

DHI-NVR4116-4KS3-L

16CH Smart 1U 1-Bay Lite Network Video Recorder



- Supports Smart H.265+, H.265, Smart H.264+, H.264 and MJPEG decoding formats.
- Max decoding capability: 10 × 1080p@30 fps or 2 × 8 MP@30 fps.
- Max 160/160/80 Mbps incoming/recording/outgoing bandwidth.
- Supports IP cameras with a resolution up to 12 MP.
- AI by Camera supports face detection and recognition, perimeter protection and SMD.
- Supports one-click arming and disarming.



Series Overview

The NVR4000-4KS3-L model of the Lite Series NVR is favored for its outstanding performance. It supports 4K resolution for scenes that require highly detailed images, and can serve as the edge, central, or backup storage with an intuitive shortcut menu for remote management and control. This NVR also features Smart Motion Detection (SMD) by camera, which can distinguish target vehicles and humans from ordinary ones in real-time. When an IPC is connected to the NVR, a variety of AI functions become available such as face detection and perimeter protection. This NVR is both cost-effective and easy-to-install, making it ideal for a wide range of applications such as for cities, transportation, education and finance.

Functions

Face Detection by Camera

Face detection is to detect if there is any human face appearing in the video. This technology adopts a deep learning algorithm to support face detection, tracking, optimization and capturing, and then output the best face snapshot.

Face Recognition by Camera

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

Perimeter Protection by Camera

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 by Camera

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.

HDMI (4K)

The HDMI port can support up to 4K output, delivering clear and highly detailed images.

NVR NEXT

With its enhanced system, the NVR introduces NVR NEXT, a user-friendly GUI featuring a modular design to improve operation efficiency and streamline workflows, catering to the needs of small and medium-sized businesses.

Technical Specification

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

AI	
AI by Camera	Face detection; face recognition; perimeter protection; SMD

Perimeter Protection	
Perimeter Performance of AI by Camera (Number of Channels)	All channels (8 targets/s)

Face Detection	
Face Attributes	6 attributes
Face Detection Performance of AI by Camera (Number of Channels)	All channels (6 targets/s)

Face Recognition	
Face Recognition Performance of AI by Camera (Number of Channels)	All channels (6 targets/s)

SMD	
SMD by Camera	All channels (12 targets/s)

Audio and Video	
Access Channel	16 channels
Network Bandwidth	160 Mbps incoming, 160 Mbps recording and 80 Mbps outgoing
Resolution	12 MP;8 MP;6 MP;5 MP;4 MP;3 MP;1080p;720p;960p;D1;CIF;QCIF
Decoding Capability	AI OFF: Up to 1-channel 12 MP@30 fps; 2-channel 8 MP@30 fps; 3-channel 6 MP@30 fps; 4-channel 5 MP@30 fps; 5-channel 4 MP@30 fps; 10-channel 1080p@30 fps AI by Camera: Up to 1-channel 12 MP@30 fps; 2-channel 6 MP@30 fps; 3-channel 4 MP@30 fps; 6-channel 1080p@30 fps
Video Output	1 HDMI, 1 VGA HDMI: 3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720 VGA: 1920 × 1080, 1280 × 1024, 1280 × 720
Multi-screen Display	1/4/8/9/16
Third-party Camera Access	ONVIF

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

Network	
Network Protocol	HTTP; HTTPS; TCP/IP; IPv4; IPv6; RTSP; UDP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; FTP; DDNS; SNMP; Alarm

Network Protocol	Server; P2P; Auto Registration; IP Search (Supports IP camera, DVR, NVS, etc.)
Mobile Phone Access	iOS; Android
Interoperability	ONVIF 25.06 (Profile T; Profile S; Profile G; Profile M); CGI; SDK
Browser	Chrome; Safari; Edge; Firefox
Security	Digest;WSSE;Account lockout;Security logs;IP/MAC filtering;Generation and importing of X.509 certification;syslog;HTTPS;802.1x;Trusted boot;Trusted execution;Trusted upgrade;Session security;Security warning;SSL/TLS1.2;AES 256

