alhua
TECHNOLOGY

DHI-NVR5432-16P-I
32Channel 1.5U 16PoE AI Network Video Recorder

· 32 Channel IP video access
· Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
· Up to 16 Channel perimeter protection
· Up to 4 Channel video stream face recognition
· Up to 24 face pictures /sec processing
· Up to 20 face databases with 100,000 face images in total
· 1-8 PoE Ports support ePoE & EoC

Face Recognition | Face Capture | Human Capture | ANPR | Metadata | Image Search | Blacklist Alarm | People Counting | False Alarm Filter

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 new NVR5000-I network video recorder delivers excellent performance and high recording quality that is ideally suitable for IP video surveillance applications. This NVR adopts powerful processor, providing the capability of 4K resolution processing for applications where image details are highly required. Additionally, the NVR can be served as edge storage, central storage or backup storage with an intuitive shortcut operation menu for remote management and control.

With build-in deep learning module, NVR5000-I series products adopt video image structuring technology based on deep learning algorithms, achieving high-precision human face recognition and perimeter protection. By applying deep learning artificial intelligence, NVR5000-I allows users to focus on what matters most, improves event response time and helps make video actionable.

The NVR is compatible with numerous third-party devices, which make it the perfect solution for surveillance systems that work independently of video management system (VMS).

Functions

Perimeter Protection
Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

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 metadata. Facial feature filtering while real time display, only show faces with target features.

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.

Common/Stranger Mode
NVR5000-I supports common and stranger mode. In stranger mode, when NVR detects a strange 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.

AI Search
Support seach by metadata of human and vehicles. Support uploading face pictures to NVR and compare them with recorded faces in NVR 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.

ANPR
Automatic Number Plate Recognition available for convenient entrance/exit management. Support license plate recognition(working with Dahua ITC camera), black/white list import/export, add/delete B/W list number, search result from recorded video.

Point of Sale (POS)
Ideal for grocery and retail stores, the optional POS solution allows the NVR to receive a POS transaction via corresponding video. This feature allows merchants to analyze specific transactions via the Fuzzy search algorithm.

Onvif

Technical Specification

System

Main Processor	Multi-core embedded processor
Operating System	Embedded LINUX

Perimeter Protection

Performance	16 channel, 10 IVS rules for each channel
Object classification	Human/Vehicle secondary recognition for tripwire and intrusion
AI Search	Search by target classification (Human, Vehicle)

Face Recognition

Performance	Max 24 face pictures /sec processing (modeling and comparing)
	4 channel video stream face recognition / 16 channel picture stream face recognition (with FD camera)
Stranger Mode	Detect strangers' faces(not in device's face database). Similarity threshold can be set manually.
AI Search	Up to 8 target face images search at same time, similarity threshold can be 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.
Trigger Events	Buzzer, Voice Prompts, Email, Snapshot, Recording, Alarm Out, PTZ Activation, etc.

Metadata

Face	Gender, age, glasses, beard, mask.
Vehicle	Vehicle color, vehicle model, vehicle logo, plate color, vehicle decorations, call, seatbelt.
Human Body	Tops style,tops color,bottom style,bottom color, hat, bag.
Non-motor Vehicle	Type, color, people number.
AI Search	Support search target video by metadata.

Audio and Video

IP Camera Input	32 Channel
Two-way Talk	1 Channel Input, 1 Channel Output, RCA

Display

Interface	2 HDMI, 1 VGA
Resolution	HDMI1/VGA: 1920 × 1080 , 1280 × 1024, 1280 × 720 , 1024 × 768
	HDMI2: 3840 × 2160 , 1920 × 1080 , 1280 × 1024, 1280 × 720 , 1024 × 768
Decoding Capability	4-ch@8MP(30fps), 16-ch@1080P(30fps)
Multi-screen Display	1st Screen: 1/4/8/9/16/25/36 2nd Screen: 1/4/8/9/16

Recording

Bandwidth	320Mbps (160Mbps when AI function enabled)
Compression	Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
Resolution	16MP, 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, 1.3MP, 720P, D1 etc.
Record Mode	Manual, Schedule (Continuous, MD(Motion Detection) , Alarm, IVS)
Record Interval	1 ~ 120 min (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec

