

# DH-IPC-HFW4241T-ZAS

## 2 MP IR Vari-focal Bullet 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

Powered by its advanced deep learning algorithms, Dahua WizMind 4 Series cameras are ahead of their time advancing functions such as perimeter protection, smart motion detection and face detection. With its Starlight sensors and large aperture lenses, cameras in this series deliver excellent image quality even in environments with low illuminance. This series is IP67-rated and IK10-rated (depending on the model) giving you the confidence and precision you are looking for in a camera.

### 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.

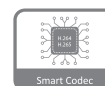
#### SMD 3.0

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

#### 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) are largely reduced.

- 2 MP 1/2.8" CMOS image sensor, excellent low luminance performance and high definition of images.
- Outputs max. 2 MP (1920 × 1080) @ 50/60 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, max. IR distance: 60 m.
- ROI, SMART 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.
- Supports the AFSA (Anti-flicker Self-adaption) function, which automatically eliminates flicker.
- Intelligent detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human); face detection.
- Abnormality detection: Motion detection, privacy masking, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; max. 512 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply facilitates installation.
- IP67, IK10 (optional) protection.
- SMD 3.0



### 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.

### 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 normal 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               | 1/2.8" CMOS                                                                               |
| Max. Resolution            | 1920 (H) × 1080 (V)                                                                       |
| ROM                        | 128 MB                                                                                    |
| RAM                        | 512 MB                                                                                    |
| Scanning System            | Progressive                                                                               |
| Electronic Shutter Speed   | Auto/Manual 1/3 s–1/100,000 s                                                             |
| Min. Illumination          | 0.002 lux@F1.5 (Color, 30 IRE)<br>0.0002 lux@F1.5 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio                  | > 56 dB                                                                                   |
| Illumination Distance      | Up to 60 m (197 ft)                                                                       |
| Illuminator On/Off Control | Auto/Manual                                                                               |
| Illuminator Number         | 4 (IR LED)                                                                                |
| Pan/Tilt/Rotation Range    | Pan: 0°–360°; Tilt: 0°–90°; Rotation: 0°–360°                                             |

### Lens

|                      |                                                                                                                                                                                                                                                                                                                                                                                 |                        |                       |                     |                      |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|---------------------|----------------------|
| Lens Type            | Motorized vari-focal                                                                                                                                                                                                                                                                                                                                                            |                        |                       |                     |                      |
| Lens Mount           | φ14                                                                                                                                                                                                                                                                                                                                                                             |                        |                       |                     |                      |
| Focal Length         | 2.7 mm–13.5 mm                                                                                                                                                                                                                                                                                                                                                                  |                        |                       |                     |                      |
| Max. Aperture        | F1.5                                                                                                                                                                                                                                                                                                                                                                            |                        |                       |                     |                      |
| Field of View        | Horizontal: 109°–30°<br>Vertical: 56° –17°<br>Diagonal: 137° –35°                                                                                                                                                                                                                                                                                                               |                        |                       |                     |                      |
| Iris Control         | Fixed                                                                                                                                                                                                                                                                                                                                                                           |                        |                       |                     |                      |
| Close Focus Distance | 0.8 m (2.6 ft)                                                                                                                                                                                                                                                                                                                                                                  |                        |                       |                     |                      |
| DORI Distance        | Lens                                                                                                                                                                                                                                                                                                                                                                            | Detect                 | Observe               | Recognize           | Identify             |
|                      | W                                                                                                                                                                                                                                                                                                                                                                               | 44.1 m<br>(144.67 ft)  | 17.6 m<br>(57.74 ft)  | 8.8 m<br>(28.87 ft) | 4.4 m<br>(14.44 ft)  |
|                      | T                                                                                                                                                                                                                                                                                                                                                                               | 144.8 m<br>(475.02 ft) | 57.9 m<br>(189.96 ft) | 28.9m<br>(94.82 ft) | 14.8 m<br>(48.56 ft) |
|                      | *DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool. |                        |                       |                     |                      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                 |                        |                       |                     |                      |

### Intelligence

|                            |                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IVS (Perimeter Protection) | Tripwire, intrusion (support the classification and accurate detection of vehicle and human)                                                                                                                                                                                                              |
| 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 snapshot set as face or one-inch photo; 3 snapshot strategies (real-time snapshot, optimization snapshot, and quality priority); face angle filter; optimization time setting |

### Video

|                   |                                                                        |
|-------------------|------------------------------------------------------------------------|
| Video Compression | H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream) |
|-------------------|------------------------------------------------------------------------|

