

DHI-IVSS7024-16I

4U 24HDDs WizMind Intelligent Video Surveillance Server



Wiz Mind

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

System Overview

Dahua IVSS goes beyond the ordinary NVR products. It is an Intelligent Video Surveillance Server that combines video management features with traditional video storage functions in one device. Besides the basic functions as a network video recorder, IVSS is integrated with features such as face detection and face recognition for different business and industrial applications.

With the build-in deep learning module, IVSS series products adopt video image metadata technology based on deep learning algorithms, offering high-precision human face recognition and perimeter protection. By applying deep learning artificial intelligence, IVSS allows users to focus on what matters most, to improve event response time and help make video actionable.

An all new UI design supports device operation and maintenance management, improving the value and experience of surveillance view, and serving the era of security big data.

Functions

Face Recognition

Supports recording faces by metadata and real-time crosscheck with incredible accuracy to figure out the face with target features. With the Regular and Stranger face mode, IVSS triggers various kinds of alarm actions for different applications.

AI IVS

With deep learning algorithm, AI IVS technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, parking detection, loitering detection and crowd gathering estimation) are largely reduced.

- Industry embedded micro-controller
- Max 512Mbps incoming bandwidth
- 256-channel IP video access
- Up to 256-channel AI IVS
- \cdot Up to 128-channel face recognition with normal IPC
- Up to 256-channel face recognition with face detection IPC
- Up to 64-channel video metadata
- Up to 50 face databases with 300,000 face pictures in total
- Supports RAID 0/1/5/6/10/50/60
- 3 HDMI/1 VGA video output



Video Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. Currently, there are four main kinds of metadata in the security industry: Human face, human body, and motor vehicle and non-motor vehicle metadata.

AI Search

Supports search by metadata of human and vehicles. Supports uploading face pictures to IVSS and compare them with recorded faces in IVSS by similarity. IVSS enables operators to quickly and easily search through multiple channels and long duration, to efficiently find out when and where a person of interest appeared.

ANPR

Automatic Number Plate Recognition available for convenient entrance/ exit management. This feature provides number plate recognition (working with Dahua ITC camera), number plate comparison with blocklist/allowlist, vehicle database management, and vehicle record search.

N+M Hot Standby

The highly reliable redundancy N+M Hot Standby design provides a secure failover technique to ensure immediate backup. In the event of a system failure, the sub device instantly takes over the main device to ensure no data loss.

Fisheye Dewarp

Supports multiple fisheye dewarp modes to make viewing video easy whether its live or during playback.

Smart Tracking

The automatic tracking PTZ feature automatically tracks a moving target throughout the camera's field of view. This function is ideal for following an object as it moves through airports, parking lots, city centers, or other scenes.

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Technical Specification

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System	
Main Processor	Industry embedded micro-controller
Operating System	Embedded Linux OS
Operation Interface	WEB (PCAPP), local GUI
AI Applications	
Al by Camera	Face detection, face recognition, video metadata, IVS (tripwire, intrusion, abandoned object, missing object, fast moving, parking detection, crowd gathering, loitering,parking, and fence-crossing), people counting, smoking detection, call detection
Al by Device	Face detection, face recognition, video metadata, IVS (tripwire, intrusion,crowd gathering, loitering detection, parking detection), plate comparison
IVS	
IVS Performance (Al by Device) (Channel Number)	General model: 256-channel Advanced model: 64-channel
IVS Performance (AI by Camera) (Channel Number)	256-channel
Human Face Detectio	n
Human Face Properties	Supports 6 properties: Gender, age range (6 levels), glasses, expression (8 types), mouth mask, and beard
Face Detection Performance (Al by Device) (1080P) (Channel Number)	128-channel
Face Detection Performance (Al by camera) (Channel Number)	256-channel
Human Face Recognit	tion
Face Database Capacity	50 face databases with 300,000 face pictures in total
Human Face Recognition Performance (AI by Device) (1080P)(Channel Number)	128-channel with normal IP camera 256-channel with face detection IP camera (Totally 320 face pictures analyzed per second)
Human Face Recognition Performance (AI by camera) (Channel Number)	256-channel
ANPR	
Plate Database Capacity	50 plate databases with 300,000 plate numbers in total Supports allowlist and blocklist
Plate Detection Performance by ITC Camera (Channel Number)	64-channel
Video Metadata	
Human Body Properties	Gender, age, sleeves length, top color, bottom type, bottom color, bag, rain coat, umbrella,hat, hairstyle, direction, hold a baby, mouth mask
Vehicle Properties	Vehicle type, vehicle color, plate color, logo, calling, seatbelt, ornament, region
Non-motorized Vehicle Properties	Non-motor vehicle type, non-motor vehicle color, number of passengers, umbrella, rain coat, bag , sleeve length, top color, hat, hair style, mouth mask

