

4MP IP E-VU Security System

Twelve (12) 4MP Fixed Eyeball Network Cameras with One (1) 16-Channel 4K Network Video Recorder



4MP Network Cameras

- 4MP at 30 fps Maximum Resolution,
- Maximum IR LED Length 30 m (98.43 ft) with Smart IR
- 2.8 mm fixed lens
- Motion Detection
- IP67 Ingress Protection

4K Network Video Recorder

- 4 TB Pre-installed Hard Disk Drive
- Supports Remote Configuration and Management of Network Cameras
- Smart H.265+ and Smart H.264+ Dual Codec
- Maximum 160 Mbps Recording Bandwidth
- Up to 8MP Resolution for Preview and Playback

System Overview

The Dahua Network Security System provides all the components to quickly install, configure, and employ a complete video surveillance solution. The IP cameras offer the clarity of 4MP video, and the NVR offers built-in motion detection algorithms, alarm triggers, and customized recording modes. The NVR also features Plug and Play technology to connect quickly to cameras on the same network. Each component accepts a PoE power supply to facilitate installation.

Functions

Smart IR Illumination

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 30 m (98 ft).

Flexible Recording

The NVR offers a variety of configurable recording options and schedules that saves disk space and active monitoring time. The NVR monitors incoming video and can be programmed to record if motion is detected or if an alarm is triggered. The NVR can also be programmed to record on a schedule or at different intervals. The recording options and schedules can be set for each individual camera or copied to all cameras.

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

Environmental

With a temperature range of -40°C to $+60^{\circ}\text{C}$ (-40°F to $+140^{\circ}\text{F}$), the cameras are designed for extreme temperature environments. The cameras, subjected to rigorous dust and water immersion tests, are certified to the IP67 rating making them suitable for demanding outdoor applications.

The NVR features an operating temperature of -10°C to $+55^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+131^{\circ}\text{F}$).

Technical Specification					
N41CJ02 4MP Fixed Eyeball Network Camera					
Camera					
Image Sensor		1/3-in. 4MP Progressive-scan CMOS			
Effective Pixels		2560 (H) × 1440 (V)			
RAM/ROM		64 MB / 16 MB			
Scanning System		Progressive			
Electronic Shutter Speed		Auto, Manual; 1/3 s to 1/100000 s			
Minimum Illumination		Color, 30 IRE: 0.03 lux at F2.0 B/W, 30 IRE: 0.003 lux at F2.0 0 lux (Illuminator On)			
S/N Ratio		> 56 dB			
IR Distance		Distance up to 30.0 m (98.43 ft)			
IR On/Off Control		Auto, Manual			
IR LEDs		One (1)			
Lens					
Lens Type		Fixed-focal			
Iris Type		Fixed			
Mount Type		M12			
Focal Length		2.8 mm			
Maximum Aperture		F2.0			
Field of View		Horizontal: 90° Vertical: 50° Diagonal: 107°			
Close Focus Distance		1.0 m (3.28 ft)			
DORI ¹ Distance		Detect	Observe	Recognize	Identify
		68.0 m (223.10 ft)	27.2 m (89.24 ft)	13.6 m (44.62 ft)	6.8 m (22.31 ft)
Pan/Tilt/Rotation					
Range		Pan: 0° to 355° Tilt: 0° to 78° Rotation: 0° to 355°			
Video					
Compression		Smart H.265+, H.265, Smart H.264+, H.264, H.264B, MJPEG			
Streaming Capability		Two (2) Streams			
Resolution		4MP (2560 × 1440), 3MP (2304 × 1296), 1080p (1920 × 1080), 1.3MP (1280 × 960), 720p (1280 × 720), D1 (704 × 480), VGA (640 × 480), CIF (352 × 240)			
Frame Rate	Main Stream	2560 × 1440 at 1 to 30 fps			
	Sub Stream	704 × 480 at 1 to 30 fps			
Bit Rate Control		CBR/VBR			
Bit Rate		H.264: 32 kbps to 4096 Kbps H.265: 12 kbps to 4096 Kbps			
Day/Night		Auto (ICR), Color, B/W			
Backlight		BLC, HLC, DWDR			
White Balance		Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom			
Gain Control		Auto, Gain Priority, Shutter Priority, Manual			
Noise Reduction		3D DNR			
Motion Detection		Off, On (4 Zones, Rectangle)			
Region of Interest		Off, On (4 Zones)			
Smart IR		Support			
Image Rotation		0°, 180° (0°by default)			
Mirror		Off, On			
Privacy Masking		Off, On (4 Areas)			

