DHI-NVR5216-16HP-AI/ANZ-PRO

16CH 1U 16PoE 2HDDs WizMind Network Video Recorder

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS,NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

Series Overview

With the innovation and advancement of Xinghan Large-Scale Model technology, Dahua makes a landmark launch of the WizSeek NVR. It achieves efficient alignment and collaborative understanding between images and natural language, empowering diverse applications such as text-to-image search with WizSeek and the Text-Defined Alarms feature. These capabilities make it ideally suited for a wide range of scenarios, including public safety and security, retail businesses, smart home, residential communities and more.

Functions

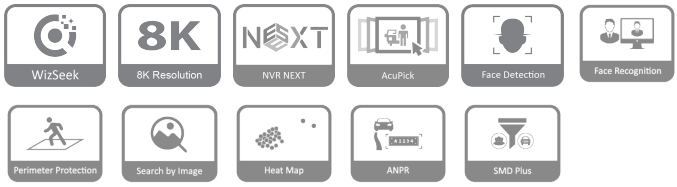
WizSeek

Powered by Xinghan large-scale AI model, WizSeek enables natural-language video search for human, vehicle, object, and event with high accuracy, while reducing investigation time by transforming manual reviews into instant results.

NVR NEXT

With its enhanced system, the NVR introduces NVR NEXT, a user-friendly GUI featuring a modular design to improve operation efficiency and streamline workflows, catering to the needs of small and medium-sized businesses.

- Supports Smart H.265+, H.265, Smart H.264+, H.264 and MJPEG decoding formats.
- Max. decoding capability: 40 × 1080p@30 fps or 16 × 5 MP@30 fps.
- Max. 512/512/384 Mbps incoming/recording/outgoing bandwidth.
- Supports IP cameras with a resolution up to 32 MP.
- Supports 8K HDMI output.
- Intelligent analytics based on Xinghan Large-Scale AI Models
- AI by Recorder supports 8-channel face detection and recognition, up to 20 face databases and 200,000 face images; 8-channel metadata; 8-channel AcuPick; 16-channel perimeter protection;
- AI by Camera supports face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, stereo analysis, heat map, people counting and AcuPick
- Supports N+M cluster, ISCSI.
- Supports EPTZ, and one-click arming and disarming.



AcuPick

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

Face Detection

Face detection is to detect if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.

Face Recognition

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

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.

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; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD; AcuPick; WizSeek; Texted-Defined Alarming
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; PPE detection; AcuPick
AcuPick Performance of AI by Recorder (Number of Channels)	Xinghan Large-Scale AI Models enabled：8 channels Xinghan Large-Scale AI Models disabled：16 channels
AcuPick Performance of AI by Camera (Number of Channels)	All channels (36 targets/s)

WizSeek

Performance	1. Compatible with cameras that support AcuPick/IVS/Metadata/SMD, it can meet full-channel WizSeek（Max 16 targets per sec）. 2. Compatible with normal cameras, after enabling AcuPick/Metadata by NVR, it can offer up to 8-channel WizSeek（Max 16 targets per sec）. 3. Compatible with normal cameras, after enabling IVS by NVR, it can offer up to 16-channel WizSeek（Max 16 targets per sec）. 4. Modeling capability: up to 1,382,400 targets per day.
Search Language	English;TradChinese;Italian;Spanish;Japanese;Russian;French;German;Portugal;Turkey;Poland;Romanian;Hungarian;Finnish;Korean;Dansk;Czechish;Bulgaria;Slovenia;Dutch;Greek;Ukrainian;Swedis;Serbian;Arabic;Thai;Hebrew;Norwegian;SpanishEU;Indonesian;PortugalBR;Vietnam;Cambodia

Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	16 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)	Xinghan Large-Scale AI Models enabled：8 channels (up to 12 face images/s each channel) Xinghan Large-Scale AI Models disabled：16 channels (up to 12 face images/s each channel)
Face Detection Performance of AI by Camera (Number of Channels)	All channels (32 targets/s)

Face Recognition

Face Database Capacity	Up to 20 face databases with 200,000 images, with a total capacity of 44 G.
Face Recognition Performance of AI by Recorder (Number of Channels)	16-channel FD (by camera) + FR (by recorder),image stream: 32 face images/s Xinghan Large-Scale AI Models enabled：8-channel FD (by recorder) + FR (by recorder), video stream: 16 face images/s Xinghan Large-Scale AI Models disabled：16-channel FD (by recorder) + FR (by recorder), video stream: 16 face images/s
Face Recognition Performance of AI by Camera (Number of Channels)	All channels (32 targets/s)

SMD

SMD Plus by Recorder	Xinghan Large-Scale AI Models enabled：Not support Xinghan Large-Scale AI Models disabled：16 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD by Camera	All channels (64 targets/s)

