

# DHI-NVR2108HS-I

## 8 Channel Compact 1U 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.

### System Overview

This AI network video recorder is a highly cost-effective economical 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/exits, and perimeter protection of people and vehicles.

### Functions

#### New User Interface

Local and web interfaces adopt the new UI 4.0 style which caters to users habits. Functional modules are divided more clearly and easier to understand.

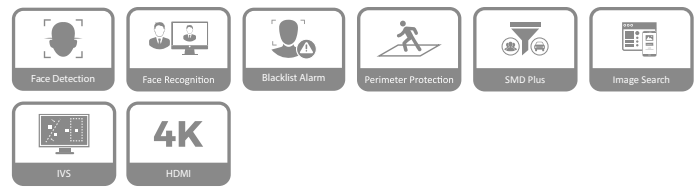
#### Decoding (Smart H.265+/Smart H.264+)

Dahua smart encoding (H.265+/ H.264+) is the optimized implementation of (H.265/H.264) codec that uses a scene-adaptive code rate control algorithm, providing more efficiency in the encoding process and higher video quality, and reducing the cost of storage and transmission significantly. This NVR supports the corresponding decoding.

#### SMD Plus

SMD Plus, referred to as Smart Motion Detection Plus, which is an upgrading version of SMD that greatly improves the alarm accuracy by loading deep-learning algorithm. It analyzes person and vehicle shapes based on motion detection and sends alarms only when person or vehicle intrudes.

- New 4.0 user interface
- Remote surveillance, live view and video play on mobile phone App
- Max. decoding capability: 4x1080P@30fps. Supports adaptive decoding
- Supports mainstream cameras of ONVIF and RTSP protocols
- H.264/.H265/Smart H.264+/Smart H.265+/MJPEG, H.265 auto switch
- 1 VGA/1 HDMI simultaneous video output by default, the maximum resolution of HDMI is 4K; and non-simultaneous video output is also supported, the maximum resolution is 1080P
- 1-channel face detection and recognition (AI by NVR); or 2-channel perimeter detection (AI by NVR); or 4-channel SMD (AI by NVR); up to 10 face databases and 5,000 face images
- All-channel AI by camera: face detection and comparison, perimeter protection and SMD
- Security baseline 2.1



#### 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

Face recognition is to figure out the captured face with target features, and compare them with the face database to identify the personnel.

#### Perimeter Protection

Based on the deep learning algorithm, perimeter protection provides accurate human and vehicle classification detection. It greatly reduces false alarms by smartly detecting behaviors such as tripwire and intrusion according to the detected object in restricted areas (e.g., for human or vehicle) .

## Technical Specification

### System

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

### Video

Access Channel	8 channels
Network Bandwidth	80 Mbps for access, 80 Mbps for storage and 60 Mbps for forwarding.
Resolution	12M/8M/5M/4M/3M/2M/720P/D1
Decoding Capability	4ch 1080P@30fps
Video Output	1 VGA/1 HDMI simultaneous video output by default, the maximum resolution of HDMI is 4K
Multi-screen Display	1/4/8/9
Third Party Camera Access	Onvif, RTSP

### Compression

Video	H.264/.H265/Smart H.264+/Smart H.265+/MJPEG
Audio	PCM/G711A/G711U/G26/AAC

### Network

Network Protocol	HTTP, HTTPS, TCP/IP, IPv4, IPv6, RTSP, UDP, NTP, DHCP, DNS
Mobile Phone Access	Android, iOS
Interoperability	ONVIF (profile T/profile S/profile G), CGI, SDK
Browser	Chrome, IE9 or above, Firefox

### Record Playback

Multi-channel Playback	Up to 8 channels playback
Record Mode	Priority of record mode: Manual recording > alarm recording > motion detection recording > timed recording
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 (cut/file), partially enlarge, audio on/off

### SMD Plus

Performance	4 channels
AI Search	Search by target classification (Human, Vehicle)

### Face Recognition

Performance	Max 8 face pictures/sec processing 1 channel video stream face recognition
Stranger Mode	Detect strangers' faces (not in device's face database). Similarity threshold can be set manually.
AI Search	Up to 8 target face images search at same time, similarity threshold can be set for each target face image.