Network	
Ethernet	RJ-45 (10/100 Base-T)
Protocol	IPv4, IPv6, HTTP, TCP, UDP, ARP, RTIP, RTSP, SMTIP, FTIP, DHCP, DNS, DDNS, NTP, Multicast
Interoperability	ONVIF (Profile S,T), CGI, P2P, Milestone, SDK, API
Max. User Access	6 (Total Bandwidth: 48 MB)
Edge Storage	FTP
Web Viewer	IE, Chrome, Firefox
Management Software	SmartPSS Lite, DMSS
Mobile Operating System	iOS, Android
Cybersecurity	Video Encryption Configuration Encryption, Digest, WSSE, Account Lockout, Security Logs, Generating and Importing X.509 Certification, HTTPS, Trusted Boot, Trusted Execution, Trusted Upgrade

Certifications	
Safety	EN 62368-1
Electromagnetic Compatibility (EMC)	FCC CFR 47 Part 15 Subpart B Electromagnetic Compatibility Directive 2014/30/EU

Electrical	
Power Supply	12 VDC or PoE (802.3af)
Power Consumption	Basic: 1.6 W (12 VDC), 2.4 W (PoE) Maximum (ICR + H.265 + IR Intensity): 3.6 W (12 VDC), 4.7 W (PoE)

Environmental	
Operating Conditions	−40°C to +55°C (−40°F to +131°F), Less than or equal to 95% RH
Storage Conditions	−40°C to +55°C (−40°F to +131°F),
Ingress Protection	IP67

Construction	
Casing	Metal
Dimensions	85.6 mm x 94.0mm (3.4 in. x 3.7 in.)
Net Weight	0.32 kg (0.71 lb)
Gross Weight	0.43 kg (0.95 lb)

Intelligent Video System Functions	
Standard Features	- Tampering with the camera. - Error sending or receiving data over the network. - Unauthorized access to the camera.
Motion	An object moves through any part of the scene.

¹ The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4, the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

Technical Specification		
N42C3P4 Sixteen-channel 4K Network Video Recorder (4 TB)		
System		
Main Processor		Industrial-grade Embedded Processor
Operating System		Embedded Linux
Audio and Video		
IP Camera Input		16 Channels
Audio		Input: One (1) Channel, RCA Output: One (1) Channel, RCA
Analytics+ Recording ²		
Perimeter Protection	Channels	Eight (8)
	Search	By Channel, Time, and Event Type
Smart Motion Detection+	Channels	12
	Search	By Target Classification (Human or Vehicle)
Display		
Interface		One (1) HDMI One (1) VGA
Native Output Resolution		3840 x 2160, 1920 x 1080, 1280 x 1024, 1280 x 720
Maximum Decoding		Two (2) Channel of 8 MP at 30 fps Four (4) Channels of 4 MP at 30 fps Eight (8) Channels of 2 MP at 30 fps 16 Channels of 2 MP at 15 fpss
Multi-screen Display		1/4/8/9/16
On-screen Display		Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording
Recording		
Video Compression		Smart H.265+, H.265, Smart H.264+, H.264, MJPEG
Audio Compression		PCM, G.711A, G.711Mu, G.726
Supported IP Camera Resolution		8MP, 6MP, 5MP, 4MP, 3MP, 1080p, 720p, D1
Maximum Recording Bandwidth		160 Mbps
Record Mode		Manual Recording; Alarm Recording; SMD Recording; Smart Recording
Video Detection and Alarm		
Alarm Input		Four (4) Channels
Relay Output		Two (2) Channels
General Alarms		Motion Detection, Privacy Masking, Video Loss, Scene Changing, PIR Alarm, IPC External Alarm
Anomaly Alarms		Camera Disconnection, Storage Error, Disk Full, IP Conflict, MAC Conflict, Login Locked, Cybersecurity Exception
Analytics+ Alarms		Face Detection, Perimeter Protection (Intrusion and Tripwire), IVS, People Counting, Heat Map, SMD Alarms
Alarm Actions		Recording, Snapshot, Audio, Buzzer, Log, Preset, Email
Playback and Backup		
Sync Playback		1/4/8
Search Mode		Time/Date, Alarm, MD and Exact Search (Accurate to One (1) Second), Smart Search
Playback Function		Play, Pause, Stop, Rewind, Fast Play, Slow Play, Reverse, By Frame, Full Screen, Backup Selection (Video Clip or File), Partial Zoom, Audio On/Off
Backup Mode		USB Device, Network

