alhua TECHNOLOGY

DHI-NVR5208-8P-EI

Dahua 8CH 2HDD 1U NETWORK VIDEO RECORDER

ePoE   WizSense

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 or 8 × 8MP@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 8 channels.
- Supports N+M cluster,iSCSI.
- AI by Recorder supports 2-channel face detection and recognition, up to 20 face databases and 20,000 face images; 4-channel perimeter protection; 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 EPTZ, and one-click arming and disarming.

| AcuPick | Perimeter Protection | Face Detection | Face Recognition | Search by Image | Heat Map |
| ANPR | Blocklist Alarm | People Counting | SMD Plus | | |

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.

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 blocklist/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

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

AI

AI by Camera	Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map
AI by Recorder	Face detection; face recognition; perimeter protection; SMD Plus
AcuPick AI by Camera + Recorder	Max. 8-channel, 1 combined event per channel/s

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 (8 targets/s)

Face Detection

Face Detection Performance of AI by Camera (Number of Channels)	8 channels
Face Detection Performance of AI by Recorder (Number of Channels)	2 channels (up to 12 face images/s each channel)
Face Attributes	Gender; age group; glasses; expressions; face mask; beard

Face Recognition

Face Recognition Performance of AI by Recorder (Number of Channels)	1. 8-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)	8 channels
Face Database Capacity	Up to 20 face databases with 20,000 images, with a total capacity of 2.5 G. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image.

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 (16 targets/s)

Video Metadata

Motor Vehicle Attributes	License plate, plate color, vehicle body, vehicle model, vehicle logo, calling, seatbelt, vehicle interior, vehicle registration location.
Human Attributes	Top color, top type, bottom color, bottom type, hat, bag, age, gender and umbrella
Metadata Performance of AI by Camera (Number of Channels)	8 channels
Non-motor Vehicle Attributes	Vehicle model, vehicle color, number of persons, helmet.

Vehicle License Plate Comparison

ANPR by Camera (Number of Channels)	All channels (8 targets/s)
License Plate Database Capacity	1. Create up to 20,000 plate numbers. 2. Blocklist and allowlist

Audio and Video

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
Access Channel	8 channels
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 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
Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Hanwha
Video Output	1 VGA, 1 HDMI VGA:1920 × 1080, 1280 × 1024, 1280 × 720 HDMI: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 Sub screen: 1/4/8/9
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

Compression Standard

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

Network

Mobile Phone Access	iOS; Android
Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; UDP; NTP; DHCP; DNS; SMTP; UPnP; DDNS; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, etc.); Multicast; P2P; Auto Registration; iSCSI
Interoperability	ONVIF 23.12(Profile T; Profile S; Profile G); CGI; SDK
Browser	Chrome; IE; Safari; Edge; Firefox

Recording Playback

Record Mode	General, motion detection; intelligent; alarm; POS

Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)
Backup Method	USB device and network
Multi-channel Playback	Up to 8 channels

Storage

Disk Group	Yes

Alarm

General Alarm	Motion detection; local alarm; alarm box; camera external alarm; network alarm; scene changing; PIR alarm; thermal alarm
Alarm Linkage	Record; snapshot (panoramic); local alarm output; IPC external alarm output; audio; buzzer; log, preset; email
Intelligent Alarm	Face detection; perimeter protection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map
Anomaly Alarm	Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; abnormal behavior of fan; cybersecurity exception

Port

| Alarm Input	4 channels
Audio Input	1-channel RCA
VGA	1
RS-485	1
RS-232	1
Alarm Output	2 channels
PoE Port	8 ports, 10/100 Mbps, IEEE 802.3 af/at, 1-8 ports support ePoE
USB	2 (1 front USB 2.0 port, 1 rear USB 3.0 port)
Disk Interface	2 SATA ports, each disk can contain up to 20 TB. This limit varies depending on the environment temperature.
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)
HDMI	1
Audio Output	1-channel RCA

General

Operating Temperature	−10 °C to +55 °C (14 °F to +131 °F)
Operating Humidity	10%–93% (RH), non-condensing
Gross Weight	3.80 kg (8.38 lb)
Certifications	FCC: 47 CFR FCC Part15, SubpartB, 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
Packaging Dimensions	451.0 mm × 147.0 mm × 425.0 mm (17.76" × 5.79" × 16.73") (W × D × H)
Product Dimensions	375.0 mm × 329.4 mm x 53.0mm (14.76" × 12.97" × 2.09") (W × D × H)

Power Consumption	Total output of NVR is ≤ 10 W (without HDD) Total output power of PoE is 130 W, the maximum output power of a single port is 25.5W
Net Weight	2.57 kg (5.67 lb)
Storage Temperature	−20 °C to +60 °C (−4 °F to +140 °F)
Power Supply	100–240 VAC, 47-63 Hz

Ordering Information

Type	Model	Description
NETWORK VIDEO RECORDER	DHI-NVR5208-8P-EI	Dahua 8CH 2HDD 1U NETWORK VIDEO RECORDER

Dimensions (mm[inch])
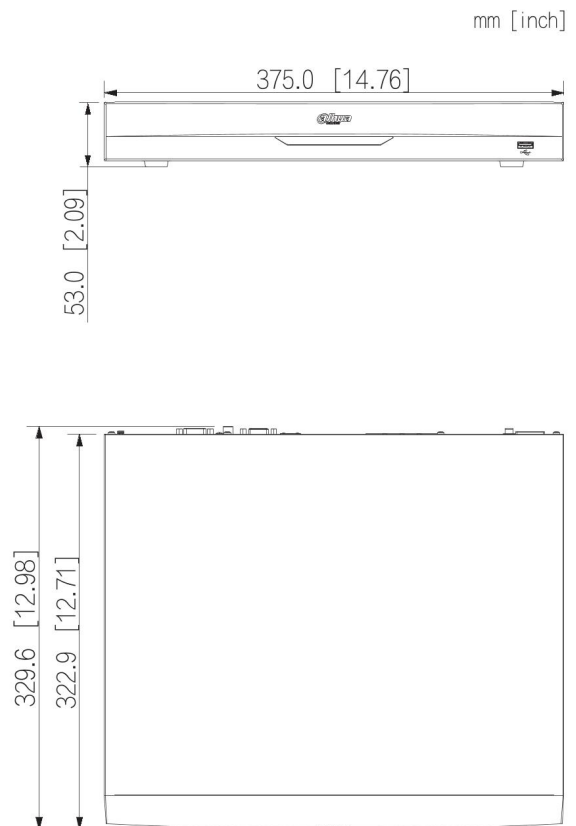
Panels
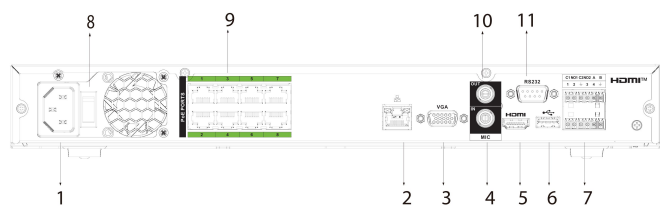
1	Power Input	2	Network Port
3	VGA Port	4	AUDIO IN, RCA Connector
5	HDMI Port	6	USB Port
7	Alarm In/Out	8	Power Switch
9	PoE Ports	10	AUDIO OUT, RCA Connector
11	RS-232 Port		