



DH-XVR5116HE-I3

16 Channels Penta-brid 5M-N/1080P Mini 1U 1HDD 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

Dahua Technology, a world-leading video-centric smart IoT solution and service provider, debuted its new XVR series, XVR5000-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 takes effect when Face is selected in AI Mode.

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.

*Perimeter Protection takes effect when IVS&SMD is selected in AI Mode.

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.

*SMD Plus takes effect when SMD or IVS&SMD is selected in AI Mode

- · H.265+/H.265 dual-stream video compression
- · Supports Full-channel AI Coding
- · Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Max 24 channels IP camera inputs, each channel up to 6MP; Max 128
 Mbps incoming bandwidth
- Up to 4 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 functionalitie



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, Al 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.

System					
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Share Processor Inhested processor Inhested Innx Street Street Processor Operating interface Web. Local CUI Perimeter Protection Perimeter Performance All by Recoder (Number) Advanced Models 7 channels, 10 NS for each channel growth and an advanced Models 7 channels, 10 NS for each channel growth and an advanced Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels, 10 NS for each channel growth Models 7 channels (pp 10 L2 lace integers), 10 NS for each channel growth Models 7 channels (pp 10 L2 lace integers), 10 NS for each channel growth Models Protection Face Detection Face Detection Face Recognition Face	System	Video Output		×720	
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Perimeter Protection Compression Standard Video Compression A Coding/N2654/N265/N2644-N264 Audio Compression — AI Coding/N2654-N265/N2644-N264 Network Protocol — Netwo	Operating System	Embedded Linux	Multi-screen Display		
Perimeter Protection Protriester Profession Standard Video Compression Al Coding/N 2654/N.265/N.2644/N.264 Audio Compression G.711A/G.711a/PCM Protriester Profession G.711A/G.711a/PCM Audio Compression G.711A/G.711a/PCM Protriester Profession G.711A/G.711a/PCM Protriester Profession G.711A/G.711a/PCM Network Network Network Network Network Protocol Audio Compression G.711A/G.711a/PCM Network Network Protocol Standard Video Compression G.711A/G.711a/PCM Network Network Protocol Audio Compression G.711A/G.711a/PCM Network Protocol Standard Network Protocol Standard Network Network Protocol Standard Network Network Protocol Standard Network Network Protocol Standard Network Network Network Protocol Standard Network Network Protocol Standard Network Network Network Network Network Network Protocol Standard Network Network Network Network Network Network Network Network Network Protocol Standard Network Network Network Network Network Network Network Network Protocol Standard Network Network Network Network Network Protocol Standard Network Network Network Network Protocol Standard Network Network Network Network Protocol Standard Network Network Network Network Network Network Network Protocol Standard Network Network Protocol Standard Network Network Network Network Network Network Protocol Standard Network Network Network Network Protocol Standard Network Netwo	Operating Interface	Web; Local GUI	Third-party Camera Access		
Perimeter Performance Al Dy Recorder (Winder of Charmels). 10 (NS for each channel Or Charmels). Audio Compression (3711A/S711µPCM) Face Detection Face Attributes Gender; ase group; glasses; expressions; face mask, beard Face Detection Performance of Al by Recorder (Winder of Charmels) Up to 10 face databases with 10000 face images in total Name, pender, burtidary, address, certificate style, certificate byte, certificate	Perimeter Protection		Compression Standa		
Face Attributes Cender; ape group, plasses; expressions; face mask; beard	by Recorder (Number of		·		
Face Datestion Face Datestion Face Datestion Face Recognition Face Recognition Face Dates above (Number of Channels) Face Dates above (Number of Channels) Face Recognition Face Dates above (Number of Channels) Face Dates (Number of Channels) Face Dates (Number of Channels) Face Recognition Face Recogniti	Face Detection		Audio Compression	G.711A/G.711u/PCM	
Network Protocol HTTP, HTTPS, TEP / Br. Pust, RTSP, LIDR, SMTP, NTP, DINCO Performance of Al by Recorder (Number of Channels) 2 channels (up to 12 face images/s) Mobile Phone Access Phone, Pad, Android	Face Attributes	Gender; age group; glasses; expressions; face mask;	Network		
Performance of Al by Recorder (Number of Channels) 2 channels (up to 12 face images/s) Mobile Phone Access Phone, iPad, Android Interoperability ONVIF 21.06, CGI		beard	Network Protocol		
Face Recognition Face Database Capacity On 10 face databases with 10000 face images in total. Name, gender, birthday, address, certificate type, certifica	Performance of Al by Recorder (Number of	2 channels (up to 12 face images/s)	Mobile Phone Access	iPhone, iPad, Android	
Face Database Capacity certificate (processes) certificate (processes) certificate (processes) Face Recognition Performance of Al by Recorder (Number of Channels) 2 channels 2 channels 2 channels 3 channels 3 channels 3 channels 3 channels 3 channels 3 channels 4 channels 3 channels 3 channels 3 channels 4 channels 3 channels 4 channels 4 channels 5 channels 4 channels 5 channels 6 channels 7 conflict 7 conflict	•		Interoperability	ONVIF 21.06, CGI	
Face Database Capacity critical Name, gender, birthday, address, certificate type, cordinate to each face picture Face Recognition Performance of Ai by Recorder (Number of Channels) SMD Plus SMD Plus 16 Channels Secondary filtering for human and motor wehicle SMD Plus, reducing false alarms caused by leaves, rain and lighting condition change Audio and Video Analog Camera Input 15 BNC ports, CVI access by default, supports HDCVI/A HD/TVI/CVS audio detect 1 CVI: SMP, 4MP, 1080p@25/30 fps, 720p@35/30 fps, 720p@25/30 fps, 720p@25/	Face Recognition	Un to 10 face databases with 10000 face images in	Browser	Chrome, IE9 or above, Firefox	
Tack Recording Playback Record Mode General, motion detection; intelligent; alarm; POS	Face Database Capacity	total. Name, gender, birthday, address, certificate type,		Single-address mode	
Performance of Al by Recorder (Mumber of Channels) SMD Plus 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, CVI access by default, supports HDCVI/AHD/TVI/CVBS auto-detection. Alarm Camera Input 16 BNC ports, CVI access by default, supports HDCVI/AHD/TVI/CVBS auto-detection. Alarm Camera Input 17 Ur to SMP AMP, 1080 pe 25/30 fps. 720 pe 25/30 fps. 3. AHD: SMP, 4MP, 3MP, 1080 pe 25/30, 720 pe 25/30, 720 pe 25/30 fps. 3. AHD: SMP, 4MP, 3MP, 1080 pe 25/30, 720 pe 25/30, 720 pe 25/30 fps. 3. AHD: SMP, 4MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4	to each face picture			Recording Playback	
Camera Input In Camera	Performance of AI by	2 channels	Record Mode	General, motion detection; intelligent; alarm; POS	
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, CVI access by default, supports HDCVI/AHD/TVI/CVBS auto-detect 1. CVI: SMP, 4MP, 1080p@25/30 fps, 720p@50/60 fps, 720p@5/30 fps, 720p@5/30 fps, 720p@5/30 fps, 3, AHD: 5MP, 4MP, 3MP, 1080p@25/30 fps, 720p@25/30 fps, 3, AHD: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps, 4DP, 4MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps, 4DP, 4MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps, 4DP, 4MP, 4MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps, 4DP, 4MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4M	Channels)		Recording Playback	It changes to 1/4/9 split when Face or IVS&SMD is	
SMD Plus by Recorder vehicle SMD Plus, reducing false alarms caused by leaves, rain and lighting condition change Audio and Video Analog Camera Input Alarm Alarm Alarm Alarm Alarm Alarm Alarm Alarm Anomaly Alarm Camera Input Dual-stream Motion detection, Video Loss, tampering, and local alarm alarm Anomaly Alarm Anomaly Alarm Anomaly Alarm Anomaly Alarm Anomaly Alarm Anomaly Alarm Face detection, face recognition, perimeter protection intelligent Alarm Intelligent Alarm Face detection, face recognition, perimeter protection intelligent Alarm IP Camera Input Dual-stream Yes Alarm Alarm Anomaly Alarm Face detection, face recognition, perimeter protection intelligent Alarm Face detection, face recognition, perimeter protection Record, snapshot (panoramic), IPC external alarm output, access controller, voice prompt, buzzer, log, prest, email Alarm Linkage Ports Alarm Linkage Alarm Notion detection, face recognition, perimeter protection Face detection, face recognition, perimeter protection Alarm Linkage Alarm Linkage Alarm Linkage Alarm Linkage Alarm Linkage Alarm Linkage Alarm Linka	SIVID FIUS	16 channels: Secondary filtering for human and motor	Backup Method		
Alarm Analog Camera Input 16 BNC ports, CVI access by default, supports HDCVI/ AHD/TVI/CVBS auto-detect Camera Input 1. CVI: 5MP, 4MP, 1080p@25/30 fps, 720p@50/60 fps, 720p@25/30 fps, 720p@25/30 fps, 720p@25/30 fps. 2. TVI: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps. 3. AHD: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps. By Channels of IPC access By Pc 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, 5MD, FACE) will be disabled. Encoding Capacity Main stream: All channel 5M-N (1 fps-10 fps); 1080N/720p/360H/DI/CIF (1 fps-25/30 fps) Sub stream: Supported (D1/CIF (1 fps-15 fps)). Dual-stream Yes Alarm Input Alarm Input Alarm Input 16 channels Alarm Input 16 channels Yes (share the same audio input with the first channel) Alarm Output 3 channels Yes (share the same audio input with the first channel) Video Frame Rate Alarm Output 3 channels 1 SATA Port, up to 161B, the maximum HDD capacity varies with environment temperature Audio Sampling 8 KHz, 16 bit Port, for PTZ Control	SMD Plus by Recorder	vehicle SMD Plus, reducing false alarms caused by		Instant playback, general playback, event playback, tag	
