

## Fusion IV DVR Series

### BRIDGING THE GAP BETWEEN ANALOG AND IP

The Fusion IV hybrid DVR Series sets a new standard for recording. Expanding beyond the analog 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 analog 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 (analog 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 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 backup. 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 analog and IP cameras, Fusion IV is ideal for systems requiring transition to IP to maximize the cost-savings benefits associated with IP networking. Additional benefits are realized for systems adding new capabilities such as unparalleled image clarity using megapixel cameras. Applications include educational, municipal and corporate campus environments, large retail and hotels or resorts. When the need is for a hybrid digital recording solution, the answer is the Fusion IV DVR.

### Features:

#### Hardware

- Analog and IP recording up to 32 channels
- Global recording rates for 120/100 to 480/400 at CIF resolution (NTSC/PAL)
- Recording resolutions up to 720 × 480 (D1)
- VGA and DVI-D ports for local video viewing
- Available with 8, 16 and 32 looping video inputs
- Internal storage capacity from 500 GB to 8 TB
- External storage options from 5 TB to 32 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 analog/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 access control with WIN-PAK®
- Powerful API available for third party software integration



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### FEATURES

Fusion IV consists of three major components included with each unit:

- **Server Unit:** 8, 16 or 32 channel models with global recording rates of 120/100 through 480/400 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 x 480 and has an image capture rate of up to 480 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 up to 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 7, Vista or XP 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 customized user accounts.
- Create remote backup 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 7, Vista or XP 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)<sup>2</sup>
- 1 GB system memory
- DirectX 9 or higher
- 256 MB+ Nvidia or ATI video card<sup>3</sup>
- 256k network connection<sup>4</sup>
- TCP/IP installed

- Microsoft Windows 7, Vista or XP<sup>5</sup>

- 1280 x 1024 optimal display resolution
- 32 bit color depth

##### Recommended<sup>1</sup>:

- Intel Quad Core i7 processor (or equivalent)<sup>2</sup>
- 2 GB system memory

- DirectX 9 or higher
- ATI 5750 video card (or equivalent)<sup>3</sup>
- 512k network connection<sup>4</sup>
- TCP/IP installed
- Microsoft Windows 7, Vista or XP<sup>5</sup>
- 1280 x 1024 optimal display resolution
- 32 Bit Color Depth

<sup>1</sup> Minimum requirements for H.264 solutions and highly recommended for megapixel image rendering.

<sup>2</sup> No support for Xeon processors.

<sup>3</sup> FireMV, NVS and CAD cards are not supported. Dual video cards required for four monitor output. SLI/Crossfire not supported.