|                             |                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smart Codec                 | Smart H.265+<br>Smart H.264+                                                                                                                                                                                                                                                                                                                     |
| AI Coding                   | AI H.265<br>AI H.264                                                                                                                                                                                                                                                                                                                             |
| Video Frame Rate            | Main stream: 1920 × 1080 @ (1–50/60) fps<br>Sub stream 1: 704 × 576 @ (1–50 fps)/704 × 480 @ (1–60 fps)<br>Sub stream 2: 1920 × 1080 @ (1–50/60 fps)<br>Sub stream 3: 1280 × 720 @ (1–50/60 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           | 4 streams                                                                                                                                                                                                                                                                                                                                        |
| Resolution                  | 1080p (1920 × 1080); 1.3M(1280 × 960); 720p (1280 × 720); D1 (704 × 576/704×480); CIF (352 × 288/352 × 240); VGA (640 × 480)                                                                                                                                                                                                                     |
| Bit Rate Control            | CBR/VBR                                                                                                                                                                                                                                                                                                                                          |
| Video Bit Rate              | H.264: 3 kbps–8192 kbps<br>H.265: 3 kbps–8192 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                                                                                                                                                                                                                                                                                                                                             |
| Noise Reduction             | 3D NR                                                                                                                                                                                                                                                                                                                                            |
| Motion Detection            | OFF/ON (4 areas, rectangular)                                                                                                                                                                                                                                                                                                                    |
| Image Stabilization         | Electronic Image Stabilization (EIS)                                                                                                                                                                                                                                                                                                             |
| Region of Interest (RoI)    | Yes (4 areas)                                                                                                                                                                                                                                                                                                                                    |
| Smart Illumination          | Yes                                                                                                                                                                                                                                                                                                                                              |
| Defog                       | Yes                                                                                                                                                                                                                                                                                                                                              |
| Image Rotation              | 0°/90°/180°/270° (support 90°/270° with 1920 × 1080 resolution and lower)                                                                                                                                                                                                                                                                        |
| Mirror                      | Yes                                                                                                                                                                                                                                                                                                                                              |
| Privacy Masking             | 4 areas                                                                                                                                                                                                                                                                                                                                          |

### Audio

|                   |                                    |
|-------------------|------------------------------------|
| Built-in MIC      | Yes                                |
| Audio Compression | G.711a; G.711Mu; PCM; 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; scene changing; audio detection; voltage detection; defocus detection; external alarm; face detection; SMD; 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; SAMBA; PPPoE; SNMP; P2P                            |
| Security            | 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 |
| Interoperability    | ONVIF (Profile S/Profile G/Profile T); CGI                                                                                                                                               |
| User/Host           | 20 (Total bandwidth: 64 M)                                                                                                                                                               |
| Storage             | FTP; SFTP; Micro SD card (support max. 512 G); NAS                                                                                                                                       |
| Browser             | IE: IE11<br>Chrome<br>Firefox                                                                                                                                                            |
| Management Software | SmartPSS Lite; DSS; DMSS                                                                                                                                                                 |
| Mobile Client       | IOS; Android                                                                                                                                                                             |

## Certification

|                |                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications | CE-LVD: EN62368-1;<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU;<br>FCC: 47 CFR FCC Part 15, Subpart B;<br>UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14 |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Port

|              |                              |
|--------------|------------------------------|
| Audio Input  | 1 channel (RCA port)         |
| Audio Output | 1 channel (RCA port)         |
| Alarm Input  | 1 channel in: 5 mA 3–5 VDC   |
| Alarm Output | 1 channel out: 300 mA 12 VDC |

## Power

|                   |                                                                                                             |
|-------------------|-------------------------------------------------------------------------------------------------------------|
| Power Supply      | 12 VDC/PoE (802.3af)                                                                                        |
| Power Consumption | Basic: 2.3 W (12 VDC); 2.9 W (PoE)<br>Max. (WDR + IR intensity + Intelligence): 6.6 W (12 VDC); 7.7 W (PoE) |

## Environment

|                       |                                                        |
|-----------------------|--------------------------------------------------------|
| Operating Temperature | –30 °C to +60 °C (–22 °F to 140 °F) / Less than 95% RH |
| Storage Temperature   | –40 °C to +60 °C (–40 °F to 140 °F)                    |
| Protection            | IP67                                                   |

## Structure

|                    |                                                                     |
|--------------------|---------------------------------------------------------------------|
| Casing             | Metal                                                               |
| Product Dimensions | 244.1 mm × 79.0 mm × 75.9 mm<br>(9.61" × 3.11" × 2.99") (L × W × H) |
| Net Weight         | 820 g (1.81 lb)                                                     |
| Gross Weight       | 1090 g (2.40 lb)                                                    |

## Ordering Information

| Type                   | Model                      | Description                                      |
|------------------------|----------------------------|--------------------------------------------------|
| 2 MP Camera            | DH-IPC-HFW4241TP-ZAS-27135 | 2 MP IR Vari-focal Bullet WizMind Network Camera |
| Accessories (optional) | PFA130-E                   | Junction Box                                     |
|                        | PFA135                     | Junction Box                                     |
|                        | PFA152-E                   | Pole Mount                                       |
|                        | PFM321D                    | 12 VDC 1 A Power Adapter                         |
|                        | PFM900-E                   | Integrated Mount Tester                          |
|                        | PFM114                     | TLC SD Card                                      |

## Accessories

### Optional:



PFA130-E  
Junction  
Box



PFA135  
Junction  
Box



PFA152-E  
Pole  
Mount



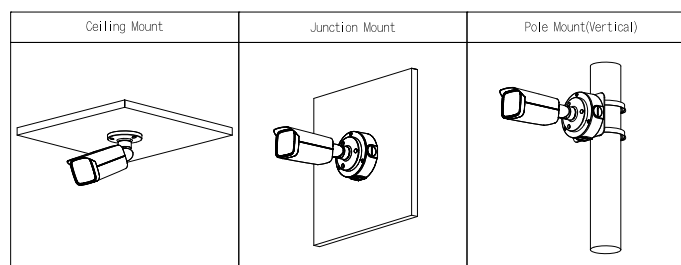
PFM321D  
12 VDC 1 A  
Power Adapter



PFM900-E  
Integrated  
Mount Tester



TF-P100  
TLC SD  
Card



## Dimensions (mm[inch])

