**Dahua** TECHNOLOGY

# 4MP Starlight Network Security System
Six (6) 4 MP Eyeball Network Cameras with One (1) 8-channel 4K NVR



## System Overview

The Dahua Network Security System provides all the components to quickly install, configure, and employ a complete video surveillance solution. The IP cameras offer the clarity of 4 MP video, and the NVR offers built-in motion detection algorithms, alarm triggers, and customized recording modes. The NVR also features Plug and Play technology to connect quickly to cameras on the same network. Each component accepts a PoE power supply to facilitate installation.

## Functions

### Starlight Technology
For challenging low-light applications, Dahua's Starlight low light Technology offers best-in-class light sensitivity, capturing details in low light applications. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

### Intelligent Video System
IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, where a target crosses a user-defined line and the camera quickly and accurately responds by triggering an alarm. Working with IVS-enabled IP cameras, the NVR recognizes and records video that contains IVS data on all IP channels.

### Smart IR
With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 30 m (98 ft).

### 4 MP Network Cameras

- 4 MP (2560 x 1440) at 30 fps Maximum Resolution
- 2.8 mm Fixed Lens
- Maximum IR Length 30 m (98 ft) with Smart IR
- Starlight Technology for Ultra Low-light Applications
- Built-in Microphone
- Intelligent Video System
- IP67 Environmental Protection

### 4K Network Video Recorder

- 2 TB Pre-installed Had Disk Drive
- Embedded Quad-core Processor
- H.265 and H.264 Dual Codec
- Up to 8 MP Resolution for Preview and Playback
- 80 Mbps Incoming Bandwidth

### Flexible Recording
The NVR offers a variety of configurable recording options and schedules that saves disk space and active monitoring time. The NVR monitors incoming video and can be programmed to record if motion is detected or if an alarm is triggered. The NVR can also be programmed to record on a schedule or at different intervals. The recording options and schedules can be set for each individual camera or copied to all cameras.

### 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.

### Environmental
With a temperature range of –40° C to +60° C (–40° F to +140° F), the cameras are designed for extreme temperature environments. The cameras, subjected to rigorous dust and water immersion tests, are certified to the IP67 rating making them suitable for demanding outdoor applications.

The NVR features an operating temperature of-10° C to +55° C (+14° F to +131° F).

### Interoperability
The camera and NVR conform to the ONVIF (Open Network Video Interface Forum) specification, ensuring interoperability between network video products regardless of manufacturer.

## Technical Specification

### N42BJ62 4 MP Network Camera

### Camera

| | |
|---|---|
| Image Sensor | 1/3-in. CMOS |
| Effective Pixels | 2688 (H) x 1520 (V), 4 MP |
| ROM/RAM | 128 MB / 128 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto, Manual: 1/30 s to 1/100000 s |
| Minimum Illumination | Color: 0.008 lux at F1.6<br>0 Lux with IR on |
| IR Distance | Up to 30.0 m (98.43 ft) |
| IR On/Off Control | Auto, Manual |
| IR LEDs | Two (2) |

### Lens

| | |
|---|---|
| Lens Type | Fixed-focal |
| Mount Type | M12 |
| Focal Length | 2.8 mm |
| Max Aperture | F1.6 |
| Angle of View | Horizontal: 102°<br>Vertical: 55°<br>Diagonal: 121° |
| Iris | Fixed Aperture |
| Close Focus Distance | 0.90 m (2.95 ft) |

### DORI[1] Distance

| Detect<br>(8 ppf) | Observe<br>(19 ppf) | Recognize<br>(38 ppf) | Identify<br>(76 ppf) |
|---|---|---|---|
| 56.0 m (183.73 ft) | 22.40 m (73.49 ft) | 11.20 m (36.75 ft) | 5.60 m (18.37 ft) |

### Installation Angle

| | |
|---|---|
| Range | Pan: 0° to 360°<br>Tilt: 0° to 78°<br>Rotation: 0° to 360° |

### Video

| | | |
|---|---|---|
| Compression | | Smart H.265+, H.265, Smart H.264+, H.264, H.264B MJPEG (sub stream only) |
| Streaming Capability | | Two (2) Streams |
| Resolution | | 4 MP (2688 x 1520), 2560 x 1440, 2304 x 1296, 1080p (1920 x1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 ×480), CIF (352 x 240) |
| Frame Rate | Main Stream | 2688 x 1520 at 20 fps or 2560 x 1440 at 30 fps |
| | Sub Stream | D1 (704 x 480) at 30 fps |
| Bit Rate Control | | CBR, VBR |
| Day/Night | | Auto (ICR), Color, B/W |
| BLC Mode | | BLC, HLC, True WDR (120 dB) |
| White Balance | | Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom |
| Gain Control | | Auto, Gain Priority, Shutter Priority, Manual |
| Noise Reduction | | 3D DNR |

| | |
|---|---|
| Motion Detection | Off, On (4 Zones, rectangular) |
| Region of Interest | Off, On (4 Zones) |
| Smart IR | Auto, Manual |
| Digital Zoom | 16x |
| Flip | 0°, 90°, 180°, 270° |
| Mirror | Off, On |
| Privacy Masking | Off, On (4 Areas, rectangular) |

### Network

| | |
|---|---|
| Ethernet | RJ-45 (10/100 Base-T) |
| Protocol | HTTP, HTTPs, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP |
| Interoperability | ONVIF (Profile S, G, T), CGI, P2P, Milestone, Genetec |
| Auto Register | Support |
| Streaming Method | Unicast, Multicast |
| Maximum User Access | 20 Users /20 Hosts |
| Edge Storage | Network Attached Storage (NAS), FTP, SFTP, Micro SD Card slot (maximum 256 GB) |
| Web Viewer | IE, Chrome, Firefox |
| Management Software | Smart PSS, DSS, DMSS |
| Mobile Operating System | IOS, Android |

