DHI-IVSS7124-16I

256CH 4U Intelligent Video Surveillance Server



Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS,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.

Series Overview

Dahua IVSS goes beyond ordinary NVR products. It is an Intelligent Video Surveillance Server that combines video management features with traditional video storage functions in one device. Aside from the basic functions of a network video recorder, IVSS also has a variety of powerful AI features, such as face detection and face recognition, to meet the needs of different scenes. Thanks to its built-in AI chip, advanced deep learning algorithms and video image metadata technology, IVSS supports a variety of AI functions, such as high-precision face recognition and perimeter protection. Together, they shorten the response time to events and make videos more interactive, allowing you to focus on what matters most. It also has an all new UI design that offers device operation and maintenance management, improving the quality of surveillance and serving the era of security big data.

Functions

Face Detection

Empowered by deep-learning algorithms, the device supports face detection, tracking, and capture, and outputs the best face snapshots. It supports analysis of up to 6 face attributes.

- 64-bit High-performance multi-core processor
- 256-channel IP video access
- Max 768 Mbps/768 Mbps incoming/recording bandwidth
- Up to 256-channel AI IVS
- Up to 256-channel face recognition with normal IPC
- Up to 160-channel 2 MP or 80-channel 4 MP face recognition with face detection IPC
- Up to 256-channel video metadata
- Up to 256-channel AcuPick with normal IPC
- Up to 100 face databases with 500,000 face pictures in total
- 24 bays, supports RAID 0/1/5/6/10/50/60
- 4 HDMI/1 VGA video output



Face Recognition

Supports recording faces with incredible accuracy through metadata and real-time cross-check to recognize faces with target features. With Regular and Stranger face modes, the device triggers a wide variety of alarm actions to suit different situations.

Video Metadata

Metadata is the information on the features and attributes that is extracted from target objects which can be used for data retrieval. Currently, there are 4 main kinds of metadata in the security industry: Human face, human body, and motor vehicle and non-motor vehicle metadata.

IVS

Within specified restricted areas, intelligent detections are carried out, such as tripwire, intrusion, parking, people loitering and gathering. Driven by deep learning algorithms, IVS can provide precise person and vehicle classification detection, and accurately trigger alarms based on object types (pedestrians and vehicles), to greatly reduce the generation of false alarms. In addition, some basic functions including tripwire and intrusion are also referred to as perimeter protection.

AcuPick

This industry-leading search technology effectively utilizes both front-end and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

Technical Specification

System

Main Processor	64-bit multi-core processor
Operating System	Embedded Linux OS
Operating Interface	Web (PCAPP), local GUI

AI Applications

AI by Camera	Face detection; face recognition; video metadata (human; vehicle; non-motor vehicle); IVS; license plate comparison; tripwire people counting; regional people counting; abnormal number of people in queue; smoking detection; call detection; face & body detection; SMD
AI by Recorder	Face detection; face recognition; entries frequency; video metadata (human; vehicle; non-motor vehicle); metadata attributes alarm by recorder; IVS;
AcuPick	1.AI by Recorder: Supports 256-channel 2 MP or 256-channel 4 MP resolution 2.AI by Camera: Supports 160-channel 2 MP or 80-channel 4 MP resolution

Face Detection

Face Detection	1. AI by Recorder: 256-channel 2 MP or 256-channel 4 MP with normal IP camera; 2. AI by Camera: 160-channel 2 MP or 80-channel 4 MP resolution with face detection IP camera; 3. Supports 6 properties: Gender, age, glasses, expression, face mask, and beard

Search by Image

Search by Image	Search by image in the face database, search by face or human body images, and 1:1 face recognition.

Face Recognition

Face Database Capacity	1.100 human face databases with 500,000 face pictures in total 2. 5 passerby databases with 500,000 face pictures in total The human face database and the passerby database share the total capacity and number of face images.
Face Recognition	1. AI by Recorder: 256-channel 2 MP or 256-channel 4 MP with normal IP camera; 160-channel 2 MP or 80-channel 4 MP with face detection IP camera (Totally 160 × 2 MP or 80 × 4 MP face pictures analyzed per second); 2. AI by Camera: 160-channel 2 MP or 80-channel 4 MP with face recognition IP camera; 3. Supports entries frequency alarm

