# DH-IPC-HFW7842H-Z-S2

## 8MP IR 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

With advanced deep learning algorithm, Dahua WizMind 7 Series network camera supports various intelligent functions and satisfies the requirements in different scenes. The camera can accurately recognize person, vehicle, and non-motor vehicle, face, and liveness. This series camera has ultra starlight night version effect, and works with ultra-low stream. 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

### 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.

### 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.

- 8-MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 8 MP (3840 × 2160)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- ROI, SMART H.264 +/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Built-in IR LED, and the max. illumination distance is 60 m.
- With deep learning algorithm, it supports video metadata, face detection,face recognition,people counting, perimeter protection,etc.
- Supports P-Iris, the camera can control the iris more precisely for better image effect.
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict and illegal access.
- Alarm: 3 in, 2 out; audio: 1 in, 1 out; RS485, BNC, supports max. 256 G Micro SD card.
- 12 VDC/24 VAC/PoE power supply (the power ports are different depending on the power supply).
- IP67, IK10 protection grade.
- 12 VDC power output, max. current 165 mA , easy for installation
- Anti-corrosion coating(optional).

| 8Mp | Starlight | Video Metadata | IVS | People Counting | Face Recognition |

### Perimeter Protection
With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

### People Counting
With deep learning algorithm, Dahua People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with management platform, it outputs reports to meet your requirements.

### 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.

### 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.

## Cyber Security

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control,trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading the device.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/1.8" CMOS |
| Max. Resolution | 3840 (H) × 2160 (V) |
| ROM | 4 GB |
| RAM | 2 GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.003 lux@F1.2 (Color, 30 IRE)<br>0.0003 lux@F1.2 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio | >56 dB |
| Illumination Distance | 60 m (196.85 ft) |
| Illuminator On/Off Control | Auto; manual; zoomprio |
| Illuminator Number | 4 (IR LED) |

### Lens

| | |
|---|---|
| Lens Type | Motorized vari-focal |
| Lens Mount | Module interface |
| Focal Length | 2.7-12 mm |
| Max. Aperture | F1.2 |
| Field of View | Horizontal: 112° (W)–47° (T)<br>Vertical: 58° (W)–26° (T)<br>Diagonal: 137° (W)–54° (T) |
| Iris Control | Auto; P-iris |
| Close Focus Distance | 1 m (3.28 ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| | W | 87.3 m (286.42 ft) | 34.9 m (114.50 ft) | 17.5 m (57.41 ft) | 8.7 m (28.54 ft) |
| | T | 186.8 m (612.86 ft) | 74.7 m (245.07 ft) | 37.5 m (123.03 ft) | 18.7 m (61.35 ft) |

### Smart Event

| | |
|---|---|
| IVS | Abandoned object; missing object |

### Professional, intelligent

| | |
|---|---|
| IVS (Perimeter Protection) | Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection |
| Face Detection | Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting |

| | |
|---|---|
| Face Recognition | Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); face snapshot set as face or one-inch photo; snapshot strategies (recognition priority and optimization snapshot); face angle filter; optimization time setting. Support 5 face databases; register one by one or in batches; support face recognition similarity settings and face comparison on the basis of 100,000 face databases. |
| People Counting | Tripwire people counting and people counting in area; generating and exporting report (day/month/year); queue management and exporting report (day/month); 4 rules can be set for tripwire, people counting in area and queue management. |
| Video Metadata | Motor vehicle, non-motor vehicle, face, human detection; track; snapshot; snapshot optimization; optimal face snapshot upload.<br>Motor vehicle attributes: license plate, vehicle type, vehicle color, vehicle logo, seatbelt, smoking, calling,etc.<br>Non-motor vehicle attributes: type, color, number of people, top type and color ,helmet.<br>Human body attributes: top/bottom type and color, bag, hat, gender, and umbrella.<br>Face attributes: gender, age, expressions, glasses, face mask and beard. |
| Smart Search | Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos |

### Video

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|---|---|
| Video Compression | H.265; H.264; H.264H; MJPEG (Only supported by the sub stream) |
| Smart Codec | Smart H.265+; Smart H.264+ |
| Video Frame Rate | Main Stream: 3840 × 2160 (1–25/30 fps)<br>Sub stream: 704 × 576 (1–25 fps);704 × 480 (1–30 fps)<br>Third stream: 1920 × 1080 (1–25/30 fps)<br>Fourth stream: 1920 × 1080 (1–25/30 fps)<br>Fifth stream: 704 × 576 (1–25fps);704 × 480 (1–30 fps) |
| Stream Capability | 5 streams |
| Resolution | 3840 × 2160; 3072 × 2048; 3072 × 1728; 2592 × 1944; 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: 8 kbps–16384 kbps<br>H.265: 3 kbps–14050 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| HLC | Yes |
| WDR | 120 dB |
| Scene Self-adaptation (SSA) | Yes |
| 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) |
| Image Stabilization | Electronic Image Stabilization (EIS) |

| | |
|---|---|
| Smart Illumination | Yes |
| Defog | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 4 areas |

