

DH-IPC-HDBW2230E-S-S2

2MP Lite IR Fixed-focal Dome Network Camera



Series Overview

With upgraded H.265 encoding technology, Dahua Lite series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better color image in the condition of low illumination. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

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.

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.

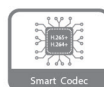
IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

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 compromising the device.

- 2MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2MP (1920 × 1080) @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.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, DWDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire.
- Abnormality detection: Motion detection, privacy masking, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Max. 256 G micro SD card.
- 12V DC/PoE power supply.
- IP67, IK10 protection.



Protection (IP67, IK10, 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.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).

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 | 1/2.8" 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 | 0.005 Lux@F1.6 (Color, 30 IRE) 0.0005 Lux@F1.6 (B/W, 30 IRE) 0 Lux (Illuminator on) |
| S/N Ratio | > 56 dB |
| Illumination Distance | 30 m (98.43 ft) (IR) |
| Illuminator On/Off Control | Auto; manual |
| Illuminator Number | 3 (IR LED) |
| Pan/Tilt/Rotation Range | Pan: 0°–355° Tilt: 0°–65° Rotation: 0°–355° |

Lens

| | | | | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|----------------------|---------------------|
| Lens Type | Fixed-focal | | | | |
| Lens Mount | M12 | | | | |
| Focal Length | 2.8 mm; 3.6 mm | | | | |
| Max. Aperture | 2.8 mm: F1.6 3.6 mm: F1.6 | | | | |
| Field of View | 2.8 mm: Horizontal: 108°; Vertical: 56°; Diagonal: 128° 3.6 mm: Horizontal: 88°; Vertical: 44°; Diagonal: 105° | | | | |
| Iris Control | Fixed | | | | |
| Close Focus Distance | 2.8 mm: 0.6 m (1.97 ft) 3.6 mm: 1.3 m (4.27 ft) | | | | |
| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
| | 2.8 mm | 38.6 m (126.64 ft) | 15.4 m (50.52 ft) | 7.7 m (25.26 ft) | 3.9 m (12.80 ft) |
| | 3.6 mm | 58.9 m (193.24 ft) | 23.6 m (77.43 ft) | 11.8 m (38.71 ft) | 5.9 m (19.36 ft) |

Smart Event

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|-----|---------------------|
| IVS | Tripwire; intrusion |
|-----|---------------------|

Video

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|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Sub stream: 704 × 576@1–25 fps 704 × 480@1–30 fps *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 (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 H.265: 12 kbps–6144 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| HLC | Yes |
| WDR | DWDR |
| 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°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 4 areas |

Alarm

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|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alarm Event | No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; voltage detection; security exception |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Network

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|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
| 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; PPPoE; Bonjour |
| Interoperability | ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone |
| User/Host | 20 (Total bandwidth: 48 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 256 G); NAS |
| Browser | IE Chrome Firefox |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Client | iOS; Android |

Certification

| | |
|----------------|------------------------------------------------------------------------------------------------------------------------|
| Certifications | CE-LVD: EN 62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B |
|----------------|------------------------------------------------------------------------------------------------------------------------|

Power

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|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply | 12 V DC/PoE (802.3af) |
| Power Consumption | Basic: 1.8 W (12 V DC); 2.5 W (PoE) Max. (ICR + H.265 + max. resolution + main stream + IR intensity + DWDR + IVS): 4.6 W (12 V DC); 5.4 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; IK10 |

Structure

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|--------------------|--------------------------------|
| Casing | Metal |
| Product Dimensions | 81 mm × Φ109.9 mm (3.2"×Φ4.3") |
| Net Weight | 0.35 kg (0.8 lb) |
| Gross Weight | 0.49 kg (1.1 lb) |

Ordering Information

| Type | Model | Description |
|------------------------|-----------------------|---------------------------------------------|
| 2MP Camera | DH-IPC-HDBW2230E-S-S2 | 2MP Lite IR Fixed-focal Dome Network Camera |
| Accessories (optional) | PFA136 | Junction Box |
| | PFB203W | Wall Mount Bracket |
| | PFA152-E | Pole Mount Bracket |
| | PFA106 | Mount Adapter |
| | PFB220C | Ceiling Mount Bracket |
| | PFM321D | 12V DC 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



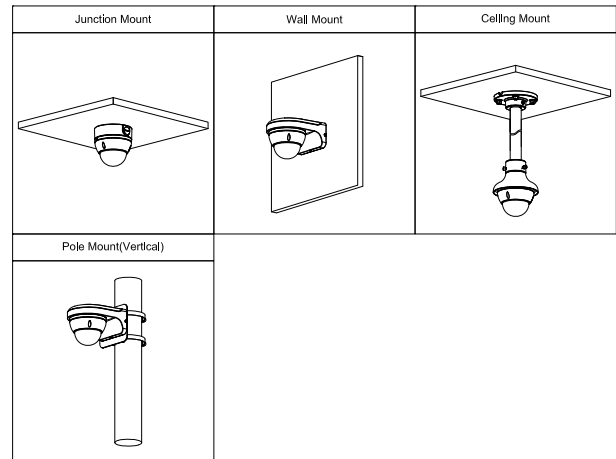
PFB220C Ceiling Mount Bracket



PFM321D 12V DC 1A Power Adapter



PFM900-E Integrated Mount Tester



Dimensions (mm[inch])

