

# 4MP IP E-VU Security System

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



## 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.

### 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

- 2 TB Pre-installed Hard Disk Drive
- Supports Remote Configuration and Management of Network Cameras
- Smart H.265+ and Smart H.264+ Dual Codec
- Maximum 80 Mbps Recording Bandwidth
- Up to 8MP Resolution for Preview and Playback

### 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  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  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  $-10^{\circ}\text{C}$  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 <sup>1</sup> Distance	<table border="1"> <thead> <tr> <th>Detect</th> <th>Observe</th> <th>Recognize</th> <th>Identify</th> </tr> </thead> <tbody> <tr> <td>68.0 m (223.10 ft)</td> <td>27.2 m (89.24 ft)</td> <td>13.6 m (44.62 ft)</td> <td>6.8 m (22.31 ft)</td> </tr> </tbody> </table>	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)
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#### Pan/Tilt/Rotation

Range	Pan: 0° to 355° Tilt: 0° to 78° Rotation: 0° to 355°
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#### 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	<ul style="list-style-type: none"> <li>Tampering with the camera.</li> <li>Error sending or receiving data over the network.</li> <li>Unauthorized access to the camera.</li> </ul>
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****N41C1P2 Four-channel 4K Network Video Recorder (2 TB)**

## System

Main Processor	Industrial-grade Embedded Processor
Operating System	Embedded Linux

## Audio and Video

IP Camera Input	Four (4) Channels
Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA

Analytics+ Recording<sup>2</sup>

Perimeter Protection	Channels	Four (4)
	Search	By Channel, Time, and Event Type
Smart Motion Detection+	Channels	Four (4)
	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 8MP at 30 fps Four (4) Channels of 4MP at 30 fps
Multi-screen Display	1/4
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	80 Mbps
Record Mode	Manual Recording; Alarm Recording; SMD Recording; Smart Recording

## Video Detection and Alarm

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
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	Four (4) 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	One (1) SATA III Port, Up to 10 TB capacity per HDD
HDD Mode	Single

## Auxiliary Interface

USB	Two (2) USB 2.0 Ports (Rear Panel)
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## Electrical

Power Supply	48 VDC, 1.25 A
NVR Power Consumption	< 10 W, without HDD
Total PoE Budget	25.5 W single port, 36 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)	204.60 mm x 206.40 mm x 45.60 mm (8.06 in. x 8.12 in. x 1.80 in.)
Net Weight	0.50 kg (1.10 lb), without HDD
Gross Weight	1.43 kg (3.15 lb), without HDD

## Certifications

Safety	EN 62368-1 UL 62368-1 CAN/CSA C22.2 No.62368-1-14
Electromagnetic Compatability (EMC)	CFR 47 FCC Part 15 Subpart B EN55032, EN55024, EN55035, EN61000-3-2, EN61000-3-3, EN50130-4

<sup>2</sup> 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	N444L42A	<ul style="list-style-type: none"> <li>4 x N41CJ02 4MP Fixed Eyeball Network Camera</li> <li>1 x N41C1P2 4-channel 4K Network Video Recorder with 2 TB HDD (Smart 1U Casing, 4 PoE Ports)</li> </ul>
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.)

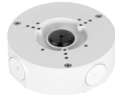
**Package Contents**

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



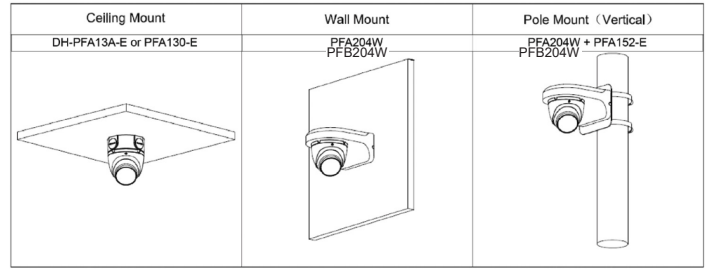
PFB204W Wall Mount Bracket



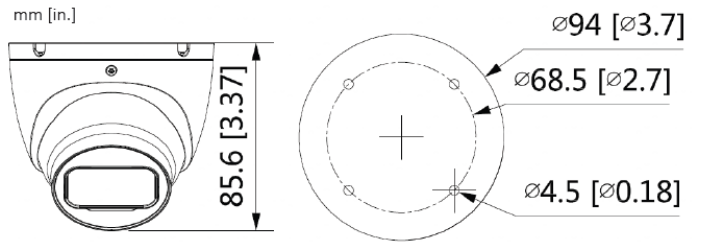
PFA152-E Pole Mount



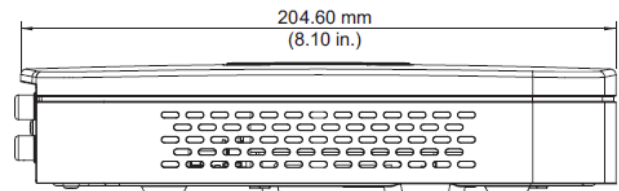
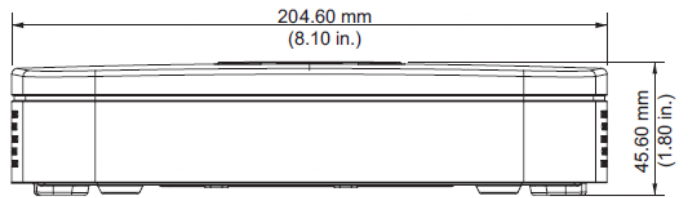
PFH101 Rack-mount Tray



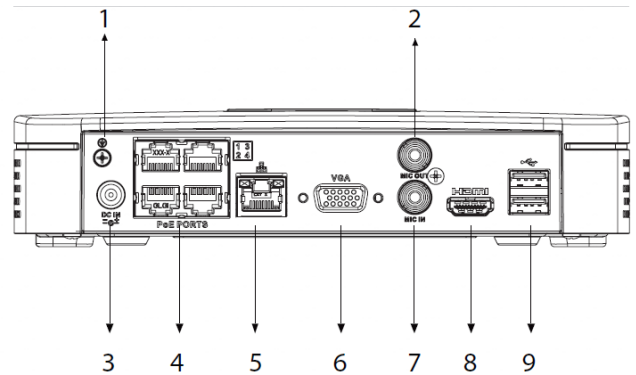
**Dimensions - N41CJ02**



**Dimensions - N41C1P2**



**Rear Panel - N41C1P2**



1	Ground	6	VGA Output
2	Audio Output, RCA (x1)	7	Audio Input, RCA (x1)
3	Power Input	8	HDMI Output
4	PoE Ports, RJ-45 (x4)	9	USB 2.0 Ports (x2)
5	Network Port, RJ-45		