

4MP Starlight Network Security System

Six (6) 4 MP Eyeball Network Cameras with One (1) 8-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 4 MP 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).

4 MP Network Cameras

- 4 MP (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 $+60^{\circ}\text{C}$ (-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 $+131^{\circ}\text{F}$).

Interoperability

The camera and NVR conform to the ONVIF (Open Network Video Interface Forum) specification, ensuring interoperability between network video products regardless of manufacturer.

Technical Specification**N42BJ62 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)

DORI¹ 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°
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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 x 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	

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 (IEEE802.3af, 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 x 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	<ul style="list-style-type: none"> 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.

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**N41C2P2 4K NVR**

System

Main Processor	Industrial-grade Embedded Processor
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Operating System	Embedded Linux
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Audio and Video

IP Camera Input	Eight (8) Channels
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Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA
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Analytics+ Recording²

Perimeter Protection	Channels	Eight (8)
	Search	By channel, time, event type
SMD+	Channels	Eight (8)
	Search	By target classification (human or vehicle)

Display

Interface	One (1) HDMI One (1) VGA
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Native Output Resolution	3840 x 2160, 1920 x 1080, 1280 x 1024, 1280 x 720
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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
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Multi-screen Display	1/4/8/9
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On-screen Display	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording
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Recording

Video Compression	Smart H.265+, H.265, Smart H.264+, H.264, MJPEG
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Audio Compression	PCM, G.711A, G.711Mu, G.726
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Supported IP Camera Resolution	8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 1080p, 720p, D1
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Maximum Recording Bandwidth	80 Mbps
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Record Mode	Manual Recording; Alarm Recording; SMD Recording; Smart Recording
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Video Detection and Alarm

General Alarms	Motion detection, privacy masking, video loss, scene changing, PIR alarm, IPC external alarm
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Anomaly Alarms	Camera disconnection, storage error, disk full, IP conflict, MAC conflict, login locked, and cybersecurity exception
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Analytics+ Alarms	Face detection, perimeter protection (intrusion and tripwire), IVS, people counting, heat map, and SMD alarms
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Alarm Actions	Recording, snapshot, audio, buzzer, log, preset, and email
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Playback and Backup

Sync Playback	1/4/8
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Search Mode	Time/Date, Alarm, MD and Exact Search (accurate to one second), Smart Search
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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
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Backup Mode	USB Device, Network
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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 Mbps), Self-adaptive
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PoE	Eight (8) Ports (IEEE802.3af/at)
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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
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Maximum User Access	128
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Mobile Operating System	IOS, Android
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Browser	Chrome, IE 9 or later
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Interoperability	ONVIF Profiles S,T,G; CGI, SDK
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Storage

Internal HDD	One (1) SATA III Port, Up to 10 TB capacity per HDD (Ships with a pre-installed 2 TB HDD)
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HDD Mode	Single
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Auxiliary Interface

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

Power Supply	53 VDC, 1.36 A
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NVR Power Consumption	< 10 W, without HDD
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Total PoE Budget	25.5 W single port, 72 W total
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Environmental

Operating Conditions	-10° C to +50° C (+14° F to +122° F), 10% to 93% RH
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Storage Conditions	0° C to +40° C (32° F to 104° F), 30% to 85% RH
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Construction

Dimensions (W x L x H)	270.0 mm x 206.50 mm x 47.50 mm (10.63 in. x 8.12 in. x 1.80 in.)
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Net Weight	0.70 kg (1.54 lb), without HDD
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Gross Weight	1.80 kg (3.97 lb), without HDD
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Certifications

Safety	EN62368-1 UL 62368-1 CAN/CSA C22.2 No.62368-1-14
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Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B EN55032, EN55024, EN55035, EN61000-3-2, EN61000-3-3, EN50130-4
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² The recorder Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality.