DAHUA
TECHNOLOGY

Four-channel 4K Network Video Recorder

Smart 1U 4-port PoE 4K and Smart H.265+

- Smart H.265+ and Smart H.264+ Dual Codec
- Maximum 80 Mbps Recording Bandwidth
- Up to 8 MP Resolution for Preview and Playback
- Simultaneous HDMI and VGA Video Output
- Supports Remote Configuration and Management of Network Cameras
- Supports P2P Remote Surveillance and DMSS Mobile App
- Records Analytics+ Data from Edge Cameras
- Four (4) PoE/PoE+ Ports
- Five-year Warranty*

SMD Plus	Face Detection	Perimeter Protection	People Counting	4K HDMI

System Overview

Dahua's Lite Series network video recorders offer excellent performance and high recording quality for network video surveillance applications. For applications where details are critical for identification, this professional NVR provides a powerful processor with up to 4K resolution. Additionally, the NVR features a mouse shortcut operation menu, remote management and control, center storage, edge storage, and back up storage.

Designed as a cost-effective and easy to install recorder, this NVR is an ideal addition to any security system that monitors public spaces, water conservancy, transportation, city centers, schools, and financial institutions.

The NVR is compatible with numerous third-party devices making it the perfect solution for surveillance systems with or without a video management system (VMS). Its open architecture supports multi-user access and it is compatible with ONVIF S, T, and G protocols, enabling interoperability when combined with 4K cameras.

Functions

4K Resolution
4K resolution is a revolutionary breakthrough in image processing technology. 4K delivers four times the resolution of Full HD 1080p devices and offers superior picture quality and image details. 4K resolution improves the clarity of a magnified scene to view or record crisp forensic video from large areas.

High Efficiency Video Coding (H.265)
The H.265 (ITU-T VCEG) video compression standard offers double the data compression ratio at the same level of video quality, or substantially improved video quality at the same bit rate, as compared to older video compression technologies. H.265 offers such impressive compression by expanding the pattern comparison and difference-coding, improving motion vector prediction and motion region merging, and incorporating an additional filtering step called sample-adaptive offset filtering.

Smart H.265+
Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 90% when compared to the H.264 video compression standard.

Analytics+ Recording
Working with Dahua WizSense network cameras, the NVR recognizes and records video that contains analytic data on all IP channels. The NVR records intelligence at-the-edge features, including Perimeter Protection, Smart Motion Detection+, and People Counting.

Compatible with DMSS
The DMSS app is available on the iOS App Store and the Google Play Store. DMSS makes surveillance easy and simple, allowing remote access to back-end devices, view live video, receive event push notifications, and search for recorded videos from an iPhone, iPad, or Android phone at anytime from virtually anywhere.

Technical Specification

System

Main Processor	Industrial-grade Embedded Processor
Operating System	Embedded Linux

Audio and Video

IP Camera Input	Four (4) Channels
Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA

Analytics+ Recording[1]

Perimeter Protection	Channels	Four (4)
	Search	By channel, time, event type
SMD+	Channels	Four (4)
	Search	By target classification (human or vehicle)

Display

Interface	One (1) HDMI One (1) VGA
Native Output Resolution	3840 x 2160, 1920 x 1080, 1280 x 1024, 1280 x 720
Maximum Decoding	Two (2) Channel of 8 MP at 30 fps Four (4) Channels of 4 MP at 30 fps
Multi-screen Display	1/4
On-screen Display	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording

Recording

Video Compression	Smart H.265+, H.265, Smart H.264+, H.264, MJPEG
Audio Compression	PCM, G.711A, G.711Mu, G.726
Supported IP Camera Resolution	8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 1080p, 720p, D1
Maximum Recording Bandwidth	80 Mbps
Record Mode	Manual Recording; Alarm Recording; SMD Recording; Smart Recording

Video Detection and Alarm

General Alarms	Motion detection, privacy masking, video loss, scene changing, PIR alarm, IPC external alarm
Anomaly Alarms	Camera disconnection, storage error, disk full, IP conflict, MAC conflict, login locked, and cybersecurity exception
Analytics+ Alarms	Face detection, perimeter protection (intrusion and tripwire), IVS, people counting, heat map, and SMD alarms
Alarm Actions	Recording, snapshot, audio, buzzer, log, preset, and email

Playback and Backup

Sync Playback	1/4
Search Mode	Time/Date, Alarm, MD and Exact Search (accurate to one second), Smart Search
Playback Function	Play, Pause, Stop, Rewind, Fast Play, Slow Play, Reverse, By Frame, Full Screen, Backup Selection (video clip or file), Partial Zoom, Audio On/Off
Backup Mode	USB Device, Network

