

# DH-IPC-HFW2249TL-S-PROX

2MP WizColor X Fixed-focal Bullet WizSense Network Camera



WizSense

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

### WizColor X Technology

Dahua WizColor X technology integrates an AI-ISP 2.0 algorithm enhanced by large models and industry-leading large-pixel image sensors or UltraSight Lens technology. It greatly improves light sensitivity and delivers rich color layers and fine details at night. It also allows precise capture and recognition of moving targets with reduced motion blur.

### AI-ISP 2.0

By utilizing deep learning image processing algorithms based on large models in combination with traditional image algorithms, it incorporates motion recognition detection algorithms. This enhances all-weather image quality, reduces motion blur, delivers clear images with fine details, and improves the camera's adaptability to various scenes.

- 2 MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max 2 MP (1920 × 1080)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in warm light, the max warm light distance is 30 m.
- ROI, AI H.264/AI H.265 (Super AI Coding), flexible coding, applicable to various bandwidth and storage environments.
- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, invalid access, and voltage detection.
- 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).
- Max 512 GB Micro SD card; built-in dual Mic.
- 12 VDC/PoE power supply.
- IP67 protection.
- SMD Plus.



### 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.

### Super AI Coding

With advanced AI object detection and scene recognition technology, Super AI Coding integrates ROI, BAE, and ABR to achieve higher encoding efficiency than H.265 and H.264 while effectively reducing storage and transmission costs without compromising video quality.

### 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 normally after soaking in 1 m deep water for 30 minutes.

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            | 1920 (H) × 1080 (V)                                        |
| Scanning System            | Progressive                                                |
| Electronic Shutter Speed   | Auto/Manual 1/3 s–1/100,000 s                              |
| Min. Illumination          | 0.00003 lux@F0.8                                           |
| S/N Ratio                  | >56 dB                                                     |
| Illumination Distance      | Up to 30 m (98.43 ft) (Warm light)                         |
| Illuminator On/Off Control | Auto;Manual                                                |
| Illuminator Number         | 4 (Warm light)                                             |
| Angle Adjustment           | Pan: 0° to 360°<br>Tilt: 0° to 90°<br>Rotation: 0° to 360° |

### Lens

|                      |  |                                                                     |
|----------------------|--|---------------------------------------------------------------------|
| Lens Type            |  | Fixed-focal                                                         |
| Lens Mount           |  | M18                                                                 |
| Focal Length         |  | 2.8 mm; 3.6 mm                                                      |
| Max. Aperture        |  | F0.8                                                                |
| Field of View        |  | 2.8 mm: H: 110°; V: 58°; D: 131°<br>3.6 mm: H: 90°; V: 48°; D: 107° |
| Iris Control         |  | Fixed                                                               |
| Close Focus Distance |  | 2.8 mm: 1.3 m (4.27 ft)<br>3.6 mm: 1.7 m (5.58 ft)                  |

|               |                                                                                                                                                                                                                                                                                                                                                                                 |                        |                       |                       |                      |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|-----------------------|----------------------|
| DORI Distance | Lens                                                                                                                                                                                                                                                                                                                                                                            | Detect                 | Observe               | Recognize             | Identify             |
|               | 2.8 mm                                                                                                                                                                                                                                                                                                                                                                          | 41.3 m<br>( 135.50 ft) | 16.5 m<br>( 54.13 ft) | 8.3 m<br>( 27.23 ft)  | 4.1 m<br>( 13.45 ft) |
|               | 3.6 mm                                                                                                                                                                                                                                                                                                                                                                          | 51.7 m<br>( 169.62 ft) | 20.7 m<br>( 67.91 ft) | 10.3 m<br>( 33.79 ft) | 5.2 m<br>( 17.06 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                                                                                                       |

### Video

|                          |                                                                                                                                                                                                                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression        | H.265; H.264; H.264H; H.264B; MJPEG (Only supported by sub stream)                                                                                                                                                                                                                                |
| AI Coding                | AI H.265; AI H.264 (Super AI Coding)<br>*Includes smart codec technology, Smart H.265+ and 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>Third stream: 352 × 288@1 fps/352 × 240@1 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. |
| Streaming Capability     | 3 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; H.265: 12 kbps–6144 kbps                                                                                                                                                                                                                                                |
| Day/Night                | 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 (Rol) | Yes (4 areas)                                                                                                                                                                                                                                                                                     |
| Smart Illumination       | Yes                                                                                                                                                                                                                                                                                               |
| Image Rotation           | 0°/90°/180°/270°(Support 90°/270° with 1080p resolution and lower)                                                                                                                                                                                                                                |
| Mirror                   | Yes                                                                                                                                                                                                                                                                                               |
| Privacy Masking          | 4 areas                                                                                                                                                                                                                                                                                           |
| LDC                      | Yes                                                                                                                                                                                                                                                                                               |

