



# DHI-NVR5216-16P-EI

16 Channels 1U 16PoE 2HDD 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**

#### **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.

#### **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.

- · Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format.
- · 32-channel 1080p self-adaptive decoding capability.
- · Max. 384 Mbps incoming/recording/outgoing bandwidth.
- · Al by recorder: 2-channel face detection and recognition, 4-channel perimeter protection, and 8-channel SMD Plus.
- · Al by camera: Face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, and people counting.
- · Security baseline 2.3.



#### **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.

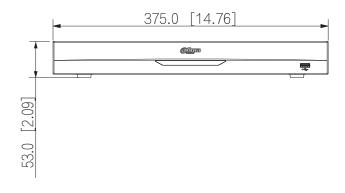
Technical Specificati	on		Vehicle License Plate	Comparison	
System			ANPR by Camera (Number of Channels)	8 channels	
Main Processor	Industrial-grade processor		License Plate Database	1. Create up to 20,000 plate numbers.	
Operating System	Embedded Linux		Capacity	2. Blocklist and allowlist	
Operating Interface	Web, Local GUI		Audio and Video		
Al			Access Channel	16	
Al by Recorder	Face detection; face recognition; perimeter protection; SMD Plus		Network Bandwidth	Al disabled: 384 Mbps incoming, 384 Mbps recording and 384 Mbps outgoing	
Al 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		Resolution	Al enabled: 200 Mbps incoming, 200 Mbps recording and 200 Mbps outgoing  32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 5 MP; 4 MP; 1080p; 720p; D1; CIF; QCIF	
Perimeter Protection				Al disabled: 2-channel 32 MP@20 fps; 2-channel 24	
Perimeter Performance AI by Recorder (Number of Channels)	4 channels, 10 IVS rules for each channel		Decoding Capability	MP@20 fps; 4-channel 16 MP@30 fps; 5-channel 12 MP@30 fps;8-channel 8 MP@30 fps; 12-channel 5 MP@30 fps;16-channel 4 MP@30 fps Al 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; 12-channel 4 MP@30 fps	
Perimeter Performance of Al by Camera (Number of Channels)	16 channels				
Face Detection Face Attributes	Gender; age group; glasses; expressions; face mask;		Video Output	1-channel VGA, 1-channel HDMI video output. Heterogeneous video source output for HDMI and VGA Supports 4K display	
Face Detection	beard		Multi-screen Display	Main screen: 1/4/8/9/16 Sub screen: 1/4/8/9/16	
Performance of AI by Recorder (Number of Channels)	2 channels (up to 12 face images/s each channel)		Third-party Camera Access	ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Samsung	
Face Detection	16 channels		Compression Standard		
Performance of AI by Camera (Number of Channels)			Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG	
Face Recognition			Audio Compression	G.711a; G.711u; PCM; G726	
Up to 20 face databases with 20,000 images, with a			Network		
Face Database Capacity	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.		Network Protocol	HTTP; HTTPS; TCP/IP; IPv4/IPv6; RTSP; 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	
Face Recognition Performance of AI by Recorder (Number of	1. 16-channel FD (by camera) + FR (by recorder), image stream: 16 face images/s     2. 2-channe FD (by recorder) + FR (by recorder), video		Mobile Phone Access	iOS; Android	
Channels)	stream: 12 face images/s		Interoperability	ONVIF 21.12(Profile T; Profile S; Profile G); CGI; SDK	
Face Recognition Performance of AI by Camera (Number of	16 channels		Browser	Chrome IE 9 or later Firefox	
Channels)			Recording Playback		
SMD Plus	9 channels: Secondary filtering for house and and		Multi-channel Playback	Up to 16 channels	
SMD Plus by Recorder	8 channels: Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change		Record Mode	General, motion detection; intelligent; alarm; POS	
SMD Plus by Camera	16 channels		Backup Method	USB device and network	
Video Metadata			Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)	
Metadata Performance of AI by Camera (Number of Channels)	8 channels		Storage		
			Disk Group	Yes	
Human Attributes	Top color, top type, bottom color, bottom type, hat, bag, age, gender and umbrella $$		Alarm		
Motor Vehicle Attributes	License plate, plate color, vehicle body, vehicle model, vehicle logo, calling, seatbelt, vehicle interior, vehicle registration location.		General Alarm	Motion detection; privacy masking; local alarm	
Non-motor Vehicle Attributes	Vehicle model, vehicle color, number of persons, helmet.		Anomaly Alarm	Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; abnormal behavior of fan; cybersecurity exception	

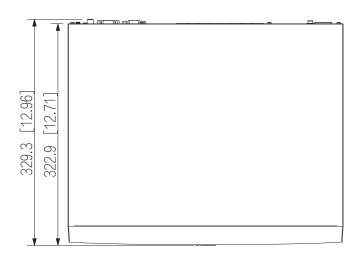
Intelligent Alarm	Face detection; perimeter protection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map		
Alarm Linkage	Record; snapshot (panoramic); local alarm output; IPC 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, up to 16 TB. The maximum HDD capacity varies with 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, 47-63 Hz		
Power Consumption	Total output of NVR is $\leq$ 10W (without HDD) Total output power of PoE is 130W, the maximum output power of a single port is 25.5W		
Net Weight	2.66 kg (5.86 lb)		
Gross Weight	3.82 kg (8.42 lb)		
Product Dimensions	375.0 mm × 329.3 mm × 53.0mm (14.76" × 12.96" × 2.09") (W × D × H)		
Packaging Dimensions	449.0 mm × 170.0 mm × 421.0 mm (17.68" × 6.69" × 16.57") (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		

# **Ordering Information**

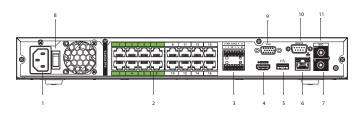
Туре	Model	Description
16 Channels WizSense NVR	DHI-NVR5216-	16 Channels 1U 16PoE 2HDD WizSense Network Video Recorder

# Dimensions (mm[inch])





## **Panels**



- 1 Power Input 3 Alarm In/Out
- 5 USB Port 7 MIC IN, RCA Connector 9 VGA Port
- 11 MIC OUT, RCA Connector

- 4 HDMI Port 6 Nerwork Port 8 Power Switch 10 RS-232 Port