# DH-XVR5208AN-4KL-I3

## 8CH Penta-brid 4K Value/5MP 1U 2HDDs WizSense Digital 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

Dahua Technology, a world-leading video-centric smart IoT solution and service provider, debuted its new XVR series, XVR5000-4KL-I3 Series featuring max.full-channel SMD Plus to benefit customers from AI upgrade (The number of channels differs depending on the model. Please refer to the specifications below for information on the number of channels.). This series has been developed to reduce false-alarm rates and the cost of human surveillance, thus bringing great value to customers in search of products with accurate human/vehicle alarm to raise the security level of various indoor and outdoor facilities.

## Functions

### Face Recognition
Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database.
*Face Recognition conflicts with SMD Plus and Perimeter Protection.

### 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.

### EPTZ
With advanced target detection and tracking algorithms, Dahua EPTZ technology can simultaneously zoom in and track multiple humans and vehicles that trigger alarms. It provides rich details and a panoramic view at the same time.

* *The information below only applies to hardware version 2.0. of the product.*
· 2-channel QuickPick 2.0 for analog channels which improves the efficiency of target retrieval.
· 1-channel Privacy Protection for analog channels which supports masking and restoring human faces that are detected in real time.
· 8-channel SMD Plus for analog channels or 16-channel SMD by camera which allows the device to trigger accurate alarms for humans and vehicles.
· 8-channel perimeter protection for analog channels which supports tripwire and intrusion detection powered by AI.
· 2-channel face recognition for analog channels which supports face comparison.
· 8-channel AI Coding saves on storage and bandwidth while maintaining the details of targets in videos.
· Supports HDCVI, AHD, TVI, CVBS and IP video input.
· Supports up to 16-channel IP camera input and each channel can be up to 8 MP. The incoming bandwidth reaches 128 Mbps.
· Smart H.265+ and H.265 dual-stream video compression.

### QuickPick 2.0
By employing the back-end perimeter protection algorithm, QuickPick 2.0 not only retains the capability to identify the color of clothing and vehicles, which was offered by its predecessor QuickPick 1.0, but it also possesses the enhanced ability to detect various types of hats, clothing and vehicles, thus greatly improving the accuracy of the search function.

### Privacy Protection
Dahua Privacy Protection technology is capable of masking detected human faces and subsequently removing the mask, ensuring the privacy of specific individuals is protected.

### Irregular Black Block Masking
Dahua's black block masking function supports the use of irregular shapes for masking, ensuring privacy in public and private locations.

### HDMI (4K)
The HDMI port can support up to 4K output, delivering clear and highly detailed images.

## Technical Specification

### System

| | |
|---|---|
| Main Processor | Industrial-grade processor |
| Operating System | Embedded Linux |
| Operating Interface | Web; Local GUI |

### Quick Pick

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|---|---|
| QuickPick 2.0 AI by Recorder (Number of Channels) | 2 channels |

### Perimeter Protection

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|---|---|
| Perimeter Performance AI by Recorder (Number of Channels) | Advanced Mode: 2 channels, 10 IVS rules for each channel<br>General Mode: 8 channels, 10 IVS rules for each channel |

### Face Detection

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|---|---|
| Face Attributes | 6 attributes |
| Face Detection Performance of AI by Recorder (Number of Channels) | 2 channels(up to 12 face images/s each channel) |

### Privacy Protection

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|---|---|
| Privacy Protection Performance of AI by Recorder (Number of Channels) | 1 channel |

### Face Recognition

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|---|---|
| Face Database Capacity | Up to 10 face databases with 20,000 images. |
| Face Recognition Performance of AI by Recorder (Number of Channels) | 2 channels |

### SMD Plus

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|---|---|
| SMD Plus by Recorder | 8 channels: Secondary filtering for human and vehicle, reducing false alarms caused by leaves, rain and lighting condition change |
| SMD Plus by Camera | 16 channels |

### AI Video Quality Analytics

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|---|---|
| AI Video Quality Analytics by Recorder | 8 channels: Supports detecting brightness levels, color cast, defocus, overexposure, contrast levels, black and white |

### Scene Changing

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|---|---|
| Scene Changing by Recorder | 1 channel |

### Irregular Black Block Masking

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|---|---|
| Irregular Black Block Masking by Recorder | 1 channel |