Recording Playback	
Multi-channel Playback	Up to 16 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

Alarm	
General Alarm	Motion detection; camera external alarm; network alarm; scene changing; PIR alarm
Anomaly Alarm	Error (no disk, disk error, low space, low quota space; network disconnection; IP conflict; MAC conflict); video loss; video tampering; camera offline
Intelligent Alarm	Face detection; face recognition; perimeter protection
Alarm Linkage	Record; snapshot (panoramic); IPC external alarm output; audio; buzzer; log, preset; email

Port	
Audio Input	1-channel RCA
Audio Output	1-channel RCA
Alarm Input	NA (4 channels is optional)
Alarm Output	NA (2 channels are optional; one of the channels is 1-ch 12 V 1 A output)
Disk Interface	1 SATA port, up to 20 TB. This limit varies depending on the environment temperature.
USB	2 (2 rear USB 2.0 ports)
HDMI	1
VGA	1
Network Port	1 (10/100/1000 Mbps Ethernet port, RJ-45)

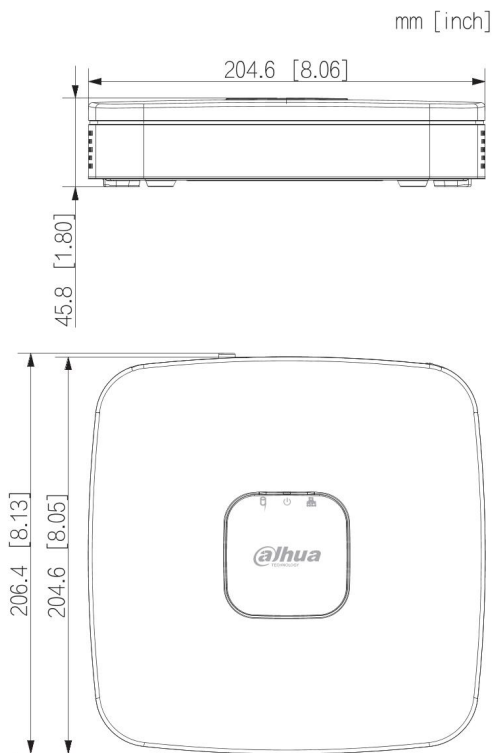
General	
Power Supply	12 VDC, 1.5 A
Power Consumption	<3 W (without HDD)
Net Weight	0.46 kg (1.01 lb)
Gross Weight	0.99 kg (2.18 lb)
Product Dimensions	204.6 mm × 206.4 mm × 45.8 mm (8.06" × 8.13" × 1.80") (W × D × H)
Packaging Dimensions	330.0 mm × 101.0 mm × 256.0 mm (12.99" × 3.98" × 10.08") (W × D × 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
Certifications	CE-LVD: EN IEC 62368-1:2024+ A11:2024 CE-EMC: EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019, EN 55032:2015+A11:2020, EN 55035:2017+A11:2020, EN 55024:2010+A1:2015, EN 50130-4:2011+A1:2014

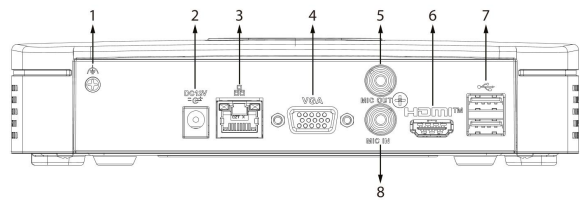
Ordering Information

Type	Model	Description
NETWORK VIDEO RECORDER	DHI-NVR4116-4KS3-L	16CH Smart 1U 1-Bay Lite Network Video Recorder

Dimensions (mm[inch])



Panels



- 1 Ground
- 2 Power Input
- 3 Network Port
- 4 VGA Port
- 5 AUDIO OUT, RCA Connector
- 6 HDMI Port
- 7 USB Ports
- 8 AUDIO IN, RCA Connector