DHI-NVR2116-I2

16 Channel Smart 1U 1HDD WizSense Network Video Recorder

WizSense

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.

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format
- Max. decoding capability: 6 × 1080p@30 fps. Supports adaptive decoding
- 1-channel face detection and recognition (AI by NVR); 1-channel perimeter protection (AI by NVR); up to 10 face databases and 5,000 face images; 4-channel SMD Plus (AI by NVR);
- AI by camera: Face detection and recognition, perimeter protection, and SMD Plus
- Connected to the third-party network cameras
- Security baseline 2.1

| Face Detection | Face Recognition | Black list Alarm | Perimeter Protection | Search by Image | IVS | SMD Plus |

Series Overview

This AI network video recorder is a highly cost-effective product, providing functions such as local live view, multi-screen display, real-time storage on local HDD, fast operation by mouse, and remote management and control. This product is suitable for face detection and recognition at entrances and exits, and perimeter protection of people and vehicles.

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.

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.
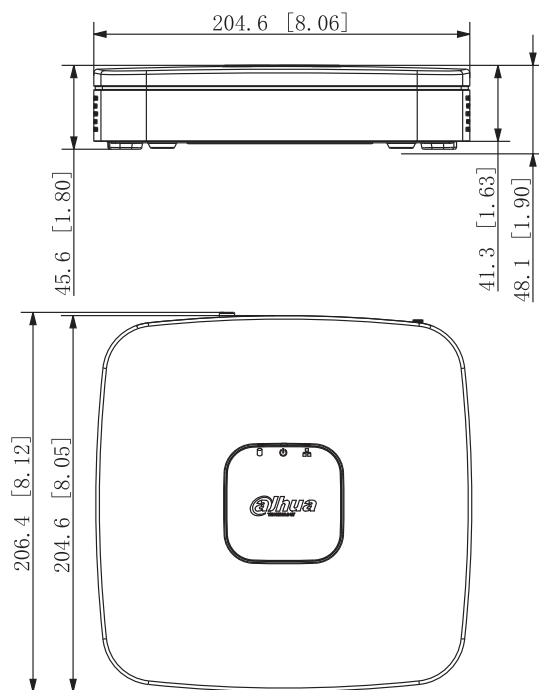
Smart Fan

The NVR is equipped with a smart fan to achieve high cooling efficiency. It automatically turns on or turns off according to CPU and ambient temperature. The fan is long-lasting and low noise, reducing maintenance costs and improving the user experience.

Technical Specification

System

Main Processor	Industrial-grade embedded processor
Operating System	Embedded Linux
Operation Interface	Web; local GUI

AI

AI by Camera	Face detection; face recognition; perimeter protection; SMD Plus
AI by Device	Face detection; face recognition; perimeter protection; SMD Plus

Perimeter Protection

Perimeter Performance AI by Device(Number of Channels)	1
Perimeter Performance of AI by Camera (Number of Channels)	4

Face Detection

Face Attributes	6 attibutes: Gender; age group (6); glasses; expressions (8); mouth mask; beard
Face Detection Performance of AI by Device (1080P) (Number of Channels)	1 (up to 12 face images/second)
Face Detection Performance of AI by Camera (Number of Channels)	5

Face Recognition

Face Database Capacity	Up to 10 face databases with 5,000 images
Face Recognition Performance of AI by Device (1080P) (Number of Channels)	1 (up to 4 face images/second)
Face Recognition Performance of AI by Camera (Number of Channels)	5

SMD Plus

SMD Plus by Device	4
SMD Plus by Camera	6-channel SMD Plus (AI by camera): Detects tripwire and intrustion of human or vehicle; filters false alarms caused by leaves, raindrops and change of brightness away

