

# DH-XVR5116H-4KL-I3

16CH Penta-brid 4K Value/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. \*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.
- 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.
- 8-channel perimeter protection for analog channels which supports tripwire and intrusion detection powered by Al.
- 2-channel face recognition for analog channels which supports face comparison.
- 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 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.

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Technical Specification		Audio and Video	
System		Analog Camera Input	16 BNC ports, supports HDCVI/AHD/TVI/CVBS auto- detect
, Main Processor	Industrial-grade processor		1. CVI: 4K@25/30 fps; 4K@12.5/15 fps; 6 MP@20
Operating System	Embedded Linux		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.
Operating Interface	Web; Local GUI	Camera Input	<ul> <li>2. TVI: 4K@15 fps; 5 MP(2560 x 1944)@20 fps;</li> <li>5 MP(2960 x 1665)@20 fps; 4 MP@25/30 fps; 3</li> <li>MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps.</li> <li>3. AHD: 4K@15 fps; 5 MP@20 fps; 4 MP@25/30 fps; 3</li> <li>MP@25/30 fps; 1080p@25/30 fps; 720p@25/30 fps.</li> <li>Up to 32 channels of IPC access</li> </ul>
Quick Pick			
QuickPick 2.0 Al by Recorder (Number of Channels)	2 channels		
Perimeter Protection			16 IP channels by default + 16 channels (analog channels are converted to IP channels)
Perimeter Performance AI by Recorder (Number of Channels)	Advanced Mode: 2 channels, 10 IVS rules for each channel General Mode: 8 channels, 10 IVS rules for each channel	IP Camera Input	Incoming bandwidth: 128 Mbps, recording bandwidth: 128 Mbps and outgoing bandwidth: 128 Mbps *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.
Face Detection			Encode Enhancement disabled :
Face Attributes Face Detection Performance of AI by Recorder (Number of Channels)	6 attributes 2 channels(up to 12 face images/s each channel)		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
Privacy Protection			MP@(1 fps-12 fps); the 1st, 9th channel 4K-N/4 MP/3 MP@(1 fps-25/30
Privacy Protection Performance of AI by Recorder (Number of Channels)	1 channel		fps), others 4K-N/4 MP/3 MP@(1 fps-15 fps); 4K@(1 fps-8 fps); 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)
Face Recognition			Encode Enhancement enabled : Main stream:
Face Database Capacity	Up to 10 face databases with 20,000 images.	Encoding Capacity	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); 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 Recognition Performance of AI by Recorder (Number of Channels)	2 channels		
SMD Plus			
SMD Plus by Recorder	16 channels: Secondary filtering for human and vehicle, reducing false alarms caused by leaves, rain and lighting condition change		
SMD Plus by Camera	32 channels		
Al Video Quality Analytics			Face Detection, Perimeter Protection, QuickPick 2.0 and Privacy Protection cannot be used.
Al Video Quality Analytics by Recorder	16 channels: Supports detecting brightness levels, color cast, defocus, overexposure, contrast levels, black and	Dual-stream	Yes
	white	Video Bit Rate	32 kbps–6144 kbps
Scene Changing		Audio Sampling	8 kHz, 16 bit
Scene Changing by Recorder	1 channel	Audio Bit Rate	64 kbps
Irregular Black Block Masking			1 HDMI, 1 VGA HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 ×
Irregular Black Block Masking by Recorder	1 channel	Video Output	720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 *Simultaneous/heterogeneous video sources output for
EPTZ			VGA and HDMI is configurable.
EPTZ by Recorder	1 channel	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	Panasonic; Sony; Hanwha; Axis; Arecont; ONVIF

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#### **Compression Standard**

Compression Standard					
Video Compression	Al Coding; Smart H.265+; H.265; Smart H.264+; H.264				
Audio Compression	G.711a; G.711u; PCM				
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 24.06 (Profile T; Profile S; Profile G); CGI; SDK				
Browser	Chrome; IE; Safari; Edge; Firefox				
Recording Playback					
Record Mode	General; alarm; motion detection; intelligent; 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				
Alarm					
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					
Audio Input	1-channel RCA 16-channel BNC (Coaxial Audio)				
Audio Output	1-channel RCA				
Two-way Talk	Yes (share the same audio input with the first channel)				
Disk Interface	1 SATA port, 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					
Power Supply	12 VDC, 3 A				
Power Consumption	<15 W (without HDD)				
Net Weight	1.30 kg (2.87 lb)				
Gross Weight	2.10 kg (4.63 lb)				
Product Dimensions	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)	
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

Туре	Model	Description
DIGITAL VIDEO RECORDER	DH-XVR5116H-4KL-I3	16CH Penta-brid 4K Value/5MP Mini 1U 1HDD WizSense Digital Video Recorder

### Accessories

Optional:







DHI-SSD-V800S256G SSD

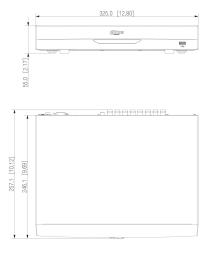
DHI-SSD-V800S512G SSD

DHI-SSD-V800S1TB SSD



DHI-ARB1606 Alarm Box

### Dimensions (mm[inch])



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#### Panels 2 G 11 10 9 8 1 VIDEO IN 2 AUDIO IN, RCA Connector 3 VGA Port 4 Ground 5 Power Switch 6 Power Input 7 RS-485 Port 8 Network Port 9 USB Port 10 HDMI Port 11 AUDIO OUT, RCA Connector

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