### Audio

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

### Alarm

|             |                                                                                                                                                                                                                  |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alarm Event | No SD card; SD card full; SD card error; network disconnection; IP conflict; invalid access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage 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; NTP; Multicast; ICMP; IGMP; NFS; P2P; Auto Registration |

|                     |                                                                                                                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interoperability    | ONVIF (Profile S & Profile G & Profile T); CGI                                                                                                                                                                                     |
| User/Host           | 6 (Total bandwidth: 36 M)                                                                                                                                                                                                          |
| Storage             | FTP; SFTP; Micro SD card (support max 512 GB)                                                                                                                                                                                      |
| Browser             | IE; Chrome; Firefox                                                                                                                                                                                                                |
| Management Software | Smart PSS Lite; DSS; DMSS; DoLynk Care                                                                                                                                                                                             |
| Mobile Client       | iOS;Android                                                                                                                                                                                                                        |
| 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;Session security;Security warning;SSL/TLS1.2;AES 256 |

## Certification

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

## Power

|                   |                                                                                                                                                |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply      | 12 VDC (±30%); PoE (802.3af)                                                                                                                   |
| Dual Power Backup | When the power adapter and PoE provide power at the same time, disconnect one of them. The device will continue to work, but will not restart. |
| Power Consumption | Basic: 1.6 W (12 VDC); 2.4 W (PoE);<br>Max.: 5.4 W (12 VDC); 6.5 W (PoE) (Intelligence + WDR + illumination on)                                |

## Environment

|                       |                                                                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature | −40 °C to +60 °C (−40 °F to +140 °F)                                                                                                                         |
| Operating Humidity    | ≤95% (RH), non-condensing                                                                                                                                    |
| Storage Temperature   | −40 °C to +60 °C (−40 °F to +140 °F)                                                                                                                         |
| Storage Humidity      | ≤95% (RH), non-condensing                                                                                                                                    |
| Protection            | IP67                                                                                                                                                         |
| Anti-corrosion Level  | Basic Protection<br>*The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection. |

## Structure

|                    |                                                                     |
|--------------------|---------------------------------------------------------------------|
| Casing Material    | Metal                                                               |
| Product Dimensions | 205.6 mm × 80.2 mm × 76.2 mm (8.09" × 3.16" × 3.00")<br>(L × W × H) |
| Net Weight         | 0.61 kg (1.34 lb)                                                   |
| Gross Weight       | 0.76 kg (1.68 lb)                                                   |

## Ordering Information

| Type                   | Model                   | Description                                               |
|------------------------|-------------------------|-----------------------------------------------------------|
| IP CAMERA              | DH-IPC-HFW2249TL-S-PROX | 2MP WizColor X Fixed-focal Bullet WizSense Network Camera |
| Accessories (Optional) | G3416GW                 | G3/4" Water Joint                                         |
|                        | DH-PFA130-E             | Water-proof Junction Box                                  |
|                        | DH-PFA151               | Corner Mount Bracket                                      |

| Type                   | Model             | Description              |
|------------------------|-------------------|--------------------------|
| Accessories (Optional) | DH-PFA157         | Pole Mount Bracket       |
|                        | DH-PFM320-010EN   | DC12V 1A Power Adapter   |
|                        | DH-PFM325D-1210EN | DC12V 1A Power Adapter   |
|                        | DH-PFM325D-1215EN | DC12V 1.5A Power Adapter |
|                        | DH-PFM320-020EN   | DC12V 2A Power Adapter   |
|                        | DH-PFM320D-EN     | DC12V 2A Power Adapter   |
|                        | PFM900-E          | Integrated Mount Tester  |
|                        | DHI-TF-P100/512GB | MicroSD Card             |

## Accessories

Optional:



G3416GW  
G3/4" Water Joint



DH-PFA130-E  
Water-proof Junction Box



DH-PFA151  
Corner Mount Bracket



DH-PFA157  
Pole Mount Bracket



DH-PFM320-010EN  
DC12V 1A Power Adapter



DH-PFM325D-1210EN  
DC12V 1A Power Adapter



DH-PFM325D-1215EN  
DC12V 1.5A Power Adapter



DH-PFM320-020EN  
DC12V 2A Power Adapter



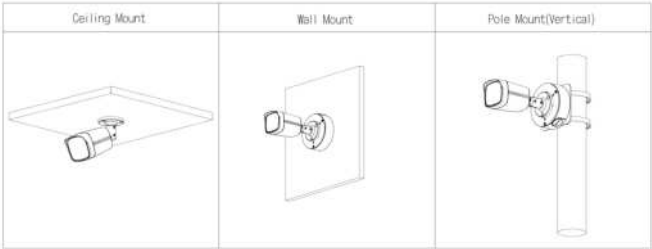
DH-PFM320D-EN  
DC12V 2A Power Adapter



PFM900-E  
Integrated Mount Tester



DHI-TF-P100/512GB  
MicroSD Card



Dimensions (mm[inch])

