# DH-IPC-HF5442E-E

## 4 MP Box WizMind Network Camera

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 starlight solution and deep learning algorithm, Dahua WizMind 5 Series network camera has various intelligent functions, including face capture, perimeter protection and people counting, which greatly improve the accuracy of video analysis.

## Functions

### 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 Attributes

With deep learning algorithm, the network camera can recognize face attributes, such as gender, age, expression, glasses, mouth mask, and beard.

### 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 yearly/monthly/daily reports to meet your requirements.

- 4-MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520) @30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- ROI, SMART H.264 +/H.265+,AI H.264/H.265, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); abandoned object, missing object, loitering detection, people gathering, parking detection, heat map and face detection.
- 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: 2 in, 1 out; audio: 1 in, 1 out; 485; BNC; supports max. 256 G Micro SD card, built in MIC.
- 24 VAC/12 VDC/PoE power supply, easy for installation.
- ePoE.
- SMD 3.0



### ePoE

Dahua's innovative ePoE technology offers a new solution to transmit power and data over long distances between cameras and network switch, allowing more flexible design of surveillance system, improving reliability, reducing installation time and saving money. ePoE technology encompasses pure network systems where a single CAT6 cable can carry signals up to 300 m (984 ft) at 100 Mbps, 800 m (2625 ft) at 10 Mbps.

### 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 (wide voltage)

Wide voltage: The camera allows ±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 | 1/1.8" CMOS |
| Max. Resolution | 2688 (H) × 1520 (V) |
| ROM | 128MB |
| RAM | 1GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | With F1.6 lens:<br>0.002 lux@F1.6 (Color, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio | > 56 dB |

### Lens

| | |
|---|---|
| Lens Mount | C/CS |
| Iris Control Type | DC-Iris |

### Smart Event

| | |
|---|---|
| IVS | Abandoned object; missing object |
| Heat Map | Yes |

### 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 |
| SMD 3.0 | Less false alarm, longer detection distance |
| Face Detection | Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 face attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); face snapshot set as face, one-inch photo or custom; 3 snapshot strategies (real-time snapshot, optimization snapshot and quality first); face angle filter; optimization time setting |
| People Counting | Tripwire people counting; generating and exporting report (day/month); people counting in area; queue management; 4 rules can be set for tripwire, people counting in area and queue management. |
| Smart Search | Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos |

### 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+ |
| AI Coding | AI H.265; AI H.264 |
| Video Frame Rate | Main stream: 2688 × 1520@ (1–25/30 fps)<br>Sub stream: D1@ (1–25/30 fps)<br>Third stream: 1080p@ (1–25/30 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 | 2688 × 1520; 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–20480 kbps<br>H.265: 3 kbps–20480 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| HLC | Yes |
| WDR | 140 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) |
| Defog | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 4M resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 8 areas |

### Audio

| | |
|---|---|
| Built-in MIC | Yes |
| Audio Compression | PCM; G.711a; G.711Mu; G.726; G.723 |

### Alarm

| | |
|---|---|
| Alarm Event | No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; 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; SMD; people counting in area; stay detection; people counting; security exception |

### Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 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; 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; P2P |
| User/Host | 20 (Total bandwidth: 80 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 256 GB); NAS |

| Browser | IE: IE 8 and later<br>Chrome<br>Firefox<br>Safari: Safari 12 and later |
|---|---|
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Client | 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:<br>UL60950-1<br>CAN/CSA C22.2 No.60950-1-07 |
|---|---|

## Port

| RS-485 | 1 (baud rate range:1200 bps–115200 bps) |
|---|---|
| Audio Input | 1 channel (3. 5 mm JACK port) |
| Audio Output | 1 channel (3.5 mm JACK port) |
| Alarm Input | 2 channels in: 5 mA 3V–5 VDC |
| Alarm Output | 1 channel out: 300 mA 12 VDC |

## Power

| Power Supply | 12 VDC/24 VAC/PoE (802.3af)/ePoE |
|---|---|
| Power Consumption | Basic: 4.1 W (12 VDC); 4.3 W (24 VAC); 4.4 W (PoE)<br>Max. (H.265+three streams+intelligence on+IR on): 9.2 W (12 VDC); 8.7 W (24 VAC); 9.2 W (PoE) |

## Environment

| Operating Temperature | −30 °C to +60 °C (−22 °F to +140 °F) |
|---|---|
| Storage Temperature | ≤ 95% |
| Protection | −30 °C to +60 °C (−22 °F to +140 °F) |

## Structure

| Casing | Metal |
|---|---|
| Product Dimensions | 135.4 mm × 74.4 mm × 65.5 mm (5.3" × 2.9" × 2.6") (L × W × H) |
| Net Weight | 528 g (1.16 lb) |
| Gross Weight | 620 g (1.37 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 4MP Camera | DH-IPC-HF5442EP-E | 4 MP Box WizMind Network Camera, PAL |
| | DH-IPC-HF5442EN-E | 4 MP Box WizMind Network Camera, NTSC |
| Accessories (Optional) | PFB122W | Wall Mount Bracket |
| | PFB120WS | Wall Mount Bracket |
| | PFB121W | Wall Mount Bracket |
| | PFB110W | Ceiling Mount Bracket |
| | PFB110C-E | Ceiling Mount Bracket |
| | DH-OPT-127F2712D-IR4MP | 2.7-12mm |
| | PFM321D | 12 VDC 1A Power Adapter |
| | LR1002-1ET/1EC | Single-port Long Reach Ethernet over Coax Extender |
| | PFM900-E | Integrated Mount Tester |

## Accessories

Optional:



PFB122W
Wall Mount
Bracket



PFB120WS
Wall Mount
Bracket



PFB121W
Wall Mount
Bracket



PFB110W
Ceiling Mount
Bracket



PFB110C-E
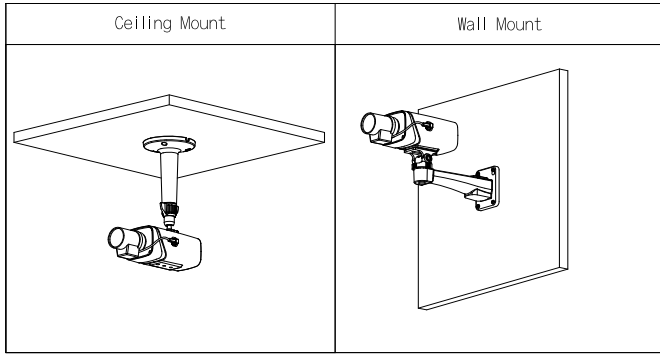Ceiling Mount
Bracket



DH-OPT-127F2712D
-IR4MP
2.7-12mm



PFM321D
12 VDC 1A Power
Adapter



LR1002-1ET/1EC
Single-port Long Reach
Ethernet Over Coax
Extender



PFM900-E
Integrated
Mount Tester

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

## Dimensions (mm[inch])

135.4 [5.33]
125 [4.92]

74.4 [2.93]

65.5 [2.58]

78.5 [3.09]

1/4−20 × 6UNC

65.5 [2.58]   17 [0.67]

2−1/4−20 × 6UNC