# DH-IPC-HFW2649M-S-B-PRO

6MP WizColor Fixed-focal Bullet WizSense Network Camera



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 Technology**

Dahua WizColor Technology seamlessly combines with the powerful AI-ISP, large pixel size sensor and large aperture in cameras. This unique integration enables cameras to effortlessly capture high-quality images with vibrant colors during nighttime scenarios, ensuring fine details are preserved and minimizing motion blur. Unlike traditional self-illuminating cameras, Dahua WizColor Technology maximizes the utilization of weak light sources, such as moonlight and city lights reflected in the sky, delivering captivating full-color images of the entire scene. It also ensures that monitoring distances are not compromised at night due to limited illumination ranges, facilitating full-color image capture even over long distances.

**AI-ISP**

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

**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.

- 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 6 MP (3288 × 1850) @20 fps, and supports 4 MP (2688 × 1520) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in warm light, and the max. illumination distance is 50 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.
- Supports max. 256 G Micro SD card; built in Mic.
- 12 VDC/PoE power supply, easy for installation.
- IP67 protection.
- SMD Plus.




**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.

**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 | 3288 (H) × 1850 (V) |
| ROM | 128 MB |
| RAM | 256 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.0007 Lux@F1.0 |
| S/N Ratio | >56 dB |
| Illumination Distance | Up to 50 m (164.04 ft) (Warm light) |
| Illuminator On/Off Control | Auto; Manual |
| Illuminator Number | 4 (Warm light) |

### Lens

| | |
|---|---|
| Lens Type | Fixed-focal |
| Lens Mount | M16 |
| Focal Length | 3.6 mm; 6 mm |
| Max. Aperture | F1.0 |
| Field of View | 3.6 mm: H: 78°; V: 42°; D: 91°<br>6 mm: H: 48°; V: 25°; D: 56° |
| Iris Control | Fixed |
| Close Focus Distance | 3.6 mm: 4 m (13.12 ft)<br>6 mm: 12 m (39.37 ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | 3.6 mm | 102.0 m (334.65 ft) | 40.8 m (133.86 ft) | 20.4 m (66.93 ft) | 10.2 m (33.46 ft) |
| | 6 mm | 169.0 m (554.46 ft) | 67.6 m (221.78 ft) | 33.8 m (110.89 ft) | 16.9 m (55.45 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: 3288 × 1850@(1–20 fps)/2688 × 1520@(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. |
| Streaming Capability | 2 streams |
| Resolution | 6M (3288 × 1850/3200 × 1800); 5M (2880 × 1620); 4M (2688 × 1520); 3M (2048 × 1536); 2304 × 1296 (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 | VBR; CBR |
| Video Bit Rate | H.264: 32 kbps–8192 kbps;<br>H.265: 12 kbps–8192 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 (RoI) | Yes (4 areas) |
| Smart Illumination | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 4 areas |
| LDC | Yes |

### Audio

| | |
|---|---|
| Built-in MIC | Yes, built-in 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; illegal 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; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; P2P; Bonjour; Auto Registration |
| Interoperability | ONVIF (Profile S & Profile G & Profile T); CGI |

| | |
|---|---|
| User/Host | 20 (Total bandwidth: 48 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 256 GB); NAS |
| Browser | IE; Chrome; Firefox |
| Management Software | Smart PSS Lite; DSS; DMSS |
| Mobile Client | Android;iOS |
| Security | Digest;WSSE;Account lockout;Security logs;IP/MAC filtering;Generation and importing of X.509 certif ication;syslog;HTTPS;802.1x;Trusted boot;Trusted execution;Trusted upgrade;Session security;Security warning |

## Certification

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

## Power

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|---|---|
| Power Supply | 12 VDC (±30%); PoE (802.3af) |
| Power Consumption | Basic: 2.4 W (12 VDC); 3.2 W (PoE);<br>Max.: 6.2 W (12 VDC); 7.5 W (PoE) (H.265+ intelligence on + WDR + illuminator intensity) |

## 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 |

## Structure

| | |
|---|---|
| Casing Material | Metal + plastic |
| Product Dimensions | 201.0 mm × 103.8 mm × 97.8 mm (7.91" × 4.09" × 3.85") (L × W × H) |
| Net Weight | 0.68 kg (1.50 lb) |
| Gross Weight | 1.15 kg (2.54 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| IP CAMERA | DH-IPC-HFW2649M-S-B-PRO | 6MP WizColor Fixed-focal Bullet WizSense Network Camera |
| Accessories | PFB120WS | Wall Mount Bracket |
| | DH-PFA162 | Universal Joint |
| | DH-PFB110W | Ceiling Mount Bracket |
| | DH-PFA150 | Pole Mount Bracket |
| | DH-PFB121W | Wall Mount Bracket |
| | DH-PFA121 | Water-proof Junction Box |
| | G3416GW | G3/4" Water Joint |
| | DH-PFA152-E | Pole Mount Bracket |
| | 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

### Included:



PFB120WS
Wall Mount Bracket

### Optional:



DH-PFA162
Universal Joint



DH-PFB110W
Ceiling Mount Bracket



DH-PFA150
Pole Mount Bracket



DH-PFB121W
Wall Mount Bracket



DH-PFA121
Water-proof Junction Box



G3416GW
G3/4" Water Joint



DH-PFA152-E
Pole Mount Bracket



DH-PFM321-EN
DC12V1A power adapter



DH-PFM321D-EN
DC12V 1A power adapter



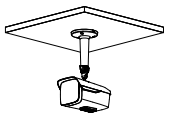
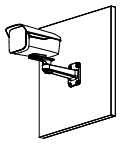
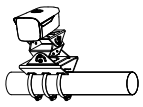
DH-PFM320D-EN
DC12V2A power adapter

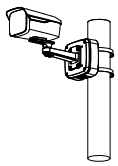


PFM900-E
Integrated Mount Tester

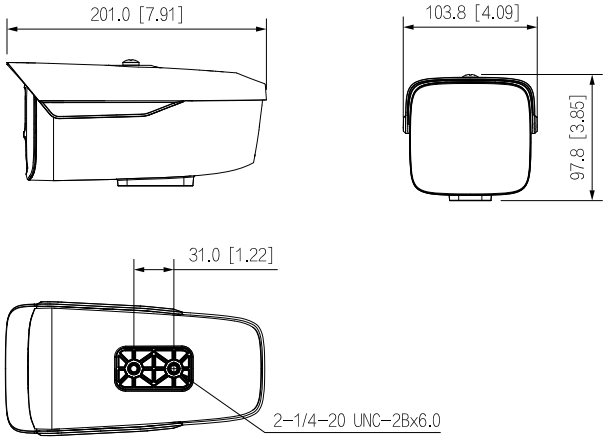


TF-P100
MicroSD
Memory Card

| Ceiling Mount | Wall Mount | Pole Mount(Horizontal) |
|---|---|---|
|  |  |  |

| Pole Mount(Vertical) |
|---|
|  |

## Dimensions (mm[inch])





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