

DHI-IVSS7024-16I

4U 24HDD AI Network Video Recorder



Al series products adopt the most advanced Al technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua Al series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc.

The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

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

With build-in deep learning module, IVSS series products adopt video image structuring technology based on deep learning algorithms, achieving high-precision human face recognition and perimeter protection. By applying deep learning artificial intelligence, IVSS allow users to focus on what matters most, 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 servicing the era of security big data.

- · Industry embedded micro-controller
- · Max 512Mbps incoming bandwidth
- · 256-channel IP video access
- Up to 256-channel perimeter protection
- Up to 96-channel face recognition by device
- Up to 256-channel face recognition by camera
- 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
- · SAS3.0 for storage extension
- · 3HDMI/1VGA video output



Functions

Face Recognition

Support record faces by structured data and real-time crosscheck with incredible accuracy to figure out the face with target features. With regular/Stranger mode to trigger kinds of alarm actions for different applications.

Perimeter Protection

Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

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.

Al Search

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



Technical Specification		Metadata Performance (Al by camera) (Channel	64-channel
System		Amount)	04-Citatillet
Main Processor	Industry embedded micro-controller	Video Parameters	
Operating System	Embedded Linux OS	Remote Connection	256-channel
Operation Interface	WEB (PCAPP), local GUI	Network Bandwidth	Incoming bandwidth: 512Mbps recording bandwidth: 384Mbps outgoing bandwidth: 128Mbps
Al Applications		Resolution	12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080P/960P/720P,
AI by Camera	Supports AI by camera function: Human face detection, human face recognition, video metadata (human/ vehicle/non-motorized vehicle), perimeter protection	Decoding Capability	D1/CIF/QCIF 24-channel 1080P@ 30fps
Al by Device	Supports AI by IVSS function: Human face detection, human face recognition, video metadata (human/ vehicle/non-motorized vehicle), perimeter protection, plate recognition	Video Output	1-channel VGA output, 3-channel HDMI output, VGA 1/HDMI 1 outputs the same video source Supports 4K output
Perimeter Protection		Multi-screen Display	Customized display Max. 36-channel local live view Max.16-channel PCAPP live view
Perimeter Function (AI by device)	256-channel	Third-party Support	Onvif, RTSP, Sony, Panasonic, Axis, Arecont, Pelco, Canon, Samsung
Perimeter Function (AI by camera)	256-channel	Operating System	Embedded Linux OS
Human Face Detectio	n	Operation Interface	WEB(PCAPP), local GUI
Human Face Properties Supports 6 properties: Gender, age range (6 levels),		Compression	
Face Detection	glasses, expression (11 types), mouth mask, and beard	Video Compression	Smart H.265+/Smart H.264+/H.265/H.264
Performance (AI by device) (1080P) (Channel	96-channel, one channel max. supports 12 human faces	Audio Compression	G.711A/G.711U/PCM/G726
Amount) Face Detection		Network	
Performance (AI by	256-channel	Protocol	HTTP, HTTPS, TCP/IP, IPv4, RTSP, UDP, SMTP, NTP, DHCP, DNS, DDNS, P2P
camera) (Channel Amount)		Mobile Phone	iOS, Android
Human Face Recognition		Interoperability	ONVIF (profile S), CGI, SDK
Face Database Capacity	Max. 50 human face databases, 300000 pictures, each database contains 300000 pictures	Browser	Chrome, PCAPP, IE9 or higher, Firefox
Human Face Recognition Performance (AI by device) (1080P)(Channel	96-channel.320 face pictures per second processing	Network Mode	NIC binding mode such as multiple-address mode, load balance, fault-tolerance, etc
Amount)		Record Playback	
Human Face Recognition Performance (AI by	256-channel	Multiple-channel Playback	Max. 16-channel playback
camera) (Channel Amount)		Record Mode	Search video detection/manual record/IO alarm/ intelligent event/all record file
Plate Recognition		Storage Mode	Internal HDD, SAS disk array enclosure
Plato Database Canacity	Max. 50 plate databases, each database contains 300000 plate numbers	Backup Mode	HDD, peripheral USB storage device
Plate Database Capacity Plate Detection	Support black list/white list	Playback	Play, pause, stop, fast forward, fast backward, reverse play, frame by frame play Full-screen, backup (clip/file), snapshot, digital zoom,
Performance by ITC Camera (Channel Amount)	64-channel	CI	audio on/off
Video Metadata		Storage	
Human Body Properties	Top color, top type, bottom color, bottom type, cap, bag, age, gender, and umbrella	HDD Group	24 RAID 0/1/5/6/10
Vehicle Properties	Supports 9 properties: Plate, plate color, vehicle body, vehicle brand, driver calling, seatbelt status, decoration	Storage Pool	N/A
Non-motorized Vehicle	object in the vehicle, and vehicle registration place Supports 4 properties: Vehicle type, vehicle color,	Alarm	
Properties	people amount, and helmet	General Alarm	Motion detect, tampering, local alarm
Metadata Performance (AI by device) (1080P) (Channel Amount)	64-channel	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, video metadata (person/vehicle/non-motorized vehicle), perimeter protection (intrusion, tripwire), plate recognition
Alarm Linkage	Record, snapshot (full image), local external alarm output, IPC external alarm output, access & control, audio prompt, buzzer, log, preset, email

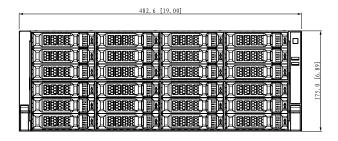
Peripheral Interface

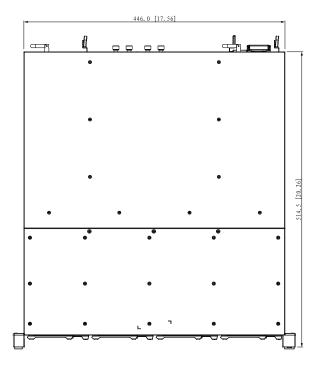
Audio Input	1-channel, RCA port (reserved)
Audio Output	1-channel, RCA port (reserved), speaker output, audio linkage output
Alarm Input	16-channel
Alarm Output	8-channel
Internal HDD	24 slots, SATA3.0/SAS. Max.10T/HDD
eSATA	1 port (reserved)
SAS	2 SAS3.0 ports
RS-232	1 port, for debug or transparent 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. 4K output
VGA	1 port
Network	4 RJ-45 10/100/1000Mbps self-adaptive Ethernet ports
Power	1 port
PoE	N/A

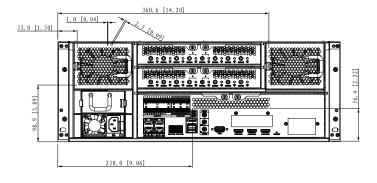
General Parameters

Power Supply	100V AC-240V AC 50±2%Hz
Power Consumption	144 W (Without HDD, idling)
Net Weight	17 kg (37.48 lb)
Gross Weight	18 kg (39.68 lb)
Dimensions (W × L × H)	Chassis: 446 mm \times 514.5 mm \times 175 mm (17.56 " \times 20.21 " \times 6.89 ") Max. size: 482.6 mm (with hanger) \times 514.5 mm \times 175 mm (with feet mat) (19.00 " \times 20.26 " \times 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)









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