

NVR4216/4232-16P-4KS2

16/32 Channel 1U 16PoE 4K&H.265 Lite Network Video Recorder



- H.265/H.264 codec decoding
- Max 200Mbps Incoming Bandwidth
- Up to 8MP Resolution for Preview and Playback
- HDMI/VGA simultaneous video output
- Support IPC UPnP, 16PoE ports
- Support ANR technology to enhance the storage reliability when the network break down



System Overview

Dahua's NVR4000-4KS2 is the first Lite series NVRs which can support 4K and H.265. And, it has the most reasonable price and best quality. This Lite NVR provides up to 8MP resolution. For applications where details are critical for identification, it provides a powerful image performance with up to 4K resolution. Additionally, the NVR features a mouse shortcut operation menu, remote management and control, centre storage, edge storage, and back up storage.

Designed as a cost-effective, easy installation, this NVR is ideal for a wide range of applications such as public safety, water conservancy, transportation, city centers, education, and financial institutions.

The NVR is compatible with numerous third-party devices making it the perfect solution for surveillance systems with or without a video management system (VMS). Its open architecture supports multi-user access and is compatible with ONVIF 2.4, enabling interoperability when combined with IP cameras.

Functions

4K Resolution

The NVR supports 4K ultra HD resolution (3840 x 2160) for recording, live viewing and playback.

Intelligent Video System (Optional)

Working with built-in intelligent video analytics IP cameras, the NVR has the ability to detect and analyze moving objects for improved video surveillance. The NVR provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed, People Counting, ideal for business intelligence, and Face Detection, for searching or identification of individuals.

Smart Add

With the Smart Add function, the installation of IP system is as easy as an analog system, no matter the NVR with or without a PoE switch embedded. It should be noted that the NVR has to be in the same router as cameras.

ANR (Automatic Network Replenishment Technology)

Video record in SD card in IP cameras when the network breaks down, and after the network recovered, the video will be transferred to NVR and then recorded in it.

Easy4ip

You can monitor at anytime and anywhere with Easy4ip. With this function, you can manage your devices more convenient.

Technical Specification

System

Main Processor	Quad-core embedded processor
Operating System	Embedded LINUX

Display

Interface	1 HDMI, 1 VGA
Resolution	3840×2160, 1920×1080, 1280×1024, 1280×720, 1024×768
Multi-screen Display	1/4/8/9/16
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Alarm out, Video Push, Email, FTP, Snapshot, Buzzer & Screen tips
Video Detection	Motion Detection, MD Zones: 396(22×18), Video Loss & Tampering
Alarm input	4 Channel, Low Level Effective, Green Terminal Interface
Relay Output	2 Channel, NO/NC Programmable, Green Terminal Interface

Playback and Backup

Playback	1/4/8/16
Search Mode	Time/Date, Alarm, MD & Exact search (accurate to second), Smart search
Playback Function	Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device/Network

Storage

Internal HDD	2 SATA III Port, Up to 6 TB capacity for each HDD
HDD Mode	Single
eSATA	N/A

Auxiliary Interface

USB	2 USB Ports (1 USB2.0, 1 USB3.0)
RS232	N/A
RS485	N/A

Third-party Support

Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, and more
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Audio and Video

IP Camera Input	16/32 Channel
Two-way Talk	1 Channel Input, 1 Channel Output, RCA

Recording

Compression	H.265/H.264
Resolution	8Mp/ 6Mp/ 5MP/ 4MP/ 3MP/ 1080P/ 1.3MP/ 720P etc.
Record Rate	200Mbps
Bit Rate	16Kbps ~ 20Mbps Per Channel
Record Mode	Manual, Schedule (Regular, Continuous), MD (Video detection: Motion Detection, Tampering, Video Loss), Stop
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec

Network

Interface	1 RJ-45 Port (10/100/1000Mbps)
Ethernet Port	1 Independent 1000Mbps Ethernet Port
PoE	16 ports (IEEE802.3at/af)
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, IP Search (Support Dahua IP camera, DVR, NVS, etc.), Easy4ip
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 2.4, CGI Conformant

Electrical

Power Supply	AC100V ~ 240V, 50 ~ 60 Hz
Power Consumption	NVR: <13.2W (Without HDD) PoE: Max 25.5w for single port, 130w in total

