alhua TECHNOLOGY

DHI-NVR5416/5432/5464-4KS2
16/32/64 Channel 1.5U 4HDDs 4K & H.265 Pro Network Video Recorder

- 16/32/64-channel IP video access
- Smart H.265+/Smart H.264+/H.265/H.264/MJPEG; H.265 auto switch
- Max 320 Mbps incoming bandwidth
- Up to 12MP resolution for live view and playback
- 1-channel fisheye dewarping (AI by NVR)
- AI by Camera: Perimeter protection; face detection and recognition; SMD Plus; video metadata; ANPR; people counting; stereo analysis; crowd distribution; heat map

Dahua's new NVR5000-4KS2 network video recorder delivers excellent performance and high recording quality that is ideally suitable for IP video surveillance applications. This professional NVR adopts powerful processor, providing the capability of 4K resolution processing for applications where image details are highly required. Additionally, the NVR can be served as edge storage, central storage or backup storage with an intuitive shortcut operation menu for remote management and control.

Series Overview

The NVR is compatible with numerous third-party devices, which make it the perfect solution for surveillance systems that work independently of video management system (VMS). It features an open architecture that supports multi-user access and is compatible with ONVIF 2.4 protocol, enabling interoperability with 4K cameras.

Functions

Perimeter Protection by Camera
Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

Face Recognition by Camera
Dahua face recognition technology extracts the features of captured faces and compares them with that in face database to recognize the person identity.
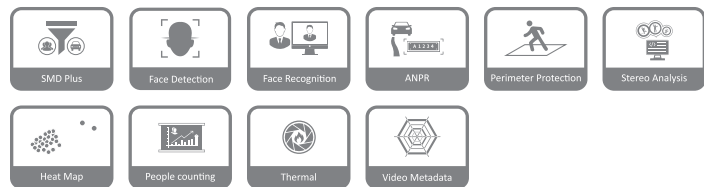
SMD Plus by Camera
With intelligent algorithm, Dahua smart motion detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

Video Metadata by Camera
With deep learning algorithm, Dahua video metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

ANPR by Camera
With deep learning algorithm, Dahua ANPR technology can recognize the number plate information of vehicles in the image with ANPR cameras. Support block/allowlist mode, searching target vehicles from recorded video.

Fisheye Dewarping
Fisheye dewarping solves the problem of distortion in the circular panoramic view. The device offers various dewarping modes for different installations and configurations that enhance the video, in both live or playback modes. Each dewarping mode offers options to adjust each scene.

People Counting by Camera
With deep learning algorithm, Dahua People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with management platform, it outputs yearly/monthly/weekly/daily reports to meet your requirements.

Stereo Analysis by Camara
With deep learning algorithm and scene 3-dimensional information, Dahua stereo analysis technology can recognize people's behaviors, such as fall detection, violence detection, strand detection, and space exception, and then generates alarm signals and triggers linkage.

DMSS
The DMSS app is available on the iOS App Store and Google Play. It makes surveillance easy and simple, allowing you to remotely access back-end devices, view live video, receive event push notifications, and search for recorded videos from an iPhone, iPad, or Android phone at anytime from virtually anywhere.

Technical Specification

System

Main Processor	Industrial embedded micro-processor
Operating System	Embedded Linux
Operation Interface	Web; local GUI

Perimeter Protection by Camera

Performance	16/20/20 channels
AI Search	Search for pictures by channel, time and event type

Face Recognition by Camera

Performance	14 channels
Face Attributes	6 attributes: Gender; age; glasses; expression; mouth mask; beard
AI Search	Search for pictures by channel, time and face attributes

SMD Plus by Camera

Performance	16/32/64 channels
AI Search	Search by target classification (human, vehicle)

Video Metadata by Camera

Performance	16 channels
Human Body	Top; top color; bottom; bottom color; hat; bag; gender; age; umbrella
Vehicle	Plate No.; type; color; vehicle type; logo; plate color; ornament; calling; seatbelt; region
Non-motor Vehicle	Type; color; number of passengers; helmet
AI Search	Supports searching for target video by metadata

ANPR by Camera

Performance	4 channels

Stereo Analysis by Camera

Performance	16 channels
AI Search	Search by target classification (fall detection; people approach detection; people No. exception detection; people staying detection; violence detection)

Video

Access Channel	16/32/64
Network Bandwidth	320 Mbps for access, 320 Mbps for storage and 320 Mbps for forwarding
Resolution	12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080p, 1.3MP, 720p, D1, and more
Decoding Capability	16-channel@1080P (30 fps)
Video Output	HDMI1: 3840 × 2160; 1920 × 1080; 1280 × 1024; 1280 × 720 VGA1: 1920 × 1080; 1280 × 1024; 1280 × 720 HDMI2/VGA2: 1920 × 1080 VGA1/HMDI1 homologous output, VGA2/HDMI2 homologous output, and VGA1/HDMI1 and VGA2/HDMI2 supports heterogeneous output