Third-party Support

Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and others

Network

Ethernet	One (1) RJ-45 Port (10/100 Mbps), Self-adaptive
PoE	Four (4) Ports (IEEE802.3af/at)
Network Function	HTTP; HTTPS; TCP/IP; IPv4/IPv6; UPnP; SNMP; RTSP; UDP; SMTP; NTP; DHCP; DNS; IP Filter; DDNS; FTP; Alarm Server; IP Search (Support Dahua IP camera; DVR; NVS); P2P; Auto register
Maximum User Access	128
Mobile Operating System	IOS, Android
Browser	Chrome, IE 9 or later
Interoperability	ONVIF Profiles S,T,G; CGI, SDK

Storage

Internal HDD	One (1) SATA III Port, Up to 10 TB capacity per HDD
HDD Mode	Single

Auxiliary Interface

USB	Two (2) USB 2.0 Ports (rear panel)

Electrical

Power Supply	48 VDC, 1.25 A
NVR Power Consumption	< 10 W, without HDD
Total PoE Budget	25.5 W single port, 36 W total

Environmental

Operating Conditions	−10° C to +50° C (+14° F to +122° F), 10% to 93% RH
Storage Conditions	0° C to +40° C (32° F to 104° F), 30% to 85% RH

Construction

Dimensions (W x L x H)	204.60 mm x 206.40 mm x 45.60 mm (8.06 in. x 8.12 in. x 1.80 in.)
Net Weight	0.50 kg (1.10 lb), without HDD
Gross Weight	1.43 kg (3.15 lb), without HDD

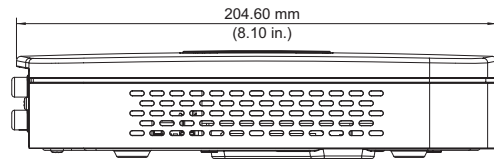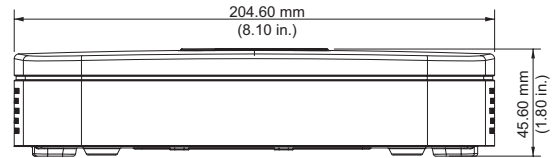### Certifications

Safety	EN62368-1 UL 62368-1 CAN/CSA C22.2 No.62368-1-14
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B EN55032, EN55024, EN55035, EN61000-3-2, EN61000-3-3, EN50130-4

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1. The recorder Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality.
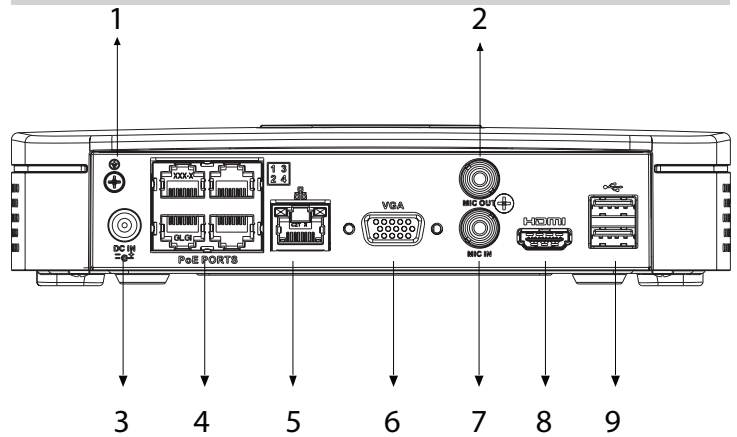
Ordering Information

Type	Part Number	Description
Four-channel NVR	N41C1P	4-channel Smart 1U 4 PoE 4K, No HDD Network Video Recorder
	N41C1P2	4-channel Smart 1U 4 PoE 4K, 2 TB HDD Network Video Recorder
	N41C1P4	4-channel Smart 1U 4 PoE 4K, 4 TB HDD Network Video Recorder
	N41C1P6	4-channel Smart 1U 4 PoE 4K, 6 TB HDD Network Video Recorder

Dimensions (mm/in.)

204.60 mm
(8.10 in.)

45.60 mm
(1.80 in.)

204.60 mm
(8.10 in.)

Rear Panel

1	Ground	6	VGA Output
2	Audio Output, RCA (x1)	7	Audio Input, RCA (x1)
3	Power Input	8	HDMI Output
4	PoE Ports, RJ-45 (x4)	9	USB 2.0 Ports (x2)
5	Network Port, RJ-45		

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