**dahua** TECHNOLOGY

# 4-channel 4K Network Video Recorder

1U 4-port PoE 4K and H.265 Lite Network Video Recorder

- H.265 and H.264 Video Compression
- Maximum 200 Mbps Incoming Bandwidth
- Up to 8 MP Resolution for Preview and Playback
- Simultaneous HDMI and VGA Video Output
- Support for IPC and UPnP Protocols
- Four (4) PoE Ports
- Support for Automatic Network Replenishment (ANR) Technology

8Mp · H.265 · Heat Map · Tripwire · Intrusion · People Counting

## System Overview

Dahua's Lite 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, centre 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.

### 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.

### Intelligent Video System (IVS) Recording
Working with IVS-enabled IP cameras, the NVR recognizes and records video that contains IVS data on all IP channels. The NVR records standard intelligence at-the-edge features, as well as premium IVS features that detect abandoned or missing objects, Tripwire violations, and intrusion violations. The NVR is also capable of recording business analysis data – Facial Detection, People Counting, and Heat Map – from IP cameras with built-in Intelligent Business Analytics.

### 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.

### Automatic Network Replenishment (ANR) Technology
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.

### Smart Add
The Smart Add function makes installing an IP surveillance system quick and easy. The NVR automatically detects and lists IP cameras connected to the same router as the NVR. This automatic detection makes adding cameras to the NVR a seamless process.

**ONVIF**

## Technical Specification

### System

| | |
|---|---|
| Main Processor | Embedded Quad-core Processor |
| Operating System | Embedded Linux |

### Audio and Video

| | |
|---|---|
| IP Camera Input | Four (4) Channels |
| Two-way Talk | Input: One (1) Channel, RCA<br>Output: One (1) Channel, RCA |

### Display

| | |
|---|---|
| Interface | One (1) HDMI<br>One (1) VGA |
| Resolution | 3840 x 2160, 1920 x 1080, 1280 x 1024,<br>1280 x 720, 1024 x 768 |
| Multi-screen Display | 1/4 |
| On-screen Display | Camera Title, Time, Video Loss, Camera Lock,<br>Motion Detection, Recording |

### Recording

| | |
|---|---|
| Compression | H.265, H.264, MJPEG |
| Resolution | 8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 1080p, 1.3 MP, 720p,<br>D1, CIF, |
| Record Rate | 200 Mbps |
| Bit Rate | 16 Kbps to 20 Mbps per channel |
| Record Mode | Manual, Schedule (Regular, Continuous), Motion<br>Detection (Video Detection, Motion Detection,<br>Tampering, Video Loss), Stop |
| Record Interval | 1 to 120 minutes (default: 60 minutes)<br>Pre-record: 1 to 30 s<br>Post-record: 10 to 300 s |

### Video Detection and Alarm

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

### Playback and Backup

| | |
|---|---|
| Sync Playback | 1/4 |
| Search Mode | Time/Date, Alarm, MD and Exact Search (accurate to<br>one second), Smart Search |
| Playback Function | Play, Pause, Stop, Rewind, Fast Play, Slow Play,<br>Next File, Previous File, Next Camera,<br>Previous Camera, Full Screen, Repeat, Shuffle,<br>Backup Selection, Digital Zoom |
| Backup Mode | USB Device, Network |

### Third-party Support

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

### Network

| | |
|---|---|
| Interface | One (1) RJ-45 Port (10/100/1000 Mbps) |
| Ethernet Port | One (1) Independent 1000 Mbps Ethernet Port |
| PoE | Four (4) Ports (IEEE802.3af/at) |
| Network Function | HTTP, HTTPs, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP,<br>SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP,<br>Alarm Server, IP Search<br>(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,<br>Up to 6 TB capacity for each HDD |
| HDD Mode | Single |

### Auxiliary Interface

| | |
|---|---|
| USB | One (1) USB 3.0 Port<br>One (1) USB 2.0 Port |

### Electrical

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|---|---|
| Power Supply | 48 VDC, 2 A |
| Power Consumption | NVR: < 9 W, without HDD |
| Total PoE Power | 25.5 W single port, 50 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, 375.0 mm x 281.50 mm x 56.0 mm<br>(14.80 in. x 11.10 in. x 2.20 in.) |
| Net Weight | 1.6 kg (3.53 lb), without HDD |
| Gross Weight | 3.2 kg (7.05 lb), without HDD |

### Certifications

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

## Intelligence

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

| Standard Features | • Tampering with the camera.<br>• Camera loses or changes focus drastically.<br>• Error writing to an onboard Micro SD card.<br>• Error sending or receiving data over the network.<br>• 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 (records data from IP cameras with 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 |
|---|---|---|
| 4-channel NVR | N42B1P | 4-channel 1U 4 PoE 4K H.265 Lite Network Video Recorder |

## Dimensions (mm/in.)



375.0 mm
14.80 in.

56.0 mm
2.20 in.

281.50 mm
11.10 in.