Fusion IV DVR Series

BRIDGING THE GAP BETWEEN ANALOGUE AND IP

The Fusion IV hybrid DVR Series sets a new standard for recording. Expanding beyond the analogue DVR role, Fusion IV bridges the gap between DVRs and NVRs; it is a full featured hybrid digital recording system. The system is designed to record, search and transmit up to 32 channels of analogue or IP video sources, up to 16 channels of audio and POS/ATM text data.

Benefits of the system include significantly expanded support for digital video sources; including IP cameras, network encoders and megapixel cameras. Fusion IV offers up to 32 channels of hybrid (analogue and/or IP) camera support. H.264 implementation provides superior video quality with small file sizes for improved performance across a network. Furthermore, H.264 is now a standard compression option for all cameras recorded on the DVR.

The Fusion IV hardware enhancements ensure efficient multi-tasking of simultaneous operations including network cameras, megapixel cameras, point-of-sale, video analytics and more. Dual video ports have also been added. Relying on the Windows® XP embedded operating system, the Fusion IV provides network security and firewall protection, while eliminating the need to format DVDs before back up. The front panel provides easy access to the standard DVD-RW drive, dual USB 2.0 ports and the four field-replaceable hard drives.

Market Opportunities

Global market adoption of IP and megapixel camera technologies drive the need for new surveillance capabilities offered by the Fusion IV DVR. Supporting both analogue and IP cameras, Fusion IV is ideal for systems requiring transition to IP to maximise the cost-savings benefits associated with IP networking. Additional benefits are realised for systems adding new capabilities such as unparalleled image clarity using megapixel cameras. Applications include educational, municipal and corporate campus environments, large retail with IDM (Integrated Data Manager) point-of-sale integration, and hotels or resorts. When the need is for a hybrid digital recording solution, the solution is the Fusion IV DVR.

Features

Hardware

- Analogue and IP recording up to 32 channels
- Global recording rates for 100 to 400 at CIF resolution PAL
- Recording resolutions up to 720 × 576 (D1)
- VGA and DVI-D ports for local live viewing
- Available with 8, 16 and 32 looping video inputs
- Internal storage capacity from 500 GB to 8 TB
- External storage options from 1 TB to 48 TB
- 16 sensor inputs and 16 control outputs
- Optional multiplexed or switched spot outputs
- 16 channels of audio standard on select models
- 10/100/1000 gigabit network standard
- Keyboard control of camera selection and PTZ control
- Windows® XP embedded operating system

Software

- Hybrid operation for analogue/IP camera mix based on DVR model - 8/16/32 channel video input
- User software included with each DVR:
  Fusion Server Software - Local user interface
  HFRVS Remote Software - Connect to a single DVR
  HFVMS Remote Management Software - Connect to multiple DVRs
- Dynamic DNS support
- Microsoft® Active Directory integration
- Smart Motion, Preview and Index Searches
- Integrated camera discovery protocol
- Integrated POS/ATM/access control with Pro-Watch®, WIN-PAK® and IDM
- Powerful API available for third party software integration
- Analytics support, up to 4 video channels

Fusion IV DVR Series

FEATURES

– **Server Unit**: 8, 16 or 32 channel models with global recording rates of between 100 - 400 (PAL) and the powerful Fusion Server Software

– **HFRVS, Fusion Remote View Software**: allows remote connections to a single Fusion DVR

– **HFVMS, Fusion Video Management Software**: allows remote operation, configuration and management of multiple Fusion DVRs

The powerful combination of Fusion Server, the feature rich HFRVS and HFVMS user software suites creates a hybrid digital recording solution that differentiates the Fusion IV DVR series from the competition.

Fusion Server Software
(included with every DVR)

- Complete local configuration and administration.

- High resolution rates - Fusion is able to record up to 720 × 480 and has an image capture rate of up to 400 ips.

- Instant access to information through advanced index searching capabilities and motion-based object search functionalities.

- The Preview Search function gives users a quick overview of a 24-hour period. The search can be narrowed down from ten-minute increments to one-minute increments.

- The Fusion Server Software gives users the option of POS integration.

- Remote notification of alarm events and health check.

- Multiple types of searching capabilities including Preview Search, Smart Motion Search and Index Search.

- Supports five simultaneous connections via HFVMS and HFRVS.

