

# DH-IPC-HDW1431T1-A

4MP Entry IR Fixed-focal Eyeball 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

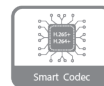
Dahua Smart Illumination technology can display image in the environment of low illuminance or completely dark environment. According to the distance of the targets, the camera adjusts illuminations intensity automatically to display the details of the moving target.

### SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

**\*The parameters and datasheets below can only be applied to 1431-S6-QH 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 30 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 SMD Plus.



### 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  $\pm 30\%$  (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                        | 128 MB                                                                                    |
| RAM                        | 128 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 30 m (98.43 ft) (IR)                                                                |
| Illuminator On/Off Control | Auto;Manual                                                                               |
| Illuminator Number         | 1 (IR LED)                                                                                |
| Angle Adjustment           | Pan: 0°–360°<br>Tilt: 0°–78°<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        |                                                                                                                                                                                                                                                                                                                                                                                 | 2.8 mm: H: 92°; V: 50°; D: 107°<br>3.6 mm: H: 78°; V: 43°; D: 92° |                      |                      |                     |
| Iris Control         |                                                                                                                                                                                                                                                                                                                                                                                 | Fixed                                                             |                      |                      |                     |
| Close Focus Distance |                                                                                                                                                                                                                                                                                                                                                                                 | 2.8 mm: 1.0 m (3.28 ft)<br>3.6 mm: 1.3 m (4.27 ft)                |                      |                      |                     |
| DORI Distance        | Lens                                                                                                                                                                                                                                                                                                                                                                            | Detect                                                            | Observe              | Recognize            | Identify            |
|                      | 2.8 mm                                                                                                                                                                                                                                                                                                                                                                          | 66.0 m<br>(216.54 ft)                                             | 26.4 m<br>(86.61 ft) | 13.2 m<br>(43.31 ft) | 6.6 m<br>(21.65 ft) |
|                      | 3.6 mm                                                                                                                                                                                                                                                                                                                                                                          | 76.0 m<br>(249.34 ft)                                             | 30.4 m<br>(99.74 ft) | 15.2 m<br>(49.87 ft) | 7.6 m<br>(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 |                                                                                                                 |
| SMD          | SMD Plus                                                                                                        |
| 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                                                                                                         |

|                       |                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Security              | Digest;Security logs;HTTPS;Trusted upgrade;WSSE;Trusted boot;Account logout;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: 1.5 W (12 VDC), 1.9 W (PoE);<br>Max. (H.265 + intelligence on + WDR+ IR intensity): 3.5 W (12 VDC), 4.3 W (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       | Inner core: Metal + Plastic;<br>Cover: Plastic;<br>Decoration ring: Plastic;<br>Pedestal: Plastic                                            |
| Product Dimensions    | 85.5 mm × Φ109 mm (3.37" × Φ4.29")                                                                                                           |
| Net Weight            | 0.25 kg (0.55 lb)                                                                                                                            |
| Gross Weight          | 0.38 kg (0.84 lb)                                                                                                                            |

| Ordering Information      |                    |                                                 |
|---------------------------|--------------------|-------------------------------------------------|
| Type                      | Model              | Description                                     |
| 4MP Camera                | DH-IPC-HDW1431T1-A | 4MP Entry IR Fixed-focal Eyeball Network Camera |
| Accessories<br>(Optional) | PFA136             | Junction Box                                    |
|                           | PFB203W            | Wall Mount Bracket                              |
|                           | PFA152-E           | Pole Mount Bracket                              |
|                           | PFA106             | Mount Adapter                                   |
|                           | PFB220C            | Ceiling Mount Bracket                           |
|                           | PFM321D            | 12 VDC 1A Power Adapter                         |
|                           | PFM900-E           | Integrated Mount Tester                         |

Accessories

Optional:



PFA136  
Junction Box



PFB203W  
Wall Mount Bracket



PFA152-E  
Pole Mount Bracket



PFA106  
Mount Adapter



PFB220C  
Ceiling Mount Bracket



PFM321D  
12 VDC 1A Power Adapter



PFM900-E  
Integrated Mount Tester

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

Dimensions (mm[inch])