Environmental

Operating Conditions	-10°C ~ +55°C (+14°F ~ +131°F), 86 ~ 106kpa
Storage Conditions	-20°C ~ +70°C (-4°F ~ +158°F), 0 ~ 90% RH

Construction

Dimensions	1U, 375mm×327.5mm×53mm (14.8" x 12.9" x 2.1")
Net Weight	2.7kg (6.0 lb) (without HDD)
Gross Weight	4.4kg(9.7lb)(without HDD)

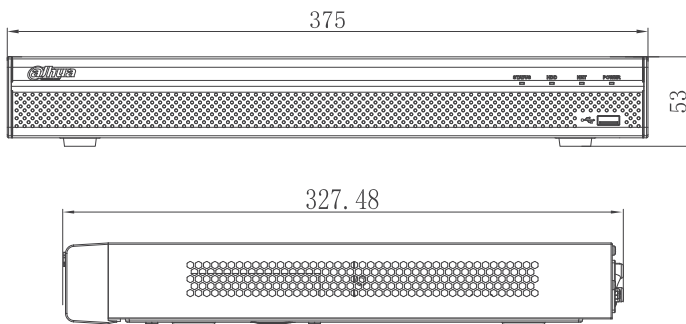
Certifications

CE	EN55032, EN55024, EN50130-4, EN60950-1
FCC	Part 15 Subpart B, ANSI C63.4-2014
UL	UL60950-1+CAN/CSA C22.2 No.60950-1

Ordering Information

Type	Part Number	Description
16 Channel NVR	NVR4216-16P-4KS2	16 Channel 1U 16PoE 4K&H.265 Lite Network Video Recorder
32 Channel NVR	NVR4232-16P-4KS2	32 Channel 1U 16PoE 4K&H.265 Lite Network Video Recorder
Accessories	N/A	N/A

Dimensions (mm)



DH-IPC-HDW2431EM-AS-S2

4MP WDR IR Eyeball Network Camera



- 4MP, 1/3" CMOS image sensor, low illuminance, high image definition
- Outputs 4MP (2560 × 1440)@25/30 fps, Max. supports 4MP (2688 × 1520) @ 20 fps
- H.265 codec, high compression rate, ultra-low bit rate
- Built-in IR LED, max IR distance: 30 m
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
- Intelligent detection: Intrusion, tripwire
- Abnormality detection: Motion detection, video tampering, no SD card, SD card full, SD card error, network disconnected, IP conflict, illegal access, voltage detection
- Supports max. 256 GB Micro SD card, built-in Mic
- 12V DC/POE power support
- IP67 protection



Series Overview

With upgraded H.265 encoding technology, Dahua Lite series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better color image in the condition of low illumination. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

Smart (H.265+ & H.264+)

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

Wide dynamic range (WDR)

Dahua adopts advanced Wide Dynamic Range (WDR) technology. You can get clear details in the environment of strong brightness contrast. In high brightness and back-light environment, bright region and dark region with strong light source, you can also get clear images.

Starlight

Dahua Starlight technology mainly applies to the environment of low illumination, and it can provide clear colorful video. Even in the environment of min. illumination, the technology can guarantee the good image effect.

Intelligent Video Analysis (IVS)

With advanced video algorithm, Dahua camera supports intelligent detection, such as tripwire and intrusion and so on.

Protection (IP67, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.

Wide voltage: The camera allows $\pm 30\%$ input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera

Image Sensor	1/3" 4Megapixel progressive CMOS
Effective Pixels	2688 (H) × 1520 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Min. Illumination	0.01 Lux @ F1.6
IR Distance	30 m (98.43 ft)
IR On/Off Control	Auto/Manual
IR LEDs Number	2 (IR LED)
Pan/Tilt/Rotation Range	Horizontal: 0°–360° Vertical: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed				
Mount Type	M12				
Focal Length	2.8 mm 3.6 mm				
Max. Aperture	F1.6 F1.6				
Field of View	2.8 mm: Horizontal: 102.0° Vertical: 55.0° Diagonal: 121.0° 3.6 mm: Horizontal: 84.0° Vertical: 45.0° Diagonal: 100.0°				
Iris Type	Fixed aperture				
Close Focus Distance	2.8 mm: 0.9 m (2.95 ft) 3.6 mm: 1.6 m (3.61 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	56 m (183.73 ft)	22.4 m (73.49 ft)	11.2 m (36.75 ft)	5.6 m (18.37 ft)
	3.6 mm	80 m (262.47 ft)	32.0 m (104.99 ft)	16.0 m (52.49 ft)	8.0 m (26.25 ft)