HFRVS Remote View Software
(included with every DVR)

- Looks and functions in the same manner as the Fusion Server Software.

- Remotely connect to a single Fusion DVR.

- Live audio.

- Remotely search and export video from the Fusion DVR.

- Control PTZ cameras connected to the Fusion DVR.

- Microsoft Windows XP© and Vista© compatible.

- Remotely set up cameras, schedules, sensors, audio, and network functions video the HFRVS Remote Software.

HFVMS Video Management Software
(single workstation license included with every DVR - can also be ordered separately.)

- Complete local configuration and administration.

- Remotely monitor video, audio and alarms.

- Access and export recorded video.

- Create infinite customised user accounts.

- Create remote back-up schedules.

- Create custom live camera views.

- Configure Fusion DVRs remotely.

- Perform remote DVR software upgrades.

- Connect to multiple Fusion DVRs all at one time.

- Microsoft Windows XP and Vista compatible.

- Maps feature allows importing of .dxf, .jpg, .wmf and other formats.

- Control cameras with advanced PTZ features.

- Point-of-sale search capabilities.

- Live audio.

HFRVS and HFVMS Software
(Workstation Requirements)

Minimum:

- Intel Core 2 Duo 2.8 GHz (or equivalent)
- 1 GB system memory
- DirectX 9 or higher
- 256 MB+ Nvidia or ATI video card
- 256k network connection
- TCP/IP installed
- Microsoft Windows XP® or Vista
- 1280 x 1024 optimal display resolution
- 32-bit colour depth
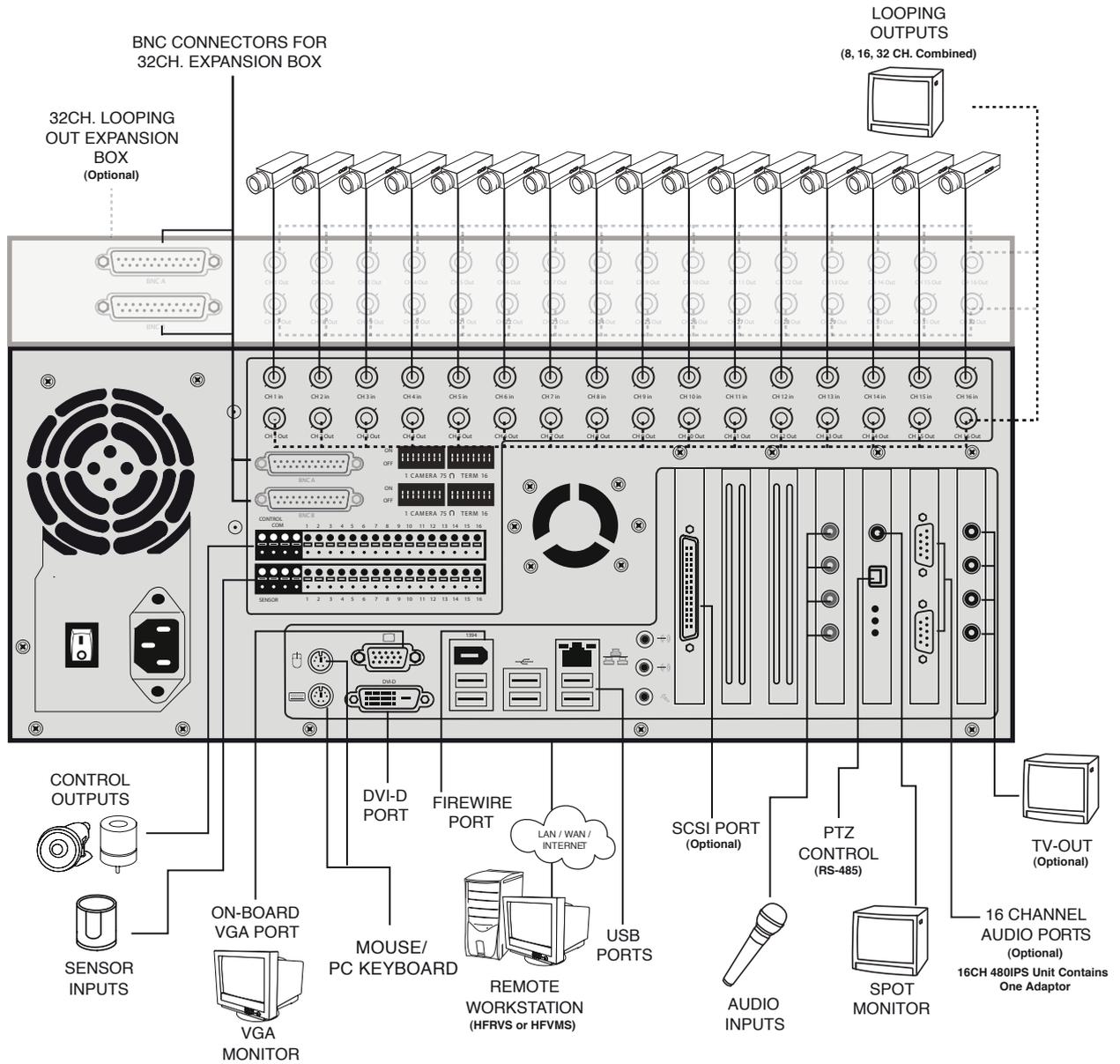
Recommended*:

