

alhua
TECHNOLOGY
**DHI-NVR4204-
EI Wiz Sense
Network Video
Recorder**



alhua TECHNOLOGY DHI-NVR4204-EI Wiz Sense Network Video Recorder Installation Guide

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alhua TECHNOLOGY DHI-NVR4204-EI Wiz Sense Network Video Recorder



Specifications

- **Model:** DHI-NVR4204-EI

- **Type:** 4CH 1U 2HDDs WizSense Network Video Recorder
- **Series:** Lite Series
- **Main Processor:** Industrial-grade processor
- **Operating System:** Embedded Linux
- **Operating Interface:** Web, Local GUI

Functions

- **Face Recognition:** Extracts features of captured faces and compares them with the face database.
- **Perimeter Protection:** Filters out false alarms and improves alarm accuracy.
- **SMD Plus:** Categorizes targets triggering motion detection for effective alarm.
- **AI Search:** Search videos by attributes of targets and event types.
- **Heat Map by Camera:** Displays crowd density and people appearance probability.
- **ANPR by Camera:** Recognizes vehicle number plate information.
- **Quick Pick:** Enables quick retrieval of human/vehicle targets.

Product Usage Instructions

Installation

1. Connect the NVR to power and network using appropriate cables.
2. Install the HDDs into the designated slots for storage.
3. Access the NVR interface via web or local GUI for setup.

Configuration

1. Configure face recognition, perimeter protection, and SMD Plus settings as per your requirements.
2. Set up AI search parameters for efficient video retrieval.
3. Customize heat map display and ANPR blocklist/allowlist mode.

Operation

1. Monitor live feeds and recorded videos through the NVR interface.
2. Utilize face detection, recognition, and other AI features for surveillance purposes.
3. Use Quick Pick for quick identification of specific targets within SMD events.

Series Overview

Dahua Lite series NVR is easy to install, cost-effective and compatible with a wide variety of third-party devices, providing a great solution for small and medium surveillance systems. It is ideal for home safety, supermarkets, warehouses, educational institutions, and financial institutions.

Functions

- **Face Recognition**

Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database.

- **Perimeter Protection**

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

- **SMD Plus**

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

- **AI Search**

With AI search, operators can search for videos by the attributes of targets and event types, which helps them to quickly and efficiently investigate where and when targets appeared and events took place.

Heat Map by Camera

Dahua heat map technology is used to display the crowd density and people appearance probability. Export and display the crowd status by different colors. Generally, the crowd status is the statistics of people quantity in space and time dimensions.

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format
- Access, storage or forwarding at 256 Mbps (180 Mbps when AI function enabled)
- Max. decoding capability: 16 × 1080p@30 fps. Supports adaptive decoding
- AI by NVR: 1-channel face detection and recognition; 2-channel perimeter protection; up to 10 face databases and 20,000 face images; 4-channel SMD Plus
- AI by Camera: Face detection and recognition, perimeter protection; SMD Plus; people counting; stereo analysis; heat map
- Connected to the third-party network cameras
- Security baseline 2.3

ANPR by Camera

With deep learning algorithm, Dahua ANPR technology can recognize the number plate information of vehicles in the image with ANPR cameras. Support blacklist/allowlist mode, searching target vehicles from recorded video.

Quick Pick

Dahua Quick Pick technology can enable users to quickly pick up the human/vehicle targets that they are interested in, which facilitates retrieval from SMD events. Lite Series | DHI-NVR4204-EI DHI-NVR4204-EI 4CH 1U 2HDDs WizSense Network Video Recorder

Technical Specification

System

Main Processor	Industrial-grade processor
Operating System	Embedded Linux
Operating Interface	Web, Local GUI
AI	

AI by Recorder	Face detection, face recognition, perimeter protection, and SMD Plus;
AI by Camera	Face detection; face recognition; perimeter protection; SMD Plus; ANPR; people counting; stereo analysis; heat map
Perimeter Protection	
Perimeter Performance AI by Recorder (Number of Channels)	2 channels, 10 IVS rules for each channel
Perimeter Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)
Face Detection	
Face Attributes	Gender; age group; glasses; expressions; face mask; beard
Face Detection Performance of AI by Recorder (Number of Channels)	1 channel (up to 12 face images/s each channel)
Face Detection Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)
Face Recognition	
Face Database Capacity	Up to 10 face databases with 20,000 images, with a total capacity of 2.5 G. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image.
Face Recognition Performance of AI by Recorder (Number of Channels)	4-channel FD (by camera) + FR (by recorder), image stream: 12 face images/s 1-channel FD (by recorder) + FR (by recorder), video stream: 12 face images/s
Face Recognition Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)
SMD Plus	

