dahua
TECHNOLOGY

DHI-IVSS7024DR

4U 24HDD Intelligent Video Surveillance Server

- Industry embedded micro-controller
- Max 768Mbps incoming bandwidth
- 256-channel IP video access
- Supports RAID 0/1/5/6/10
- 3 HDMI/1 VGA video output
- Redundant power

AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI 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.

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 (with AI camera)

Supports real-time Face Detection & Recognition (with AI camera). Shows real-time face detection and recognition results from AI camera. Records faces with video metadata. Facial features are filtered during real-time display, so as to show only faces with target features. Facial features include gender, age, expression, and more. The linkage actions for face detection and recognition events are configurable, including alarm, buzzer, snapshot, video recording, and more.

Perimeter Protection(with AI camera)

Automatically filters out false alarms caused by animals, rustling leaves and bright lights, so as to improve alarm accuracy. Enables system to act secondary recognition for the targets.

Video Metadata (with AI camera)

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, non-motor vehicle metadata.

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 it is 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

System

Main Processor	Industry embedded micro-controller
Operating System	Embedded Linux OS
Operation Interface	WEB (PCAPP), local GUI

AI Applications

AI by Camera	Supports AI by camera function: Human face detection, human face recognition, video metadata (person/vehicle/non-motor vehicle), perimeter protection

Perimeter Protection

Perimeter Function (AI by Camera)	256-channel

Human Face Detection

Human Face Properties	Supports 6 properties: Gender, age range (6-level), glasses, expression (8 types), mouth mask, and beard
Face Detection Performance (AI by Camera) (Channel Number)	128-channel

Human Face Recognition

Human Face Recognition Performance (AI by Camera) (Channel Number)	128-channel

ANPR

Plate Database Capacity	50 plate databases with 300,000 plate numbers in total Supports black list/white list
Plate Detection Performance	64-channel

Video Metadata

Human Body Properties	Top color, top type, bottom color, bottom type, cap, bag, age, gender, and umbrella
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
Non-motor Vehicle Properties	Supports 4 properties: Vehicle type, vehicle color, people amount, and helmet
Metadata Performance (AI by Device) (1080P) (Channel Number)	N/A
Metadata Performance (AI by Camera) (Channel Number)	64-channel

Video Parameters

Remote Connection	256
Network Bandwidth	RAID Incoming bandwidth: 768Mbps Recording bandwidth: 768Mbps Outgoing bandwidth: 768Mbps Single HDD Incoming bandwidth: 768Mbps Recording bandwidth: 512Mbps Outgoing bandwidth: 768Mbps
Resolution	12MP/8MP/6MP/5MP/4MP/3MP/1080P/960P/720P/D1/CIF/QCIF

Decoding Capability	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	1. Play/pause/stop/fast forward/fast backward/reverse play/frame by frame play. 2. Full-screen, backup (clip/file), snapshot, digital zoom, audio on/off

Storage

HDD Group	24
RAID	RAID0/1/5/6/10
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, fan malfunction
Intelligent Alarm	Human face detection, human face recognition, video metadata (person/vehicle/non-motor vehicle),perimeter protection (intrusion, tripwire),plate recognition
Alarm Linkage	Record, picture storage (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.10T/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 a the rear panel
HDMI	3 ports; support 4K output
VGA	1 port
Network	4 RJ-45 10/100/1000Mbps self-adaptive Ethernet ports
Power	2 ports
PoE	N/A

General Parameters

Power Supply	100V AC–240V AC 50±2%Hz
Power Consumption	144W (Without HDD, idling)
Net Weight	17 kg (37.48 lb)
Gross Weight	18 kg (39.68 lb)
Dimensions	Chassis: 446 mm × 543.4 mm × 175 mm (17.56 " ×21.39 " × 6.89 ") Max. size: 482.6 mm (with hanger) × 543.4 mm × 175 mm (with feet mat) (19.00 " × 21.39 " × 6.89 ")
Packaging Dimensions	689 mm × 779 mm × 552 mm (27.13 " × 30.67 " × 21.73")
Operating Temperature	0 °C to +45 °C (+32 °F to +113 °F)/10%RH–90% RH
Storage Temperature	0 °C to +40 °C (+32 °F to +104 °F)/30%RH–85% RH
Operating Humidity	10%–90%
Storage Humidity	30%–85%
Operating Altitude	5000 m (16404.20 ft)
Installation Mode	Desktop/rack
Certifications	CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024 FCC: Part 15 Subpart B UL 60950-1

Dimensions(mm[inch])