DHI-IVSS5108
64CH 2U Intelligent Video Surveillance Server

WizMind

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 recognition, video metadata and industrial algorithms to meet the needs of different scenes.

Functions

Face Recognition (with AI Camera)
Real-time Face Detection & Recognition with AI cameras, with results for real-time face detection and recognition being displayed on the AI camera. Faces are recorded through the use of video metadata, and facial features are filtered during real-time display, focusing on only displaying faces with target features. Facial features include gender, age, expression, and more. The linkage actions for face detection and recognition events are customizable, including alarm, buzzer, snapshot, video recording, and more.

- 64-bit High-performance multi-core processor
- Max 64-ch IP camera inputs
- Max 384 Mbps incoming/recording/forwarding bandwidth
- 8 bays,supports RAID 0/1/5/6/10/50/60
- 2 HDMI/1 VGA video output

AI IVS (with AI Camera)
With deep learning algorithms, AI IVS technology can recognize humans and vehicles accurately. In restricted areas (such as pedestrian and vehicle areas), there is a great reduction in the generation of false alarms of intelligent detection based on target type (such as tripwire, intrusion, parking detection, loitering detection, crowd gathering estimation and more).

Video Metadata (with AI Camera)
Video Metadata is attribute information extracted from a target for data retrieval. Currently, there are 4 main kinds of metadata in the security industry: Human face, human body, motor vehicle and non-motor vehicle metadata.

ANPR
Automatic Number Plate Recognition is available for convenient entrance and exit management. This feature provides license plate recognition (working with Dahua ITC cameras), license plate comparison with blocklist and allowlist, vehicle database management, and vehicle records search.

Smart Tracking
The automatic tracking PTZ feature automatically tracks moving targets in the field of view of the camera. This function is ideal for following objects as they move through airports, parking lots, city centers, and other scenes.

Technical Specification

System

Main Processor	64-bit high-performance 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

Face Detection

Face Detection	1. AI by Camera: 64-channel 2 MP or 64-channel 4 MP resolution with face detection IP camera 2. Supports 6 properties: Gender, age, glasses, expression, face mask, and beard

Face Recognition

Face Recognition	1. AI by Camera: 64-channel 2 MP or 64-channel 4 MP face recognition with face recognition IPC 2. 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 64-channel 2 MP or 64-channel 4 MP resolution with ITC

Video Metadata

Video Metadata	1. AI by Camera: Supports 64-channel 2 MP or 64-channel 4 MP resolution 2. 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: Plate No, 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 Camera: Supports 64-channel 2 MP or 40-channel 4 MP resolution 2. Rules: AI by Camera: tripwire, intrusion, abandoned object, missing object, fast moving, crowd gathering, loitering, parking and fence-crossing

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	64-channel
Network Bandwidth	Incoming bandwidth: 384 Mbps Recording bandwidth: 384 Mbps Outgoing bandwidth: 384 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; 1-channel 24 MP@30 fps; 2-channel 16 MP@30 fps; 5-channel 8 MP@30 fps; 6-channel 6 MP @30 fps; 8-channel 5 MP@30 fps; 10-channel 4 MP@30 fps; 20-channel 1080p@30 fps; 45-channel 720p@30 fps
Video Output	1-channel VGA output, 2-channel HDMI output, VGA 1/HDMI 1 outputs the same video source.
Multi-screen Display	Max. 16-channel local live view. Max. 16-channel PCAPP live view
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;IPv6;UPnP;SNMP
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	Web: Max. 16-channel playback Local: Max. 9-channel playback
Record Mode	Auto record; manual record; 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; 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	2 channels
Alarm Input	16 channels
Alarm Output	8 channels
Disk Interface	8 slots, SATA. 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 at the rear panel.
HDMI	2 ports, HDMI 1 supports 4K output.
VGA	1 port
Network Port	4 RJ-45 10/100/1000Mbps self-adaptive Ethernet ports
Power	Single supply