- Intel Core 2 Quad – Q8200 (or equivalent)
- 2 GB system memory
- DirectX 9 or higher
- Nvidia 8600 video card (or equivalent)
- 256k network connection
- TCP/IP installed
- Microsoft Windows XP® or Vista
- 1280 x 1024 optimal display resolution
- 32-bit colour depth

*Minimum requirements for H.264 solutions and highly recommended for megapixel image rendering.

Fusion **IV** DVR Series

SYSTEM DIAGRAM

LOOPING
OUTPUTS
(8, 16, 32 CH. Combined)

BNC CONNECTORS FOR
32CH. EXPANSION BOX

32CH. LOOPING
OUT EXPANSION
BOX
(Optional)

CONTROL
OUTPUTS

SENSOR
INPUTS

ON-BOARD
VGA PORT

VGA
MONITOR

DVI-D
PORT

MOUSE/
PC KEYBOARD

FIREWIRE
PORT

LAN / WAN /
INTERNET

REMOTE
WORKSTATION
(HFRVS or HFVMS)

USB
PORTS

SCSI PORT
(Optional)

AUDIO
INPUTS

PTZ
CONTROL
(RS-485)

SPOT
MONITOR

TV-OUT
(Optional)

16 CHANNEL
AUDIO PORTS
(Optional)
**16CH 480IPS Unit Contains
One Adaptor**

Fusion IV DVR Series

SPECIFICATIONS

Fusion Specifications (100 ips)	100 - 16 Ch.
Cameras	16
Looping Outputs	16
Sensors	16
Control Outputs	16
IP Cameras (max)	8
Performance Package	16
Performance Package & NVR Upgrade	32
Display - Live (L) or Recorded (R)	L
Frame Setup - Individual (I) or Global (G)	I
Resolution - Individual (I) or Global (G)	I
Resolution - 720 × 576 (720) or 640 × 576 (640)	720
Resolution - 720 × 288 (720) or 640 × 288 (640)	720
Resolution - 360 × 288 (360) or 320 × 288 (320)	360
Audio - Line In	4
Spot Monitor - Multi-Screen Controllable/Switched	M
Intensive Record - Selectable (S) or Max (M)	S
USB 2.0 Ports	8

Fusion Specifications (200 ips)	200 - 32 Ch.	200 - 16 Ch.	200 - 8 Ch.
Cameras	32	16	8
Looping Outputs	32	16	8
Sensors	16	16	8
Control Outputs	16	16	8
IP Cameras (max)	8	8	8
Performance Package	16	16	8
Performance Package & NVR Upgrade	32	32	32
Display - Live (L) or Recorded (R)	L	L	L
Frame Setup - Individual (I) or Global (G)	I	I	I
Resolution - Individual (I) or Global (G)	I	I	I
Resolution - 720 × 576 (720) or 640 × 576 (640)	720	720	720
Resolution - 720 × 288 (720) or 640 × 288 (640)	720	720	720
Resolution - 360 × 288 (360) or 320 × 288 (320)	360	360	360
Audio - Line In	8	4	4
Spot Monitor - Multi-Screen Controllable/Switched	M	M	M
Intensive Record - Selectable (S) or Max (M)	S	S	S
USB 2.0 Ports	8	8	8

