

# DH-IPC-HFS7443-Z-LI-D2

## 4MP Polar Light Bullet WizMind Network Camera



**WizMind**

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

### Series Overview

Equipped with dual-sensor construction and multispectral merging technology, Dahua Polar Light series network camera can realize color imaging in the environment of low illuminance to provide better experience. Based on deep learning algorithm, the camera supports various intelligent functions, such as precise classification of human, motor vehicle and non-motor vehicle, face recognition, and face detection, to meet different needs of customers. The camera has ultra-starlight night vision, ultra-low bit rate, complying to the standards of IP67.

### Functions

#### Polar Light 2.0

With multispectral merging technology and image merging algorithm, Dahua Polar Light 2.0 technology can realize color imaging in the environment of ultra-low illuminance to provide better experience.

#### Multi-Spectrum Fusion

Dahua Multi-Spectrum Fusion technology extracts the details and brightness of the visible spectrum and infrared spectrum to make the fusion brightness close to the visible light brightness, so that the camera provides a better image.

#### Dual Light Fusion

Dahua Dual Light Fusion technology integrates the light sources of different waves. With good illumination, it meanwhile can minimize the light pollution to avoid dazzle problem. The camera provides multiple illumination solutions to satisfy different demands.

- Built-in GPU chip and deep learning algorithm, improve detection accuracy
- Five intelligent resources switchable: Video metadata, face recognition, face detection, crowd distribution map, and IVS
- Video metadata: Supports capturing motor vehicle, non-motor vehicle, face, and person, and attributes recognition
- Face recognition: Supports tracking, optimization, snapshot, reporting high quality picture, face enhancement; face exposure, face attribute extraction, 5 groups of face database management, registration and batch registration, similarity setting, and support face comparison with the face database containing up to 300 thousand face pictures
- Tripwire, intrusion, fast moving, abandoned object, missing object, loitering detection, people gathering, parking detection
- Two 4MP, 1/1.8" CMOS image sensors, one is for collecting black and white information, and the other is for collecting colorful information, and the camera will integrate the collected information
- With multi-spectrum fusion technology, the camera can guarantee the clarity of the image and color rendition in the environment of ultra-low illuminance; and it can provide colorful image with IR LED on
- Outputs max. 4MP (2688 × 1520) @25/30 fps
- H.265 codec, high compression rate, ultra-low bit rate
- Built-in illuminator of dual light fusion, and the max. illumination distance is 150 m
- ROI, SVC, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments
- Alarm: 3 in, 2 out; audio: 2 in, 1 out; RS-485; BNC; supports max. 256 G Micro SD card
- 12V DC/PoE power supply; 12V DC power output, and max. current 165mA; easy for installation
- P-Iris iris



#### Face Recognition

Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database to recognize the person identity.

#### Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

**Video Metadata**

With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

**Technical Specification**

|                            |  |
|----------------------------|--|
| <b>Camera</b>              |  |
| Image Sensor               | 1/1.8"4Megapixel progressive CMOS  |
| Max. Resolution            | 2688 (H) × 1520 (V)  |
| ROM                        | 32 GB  |
| RAM                        | 4 GB   |
| Scanning System            | Progressive  |
| Electronic Shutter Speed   | Auto/Manual 1/3 s–1/100,000 s  |
| Min. Illumination          | 0.001 Lux @F1.3  |
| S/N Ratio                  | >56 dB   |
| Illumination Distance      | Monitoring: W: 45 m (147.6 ft); T: 150 m (492.1 ft)<br>Face detection: W: 20 m (65.6 ft); T: 40 m (131.2 ft) |
| Illuminator On/Off Control | Auto/Manual/Zoomprio   |
| Illuminator Number         | 6 (illuminator with dual light fusion)   |

