

# DHI-NVR5208-EI

8 Channels 1U 2HDDs WizSense Network Video Recorder



**Wiz Sense**

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 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.

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format.
- Max. decoding capability: 32 × 1080p@30 fps or 8 × 8MP@30 fps.
- Max. 384 Mbps incoming/recording/outgoing bandwidth.
- Support AcuPick with Max. 16-Channel.
- Support N+M cluster.
- 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 2.3.



### 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.

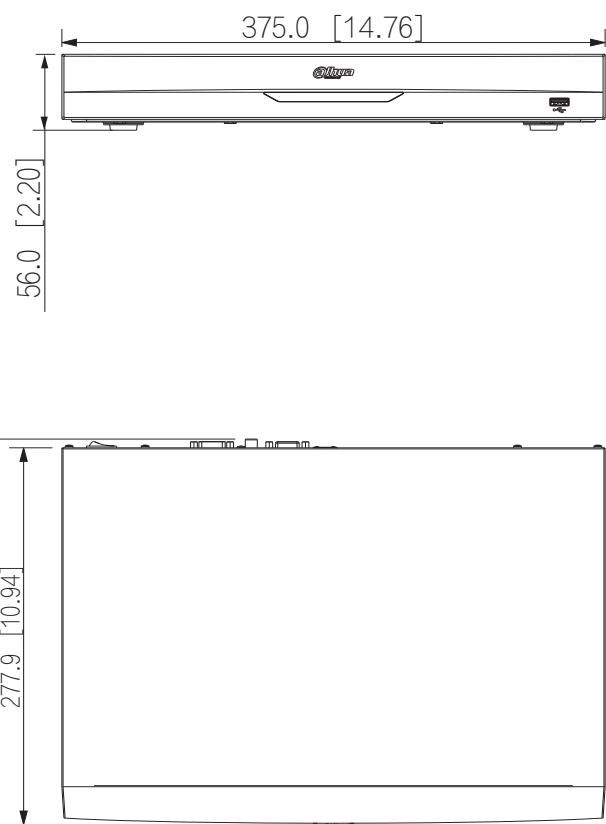
### SMD Plus

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.

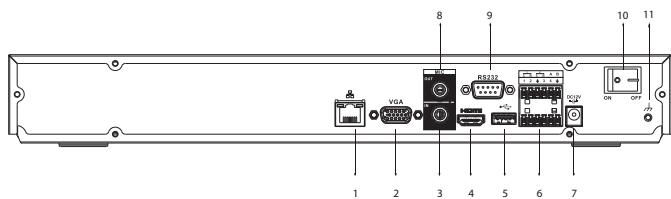
Technical Specification		Non-motor Vehicle Attributes	Vehicle model, vehicle color, number of persons, helmet.
System			
Main Processor	Industrial-grade processor		
Operating System	Embedded Linux		
Operating Interface	Web, Local GUI		
AI			
AI by Recorder	Face detection; face recognition; perimeter 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. 16-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-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		
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 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@20 fps; 2-channel 24 MP@20 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@20 fps; 1-channel 24 MP@20 fps; 2-channel 16 MP@30 fps; 4-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 8-channel 5 MP@30 fps		
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		
Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Samsung		
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 22.06 (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
<b>Port</b>	
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 16 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)
<b>General</b>	
Power Supply	12 VDC, 4 A
Power Consumption	Total output of NVR is $\leq$ 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 $\times$ 284.4 mm $\times$ 56.0mm (14.76" $\times$ 11.20" $\times$ 2.20") (W $\times$ D $\times$ H)
Packaging Dimensions	433.0 mm $\times$ 141.0 mm $\times$ 366.0 mm (17.04" $\times$ 5.55" $\times$ 14.41") (W $\times$ D $\times$ 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+A1: 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	DHI-NVR5208-EI	8 Channels 1U 2HDDs WizSense Network Video Recorder