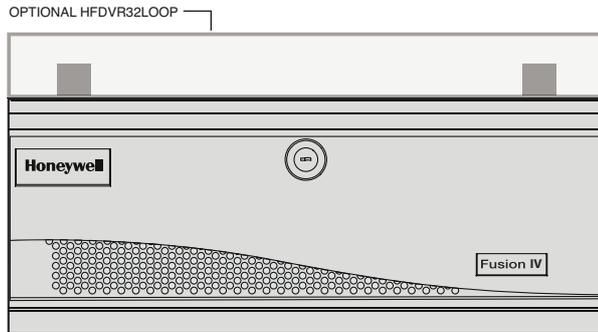| Fusion Specifications (400 ips)	400 - 32 Ch.	400 - 16 Ch.
Cameras	32	16
Looping Outputs	32	16
Sensors	16	16
Control Outputs	16	16
IP Cameras (max)	8	8
Performance Package	32	16
Performance Package & NVR Upgrade	32	32
Display - Live (L) or Recorded (R)	L	L
Frame Setup - Individual (I) or Global (G)	I	I
Resolution - Individual (I) or Global (G)	I	I
Resolution - 720 × 576 (720) or 640 × 576 (640)	720	720
Resolution - 720 × 288 (720) or 640 × 288 (640)	720	720
Resolution - 360 × 288 (360) or 320 × 288 (320)	360	360
Audio - Line In	8	16
Spot Monitor - Multi-Screen Controllable/Switched	M	M
Intensive Record - Selectable (S) or Max (M)	S	S
USB 2.0 Ports	8	8

Note Frame Rate ÷ number of inputs = max frame rate per camera

Fusion IV Unit	
Remote Sessions	Maximum of 5 simultaneous
Web Sessions	Maximum of 50
Video Standard	PAL: 720 × 576 max
Image Compression	User selectable per camera (H.264, MPEG, MJPEG)
3~4 Kbytes Per Frame (analogue)	360 × 240
Record/Viewing (analogue)	Up to 400 ips
Record/Viewing (network video)	Dependent on camera
Internal Storage Media	500 GB to 8 TB

Video Inputs	
Composite	Analogue Input: BNC 1.0 - Vp-p @75 Ohms
IP	MPEG-4 / MJPEG / H.264 stream from network

Video Outputs	
Composite	RCA connector 1.0 - Vp-p @ 75 Ohms
SVGA	15 pin D-type port for a PC monitor connection (standard and wide screen monitor support)
DVI-D	24 pin port for a digital video display

Electrical	
Input Voltage	115 - 230 VAC, 50 - 60 Hz 10/7A
Operating Voltage	115V/230V Auto Sensing
Power Consumption	Up to 465 W

Mechanical	
Dimensions	180 mm × 440 mm × 552 mm
Weight	Unit: 29 kg; Shipping: 29 kg to 38 kg
Construction	Housing: Steel Chassis
Finish	Housing: Black Matt Paint

Environmental	
Temperature	Operating: 5℃ to 40℃; Storage: -10℃ to 65℃
Relative Humidity	Operating: 0% to 90% non-condensing

Regulatory	
Emissions	FCC Part 15, Subpart B. Class A. EN55022 + A1:1995 and A2:1997 EN61000-3-3 EN61000-3-2
Immunity	EN 55024:1998 + A1:2001 and A2:2003
Safety U.S. and Canada International	UL, cUL listed; UL 60950-1:2003; IEC/EN 60950-1:2001 CB report and certificate

