

4MP 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

Intelligent Video System

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera detects and captures a snapshot of human face in a defined area within a scene, and offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

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.

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 at 20 fps Maximum Resolution
- 2.8 mm Fixed Lens
- Maximum IR Length 30 m (98 ft) with Smart IR
- Intelligent Video System
- IP67 Environmental Protection

4K Network Video Recorder

- Embedded Quad-core Processor
- Smart H.265+ and Smart H.264+ Dual Codec
- Up to 8 MP Resolution for Preview and Playback
- Up to 2 Channels of 8 MP or 8 Channels of 1080p Decoding
- 80 Mbps Incoming Bandwidth

Flexible Recording

The NVR offers a variety of configurable recording options and schedules that saves HDD 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.

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 70% when compared to standard H.265 video compression.

Environmental

With a built-in heater and a temperature range of -30°C to $+60^{\circ}\text{C}$ (-22°F to $+140^{\circ}\text{F}$), 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 $+55^{\circ}\text{C}$ ($+14^{\circ}\text{F}$ to $+131^{\circ}\text{F}$).

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**N41BK22 4 MP Network Camera**

Camera

| | |
|--------------------------|--|
| Image Sensor | 1/3-in. CMOS |
| Effective Pixels | 2688 (H) x 1520 (V), 4 MP |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto, Manual: 1/30 s to 1/100000 s |
| Minimum Illumination | Color: 0.08 lux at F2.0 (1/3 s, 30 IRE) Color: 0.3 lux at F2.0 (1/30 s, 30 IRE) 0 Lux with IR on |
| S/N Ratio | More than 65 dB |
| IR Distance | Up to 30 m (98.04 ft) |
| IR On/Off Control | Auto, Manual |
| IR LEDs | 12 |

Lens

| | |
|---------------|-----------------------------------|
| Lens Type | Fixed Lens |
| Mount Type | Board-in |
| Focal Length | 2.8 mm |
| Max Aperture | F2.0 |
| Angle of View | Horizontal: 104° Vertical: 57° |
| Focus Control | Fixed |

DORI¹ Distance

| Detect (8 ppf) | Observe (19 ppf) | Recognize (38 ppf) | Identify (76 ppf) |
|-------------------|---------------------|-----------------------|----------------------|
| 63 m (207 ft) | 25 m (82 ft) | 13 m (43 ft) | 6 m (20 ft) |

Installation Angle

| | |
|-------|--|
| Range | Pan: 0° to 360° Tilt: 0° to 90° Rotation: 0° to 360° |
|-------|--|

Video

| | | |
|----------------------|--|----------------------------------|
| Compression | Smart H.265+, H.265, Smart H.264+, H.264, MJPEG (sub stream only) | |
| Streaming Capability | Two (2) Streams | |
| Resolution | 4 MP (2688 x 1520), 3 MP (2304 x 1296), 1080p (1920 x 1080), 720p (1280 x 720), VGA (640 x 480), D1 (704 x 480), CIF (352 x 240) | |
| Frame Rate | Main Stream | 4 MP at 20 fps or 3 MP at 30 fps |
| | Sub Stream | D1 at 30 fps |
| Bit Rate Control | CBR, VBR | |
| Day/Night | Auto (ICR), Color, B/W | |
| BLC Mode | BLC, HLC, True WDR (120 dB) | |
| Gain Control | Auto, 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, API |
| Streaming Method | Unicast, Multicast |
| Max. User Access | 10 Users /20 Users |
| Edge Storage | NAS Local PC for instant recording |
| Web Viewer | IE, Chrome, Firefox, Safari |
| Management Software | Smart PSS, DSS |
| Mobile Operating System | IOS, Android |

Certifications

| | |
|-------------------------------------|----------------------------------|
| Safety | UL60950-1 |
| Electromagnetic Compatibility (EMC) | FCC CFR 47 FCC Part 15 Subpart B |

Electrical

| | |
|-------------------|--|
| Power Supply | 12 VDC, 0.5 A or PoE (IEEE 802.3af, Class 0) |
| Power Consumption | < 5.5 W |

Environmental

| | |
|----------------------|---|
| Operating Conditions | -30° C to +60° C (-22° F to +140° F), Less than 95% RH |
| Storage Conditions | -30° C to +60° C (-22° F to +140° F), Less than 95% RH |
| Ingress Protection | IP67 |