|                      |  |                     |                   |                    |                   |
|----------------------|--|---------------------|-------------------|--------------------|-------------------|
| <b>Lens</b>          |  |                     |                   |                    |                   |
| Lens Type            | Motorized vari-focal                                       |                     |                   |                    |                   |
| Focal Length         | 12 mm–72 mm  |                     |                   |                    |                   |
| Max. Aperture        | 12 mm–72 mm  |                     |                   |                    |                   |
| Field of View        | Horizontal: 26°–7°<br>Vertical: 14°–4°<br>Diagonal: 30°–8° |                     |                   |                    |                   |
| Iris Control         | Auto   |                     |                   |                    |                   |
| Close Focus Distance | 3 m (9.8 ft)   |                     |                   |                    |                   |
| DORI Distance        | Lens   | Detect              | Observe           | Recognize          | Identify          |
|                      | W  | 220.6 m (723.8 ft)  | 88.2 m (289.4 ft) | 44.1 m (144.7 ft)  | 21.0 m (68.9 ft)  |
|                      | T  | 827.5 m (2714.9 ft) | 331 m (1086.0 ft) | 165.5 m (543.0 ft) | 58.0 m (190.3 ft) |

|                    |                                  |
|--------------------|----------------------------------|
| <b>Smart Event</b> |                                  |
| IVS                | Abandoned object; missing object |

|                                  |  |
|----------------------------------|--|
| <b>Professional, intelligent</b> |  |
| IVS (Perimeter Protection)       | Tripwire; intrusion; loitering detection; people gathering; fast moving; parking detection   |
| Face Detection                   | Face detection; track; optimization; snapshot; report high quality picture; face enhancement; face exposure; face attribute extraction, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear), mouth mask, beard; face matting setting: face, single inch photo; three snapshot modes: Real-time snapshot, optimized snapshot, quality priority; face angle filter; optimization time setting |

|                        |  |
|------------------------|--|
| Face Recognition       | Face detection; track; optimization; snapshot; report high quality picture; face enhancement; face exposure; face attribute extraction, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear), mouth mask, beard; face matting setting: face, single inch photo; two snapshot modes: Real-time snapshot and optimized snapshot; face angle filter; optimization time setting; support adding 5 groups of face database, registration and batch registration, similarity setting, and support face comparison with the face database containing up to 300 thousand face pictures |
| Crowd Distribution Map | Crowd map, global people counting; people counting in area; snapshot for crowd density exception   |
| Video Metadata         | Support detection of motor vehicle, non-motor vehicle, face and human body; track, motor vehicle priority; snapshot; report high quality captured picture<br>Motor vehicle attributes (license plate, vehicle color, vehicle type, car logo, license plate color, vehicle Model, visor, seatbelt, smoke, ornament, inspection sticker)<br>Non-motor vehicle attributes (vehicle type, vehicle color, occupancy, top color, top, hat)<br>Human body attributes (gender, top, top color, bottom, bag, umbrella, hat)<br>Face attributes (gender, age, glasses, expressions, mouth mask, beard)   |
| Smart Search           | Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos.   |

|                       |  |
|-----------------------|--|
| <b>Video</b>          |  |
| Video Compression     | H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream)   |
| Smart Codec           | Smart H.265: Yes<br>Smart H.264: Yes   |
| Video Frame Rate      | 50Hz:<br>Main stream: 2688 × 1520 @25 fps<br>Sub stream: 704 × 576 @25 fps<br>Third stream: 1920 × 1080 @25 fps<br>60Hz:<br>Main stream: 2688 × 1520 @30 fps<br>Sub stream: 704 × 480 @30 fps<br>Third stream: 1920 × 1080 @30 fps |
| Stream Capability     | 3 streams  |
| Resolution            | 4M (2688 × 1520); 3M (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: 3 kbps–17664 kbps<br>H.265: 3 kbps–17664 kbps   |
| Day/Night             | Yes (Switchable between colorful channel channel and B/W channel)  |
| BLC                   | Yes  |
| HLC                   | Yes  |
| WDR                   | 140 dB   |
| Scene Self-adaptation | Yes  |
| Scene Self-adaptation | Auto/natural/street lamp/outdoor/manual/regional custom  |
| Gain Control          | Auto/Manual  |
| Noise Reduction       | 3D NR  |
| Motion Detection      | OFF/ON (4 areas)   |

|                          |   |
|--------------------------|---|
| Region of Interest (RoI) | Yes (4 areas)   |
| Smart Illumination       | Yes   |
| Defog                    | Yes   |
| Image Rotation           | 0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower) |
| Mirror                   | Yes   |
| Privacy Masking          | 4 areas   |