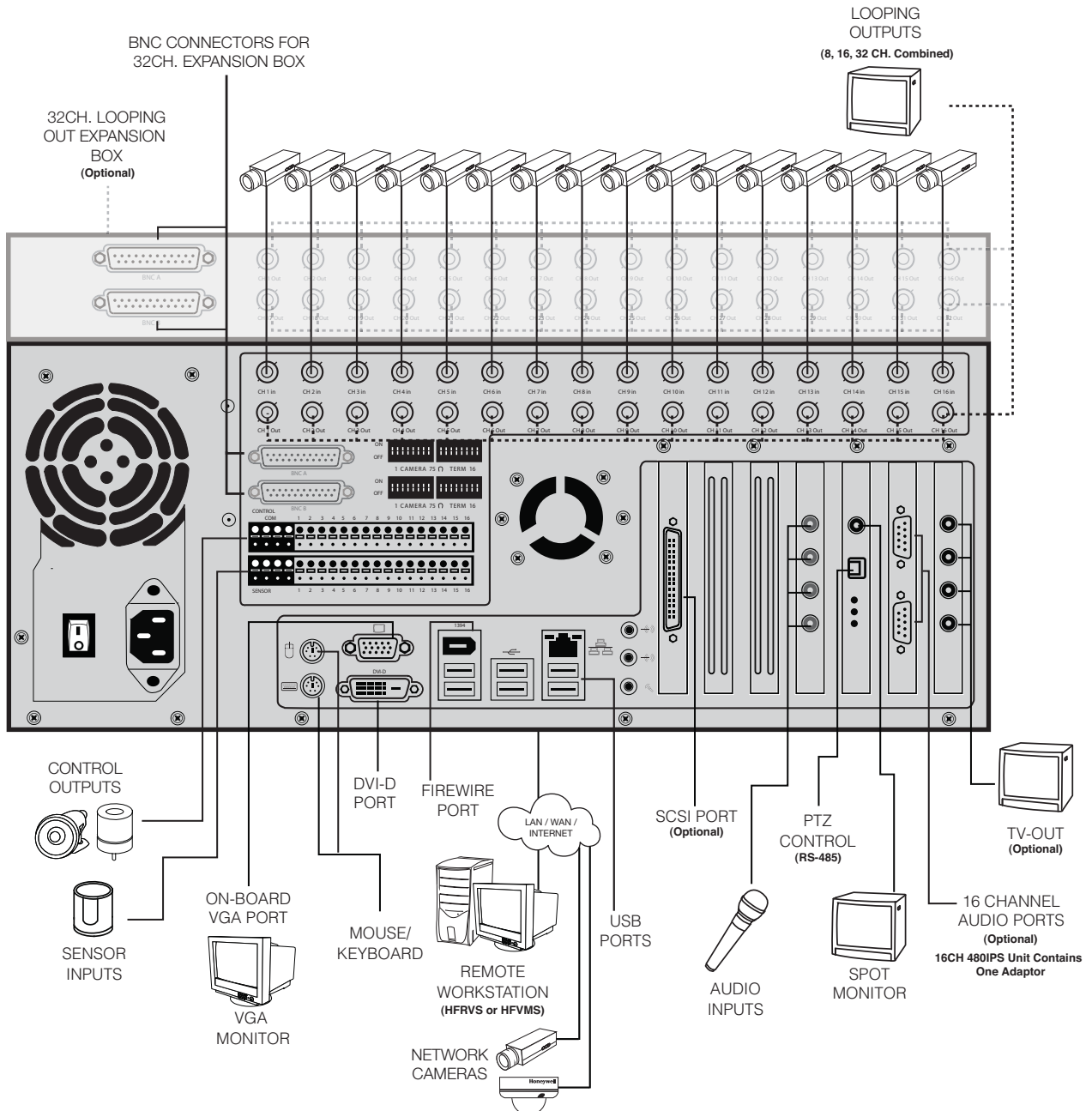
<sup>4</sup> Gigabit network highly recommended for LAN environments and configurations running multiple megapixel cameras.

<sup>5</sup> No support for server operating systems.