Third-party Support

Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and Others
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Network

Ethernet	One (1) RJ-45 Port (10/100/1000 Mbps), Self-adaptive
PoE	16 Ports (IEEE802.3af/at)
Network Function	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; DDNS; FTP; Alarm Server; IP Search (Support Dahua IP Camera; DVR; NVS); P2P; Auto-register
Maximum User Access	128
Mobile Operating System	iOS, Android
Browser	Chrome; IE 9 or later
Interoperability	ONVIF Profiles (S,T,G); CGI; SDK

Storage

Internal HDD	Two (2) SATA III Ports, Up to 10 TB capacity per HDD
HDD Mode	Single

Auxiliary Interface

USB	Two (2) USB 2.0 Ports (Rear Panel)
RS-232	One (1) Port

Electrical

Power Supply	100 VAC to 240 VAC, 47 Hz to 63 Hz, 3 5 A
NVR Power Consumption	< 10 W, without HDD
Total PoE Budget	25.5 W single port, 117 W total

Environmental

Operating Conditions	−10° C to 55° C (14° F to 131° F), 10% to 93% RH
Storage Conditions	0° C to 40° C (32° F to 104° F), 30% to 85% RH

Construction

Dimensions (W x L x H)	375.0 mm x 327.90 mm x 53.0 mm (14.76 in. x 12.91 in. x 2.09 in.)
Net Weight	2.63 kg (5.80 lb), without HDD
Gross Weight	3.91 kg (8.62 lb), without HDD

Certifications

Safety	EN 62368-1 UL 62368-1 CAN/CSA C22.2 No.62368-1-14
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² The recorder Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality

Ordering Information

Type	Part Number	Description
4MP IP E-VU Security System	N464L124A	12 x N41CJ02 4MP Fixed Eyeball Network Camera 1 x N42C3P4 16-channel 4K Network Video Recorder with 4 TB HDD (1U Casing, 16 PoE Ports)
Accessories, optional	DH-PFA13A-E	Junction Box
	PFA130-E	Waterproof Junction Box
	PFB204W	Wall Mount Bracket
	PFA152-E	Pole Mount
	PFH101	Rack Mount Tray, compatible with 1U, Mini 1U, and Compact 1U Storage Devices 482 60 mm x 281 20 mm x 43.70 mm (19.0 in. x 11.07 in. x 1.72 in.)