Metadata Performance (Al by Device) (1080P) (Channel Number)	64-channel	
Metadata Performance (Al by camera) (Channel Number)	64-channel	
Video Parameters		
Remote Connection	256-channel	
Network Bandwidth	Incoming bandwidth: 512Mbps recording bandwidth: 384Mbps outgoing bandwidth: 128Mbps	
Resolution	24MP/16MP/12MP/8MP/6MP/5MP/4MP/3MP/1080P/9 60P/720P/D1/CIF/QCIF	
Decoding Capability	2-channel 24MP/3-channel 16MP/6- channel12MP (20fps)/7-channel12MP (15fps)/6- channel8MP (30fps)/12-channel8MP (15fps)/7- channel6MP(30fps)/9-channel5MP(30fps)/11- channel5MP (25fps)/12-channel4MP (30fps)/18- channel4MP (20fps)/19-channel3MP (25fps)/12- channel1080P (60fps)/24-channel1080P (30fps)/36- channel720P (30fps)	
Video Output	1-channel VGA output, 3-channel HDMI output, VGA 1/ HDMI 1 outputs the same video source Supports 4K output	
Multi-screen Display	Customized display Max. 36-channel local live view Max.16-channel PCAPP live view	
Third-party Support	Onvif, RTSP, Sony, Panasonic, Axis, Arecont, Pelco,Canon, Samsung	
Operating System	Embedded Linux OS	
Operation Interface	WEB(PCAPP), local GUI	
Compression		
Video Compression	Smart H.265+/Smart H.264+/H.265/H.264	
Audio Compression	G.711A/G.711U/PCM/G726	
Network		
Protocol	HTTP, HTTPS, TCP/IP, IPv4, RTSP, UDP, SMTP, NTP, DHCP, DNS, DDNS, P2P	
Mobile Phone	DMSS	
Interoperability	ONVIF (Profile S, T and G), CGI, SDK	
Browser	Chrome, PCAPP, IE9 or higher, Firefox	
Network Mode	NIC binding mode such as multiple-address mode, load balance, fault-tolerance, etc	
Record Playback		
Multiple-channel Playback	Max. 16-channel playback	
Record Search	Search video detection/manual record/IO alarm/ intelligent event/all record file	
Storage Medium	Internal HDD, SAS disk array enclosure	
Backup Method	HDD, peripheral USB storage device	
Playback Function	Play, pause, stop, fast forward, fast backward, reverse play, frame by frame play Full-screen, backup (clip/file), snapshot, digital zoom, audio on/off	
Storage		
HDD Group	24	
RAID	RAID 0/1/5/6/10/50/60	

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Storage Pool	N/A	
Alarm		
General Alarm	Motion detect, tampering, local alarm	
Anomaly Alarm	IPC offline alarm, storage error, HDD full, IP conflict, MAC conflict, login lock, AI module temperature alarm, AI module offline, fan malfunction	
Intelligent Alarm	Human face detection, human face recognition, entries frequency, video metadata (person/vehicle/non-motor vehicle), IVS, plate recognition, people counting, smoking, call	
Alarm Linkage	Record, snapshot (full image), local external alarm output, IPC external alarm output, access & control, audio prompt, buzzer, log, preset, email	

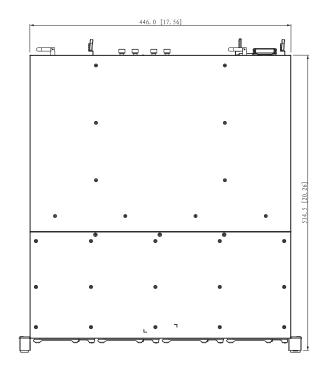
Peripheral Interface

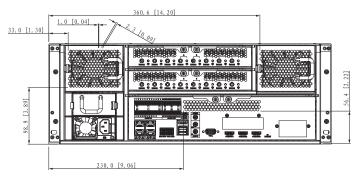
Audio Input	1-channel (reserved)	
Audio Output	1-channel, speaker output, audio linkage output	
Alarm Input	16-channel	
Alarm Output	8-channel	
Internal HDD	24 slots, SATA3.0/SAS. Max.16T/HDD	
eSATA	1 port	
SAS	2 SAS3.0 ports	
RS-232	1 port, for debug or transparent COM data	
RS-485	1 port, control peripheral PTZ and so on Supports various protocols	
USB	4 ports 2 USB2.0 port at the front panel and 2 USB3.0 port at the rear panel	
HDMI	3 ports; support 4K output	
VGA	1 port	
Network	4 RJ-45 10/100/1000Mbps self-adaptive Ethernet ports	
Power	1 port	
PoE	N/A	
General Parameters		
Power Supply	AC100-127V/200-240V 50/60Hz	
Power Consumption	120W (without HDD, idling) 408W (all HDDs connected)	
Net Weight	17 kg (37.48 lb)	
Gross Weight	18 kg (39.68 lb)	
Dimensions (W × L × H)	Chassis: 446 mm × 514.5 mm × 175 mm (17.56 " × 20.21 " × 6.89 ") Max. size: 482.6 mm (with hanger) × 514.5 mm × 175 mm (with feet mat) (19.00 " × 20.26 " × 6.89 ")	
Packaging Dimensions (W × L × H)	689 mm × 779 mm × 552 mm (27.13 " × 30.67 " × 21.73 ")	
Operating Conditions	0 °C to +45 °C (+32 °F to +113 °F)/10%RH–90% RH	
Strorage Conditions	0 °C to +40 °C (+32 °F to +104 °F)/30%RH-85% RH	

Operating Altitude	5000 m (16404.20 ft)
Installation Mode	Desktop/rack
Certifications	CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN55024,EN55035, EN50130-4,EN60950-1 FCC: Part 15 Subpart A UL: 60950-1 and CAN/CSA C22.2 No. 60950-1-07

Dimensions(mm[inch])

482.6 [19.00]		
	[6.89]	
	75.0	





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