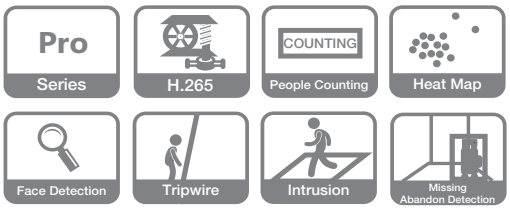
24-channel 4K Network Video Recorder

1U 24-port PoE 4K SATA Network Video Recorder



- Smart H.265+ and Smart H.264+ Video Compression
- Maximum 320 Mbps Incoming Bandwidth
- Up to 12 MP Resolution for Preview and Playback
- Support for IPC and UPnP Protocols
- 24 PoE Ports
- Customized Live View Layout with Support for Panoramic Displays
- Intelligent Video System with Business Analytics
- 3D Intelligent Positioning with Dahua PTZ Cameras



System Overview

Dahua's Pro Series network video recorders offer excellent performance and high recording quality for IP 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 2.4, enabling interoperability when combined with 4K cameras.

Functions

Dewarping Mode

The NVR has the ability to correct the distortion in a circular panoramic view produces by a fisheye lens. The NVR offers various dewarping modes for different installations and configurations.

N+M Hot Standby

The highly reliable N+M Hot Standby redundancy design provides a secure, fail-over technique ensuring immediate backup. In the event of a system failure, the slave instantly takes over the master ensuring no data is lost.

4K Resolution

4K resolution is a revolutionary breakthrough in image processing technology. 4K delivers four times the resolution of standard HDTV 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.

Intelligent Video System (IVS) Recording

With built-in intelligent video analytics, the NVR has the ability to detect and analyze moving objects for improved video surveillance. The NVR provides standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed, People Counting, ideal for business intelligence, and Facial Detection, for searching or identification of individuals.

Heat Map

The Heat Map option highlights the areas with the highest concentration of people. This information can then be exported into a customized report to assist in business or forensic analysis.

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.

Automatic Network Replenishment Technology (ANR)

Network Video Recorders with the ANR function automatically store video data on an IP camera SD card when the network is disconnected. After recovery of the network, the NVR automatically retrieves the video data stored on the camera.

Technical Specification

System

Main Processor	Embedded Quad-core Processor
Operating System	Embedded Linux

Audio and Video

IP Camera Input	24 Channels
Two-way Talk	Input: One (1) Channel, RCA Output: One (1) Channel, RCA

Display

Interface	One (1) HDMI Port (4K) One (1) VGA Port (1080p)
Resolution	3840 x 2160, 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768
Multi-screen Display	1/4/8/9/16/25
On-screen Display	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording

Recording

Compression	Smart H.265+, H.265, Smart H.264+, H.264, MJPEG
Resolution	12 MP, 8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 1080p, 1.3 MP, 720p, D1, CIF
Recording Bit Rate	320 Mbps
Bit Rate	16 Kbps to 20 Mbps per channel
Record Mode	Manual, Schedule (Regular, Motion Detection), Alarm, IVS, Stop
Record Interval	1 to 120 minutes (default: 60 minutes) Pre-record: 1 to 30 s Post-record: 10 to 300 s

Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer and Screen Tips
Video Detection	Motion Detection, MD Zones: 396 (22 x 18), Video Loss and Tampering
Alarm Input	Four (4) Channels, Low Level Effective, Green Terminal Interface
Relay Output	Two (2) Channels, NO/NC Programmable, Green Terminal Interface

Playback and Backup

Sync Playback	1/4/9/16
NVR Video Output	Four (4) Channels at 4K or 16 Channels at 1080p
Search Mode	Time/Date, Alarm, MD and Exact Search (accurate to one second)
Playback Function	Play, Pause, Stop, Rewind, Fast Play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
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 (10/100/1000 Mbps)
PoE	24 Ports (IEEE802.3af/at), 10/100 Mbps
Forwarding Rate	320 Mbps
Network Function	HTTP, HTTPs, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search (Support for Dahua IP cameras, DVRs, NVS)
Maximum User Access	128 Users
Mobile Operating System	IOS, Android
Interoperability	ONVIF 2.4, CGI Conformant

Storage

Internal HDD	Two (2) SATA III Ports, Up to 8 TB capacity for each HDD
Maximum Storage Capacity	16 TB
HDD Mode	Single