## Audio

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|---|---|
| Audio Compression | PCM; G.711A; G.711Mu; G.726; G.723 |

## Alarm

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|---|---|
| Alarm Event | No SD card; SD card full; SD card error; SD card durability warning; network disconnection; IP conflict; illegal access; security exception; motion detection; video tampering; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; defocus detection; external alarm; face detection; video metedata; people counting in area; people counting; queue management |

## Network

| | |
|---|---|
| Network Port | RJ-45 (10/100/1000 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; SAMBA; PPPoE; SNMP |
| Interoperability | ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; P2P |
| User/Host | 20 (Total bandwidth: 80 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 256 GB); NAS |
| Browser | With plug-in: IE: IE 8 and later Chrome: 45 and earlier Firefox: 46 and earlier Safari: 12 and earlier Without plug-in: Edge Chrome: 45 and later Firefox: 46 and later Safari: 12 and later |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Client | iOS; Android |

## Certification

| | |
|---|---|
| Certifications | CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14; UL 50E NEMA Type 4X (optional) |

## Port

| | |
|---|---|
| RS-485 | 1 (baud rate range:1200 bps–115200 bps) |
| Audio Input | 1 channel (RCA port) |
| Audio Output | 1 channel (RCA port) |
| Alarm Input | 3 channels in: 5 mA 3 V–5 VDC |
| Alarm Output | 2 channels out: 1,000 mA 30 VDC/500 mA 50 VDC |

## Power

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|---|---|
| Power Supply | 12 VDC/24 VAC/PoE+ (802.3at) |
| Power Consumption | Basic power consumption: 5.11 W (12 VDC); 6.82 W (24 VAC); 7.62 W (PoE) Max. power consumption (Max. stream + intelligent function + IR LED + focus):  16.8 W (12 VDC); 20.7 W (24 VAC); 21.3 W (PoE) Heat power consumption: 3.3 W (12 VDC); 5.5 W (24 VAC); 5.5 W (PoE) |

## Environment

| | |
|---|---|
| Operating Conditions | −40 °C to +65 °C (−40 °F to +149 °F)/Less than 95% RH |
| Storage conditions | −40 °C to +65 °C (−40 °F to +149 °F) |
| Protection Grade | IP67, IK10, Anti-Corrosion Protection: NEMA 4X (optional) |

## Structure

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|---|---|
| Casing | Metal + plastic |
| Product Dimensions | 340.1 mm × 108.5 mm × 92.9 mm (13.39" × 4.27" ×3.66") (L × W × H) |
| Net Weight | 1.58 kg (3.48 lb) |
| Gross Weight | 2.48 kg (5.47 lb) |

## Ordering Information

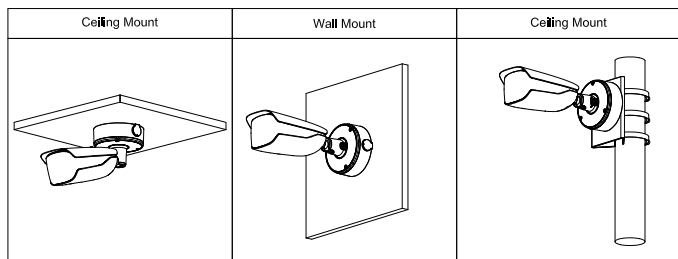| Type | Model | Description |
|---|---|---|
| 8MP Camera | DH-IPC-HFW7842H-Z-S2 | 8MP IR Bullet WizMind Network Camera |
| | IPC-HFW7842H-Z-S2 | 8MP IR Bullet WizMind Network Camera |
| Accessories (Optional) | PFA154 | Pole Mount |
| | PFM320D | 12 VDC 2A Power Adapter |
| | PFM900-E | Integrated Mount Tester |
| | TF-P100 | MicroSD Memory Card |

## Accessories

Optional:



PFA154
Pole Mount



PFM320D
12 VDC 2A
Power Adapter



PFM900-E
Integrated
Mount Tester



TF-P100
MicroSD
Memory Card

| Ceiling Mount | Wall Mount | Ceiling Mount |
|---|---|---|

## Dimensions (mm[inch])

340.1 [13.39]

138.3 [5.44]
108.5 [4.27]
92.9 [3.66]
134.0 [5.27]

⌀134.0 [⌀5.27]
⌀118.0 [⌀4.65]
3-⌀4.4 [⌀0.17]