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PROJEKTUES:

BOE "ARABEL - STUDIO" Sh.p.k & "NET GROUP" Sh.p.k

2022



# Surveillance HDD

Data Sheet

#### The New Generation SV Drive

- The industry's first surveillance-optimized hard drive precision-tuned for high write surveillance workloads operating 24x7
- Capacities up to 8TB support 64 cameras per drive and 8+1 drives per system
- Engineered for workloads of 180TB/year, three times that of desktop drives
- Low power consumption and startup current to minimize heat and vibration emission, improving long-term drive reliability
- Tarnish-resistant components to help protect drive from environmental elements, increasing field reliability
- Customize power settings for incremental savings during system downtime without compromising time to record
- Reliable performance in multi-drive systems with support from RV sensors
- Optional 3-year +Rescue Data Recovery Service plan to help protect against data loss from viruses, software issues or mechanical and electrical breakdowns

# **Best-Fit Applications**

- NVR
- Embedded SDVR
- Hybrid SDVR
- Surveillance DVR

1 Drives with Rotational Vibration sensors can be used in systems with 8+ drive bays. Drives without Rotational Vibration are ideal for systems with 8 or fewer drives.





# Surveillance HDD



Chasifications			Cunrai	llance LIDD			
Specifications	OTD	CTD	i	llance HDD	OTD	OTD	1TD
Capacity	8TB	6TB	5TB	4TB	3TB	2TB	1TB
Standard Model Numbers	ST8000VX0002	ST6000VX0001	ST5000VX0001	ST4000VX000	ST3000VX006	ST2000VX003	ST1000VX001
+Rescue Model Numbers	ST8000VX0012	ST6000VX0011	ST5000VX0011	ST4000VX002	ST3000VX005	ST2000VX005	ST1000VX003
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s
Cache	256MB	128MB	128MB	64MB	64MB	64MB	64MB
Bytes per Sector	4096	4096	4096	4096	4096	4096	4096
Performance							
R/V (Rotational Vibration) Sensor	Yes	Yes	Yes	Yes	No	No	No
Drive bays supported	8+	8+	8+	8+	1 to 8	1 to 8	1 to 8
Cameras Supported	Up to 64	Up to 64	Up to 64	Up to 64	Up to 64	Up to 64	Up to 64
Max Sustainable Transfer Rate	230MB/s	180MB/s	180MB/s	180MB/s	180MB/s	180MB/s	180MB/s
+Rescue Data Recovery Servi	ice						
3-Year Option With +Rescue Model	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voltage							
Voltage Tolerance, Inc. Noise (5V)	±5%	±5%	±5%	±5%	±5%	±5%	±5%
Voltage Tolerance, Inc.	±10%	±10%	±10%	±10%	±10%	±10%	±10%
Noise (12V) Power Management							
Startup Power (12V, A)	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Average Operating Power	9.0W	9.0W	9.0W	5.6W	5.6W	5.6W	5.6W
Idle Average	7.6W	7.2W	7.2W	4.0W	4.0W	4.0W	4.0W
Standby Mode	0.6W	0.6W	0.6W	0.5W	0.5W	0.5W	0.5W
Sleep Mode	0.6W	0.6W	0.6W	0.5W	0.5W	0.5W	0.5W
Environmental/Temperature							
Operating (ambient, min)	5°C	5°C	5°C	0°C	0°C	0°C	0°C
Operating (drive case, max)	60°C	60°C	60°C	70°C	70°C	70°C	70°C
Nonoperating (ambient, min)	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C	-40°C
Nonoperating (ambient, max)	70°C	70°C	70°C	70°C	70°C	70°C	70°C
Reliability	70 0	700	70 0	700	70 0	700	70 0
	Yes	Yes	Yes	Yes	No	No	No
Tarnish Resistant	300,000	300,000	300,000	300,000	300,000	300,000	300,000
Load/Unload Cycles  Nonrecoverable Read Errors	300,000	300,000	300,000	300,000	300,000	300,000	300,000
per Bits Read, Max	1 per 10E15	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14	1 per 10E14
Mean Time Between Failures	1,000,000hr	1,000,000hr	1,000,000hr	1,000,000hr	1,000,000hr	1,000,000hr	1,000,000hr
Power-On Hours	8760	8760	8760	8760	8760	8760	8760
Warranty, Limited (years)	3	3	3	3	3	3	3
Physical							
Height	26.11mm	26.11mm	26.11mm	26.11mm	26.11mm	26.11mm	19.99mm
Height	1.028in	1.028in	1.028in	1.028in	1.028in	1.028in	0.787in
Width	101.85mm	101.85mm	101.85mm	101.6mm	101.6mm	101.6mm	101.60mm
Width	4.010in	4.010in	4.010in	4.0in	4.0in	4.0in	4.0in
Depth	147.00mm	147.00mm	147.00mm	146.99mm	146.99mm	146.99mm	146.99mm
Depth	5.878in	5.878in	5.878in	5.787in	5.787in	5.787in	5.787in
Typical Weight	780g	780g	780g	610g	610g	610g	400g
Typical Weight	1.72lb	1.72lb	1.72lb	1.345lb	1.345lb	1.345lb	0.88lb
Carton Unit Quantity	20	20	20	20	20	20	25
Cartons per Pallet	40	40	40	40	40	40	40
Cartons per Layer	8	8	8	8	8	8	8

