# DH-IPC-HFW2249T-ZAS-IL

## 2MP Smart Dual Light Vari-focal Bullet WizSense Network Camera



- 2-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in multi-core light, the max. IR distance is 60 m and the max. warm light distance is 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.
- Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human).
- 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.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card; built in Mic.
- 12 VDC/PoE power supply, easy for installation.
- IP67, IK10 (optional) protection.
- SMD Plus.




Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

### Series Overview

With advanced deep learning algorithm, Dahua WizSense 2 Series network camera supports intelligent functions, such as perimeter protection and smart motion detection. With starlight technology, this series camera provides a better image effect in the condition of low illuminance.

### Functions

**Smart Dual Light**
Dahua Smart Dual Light technology adopts smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshot and video with full-color image. When the target is out of the monitoring area, the white light is off and the IR illuminator is on, which reduces light pollution efficiently.

**SMD Plus**
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, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

**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.

**Full-color**
With high-performance sensor and large aperture lens, Dahua Full-color technology can display clear colorful image in the environment of ultra-low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colorful image details.

**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)**
With high-performance sensor and large aperture lens, Dahua Full-color technology can display clear colorful image in the environment of ultra-low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colorful image details.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" CMOS |
| Max. Resolution | 1920 (H) × 1080 (V) |
| ROM | 128 MB |
| RAM | 128 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 (196.85 ft) (IR)<br>Up to 60 m (196.85 ft) (Warm light) |
| Illuminator On/Off Control | Auto;Manual |
| Illuminator Number | 4 (Multi-core (IR + warm) light) |
| Angle Adjustment | Pan: 0°–360°<br>Tilt: 0°–90°<br>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 | H: 109°–30°; V: 56°–17°; D: 131°–35° |
| Iris Control | Fixed |
| Close Focus Distance | 0.8 m (2.62 ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | W | 44.1 m ( 144.69 ft) | 17.7 m ( 58.07 ft) | 8.8 m ( 28.87 ft) | 4.4 m ( 14.4 ft) |
| | T | 144.8 m ( 475.07 ft) | 57.9 m ( 189.96 ft) | 29.0 m ( 96.14 ft) | 14.5 m ( 47.57 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) | Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human) |
| SMD | SMD Plus |
| 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+ |
| Video Frame Rate | Main stream: 1920 × 1080@(1–25/30 fps)<br>sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 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 | 2 streams |
| Resolution | 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 | VBR;CBR |
| Video Bit Rate | H.264: 32 kbps–6144 kbps;<br>H.265: 12 kbps–6144 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 |
| Smart Dual Light | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 4 areas |

### Audio

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

### 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; defocus detection;external alarm;SMD; security exception |

### Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 Base-T) |
| Network Protocol | IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP; P2P |
| Interoperability | ONVIF (Profile S & Profile T & Profile G); CGI |
| User/Host | 6 (Total bandwidth: 36 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 256 GB) |
| Browser | IE<br>Chrome<br>Firefox |

| | |
|---|---|
| Management Software | Smart PSS Lite; DSS; DMSS; DoLynk Care |
| Mobile Client | iOS;Android |
| Cyber Security | Video 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 |

### Certification

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

### Port

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

### Power

| | |
|---|---|
| Power Supply | 12 VDC; PoE (802.3af) |
| Power Consumption | Basic: 2.6 W (12 VDC), 3.1 W (PoE);<br>Max.: 10.2 W (12 VDC), 12.7 W (PoE) (H.265 + intelligence on+ WDR + warm light intensity) |

### Environment

| | |
|---|---|
| Operating Temperature | –30 °C to +60 °C (–22 °F to +140 °F) |
| Operating Humidity | ≤95% (RH), non-condensing |
| Storage Temperature | –30 °C to +60 °C (–22 °F to +140 °F) |
| Storage Humidity | ≤95% (RH), non-condensing |
| Protection | IP67; IK10 (optional) |

### Structure

| | |
|---|---|
| Casing Material | Metal |
| Product Dimensions | 238.5 mm × 90.7 mm × 90.7 mm (9.39" × 3.57" × 3.57") (L × W × H) |
| Net Weight | 0.76 kg (1.68 lb) |
| Gross Weight | 0.95 kg (2.09 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| IP CAMERA | DH-IPC-HFW2249T-ZAS-IL | 2MP Smart Dual Light Vari-focal Bullet WizSense Network Camera |
| Accessories (Optional) | DH-PFA151 | Corner Mount Bracket |
| | DH-PFA130-E | Water-proof Junction Box |
| | G3416GW | G3/4" Water Joint |
| | DH-PFA152-E | Pole Mount Bracket |
| | DH-PFA135 | Junction Box |
| | DH-PFM321-EN | DC12V1A power adapter |
| | DH-PFM321D-EN | DC12V 1A power adapter |
| | DH-PFM320D-EN | DC12V2A power adapter |
| | PFM900-E | Integrated Mount Tester |
| | DHI-TF-P100/256GB | MicroSD Card |

## Accessories

Optional:



DH-PFA151
Corner Mount Bracket



DH-PFA130-E
Water-proof Junction Box



G3416GW
G3/4" Water Joint



DH-PFA152-E
Pole Mount Bracket



DH-PFA135
Junction Box



DH-PFM321-EN
DC12V1A power adapter



DH-PFM321D-EN
DC12V 1A power adapter



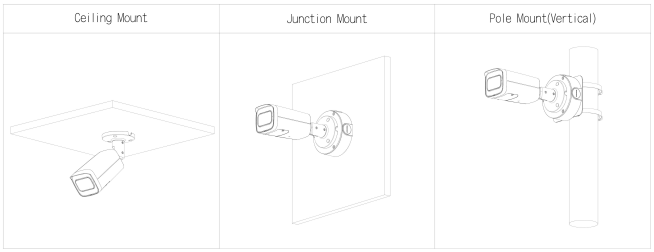
DH-PFM320D-EN
DC12V2A power adapter



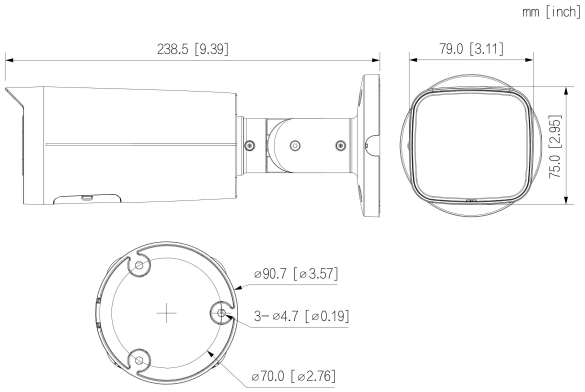
PFM900-E
Integrated Mount Tester



DHI-TF-P100/256GB
MicroSD Card




## Dimensions (mm[inch])




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