

DHI-NVR5424-24P-EI

24CH 1.5U 24POE 4HDDs WizSense Network Video Recorder



Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

Series Overview

The NVR5000-EI series offers outstanding performance and high-grade recording technology that make it ideal for IP video surveillance applications. It has a powerful processor, that offers high access and forwarding bandwidth and strong decoding capabilities that together produce unimpeded streams. Thanks to its built-in AI chip and Dahua's advanced deep learning algorithms, the NVR supports a variety of AI functions, such as high-precision face recognition and perimeter protection. They shorten the response time to events and make videos more interactive. This NVR is compatible with numerous third-party devices, making it a great solution for surveillance systems that work with Video Management Software (VMS).

Functions

AcuPick

This industry-leading search technology effectively utilizes both front-end and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improves alarm accuracy.

- Supports Smart H.265+, H.265, Smart H.264+, H.264 and MJPEG decoding formats.
- Max. decoding capability: 32 × 1080p@30 fps
- Max. 384/384/384 Mbps incoming/recording/outgoing bandwidth.
- Supports IP cameras with a resolution up to 32 MP.
- Supports AcuPick with up to 24 channels.
- AI by recorder: supports 2-channel face detection and recognition, up to 20 face databases and 20,000 face images; 4-channel perimeter protection, and 8-channel SMD Plus.
- AI by Camera supports face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, stereo analysis, heat map, and people counting.
- Supports N+M cluster, ISCSI.
- Supports EPTZ, and one-click arming and disarming.



Face Recognition

Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database.

Heat Map by Camera

Dahua heat map technology is used to display the crowd density and people appearance probability. Export and display the crowd status by different colors. Generally, the crowd status is the statistics of people quantity in space and time dimensions.

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 blacklist/allowlist mode, searching target vehicles from recorded video.

SMD Plus

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.

Technical Specification

System

Main Processor	Industrial-grade processor
Operating System	Embedded Linux
Operating Interface	Web, Local GUI

AI

AI by Recorder	Face detection; face recognition; perimeter protection; SMD
AI by Camera	Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD; stereo analysis; crowd distribution; people counting; ANPR; heat map
AcuPick AI by Camera + Recorder	Max. 24-channel, 1 combined event per channel

Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	4 channels, 10 IVS rules for each channel
Perimeter Performance of AI by Camera (Number of Channels)	All channels (32 targets/s)

Face Detection

Face Attributes	6 attributes
Face Detection Performance of AI by Recorder (Number of Channels)	2 channels (up to 12 face images/s each channel)
Face Detection Performance of AI by Camera (Number of Channels)	16 channels

Face Recognition

Face Database Capacity	Up to 20 face databases with 20,000 images, with a total capacity of 2.5 G.
Face Recognition Performance of AI by Recorder (Number of Channels)	1. 16-channel FD (by camera) + FR (by recorder), image stream: 16 face images/s 2. 2-channel FD (by recorder) + FR (by recorder), video stream: 12 face images/s
Face Recognition Performance of AI by Camera (Number of Channels)	16 channels

SMD Plus

SMD Plus by Recorder	8 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD Plus by Camera	All channels (64 targets/s)

Video Metadata

Metadata Performance of AI by Camera (Number of Channels)	8 channels
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People Attributes	9 human body attributes
Motor Vehicle Attributes	9 attributes
Non-motor Vehicle Attributes	4 attributes

Vehicle License Plate Comparison

ANPR by Camera (Number of Channels)	All channels (32 targets/s)
License Plate Database Capacity	1. Create up to 20,000 plate numbers. 2. Blocklist and allowlist

Audio and Video

Access Channel	24 channels
Network Bandwidth	AI disabled: 384 Mbps incoming, 384 Mbps recording and 384 Mbps outgoing AI enabled: 200 Mbps incoming, 200 Mbps recording and 200 Mbps outgoing
Resolution	32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF; QCIF
Decoding Capability	AI disabled: 2-channel 32 MP@25 fps; 2-channel 24 MP@25 fps; 4-channel 16 MP@30 fps; 5-channel 12 MP@30 fps; 8-channel 8 MP@30 fps; 10-channel 6 MP@30 fps; 12-channel 5 MP@30 fps; 16-channel 4 MP@30 fps; 24-channel 1080p@30 fps AI enabled: 1-channel 32 MP@25 fps; 1-channel 24 MP@25 fps; 2-channel 16 MP@30 fps; 4-channel 12 MP@30 fps; 6-channel 8 MP@30 fps; 8-channel 6 MP@30 fps; 8-channel 5 MP@30 fps; 12-channel 4 MP@30 fps; 24-channel 1080p@30 fps
Video Output	2 VGA, 2 HDMI VGA:1920 × 1080, 1280 × 1024, 1280 × 720 HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 Heterogeneous video source output for HDMI1 and HDMI2 Simultaneous video source output for VGA1 and HDMI1 Simultaneous video source output for VGA2 and HDMI2
Multi-screen Display	Main screen: 1/4/8/9/16/25 Sub screen: 1/4/8/9/16
Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Hanwha

Compression Standard

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Audio Compression	G.711a; G.711u; PCM; G726

Network

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; IPv6; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; FTP; DDNS; SNMP; Alarm Server; P2P; Auto Registration; IP Search (Supports IP camera, DVR, NVS, etc.); ISCSI
Mobile Phone Access	iOS; Android
Interoperability	ONVIF 22.12(Profile T; Profile S; Profile G); CGI; SDK
Browser	Chrome; IE; Safari; Edge; Firefox

