

DH-IPC-HDBW2231E-S-S2

2MP IR Mini Dome Network Camera



- 2MP, 1/2.8" CMOS image sensor, low illuminance, high image definition
- Outputs 2MP (1920 × 1080) @ 25/30 fps
- H.265 coding, high compression ration, low bit rate
- Built-in IR LED, max IR distance: 30 m
- ROI, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments
- Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
- Intelligent detection: Intrusion, tripwire
- Abnormality detection: Motion detection, video tampering, no SD card, SD card full, SD card error, network disconnected, IP conflict, illegal access, voltage detection
- Max. 256 GB SD card
- 12V DC/POE power support
- IP67, IK10 protection grade



System Overview

With upgraded H.265 encoding technology, Dahua Lite series camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better colorful image in the environment of low illumination. It supports SD card storage, waterproof function, dust-proof function and tamper-proof function, complying to the standards of IP67 and IK10.

Functions

Smart (H.265+ & H.264+)

Adopting advanced algorithm of auto stream control according to the environment, Dahua smart encoding technology realizes the higher efficiency than (H.265 & H.264), providing high-quality video, and reducing the cost of storage and transmission.

Wide dynamic range (WDR)

Dahua adopts advanced Wide Dynamic Range (WDR) technology. You can get clear details in the environment of strong brightness contrast. In high brightness and back-light environment, bright region and dark region with strong light source, you can also get clear images.

Starlight

Dahua Starlight technology mainly applies to the environment of low illumination, and it can provide clear colorful video. Even in the environment of min. illumination, the technology can guarantee the good image effect.

Intelligent Video Analysis (IVS)

With advanced video algorithm, Dahua camera supports intelligent detection, such as tripwire and intrusion and so on.

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 m (Impact energy is 20J).

Wide voltage: The camera allows $\pm 30\%$ 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"2Megapixel progressive CMOS |
| Effective Pixels | 1920 (H) ×1080 (V) |
| ROM | 128 MB |
| RAM | 128 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100000 s |
| Min. Illumination | 0.002 Lux @F1.6 |
| IR Distance | 30 m (98.4 ft) |
| IR On/Off Control | Auto/Manual |
| IR LEDs Number | 3 (IR LED) |
| Pan/Tilt/Rotation Range | Horizontal: 0°–355° Vertical: 0°–65° Rotation: 0°–355° |

Lens

| | | | | | |
|----------------------|---|----------------------|---------------------|---------------------|--------------------|
| Lens Type | Fixed focal | | | | |
| Mount Type | M12 | | | | |
| Focal Length | 2.8 mm 3.6 mm | | | | |
| Max. Aperture | F1.6 | | | | |
| Field of View | 2.8 mm: Horizontal:106° Vertical: 56° Diagonal: 126° 3.6 mm: Horizontal:87° Vertical: 46° Diagonal: 104° | | | | |
| Iris Type | Fixed aperture | | | | |
| Close Focus Distance | 2.8 mm: 0.6 m (2.0 ft) 3.6 mm: 1.2 m (3.9 ft) | | | | |
| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
| | 2.8 mm | 38.6 m (126.6 ft) | 15.4 m (50.5 ft) | 7.7 m (25.3 ft) | 3.9 m (12.8 ft) |
| | 3.6 mm | 55.2 m (181.1 ft) | 22.1 m (72.5 ft) | 11.0 m (36.1 ft) | 5.5 m (18.0 ft) |

Smart Event

| | |
|-----------------------|---------------------|
| General IVS Analytics | Intrusion; tripwire |
|-----------------------|---------------------|

Video

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|-------------------|--|
| Video Compression | H.265; H.264; H.264B; MJPEG |
| Smart Codec | H.264: Yes H.265: Yes |
| Video Frame Rate | 50 Hz Main stream (1920 × 1080@25 fps); sub stream(704 × 576@25 fps) 60 Hz Main stream (1920 × 1080@30 fps); sub stream(704 × 480@30 fps) |
| 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 | ICR auto switch |
| BLC | Yes |
| WDR | 120 dB |
| White Balance | Auto/natural/street lamp/outdoor/manual/regional custom |
| Gain Control | Auto/Manual |
| Noise Reduction | 3D DNR |
| Motion Detection | OFF/ON (4 areas, rectangular) |
| Region of Interest(Rol) | Yes (4 areas) |
| Smart IR | Yse |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 1080p resolution.) |
| Mirror | Yes |
| Privacy Masking | 4 areas |

