

DH-XVR5116H-4KL-I3

16 Channels Penta-brid 4K-N/5MP Mini 1U 1HDD WizSense Digital 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

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 to recognize the person identity.

*The Face Recognition is conflicted with SMD Plus and Perimeter Protection.

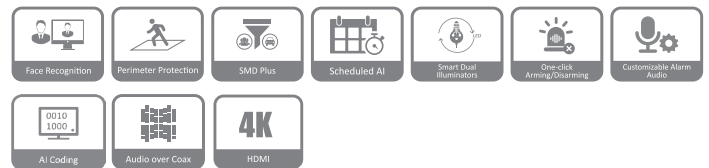
Perimeter Protection

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.

- H.265+/H.265 dual-stream video compression.
- Supports Full-channel AI-Coding.
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs.
- Max 32 channels IP camera inputs, each channel up to 8MP; Max 128 Mbps incoming bandwidth.
- Up to 8 channels video stream (analog channel) Perimeter Protection.
- Up to 16 channels video stream (analog channel) SMD Plus.
- Up to 2 channels video stream (analog channel) human face recognition.
- IoT & POS functionalities.



Scheduled AI

This technology allows multiple AI functions to be set for one channel based on time frames, eliminating the need to manually configure the system to switch between functions each time. Scheduled AI greatly increases efficiency and widens the number of scenarios that the device can be used in.

Smart Dual Illuminators

With Smart Dual Illuminators technology, you can select Smart Illumination Mode for the system to automatically switch between IR mode and white light mode. It allows white light to be turned on when a target is detected by the SMD Plus/Perimeter Protection function of AI-enabled XVR. This significantly reduces light pollution at night. Together with other modes, including IR Mode and White Light Mode, the smart dual illumination technology can meet the requirements of a wide variety of scenes.

One-click Arming/Disarming

With just one click, you can enable or disable alarm linkages to show messages, send emails, output audio alarms and more, through the mobile app and platform.

Customizable Alarm Audio

Designed for your convenience, the TIOC alarm can be customized to meet your needs. It is flexible, allowing you to directly upload your customized audio through the mobile app and XVR.

AI Coding

Compared with H.265/H.264, AI coding can reduce more than 50% bit rate and storage requirements without loss of decoding compatibility, providing clear human and vehicle details.

Audio over Coax

The integrated design can reduce wiring troubles which makes it much more cost-effective and convenient for installation.

Technical Specification

System

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

Perimeter Protection

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

Face Detection

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|---|---|
| Face Attributes | Gender; age group; glasses; expressions; face mask; beard |
| Face Detection Performance of AI by Recorder (Number of Channels) | 2 channels (up to 12 face images/s) |

Face Recognition

| | |
|---|---|
| Face Database Capacity | Up to 10 face databases with 20,000 face images in total. Name, gender, birthday, address, certificate type, certificate No., countries®ions and state can be added to each face picture |
| Face Recognition Performance of AI by Recorder (Number of Channels) | 2 channels |

SMD Plus

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

Audio and Video

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|---------------------|--|
| Analog Camera Input | 16 BNC ports, CVI access by default, supports HDCVI/AHD/TVI/CVBS auto-detect |
| Camera Input | 1. CVI: 4K, 6 MP, 5 MP, 4 MP, 1080P@25/30 fps, 720P@50/60 fps, 720P@25/30 fps. 2. TVI: 4K, 5 MP, 4 MP, 3 MP, 1080P@25/30 fps, 720P@25/30 fps. 3. AHD: 4K, 5 MP, 4 MP, 3 MP, 1080P@25/30 fps, 720P@25/30 fps. |
| IP Camera Input | Up to 32 channels of IPC access 16 IP channels by default + 16 channels (analog channels are converted to IP channels) incoming bandwidth: 128 Mbps, recording bandwidth: 128 Mbps and outgoing bandwidth: 128 Mbps *After IP channels are added beyond the existing channels, the AI Function (IVS, SMD, FACE) will be disabled. |
| Encoding Capacity | Main stream: All channels 4K@ (1-7 fps); 6 MP@ (1-10 fps); 5 MP @ (1-12 fps); 4K-N/4 MP/3 MP@ (1-15 fps); 4M-N/1080P/720P/960H/D1/CIF (1 fps-25/30 fps); Sub stream: 960H@ (1 fps-15 fps); D1/CIF@ (1 fps-25/30 fps) |
| Dual-stream | Yes |
| Video Frame Rate | PAL: 1 fps-25 fps NTSC: 1 fps-30 fps |
| Video Bit Rate | 32 kbps-6144 kbps per channel |
| Audio Sampling | 8 kHz, 16 bit |
| Audio Bit Rate | 64 kbps |

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.

