**alhua**
TECHNOLOGY

# DH-IPC-HFW1431M-A-I2-B-S4

## 4MP Entry IR Fixed-focal Eyeball Network Camera

· 4-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.

· Outputs max. 4 MP (2688 × 1520) @20 fps and supports 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 60 m.

· ROI, SMART H.264 +/H.265+, flexible coding, applicable to various bandwidth and storage environments.

· Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, appli cable to various monitoring scenes.

· Abnormality detection: motion detection, video tampering, audio detection, network disconnection, IP conflict, and illegal access.

· Built-in MIC.

· 12 VDC/PoE power supply.

· IP67 protection.

| 4Mp | Smart Codec | Smart Illumination | Motion Detection | Built-in Mic | IP67 |
|---|---|---|---|---|---|

## 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.

### Motion Detection

When moving objects appear in the monitoring image, Dahua Motion Detection (General) technology triggers alarm or records.

### Smart Illumination

Dahua Smart Illumination technology can display image in the environ- ment 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.
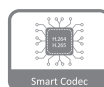
### Image Flip

For narrow and long scenes, Dahua image flip technology flips the im- age by 90°/180°/270° to realize better surveillance in rotation mode.

### Cyber Security

Dahua network cameras employ a series of security technologies, including security authentication and authorization, access control pro- tocols, trusted protection, encrypted transmission and encrypted stor- age. 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 works normal 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 | 1/2.7" CMOS |
| Max. Resolution | 2688 (H) × 1520 (V) |
| ROM | 16 MB |
| RAM | 128 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.01 lux@F2.0 (Color, 30 IRE)<br>0.001 lux@F2.0 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio | > 56 dB |
| Illumination Distance | 3.6 mm: 30 m (98.43 ft) (IR)<br>6 mm: 50 m (164.04 ft) (IR)<br>8 mm: 60 m (196.85 ft) (IR) |
| Illuminator On/Off Control | Auto; Manual |
| Illuminator Number | 2 (IR LED) |

### Lens

| | |
|---|---|
| Lens Type | Fixed-focal |
| Lens Mount | M12 |
| Focal Length | 3.6 mm; 6 mm; 8 mm |
| Max. Aperture | 3.6 mm: F2.0<br>6 mm: F2.0<br>8 mm: F2.0 |
| Field of View | 3.6 mm: Horizontal: 84°; Vertical: 45°; Diagonal: 100°<br>6 mm: Horizontal: 51°; Vertical: 29°; Diagonal: 59°<br>8 mm: Horizontal: 39°; Vertical: 21°; Diagonal: 45° |
| Iris Control | Fixed |
| Close Focus Distance | 3.6 mm: 1.2 m (3.94 ft)<br>6 mm: 2.6 m (8.53 ft)<br>8 mm: 4.3 m (14.11 ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | 3.6 mm | 70.0 m (249.34 ft) | 30.4 m (99.74 ft) | 15.2 m (49.87 ft) | 7.6 m (41.99 ft) |
| | 6 mm | 116.0 m (380.58 ft) | 46.4 m (152.23 ft) | 23.2 m (76.12 ft) | 11.6 m (38.06 ft) |
| | 8mm | 160.0 m (524.93 ft) | 64.0 m (209.97 ft) | 32.0 m (104.99 ft) | 16.0 m (52.49 ft) |

### Video

| | |
|---|---|
| Video Compression | H.265; H.264; H.264B; MJPEG (Only supported by the sub stream) |
| Smart Codec | Smart H.265+; Smart H.264+ |
| Video Frame Rate | Main Stream:<br>2688 × 1520 (1–20 fps)<br>2560 × 1440 (1–25/30 fps)<br>Sub Stream:<br>704 × 576 (1–20/25 fps)<br>704 × 480 (1–20/30 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 | 2688 × 1520 (2688 × 1520); 2560 × 1440 (2560 × 1440); 2304 × 1296 (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–6144 kbps<br>H.265: 12 kbps–6144 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 |
| Mirror | Yes |
| Privacy Masking | 4 areas |

### Audio

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

### Alarm

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

### Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 Base-T) |
| SDK and API | Yes |
| Cyber Security | Video encryption; configuration encryption; Digest; WSSE; account lockout; security logs; generation and importing of X.509 certification; trusted boot; trusted execution; trusted upgrade |
| Network Protocol | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; SMTP; FTP; DHCP; DNS; DDNS; NTP; Multicast |
| Interoperability | ONVIF (Profile S/Profile T); CGI; Milestone; P2P |
| Storage | FTP |
| Browser | IE<br>Chrome<br>Firefox |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Client | IOS; Android |

### Certification

| | |
|---|---|
| Certifications | CE-LVD: EN62368-1<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU<br>FCC: 47 CFR FCC Part 15, Subpart B |

## Power

| | |
|---|---|
| Power Supply | 12 V DC/PoE |
| Power Consumption | Basic: 2.1 W (12 VDC); 2.9 W (PoE)<br>Max. (ICR + H.265 + IR intensity): 5.8 W (12 VDC); 6.6 W (PoE) |

## Environment

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

## Structure

| | |
|---|---|
| Casing | Metal + plastic |
| Product Dimensions | 162.6 mm × 70 mm× 70 mm (6.38" × 2.76"× 2.76") (L × W × H) |
| Net Weight | 0.63 kg (1.39 lb) |
| Gross Weight | 1.24 kg (2.73 lb) |

### Ordering Information

| Type | Part Number | Description |
|---|---|---|
| IP Camera | DH-IPC-HFW1431M-A-I2-B-S4 | 4MP Entry IR Fixed-focal Eyeball Network Camera |
| Accessories | PFB120WS | Wall Mount |
| | PFB110W | Ceiling Mount |
| | PFB121W | Wall Mount |
| | PFB121W+PFA152-E | Pole Mount (Vertical) |
| | PFA162+PFA150 | Pole Mount (Horizontal) |

### Accessories

Included:

PFB120WS
Wall Mount

Optional:

PFB110W
Ceiling Mount

PFB121W
Wall Mount

PFB121W+PFA152-E
Pole Mount (Vertical)

PFA162+PFA150
Pole Mount (Horizontal)

| Ceiling Mount | Wall Mount | Pole Mount(Vertical) |
|---|---|---|
| | | |
| Pole Mount(Horizontal) | | |

## Dimensions (mm[inch])

194.4 [7.65]

96.6 [3.80]

89.5 [3.52]

31.0 [1.22]

2-1/4-20 UNC-2Bx6.0