

# DHI-IVSS7008-21

2U 8HDD Intelligent Video Surveillance Server



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 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.

### **Perimeter Protection**

Automatically filters out false alarms caused by animals, rustling leaves

- · Industry embedded micro-controller
- Max 400Mbps incoming bandwidth
- 128-channel IP video access
- Up to 32-channel perimeter protection
- Up to 16-channel face recognition with normal IPC
- Up to 40-channel face recognition with face detection IPC
- · Up to 8-channel video metadata
- Up to 50 face databases with 300,000 face pictures in total
- Supports RAID 0/1/5/6/10
- · 3 HDMI/2 VGA video output



and bright lights, so as to improve alarm accuracy. Enables system to act secondary recognition for the targets.

#### 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 black/ white list, 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 slave device instantly takes over the master 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.

Technical Specification		Metadata Performano (Al by camera) (Chann	
System		Number)	SE CHAINE
Main Processor	Industry embedded micro-controller	Video Parameter	rs
Operating System	Embedded Linux OS	Remote Connection	128-channel
Operation Interface	WEB (PCAPP), local GUI	Network Bandwidth	Incoming bandwidth: 400Mbps recording bandwidth: 320Mbps outgoing bandwidth: 96Mbps
Al Applications		Resolution	12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080P/960P/720P/
Al by Camera	Supports AI by camera function: Human face detection, human face recognition, video metadata (human/vehicle/non-motorized vehicle), perimeter protection		D1/CIF/QCIF  5-channel 12MP (20fps)/6-channel 12MP (15fps)/5-channel 8MP (30fps)/10-channel 8MP (15fps)/6-channel 6MP(30fps)/8-channel 5MP(30fps)/9-channel 5MP
Al by Device	Supports AI by IVSS function: Human face detection, human face recognition, video metadata (human/vehicle/non-motorized vehicle), perimeter protection	Decoding Capability	(25fps)/10-channel 4MP (30fps)/15-channel 4MP (20fps)/16-channel 3MP (25fps)/10-channel 1080P (60fps)/20-channel 1080P (30fps)/30-channel 720P (30fps)
Perimeter Protection  Perimeter Function (AI by			2-channel VGA output, 3-channel HDMI output, VGA 1/ HDMI 1 outputs the same video source. VGA2/HDMI2 outputs the same video source. Supports 4K output
Device)  Perimeter Function (Al by	32-channel	Multi-screen Display	Customized display Max. 36-channel local live view Max.16-channel PCAPP live view
camera)  64-channel  Human Face Detection		Third-party Support	Onvif, RTSP, Sony, Panasonic, Axis, Arecont, Pelco, Canon, Samsung
Human Face Properties	Supports 6 properties: Gender, age range (6 levels),	Operating System	Embedded Linux OS
Face Detection	glasses, expression (8 types), mouth mask, and beard	Operation Interface	WEB(PCAPP), local GUI
Performance (Al by Device) (1080P) (Channel	16-channel	Compression	
Number)		Video Compression	Smart H.265+/Smart H.264+/H.265/H.264
Face Detection Performance (AI by	40-channel	Audio Compression	G.711A/G.711U/PCM/G726
camera) (Channel Number)		Network	
Human Face Recognition		Protocol	HTTP, HTTPS, TCP/IP, IPv4, RTSP, UDP, SMTP, NTP, DHCP, DNS, DDNS, P2P
Face Database Capacity	50 face databases with 300,000 face pictures in total	Mobile Phone	DMSS
Human Face Recognition Performance (Al by	16-channel with normal IP camera 40-channel with face detection IP camera (Totally 40 face pictures analyzed per second)	Interoperability	ONVIF (Profile S, T and G), CGI, SDK
Device) (1080P)(Channel Number)		Browser	Chrome, PCAPP, IE9 or higher, Firefox
Human Face Recognition Performance (Al by	40-channel	Network Mode	NIC binding mode such as multiple-address mode, load balance, fault-tolerance, etc
camera) (Channel Number)		Record Playback	
ANPR		Multiple-channel Play	
	50 plate databases with 300,000 plate numbers in total	Record Search	Search video detection/manual record/IO alarm/ intelligent event/all record file
Plate Database Capacity	Supports black list/white list	Storage Medium	Internal HDD, SAS disk array enclosure
Plate Detection Performance by ITC	32-channel	Backup Method	HDD, peripheral USB storage device
Camera (Channel Number)  Video Metadata		Playback Function	Play, pause, stop, fast forward, fast backward, reverse play, frame by frame play Full-screen, backup (clip/file), snapshot, digital zoom,
	Top color, top type, bottom color, bottom type, cap,		audio on/off
Human Body Properties	bag, age, gender, and umbrella	Storage	
Vehicle Properties	Supports 9 properties: Plate, plate color, vehicle body, vehicle brand, driver calling, seatbelt status, decoration object in the vehicle, and vehicle registration place	HDD Group	12 RAID 0/1/5/6/10
Non-motorized Vehicle	Supports 4 properties: Vehicle type, vehicle color,	Storage Pool	N/A
Properties  Metadata Performance (Al by Device) (1080P) (Channel Number)	people amount, and helmet  8-channel	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, 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

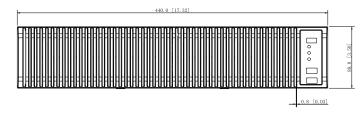
## Peripheral Interface

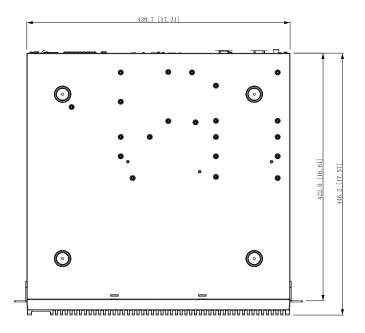
Audio Input	1-channel, RCA port (reserved)
Audio Output	2-channel, RCA port (reserved), speaker output, audio linkage output
Alarm Input	16-channel
Alarm Output	8-channel
Internal HDD	8 slots, SATA3.0. Max.10T/HDD
eSATA	1 port (reserved)
SAS	N/A
RS-232	1 port, for debug or transparent COM data
RS-485	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	2 ports
Network	4 RJ-45 10/100/1000Mbps self-adaptive Ethernet ports
Power	1 port
PoE	N/A

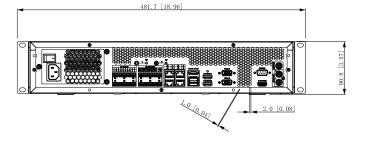
## **General Parameters**

General Farameters				
Power Supply	100V AC-240V AC 50±2%Hz			
Power Consumption	43W (Without HDD, idling)			
Net Weight	8.55 kg (18.85 lb)			
Gross Weight	10.9 kg (24.03 lb)			
Dimensions (W × L × H)	Chassis: 439.7 mm × 446.2 mm × 89 mm (17.31 " × 17.57 " × 3.50 ") Max. size: 481.7 mm (with hanger) × 446.2 mm × 90.8 mm (with feet mat) (18.96 " × 17.57 " × 3.57 ")			
Packaging Dimensions (W × L × H)	With Packaging: 562 mm × 599 mm × 235 mm (22.13 " × 23.58 " × 9.25 ") Protection box: 491 mm × 584 mm × 631 mm (19.33 " × 22.99 " × 24.84 ")			
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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