Dahua TECHNOLOGY

DHI-IVSS7016DR-4T
3U 16HDD AI Network Video Recorder

Deep • Sense

- Intel quad-core processor
- Max 512Mbps incoming bandwidth
- 256 Channel IP video access
- Up to 16 Channel video stream face recognition
- Up to 40 Channel picture stream face recognition
- Regular/stranger mode
- Search by image
- Face database management
- Supports RAID 0/1/5/6/10
- SAS3.0 for storage extension
- 3HDMI/1VGA video output
- Redundant power

Face Recognition	Face Capture	Metadata	Image Search	Blacklist Alarm

Functions

Real Time Face Recognition
Video stream & picture stream real time face recognition. Facial attributes analysis features including gender, age, expression, glasses, moustache, mouth mask. Identify people and also capture, record faces with structured data. Facial feature filtering while real time display, only show faces with target features.

Regular/Stranger Mode
IVSS support regular and stranger mode. In stranger mode, when IVSS detect a stranger face(not in device's face database), it can trigger alarm, buzzer, snapshot, record, etc. Similarity threshold can be set manually. This function is developed for important infrastructure sites for which access control is critical.

Efficient Search
Support uploading face pictures to IVSS and compare them with recorded faces in IVSS 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 appeard.

Face Database Management
Configurable multiple face databases. Powerful face database management. Face database can be applied to video channels independently. Name, gender, birthday, nationality, address, ID information can be added to each face picture.

DeepSense 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 DeepSense series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc.

The complete lineup of Dahua DeepSense 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 analysis, comparison, retrieval, storage, and management. 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.

ONVIF

Technical Specification

System

Main Processor	Intel Quad-core Processor
Memory	16GB, up to 64GB
Operating System	Embedded LINUX

Artificial Intelligence

Face Recognition	16 channel video stream face recognition / 40 channel picture stream face recognition (with FD camera)
Performance	40 face pictures /sec processing (modeling and comparing)
Metadata	Sturctured data of gender, age, expression, glasses, moustache, mouth mask information.
Stranger Mode	Detect strangers' faces(not in device's face database). Similarity threshold can be set manually.
Trigger Events	Buzzer, snapshot, recording, etc.
Search by Image	Up to 10 target face images search at same time. Support similarity threshold set for each target face image.
Database Management	Up to 20 face databases with 100,000 face images in total. Name, gender, birthday, nationality, address, ID information can be added to each face picture.
Database Application	Each database can be applied to video channels independently.

Audio and Video

IP Camera Input	256 Channel
Two-way Talk	1 × 3.5mm audio input, 1 × 3.5mm audio output

Display

Interface	3 HDMI, 1VGA
Resolution	HDMI1/2/3 : 3840 × 2160 , 1920 × 1080 , 1280 × 1024, 1280 × 720
	VGA : 1920 × 1080 , 1280 × 1024, 1280 × 720
Decoding Capability	24-ch@1080P(30fps)
Multi-screen Display	Up to 36 split for each screen
OSD	Camera title, Time, Motion detection, Recording

Recording

Bandwidth	450Mbps
Compression	H.265/H.264/MJPEG/MPEG4
Resolution	12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, etc.
Record Mode	Schedule (Continuous, Event)

Video Detection and Alarm

Trigger Events	Recording, Snapshot, Buzzer, etc.
Video Detection	Motion Detection, MD Zones: 396 (22 × 18); Tampering
Alarm input	16 Channel
Relay Output	8 Channel

Playback and Backup

Sync Playback	Up to 16ch sync playback, 128Mbps playback bandwidth
Search Mode	Time /Date, Video Detection, Face and Exact Search (accurate to second)
Backup Mode	USB Device/Network

Third-party Support

Third-party Support	AXIS, Panasonic, Sony, etc.

Network

Interface	4 RJ-45 Ports (10/100/1000Mbps)
Optional Interface	4 Giga Optical Fiber Interface
Network Port Mode	Independent Ethernet Ports, Load Balance, Fault-Tolerance, Link Aggregation
Network Function	HTTP, HTTPS, TCP/IP, UDP, RTSP, IPv4, NTP, DHCP, DNS, IP Filter, IP Search (Support Dahua IP camera, DVR, etc.), P2P
Interoperability	ONVIF 2.4, SDK

Storage

Internal HDD	16 SAS/SATA HDDs, Up to 10 TB capacity for each HDD, Independent HDD bracket, hot-swap
HDD Mode	Single, Raid 0/1/5/6/10(Enterprise-level HDDs are recommended), Support Global HDD Hot-spare
eSATA	1 eSATA Port (Please contact technical engineer to confirm the compatible device)
SAS	2 SAS3.0 Ports

Auxiliary Interface

Front Cover	Support Hot-swap, 7-inch HD LCD (1920 × 1080 , 1280 × 1024)
USB	4 USB Ports (2 USB 2.0 , 2 USB 3.0)
RS232	1 Port, for PC Communication
RS485	1 Port

Electrical

Power Supply	AC100V ~ 240V, 50 ~ 60 Hz, Hot-swap, Redundant
Power Consumption	<100W (Without HDD)
Fan	Dual-ball bearing fans, Hot-swap

Environmental

Operating Conditions	0°C ~ +45°C (+32°F ~ +113°F), 86 ~ 106kpa
Storage Conditions	-20°C ~ +70°C (-4°F ~ +158°F), 0 ~ 90% RH

Construction

Dimensions	3U, 485mm x 539.4mm x 133.2mm (19.1" x 21.24" x 5.2")
Net Weight	17.45kg (38.47 lb) (without HDD)
Installation	Standard 19-inch Rack-mounted

Certifications

CE	EN55032, EN55024, EN50130-4, EN60950-1
FCC	Part 15 Subpart B, ANSI C63.4-2014
UL	UL 60950-1

Ordering Information

Type	Part Number	Description
IVSS	DHI-IVSS7016-4T	3U 16HDD Intelligent Video Surveillance Server
IVSS	DHI-IVSS7016DR-4T	3U 16HDD Intelligent Video Surveillance Server with Redundant Power & LCD screen
Relevant Products	DH-IPC-HF8242F-FD	2MP Starlight Face Detection Box Network Camera

Relevant Products

DH-HF8242F-FD

Dimensions(mm)

485. 0

133. 2

444. 8

522. 4

539. 4

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