Video

Access Channel	16 channels
Network Bandwidth	AI off: Access: 144 Mbps; Storage: 144 Mbps; Forward: 72 Mbps AI on: Access: 72 Mbps; Storage: 72 Mbps; Forward: 36 Mbps
Resolution	12MP; 8MP; 5MP; 4MP; 3MP; 2MP; 720p; D1
Decoding Capability	AI disabled: 1-channel 12MP@30 fps; 1-channel 8MP@30 fps; 2-channel 5MP@30 fps; 3-channel 4MP@30 fps; 6-channel 1080p@30 fps AI enabled: 1-channel 8MP@30 fps; 1-channel 5MP@30 fps; 2-channel 4MP@30 fps; 4-channel 1080p@30 fps

Video Output	1 × VGA, 1 × HDMI (simultaneous)
Multi-screen Display	1, 4, 8, 9, 16 views
Third Party Camera Access	Onvif

Compression

Video	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Audio	PCM; G711A; G711U; G726

Network

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; RTSP; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; DDNS; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, etc.); P2P;Auto Registration
Mobile Phone Access	Android; iOS
Interoperability	ONVIF (profile T; profile S; profile G); CGI; SDK
Browser	Chrome; IE9 or later; Firefox

Record Playback

Multi-channel Playback	Up to 16 channels
Record Mode	Manual record; alarm recordings; motion detection recordings; scheduled recordings
Storage	Local HDD and network
Backup	USB device
Playback Function	1. Play; pause; stop; fast forward; fast backward; rewind; play by frame 2. Full screen; backup (vide clip/file); partially zom in; audio on/off

Alarm

General Alarm	Motion detection; privacy masking; video loss; PIR alarm; IPC alarm
Anomaly Alarm	Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; cyber security exception
Intelligent Alarm	Face detection; face recognition; perimeter protection (intrusion and tripwire); IVS; SMD Plus
Alarm Linkage	Recording; snapshot; buzzer; log; preset; email; tour

External Port

HDD	1 SATA port, up to 10 TB. The maximum HDD capacity varies with environment temperature
USB	2 rear USB 2.0 ports
HDMI	1 (max. resolution: 4K)
VGA	1
Network	1 × RJ-45, 10/100/1,000 Mbps
RCA Input	1
RCA Output	1
RCA Output	1

General Parameter

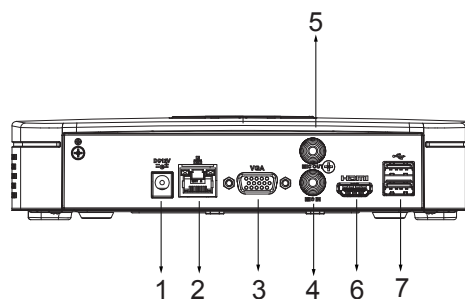|	
Power Supply	12 V DC, 1.5 A
Power Consumption	Total output of NVR is ≤ 10 W (without HDD)
Net Weight	0.45 kg (0.99 lb)

Gross weight	1.07 kg (3.04 lb)
Product Dimensions	204.6 mm × 206.4 mm × 48.1 mm(8.06" × 8.13" × 1.89") (W × L × H)
Package Dimensions	96 mm × 364 mm × 261 mm (3.78" × 14.33" × 10.28") (W × L × H)
Operating Temperature	−10 °C to +55 °C (+14 °F to +131 °F)
Storage Temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity	10%–93%
Storage Humidity	30%–85%
Operating Altitude	3,000 m (9,842.52 ft)
Installation	Desktop
Certifications	FCC:47 CFR FCC Part15,SubpartB,Class A CE-EMC:EN 55032:2015,Class A;EN IEC 61000-3-2:2019;EN 61000-3-3:2013+A1:2019;EN 55024:2010+A1:2015;EN 55035:2017;EN 50130-4:2011+A1:2014 CE-LVD:EN 62368-1:2014+A11:2017

Ordering Information

Type	Model	Description
16 Channel WizSense NVR	DHI-NVR2116-I2	16 Channel Smart 1U WizSense Network Video Recorder

Dimensions (mm[inch])

Panels

1	DC 12V Power Input	2	Network Port
3	VGA Port	4	AUDIO IN, RCA Connector
5	AUDIO OUT, RCA Connector	6	HDMI Port
7	USB Port		

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