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### SYSTEM DIAGRAM



## Fusion IV DVR Series

### SPECIFICATIONS

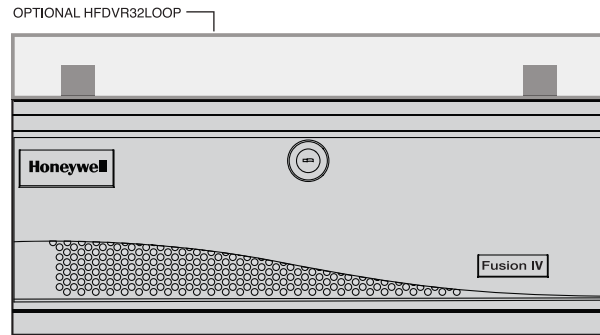
Remote Software and FVMS	
Sessions Maximum per Fusion Recorder	5 simultaneous connections
Administration; Configuration	1 session
Users Viewing Live Video and Retrieving Video	4 sessions
Above with PTZ Control	1 at a time controlling PTZ
Compatibility	Microsoft Windows® 7, Vista, or XP
Recorder Unit	
Video Standard	NTSC or PAL, & IP network video
Video Display Format	480 ips (NTSC) 400 ips (PAL)
Color Control	Brightness, hue and contrast
Recording and Transmission Compression Algorithm	Selectable codec; H.264, MPEG-4, MJPEG
Record Mode	(FIFO) Continuous buffer
Recording Capacity	Hard drive capacities up to 8 TB. See ordering section for details.
Recording Rate – R Units (Global) 8, 16, 32 ch	Up to 480/400 ips max, model dependent (NTSC/PAL) @ CIF resolution. See ordering section for details.
Recording Rate – H Units (Global) 16 ch	Up to 480/400 ips (NTSC/PAL) @ D1 resolution
Analog Video Resolution Settings	CIF: 360 x 240 NTSC or 360 x 288 PAL 2CIF: 720 x 240 NTSC or 720 x 288 PAL D1: 720 x 480 NTSC or 720 x 576 PAL
IP Devices and Resolution See Doc 800-07870 for a List of IP Devices Supported by Fusion	Various settings up to and including 5 megapixel based on supported camera resolution options.
Hybrid Operation	Up to a combined total of 8, 16, or 32 cameras (IP/analog) <ul style="list-style-type: none"> <li>• DVR model dependent</li> <li>• May require hardware performance package</li> </ul>
Video Motion Detection	Server-side motion detection for analog and IP cameras.  IP camera motion detection for specific cameras – see Doc 800-07870 for details
Event Recording and Reporting – DVR Interface	Input via – alarm i/p contacts, and motion. Reporting via alarm o/p contacts & e-mail notification
IP Device I/O	Support for select devices only, see Doc 800-07870 for details
Removable Media	Built-in DVD-RW option and 8 USB ports
Still Image	JPEG file format
NTP Client	NTP time synchronization available
DHCP Enabled	DHCP or Manual IP entry
Port Number Setup	5 individual entries for ports
PTZ Protocols Support	Support for up to 60 PTZ protocols
Language Support	English, French, German, Italian, Spanish (EU), Spanish (Americas), Portuguese, Russian, Czech, Polish

Connections	
Video Input	8 or 16 looping, 32 non-looping (optional 32 ch looping box), BNC 1 Vp-p @ 75 Ohms
Video Output	MAIN-OUT (VGA/DVI-D) and SPOT-OUT (RCA)
Audio Input/Output	<b>Audio Input</b> - line level RCA <ul style="list-style-type: none"> <li>• 4 inputs – 8 ch DVR/240 ips &amp; 16 ch DVR /120 ips</li> <li>• 8 inputs – 32 ch DVR/240 ips &amp; 32 ch DVR /480 ips</li> <li>• 16 inputs – 16 ch DVR/480 ips</li> </ul> <b>Audio Output</b> <ul style="list-style-type: none"> <li>• 1 ch, 1/8" phone jack line-out</li> </ul>
Sensor Inputs General Purpose	8 (8 ch DVR) or 16 (16 ch/32 ch DVR), NO/NC -selectable
Control Outputs	8 (8 ch DVR) or 16 (16 & 32 ch DVR), relay output
Serial Ports	1 RS232 (9-pin D-Sub), 8 USB 2.0, 1 RS485
Internal Storage	SATA HDD, up to 4
Networking	10/100/1000 NIC onboard (optional 1 GB network)
Electrical	
Input Voltage	115-230 VAC, 50-60 Hz 10/7A
Power Consumption	Up to 465 W
Mechanical	
Dimensions (W x H x D)	7" x 17.3" x 21.75" (180 mm x 440 mm x 552 mm)
Weight	Unit: 64 lb (29 kg) Shipping: 24 lb (29 kg) to 84 lb (38 kg)
Construction	Housing: Steel chassis Finish: Black matte paint
Environmental	
Temperature	Operating: 5°C to 40°C (40°F to 104°F) Storage: -10°C to 65°C (14°F to 150°F)
Relative Humidity	0% - 90%, non-condensing
Regulatory	
Safety	UL, cUL listed; UL 60950-1:2001 IEC/EN 60950-1:2001 CB report and certificate
Emissions	FCC Part 15, Subpart B, Class B EN55022 :2006 (Class B) EN61000-3-3 EN61000-3-2
Immunity	EN55024: (Class B)

