DAHUA TECHNOLOGY

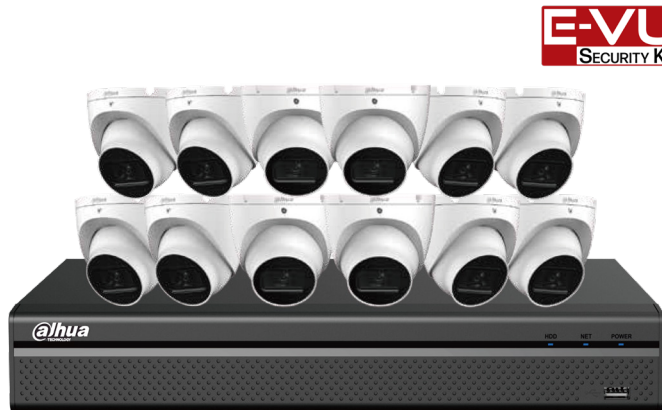# 4K IP E-VU Security System (12 Cameras)

Twelve (12) 8MP Fixed Eyeball Network Cameras with One (1) 4 TB Sixteen-channel 4K Network Video Recorder

8MP Network Cameras
- 8MP at 15 fps Maximum Resolution
- Maximum IR LED Length 30 m (98.43 ft) with Smart IR
- 2.8 mm fixed lens
- Built-in Microphone
- IP67 Ingress Protection

4K Network Video Recorder
- 4 TB Pre-installed Had Disk Drive
- Supports Remote Configuration and Management of Network Cameras
- Smart H.265+ and Smart H.264+ Dual Codec
- Maximum 160 Mbps Incoming 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 security solution. The IP cameras offer the clarity of 8MP 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 b e captured i n 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.

High Efficiency Video Coding (H.265)
The H.265 (ITU-T VCEG) video compression standard offers double the data compression ratio at the same level of video quality, or substantially improved video quality at the same bit rate, as compared to older video compression technologies. H.265 offers such impressive compression by expanding the pattern comparison and difference-coding, improving motion vector prediction and motion region merging, and incorporating an additional filtering step called sample-adaptive offset filtering.

Environmental
With a temperature range of −40° C to +60° C (−40° F to +140° 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° C (+14° F to +131° F).

Technical Specification

N81CJ02 8MP Fixed Eyeball Network Camera

Camera

Image Sensor	1/2.7-in. 8MP Progressive-scan CMOS
Effective Pixels	3840 (H) × 2160 (V)
RAM/ROM	256 MB / 16 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual; 1/3 s to 1/100000 s
Minimum Illumination	Color, 30 IRE: 0.04 lux at F2.0 B/W, 30 IRE: 0.004 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: 105° Vertical: 56° Diagonal: 125°
Close Focus Distance	1.0 m (3.28 ft)

DORI[1] Distance	Detect	Observe	Recognize	Identify
	74.7 m (245.08 ft)	29.9 m (98.10 ft)	14.9 m (48.88 ft)	7.5 m (24.61 ft)

Pan/Tilt/Rotation

Range	Pan: 0˚ to 360˚ Tilt: 0˚ to 78˚ Rotation: 0˚ to 360˚

Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264, H.264B, MJPEG
Streaming Capability	Two (2) Streams
Resolution	3840 × 2160, 3072 × 2048, 3072 ×1728, 2592 × 1944, 2688 × 1520, 3MP (2048 × 1536); 2304 × 1296, 1080p (1920 × 1080), 1.3MP (1280 × 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 x 480), CIF (352 x 240)
Frame Rate	Main Stream	3840 × 2160 at 1 to 15 fps 2688 x 1520 at 1 to 30 fps
	Sub Stream	704 × 480 at 1 to 15 fps
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 kpbs to 8192 Kbps H.265: 12 kpbs to 8192 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°, 90°, 180°, 270° (Supports 90°, 270° with 2688 x 1520 resolution or lower)
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, SDK, API
Max. User Access	6 (Total Bandwidth: 48 MB)
Edge Storage	FTP
Web Viewer	IE, Chrome, Firefox
Management Software	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

Audio

Compression	G.711A, G.711Mu, G.726, PCM
Input	Built-in Microphone

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: 2.3 W (12 VDC), 3.1 W (PoE) Maximum (ICR + H.265 + Maximum Resolution + Main Stream + DWDR + IR Intensity): 4.6 W (12 VDC), 5.6 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

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 (Cont.)