Vehicle License Plate Comparison

License Plate Database Capacity	1. 50 plate databases with 500,000 plate numbers in total 2. Supports allowlist and blocklist
Vehicle License Plate Comparison	Supports 160-channel 2 MP or 80-channel 4 MP resolution with ITC

Video Metadata

Video Metadata	1. AI by Recorder: Supports 256-channel 2 MP or 256-channel 4 MP resolution 2. AI by Camera: Supports 160-channel 2 MP or 80-channel 4 MP resolution 3. Object type:
	Human body: Gender, age, sleeves length, top color, bottom type, bottom color, bag, rain coat, umbrella, hat, hairstyle, direction, hold a baby, face mask Vehicle: Vehicle type, vehicle color, plate color, logo, calling, seatbelt, ornament Non-motorized Vehicle: Non-motor vehicle type, non-motor vehicle color, number of passengers, umbrella, rain coat, bag , sleeve, length, top color, hat, hair style, face mask

IVS Analytics

IVS	1. AI by Recorder: Supports 256-channel 2 MP or 256-channel 4 MP with normal IP camera 2. AI by camera: Supports 160-channel 2 MP or 80-channel 4 MP 3. Rules: AI by Recorder: tripwire, intrusion, crowd gathering, loitering detection and parking detection AI by Camera: tripwire, intrusion, abandoned object, missing object, fast moving, crowd gathering, loitering, parking, and fence-crossing

Intelligent Task Analytics

Intelligent Task Analytics	Local video records, import DAV videos from external devices for analysis

Video Diagnosis

Video Diagnosis	1. Supports 1-channel tour detection 2. Supports 12 detection items: Video tampering, scene changing, video jitter, noise detection, stripe interference, video loss, image freeze, overexposure, defocus detection, video color cast, abrupt image change and low contrast

Audio and Video

Access Channel	256-channel
Network Bandwidth	Incoming bandwidth: 768 Mbps Recording bandwidth: 768 Mbps Outgoing bandwidth: 768 Mbps
Resolution	32 MP;24 MP;16 MP;12 MP;8 MP;6 MP;5 MP;4 MP;3 MP;1080p;720p
Decoding Capability	1-channel 32 MP@30 fps; 2-channel 24 MP@30 fps; 3-channel 24 MP@24 fps; 4-channel 16 MP@25 fps; 7-channel 12 MP@20 fps; 7-channel 8 MP @30 fps; 14-channel 8 MP@15 fps; 9-channel 6 MP@30 fps; 11-channel 5 MP@30 fps; 13-channel 5 MP@25 fps; 14-channel 4 MP@30 fps; 22-channel 4 MP@20 fps; 18-channel 3 MP @30 fps; 22-channel 3 MP @25 fps; 14-channel 1080p@60 fps; 28-channel 1080p@30 fps; 63-channel 720p@30 fps
Video Output	1-channel VGA output, 4-channel HDMI output, VGA 1/ HDMI 1 outputs the same video source.
Multi-screen Display	1st Screen: Max.64-channel; 2nd Screen: Max.16-channel; 3rd Screen: Max.1-channel; 4th Screen: Max.1-channel
Third-party Camera Access	Onvif, RTSP, Sony, Panasonic, Axis, Arecont, Pelco, Canon, Samsung

Compression Standard

Video Compression	Smart H.265+;H.265;Smart H.264+;H.264
Audio Compression	G.711a;G.711u;PCM;G.726

Network

Network Protocol	HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;P2P;iSCSI
Mobile Phone Access	DMSS
Interoperability	ONVIF (Profile S, T and G); CGI; SDK
Browser	Chrome; PCAPP; IE9 or higher; Firefox
Network Mode	Multiple-address mode;Load balance;Fault-tolerance;Link aggregation

Recording Playback

Multi-channel Playback	Max. 16-channel playback
Record Mode	Search video detection; IO alarm; thermal imaging; intelligent event; all record file
Storage Method	Internal HDD
Backup Method	HDD, peripheral USB storage device
Playback Function	1. Play; Pause; Stop; Fast forward; Fast backward; Reverse play; Frame by frame; 2. Full-screen; Backup (clip and file); Snapshot; Digital zoom; Audio on and off

Storage

Disk Group	Yes
Network Disk	iSCSI
RAID	RAID0;RAID1;RAID5;RAID6;RAID10;RAID50;RAID60
Record Management	Supports record control (continuous, event-based, scheduled, scheduled & event-based).