Specifications		SV35 Series <sup>™</sup>		
Capacity	3ТВ	2TB	1TB	
Standard Model Numbers	ST3000VX000	ST2000VX000	ST1000VX000	
+Rescue Model Numbers	ST3000VX004	ST2000VX004	ST1000VX002	
Interface	SATA 6Gb/s	SATA 6Gb/s	SATA 6Gb/s	
Cache	64MB	64MB	64MB	
Bytes per Sector	4096	4096	4096	
Performance				
R/V (Rotational Vibration) Sensor	No	No	No	
Drive bays supported	1 to 8	1 to 8	1 to 8	
Cameras Supported	Up to 32	Up to 32	Up to 32	
Max Sustainable Transfer Rate	210MB/s	210MB/s	210MB/s	
+Rescue Data Recovery Service				
3-Year Option With +Rescue Model	Yes	Yes	Yes	
Voltage				
Voltage Tolerance, Inc. Noise (5V)	±5%	±5%	±5%	
Voltage Tolerance, Inc. Noise (12V)	+10%/-7.5%	+10%/-7.5%	+10%/-7.5%	
Power Management				
Startup Power (12V, A)	2.0	2.0	2.0	
Average Operating Power	8.0W	8.0W	5.90W	
Idle Average	5.4W	5.4W	3.36W	
Standby Mode	0.75W	0.75W	0.63W	
Sleep Mode	0.75W	0.75W	0.63W	
Environmental/Temperature				
Operating (ambient, min)	0°C	0°C	0°C	
Operating (drive case, max)	70°C	70°C	70°C	
Nonoperating (ambient, min)	-40°C	-40°C	−40°C	
Nonoperating (ambient, max)	70°C	70°C	70°C	
Reliability				
Tarnish Resistant <sup>1</sup>	<u> </u>	_	<u> </u>	
Load/Unload Cycles	300,000	300,000	300,000	
Nonrecoverable Read Errors per Bits Read, Max	1 per 10E14	1 per 10E14	1 per 10E14	
Mean Time Between Failures	1,000,000hr	1,000,000hr	1,000,000hr	
Power-On Hours	8760	8760	8760	
Warranty, Limited (years)	3	3	3	
Physical				
Height	26.11mm	26.11mm	19.99mm	
Height	1.028in	1.028in	0.787in	
Width	101.6mm	101.6mm	101.6mm	
Width	4.0in	4.0in	4.0in	
Depth	146.99mm	146.99mm	146.99mm	
Depth	5.787in	5.787in	5.787in	
Typical Weight	626g	626g	400g	
Typical Weight	1.38lb	1.38lb	0.88lb	
Carton Unit Quantity	20	20	25	
Cartons per Pallet	40	40	40	
Cartons per Layer	8	8	8	

<sup>1</sup> Product will ship with tarnish-resistant components in early 2016.

