

# DHI-NVR4116-EI

### 16CH Smart 1U 1HDD 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 those in face database to recognize the person identity.

#### 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.

#### 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.

#### · Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format.

- · Access, storage or forwarding at 256 Mbps (180 Mbps when Al function enabled).
- $\cdot$  Max. decoding capability: 16  $\times$  1080p@30 fps. Supports adaptive decoding.
- AI by NVR: 1-channel face detection and recognition; 2-channel perimeter protection; up to 10 face databases and 20,000 face images; 4-channel SMD Plus.
- Al by Camera: Face detection and recognition, perimeter protection; SMD Plus; people counting; stereo analysis; heat map.
- $\cdot$  Connected to the third-party network cameras.

· Security baseline 2.3.



#### AI Search

Support AI seach by metadata of different targets or uploading face pictures to device and comparing them with recorded faces by similarity. Enable operators to quickly and easily search through multi channels and long duration, efficiently find out when and where a person of interest appeard.

#### 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.

#### **Quick Pick**

Dahua Quick Pick technology can enable users to quickly pick up the human/vehicle targets that they are interested in, which facilitates retrieval from SMD events.



# Wiz Sense | DHI-NVR4116-8P-EI

Technical Specification			Al disabled: 2-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 4-channel 8 MP@30 fps; 6-channel 5 MP@30 fps; 8-channel 4 MP@30 fps; 16-channel 1080p@30 fps
System		Decoding Capability	
Main Processor	Industrial-grade processor		Al enabled: 1-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 3-channel 8 MP@30 fps; 4-channel 5 MP@30 fps; 6-channel 4 MP@30 fps; 12-channel
Operating System	Embedded Linux		1080p@30 fps
Operating Interface	Web; Local GUI		1 HDMI, 1 VGA HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 ×
Al		Video Output	720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
AI by Recorder	Face detection, face recognition, perimeter protection, and SMD Plus;		*Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.
AI by Camera	Face detection; face recognition; perimeter protection; SMD Plus; ANPR; people counting; stereo analysis; heat map	Multi-screen Display	1st Screen: 1/4/8/9/16 2nd Screen: 1/4/8/9/16
Perimeter Protection		Third-party Camera Access	Panasonic, Sony, Samsung, Axis, Pelco, Arecont, ONVIF, Canon
Perimeter Performance AI by Recorder (Number of	2 channels, 10 IVS rules for each channel	Compression Standa	ard
Channels)		Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Perimeter Performance of AI by Camera (Number of	8 channels	Audio Compression	G.711a; G.711u; PCM; G726
Channels) Face Detection		Network	
Face Detection	Gender; age group; glasses; expressions; face mask;		HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; UDP;
Face Attributes	beard	Network Protocol	SMTP; NTP; DHCP; DNS; IP Filter; PPPOE; DDNS; FTP; Alarm Server; IP Search (Support Dahua IP camera; DVR; NVS; etc.); P2P; auto register
Face Detection Performance of AI by	1 channel (up to 12 face images/s each channel)	Mobile Phone Access	iOS; Android
Recorder (Number of Channels)		Interoperability	, ONVIF 22.06(Profile T; Profile S; Profile G); CGI; SDK
Face Detection Performance of AI by	8 channels	Browser	Chrome; IE9 and later; Firefox
Camera (Number of Channels)		Recording Playback	
Face Recognition		Multi-channel Playback	Up to 16 channels
	Up to 10 face databases with 200,00 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.	Record Mode	General, motion detection; intelligent; alarm
Face Database Capacity		Backup Method	USB device and network
Face Recognition	8-channel FD (by camera) + FR (by recorder),image stream: 12 face images/s 1-channel FD (by recorder) + FR (by recorder), video	Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback
Performance of AI by Recorder (Number of		Alarm	
Channels)	stream: 12 face images/s	General Alarm	Motion detection; privacy masking; video loss; scene
Face Recognition Performance of AI by	8 channels	General Alarm	changing; PIR alarm; IPC external alarm
Camera (Number of Channels)		Anomaly Alarm	Camera disconnection; storage error; disk full; IP conflict; MAC conflict; login locked; and cybersecurity exception
SMD Plus		Intelligent Alarm	Face detection; face recognition; perimeter protection; SMD Plus; people counting; stereo analysis; heat map
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 Linkage	Record; snapshot; IPC external alarm output; audio; buzzer; log; preset; email
SMD Plus by Camera	8 channels	Port	
Audio and Video		Audio Input	1-channel RCA
Access Channel	16 channels	Audio Output	1-channel RCA
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	HDD Interface	1 SATA port, up to 16 TB.The maximum HDD capacity varies with environment temperature.
		USB	2 (2 rear USB 2.0 ports)
Resolution	16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF	HDMI	1
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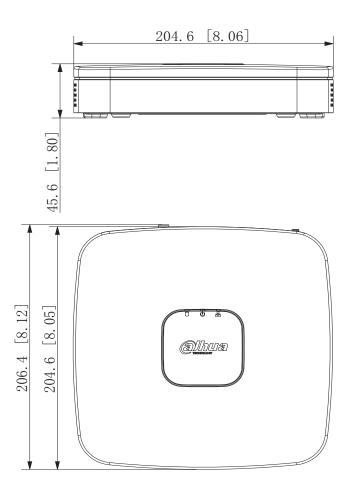
# Wiz Sense | DHI-NVR4116-8P-EI

VGA	1	
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)	
General		
Power Supply	12 VDC, 2 A	
Power Consumption	<10 W(without HDD)	
Net Weight	0.45 kg (0.99 lb)	
Gross Weight	1.07 kg (2.36 lb)	
Product Dimensions	204.6 mm × 206.4 mm × 45.6 mm (8.06" × 8.12" × 1.80") (W × L × H)	
Packaging Dimensions	364 mm × 96 mm × 261 mm (14.33" × 3.78" × 10.26") (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)	
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	

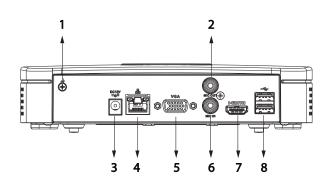
#### **Ordering Information**

Туре	Model	Description
16 Channels WizSense NVR	DHI-NVR4116-EI	16CH Smart 1U 1HDD WizSense Network Video Recorder

#### Dimensions (mm[inch])



Panels



- 1 Ground
- 3 Power Input
- 5 VGA Port
- 7 HDMI Port
- 2 AUDIO OUT, RCA Connector
- 4 Network Port
- 6 AUDIO IN, RCA Connector
- 8 USB Ports

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