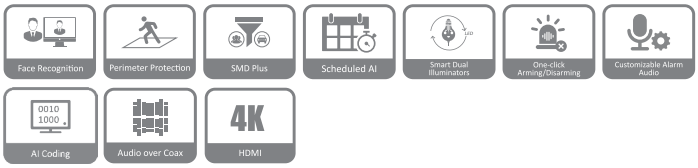
DH-XVR5416L-4KL-I3

16 Channels Penta-brid 4K-N/5MP 1.5U 4HDDs WizSense Digital Video Recorder



- H.265+/H.265 dual-stream video compression.
- Supports 16-channel AI-Coding.
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs.
- Max 32 channels IP camera inputs, each channel up to 12MP; 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.



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.

*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.

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

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

Perimeter Protection

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

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, cerificate No., countries & regions and state can be added to each face image
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

Audio and Video

Analog Camera Input	16 BNC ports, 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: 4K@(1fps-7fps); 6 MP@(1fps-10fps); 5 MP@(1fps-12fps); 4K-N, 4 MP, 3 MP@(1fps-15fps); 4M-N, 1080p, 720p, 960H, D1,CIF@(1fps–25/30fps); Sub stream: 960H@(1fps–15fps); D1/CIF@(1 fps–25/30fps)
Dual-stream	Yes
Video Bit Rate	32 kbps–6144 kbps
Audio Sampling	8 kHz, 16 bit
Audio Bit Rate	64 kbps
Video Output	2 HDMI, 1 VGA, 1 TV Resolution VGA/HDMI2: 1920 × 1080, 1280 × 1024, 1280 × 720 HDMI1: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 *Heterogeneous video sources output for HDMI2 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

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 21.12; 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)

Storage

Disk Group	Yes

Alarm

General Alarm	Motion detection; video loss; tampering; local alarm
Anomaly Alarm	No disk; storage error; disk full; camera 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

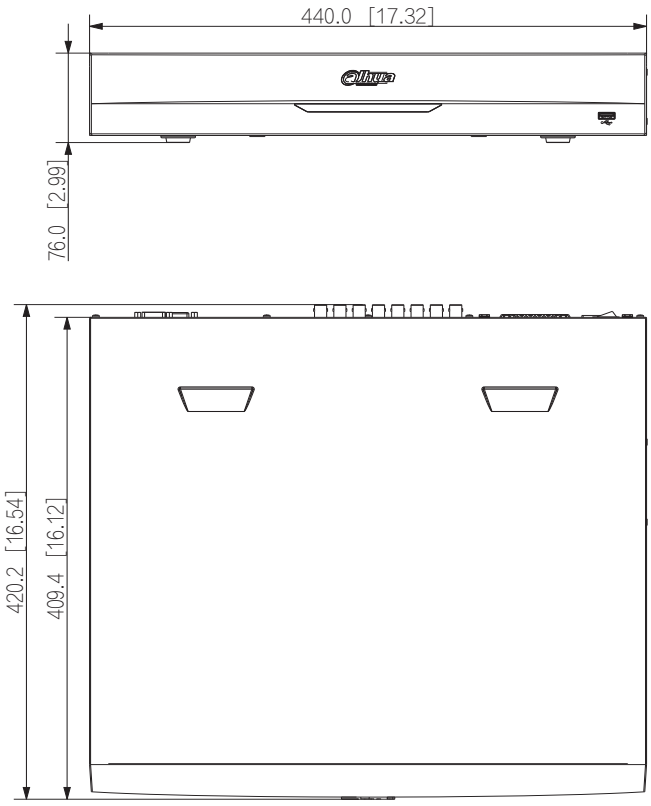
TV Output	Yes
Audio Input	4-channel BNC (external) 16-channel BNC (coaxial audio)
Audio Output	1-channel BNC
Two-way Talk	1-channel BNC
Alarm Input	16 channels
Alarm Output	6 channels
HDD Interface	4 SATA ports, up to 16TB for a single HDD, the maximum HDD capacity varies with environment temperature
eSATA	1

RS-232	1 port, for PC Communication & Keyboard
RS-485	1 port, for PTZ control
USB	3 (1 front USB 2.0 port, 2 rear USB 3.0 ports)
HDMI	2
VGA	1
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)

General

Power Supply	100-240 VAC, 50/60 Hz
Power Consumption	<20 W
Net Weight	4.7 kg (10.36 lb)
Gross Weight	6.9 kg (15.21 lb)
Product Dimensions	1.5U, 440.0 mm × 420.2 mm × 76.0 mm (17.32" × 16.54" × 2.99") (W × D × H)
Packaging Dimensions	529.0 mm × 499.0 mm × 211.0 mm (20.83" × 19.65" × 8.31") (W × D × H)
Operating Temperature	–10 °C to +55 °C (14 °F to +131 °F)
Operating Humidity	10%–90% (RH)
Installation	Rack or 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

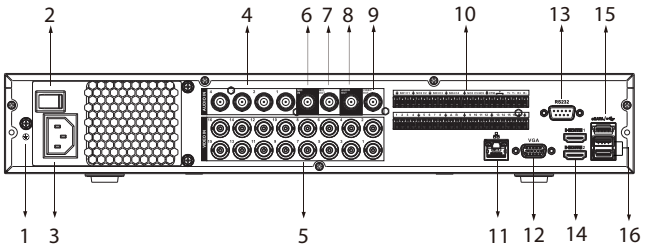
Dimensions (mm[inch])



Ordering Information

Type	Model	Description
16 Channels WizSense XVR	DH-XVR5416L-4KL-I3	1.5U DIGITAL VIDEO RECORDER

Panels



1 Ground
2 Power Switch
3 Power Input
4 AUDIO IN, BNC Connector
5 VIDEO IN
6 MIC IN, BNC Connector
7 MIC OUT, BNC Connector
8 AUDIO OUT, BNC Connector
9 VIDEO OUT
10 Alarm In/Out
11 Network Port
12 VGA Port
13 RS-232 Port
14 HDMI Ports
15 eSATA Port
16 USB Ports

Rev 002.000 © 2022 Dahua. All rights reserved. Design and specifications are subject to change without notice.
The images, specifications and information mentioned in the document are only for reference, and might differ from the actual product.