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# **HBW4PER2**

# Network WDR 4 MP IR Bullet Camera



OPERATIONAL	
VIDEO STANDARD	NTSC/PAL
SCANNING SYSTEM	Progressive scan
IMAGE SENSOR	1/3" 4 MP CMOS
NUMBER OF PIXELS (H × V)	2688×1520
MINIMUM ILLUMINATION	0.03 lux color @ F1.4(Color, 1/3s, 30 IRE) 0 lux B/W with IR LEDs on @ F1.4
S/N RATIO	> 45 dB
ELECTRONIC SHUTTER SPEED	1/3(4) – 1/100,000 s
IR DISTANCE	Up to 164 ft (50 m), depending on scene reflectance
SMART IR	Auto/Manual
DAY/NIGHT	Auto (ICR)/Color/BW
BACKLIGHT COMPENSATION	BLC/HLC/WDR
WHITE BALANCE	Auto/Natural/Street Lamp/Outdoor/Manual/ Customized Region
GAIN CONTROL	0~100
WIDE DYNAMIC RANGE	120 dB
NOISE REDUCTION	3D DNR
PRIVACY MASKING	Up to 4 configurable zones
MOTION DETECTION	Up to 4 configurable zones
REGION OF INTEREST	Up to 4 configurable zones
DIGITAL ZOOM	16x
LENS	2.7 – 13.5 mm, MFZ, F1.4
ANGLE OF VIEW	104° – 28° (H), 55° – 16° (V)
VIDEO	
VIDEO COMPRESSION	H.265/H.264H/Smart Codec/MJPEG (Sub Stream)
RESOLUTION	4 MP (2688×1520), QHD (2560×1440), 3 MP (2304×1296), 1080p (1920×1080), SXGA (1280×1024), 1.3 MP (1280×960), 720p (1280×720), D1 (704×480/576), VGA (640×480), CIF (352×240/288)
FRAME RATE	4 MP at 1 - 20fps, 3 MP at 1 - 25/30fps D1/CIF at 1 - 25/30fps
BIT RATE CONTROL	CBR/VBR
BIT RATE	H.265: 12K – 8448 Kbps H.264: 32K – 10240 Kbps
NETWORK	
ETHERNET	RJ-45 (10/100BASE-T)
SUPPORTED WEB BROWSERS	Internet Explorer (11.0+)
SUPPORTED OS	Windows® 7 32-bit/64-bit; Windows® 10 32-bit/64-bit

NETWORK (CONT'D)	
PROTOCOLS*	HTTP; HTTPs; TCP; ARP; RTSP; RTP; RTCP; UDP; SMTP; DHCP; DNS; PPPoE; IPv4/v6; QoS; UPnP; NTP; Bonjour; IEEE 802.1x; Multicast; ICMP; IGMP; TLS
INTEROPERABILITY	ONVIF Profile S/G/Q
MAXIMUM USER ACCESS	20 users
SECURITY	User account and password protection HTTPS, IP Filter, Digest authentication, User access log, TLS1.2 only, AES-128/256, SSH/Telnet closed, sFTP by default, PCIDSS compliance
EVENT	No SD card, SD card error, SD card capacity warning, network disconnection, IP address conflict, illegal access, video tampering, motion detection
EVENT NOTIFICATION	Record (SD card, NAS, and FTP), email, snapshot
MICRO SD	Up to 128 GB microSDHC card, Class 10 (not included)
ELECTRICAL	
POWER SUPPLY	PoE (802.3af) Class 0, 12 VDC
POWER CONSUMPTION	11.74 W max. (IR LEDs on)
MECHANICAL	
DIMENSIONS	8.46" × 3.56" (214.8 mm × 90.4 mm)
PRODUCT WEIGHT	1.51 lb (0.685 kg)
PACKAGE WEIGHT	1.90 lb (0.86 kg)
CONSTRUCTION	Die-cast aluminum housing with powder coat
CONSTRUCTION COLOR	RAL 9003 (White)
ENVIRONMENTAL	
OPERATING TEMPERATURE	-22°F to 140°F (-30°C to 60°C)
STORAGE TEMPERATURE	-22°F to 140°F (-30°C to 60°C)
RELATIVE HUMIDITY	Less than 95%, non-condensing
INGRESS PROTECTION	IP66
REGULATORY	
EMISSIONS	FCC Part 15B, EN 55032
IMMUNITY	EN 50130-4
SAFETY	EU: EN 60950-1 North America UL listed to UL/CSA 60950-1
ROHS	EN 50581

<sup>\*</sup> Some development may be required in specific user cases to support some of these protocols in the field as they mature over time.

