DH-XVR5416L-4KL-I3/T

16CH Penta-brid 4K Value/5MP 1.5U 4HDDs 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

The XVR5000-4KL-I3/T series raises the bar on video recorders with its advanced high-resolution design, offering versatility to meet the demands of various applications and projects of different scales and budgets. Its strong compatibility with 5MP cameras ensures the delivery of clear and vivid live video feeds, making it highly recommended for use with 5MP cameras. Loaded with multiple AI functions, such as AcuPick, EPTZ and privacy protection, this series not only streamlines operations but also significantly reduces time and labor costs, contributing to a lower Total Cost of Ownership (TCO).

Functions

Two-way talk

Allows for seamless communication between the camera, client and recorder over coaxial cable, and offers instant voice intercom and timely audio alerts.

Enhanced Encoding

Encoding Enhancement mode optimizes videos through real-time encoding to make them smoother and improve scene rendering.

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.

* DoLynk Cloud version: DMSS 2.0.30 and above, DoLynk Care 2.50.20 and above.
- 16-channel two-way talk over coaxial cable allows for seamless communication between the camera, client and recorder.
- 8-channel AcuPick for analog channels which improves the efficiency of target retrieval.
- 8-channel perimeter protection for analog channels which supports tripwire and intrusion detection powered by AI.
- 4-channel face recognition for analog channels which supports face comparison.
- 16-channel SMD Plus for analog channels or 32-channel SMD by camera which allows the device to trigger accurate alarms for humans and vehicles.
- 16-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 32-channel IP camera input and each channel can be up to 12 MP. The incoming bandwidth reaches 320 Mbps.
- Supports accessing Wi-Fi cameras, making it suitable for a wide range of scenes.
- Smart H.265+ and H.265 dual-stream video compression.



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.

AcuPick

This industry-leading search technology effectively utilizes back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

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.

Technical Specification

System

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

AcuPick

AcuPick AI by Recorder (Number of Channels)	8 channels

Perimeter Protection

Perimeter Performance AI by Recorder (Number of Channels)	8 channels, 10 IVS rules for each channel

Face Detection

Face Attributes	6 attributes
Face Detection Performance of AI by Recorder (Number of Channels)	4 channels (up to 12 face images/s each channel)

Privacy Protection

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

Face Recognition

Face Database Capacity	Up to 10 face databases with 20,000 images
Face Recognition Performance of AI by Recorder (Number of Channels)	4 channels

SMD

SMD Plus by Recorder	16 channels: Secondary filtering for human and vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD by Camera	32 channels

AI Video Quality Analytics

AI Video Quality Analytics by Recorder	16 channels: Supports detecting brightness levels, color cast, defocus, overexposure, contrast levels, black and white.

Scene Changing

Scene Changing by Recorder	1 channel

Irregular Black Block Masking

Irregular Black Block Masking by Recorder	1 channel

EPTZ

EPTZ by Recorder	1 channel

Audio and Video

Analog Camera Input	16 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. 2. TVI: 4K@15 fps; 5 MP(2560 × 1944)@20 fps; 5 MP(2960 × 1665)@20 fps; 4 MP@25/30 fps; 3 MP (2304 × 1296)@20 fps; 1080p@25/30 fps; 720p@25/30 fps. 3. AHD: 4K@15 fps; 5 MP@20 fps; 4 MP@25/30 fps; 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: 320 Mbps, recording bandwidth: 320 Mbps and outgoing bandwidth: 256 Mbps *After IP extension is enabled, EPTZ, Video Quality Analytics, Scene Changing, Face Recognition, Face Detection, Perimeter Protection, AcuPick and Privacy Protection cannot be used.
Encoding Capacity	Encode Enhancement disabled: Main stream: the 1st, 9th channel 4K@(1 fps–15 fps), others 4K@(1 fps–7 fps) the 1st, 9th channel 6 MP@(1 fps–20 fps), others 6 MP@(1 fps–10 fps) the 1st, 9th channel 5 MP@(1 fps–25 fps), others 5 MP@(1 fps–12 fps) the 1st, 9th channel 4K-N/4 MP/3 MP@(1 fps–25/30 fps), others 4K-N/4 MP/3 MP@(1 fps–15 fps) 4K@(1 fps–8 fps); 4K-N/5 MP@(1 fps–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) Encode Enhancement enabled: Main stream: the 1st, 5th, 9th, 13th channel 4K@(1 fps–15 fps), others 4K@(1 fps–7 fps) the 1st, 5th, 9th, 13th channel 6 MP@(1 fps–20 fps), others 6 MP@(1 fps–10 fps) the 1st, 5th, 9th, 13th channel 5 MP@(1 fps–25 fps), others 5 MP@(1 fps–12 fps) the 1st, 5th, 9th, 13th channel 4K-N/4 MP/3 MP@(1 fps–25/30 fps), others 4K-N/4 MP/3 MP@(1 fps–15 fps) 4K/6 MP@(1 fps–10 fps); 4K-N/5 MP@(1 fps–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) *When Encode Enhancement is enabled, EPTZ, Video Quality Analytics, Scene Changing, Face Recognition, Face Detection, Perimeter Protection, AcuPick 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	2 HDMI, 1 VGA, 1 CVBS HDMI1: 3840 × 2160, 2560 × 1440, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA/HDMI2: 1920 × 1080, 1280 × 1024, 1280 × 720 *Heterogeneous video sources output for HDMI 2 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;RTSP;Panasonic;Sony;Axis;Arecont;Hanwha