Recording Archive	
On Board Device	DVD-RW, USB
Network	LAN, WAN

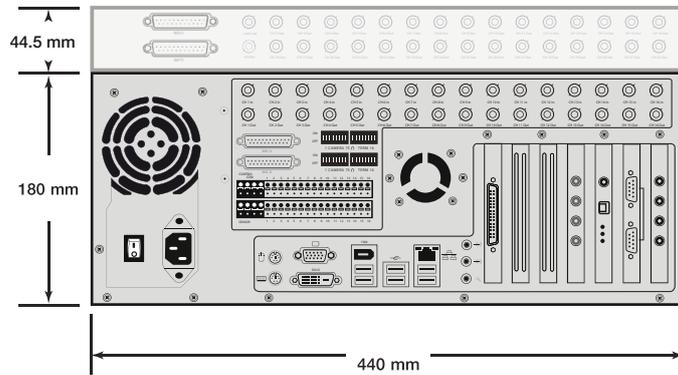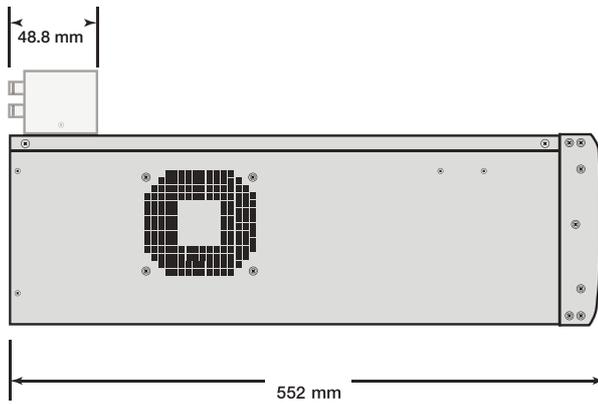| Base System	
Includes	HFRVS & HFVMS Software, Keyboard, Mouse, Rack Mounts, DVD-RW, Audio In, Network Connectivity, Web Access, USB Port, Keyboard and Mouse PS2 Ports, and RS-485/232 Ports.

Fusion IV DVR Series

SYSTEM DIMENSIONS

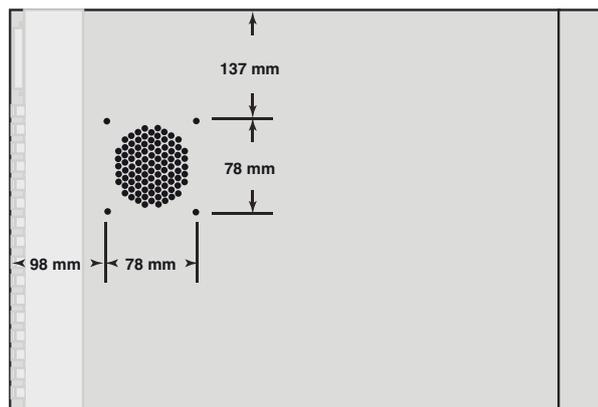**Front View**

OPTIONAL HFDVR32LOOP

Back View

44.5 mm

180 mm

440 mm

Side View

48.8 mm

552 mm

Top View
Keep Clear
(CPU EXHAUST FAN)