# **Network WDR 4 MP IR Bullet Camera**

# RECOMMENDED ACCESSORIES

SYSTEM COMPATIBILITY	
HEN*4	8/16/32/64-channel Performance Series 4K NVRs (H.264 and H.265)
HEN*2	4/8/16-channel Performance Series NVRs (H.264)

MOUNTS AND ACCESSORIES		
HQA-PM2**		Pole Mount Bracket
HB34S2-CM**		Corner Mount Bracket
HBS2-BB		Junction Box

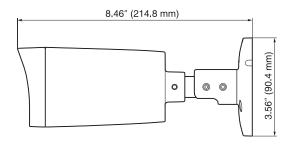
\*\* The HBS2-BB junction box must be used when installing the camera to HQA-PM2 or HB34S2-CM.

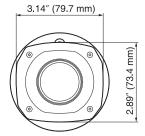
# ORDERING

HBW4PER2

 $Network\ WDR\ 4\ MP\ IR\ Bullet\ Camera,\ 1/3\ "CMOS,\ 2.7-13.5\ mm\ MFZ,\ 4\ IR\ LEDs,\ PoE,\ IP66,\ H.\ 265/H.\ 264/Smart\ Codec$ 

# DIMENSIONS





## Find out more

www.security.honeywell.com/

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

# HEN16204/HEN32204/HEN64204

Introducing Honeywell's Focus 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 32 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 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® 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

## Convenient, Flexible Storage Options

- Internal storage supports 4 HDDs expandable up to 32 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

## 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**

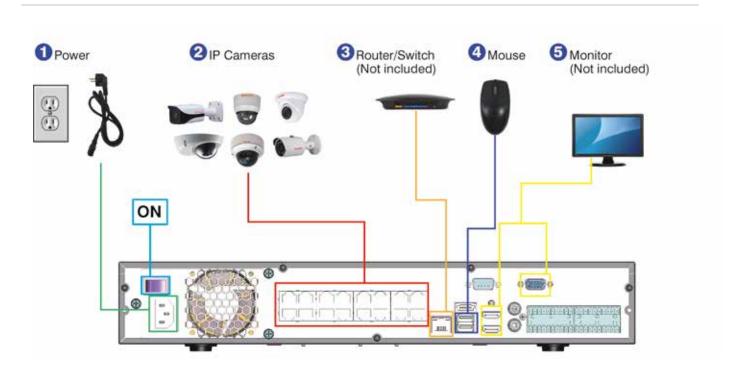
The flexible storage options and high recording and networking performance of the Focus 4K Embedded NVRs make these NVRs perfect for a wide range of security applications.

## FEATURES AND BENEFITS

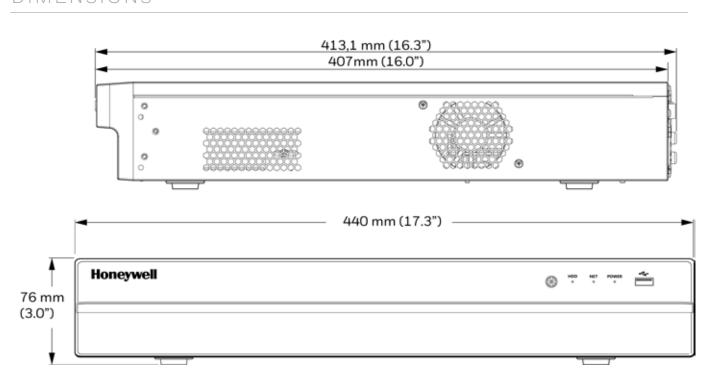
- H.265/H.264/ MJPEG/MPEG4 codec decoding
- 2 HDMI/VGA simultaneous video outputs
- UL listed
- Supports up to 16 alarm input channels and 6 alarm relay output channels
- Supports sending notifications through email, FTP, and/or HTTP
- Supports recording a video clip of events for distribution
- Supports uploading still images at the time of the event through email and/or
- 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