Multi-screen Display	1st Screen: 16-channel: 1/4/8/9/16
	        32-channel: 1/4/8/9/16/25/36
	        64-channel: 1/4/8/9/16/25/36/64
	
	2nd screen: 1/4/8/9/16

Third Party Camera Access

Third Party Camera Access	Panasonic, Sony, Samsung, Axis, Pelco, Arecont, ONVIF, Canon and more

Compression

Video	Smart H.265+; Smart H.264+; H.265; H.264; MJPEG
Audio	PCM; G.711A; G.711U; G.726

Network

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; PPPoE; DDNS; FTP; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, and more.) ; P2P
Mobile Phone Access	Android; iOS
Interoperability	ONVIF (profile T/S/G); CGI; SDK
Browser	Chrome; IE9 or later; Firefox

Record Playback

Multi-channel Playback	1/4/9/16
Record Mode	Manual; schedule (general; MD; alarm; MD & alarm; intelligent; POS)
Storage Method	Local HDD and network
Backup	USB device
Playback Function	1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (cut/file) ; partially enlarge; audio on/off

Storage

Disk Group	Yes

Alarm

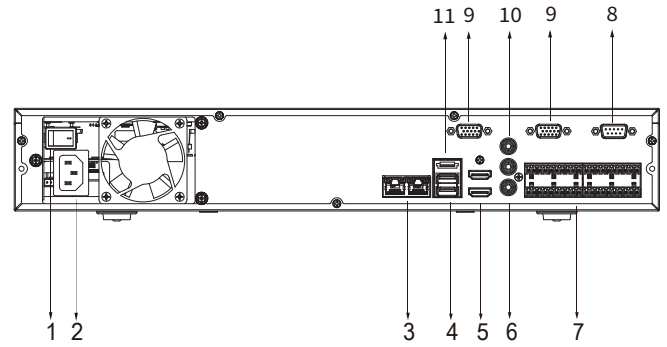|	
General Alarm	Motion detection; privacy masking; video loss; local alarm; PIR alarm; IPC alarm
Anomaly Alarm	Camera offline; storage error; full storage; IP conflict; MAC conflict; login lock; network security anomaly
Intelligent Alarm	Perimeter protection; face detection; face recognition; SMD; video metadata (human; motor-vehicle; non-motor vehicle) ; ANPR; people counting; stereo analysis; crowd distribution; heat map
Alarm Linkage	Record; snapshot; IPC external alarm output; buzzer; log; preset; email

External Port

Audio Input	1 channel, RCA connector
Audio Output	2 channels, RCA connector, which supports voice intercom output
HDD	4 SATA III ports, up to 10 TB for a single HDD. The maximum HDD capacity varies with environment temperature
Alarm Input	16 channels
Alarm Output	6 channels
eSATA	1 eSATA
RS-232	1 channel, used to debug and pass through serial data
RS-485	1 channel, used to control PTZ, and it supports multiple protocols
USB	1 front USB 2.0 port, 2 rear USB 3.0 ports

HDMI	2
VGA	2
Network	2 RJ-45 10/100/1000 Mbps self-adaptive Ethernet ports

General Parameter

Power Supply	Single, 100V–240V AC, 50 Hz–60 Hz
Power Consumption	< 16.7W (without HDD)
Net Weight	4.3 kg (9.5 lb) (without HDD)
Gross Weight	7 kg (15.4 lb) (without HDD)
Product Dimensions	440 mm × 412.2 mm × 76.0 mm (17.3" × 16.2" × 3.0")
Package Dimensions	522 mm × 492 mm × 200 mm (20.6" × 19.4" × 7.9")
Operating Temperature	-10°C to +55°C (+14°F to +131°F)
Storage Temperature	0°C to +40°C (+32°F to +104°F)
Operating Humidity	10%–93% (RH)
Storage Humidity	30%–85% (RH)
Operating Altitude	3,000 m (9,843 ft)
Certifications	CE: EN55032; EN55024; EN50130-4; EN60950-1 FCC: Part 15 Subpart B; ANSI C63.4-2014 UL: UL 60950-1

Panels

1	Power Switch	2	Power Input
3	Network Ports	4	USB Ports
5	HDMI Ports	6	AUDIO IN, RCA Connector
7	Alarm In/Out	8	RS-232 Port
9	VGA Ports	10	AUDIO OUT, RCA Connector
11	eSATA Port		

Ordering Information

Type	Model	Description
16 Channel NVR	DHI-NVR5416-4KS2	16 Channel 1.5U 4K & H.265 Pro Network Video Recorder
32 Channel NVR	DHI-NVR5432-4KS2	32 Channel 1.5U 4K & H.265 Pro Network Video Recorder
64 Channel NVR	DHI-NVR5464-4KS2	64 Channel 1.5U 4K & H.265 Pro Network Video Recorder

Dimensions (mm[inch])