General

Disk Bay	8
Form Factor	2U
Power Supply	100-240 VAC, 50-60 Hz
Power Consumption	Working (without HDD): ≤ 38 W (129.69 BTU/hr) Working (all HDDs connected): ≤ 105 W (358.36 BTU/hr) Rated: ≤ 200 W (682.59 BTU/hr)
Fan	Intelligent speed regulation fan
Net Weight	7.66 kg (16.89 lb)
Gross Weight	10.24 kg (22.58 lb)
Product Dimensions	Chassis: 439.7 mm × 446.2 mm × 89.0 mm (17.31" × 17.57" × 3.50") (W × D × H) Max. size: 481.7 mm (with hanger) × 446.2 mm × 90.8 mm (with feet mat) (18.96" × 17.57" × 3.57") (W × D × H)
Packaging Dimensions	With packaging: 599 mm ×562 mm × 235 mm (23.58" × 22.13" × 9.25") (W × D × H) Protection box: 584 mm × 491 mm × 631 mm (22.99" × 19.33" × 24.84") (W × D × H)
Operating Temperature	0 °C to +55 °C (+32 °F to +131 °F)
Operating Humidity	10%–90% (RH), non-condensing
Operating Altitude	≤5,000 m (16,404.20 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

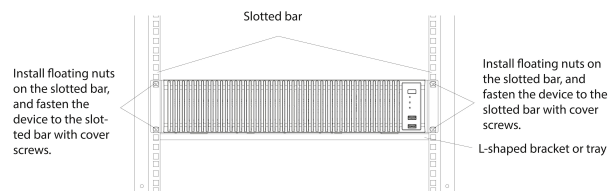## Ordering Information

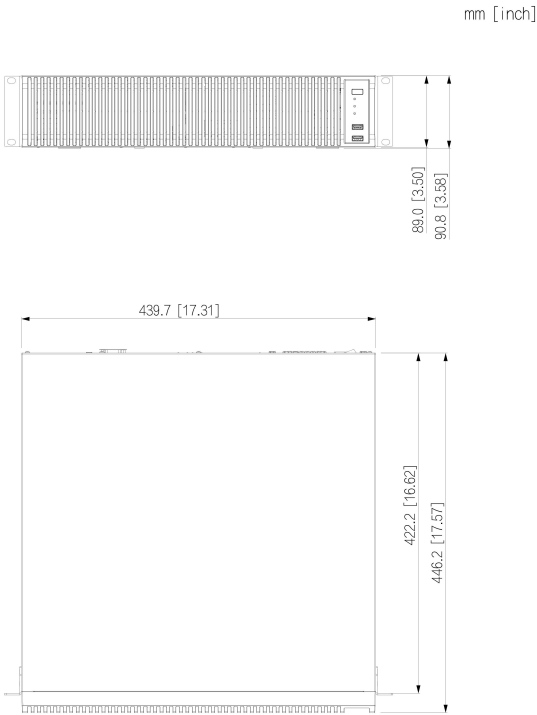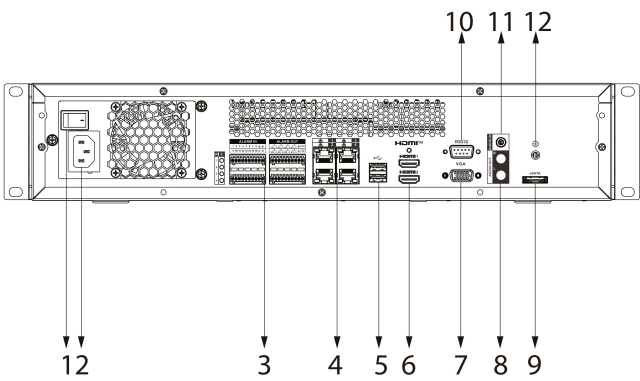| Type	Model	Description
Intelligent Video Surveillance Server	DHI-IVSS5108	64CH 2U Intelligent Video Surveillance Server
Accessories (Optional)	DH-IVSS508-V2-9HDD	0CH Nonstandard HDD Bracket

Accessories

Optional:

DH-IVSS508-V2-9HDD
0CH Nonstandard HDD Bracket

Slotted bar

Install floating nuts on the slotted bar, and fasten the device to the slotted bar with cover screws.

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L-shaped bracket or tray

Dimensions (mm[inch])

mm [inch]

89.0 [3.50]
90.8 [3.58]

439.7 [17.31]

422.2 [16.62]
446.2 [17.57]

Panels

10 11 12

12   3   4   5   6   7   8   9

1	Power Switch	2	Power Input
3	Alarm In/Out	4	Network Port
5	USB Port	6	HDMI Port
7	VGA Port	8	AUDIO OUT
9	eSATA Port	10	RS-232 Port
11	AUDIO IN	12	Ground