SMD Plus by Recorder	4 channels: Secondary filtering for human and motor vehicle, reducing false alarms caused by leaves, rain and lighting condition change
SMD Plus by Camera	All channels (16 targets/s)
Audio and Video	
Access Channel	4 channels
Network Bandwidth	AI disabled: 256 Mbps incoming, 256 Mbps recording and 256 Mbps outgoing AI enabled: 180 Mbps incoming, 180 Mbps recording and 180 Mbps outgoing

Resolution	16 MP; 12 MP; 8 MP; 6 MP; 5 MP; 4 MP; 3 MP; 1080p; 960p; 720p; D1; CIF
Decoding Capability	AI disabled: 2-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 4-channel 8 MP@30 fps AI enabled: 1-channel 16 MP@30 fps; 2-channel 12 MP@30 fps; 3-channel 8 MP@30 fps; 3-channel 6 MP@30 fps; 4-channel 5 MP@30 fps
Video Output	1 HDMI, 1 VGA HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720 *Simultaneous/heterogeneous video sources output for VGA and HDMI is configurable.
Multi-screen Display	1st Screen: 1/4 2nd Screen: 1/4
Third-party Camera Access	Panasonic, Sony, Samsung, Axis, Pelco, Arecont, ONVIF, Canon

Compression Standard

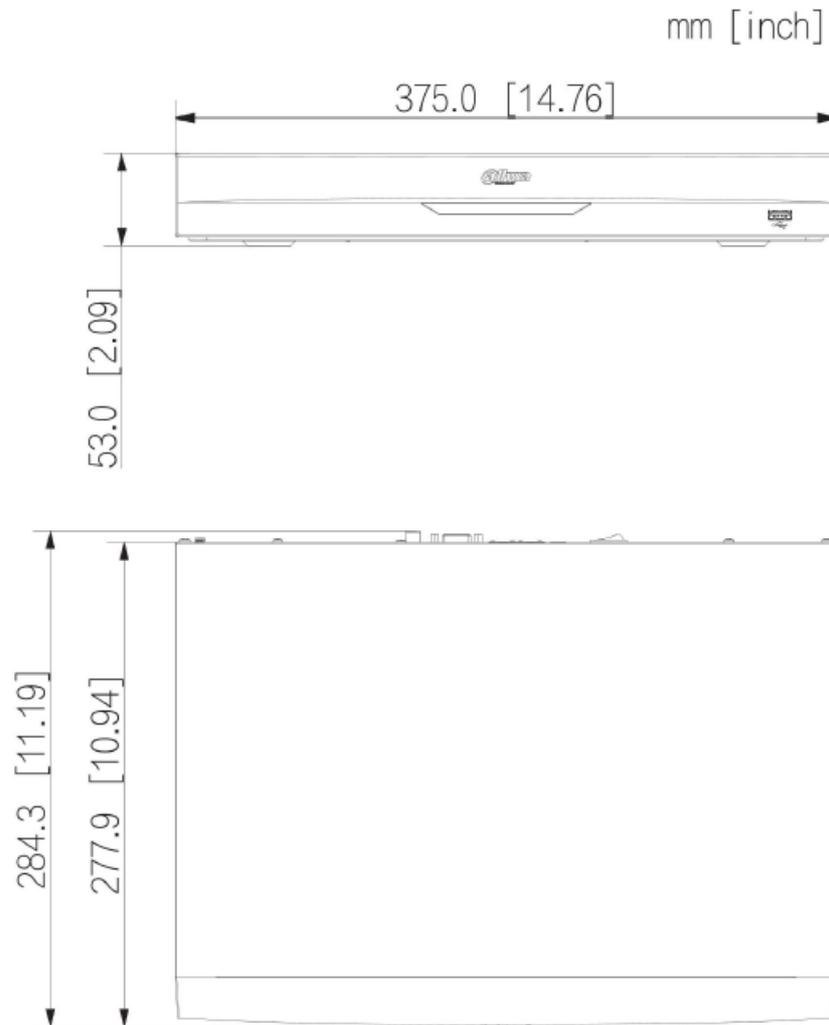
Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG
Audio Compression	G.711a; G.711u; PCM; G726
Network	