137 mm

78 mm

98 mm   78 mm

Fusion IV DVR Series

ACCESSORIES

Factory Installed Accessories	
HF4HWUPGCPU	Fusion IV Hardware Performance Package (Includes Quad Core CPU & 1GB Memory Upgrade)
HF4R5	Fusion IV Internal RAID5 Configuration (Must have 3 drives)
HF4GBNIC	Gigabit Network Interface – adds 2nd Ethernet Port to Fusion IV
HFDVR4VOUT	4 CH Analogue TV Output Card for all Fusion IV DVR models
HF4VOUTM	4 CH Multiplexed Analogue TV Output Card for all Fusion IV DVR models
HFDVR16AUDIO	16 CH Audio Input Card for all Fusion IV DVR models
HAABF [1] [2]	Video Analytics Active Alert® Base Package
HAASF [1] [2]	Video Analytics Active Alert® Standard Package
HAAPF [1] [2]	Video Analytics Active Alert® Premium Package
HASIF [1] [2]	Video Analytics Smart Impressions
HAACF [1] [2]	Video Analytics People Counter
HFANPRAPP1 [1] [2]	1 CH of Fusion ANPR Engine and Application Software (ANPR Review and Database)
HFANPRAPP2 [1] [2]	2 CH of Fusion ANPR Engine and Application Software (ANPR Review and Database)
HFANPRAPP3 [1] [2]	3 CH of Fusion ANPR Engine and Application Software (ANPR Review and Database)
External Storage Accessories	
HE520RA4	4 BAY Raid 5 - 1RU SCSI U320 Rackmount 500GB SATA II Hard Drives. 2.0 TB Total Capacity
HE530RA4	4 BAY Raid 5 - 1RU SCSI U320 Rackmount 750GB SATA II Hard Drives. 3.0 TB Total Capacity
HE540RA4	4 BAY Raid 5 - 1RU SCSI U320 Rackmount 1TB SATA II Hard Drives. 4.0 TB Total Capacity
HE560RA8	8 BAY Raid 5 - 2RU SCSI U320 Rackmount 750GB SATA II Hard Drives. 6.0 TB Total Capacity
HE580RA8	8 BAY Raid 5 - 2RU SCSI U320 Rackmount 1TB SATA II Hard Drives. 8.0 TB Total Capacity
HE590RA12	12 BAY Raid 5 - 2RU SCSI U320 Rackmount 750GB SATA II Hard Drives. 9.0 TB Total Capacity
HE5120RA16	16 BAY Raid 5 - 3RU SCSI U320 Rackmount 750GB SATA II Hard Drives. 12.0 TB Total Capacity
HE5160RA16	16 BAY Raid 5 - 3RU SCSI U320 Rackmount 1TB SATA II Hard Drives. 16.0 TB Total Capacity
ASC39160	SCSI adapter card for controlling Raid 5 U320 systems. To be used with Fusion IV DVRs
Field Installed Accessories	
HF4HWUPGCPUF	Fusion IV Hardware Performance Package (Includes Quad Core CPU & 1GB Memory Upgrade)
HFDVR32LOOP	Optional 16 CH Looping Expansion Module for 32CH Fusion IV DVR models
HF4HD2T0	Fusion IV 2 TB Upgrade Kit (Includes Fusion IV Drive Tray)
HF4HD1T0	Fusion IV 1 TB Upgrade Kit (Includes Fusion IV Drive Tray)
HF4HD500	Fusion IV 500 GB Upgrade Kit (Includes Fusion IV Drive Tray)
Software Part Numbers	
HFRVS	Fusion Remote View Software
HFVMS	Fusion Video Management Software
HFVMSR	Fusion to Rapid Eye™ Remote Software
IP and POS Data Software Licenses	
HFLICNVR1	1 CH Fusion IP/ Network Video License (Add up to 4 CH of Network Video to Fusion IV Systems)
HFLICNVR4	4 CH Fusion IP/ Network Video License (Add 4 CH of Network Video to Fusion IV Systems)
HFLICNVR8 [2]	8 CH Fusion IP/ Network Video License (Add 8 CH of Network Video to Fusion IV Systems)
HFLICNVR16 [2]	16 CH Fusion IP/ Network Video License (Add 16 CH of Network Video to Fusion IV Systems)
HFLICDATA	1 CH Fusion 4 Alarm Panel for POS Data License
Other Recommended Accessories	
HJZTPX	HJZTPX PTZ camera and DVR controller

1 Up to 4 channels of any combination of Video Analytic packages or up to 6 ANPR channels. Video Analytics and ANPR options are available with 200 IPS and 400 IPS real time Fusion IV configurations only.
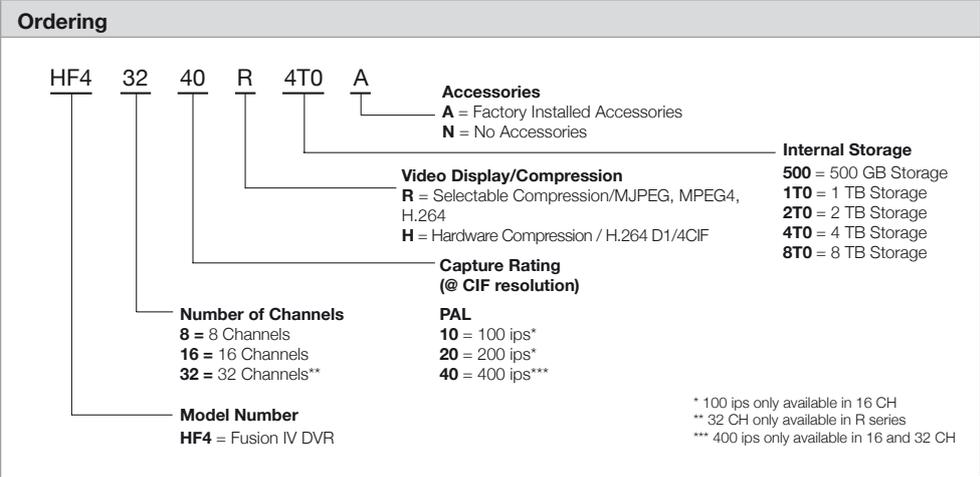2 Requires HF4HWUPGCPU.