Video Detection and Alarm

Trigger Events	Alarm Out, Video Push, Email, Recording, PTZ, Tour, Snapshot, Voice Prompt, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 × 18), Video Loss, Tampering and Scene Change
Alarm input	16 Channel
Relay Output	6 Channel

Playback and Backup

Sync Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to second)
Backup Mode	USB Device/Network/eSATA Device

Third-party Support

Third-party Support	Arecont Vision, Airlive, AXIS, Canon, Dynacolor, JVC, LG, Panasonic, Pelco, PSIA, Samsung, Sanyo, Sony, Watchnet and more

Network

Interface	1 RJ-45 Ports (10/100/1000Mbps)
PoE	16 ports (IEEE802.3af/at) 1-8 ports support ePoE & EoC
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, SNMP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE,DDNS, FTP, Alarm Server, IP Search (Support Dahua IP camera, DVR, NVS, etc.), P2P
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 2.4, SDK, CGI

Storage

Internal HDD	4 SATA III Ports, Up to 8 TB capacity for each HDD
eSATA	1 eSATA

Auxiliary Interface

USB	3 USB Ports (2 Rear USB 3.0 , 1 Front USB 2.0)
RS232	1 Port, for PC Communication and Keyboard
RS485	1 Port, for PTZ Control

Electrical

Power Supply	Single, AC100V ~ 240V, 50 ~ 60 Hz
Power Consumption	NVR: <21.1W (Without HDD)
	PoE: Max 25.5W for single port 150W total rated power, 80% control for protection
Fan	Smart fan, automatically adjust running speed

Environmental

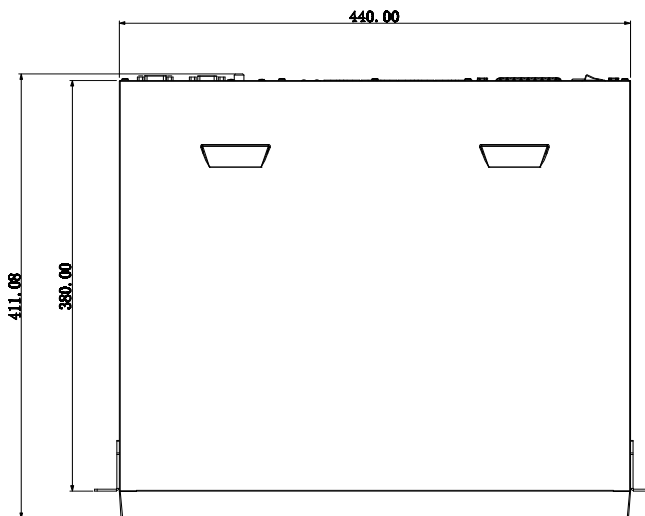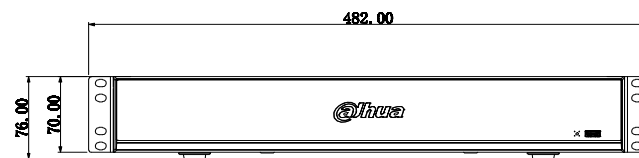|	
Operating Conditions	-10°C ~ +55°C (+14°F ~ +131°F), 86 ~ 106kpa
Storage Conditions	-20°C ~ +70°C (-4°F ~ +158°F), 0 ~ 90% RH

Construction

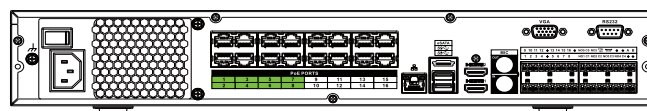|	
Dimensions	1.5U, 440mm x 411.1mm x 76mm ; (17.3" x 16.2" x 3.0")
Net Weight	5.00kg (11.0 lb) (without HDD)
Gross Weight	7.05kg (15.5 lb) (without HDD)

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
32 Channel AI NVR	DHI-NVR5432-16P-I	32 Channel 1.5U 16PoE AI Network Video Recorder

Dimensions (mm)

Rear Panel