Package Contents

Type	Material
Network Cameras	Printed Manual Printed Regulatory Guide Plastic Wall Anchors with Screws (x3) Mounting Template Waterproof Ethernet Connector
4K NVR	Quick Network Guide Printed Manual Printed Regulatory Guide Mouse Power Adapter with Power Cord Ethernet Cable, RJ-45 Rubber Feet (x4)

Accessories (Optional)



DH-PFA13A-E
Junction Box



PFA130-E
Waterproof Junction Box



PFB204W
Wall Mount Bracket



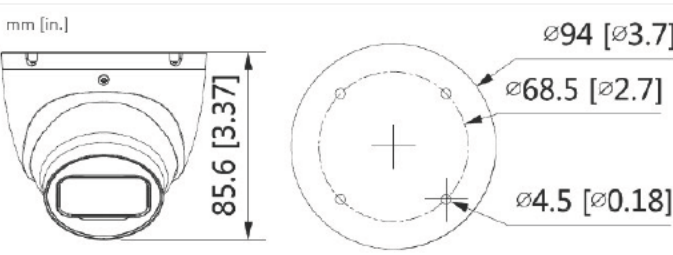
PFA152-E
Pole Mount



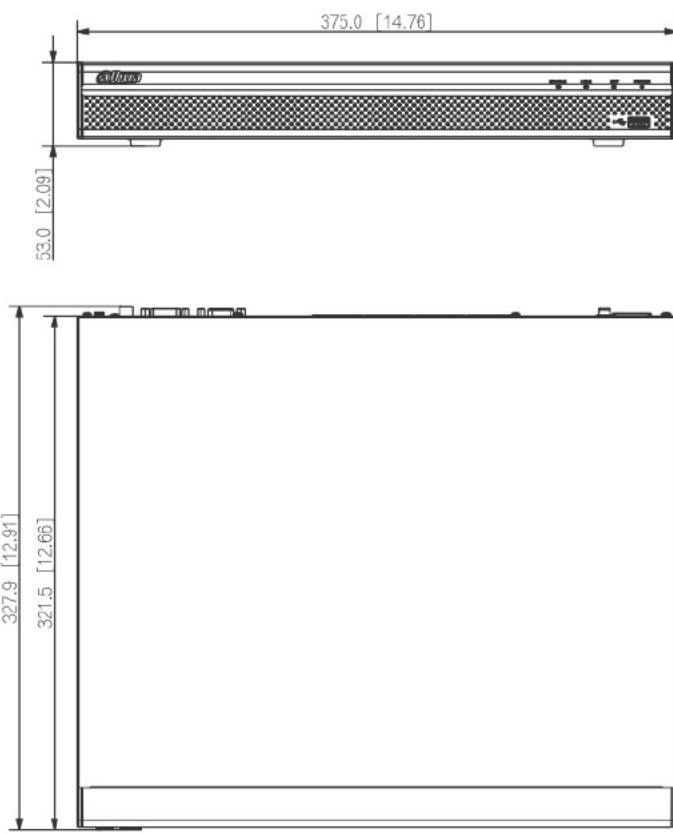
PFH101
Rack-mount
Tray

Ceiling Mount	Wall Mount	Pole Mount (Vertical)
DH-PFA13A-E or PFA130-E	PFB204W	PFB204W + PFA152-E
		

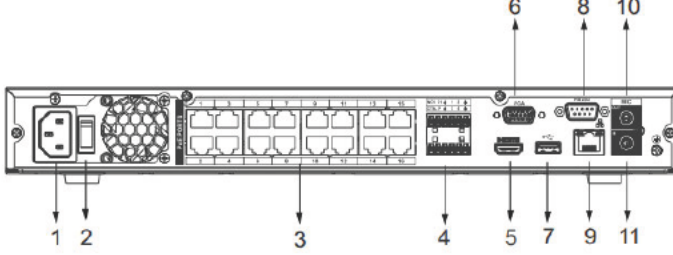
Dimensions - N41CJ02



Dimensions - N42C3P4



Rear Panel - N42C3P4



1	Power Input	6	VGA Output
2	Power Switch	7	USB 2.0 Ports (x1)
3	PoE Ports, RJ-45 (x16)	8	RS232 Port
4	Alarm I/O	9	Network Port, RJ-45
5	HDMI Output	10	MIC Input, RCA (x1)
		11	Audio Output, RCA (x1)