# DH-IPC-HFW1431M-A

## 4MP General Bullet Network Camera

## Series Overview

With features of simple installation, easy operation, and high performance-cost ratio, Dahua Entry series network camera is applicable to small and medium-sized scenes, such as homes/residences, small-sized retail stores, and other small and medium-sized enterprises.

## Functions

### Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

### Smart Illumination

Dahua Smart Illumination technology can display image in the environment of low illuminance or completely dark environment. According to the distance of the targets, the camera adjusts Illuminations intensity automatically to display the details of the moving target.

### Human Detection

Dahua intelligent algorithms extract moving human targets from videos and filters out alarms that are triggered by non-human targets to increase the accuracy and effectiveness of alarms.

*The parameters and datasheets below can only be applied to 1431-S6 series.*

- 4-MP 1/2.9" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2560 ×1440)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 80 m.
- WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Abnormality detection: Motion detection, video tampering, audio detection, network disconnection, IP conflict, illegal access.
- Built in Mic.
- 12 VDC/PoE power supply, easy for installation.
- IP67 protection.
- Supports human detection.

### Cyber Security

Dahua network cameras employ a series of security technologies, including security authentcaton and authorizaton, access control protocols, trusted protecton, encrypted transmission and encrypted storage. These technologies improve the camera's defense against external cyber threats and prevent malicious programs from compromising the device.

### Protection (IP67, Wide Voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes.

Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.9" CMOS |
| Max. Resolution | 2560 (H) × 1440 (V) |
| ROM | 16 MB |
| RAM | 64 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.03 lux@F2.0 (Color, 30 IRE);<br>0.003 lux@F2.0 (B/W, 30 IRE);<br>0 lux (Illuminator on) |
| S/N Ratio | >56 dB |
| Illumination Distance | Up to 80 m (262.47 ft) (IR) |
| Illuminator On/Off Control | Auto;Manual |
| Illuminator Number | 4 (IR LED) |
| Angle Adjustment | Pan: 0°–360°<br>Tilt: 0°–90°<br>Rotation: 0°–360° |

### Lens

| | |
|---|---|
| Lens Type | Fixed-focal |
| Lens Mount | M12 |
| Focal Length | 2.8 mm;3.6 mm |
| Max. Aperture | F2.0 |
| Field of View | 3.6 mm: H: 78°; V: 43°; D: 92° |
| Iris Control | Fixed |
| Close Focus Distance | 3.6 mm: 1.3 m (4.27 ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| | 3.6 mm | 76.0 m (249.34 ft) | 30.4 m (99.74 ft) | 15.2 m (49.87 ft) | 7.6 m (24.93 ft) |

*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.

### Intelligence

| | |
|---|---|
| Human Detection | Support the classification and accurate detection of human |
| Smart Search | Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos |

### Video

| | |
|---|---|
| Video Compression | H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream) |
| Smart Codec | Smart H.265+; Smart H.264+ |
| Video Frame Rate | Main stream: 2560 × 1440@(1–25/30 fps)<br>sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps)<br>*The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity. |
| Stream Capability | 2 streams |
| Resolution | 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H.264: 32 kbps–4096 kbps;<br>H.265: 12 kbps–4096 kbps |
| Day/Night | Auto(ICR)/Color/B/W |
| BLC | Yes |
| HLC | Yes |
| WDR | 120 dB |
| White Balance | Auto; natural; street lamp; outdoor; manual; regional custom |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D NR |
| Motion Detection | OFF/ON (4 areas, rectangular) |
| Region of Interest (RoI) | Yes (4 areas) |
| Smart Illumination | Yes |
| Image Rotation | 0°/180° |
| Mirror | Yes |
| Privacy Masking | 4 areas |

### Audio

| | |
|---|---|
| Built-in MIC | Yes, built-in Mic |
| Audio Compression | G.711a; G.711Mu; PCM; G.726 |

### Alarm

| | |
|---|---|
| Alarm Event | Network disconnection; IP conflict; illegal access; motion detection; video tampering; audio detection; security exception; SMD (human) |

### Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 Base-T) |
| SDK and API | Yes |
| Network Protocol | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP; P2P |
| Interoperability | ONVIF (Profile S & Profile T); CGI |
| User/Host | 6 (Total bandwidth: 24 M) |
| Storage | FTP |
| Browser | IE; Chrome; Firefox |
| Management Software | Smart PSS Lite; DSS; DMSS; DoLynk Care |
| Mobile Client | iOS;Android |

| | |
|---|---|
| Cyber Security | Configuration encryption;Trusted execution;Digest;Security logs;HTTPS;Trusted upgrade;WSSE;Trusted boot;Account lockout;Generation and importing of X.509 certification;Video encryption |

## Certification

| | |
|---|---|
| Certifications | CE-LVD: EN62368-1;<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU |

## Power

| | |
|---|---|
| Power Supply | 12 VDC/PoE (802.3af) |
| Power Consumption | Basic: 1.6W (12 VDC), 2.1W (PoE);<br>Max. (H.265 + intelligence on + WDR+ IR intensity): 8.9W(12 VDC), 10.6W (PoE) |

## Environment

| | |
|---|---|
| Operating Temperature | −40 °C to +60 °C (−40 °F to +140 °F) |
| Operating Humidity | ≤95%(RH), non-condensing |
| Storage Temperature | −40 °C to +60 °C (−40 °F to +140 °F) |
| Storage Humidity | ≤95%(RH), non-condensing |
| Protection | IP67 |

## Structure

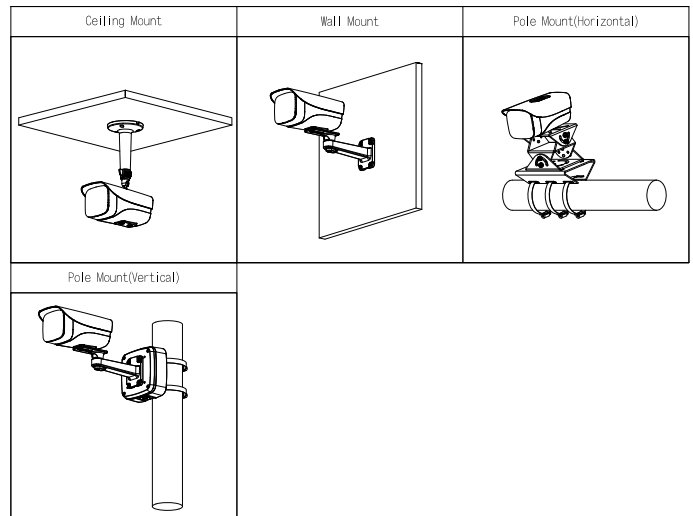| | |
|---|---|
| Casing Material | Metal + Plastic |
| Product Dimensions | 194.4 mm × 96.6 mm × 89.5 mm (7.65" × 3.80" × 3.52") (L × W × H) |
| Net Weight | 0.63 kg (1.39 lb) |
| Gross Weight | 1.06 kg (2.34 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 4MP Camera | DH-IPC-HFW1431M-A | 4MP General Bullet Network Camera |
| Accessories (Optional) | PFB120WS | Wall Mount Bracket |
| | PFB121W | Wall Mount Bracket |
| | PFB110W | Ceiling Mount Bracket |
| | PFA162 | Universal joint |
| | PFA150 | Pole Mount Bracket |
| | PFA121 | Junction Box |
| | PFA152-E | Pole Mount Bracket |
| | PFM900-E | Integrated Mount Tester |
| | PFM321D | 12VDC 1A Power Adapter |

## Accessories

Included:



PFB120WS
Wall Mount
Bracket

Optional:



PFB121W
Wall Mount
Bracket

PFB110W
Ceiling Mount
Bracket

PFA162
Universal
joint

PFA150
Pole Mount
Bracket

PFA121
Junction Box

PFA152-E
Pole Mount
Bracket

PFM900-E
Integrated Mount
Tester

PFM321D
12 VDC 1A Power
Adapter



## Dimensions (mm[inch])