Analog Camera Input AHD/TVI/CVBS auto-detect 1. CVI: SMP, 4MP, 1080p@25/30 fps, 720p@50/60 fps, 720p@25/30 fps. 2. TVI: SMP, 4MP, 1080p@25/30, 720p@25/30 fps. 3. AHD: SMP, 4MP, 3MP, 4MP, 3MP, 4MP, 3MP, 4MP, 3MP, 4MP, 4MP, 3MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4MP, 4	Audio and Video		Alarm	praybasis, small episybasis (rate and metion detection)	
Camera Input 720@25/30 fps. 2. TVI: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps. 3. AHD: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps. 3. AHD: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps. Intelligent Alarm Face detection, face recognition, perimeter protection	Analog Camera Input		General Alarm		
IP Camera Input Up to 24 channels of IPC access 8 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 hafter IP channels are added beyond the existing channels, the Al Function (IVS, SMD, FACE) will be disabled. Ports Audio Input Indicate the same audio input with the first channel BNC (coaxial audio) Audio Output Indicate the same audio input with the first channel SM-N (1 fps-15 fps); 1080N/720p/960H/D1/CIF (1 fps-25/30 fps) Sub stream: Supported (D1/CIF (1 fps-15 fps)). Alarm Input Indicate the same audio input with the first channel SM-N (1 fps-15 fps) Sub stream: Supported (D1/CIF (1 fps-25 fps). Alarm Input Indicate the same audio input with the first channel SM-N (1 fps-15 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Alarm Output Indicate the same audio input with the first channel SM-N (1 fps-30 fps). Indicate the same audio input with the first channel SM-N	Camera Input	720p@25/30 fps. 2. TVI: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30 fps. 3. AHD: 5MP, 4MP, 3MP, 1080p@25/30, 720p@25/30	Anomaly Alarm		
Recoding Capacity Siperate Post			Intelligent Alarm	Face detection, face recognition, perimeter protection	
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. Main stream: All channel 5M-N (1 fps-10 fps); 4M-N/1080p (1 fps-15 fps); 1080N/720p/960H/D1/CIF (1 fps-25/30 fps) Sub stream: Supported (D1/CIF (1 fps-15 fps)). Dual-stream Yes Alarm Input Alarm Output 1-channel RCA Yes (share the same audio input with the first channel) Alarm Output 1-channel RCA Two-way Talk Yes (share the same audio input with the first channel) Alarm Input 1-channel RCA Two-way Talk Yes (share the same audio input with the first channel) Alarm Output 3 channels Video Frame Rate Alarm Output 3 channels TSATA Port, up to 16TB, the maximum HDD capacity varies with environment temperature Audio Sampling 8 KHz, 16 bit RS-485 1 Port, for PTZ Control	IP Camera Input	8 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	Alarm Linkage	output, access controller, voice prompt, buzzer, log,	
channels, the AI Function (IVS, SMD, FACE) will be disabled. Audio Input 16-channel RCA (external) 16-channel RCA (external) 16-channel BNC (coaxial audio) Audio Output 1-channel RCA 4M-N/1080p (1 fps-15 fps); 1080N/720p/960H/D1/CIF (1 fps-25/30 fps) Sub stream: Supported (D1/CIF (1 fps-15 fps)). Dual-stream Yes Alarm Input 16 channels Yes (share the same audio input with the first channel) Video Frame Rate PAL: 1 fps-25 fps. NTSC: 1 fps-30 fps. Video Bit Rate 32 Kbps-6144 Kbps Per Channel HDD Interface 1 SATA Port, up to 16TB, the maximum HDD capacity varies with environment temperature Audio Sampling 8 KHz, 16 bit RS-485 1 Port, for PTZ Control			Ports		
Encoding Capacity 4M-N/1080p (1 fps-15 fps); 1080N/720p/960H/D1/CIF (1 fps-25/30 fps) Sub stream: Supported (D1/CIF (1 fps-15 fps)). Two-way Talk Yes (share the same audio input with the first channel) Video Frame Rate PAL: 1 fps-25 fps. NTSC: 1 fps-30 fps. Video Bit Rate 32 Kbps-6144 Kbps Per Channel HDD Interface Audio Sampling 8 KHz, 16 bit RS-485 1 Port, for PTZ Control			Audio Input		
Two-way Talk Yes (share the same audio input with the first channel)	Encoding Consolt	4M-N/1080p (1 fps–15 fps); 1080N/720p/960H/D1/CIF (1 fps–25/30 fps)	Audio Output	1-channel RCA	
Video Frame Rate PAL: 1 fps=25 fps. NTSC: 1 fps=30 fps. Alarm Output 3 channels Video Bit Rate 32 Kbps=6144 Kbps Per Channel HDD Interface 1 SATA Port, up to 16TB, the maximum HDD capacity varies with environment temperature Audio Sampling 8 KHz, 16 bit RS-485 1 Port, for PTZ Control	Encoding Capacity		Two-way Talk	Yes (share the same audio input with the first channel)	
Video Bit Rate NTSC: 1 fps–30 fps. Video Bit Rate 32 Kbps–6144 Kbps Per Channel Audio Sampling 8 KHz, 16 bit RS-485 1 Port, for PTZ Control	Dual-stream	Yes	Alarm Input	16 channels	
Video Bit Rate 32 Kbps-6144 Kbps Per Channel HDD Interface 1 SATA Port, up to 16TB, the maximum HDD capacity varies with environment temperature Audio Sampling 8 KHz, 16 bit RS-485 1 Port, for PTZ Control	Video Frame Rate	·	Alarm Output	3 channels	
	Video Bit Rate		HDD Interface		
Audio Bit Rate 64 Kbps USB 2 (1 front USB 2.0 port, 1 rear USB 3.0 port)	Audio Sampling	8 KHz, 16 bit	RS-485	1 Port, for PTZ Control	
	Audio Bit Rate	64 Kbps	USB	2 (1 front USB 2.0 port, 1 rear USB 3.0 port)	