Network

| | |
|---------------------|--|
| Network | RJ-45 (10/100 Base-T) |
| Protocol | HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; QoS; UPnP; NTP; RTMP; Multicast; HTTPS; SFTP; 802.1x; ICMP; IGMP |
| Interoperability | ONVIF (Profile S/Profile G); CGI; Milestone; Genetec |
| User/Host | 20 |
| Edge Storage | Dahua Cloud; FTP; Micro SD Card (support max. 256 GB); NFS |
| Browser | IE; Chrome; Firefox |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Phone | IOS; Android |

Certification

| | |
|----------------|--|
| Certifications | CE-LVD: EN60950-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07 |
|----------------|--|

Power

| | |
|-------------------|---|
| Power Supply | 12V DC/PoE |
| Power Consumption | Basic power consumption: 1.9W (12V DC); 2.4W (PoE) Max. power consumption (H.265 + max. resolution + max. stream + WDR + IR full intensity + IVS enabled): 4.5W (12V DC); 5.4W (PoE) |

Environment

| | |
|----------------------|--|
| Operating Conditions | -40°C to +60°C (-40°F to +140°F)/less than≤95% |
| Storage Temperature | -40°C to +60°C (-40°F to +140°F) |
| Protection Grade | IP67, IK10 |

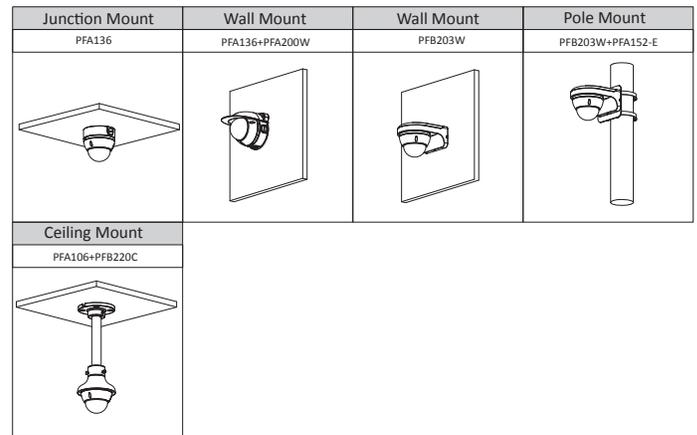
Structure

| | |
|--------|-------|
| Casing | Metal |
|--------|-------|

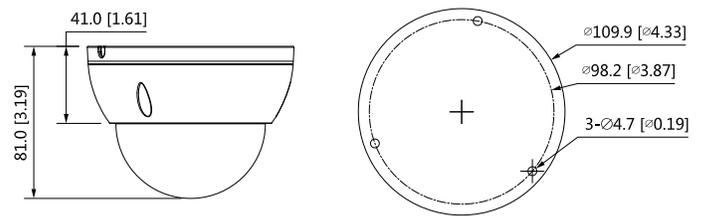
| | |
|--------------|----------------------------------|
| Dimensions | 81 mm × Φ109.9 mm (3.2" × Φ4.3") |
| Net Weight | 0.35 kg (0.77lb) |
| Gross Weight | 0.48 kg (1.06lb) |

Ordering Information

| Type | Part Number | Description |
|------------------------|------------------------|--|
| 2MP Camera | DH-IPC-HDBW2231EP-S-S2 | 2MP IR Mini Dome Network Camera, PAL |
| | DH-IPC-HDBW2231EN-S-S2 | 2MP IR Mini Dome Network Camera, NTSC |
| Accessories (optional) | PFA136 | Junction Box |
| | PFA200W | Rain Shade |
| | PFB203W | Wall Mount |
| | PFA152-E | Pole Mount |
| | PFA106 | Mount Adapter |
| | PFB220C | Ceiling Mount |
| | PFM321D | DC12V1A Power Adapter |
| | LR1002-1ET/1EC | Single-port Long Reach Ethernet Over Coax Extender |
| | PFM900-E | Integrated Mount Tester |
| | PFM114 | TLC SD Card |



Dimensions (mm[inch])



Accessories

Optional:



PFA136
Junction Box



PFA200W
Rain Shade



PFA106
Wall Mount



PFA152-E
Pole Mount



PFA106
Mount Adapter



PFB220C
Ceiling Mount



PFM321D
DC12V1A Power
Adapter



LR1002-1ET/1EC
Single-port long
reach ethernet over
coax extender



PFM900-E
Integrated Mount
tester



PFM114
TLC SD card