

# DH-IPC-HUM4231S1-L4

2MP Fixed-focal Pinhole Network Camera-PoE



## Series Overview

Dahua Pinhole series network camera includes one-in-all camera and separated camera. Separated camera can work with different lens to meet the requirements in different installation scenes. Pinhole Series camera is widely applied in hidden or small scenes such as banks and advertising screen.

## 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.

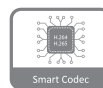
### WDR

With advanced Wide Dynamic Range (WDR) technology, Dahua network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

### Starlight

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

- 2-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- 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, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, external alarm and security exception.
- Alarm: 2 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply, easy for installation.



## Protection (Wide Voltage)

Wide voltage: The camera allows  $\pm 30\%$  input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

## Cyber Security

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

| Technical Specification  |  |  |                      |                     |                     |
|--------------------------|--|--|----------------------|---------------------|---------------------|
| Camera                   |  |  |                      |                     |                     |
| Image Sensor             |  | 1/2.7" CMOS  |                      |                     |                     |
| Max. Resolution          |  | 1920 (H) × 1080 (V)  |                      |                     |                     |
| ROM                      |  | 128 MB   |                      |                     |                     |
| RAM                      |  | 128 MB   |                      |                     |                     |
| Scanning System          |  | Progressive  |                      |                     |                     |
| Electronic Shutter Speed |  | Auto/Manual 1/3 s–1/100,000 s  |                      |                     |                     |
| Min. Illumination        |  | 0.01 lux@F2.0 (Color, 30 IRE)<br>0.001 lux@F2.0 (B/W, 30 IRE)  |                      |                     |                     |
| S/N Ratio                |  | >56 dB   |                      |                     |                     |
| Lens                     |  |  |                      |                     |                     |
| Lens Type                |  | Fixed-focal  |                      |                     |                     |
| Lens Mount               |  | M12  |                      |                     |                     |
| Focal Length             |  | 2.8 mm   |                      |                     |                     |
| Max. Aperture            |  | F2.0   |                      |                     |                     |
| Field of View            |  | Horizontal: 100°; Vertical: 57°; Diagonal: 114°  |                      |                     |                     |
| Iris Control             |  | Fixed  |                      |                     |                     |
| Close Focus Distance     |  | 0.6 m (1.97 ft)  |                      |                     |                     |
| DORI Distance            | Lens   | Detect   | Observe              | Recognize           | Identify            |
|                          | 2.8 mm   | 43.6 m<br>(143.04 ft)  | 17.4 m<br>(57.09 ft) | 8.7 m<br>(28.54 ft) | 4.4 m<br>(14.44 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. |  |                      |                     |                     |
| 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:1920 × 1080 @(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               |  | 1080p (1920 × 1080); 1.3M (1920 × 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: 3 kbps–4096 kbps<br>H.265: 3 kbps–4096 kbps   |                      |                     |                     |
| Day/Night                |  | 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)   |
| Image Rotation           | 0°/90°/180°/270° (Support 90°/270° with 1080P resolution and lower)   |
| Mirror                   | Yes   |
| Privacy Masking          | 4 areas   |
| Audio                    |   |
| Built-in MIC             | Yes   |
| Audio Compression        | G.711a; G.711Mu; PCM; G.726   |
| Alarm                    |   |
| Alarm Event              | No SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access; motion detection, video tampering, audio detection; external alarm; security exception   |
| Network                  |   |
| Network Port             | RJ-45 (10/100 Base-T)   |
| SDK and API              | Yes   |
| Cyber Security           | Video encryption; Firmware encryption; Configuration encryption; Digest; WSSE; Account lockout; Security logs; IP/MAC filtering; Generation and importing of X.509 certification; syslog; HTTPS; 802.1x; Trusted boot; Trusted execution; Trusted upgrade;Session Security;Security Warning |
| Network Protocol         | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P; Bonjour  |
| Interoperability         | ONVIF (Profile S & Profile G & Profile T); CGI  |
| User/Host                | 6 (Total bandwidth: 24 M)   |
| Storage                  | FTP; SFTP; Micro SD card (support max. 256 GB); NAS; Auto Network Replenishment (ANR)   |
| Browser                  | IE<br>Chrome<br>Firefox   |
| Management Software      | Smart PSS Lite; DSS; DMSS; DoLynk Care  |
| Certification            |   |
| Certifications           | CE-LVD: EN62368-1;<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU  |
| Port                     |   |
| Audio Input              | 1 channel (RCA port)  |
| Audio Output             | 1 channel (RCA port)  |
| Alarm Input              | 2 channels in: wet contact, 5 mA 3–5 VDC  |
| Alarm Output             | 1 channel out: dry contact, 1,000 mA 30 VDC/500 mA 50 VAC   |

|                   |  |
|-------------------|--|
| Power             |  |
| Power Supply      | 12 VDC; PoE (802.3af)  |
| Power Consumption | Basic: 1.7 W (12 VDC); 2.7 W (PoE);<br>Max.: 2.1 W (12 VDC); 3.5 W (PoE) (H.265 + WDR) |

|                       |                                      |
|-----------------------|--------------------------------------|
| 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) |

|                    |  |
|--------------------|--|
| Structure          |  |
| Casing             | Metal  |
| Product Dimensions | 67.5mm×53.4mm×48.2mm (2.66" × 2.1" × 1.9") (L × W × H) |
| Net Weight         | 155 g (0.34 lb)  |
| Gross Weight       | 190 g (0.42 lb)  |

| Ordering Information |                     |  |
|----------------------|---------------------|--|
| Type                 | Model               | Description                                |
| 2MP Camera           | DH-IPC-HUM4231S1-L4 | 2MP Fixed-focal Pinhole Network Camera-PoE |
| Accessories          | PFM321D             | DC12V1A Power Adapter                      |

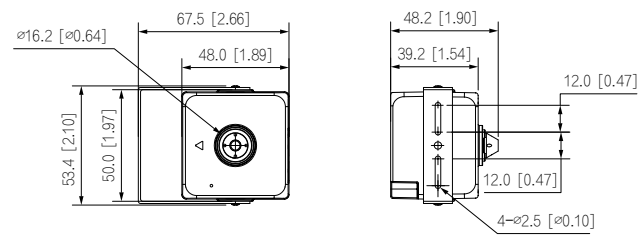
Accessories

Optional:



DC12V1A  
Power  
Adapter

Dimensions (mm[inch])



| Ceiling Mount | Plane Mount |
|---------------|-------------|
|               |             |