

# DH-IPC-HFW2230S-SA-S2

Build-in Mic 2MP IR Bullet Network Camera



- 2MP, 1/2.7" CMOS image sensor, low illuminance, high image definition
- Outputs 2MP (1920 × 1080)@25/30 fps
- H.265 codec, high compression rate, ultra-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, DWDR, 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
- Supports max. 256 GB Micro SD card
- Build-in Mic
- 12V DC/POE power support
- IP67 protection



## 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, complying to the standards of IP67.

## 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.

### 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, 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 30minutes.

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

|                          |   |
|--------------------------|---|
| Image Sensor             | 1/2.7"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        | Color : 0.005 Lux@F1.6,<br>Black & White : 0.003 Lux@F1.6, 0Lux IR on |
| IR Distance              | 30 m (98.43 ft)   |
| IR On/Off Control        | Auto/Manual   |
| IR LEDs Number           | 1   |
| Pan/Tilt/Rotation Range  | Horizontal: 0°–360°<br>Vertical: 0°–90°<br>Rotation: 0°–360°          |

|                         |   |
|-------------------------|---|
| 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<br>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 DNR  |
| Motion Detection        | OFF/ON (4 areas, rectangular)   |
| Region of Interest(Rol) | Yes (4 areas)   |
| Smart IR                | Yes   |
| Image Rotation          | 0°/90°/180°/270° (Supports 90°/270° with 1080p resolution.)   |
| Mirror                  | Yes   |
| Privacy Masking         | 4 areas   |

### Lens

|                      |   |                       |                      |                      |                     |
|----------------------|---|-----------------------|----------------------|----------------------|---------------------|
| Lens Type            | Fixed   |                       |                      |                      |                     |
| Mount Type           | M12   |                       |                      |                      |                     |
| Focal Length         | 2.8 mm<br>3.6 mm  |                       |                      |                      |                     |
| Max. Aperture        | F1.6<br>F1.6  |                       |                      |                      |                     |
| Field of View        | 2.8 mm:<br>Horizontal: 110.0°<br>Vertical: 59.0°<br>Diagonal: 132.0°<br>3.6 mm:<br>Horizontal: 91.0°<br>Vertical: 48.0°<br>Diagonal: 109.0° |                       |                      |                      |                     |
| Iris Type            | Fixed aperture  |                       |                      |                      |                     |
| Close Focus Distance | 2.8 mm: 0.6 m (1.97 ft)<br>3.6 mm: 1.1 m (3.61 ft)  |                       |                      |                      |                     |
| DORI Distance        | Lens  | Detect                | Observe              | Recognize            | Identify            |
|                      | 2.8 mm  | 37.3 m<br>(122.38 ft) | 14.9 m<br>(48.88 ft) | 7.5 m<br>(24.61 ft)  | 3.7 m<br>(12.14 ft) |
|                      | 3.6 mm  | 53.3 m<br>(174.87 ft) | 21.3 m<br>(69.88 ft) | 10.7 m<br>(35.10 ft) | 5.3 m<br>(17.39 ft) |

### Smart event

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

### Video

|                   |  |
|-------------------|--|
| Video Compression | H.265; H.264; H.264B; MJPEG  |
| Smart Codec       | Yes  |
| Video Frame Rate  | Main stream:<br>1920 × 1080 (1 fps-25/30 fps)<br>Sub stream:<br>704 × 576 (1 fps-25 fps)<br>704 × 480 (1 fps-30 fps) |
| Stream Capability | 2 streams  |

### 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; IEEE802.1x; ICMP; IGMP |
| Interoperability    | ONVIF(ProfileS/Profile G);CGI;P2P;Milestone;Genetec;AutoRegister   |
| User/Host           | 20   |
| Edge Storage        | Dahua Cloud; FTP; Micro SD Card (support max. 256 GB); NAS   |
| Browser             | Chrome, Firefox, IE  |
| SDK and API         | Yes  |
| Management Software | Smart PSS; DSS; DMSS   |
| Mobile Phone        | iOS; Android   |

### Certification

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

### Power

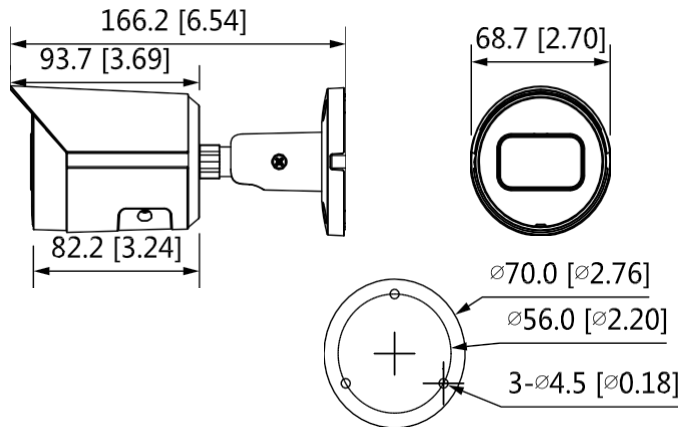
|                   |                      |
|-------------------|----------------------|
| Power Supply      | 12V DC/PoE (802.3af) |
| Power Consumption | < 4.6W               |

### 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                               |
| <b>Structure</b>    |                                    |
| Casing              | Metal                              |
| Dimensions          | 166.2 mm × Ø70 mm (6.54" × Ø2.76") |
| Net Weight          | 0.48 kg (1.1 lb)                   |
| Gross Weight        | 0.57 kg (1.3 lb)                   |

**Dimensions (mm[inch])**



| <b>Ordering Information</b> |                        |  |
|-----------------------------|------------------------|--|
| Type                        | Part Number            | Description  |
| 2MP Camera                  | DH-IPC-HFW2230SP-SA-S2 | 2MP IR Bullet Network Camera,PAL                   |
|                             | DH-IPC-HFW2230SN-SA-S2 | 2MP IR Bullet Network Camera,NTSC                  |
| Accessories (optional)      | PFA134                 | Junction Box                                       |
|                             | PFA152-E               | Pole 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  |

**Accessories**

**Optional:**



PFA134  
Junction Box



PFA152-E  
Pole 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