### EPTZ

| | |
|---|---|
| EPTZ by Recorder | 1 channel |

## Audio and Video

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|---|---|
| Analog Camera Input | 8 BNC ports, supports HDCVI/AHD/TVI/CVBS auto-detect |
| Camera Input | 1. CVI: 4K@25/30 fps; 4K@12.5/15 fps; 6 MP@20 fps; 5 MP@25 fps; 5 MP@20 fps; 4 MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps; 720p@50/60 fps.<br>2. TVI: 4K@15 fps; 5 MP(2560 x 1944)@20 fps; 5 MP(2960 x 1665)@20 fps; 4 MP@25/30 fps; 3 MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps.<br>3. AHD: 4K@15 fps; 5 MP@20 fps; 4 MP@25/30 fps; 3 MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps. |
| IP Camera Input | Up to 16 channels of IPC access<br>8 IP channels by default + 8 channels (analog channels are converted to IP channels)<br>Incoming bandwidth: 128 Mbps, recording bandwidth: 128 Mbps and outgoing bandwidth: 128 Mbps<br>*After IP extension is enabled, EPTZ, Video Quality Analytics, Scene Changing, Face Recognition, Face Detection, SMD, Perimeter Protection, QuickPick 2.0 and Privacy Protection cannot be used. |
| Encoding Capacity | Encode Enhancement disabled：<br>Main stream:<br>the 1st channel 4K@(1 fps–15 fps), others 4K@(1 fps–7 fps);<br>the 1st channel 6 MP@(1 fps–20 fps), others 6 MP@(1 fps–10 fps);<br>the 1st channel 5 MP@(1 fps–25 fps), others 5 MP@(1 fps–12 fps);<br>the 1st channel 4K-N/4 MP/3 MP@(1 fps–25/30 fps), others 4K-N/4 MP/3 MP@(1 fps–15 fps);<br>4K@(1 fps–8 fps); 5 MP@(1 fps-15 fps);4M-N/1080p/720p/960H/D1/CIF@(1 fps–25/30 fps)<br>Sub stream:<br>960H@(1 fps–15 fps); D1/CIF@(1 fps–25/30 fps)<br>Encode Enhancement enabled：<br>Main stream:<br>the 1st, 5th channel 4K@(1 fps–15 fps), others 4K@(1 fps–7 fps);<br>the 1st, 5th channel 6 MP@(1 fps–20 fps), others 6 MP@(1 fps–10 fps);<br>the 1st, 5th channel 5 MP@(1 fps–25 fps), others 5 MP@(1 fps–12 fps);<br>the 1st, 5th channel 4K-N/4 MP/3 MP@(1 fps–25/30 fps), others 4K-N/4 MP/3 MP@(1 fps–15 fps);<br>4K/6 MP@(1 fps–10 fps);5 MP@(1 fps-15 fps); 4M-N/1080p/720p/960H/D1/CIF@(1 fps–25/30 fps)<br>Sub stream:<br>960H@(1 fps–15 fps); D1/CIF@(1 fps–25/30 fps)<br>*When Encode Enhancement is enabled, EPTZ, Video Quality Analytics, Scene Changing, Face Recognition, Face Detection, Perimeter Protection, QuickPick 2.0 and Privacy Protection cannot be used. |
| Dual-stream | Yes |
| Video Bit Rate | 32 kbps–6144 kbps |
| Audio Sampling | 8 kHz, 16 bit |
| Audio Bit Rate | 64 kbps |
| Video Output | 1 HDMI, 1 VGA<br>HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720<br>VGA: 1920 × 1080, 1280 × 1024, 1280 × 720<br>*Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable. |
| Multi-screen Display | When IP extension mode not enabled: 1/4/8/9<br>When IP extension mode enabled: 1/4/8/9/16 |
| Third-party Camera Access | Panasonic; Sony; Hanwha; Axis; Arecont; ONVIF |

## Compression Standard

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|---|---|
| Video Compression | AI Coding; Smart H.265+; H.265; Smart H.264+; H.264 |
| Audio Compression | G.711a; G.711u; PCM |

## Network

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|---|---|
| Network Protocol | HTTP; HTTPS; TCP/IP; IPv4; IPv6; RTSP; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; FTP; DDNS; SNMP; Alarm Server; P2P; Auto Registration; IP Search (Supports IP camera, DVR, NVS, etc.) |
| Mobile Phone Access | iOS; Android |
| Interoperability | ONVIF 24.06 (Profile T; Profile S; Profile G); CGI; SDK |
| Browser | Chrome; IE; Safari; Edge; Firefox |