### Audio

| | |
|---|---|
| Input | Built-in Microphone |
| Audio Compression | G.711A, G.711Mu, G.726, AAC |

### Certifications

| | |
|---|---|
| Safety | EN 60950-1 |
| Electromagnetic Compatibility (EMC) | FCC CFR 47 Part 15 Subpart B<br>Electromagnetic Compatibility Directive 2014/30/EU |

### Electrical

| | |
|---|---|
| Power Supply | 12 VDC or PoE (IEEE 802.3af, Class 0) |
| Power Consumption | < 6.6 W |

### Environmental

| | |
|---|---|
| Operating Conditions | −40° C to +60° C (−40° F to +140° F), Less than 95% RH |
| Storage Conditions | −40° C to +60° C (−40° F to +140° F) |
| Ingress Protection | IP67 |

### Construction

| | |
|---|---|
| Casing | Metal |
| Dimensions | ø121.90 mm × 99.10 mm (ø4.80 in. x 3.90 in.) |
| Net Weight | 0.48 kg (1.10 lb) |
| Gross Weight | 0.65 kg (1.40 lb) |

### Intelligence

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

| | |
|---|---|
| Standard Features | • Tampering with the camera.<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

| | |
|---|---|
| Tripwire | A target crosses a user-defined line. |

1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 , the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

## Technical Specification

### N41B2P2 4K NVR

#### System

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

#### Audio and Video

| | | |
|---|---|---|
| IP Camera Input | | Eight (8) Channels |
| Audio | Input | One (1) Microphone, RCA |
| | Output | One (1) Channel, RCA, from Camera or Microphone |

#### Recording

| | |
|---|---|
| Compression | H.265, H.264 |
| Supported IP Camera Resolution | 8 MP, 6 MP, 5 MP, 4 MP, 3 MP, 1080p, 1.3 MP, 720p, 960H, D1, CIF |
| Maximum Recording Rate | 80 Mbps |
| Bit Rate | 16 Kbps to 20 Mbps per Channel |
| Record Mode | Manual, Schedule (Regular, Continuos), Motion Detection, Tampering, Video Loss, Stop |
| Record Interval | 1 to 120 minutes (default: 60 minutes), Pre-record: 1 s to 30 s, Post-record: 10 s to 300 s |

#### Display

| | | |
|---|---|---|
| Interface | | One (1) HDMI<br>One (1) VGA |
| Native Output Resolution | HDMI | 3840 x 2160, 2560 x 1440, 1920 x 1080, 1280 x 1024, 1280 x 720 |
| | VGA | 1920 x 1080, 1280 x 1024, 1280 x 720 |
| Maximum Decoding | | • Two (2) Channels of 8 MP at 30 fps<br>• Four (4) Channels of 4 MP at 30 fps<br>• Eight (8) Channels of 1080p at 30 fps |
| Multi-screen Display | | 1/4/8/9 |
| On-screen Display | | Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording |

#### Network

| | |
|---|---|
| Interface | One (1) RJ45 (10/100 Mbps) Port |
| PoE | Eight (8) Ports (IEEE 802.3af/at) |
| Network Function | HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, SNMP, IP Search (Support Dahua IP camera, DVR, NVS) |
| Maximum User Access | 128 Users |
| Mobile Operating System | IOS, Android |
| Interoperability | ONVIF 2.4, SDK, CGI |

#### Video Detection and Alarm

| | |
|---|---|
| Trigger Events | Recording, PTZ, Tour, Video Push, Email, Snapshot, Buzzer and Screen Tips |
| Video Detection | Motion Detection, MD Zones: 396 (22 × 18), Video Loss, and Tampering |

#### Playback and Backup

| | |
|---|---|
| Playback | 1/4/9 |
| Search Mode | Time/Date, Alarm, MD and Exact Search (accurate to 1 second), Smart Search |
| Playback Function | Play, Pause, Stop, Rewind, Fast Play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, and Digital Zoom |
| Backup Mode | USB Device/Network |

#### Storage

| | |
|---|---|
| Internal HDD | One (1) SATA III Port, up to 6 TB<br>Unit ships with a pre-installed 2 TB HDD |
| HDD Mode | Single |

#### Auxiliary Interface

| | |
|---|---|
| USB | Two (2) USB 2.0 Ports (1 front panel, 1 rear panel) |

#### Electrical

| | |
|---|---|
| Power Supply | 48 VDC, 1.5 A |
| Power Consumption, NVR | < 8.3 W, without HDD |
| Total PoE Power | 25.5 W single port, 80 W total |

#### Construction

| | |
|---|---|
| Dimensions | 270.0 mm x 204.70 mm x 45.70 mm (10.60 in. x 8.10 in. x 1.80 in.) |
| Net Weight | 0.65 kg (1.43 lb), without HDD |
| Gross Weight | 1.80 kg (3.97 lb), without HDD |

#### Environmental

| | |
|---|---|
| Operating Conditions | −10° C to +55° C (+14° F to +131° F), 86 kpa to 106 kpa |
| Storage Conditions | −20° C to +70° C (−4° F to +158° F), 0% to 90% RH |

#### Certifications

| | |
|---|---|
| Safety | UL 60950-1, EN 60950-1 |
| Electromagnetic Compatibility (EMC) | FCC Part 15 Subpart B, ANSI C63.4-2014 EN 55032, EN 50130-4 |
| Immunity | EN 55024 |