### Audio

|                   |  |
|-------------------|--|
| Audio Compression | PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G.722.1; G.729; G.723 |
|-------------------|--|

### Alarm

|             |  |
|-------------|--|
| Alarm Event | No SD card; SD card full; SD card error; SD card service life warning (when the camera has SD card) network disconnection; IP conflict; illegal access; motion detection; video tampering; defocus detection; scene changing; input abnormal detection; intensity change detection; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; face recognition; face detection; crowd distribution map; video metadata; external alarm |
|-------------|--|

### Network

|                     |   |
|---------------------|---|
| Network Port        | RJ-45 (10/100/1000 Base-T)  |
| SDK and API         | Yes   |
| Network Protocol    | IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP |
| Interoperability    | ONVIF(Profile S/Profile G/Profile T); CGI; Milestone; RTMP; P2P   |
| User/Host           | 20  |
| Storage             | FTP; SFTP; Micro SD card (support max. 256 G); NAS  |
| Browser             | IE: IE9 and later<br>Chrome: 41.0 and later<br>Firefox: 50.0 and later<br>Safari: 10.0 and later  |
| Management Software | Smartplayer; ConfigTool; EVS71; NVR; IVSS7X; DMSS; DSS Pro; DSS Express; NVD  |
| Mobile Client       | iOS; Android  |

### Certification

|               |  |
|---------------|--|
| Certification | CE-LVD: EN62368-1<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU<br>FCC: 47 CFR FCC Part 15 |
|---------------|--|

### Port

|              |  |
|--------------|--|
| RS-485       | 1 (baud rate range: 1,200 bps–115,200 bps) |
| Audio Input  | 2 channels (RCA port)                      |
| Audio Output | 1 channel (RCA port)                       |
| Alarm Input  | 3 channels in: 5mA 3V–5V DC                |

|              |   |
|--------------|---|
| Alarm Output | 2 channels out: 1,000mA 30V DC/500mA 50V DC |
|--------------|---|

### Power

|                   |  |
|-------------------|--|
| Power Supply      | 12V DC   |
| Power Consumption | Basic power consumption: 8.6W (12V DC)<br>Max. power consumption (illuminator on): 26.6W |

### Environment

|                      |                                  |
|----------------------|----------------------------------|
| Operating Conditions | –30°C to +60°C (–22°F to +140°F) |
| Storage Conditions   | ≤95%                             |
| Protection Grade     | IP67                             |

### Structure

|                    |   |
|--------------------|---|
| Casing             | Metal + Plastic   |
| Product Dimensions | 404.3 mm × 163.8 mm × 211.8 mm (15.9" × 6.4" × 8.3")<br>(L × W × H) |
| Net Weight         | 4040 g (8.9 lb)   |
| Gross Weight       | 4940 g (10.9 lb)  |

### Ordering Information

| Type        | Model                        | Description   |
|-------------|------------------------------|---|
| 4MP Camera  | DH-IPC-HFS7443P-Z-LI-D2-1272 | 4MP Polar Light Bullet WizMind Network Camera, PAL  |
|             | DH-IPC-HFS7443N-Z-LI-D2-1272 | 4MP Polar Light Bullet WizMind Network Camera, NTSC |
| Accessories | PFA150-SG                    | Pole Mount  |
|             | PFA162-SG                    | Plane Mount   |
|             | PFB605W-SG                   | Wall Mount  |

### Accessories

Optional:



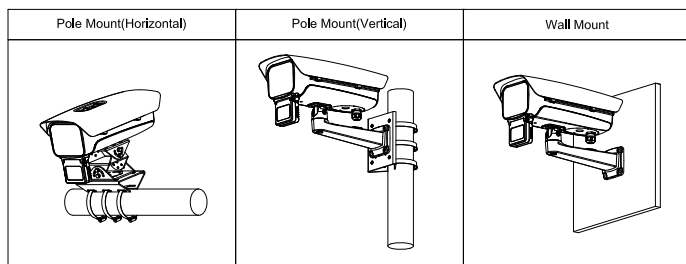
PFA150-SG Pole Mount



PFA162-SG Plane Mount



PFB605W-SG Wall Mount



**Dimensions (mm[inch])**