# 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	HEN162*4: 16 Channels IP HEN322*4: 32 Channels IP HEN642*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	HEN162*4: 1/4/8/9/16 HEN322*4: 1/4/8/9/16/25/36 HEN642*4: 1/4/8/9/16/25/36/64	
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> (3840 × 2160); <b>6 MP</b> (3072 ×	
RESOLUTION	$\begin{array}{l} 2048); \textbf{5 MP} (2560 \times 1920); \textbf{4} \\ \textbf{MP} (2560 \times 1440); \textbf{3 MP} (2048 \times 1520); \textbf{1080p} (1920 \times 1080); \\ \textbf{720p} (1280 \times 720); \textbf{D1} (704 \times 576 / 704 \times 480); \textbf{CIF} (352 \times 288 / 352 \times 240) \end{array}$	
RESOLUTION FRAME RATE	MP (2560 × 1440); <b>3</b> MP (2048 × 1520); <b>1080</b> p (1920 × 1080); <b>720</b> p (1280 × 720); <b>D1</b> (704 × 576 / 704 × 480); <b>CIF</b> (352 ×	
	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	
FRAME RATE	MP (2560 × 1440); <b>3 MP</b> (2048 × 1520); <b>1080</b> p (1920 × 1080); <b>720</b> p (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	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	
FRAME RATE  RECORD BIT RATE  BIT RATE <sup>1</sup>	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);	
FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE	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	
FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING	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)	
FRAME RATE  RECORD BIT RATE BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING	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	
FRAME RATE  RECORD BIT RATE BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING INTERVAL	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	
FRAME RATE  RECORD BIT RATE  BIT RATE¹  RECORDING MODE  RECORDING INTERVAL  PRE-EVENT RECORDING INTERVAL  POST-EVENT RECORDING INTERVAL  VIDEO DETECTION AND ALARMS	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;	
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	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 (22 × 18); Video Loss;	

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	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	4 SATA ports, up to 32 TB
EXTERNAL HDD	1 eSATA port
AUXILIARY INTERFACE	
USB PORTS	3 (2 rear USB3.0; 1 front USB2.0)
RS232	1 port (for PC communications
	and keyboard)
ELECTRICAL	,
ELECTRICAL POWER SUPPLY	Single, 100~240 VAC, 50/60 Hz
	,
POWER SUPPLY	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port
POWER SUPPLY POWER CONSUMPTION	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F)
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F),
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F),
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE  PHYSICAL	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE  PHYSICAL  DIMENSIONS  WEIGHT (WITHOUT HDD)	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity  440 mm × 413 mm × 75 mm (17.3" × 16.3" × 3.0")
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE  PHYSICAL  DIMENSIONS  WEIGHT (WITHOUT HDD)	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD)  PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity  440 mm × 413 mm × 75 mm (17.3" × 16.3" × 3.0") 4.65 kg (10.3 lb)
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE  PHYSICAL  DIMENSIONS  WEIGHT (WITHOUT HDD)  REGULATORY	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD) PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity  440 mm × 413 mm × 75 mm (17.3" × 16.3" × 3.0") 4.65 kg (10.3 lb)  FCC Part 15B, EN55032: 2012 +AC: 2013, EN61000-3-2:
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE  PHYSICAL  DIMENSIONS  WEIGHT (WITHOUT HDD)  REGULATORY  EMISSIONS	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD) PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity  440 mm × 413 mm × 75 mm (17.3" × 16.3" × 3.0") 4.65 kg (10.3 lb)  FCC Part 15B, EN55032: 2012 +AC: 2013, EN61000-3-2: 2014, EN61000-3-3: 2013 EN50130-4: 2011+A1: 2014,
POWER SUPPLY  POWER CONSUMPTION  ENVIRONMENTAL  OPERATING TEMPERATURE  RELATIVE HUMIDITY  STORAGE TEMPERATURE  PHYSICAL  DIMENSIONS  WEIGHT (WITHOUT HDD)  REGULATORY  EMISSIONS  IMMUNITY	Single, 100~240 VAC, 50/60 Hz  NVRs: 17.5 W max (without HDD) PoE: 25.5 W for a single port (150 W total)  -10°C to 55°C (14°F to 131°F) 10% to 90%, non-condensing -20°C to 70°C (-4°F to 158°F), 0% to 90% relative humidity  440 mm × 413 mm × 75 mm (17.3" × 16.3" × 3.0") 4.65 kg (10.3 lb)  FCC Part 15B, EN55032: 2012 +AC: 2013, EN61000-3-2: 2014, EN61000-3-3: 2013 EN50130-4: 2011+A1: 2014, EN55024: 2010+A1: 2015  EU: EN60950-1 North America UL listed to UL/

- \* 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.