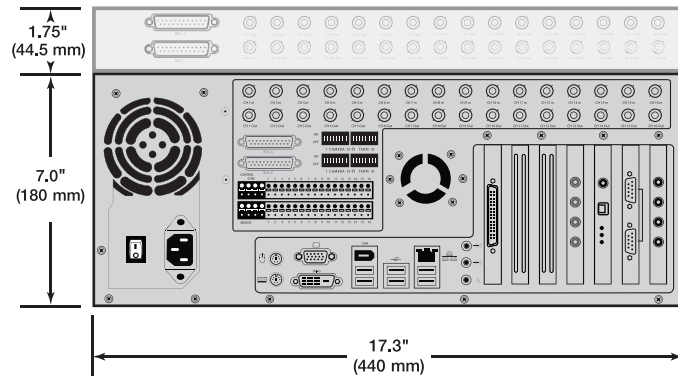
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### SYSTEM DIMENSIONS

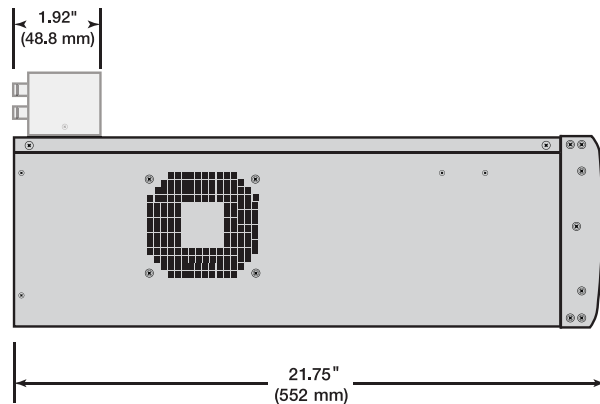
Front View



Back View

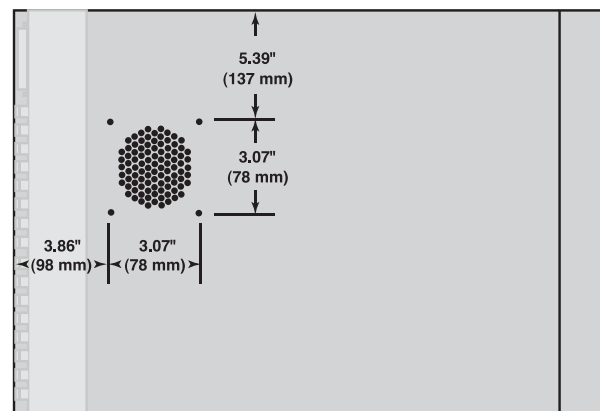


Side View



Top View

Keep Clear  
(CPU EXHAUST FAN)