Recording Playback

Multi-channel Playback	Up to 16 channels
Record Mode	General, motion detection; intelligent; alarm; POS

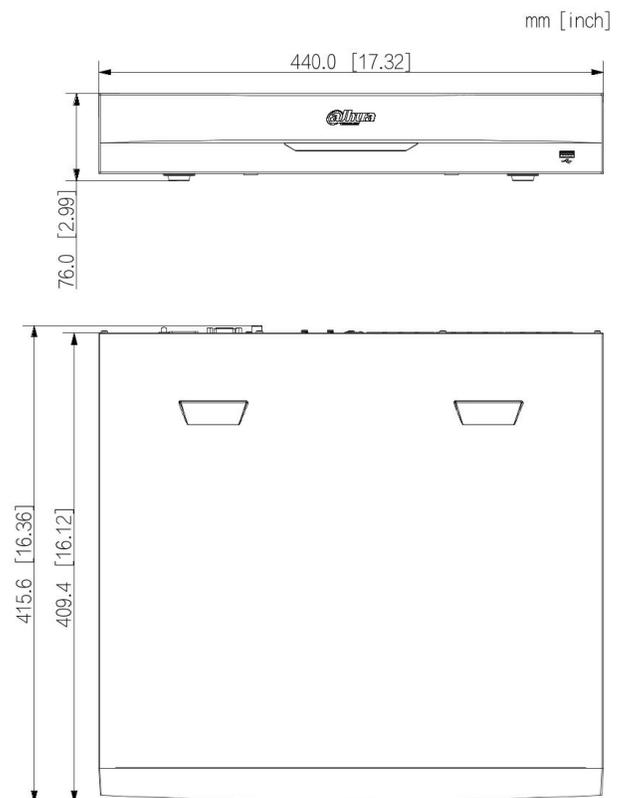
Backup Method	USB device and network
Playback Mode	Instant playback; general playback; event playback; tag playback; smart playback
Storage	
Disk Group	YES
Alarm	
General Alarm	Motion detection; local alarm; alarm box; camera external alarm; network alarm; scene changing; PIR alarm; thermal alarm
Anomaly Alarm	Error (no disk, disk error, low space, low quota space; abnormal disk health; network disconnection; IP conflict; MAC conflict; abnormal fan speed); video loss; video tampering; camera offline; audio detection
Intelligent Alarm	Face detection; face recognition; video metadata (human, motor vehicle, and non-motor vehicle); perimeter protection; license plate comparison
Alarm Linkage	Record; snapshot (panoramic); local alarm output; IPC external alarm output; access controller; audio; buzzer; log, preset; email
Port	
Audio Input	1-channel RCA
Audio Output	2-channel RCA
Alarm Input	16 channels
Alarm Output	6 channels (1-channel 12 V 1 A output)
Disk Interface	4 SATA ports. Each disk can contain up to 20 TB. This limit varies depending on the environment temperature.
eSATA	1
RS-232	1
RS-485	1 (half-duplex serial communication)
USB	3 (1 front USB 2.0 port, 2 rear USB 3.0 ports)
HDMI	2
VGA	2
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)
PoE Port	24 ports, 10/100 Mbps, IEEE 802.3 af/at, 1-8 ports support ePoE
General	
Power Supply	100–240 VAC, 50/60 Hz
Power Consumption	<13 W (without HDD) Total output power of PoE is 210 W, the maximum output power of a single port is 25.5 W
Net Weight	4.63 kg (10.21 lb)
Gross Weight	6.78 kg (14.95 lb)
Product Dimensions	440.0 mm × 415.6 mm × 76.0 mm (17.32" × 16.36" × 2.99") (W × D × H)
Packaging Dimensions	529.0 mm × 499.0 mm × 211.0 mm (20.83" × 19.65" × 8.31") (W × D × H)
Operating Temperature	–10 °C to +55 °C (14 °F to +131 °F)

Storage Temperature	–20 °C to +60 °C (–4 °F to +140 °F)
Operating Humidity	10%–93% (RH), non-condensing
Installation	Rack or desktop
Certifications	Class A CE-EMC: EN 55032:2015+A1:2020; EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A1:2019+A2:2021; EN 55035:2017+A11:2020; EN 50130-4:2011+A1:2014 CE-LVD: EN 62368-1:2014

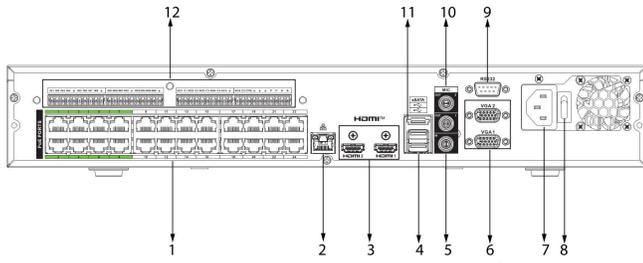
Ordering Information

Type	Model	Description
NETWORK VIDEO RECORDER	DHI-NVR5424-24P-EI	24CH 1.5U 24POE 4HDDs WizSense Network Video Recorder

Dimensions (mm[inch])



Panels



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|-------------------------|---------------------------|
| 1 PoE Ports | 2 Network Port |
| 3 HDMI Ports | 4 USB Ports |
| 5 MIC IN, RCA Connector | 6 VGA Ports |
| 7 Power Input | 8 Power Switch |
| 9 RS-232 Port | 10 MIC OUT, RCA Connector |
| 11 eSATA Port | 12 Alarm In/Out |