

DHI-NVR4216-EI

16CH 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

NVR4000-EI series is a new generation of network recorders that offers powerful decoding capabilities, and strong bandwidth. It features high-precision face recognition, perimeter protection, and SMD (Smart Motion Detection), which can distinguish target vehicles and humans from other types in real time. When connected with select IPC cameras, Quick Pick technology becomes available, allowing human and vehicle targets to be easily searched for and picked out. This network recorder is not only cost-effective, but also compatible with a wide variety of third-party devices, making it a great choice for small and medium-sized businesses.

Functions

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.

- Supports Smart H.265+, H.265, Smart H.264+, H.264 and MJPEG decoding formats.
- Max. 256 Mbps incoming/recording/outgoing bandwidth.
- Max. decoding capability: 16 × 1080p@30 fps or 4 × 8 MP@30 fps.
- Supports IP cameras with a resolution up to 16 MP.
- AI by Recorder supports 1-channel face detection and recognition, 2-channel perimeter protection, up to 10 face databases and 20,000 face images, 4-channel SMD.
- AI by Camera supports face detection and recognition, perimeter protection, SMD, people counting, stereo analysis, heat map.
- Supports EPTZ, and one-click arming and disarming.



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.

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.

AI Search

With AI search, operators can search for videos by the attributes of targets and event types, which helps them to quickly and efficiently investigate where and when targets appeared and events took place.

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.

Technical Specification		Resolution	16 MP;12 MP;8 MP;6 MP;5 MP;4 MP;3 MP;1080p;720p;960p;D1;CIF
System		Decoding Capability	AI disabled: 2-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 4-channel 6 MP@30 fps; 6-channel 5 MP@30 fps; 8-channel 4 MP@30 fps; 16-channel 1080p@30 fps AI enabled: 1-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 3-channel 8 MP@30 fps; 3-channel 6 MP@30 fps; 4-channel 5 MP@30 fps; 6-channel 4 MP@30 fps; 12-channel 1080p@30 fps; 16-channel 720p@30 fps
Main Processor	Industrial-grade processor	Video Output	1 HDMI, 1 VGA HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 *Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.
Operating System	Embedded Linux	Multi-screen Display	1st Screen: 1/4/8/9/16 2nd Screen: 1/4/8/9/16
Operating Interface	Web, Local GUI	Third-party Camera Access	Panasonic, Sony, Hanwha, Axis, Pelco, Arecont, ONVIF, Canon
AI		Compression Standard	
AI by Recorder	Face detection; face recognition; perimeter protection; and SMD	Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
AI by Camera	Face detection; face recognition; perimeter protection; SMD; ANPR; people counting; stereo analysis; heat map	Audio Compression	G.711a; G.711u; PCM; G726
Perimeter Protection		Network	
Perimeter Performance AI by Recorder (Number of Channels)	2 channels, 10 IVS rules for each channel	Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; IPv6; RTSP; UPnP; SNMP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; PPPoE; DDNS; FTP; Alarm Server; IP Search (Support Dahua IP camera, DVR, NVS, etc.); P2P; Auto Registration
Perimeter Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)	Mobile Phone Access	iOS; Android
Face Detection		Interoperability	ONVIF 23.12(Profile T; Profile S; Profile G); CGI; SDK
Face Attributes	Gender; age group; glasses; expressions; face mask; beard	Browser	Chrome; IE9 and later; Firefox
Face Detection Performance of AI by Recorder (Number of Channels)	1 channel (up to 12 face images/s each channel)	Recording Playback	
Face Detection Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)	Multi-channel Playback	Up to 16 channels
Face Recognition		Record Mode	General, motion detection; intelligent; alarm
Face Database Capacity	Up to 10 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.	Backup Method	USB device and network
Face Recognition Performance of AI by Recorder (Number of Channels)	8-channel FD (by camera) + FR (by recorder),image stream: 12 face images/s 1-channel FD (by recorder) + FR (by recorder), video stream: 12 face images/s	Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback
Face Recognition Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)	Storage	
SMD Plus		Disk Group	Yes
SMD Plus by Recorder	4 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change	Alarm	
SMD by Camera	All channels (16 targets/s)	General Alarm	Motion detection; privacy masking; video loss; scene changing; PIR alarm; IPC external alarm
Audio and Video		Anomaly Alarm	Error (no disk; disk error; low space; low quota space; abnormal disk health; network disconnection; IP conflict; MAC conflict); video loss; video tampering; camera offline; audio detection
Access Channel	16 channels	Intelligent Alarm	Face detection; face recognition; perimeter protection; SMD Plus; people counting; stereo analysis; heat map
Network Bandwidth	AI disabled: 256 Mbps incoming, 256 Mbps recording and 256 Mbps outgoing AI enabled: 180 Mbps incoming, 180 Mbps recording and 180 Mbps outgoing	Alarm Linkage	Record; snapshot; 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, up to 20 TB. The maximum HDD capacity varies with environment temperature.
USB	2 (1 front USB 2.0 port, 1 rear USB 2.0 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	<10 W(without HDD)
Net Weight	1.51 kg (3.33 lb)
Gross Weight	2.76 kg (6.08 lb)
Product Dimensions	375 mm × 284.3 mm × 53 mm (14.76" × 11.19" × 2.09") (W × D × H)
Packaging Dimensions	433 mm × 141 mm × 366 mm (17.05" × 5.55" × 14.41") (W × L × 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	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

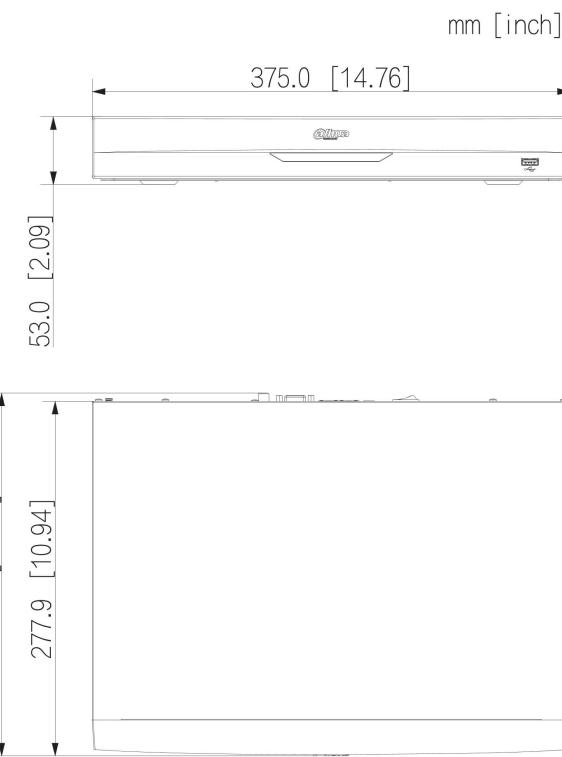
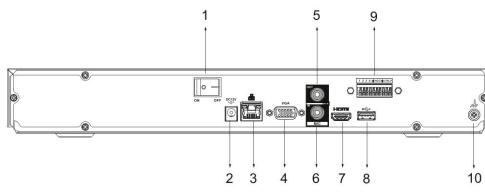
Ordering Information

Type	Model	Description
NETWORK VIDEO RECORDER	DHI-NVR4216-EI	16CH 1U 2HDDs WizSense Network Video Recorder
Accessories (Optional)	PFH101	PFH101-DH920C1

Accessories

Optional:


PFH101
PFH101-DH920C1

Dimensions (mm[inch])

Panels


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