N81CJ02 8MP Fixed Eyeball Network Camera

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)

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	Sixteen (16) Channels
Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA

Analytics+ Recording²

Perimeter Protection	Channels	Eight (8)
	Search	By Channel, Time, and Event Type
Smart Motion Detection+	Channels	Twelve (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 8MP at 30 fps Four (4) Channels of 4MP at 30 fps Eight (8) Channels of 2MP at 30 fps 16 Channels of 2 MP at 15 fps
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

Network

Ethernet	One (1) RJ-45 Port (10/100/1000 Mbps), Self-adaptive
PoE	Sixteen (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
RS232	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	EN62368-1 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

2. The recorder Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality.

Ordering Information

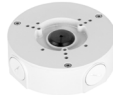| Type	Part Number	Description
4K IP E-Vu Security System	N468L124A	• N81CJ02 8MP Fixed Eyeball Network Camera (x12) • N42C3P4 16-channel 1U 16 PoE 4K, 4 TB HDD Network Video Recorder (x1)
Accessories, optional	DH-PFA13A-E	Junction Box
	PFA130-E	Waterproof Junction Box
	PFB204W	Wall Mount Bracket
	PFA152-E	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
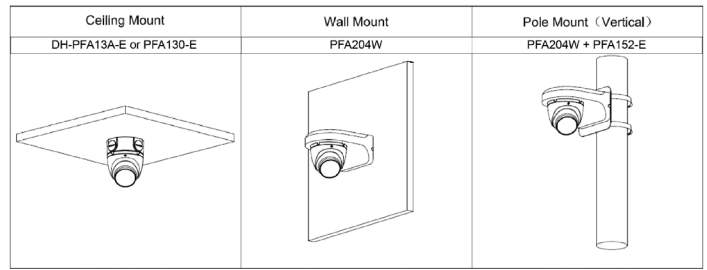Junction Box

PFA130-E
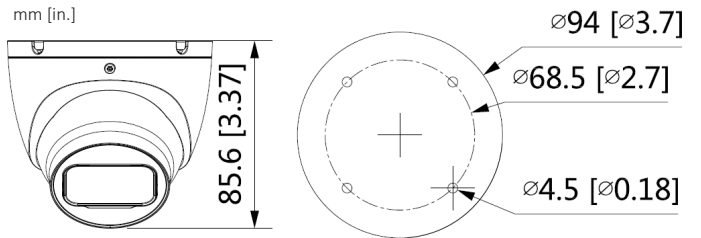Waterproof Junction Box

PFB204W
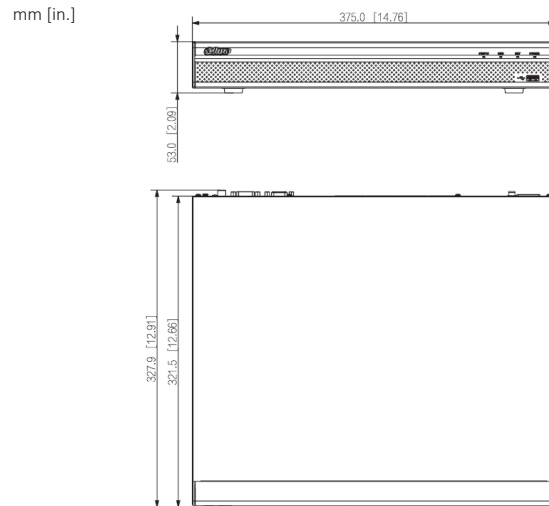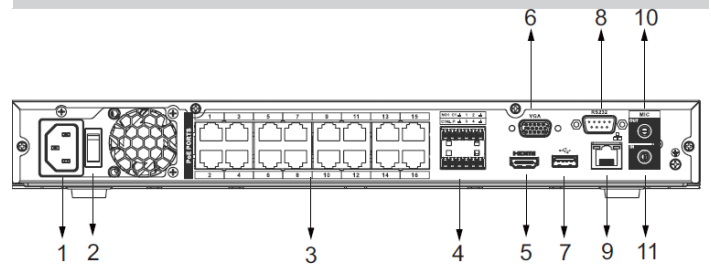Wall Mount Bracket

PFA152-E
Pole Mount

PFH101
Rack-mount Tray

Ceiling Mount	Wall Mount	Pole Mount（Vertical）
DH-PFA13A-E or PFA130-E	PFA204W	PFA204W + PFA152-E

Dimensions - N81CJ02

mm [in.]

85.6 [3.37]

∅94 [∅3.7]

∅68.5 [∅2.7]

∅4.5 [∅0.18]

Dimensions - N42C3P4

mm [in.]

375.0 [14.76]

53.0 [2.09]

327.9 [12.9]

321.5 [12.66]

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)