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

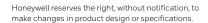
HEN16204	NVR, 16-Channel, H.265, 4K 12 MP, 4 SATA, 16 PoE, 480 fps, 0 TB
HEN32204	NVR, 32-Channel, H.265, 4K 12 MP, 4 SATA, 16 PoE, 960 fps, 0 TB
HEN64204	NVR, 64-Channel, H.265, 4K 12 MP, 4 SATA, 16 PoE, 1920 fps, 0 TB

## For more information

www.honeywell.com/security/me

## **Honeywell International Middle East**

EMAAR Business Park, bldg.2, Level 2, Office 201, PO Box 232362, Sheikh Zayed Road, Dubai, U.A.E. Telephone: +971 4 4505800 www.honeywell.com







# DH-PFS3009-8ET-96

9-Port Unmanaged Desktop Switch with 8 Port PoE



#### **System Overview**

DH-PFS3009-8ET-96 is an unmanaged Desktop Switch with 8  $\times$  10/100Mbps PoE Ports. It provides 8  $\times$  10/100 Mbps Ethernet ports and 1  $\times$  10/100 Mbps uplink ports. The product is equipped with two types of transmission modes (Extend Mode On/Extend Mode Off). The red port supports the IEEE802.3bt and the Hi-PoE standards. The maximum power consumpton is 90W. It also supports PoE watchdog to avoid manually maintenance and device restart, which can realize the intelligent management and reduce the cost.

#### **Functions**

#### **Intelligent PoE**

Provides power consumption control and real-time monitoring to guarantee priority of power supply for important ports and prevent malfunctioning caused by power consumption change. Supports ultra wide power supply, able to adapt to IPC power fluctuation.

#### **Red Port 90W**

The red ports support IEEE802.3af, IEEE802.3at, IEEE802.3bt and Hi-PoE standards, with a maximum output power consumption of 90W per port. Suitable for powering high-power devices.

#### **PoE Watchdog**

Adopts the innovative PoE Watchdog. PoE Watchdog can be switched on by dialing/turning on the WEB page switch. It enables the switch to automatically detect port status and restart the failed ports to recover connection in case of IPC connection exception. This enables intelligent operation and maintenance management in its true sense and effectively reduces manual maintenance costs.

- \*The parameters and datasheets below can only be applied to V2.0(version 2.0)
- Intelligent PoE.
- Red port supports 90W IEEE802.3bt.
- · 8-pin assignment PoE power supply.
- 250 m long distance PoE transmission.
- · PoE watchdog.
- · Wide working temperature.













#### **Long Distance PoE**

By dialing or enabling long-range transmission on the WEB interface, the transmission distance of a PoE port can be up to 250 m, meeting the requirement of wired transmission (bandwidth reduced to 10 Mbps).

#### **Eight-pin PoE**

Supports 8-pin simultaneous power supply (1/2/4/5 positive, 3/6/7/8 negative). Signal lines and idle lines supply power at the same time. Compatibility with IPC is enhanced. Cable loss is reduced. Loading capacity is increased.

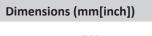
#### Scene

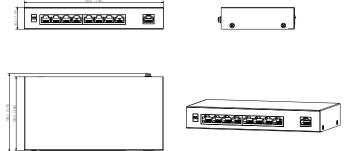
The device is applicable for use in different scenarios, including home, office, server farm, and small mall.

Technical Specification	
Hardware	
Included Power Adapter	Yes
PoE	Yes
Ethernet Port	8
Optical Port	0
Ethernet Port Speed	10/100 Mbps
Ethernet Port Uplink Speed	10/100 Mbps
Description of Function Slots	Port 1–8: 8 × RJ-45 10/100 Mbps (PoE) Port 9: 1 × RJ-45 10/100 Mbps (Uplink)
Power Supply	External power supply: 48–57 VDC, 2–1.68 A
Operaing Temperature	-10 °C to +55 °C (+14°F to +131°F)
Operatng Humidity	5% – 95% (RH)
Power Consumpton	Idling: 1.5 W Full load: 96 W
Performance	
Layer	Layer 2
Management Type	No
Smart Managed Switch	No
Switching Capacity	1.8 Gbps
Packet Forwarding Rate	1.34 Mpps
Packet Buffer Size	768 kbit
MAC Table Size	2K
Communication Standard	IEEE 802.3; IEEE 802.3u; IEEE 802.3x
Feature	
PoE Protocol	IEEE802.3af; IEEE802.3at; Hi-PoE; IEEE802.3bt
PoE Power	96 W
Power Consumption Management	Yes
PoE Pin Assignment	1, 2, 4, 5 (V+), 3, 6, 7, 8 (V-)
еРоЕ	No
Long Distance PoE Transmission	Yes
PoE Watchdog	Yes
General	
Statics Protection	Air discharge: 8 kV Contact discharge: 6 kV
Lighting Protection	Common mode: 4 kV Differental mode: 2 kV
Net Weight	0.49 kg (1.08 lb)