Video Metadata

Metadata Performance of AI by Recorder (Number of Channels)	Xinghan Large-Scale AI Models enabled：8 channels, 23 attributes extraction. Xinghan Large-Scale AI Models disabled：16 channels, 23 attributes extraction.
Metadata Performance of AI by Camera (Number of Channels)	All channels (32 targets/s)
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	16 channels
Network Bandwidth	AI disabled: 512 Mbps incoming, 512 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;720p;960p;D1;CIF;QCIF
Decoding Capability	AI disabled: 2-channel 32 MP@30 fps; 3-channel 24 MP@30 fps; 5-channel 16 MP@30 fps; 6-channel 12 MP@30 fps; 10-channel 8 MP@30 fps; 13-channel 6 MP@30 fps; 16-channel 5 MP@30 fps AI enabled: 1-channel 32 MP@30 fps; 1-channel 24 MP@30 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; 16-channel 1080p@30 fps

Video Output	1 VGA, 1 HDMI VGA:1920 × 1080, 1280 × 1024, 1280 × 720 HDMI: 7680×4320, 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 Heterogeneous video source output for HDMI and VGA
Multi-screen Display	Main screen: 1/4/8/9/16 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 25.06(Profile T; Profile S; Profile G; Profle M); CGI; SDK
Browser	Chrome; Firefox; IE

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; audio; buzzer; log, preset; email

Port

Audio Input	1-channel RCA
Audio Output	1-channel RCA
Alarm Input	4 channels
Alarm Output	2 channels
Disk Interface	2 SATA ports. Each disk can contain up to 26 TB. This limit varies depending on the environment temperature.
RS-232	1
RS-485	1
USB	2 (1 front USB 2.0 port, 1 rear USB 3.0 port)
HDMI	1
VGA	1
Network Port	1(10/100/1000 Mbps Ethernet port, RJ-45)
PoE Port	16 ports, 10/100 Mbps, IEEE 802.3 af/at, 1-8 ports support ePoE

General

Power Supply	100–240 VAC, 50/60Hz
Power Consumption	<15 W (without HDD) Total output power of PoE is 200 W, the maximum output power of a single port is 25.5 W
Net Weight	2.72 kg (6.00 lb)
Gross Weight	4.06 kg (8.95 lb)
Product Dimensions	375.0 mm × 327.4 mm × 53.0 mm (14.76" × 12.89" × 2.09") (W × D × H)
Packaging Dimensions	449.0 mm × 421.0 mm × 170.0 mm (17.68" × 16.57" × 6.69")(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
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

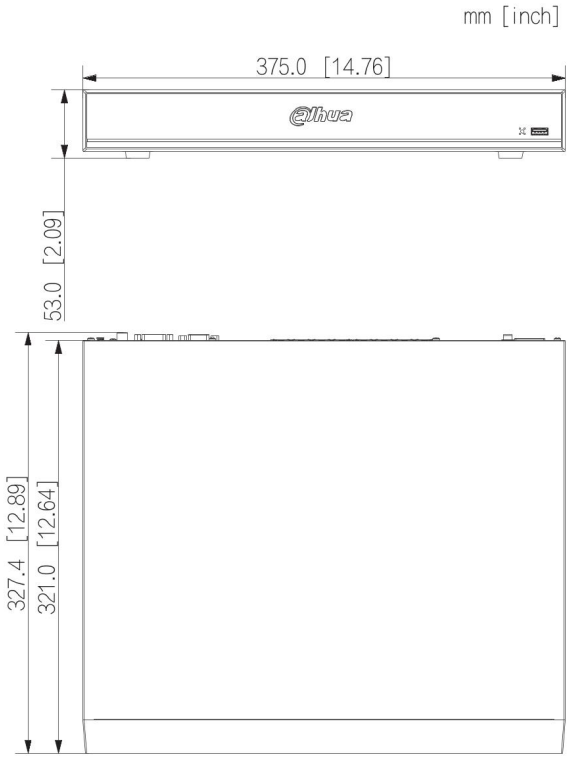
Type	Model	Description
NETWORK VIDEO RECORDER	DHI-NVR5216-16HP-AI/ANZ-PRO	16CH 1U 16PoE 2HDDs WizMind Network Video Recorder
Accessories (Optional)	DHI-ARB1606	Alarm Box

Accessories

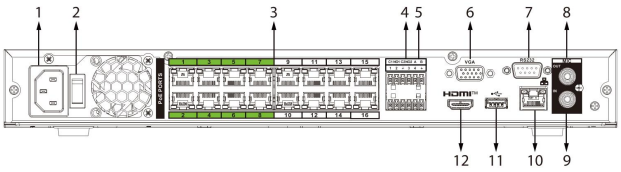
Optional:

DHI-ARB1606
Alarm Box

Dimensions (mm[inch])



Panels



1 Power Input
2 Power Switch
3 PoE Ports
4 Alarm In/Out
5 RS-485 Port
6 VGA Port
7 RS-232 Port
8 AUDIO OUT, RCA Connector
9 AUDIO IN, RCA Connector
10 Network Port
11 USB Port
12 HDMI Port

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