Multi-screen Display

When IP extension mode not enabled: 1/4/8/9/16
When IP extension mode enabled: 1/4/8/9/16/25/36

Third-party Camera Access

Onvif, Panasonic, Sony, Axis, Arecont, Pelco, Canon, Samsung

Compression Standard

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

Network

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|---------------------|---|
| Network Protocol | HTTP; HTTPS; TCP / IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; P2P |
| Mobile Phone Access | iOS, Android |
| Interoperability | ONVIF 21.06, CGI |
| Browser | Chrome, IE9 or later, Firefox |
| Network Mode | Single-address mode |

Recording Playback

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|--------------------|---|
| Record Mode | General, motion detection; intelligent; alarm; POS |
| Recording Playback | When the AI Function (IVS, FACE) is not enabled: 1/4/9/16 When the AI Function (IVS, FACE) is enabled: 1/4/9 |
| Backup Method | USB device and network |
| Playback Mode | Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection) |

Alarm

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|-------------------|--|
| General Alarm | Motion detection, video loss, tampering, and local alarm |
| Anomaly Alarm | No disk, storage error, low space, offline, IP conflict, MAC conflict |
| Intelligent Alarm | Face detection, face recognition, perimeter protection |
| Alarm Linkage | Record, snapshot (panoramic), IPC external alarm output, access controller, voice prompt, buzzer, log, preset, email |

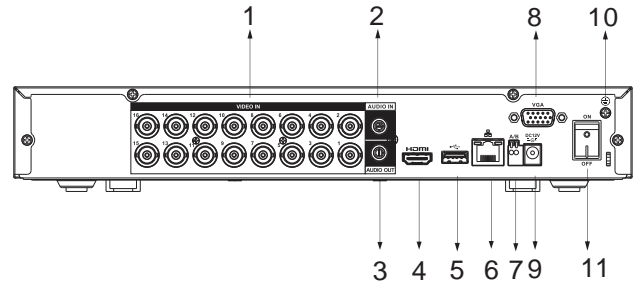
Ports

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|---------------|--|
| Audio Input | 1-channel RCA (external) 16-channel BNC (coaxial audio) |
| Audio Output | 1-channel RCA |
| Two-way Talk | Yes (share the same audio input with the first channel) |
| HDD Interface | 1 SATA port, up to 16 TB, the maximum HDD capacity varies with 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, 3 A |
| Power Consumption | Lower than 15 W (without HDD) |
| Net Weight | 1.23 kg (2.71 lb) |
| Gross Weight | 2.11 kg (4.65 lb) |
| Product Dimensions | Mini 1U, 325.0 mm × 257.1 mm × 55.0 mm (12.80" × 10.12" × 2.17") (W × D × H) |
| Packaging Dimensions | 372.0 mm × 117.0 mm × 308.0 mm (14.65" × 4.61" × 12.13") (W × D × H) |
| Operating Temperature | -10 °C to +55 °C (-14 °F to +131 °F) |
| Operating Humidity | 10%–90% (RH) |
| 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 |

Panels



- 1 Video In
- 2 Audio In
- 3 Audio Out
- 4 HDMI Port
- 5 USB Port
- 6 Network Port
- 7 RS-485 Port
- 8 VGA Port
- 9 DC 12V Power Input
- 10 Ground
- 11 Power Switch

Ordering Information

| Type | Model | Description |
|-----------------------------|--------------------|--------------------------------|
| 16 Channels WizSense XVR | DH-XVR5116H-4KL-I3 | Mini 1U DIGITAL VIDEO RECORDER |

Dimensions (mm[inch])