Alarm

General Alarm	Motion detection; tampering; local alarm; IPC external alarm; fire alarm; temperature alarm; temperature difference alarm; hot spot alarm; cold spot 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; no HDD; network security exception; power exception
Alarm Linkage	Record; snapshot (full image); alarm uploading; remote device alarm output; camera audio; buzzer; log; preset; email, and smart tracking. Disarming alarm linkage action by period or one-click sync disarm config with channels

Port

Audio Input	1 channel
Audio Output	1 channel
Alarm Input	16 channels
Alarm Output	8 channels
Disk Interface	24 slots, SATA3.0. Max.20 TB/HDD
eSATA	1 port
RS-232	1 port, for debug or COM data transmission
RS-485	1 port, control peripheral PTZ and so on. Supports various protocols.
USB	4 ports. 2 USB2.0 ports at the front panel and 2 USB3.0 ports a the rear panel.
HDMI	4 ports. HDMI 1 supports 4K output.
VGA	1 port
Network Port	4 RJ-45 ports 10/100/1000/2500Mbps self-adaptive Ethernet ports
Power	Single supply
Network Port Extension	4 RJ-45 ports 10/100/1000/2500Mbps self-adaptive Ethernet ports; 2 × 10-GbE optical fiber ports (optional)

General

Disk Bay	24
Form Factor	4U
Power Supply	100–127/200–240VAC, 50/60Hz, 7/3.5A
Power Consumption	Working(all HDDs connected): ≤ 420W(1433 BTU) Working(without HDD): ≤ 150W(512 BTU) Rated: ≤ 800W(2730 BTU)
Fan	Intelligent speed regulation fan
Net Weight	23.00 kg (50.71 lb)
Gross Weight	37.83 kg (83.40 lb)
Product Dimensions	Chassis: 446 mm× 543.4 mm× 175 mm (17.51" × 20.57" × 5.24") (W × L × H) Max. size: 482.6 mm (with hanger) × 522.4 mm × 133.2 mm (19.09" × 20.57" × 5.24") (W × L× H)
Packaging Dimensions	With packaging: 689 mm × 779 mm × 552 mm (27.13" × 30.67" × 21.73")(W × L × H)
Operating Temperature	0℃ to +45℃ (+32 °F to +113 °F)
Operating Humidity	10%–80% (RH), non-condensing
Operating Altitude	≤5000 m (16404.20 ft)
Installation	Desktop; Rack
Certifications	CE-LVD：EN 62368-1 CE-EMC：EN IEC 61000-3-2，EN 61000-3-3，EN 55032，EN 50130-4，EN 55035

Ordering Information

Type	Part Number	Description
Intelligent Video Surveillance Server	DHI-IVSS7124-16I	256CH 4U Intelligent Video Surveillance Server

Accessories

Optional:

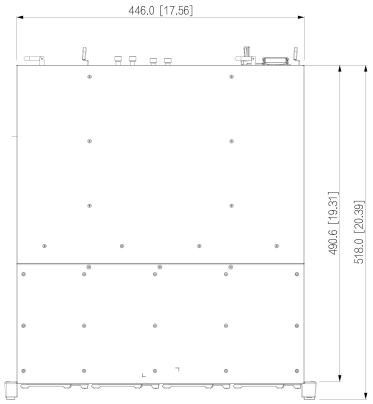


DHI-RB100/LS
Server Cabinet Rail Bracket

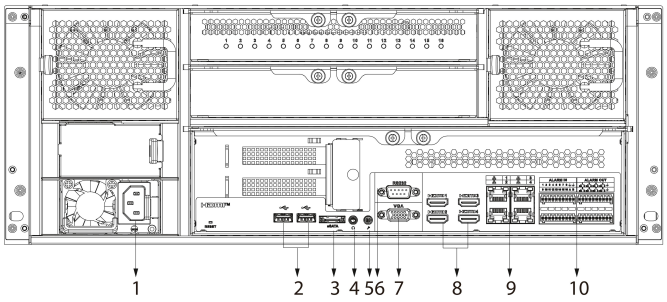
Dimensions (mm[inch])

mm [inch]





Panels



1	Power Input	2	USB Ports
3	eSATA Port	4	AUDIO OUT
5	AUDIO IN	6	RS-232 Port
7	VGA Ports	8	HDMI Ports
9	Networt Ports	10	Alarm In/Alarm Out

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