dahua
TECHNOLOGY

4MP Starlight Network Security System
Four (4) 4MP Eyeball Network Cameras (Black Housing) with One (1) 4-channel 4K NVR

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

Starlight Technology
For challenging low-light applications, Dahua's Starlight low light Technology offers best-in-class light sensitivity, capturing details in low light applications. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Intelligent Video System
IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations and intrusion detection. A camera with IVS quickly and accurately responds to monitoring events in a specific area. Working with IVS-enabled IP cameras, the NVR recognizes and records video that contains IVS data on all IP channels.

Smart IR
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).

4MP Network Cameras

- 4MP (2560 x 1440) at 30 fps Maximum Resolution
- 2.8 mm Fixed Lens
- Maximum IR Length 30 m (98 ft) with Smart IR
- Starlight Technology for Ultra Low-light Applications
- Built-in Microphone
- Intelligent Video System
- IP67 Environmental Protection

4K Network Video Recorder

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

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

N42BJ62-B 4 MP Network Camera

Camera

Image Sensor	1/3-in. CMOS
Effective Pixels	2688 (H) x 1520 (V), 4 MP
ROM/RAM	128 MB / 128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual: 1/30 s to 1/100000 s
Minimum Illumination	Color: 0.008 lux at F1.6 0 Lux with IR on
IR Distance	Up to 30.0 m (98.43 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Two (2)

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm
Max Aperture	F1.6
Angle of View	Horizontal: 102° Vertical: 55° Diagonal: 121°
Iris	Fixed Aperture
Close Focus Distance	0.90 m (2.95 ft)

DORI[1] Distance

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
56.0 m (183.73 ft)	22.40 m (73.49 ft)	11.20 m (36.75 ft)	5.60 m (18.37 ft)

Installation Angle

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 (sub stream only)
Streaming Capability		Two (2) Streams
Resolution		4 MP (2688 x 1520), 2560 x 1440, 2304 x 1296, 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480); VGA (640 ×480); CIF (352 x 240)
Frame Rate	Main Stream	2688 x 1520 at 20 fps or 2560 x 1440 at 30 fps
	Sub Stream	D1 (704 x 480) at 30 fps
Bit Rate Control		CBR, VBR
Day/Night		Auto (ICR), Color, B/W
BLC Mode		BLC, HLC, True WDR (120 dB)
White Balance		Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom
Gain Control		Auto, Gain Priority, Shutter Priority, Manual
Noise Reduction		3D DNR

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.

Motion Detection	Off, On (4 Zones, rectangular)
Region of Interest	Off, On (4 Zones)
Smart IR	Auto, Manual
Digital Zoom	16x
Flip	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (4 Areas, rectangular)

Network

Ethernet	RJ-45 (10/100 Base-T)
Protocol	HTTP, HTTPs, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP
Interoperability	ONVIF (Profile S, G, T), CGI, P2P, Milestone, Genetec
Auto Register	Support
Streaming Method	Unicast, Multicast
Maximum User Access	20 Users /20 Hosts
Edge Storage	Network Attached Storage (NAS), FTP, SFTP, Micro SD Card slot (maximum 256 GB)
Web Viewer	IE, Chrome, Firefox
Management Software	Smart PSS, DSS, DMSS
Mobile Operating System	IOS, Android

Audio

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

Certifications

Safety	EN 60950-1
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B Electromagnetic Compatibility Directive 2014/30/EU

Electrical

Power Supply	12 VDC or PoE (IEEE 802.3af, Class 0)
Power Consumption	< 6.6 W

Environmental

Operating Conditions	−40° C to +60° C (−40° F to +140° F), Less than 95% RH
Storage Conditions	−40° C to +60° C (−40° F to +140° F)
Ingress Protection	IP67

Construction

Casing	Metal
Dimensions	ø121.90 mm × 99.10 mm (ø4.80 in. x 3.90 in.)
Net Weight	0.48 kg (1.10 lb)
Gross Weight	0.65 kg (1.40 lb)

Intelligence

IVS triggers an alarm and takes a defined action for the following events:

Standard Features	• Tampering with the camera. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera.

Premium Features	
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.

