

# DH-XVR5116H-4KL-I3

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

## 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.

### 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 2 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
- Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.



### 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.

### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, a flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality videos without straining the network. Smart H.265+ technology outranks standard H.265 video compression, reducing bit rate and storage requirements by up to 70%.

### HDCVI/AHD/TVI/CVBS Auto-detect

The XVR can auto recognize the signal of front-camera without any setting. It makes operation more friendly and convenient.

### Coaxial Audio/Upgrade/Alarm

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

### Long-distance Transmission

The HDCVI system supports long distance transmission over coaxial cable and UTP, max. 700 m for 4K/4MP, 800 m for 1080P and 1200 m for 720P.

### AI Search

With AI search, operators can search for videos by the attributes of targets and event types, which helps them to quickly and efficiently investigate where and when targets appeared and events took place.

## Technical Specification

### System

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

### Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	2 channel, 10 IVS rules for each channel
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### Face Detection

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&regions 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 SMD Plus (AI by recorder), secondary filtering for human and motor vehicle SMD Plus, reducing false alarms caused by leaves, rain and lighting condition change
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### Audio and Video

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
Encoding Capacity	Main stream: All channel 4K@(1-7 fps); 6MP@(1-10 fps); 5MP@(1-12 fps); 4K-N/4 MP/3 MP@(1-15 fps); 4M-N/1080P/720P/960H/D1/CIF (1fps-25/30fps); 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
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

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

### Compression Standard

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

### Network

Network Protocol	HTTP; HTTPS; TCP / IP; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; P2P
Mobile Phone Access	iOS, Android
Interoperability	ONVIF 16.12, CGI
Browser	Chrome, IE9 or later, Firefox
Network Mode	Single-address mode

### Recording Playback

Record Mode	General, motion detection; intelligent; alarm; POS
Recording Playback	1/4/9/16
Backup Method	USB device and network
Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection)

### Alarm

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

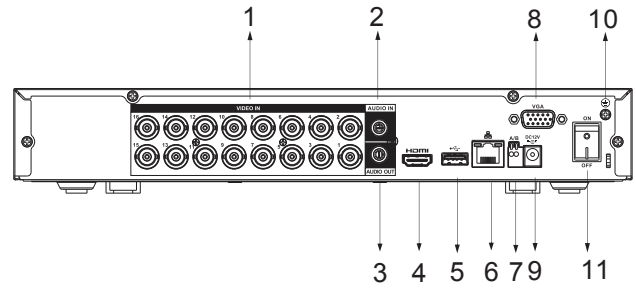
Audio Input	1-channel RCA (external) 16-channel BNC (coaxial audio)
Audio Output	1-channel RCA
Two-way Talk	Yes (share the same audio input with the first channel)
HDD Interface	1 SATA port, up to 16 TB for a single HDD, the maximum HDD capacity varies with environment temperature
RS-485	1
USB	2 (1 front 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

Power Supply	12 VDC, 3 A
Power Consumption	Lower than 15 W
Net Weight	1.23 kg (2.71 lb)
Gross Weight	2.11 kg (4.65 lb)

Product Dimensions	Mini 1U, 325.0 mm × 256.6 mm × 55.0 mm (12.80" × 10.10" × 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])**