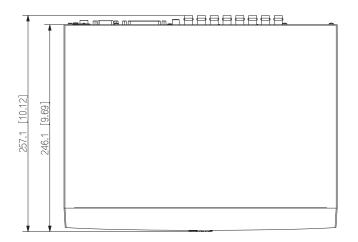
HDMI

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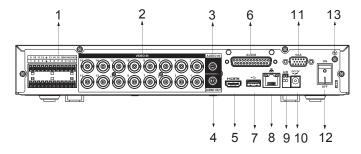
VGA	1		
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)		
General			
Power Supply	DC12V, 2A		
Power Consumption	Lower than 12 W		
Net Weight	1.36 kg (3.00 lb)		
Gross Weight	2.16 kg (4.76 lb)		
Product Dimensions	Mini 1U, 325.0 mm × 257.1 mm × 55.0 mm 12.80" × 10.12" × 2.17" (W × D × H)		
Packaging 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%		
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		
16 Channels WizSense XVR	DH-XVR5116HE-I3	Mini 1U DIGITAL VIDEO RECORDER		

Dimensions (mm[inch]) 325.0 [12.80]



Panels



- 1 Alarm In/Out
- 3 Audio In
- 5 HDMI Port
- 7 USB Port
- 9 RS-485 Port
- 11 VGA Port
- 13 Ground

- 2 Video In
- 4 Audio Out
- 6 DB-25 Port
- 8 Network Port
- 10 DC 12V Power Input
- 12 Power Switch