## Recording Playback

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|---|---|
| Record Mode | General; alarm; motion detection; intelligent; POS |
| Recording Playback | 1/4/9 |
| Backup Method | USB device and network |
| Playback Mode | Instant playback; general playback; event playback; tag playback; smart playback |

## Storage

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|---|---|
| Disk Group | Yes |

## Alarm

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|---|---|
| General Alarm | Motion detection; alarm box; HDCVI alarm; camera external alarm; network alarm; PIR alarm |
| Anomaly Alarm | Error (no disk, disk error, low space, low quota space; network disconnection; IP conflict; MAC conflict); video loss; video tampering; camera offline |
| Intelligent Alarm | Face detection; face recognition; perimeter protection; SMD Plus |
| Alarm Linkage | Record; snapshot (panoramic); IPC external alarm output; audio; buzzer; log; preset; email |

## Ports

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|---|---|
| Audio Input | 1-channel RCA<br>8-channel BNC (Coaxial Audio) |
| Audio Output | 1-channel RCA |
| Two-way Talk | Yes (share the same audio input with the first channel) |
| Disk Interface | 2 SATA ports. Each disk can contain up to 16 TB. This limit varies depending on the environment temperature. |
| 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) |

## General

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|---|---|
| Power Supply | 12 VDC, 4 A |
| Power Consumption | <10 W (without HDD) |
| Net Weight | 1.60 kg (3.53 lb) |

| | |
|---|---|
| Gross Weight | 3.00 kg (6.62 lb) |
| Product Dimensions | 375.0 mm × 289.6 mm × 53.0 mm (14.76" × 11.40" × 2.09") (W × D × H) |
| Packaging Dimensions | 433.0 mm × 141.0 mm × 366.0 mm (17.05" × 5.56" × 14.41") (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%–90% (RH), non-condensing |
| Installation | Desktop |
| Certifications | CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024 FCC: Part 15 Subpart B |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| DIGITAL VIDEO RECORDER | DH-XVR5208AN-4KL-I3 | 8CH Penta-brid 4K Value/5MP 1U 2HDDs WizSense Digital Video Recorder |

## Accessories

Optional:
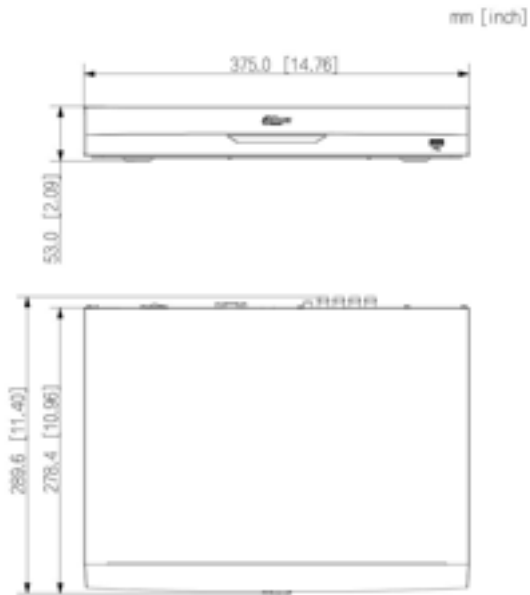


DHI-SSD-V800S256G SSD

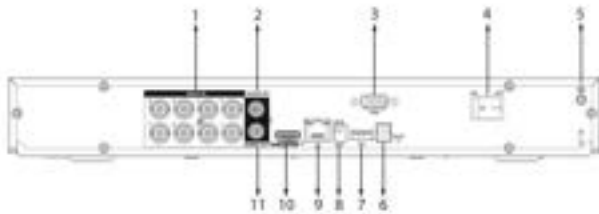

DHI-SSD-V800S512G SSD



DHI-SSD-V800S1TB SSD



DHI-ARB1606 Alarm Box

## Dimensions (mm[inch])



## Panels



1 VIDEO IN
3 VGA Port
5 Ground
7 USB Port
9 Network Port
11 AUDIO OUT, RCA Connector

2 AUDIO IN, RCA Connector
4 Power Switch
6 Power Input
8 RS-485 Port
10 HDMI Port