Technical Specification

N41C1P2 4K NVR

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

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
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	8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 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, and cybersecurity exception
Analytics+ Alarms	Face detection, perimeter protection (intrusion and tripwire), IVS, people counting, heat map, and SMD alarms
Alarm Actions	Recording, snapshot, audio, buzzer, log, preset, and email

Playback and Backup

Sync Playback	1/4
Search Mode	Time/Date, Alarm, MD and Exact Search (accurate to one 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 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 (Ships with a pre-installed 2 TB HDD)
HDD Mode	Single

Auxiliary Interface

USB	Two (2) USB 2.0 Ports (rear panel)

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 +50° C (+14° F to +122° 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	EN62368-1 UL 62368-1 CAN/CSA C22.2 No.62368-1-14
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B EN55032, EN55024, EN55035, EN61000-3-2, EN61000-3-3, EN50130-4

Ordering Information

Type	Part Number	Description
4 MP Network Security System	NB444E42B	
	• N42BJ62-B	4MP IR Eyeball Network Cameras, Black Housing (x4)
	• N41C1P2	4-channel 4K NVR, 2 TB (x1)
Camera Accessories, optional	DH-PFA130-E-B	Junction Box, black (For use alone)
	DH-PFA151-B	Corner Mount, black (For use with DH-PFB203W-B wall mount)
	DH-PFA152-E-B	Pole Mount, black (For use with DH-PFB203W-B wall mount)
	DH-PFB203W-B	Wall Mount, black (For use alone or with DH-PFA152-E-B)
	DH-PFM321D-US	12 VDC, 1 A Power Adapter

Package Contents (individual devices ship with the following:)

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

Camera Accessories (Optional)
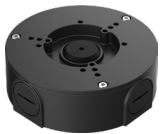
DH-PFA130-E-B Waterproof Junction Box

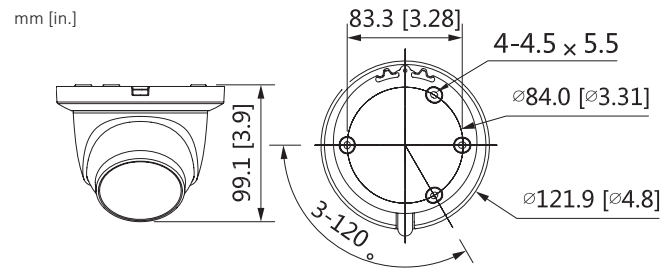DH-PFA151-B Corner Mount

DH-PFA152-E-B Pole Mount
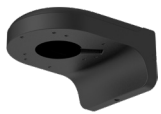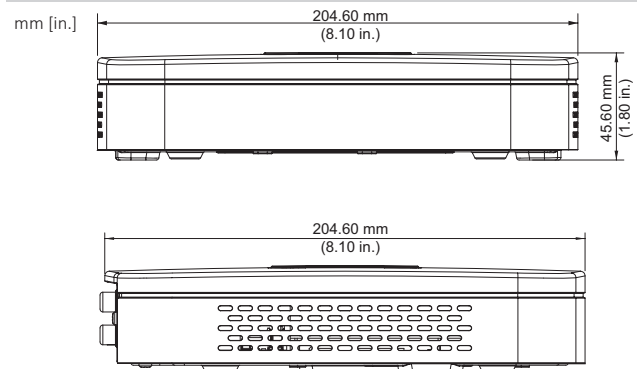
DH-PFB203W-B Wall Mount

DH-PFM321D-US Power Adapter

Junction Mount	Wall Mount	Pole Mount
DH-PFA130-E-B	DH-PFB203W-B	DH-PFA152-E-B+DH-PFB203W-B

Dimensions - 4 MP Network Camera

mm [in.]

83.3 [3.28] · 4-4.5 × 5.5 · ∅84.0 [∅3.31] · 99.1 [3.9] · ∅121.9 [∅4.8] · 3-120°

Dimensions - 4K NVR

mm [in.]

204.60 mm (8.10 in.) · 45.60 mm (1.80 in.)

204.60 mm (8.10 in.)

Rear Panel - 4K NVR
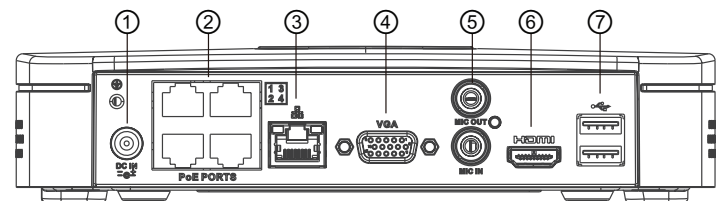
1	Power Input	5	Audio Output MIC Input
2	PoE Ports, RJ-45 (x4)	6	HDMI Output
3	Network Port, RJ-45	7	USB 2.0 Ports (x2)
4	VGA Output		