Smart event

General IVS Analytics	Intrusion; tripwire
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Video

Video Compression	H.265; H.264; H.264B; MJPEG
Smart Codec	Smart H.265+ / Smart H.264+
Video Frame Rate	Main stream: 2688 × 1520 (1 fps-20 fps) 2560 × 1440 (1 fps-25/30 fps) Sub stream: 704 × 576 (1 fps-25 fps) 704 × 480 (1 fps-30 fps)
Stream Capability	2 streams

Resolution	2688 × 1520 (2688 × 1520); 2560 × 1440 (2560 × 1440); 2304 × 1296 (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 Kbps–6144 Kbps H.265: 12 Kbps–6144 Kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest(Rol)	Yes (4 areas)
Smart IR	Yes
Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 1080p resolution.)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711A; G.711Mu; G.726

Network

Network	RJ-45 (10/100 Base-T)
Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; QoS; UPnP; NTP; RTMP; Multicast; HTTPS; SFTP; 802.1x; ICMP; IGMP
Interoperability	ONVIF(Profile S/Profile G);CGI;P2P;Milestone;Genetec
User/Host	20
Edge Storage	Dahua Cloud; FTP; Micro SD Card (support max. 256 GB); NAS
Browser	IE Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

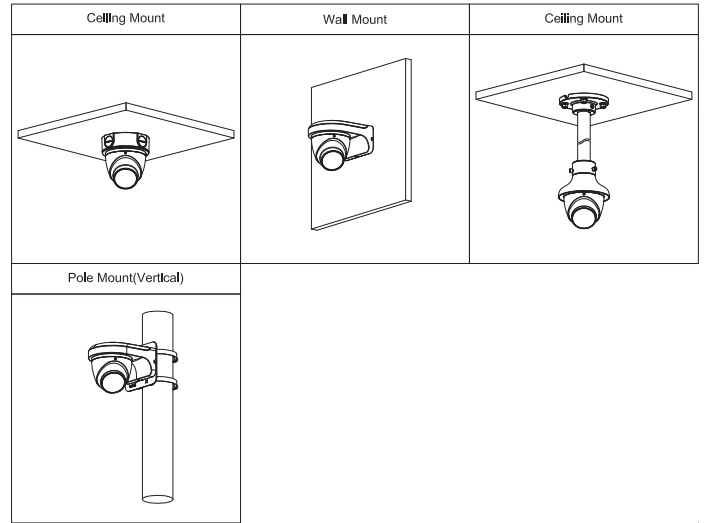
Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07
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Power

Power Supply	12V DC/PoE (802.3af)
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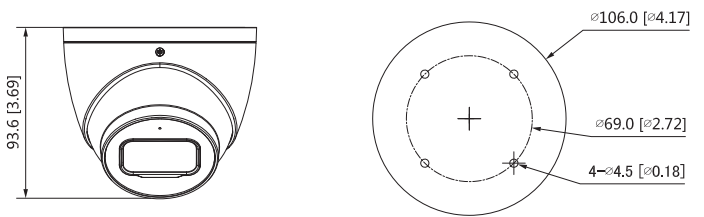
Power Consumption	< 6.6W
Environment	
Operating Conditions	-40°C to +60°C (-40°F to +140°F)/less than ≤ 95%
Storage Temperature	-40°C to +60°C (-40°F to +140°F)
Protection	IP67
Structure	
Casing	Metal
Dimensions	93.6 mm × Φ106 mm (3.7" × Φ4.2")
Net Weight	530 g (1.1 lb)
Gross Weight	800 g (1.7 lb)



Ordering Information

Type	Part Number	Description
4MP Camera	DH-IPC-HDW2431EM-AS-S2	4MP WDR IR Eyeball Network Camera, PAL
Accessories (optional)	PFA130-E	Junction Box
	PFB204W	Wall Mount
	PFA152-E	Pole Mount
	PFA106	Mount Adapter
	PFB220C	Cell Mount
	PFM321D	DC12V1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
	PFM114	TLC SD Card

Dimensions (mm[inch])



Accessories

Optional:



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