Auxiliary Interface

USB	One (1) USB 3.0 Port, rear panel One (1) USB 2.0 Port, front panel
RS232	One (1) Port for PC Communication and Keyboard

Electrical

Power Supply	Single, 100 VAC to 240 VAC, 50/60 Hz
Power Consumption	< 16 W, without HDD
Total PoE Power	25.5 W single port, 220 W total

Environmental

Operating Conditions	-10° C to +55° C (+14° F to +131° F)
Storage Conditions	-20° C to +70° C (-4° F to +158° F), 0 to 90% RH

Construction

Dimensions	1U, 440.0 mm x 419.96 mm x 43.65 mm (17.30 in. x 16.50 in. x 1.70 in.)
Net Weight	4.50 kg (9.90 lb), without HDD
Gross Weight	6.45 kg (14.20 lb)
Installation	Rack-mounted

Certifications

Safety	UL 60950-1 CAN/CSA C22.2 No.60960-1
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B ANSI C63.4-2014

Intelligence

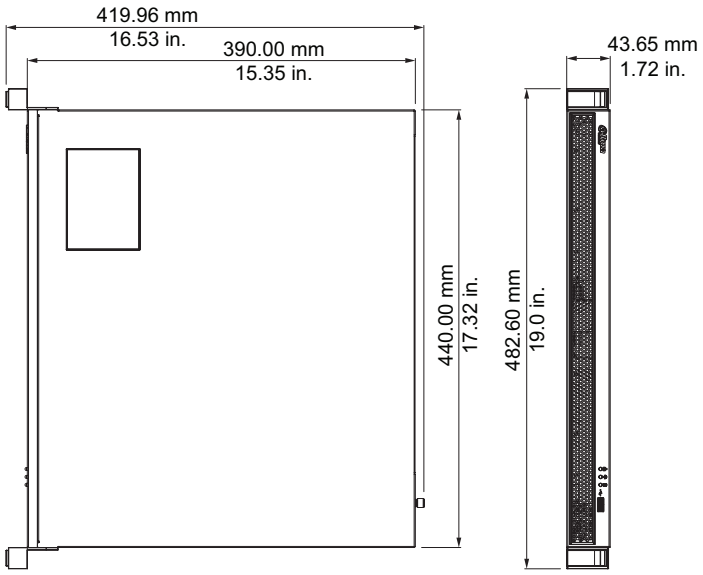
IVS triggers an alarm and takes a defined action for the following events:

Standard Features	• Tampering with the camera. • Camera loses or changes focus drastically. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera.
Premium Features	
Motion	An object moves through any part of the scene.
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.
Scene Change	A person or object moves the camera to change the scene or covers the camera to obscure the scene.
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.
Advanced Features	
Facial Detection	Detects and captures a snapshot of a human face in a defined area within a scene.
People Counting	Measure the number of customers, visitors or passengers in a surveillance scene.
Heat Map	Generates a visual representation of data.

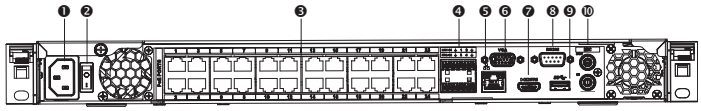
Ordering Information

Type	Part Number	Description
24-channel NVR	N52A4P	24-channel 1U 24 PoE Ports 4K H.265 Network Video Recorder
	N52A4P1	24-channel 1U 24 PoE Ports 4K H.265 Network Video Recorder, 2 TB
	N52A4P2	24-channel 1U 24 PoE Ports 4K H.265 Network Video Recorder, 3 TB
	N52A4P3	24-channel 1U 24 PoE Ports 4K H.265 Network Video Recorder, 1 TB
	N52A4P4	24-channel 1U 24 PoE Ports 4K H.265 Network Video Recorder, 4 TB
	N52A4P6	24-channel 1U 24 PoE Ports 4K H.265 Network Video Recorder, 6 TB
Accessory, Optional	PFH101	Rack Mount Tray, compatible with 1U, Mini 1U, and Compact 1U Storage Devices 482.60 mm x 281.20 mm x 43.70 mm (19.0 in. x 11.07 in. x 1.72 in.)

Dimensions (mm/in.)



Rear Panel



1	Power Input	6	VGA Output
2	On/Off Button	7	HDMI Output
3	PoE Ports (x24)	8	RS232 Port
4	Alarm Input/Output	9	USB 3.0 Port
5	Ethernet Port (1000 Mbps)	10	Audio Input/Output

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