

# DH-IPC-HFW4531S-S

## 5MP IR Fixed-focal Bullet Network Camera



### Series Overview

With advanced H.265 encoding technology, Dahua Pro series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This series camera adopts starlight technology, intelligent IR technology, and intelligent image analysis. It supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

### Functions

#### Motion Detection

When moving objects appear in the monitoring image, Dahua Motion Detection technology triggers alarm or records.

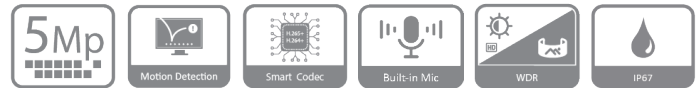
#### Smart H.265+ & Smart H.264+

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.

- 5-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 5MP (2960 × 1668) @20 fps, and supports 4MP (2688 × 1520) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 50 m.
- Rotation mode, 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, and voltage detection.
- Supports max. 256 G Micro SD card; built in Mic.
- 12 VDC/PoE power supply, easy for installation.
- IP67 protection.



### 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.

### 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               | 1/2.7" CMOS   |
| Max. Resolution            | 2960 (H) × 1688 (V)   |
| ROM                        | 128 MB  |
| RAM                        | 256 MB  |
| Scanning System            | Progressive   |
| Electronic Shutter Speed   | Auto/Manual 1/3 s–1/100,000 s   |
| Min. Illumination          | 0.007 lux@F1.6 (Color, 30 IRE)<br>0.0007 lux@F1.6 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio                  | >56 dB  |
| Illumination Distance      | Up to 50 m (164.04 ft) (IR)   |
| Illuminator On/Off Control | Auto  |
| Illuminator Number         | 1 (IR LED)  |
| Angle Adjustment           | Pan: 0°–360°<br>Tilt: 0°–90°<br>Rotation: 0°–360°   |

|                      |        |   |                    |                   |                   |
|----------------------|--------|---|--------------------|-------------------|-------------------|
| Lens                 |        |   |                    |                   |                   |
| Lens Type            |        | Fixed-focal   |                    |                   |                   |
| Lens Mount           |        | M12   |                    |                   |                   |
| Focal Length         |        | 2.8 mm; 3.6 mm; 6 mm  |                    |                   |                   |
| Max. Aperture        |        | F1.6  |                    |                   |                   |
| Field of View        |        | 2.8 mm: H: 109°; V: 57°; D: 129°<br>3.6 mm: H: 92°; V: 45°; D: 110°<br>6 mm: H: 57°; V: 30°; D: 65° |                    |                   |                   |
| Iris Control         |        | Fixed   |                    |                   |                   |
| Close Focus Distance |        | 2.8 mm: 1.1 m (3.61 ft)<br>3.6 mm: 1.7 m (5.58 ft)<br>6 mm: 3.2 m (10.50 ft)                        |                    |                   |                   |
| DORI Distance        | Lens   | Detect  | Observe            | Recognize         | Identify          |
|                      | 2.8 mm | 64.0 m (209.97 ft)  | 25.6 m (83.99 ft)  | 12.8 m (41.99 ft) | 6.4 m (20.99 ft)  |
|                      | 3.6 mm | 85.4 m (280.18 ft)  | 34.2 m (112.20 ft) | 17.1 m (56.10 ft) | 8.5 m (27.89 ft)  |
|                      | 6 mm   | 124.0 m (406.82 ft)   | 49.6 m (162.73 ft) | 24.8 m (81.36 ft) | 12.4 m (40.68 ft) |

|             |                     |
|-------------|---------------------|
| Smart Event |                     |
| IVS         | Tripwire; intrusion |

|                   |   |
|-------------------|---|
| 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: 2960 × 1668@(1–20 fps)/2688 × 1520@ (1–25/30 fps)<br>sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps)<br>third stream: 640 × 480@1 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        | 3 streams   |
| Resolution               | 5M (2960 × 1668); 4.6M (2880 × 1620); 4M (2688 × 1520); 3M (2048 × 1536/2304 × 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–8192 kbps<br>H.265: 12 kbps–8192 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°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower)   |
| 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 | No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; security exception |

|                     |   |
|---------------------|---|
| 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; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour; P2P  |
| Interoperability    | ONVIF (Profile S/Profile G/Profile T); CGI  |
| User/Host           | 20 (Total bandwidth: 48 M)  |
| Storage             | FTP; SFTP; Micro SD card (support max. 256 GB); NAS   |
| Browser             | IE; Chrome; Firefox   |
| Management Software | Smart PSS Lite; DSS; DMSS   |
| Mobile Client       | iOS;Android   |
| Cyber Security      | Configuration encryption;Trusted execution;Digest;Security logs;WSSE;Account lockout;syslog;Video encryption;802.1x/IP/MAC filtering;HTTPS;Trusted upgrade;Trusted boot;Firmware encryption;Generation and importing of X.509 certification |

Certification

|                |   |
|----------------|---|
| Certifications | CE-LVD: EN62368-1;<br>CE-EMC: Electromagnetic Compatibility Directive<br>2014/30/EU |
|----------------|---|

Power

|                   |  |
|-------------------|--|
| Power Supply      | 12 VDC/PoE   |
| Power Consumption | Basic: 2 W (12 VDC); 2.8 W (PoE)<br>Max. (H.265+ intelligence on + WDR + IR on): 4 W (12 VDC); 4.9 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) |
| Storage Humidity      | ≤95%                                 |
| Protection            | IP67                                 |

Structure

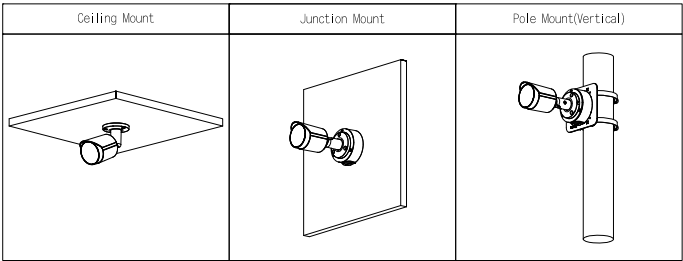
|                    |  |
|--------------------|--|
| Casing Material    | Metal  |
| Product Dimensions | 166.2 mm × 70 mm × 70 mm (6.54" × 2.76" × 2.76") (L × W × H) |
| Net Weight         | 0.48 kg (1.06 lb)  |
| Gross Weight       | 0.59 kg (1.30 lb)  |

Ordering Information

| Type                   | Model             | Description                              |
|------------------------|-------------------|--|
| 5MP Camera             | DH-IPC-HFW4531S-S | 5MP IR Fixed-focal Bullet Network Camera |
| Accessories (Optional) | PFA134            | Junction Box                             |
|                        | PFA130-E          | Water-proof Junction Box                 |
|                        | PFA152-E          | Pole Mount Bracket                       |
|                        | PFM321D           | 12 VDC 1A Power Adapter                  |
|                        | PFM900-E          | Integrated Mount Tester                  |
|                        | TF-P100           | MicroSD Memory Card                      |

Accessories

Optional:



Dimensions (mm[inch])

