EN-NVR708AI
8 Channels 1U 2HDDs 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.

Security

Audio/Video Encrypted Transmission (Private Protocol, RTSP over TLS); Trusted Protection (Trusted Update, Trusted Boot, Trusted Execute); Security Warning (Security Exception, Invalid Access); Attack Defense (Firewall, Account Lockout, Anti-DoS Attack); Firmware Encryption; 802.1x; Secure Shell; Configuration Files Security (Encrypted Storage of Configuration, Encrypted Exporting of Configuration); CA Certificate; Log Security; Session Security (Auto Logout after Timeout, Brute-force Access Prevention, Anti-hijacking)

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 filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to perform secondary recognition for the targets. Improving alarm accuracy.

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.

- 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 Mbps incoming/recording/outgoing bandwidth.
- Supports IP cameras with a resolution up to 32 MP.
- Support AcuPick with up to 8 channels.
- Support N+M cluster.
- Support 64 user
- AI by recorder: 2-channel face detection and recognition, 4-channel perimeter protection, and 8-channel SMD Plus.
- AI by camera: Face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, stereo analysis, heat map, and people counting, Security baseline 2.4.

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

Face Recognition
Dahua Face Recognition technology extracts the features of captured faces and compares them with those in face database to recognize the person identity.

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

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 Plus
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
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)	8 channels

Face Detection

Face Attributes	Gender; age group; glasses; expressions; face mask; beard
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)	8 channels

Face Recognition

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
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-channe FD (by recorder) + FR (by recorder), video stream: 12 face images/s
Face Recognition Performance of AI by Camera (Number of Channels)	8 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	8 channels

Video Metadata

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

Non-motor Vehicle Attributes	Vehicle model, vehicle color, number of persons, helmet.

Vehicle License Plate Comparison

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

Audio and Video

Access Channel	8
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; 5 MP; 4 MP; 1080p; 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 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 5 MP@30fps
Video Output	1 VGA, 1 HDMI VGA:1920 × 1080, 1280 × 1024, 1280 × 720 HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720Heterogeneous video source output for HDMI and VGA
Multi-screen Display	Main screen: 1/4/8/9 Sub screen: 1/4/8/9
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; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, etc.); Multicast; P2P; Auto Registration; 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 8 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 (face and motion detection)

Storage

Disk Group	Yes

Alarm

General Alarm	Motion detection; privacy masking; local alarm

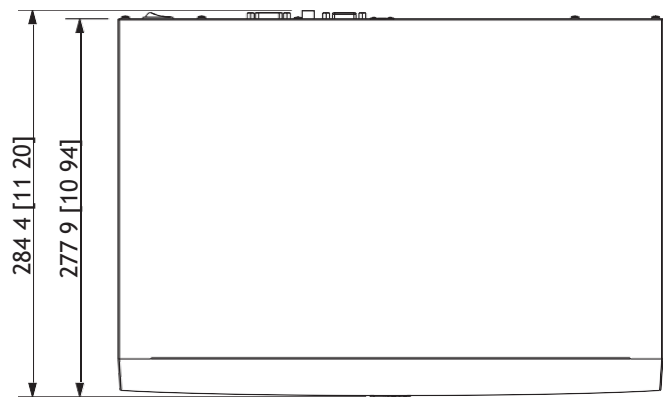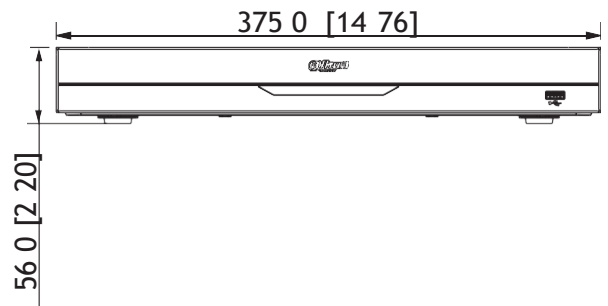|	
Anomaly Alarm	Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; abnormal behavior of fan; cybersecurity exception
Intelligent Alarm	Face detection; perimeter protection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus; stereo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

Port

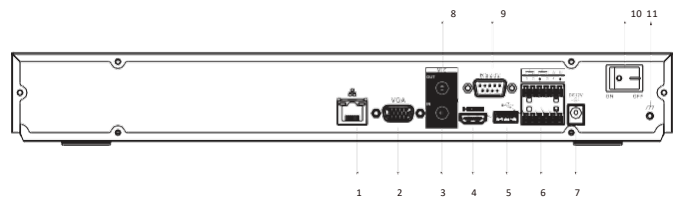|	
Audio Input	1-channel RCA
Audio Output	1-channel RCA
Alarm Input	4 channels
Alarm Output	2 channels
HDD Interface	2 SATA ports, each disk can contain up to 20 TB. This limit varies depending on the environment temperature.
RS-232	1
RS-485	1
USB	2 (1 front USB 2.0 port, 1 rear USB 3.0 port)
HDMI	1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

General

Power Supply	12 VDC, 4 A
Power Consumption	Total output of NVR is ≤ 10 W (without HDD)
Net Weight	1.57 kg (3.46 lb)
Gross Weight	2.73 kg (6.02 lb)
Product Dimensions	375.0 mm × 284.4 mm x 56.0mm (14.76" × 11.20" × 2.20") (W × D × H)
Packaging Dimensions	433.0 mm × 141.0 mm × 366.0 mm (17.04" × 5.55" × 14.41") (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)
Installation	Rack or desktop
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

Dimensions (mm[inch])

Panels

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

Ordering Information

Type	Model	Description
8 Channels WizSense NVR	EN-NVR708AI	8 Channels 1U 2HDDs WizSense Network Video Recorder