>3</b> MP ( $2048 \times 1520$ ); <b>1080</b> p ( $1920 \times 1080$ ); <b>720</b> p ( $1280 \times 720$ ); <b>D1</b> ( $704 \times 576 / 704 \times 480$ ); <b>CIF</b> ( $352 \times 288 / 352 \times 240$ ) 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	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	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	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	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	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 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	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 <b>1</b> to 120 minutes (Jefault 60 min) <b>1</b> to 300 seconds <b>1</b> to 300 seconds <b>1</b> to 120 minutes (Jefault 60 min) <b>1</b> to 300 seconds <b>1</b> to 120 minutes (Jefault 60 min) <b>1</b> to 300 seconds

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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	HEN08104: 8 ports (802.3af/at) HEN16104: 16 ports (802.3af/at) HEN32104: 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	HEN08104: 15.2 W max (no HDD) HEN16104: 14.5 W max (no HDD) HEN32104: 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) REGULATORY	6.0 lb. (2.7 kg)
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

- 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

#### SYSTEM INTEGRATIO

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.



### ORDERING

HEN08104	NVR, 8-Channel, H.265, 4K 12 MP, 2 SATA, 8 PoE, No HDD
HEN16104	NVR, 16-Channel, H.265, 4K 12 MP, 2 SATA, 16 PoE, No HDD
HEN32104	NVR, 32-Channel, H.265, 4K 12 MP, 2 SATA, 16 PoE, No HDD

#### For more information

www.honeywell.com/security

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

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