Construction

| | |
|--------------|---|
| Casing | Aluminium |
| Dimensions | ø93.40 mm x 79.40 mm (ø3.68 in. x 3.13 in.) |
| Net Weight | 0.30 kg (0.66 lb) |
| Gross Weight | 0.42 kg (0.93 lb) |

Intelligence

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

| | |
|-------------------|---|
| Standard Features | <ul style="list-style-type: none"> Tampering with the camera. 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. |

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 | Smart H.265+, H.265, Smart H.264+, 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, Continuous), 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 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 | <ul style="list-style-type: none"> Two (2) Channels of 8 MP at 30 fps Four (4) Channels of 4 MP at 30 fps 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 x 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 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 |

Ordering Information

| Type | Part Number | Description |
|------------------------------|---------------|---|
| 4K Network Security System | N484E62 | <ul style="list-style-type: none"> • 6 x 4 MP IR Eyeball Network Cameras • 1 x 8-channel 4K NVR, 2 TB |
| Camera Accessories, optional | PFA13A-E | Junction Box (For use alone) |
| | PFA152-E | Pole Mount (For use with PFB204W wall mount) |
| | PFB204W | Wall Mount (For use alone or with PFA152 pole mount) |
| | DH-PFM321D-US | 12 VDC, 1 A Power Adapter |

Camera Accessories

Optional:



PFA13A-E
Junction Box



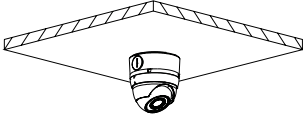
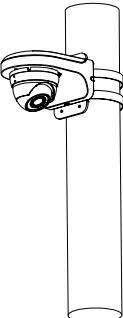
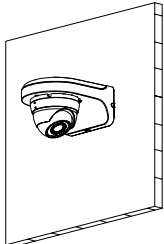
PFB204W
Wall Mount



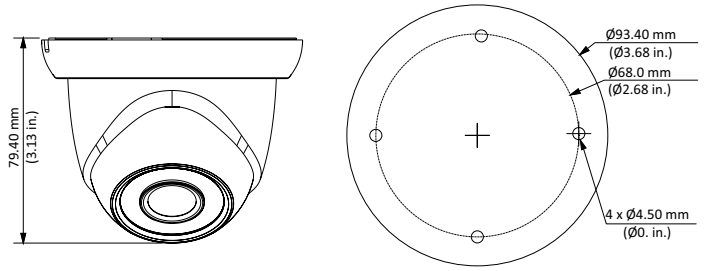
PFA152-E
Pole Mount



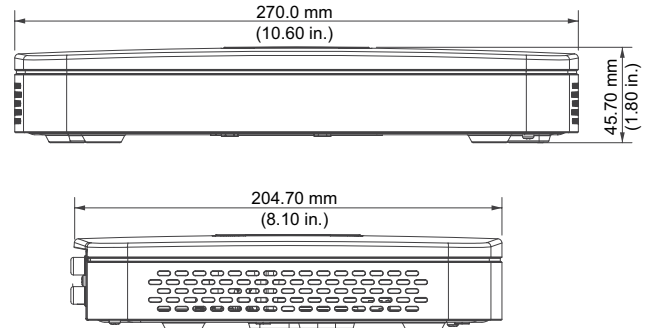
DH-PFM321D-US
Power Adapter

| Junction Mount | Pole Mount |
|---|---|
| PFA13A-E | PFB204W + PFA152-E |
|  |  |
| Wall Mount | |
| PFB204W | |
|  | |

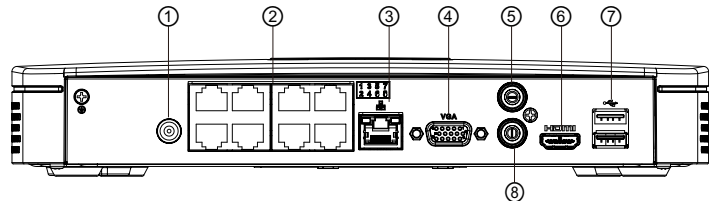
Dimensions (mm/in.) - 4 MP Network Camera



Dimensions (mm/in.) - 4K NVR



Rear Panel - 4K NVR



| | | | |
|---|---------------|---|---------------|
| 1 | VDC Power In | 5 | Audio/MIC Out |
| 2 | PoE Ports x 8 | 6 | HDMI Output |
| 3 | Network Port | 7 | USB Ports x 2 |
| 4 | VGA Output | 8 | MIC In |