Gross Weight	1.3 kg (2.87 lb)
Product Dimensions	190 mm × 100 mm × 30 mm (7.48" × 3.94" × 1.18") (L × W × H)
Packaging Dimensions	267 mm × 239 mm × 77 mm (10.51" × 9.41" × 3.03") (L × W × H)
Casing Material	Iron
Installation	Desktop mount; wall mount
Certifications	CE; FCC

	supply voltage 53V. Max. DC resistance $< 10\Omega/100$ m	
Cable(m)	Load Capacity(W)	Bandwidth(Mbps)
IEEE802.3b	t 90W	
100	71.3	100
150	62	10
200	51	10
250	40	10
Hi-PoE 60V	V	
100	53	100
150	50	10
200	47	10
250	37	10
IEEE802.3	at 30W	
100	25.5	100
150	25.5	10
200	25.5	10
250	25.5	10





# Desktop PoE Switch | DH-PFS3009-8ET

## **Panels**





# DH-PFS3218-16ET-135



- Intelligent PoE
- PD Alive(PoE Watchdog)
- · Long Distance PoE Transmission
- Smooth Transmission
- Wide Working Temperature: -10 to 55°C (14°F to 131°F)
- · Port Isolation













#### **System Overview**

DH-PFS3218-16ET-135 is a 100 Mbps dual-port uplink unmanaged PoE switch. It supports functional DIP switch which provides port isolation, long distance power supply, PoE watchdog and QoS control. Featured with Gigabit uplink optical ports, it meets the need of long distance transmission.

#### Scene

Applicable to small and micro-scale monitoring networks such as office desktops, schools, hotels, supermarkets, hospitals.

### **Technical Specification**

#### Performance

Layer	Layer 2
Managed	No
Switching Capacity	7.2 Gbps
Packet Forwarding Rate	5.3568 Mpps
Packet Buffer Memory	4 Mbit
MAC Table Size	8K
Standards Compliance	IEEE802.3, IEEE802.3u, IEEE802.3x, IEEE802.3ab, IEEE802.3z

#### Hardware Feature

Standard Power Supply	Yes
PoE	Yes
Ethernet Port	16
Optical Port	2
Ethernet Port Rate	100 Mbps

Optical Port Rate	1 Gbps
Number of Bussiness Card Slots	"Port 1–16: 16 × RJ45 10/100 Mbps Port 17–18: 2 × RJ45 10/100/1000 Mbps (uplink) Port 17–18: 2 × SFP 1000 Mbps (uplink) (combo)"
Power Supply	100V AC-240V AC
Operating Temperature	−10°C to 55°C (14°F to 131°F)
Operating Humidity	10%-90%
Storage Humidity	5%–95%
Power Consumption	"Idling: 5W Full load: 135W"

#### PoE

PoE Standard	IEEE802.3af, IEEE802.3at, Hi-PoE
PoE Budget	Port 1–2≤60W, Port 3–16≤30W, total≤135W
PoE Pin Assignment	PoE/Hi-PoE: 1, 2, 4, 5 (V+), 3, 6, 7, 8 (V-)
Long Distance PoE Transmission	Yes

#### Function

VLAN	Port Isolation
QoS	Yes
System Maintenance	PD Alive

#### General

ESD	Air discharge: 8kV Contact discharge: 6kV
Thunderproof	Common mode: 4kV Differential mode: 2kV
Dimensions	440 mm × 300 mm × 44 mm (17.32" × 11.81" × 1.73")
Packaging Dimensions	527 mm × 412 mm × 110 mm (20.75" × 16.22" × 4.33")

Rev 001.001

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