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ORDERING

Part Number	Channels	IPS/res (PAL)	Storage	Compression / Video Display
HF43240R8T0A	32	400/CIF	8 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43240R4T0A	32	400/CIF	4 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43240R2T0A	32	400/CIF	2 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43240R1T0A	32	400/CIF	1 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43240R500(N or A)	32	400/CIF	500 GB	Selectable Compression / MJPEG, MPEG4, H.264
HF43220R8T0A	32	200/CIF	8 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43220R4T0A	32	200/CIF	4 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43220R2T0A	32	200/CIF	2 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43220R1T0A	32	200/CIF	1 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF43220R500(N or A)	32	200/CIF	500 GB	Selectable Compression / MJPEG, MPEG4, H.264
HF41640H8T0A	16	400/4CIF	8 TB	Hardware Compression / H.264 D1/4CIF
HF41640H4T0A	16	400/4CIF	4 TB	Hardware Compression / H.264 D1/4CIF
HF41640H2T0A	16	400/4CIF	2 TB	Hardware Compression / H.264 D1/4CIF
HF41640H1T0A	16	400/4CIF	1 TB	Hardware Compression / H.264 D1/4CIF
HF41640H500(N or A)	16	400/4CIF	500 GB	Hardware Compression / H.264 D1/4CIF
HF41640R8T0A	16	400/CIF	8 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41640R4T0A	16	400/CIF	4 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41640R2T0A	16	400/CIF	2 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41640R1T0A	16	400/CIF	1 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41640R500(N or A)	16	400/CIF	500 GB	Selectable Compression / MJPEG, MPEG4, H.264
HF41620R8T0A	16	200/CIF	8 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41620R4T0A	16	200/CIF	4 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41620R2T0A	16	200/CIF	2 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41620R1T0A	16	200/CIF	1 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41620R500(N or A)	16	200/CIF	500 GB	Selectable Compression / MJPEG, MPEG4, H.264
HF40820H8T0A	8	200/4CIF	8 TB	Hardware Compression / H.264 D1/4CIF
HF40820H4T0A	8	200/4CIF	4 TB	Hardware Compression / H.264 D1/4CIF
HF40820H2T0A	8	200/4CIF	2 TB	Hardware Compression / H.264 D1/4CIF
HF40820H1T0A	8	200/4CIF	1 TB	Hardware Compression / H.264 D1/4CIF
HF40820H500(N or A)	8	200/4CIF	500 GB	Hardware Compression / H.264 D1/4CIF
HF40820R8T0A	8	200/CIF	8 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF40820R4T0A	8	200/CIF	4 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF40820R2T0A	8	200/CIF	2 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF40820R1T0A	8	200/CIF	1 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF40820R500(N or A)	8	200/CIF	500 GB	Selectable Compression / MJPEG, MPEG4, H.264
HF41610R8T0A	16	100/CIF	8 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41610R4T0A	16	100/CIF	4 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41610R2T0A	16	100/CIF	2 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41610R1T0A	16	100/CIF	1 TB	Selectable Compression / MJPEG, MPEG4, H.264
HF41610R500(N or A)	16	100/CIF	500 GB	Selectable Compression / MJPEG, MPEG4, H.264

Note: The letter "N" at the end of the part number signifies no factory installed accessories. The letter "A" at the end of the part number signifies factory installed accessories. Factory installed accessories MUST be ordered at the same time as the DVR.

Fusion IV DVR Series

Ordering

HF4 32 40 R 4T0 A

Accessories
A = Factory Installed Accessories
N = No Accessories

Internal Storage
500 = 500 GB Storage
1T0 = 1 TB Storage
2T0 = 2 TB Storage
4T0 = 4 TB Storage
8T0 = 8 TB Storage

Video Display/Compression
R = Selectable Compression/MJPEG, MPEG4, H.264
H = Hardware Compression / H.264 D1/4CIF

Capture Rating
(@ CIF resolution)

Number of Channels
8 = 8 Channels
16 = 16 Channels
32 = 32 Channels**

PAL
10 = 100 ips*
20 = 200 ips*
40 = 400 ips***

Model Number
HF4 = Fusion IV DVR

* 100 ips only available in 16 CH
** 32 CH only available in R series
*** 400 ips only available in 16 and 32 CH

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

For additional information,
please visit www.honeywell.com/security/uk

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