Compression Standard

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

Network

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 26.06 (Profile T; Profile S; Profile G; Profile M); CGI; SDK
Browser	Chrome; IE; Safari; Edge; Firefox
Network Mode	Multi-address mode;Load balance;Fault-tolerance

Recording

Record Mode	General;Motion detection;Intelligent;Alarm;POS
Backup Method	USB device and network
Playback Mode	Instant playback;General playback;Event playback;Tag playback;Smart playback

Recording Playback

Recording Playback	1/4/9/16

Storage

Disk Group	Yes
RAID	RAID 0/1/5/6/10

Alarm

General Alarm	Motion detection;Local alarm;IPC external alarm;Alarm box;HDCVI 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); local alarm output; IPC external alarm output; audio; buzzer; log; preset; email

Ports

CVBS Output	1 channel
Audio Input	4-channel BNC 16-channel BNC (Coaxial Audio)
Audio Output	2-channel BNC
Two-way Talk	Coaxial two-way talk: 16-channel BNC; Local and network user two-way talk: 1-channel BNC
Alarm Input	16 channels
Alarm Output	9 channels (8-channel relay output, 1-channel 12 V 1 A output)
Disk Interface	4 SATA ports. Each disk can contain up to 30 TB. This limit varies depending on the environment temperature
eSATA	1
RS-232	1
RS-485	1
USB	3 (1 front USB 2.0 port, 2 rear USB 3.0 ports)
HDMI	2
VGA	1
Network Port	2 (10/100/1000 Mbps Ethernet port, RJ-45)

General

Power Supply	100–240 VAC, 50±2% Hz
Power Consumption	<20 W (without HDD)
Net Weight	4.43 kg (9.77 lb)
Gross Weight	6.45 kg (14.22 lb)
Product Dimensions	440.0 mm × 420.2 mm × 76.0 mm (17.32" × 16.54" × 2.99") (W × D × H)
Packaging Dimensions	530.0 mm × 500.0 mm × 210.0 mm (20.87" × 19.69" × 8.27") (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 mount
Certifications	CE-LVD: EN IEC62368-1:2024+A11:2024 CE-EMC: EN55032:2015+A1:2020, EN55035:2017+A11:2020, EN 61000-3-2:2019+A1:2021+A2:2024, EN 61000-3-3:2013+A1:2019+A2:2021

Ordering Information

Type	Model	Description
DIGITAL VIDEO RECORDER	DH-XVR5416L-4KL-I3/T	16CH Penta-brid 4K Value/5MP 1.5U 4HDDs WizSense Digital Video Recorder
Accessories (Optional)	DHI-ARB1606	Alarm Box
	ESS1504C	4 Bay eSATA Extension Cabinet

Accessories

Optional:

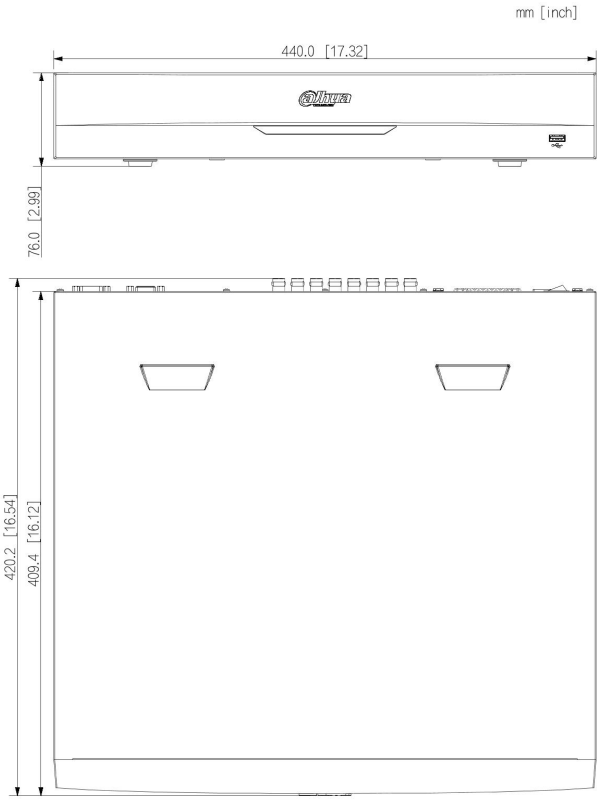


DHI-ARB1606
Alarm Box

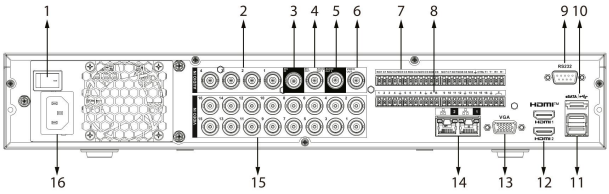


ESS1504C
4 Bay eSATA Extension Cabinet

Dimensions (mm[inch])



Panels



1 Power Switch	2 AUDIO IN, BNC Connector
3 MIC IN, BNC Connector	4 MIC OUT or AUDIO OUT, BNC Connector
5 AUDIO OUT, BNC Connector	6 VIDEO OUT
7 Alarm In/Out	8 RS-485 Port
9 RS-232 Port	10 eSATA Port
11 USB Ports	12 HDMI Ports
13 VGA Port	14 Network Ports
15 VIDEO IN	16 Power Input

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