Network Protocol	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; PPPoE; DDNS; FTP; Alarm Server; IP Search (Support Dahua IP camera; DVR; NVS; etc.); P2P; auto register
Mobile Phone Access	iOS; Android
Interoperability	ONVIF 22.06(Profile T; Profile S; Profile G); CGI; SDK
Browser	Chrome; IE9 and later; Firefox
Recording Playback	
Multi-channel Playback	Up to 4 channels
Record Mode	General, motion detection; intelligent; alarm
Backup Method	USB device and network
Playback Mode	Instant playback, general playback, event playback, tag playback, smart playback
Storage	
Disk Group	Yes
Alarm	
General Alarm	Motion detection; privacy masking; video loss; scene changing; PIR alarm; IPC external alarm
Anomaly Alarm	Camera disconnection; storage error; disk full; IP conflict; MAC conflict; login locked; and cybersecurity exception
Intelligent Alarm	Face detection; face recognition; perimeter protection; SMD Plus; people counting; stereo analysis; heat map
Alarm Linkage	Record; snapshot; IPC external alarm output; audio; buzzer; log; preset; email
Port	
Audio Input	1-channel RCA
Audio Output	1-channel RCA
Alarm Input	4 channels

Alarm Output	2 channels
Disk Interface	2 SATA ports, up to 16 TB. The maximum HDD capacity varies with environment temperature.
USB	2 (1 front USB 2.0 port, 1 rear USB 2.0 port)
HDMI	1
VGA	1
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)
General Power Supply	12 VDC, 4 A
Power Consumption	<10 W (without HDD)
Net Weight	1.51 kg (3.33 lb)
Gross Weight	2.76 kg (6.08 lb)
Product Dimensions	375 mm × 284.3 mm × 53 mm (14.76" × 11.19" × 2.09") (W × L × H)
Packaging Dimensions	433 mm × 141 mm × 366 mm (17.05" × 5.55" × 14.41") (W × L × H)
Operating Temperature	-10 °C to +55 °C (14 °F to +131 °F)
Storage Temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating Humidity	10%–93% (RH), non-condensing
Installation	Rack or desktop
Certifications	FCC: 47 CFR FCC Part15, SubpartB, Class A CE-EMC: EN 55032:2015+A1:2020; EN IEC 61000-3-2:2019+A1:2021; EN 61000-3-3:2013+A1:2019+A2:2021; EN 55035:2017+A11:2020; EN 50130-4:2011+A1:2014 CE-LVD: EN 62368-1:2014

Ordering Information		
Type	Model	Description
NETWORK VIDEO RECORDER	DHI-NVR4204-EI	4CH 1U 2HDDs WizSense Network Video Recorder

Dimensions (mm[inch])



Panels

1. Power Switch
2. Network Port
3. AUDIO OUT, RCA Connector
4. HDMI Port
5. Alarm In/Out
6. Power Input
7. VGA Port
8. AUDIO IN, RCA Connector
9. USB Port
10. Ground

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Frequently Asked Questions

- **Q: Can I expand the face database capacity on the NVR?**
- A: Yes, the NVR supports up to 10 face databases with 20,000

images in total capacity.

- **Q: How many IVS rules can be set for perimeter protection by the recorder?**

A: The recorder supports 2 channels with 10 IVS rules for each channel for perimeter protection.

Documents / Resources



[Dahua TECHNOLOGY DHI-NVR4204-EI Wiz Sense Network Video Recorder](#) [pdf] Installation Guide

DHI-NVR4204-EI, DHI-NVR4204-EI Wiz Sense Network Video Recorder, DHI-NVR4204-EI, Wiz Sense Network Video Recorder, Sense Network Video Recorder, Network Video Recorder, Video Recorder, Recorder

References

- [@ Dahua Technology - World Leading Video-Centric AIoT Solution & Service Provider](#)
- [User Manual](#)

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