### Database Management

Up to 10 face databases with 5,000 face images in total. Name, gender, birthday, address, certificate type, certificate No., countries&regions and state can be added to each face picture.

### Database Application

Each database can be applied to video channels independently.

### Trigger Events

Buzzer, Voice Prompts, Email, Snapshot, Recording, Alarm Out, PTZ Activation, etc.

### Alarm Linkage

Video recording, snapshot, log, preset, tour

### Perimeter Protection

#### Performance

2 channels

#### Object classification

Human/Vehicle secondary recognition for tripwire and intrusion

#### AI Search

Search by target classification (Human, Vehicle)

### Alarm

#### General Alarm

Motion detection, privacy masking, video loss, PIR alarm, IPC alarm

#### Anomaly Alarm

Front-end device going offline, storage error, full storage, IP conflict, MAC conflict, login lock, network security anomaly

#### Alarm Linkage

Video recording, snapshot, log, preset, tour

### External Port

#### HDD

1 SATA port, up to 8 TB. The maximum HDD capacity varies with environment temperature

#### USB

1 front USB 2.0 port, 1 rear USB 2.0 port

#### HDMI

1

#### VGA

1

#### Network

1 RJ-45 port (10/100 Mbps)

#### RCA Input

1

#### RCA Output

1

### General Parameter

#### Power Supply

DC12V, 1.5A

#### Power Consumption

Total output of NVR is ≤ 10W (without HDD)

#### Net Weight

0.81 kg (1.79 lb)

#### Gross weight

1.38 kg (3.04 lb)

#### Product Dimensions

260 mm × 232.7 mm × 47.6 mm (W × L × H)  
10.24 inch × 9.16 inch × 1.87 inch (W × L × H)

#### Package Dimensions

89 mm × 333 mm × 315 mm (W × L × H)  
3.50 inch × 13.11 inch × 12.40 inch (W × L × H)

#### Operating Temperature

-10°C to 55°C (+14°F to +113°F)

#### Storage Temperature

0°C to 40°C (+32°F to +104°F)

#### Operating Humidity

10%–93%

#### Storage Humidity

30%–85%

#### Operating Altitude

3000 m (9843 ft)

#### Installation

Desktop mounting

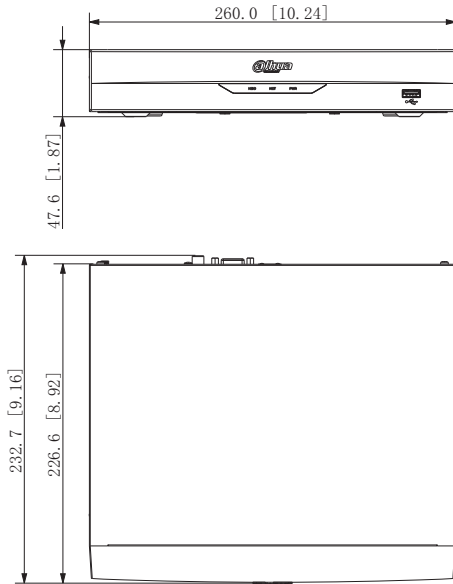
#### Certifications

CE/FCC

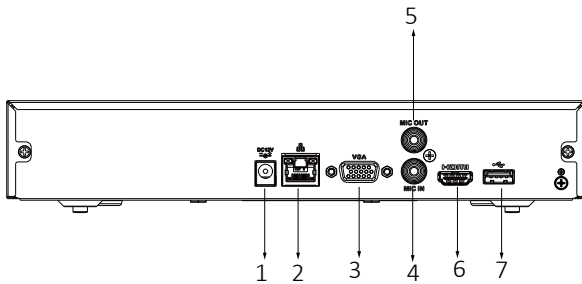
### Ordering Information

Type	Model	Description
8 Channel WizSense NVR	DHI-NVR2108HS-I	8 Channel Compact 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                 |                           |