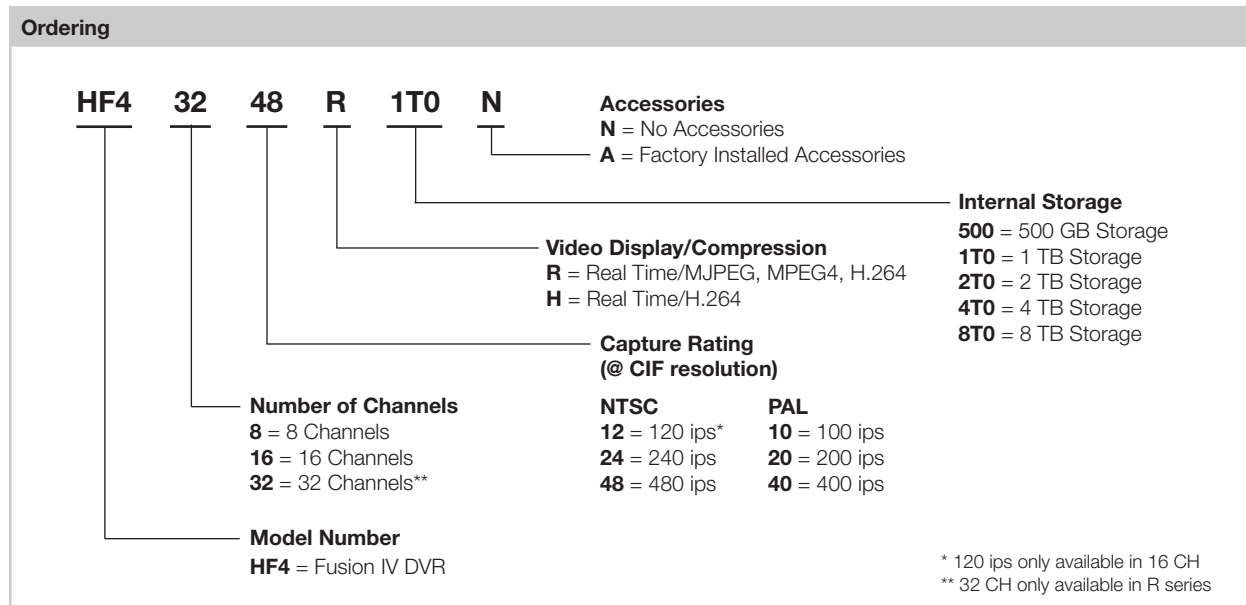
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## ACCESSORIES AND ORDERING

Factory Installed Accessories	
HF4HWUPGCPU	Fusion IV Hardware Performance Package CPU & Memory Factory Upgrade
HF4R5	Fusion IV Internal RAID 5 Configuration
HFDVRSCSI	SCSI Interface Card – for external storage
HFDVRGBNIC	Gigabit Network Interface – adds 2nd Ethernet Port
HFDVR4VOUT	4 CH Analog TV Output Card
HF4VOUTM	4 CH Multiplexed Analog TV Output Card
HFDVR16AUDIO	16 CH Audio Input Card
<b>External Storage Accessories</b>	
HFDVREXT8T	External storage 8 TB – includes SCSI adapter
HFDVREXTR5T	External RAID 5 TB – requires separate SCSI adapter (HFDVRSCSI)
HFDVREXR8T	External RAID 8 TB – requires separate SCSI adapter (HFDVRSCSI)
HFDVREXR16T	External RAID 16 TB – requires separate SCSI adapter (HFDVRSCSI)

Field Installed Accessories	
HF4HWUPGCPUF	Fusion IV Hardware Performance Package CPU & Memory Field Upgrade
HFDVR32LOOP	32 Channel Looping Expansion Box
HF4HD2T0	Fusion IV 2 TB Upgrade Kit
HF4HD1T0	Fusion IV 1 TB Upgrade Kit
HF4HD500	Fusion IV 500 GB Upgrade Kit
<b>Software Part Numbers</b>	
HFRVS	Fusion Remote View Software
HFVMS	Fusion Video Management Software
HFVMSPT	Fusion to HRDP Remote Software
HFLICDATA	1 CH Fusion Alarm Panel for POS Data License
<b>NVR Software Licenses</b>	
HFLICNVR1	Adds 1 CH of NVR to Fusion IV
HFLICNVR4	Adds 4 CH of NVR to Fusion IV
HFLICNVR8	Adds 8 CH of NVR to Fusion IV
HFLICNVR16	Adds 16 CH of NVR to Fusion IV
<b>Other Recommended Accessories</b>	
Analog and IP cameras, ACUIX PTZ, Megapixel	See Honeywell's full line of indoor and outdoor cameras, housings, lenses and infrared illuminators
HJC4000	PTZ camera and DVR controller



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

### Automation and Control Solutions

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L/FUSNV4D/D  
March 2011  
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