# DH-IPC-HFW3849T1-AS-PV

## 8MP Smart Dual Illumination Active Deterrence 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 3 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

### Siren And Light Active Deterrence

Dahua siren and light active deterrence network camera supports the light alarm and voice alarm when perimeter event occurs, to realize the deterrence and effective intervention. The camera is built in multiple voices for selection, and supports customized voice importing.

### Smart Dual Illuminators

Dahua Smart Dual Illuminators technology adopts smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the warm 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 warm light is off and the IR illuminator is on, which reduces light pollution efficiently.

### SMD 4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

*The parameters and datasheets below can only be applied to 3849-PV-S4 series.*

- 8-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 8 MP (3840 × 2160)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in warm light and IR LED; the max. IR illumination distance is 30 m and warm light distance is 30 m.
- 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 (the two function support the classification and accurate detection of vehicle and human).
- 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; supports max. 256 G Micro SD card; built-in dual MICs; 1-ch speaker; support two-way talk.
- 12 VDC/PoE power supply.
- IP67 protection.
- Sound and light alarm (red and blue lights).
- SMD 4.0.
- One-click arming/disarming through alarm input.

| 8Mp | Sound and Light Alarm | Smart Dual Illuminators | Quick Pick | AI Coding | IP67 |
|---|---|---|---|---|---|

### One-tap Disarming

Dahua One-tap Disarming function, which is convenient and easy for operation, is the switch for event linkage. Customers can close and recover event linkage through mobile App, which meets multi-scenarios needs.

### 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)

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% input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

## Technical Specification

### Camera

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|---|---|
| Image Sensor | 1/2.8" CMOS |
| Max. Resolution | 3840 (H) × 2160 (V) |
| ROM | 128 MB |
| RAM | 512 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.004 lux@F1.0 (Color, 30 IRE)<br>0.0004 lux@F1.0 (B/W, 30 IRE)<br>0 lux (illuminator on) |
| S/N Ratio | > 56 dB |
| Illumination Distance | 30 m (98.43 ft) (IR)<br>30 m (98.43 ft) (warm light) |
| Illuminator On/Off Control | Auto/Manual |
| Illuminator Number | 2 (IR LED)<br>2 (warm light) |
| Pan/Tilt/Rotation Range | Pan: 0°–360°<br>Tilt: 0°–90°<br>Rotation: 0°–360° |

### Lens

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|---|---|
| Lens Type | Fixed-focal |
| Mount Type | M12 |
| Focal Length | 2.8 mm; 3.6 mm |
| Field of View | 2.8 mm: H: 106°; V: 55°; D: 125°<br>3.6 mm: H: 85°; V: 45°; D: 100° |
| Iris Type | Fixed |
| Close Focus Distance | 2.8 mm: 2.0 m (6.56 ft)<br>3.6 mm: 2.8 m (6.23 ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | 2.8 mm | 91.0 m (298.56 ft) | 36.4 m ( 119.42 ft) | 18.2 m (59.71 ft) | 9.1 m (29.86 ft) |
| | 3.6 mm | 107.6 m (353.02 ft) | 43.0 m (141.08 ft) | 21.5 m (70.54 ft) | 10.8 m (35.43 ft) |

### Intelligence

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|---|---|
| IVS (Perimeter Protection) | Tripwire; intrusion (support the classification and accurate detection of vehicle and human) |
| SMD 4.0 | Less false alarm, longer detection distance |
| Smart Search | Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos |
| Quick Pick | With AI NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events |
| AI SSA | Adopt deep learning algorithms to adjust the parameters of the image to suit the conditions. |

### Video

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|---|---|
| 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: 3840 × 2160@(1 fps–30 fps)<br>Sub stream: 704 × 576@(1 fps–25 fps)/704 × 480@(1 fps–30 fps)<br>Third stream:1920 × 1080@(1 fps–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 | 8M (3840 × 2160); 6M (3072 × 2048); 5M (3072 × 1728/2592 × 1944); 4M (2688 × 1520/2560 × 1440); 3M (2048 × 1536/2304 × 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: 32kbps–8192 kbps<br>H.265: 12kbps–8192 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| HLC | Yes |
| WDR | 120 dB |
| Scene Self-adaptation | 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) |
| Region of Interest (RoI) | Yes (4 areas) |
| Smart Illumination | Yes |
| Defog | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 8 areas |

### Alarm

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|---|---|
| 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; external alarm; SMD; security exception |

### Network

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|---|---|
| Network | 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 |
| 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 |
| Interoperability | ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; P2P; RTMP |

| | |
|---|---|
| User/Host | 20 (Total bandwidth: 72 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 256 G); NAS |
| Browser | IE: IE8/9/11<br>Chrome<br>Firefox |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Phone | iOS; Android |

## Certification

| | |
|---|---|
| Certification | CE-LVD: EN 62368-1;<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

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

## Power

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|---|---|
| Power Supply | 12V DC/PoE (802.3af) |
| Power Consumption | Basic: 4.5 W (12 VDC); 5.5 W (PoE)<br>Max. (pulling stream+warning light+speaker+warm light on): 7.6 W (12 VDC); 9.1 W (PoE) |

## Environment

| | |
|---|---|
| Operating Conditions | −40 °C to +60 °C (−40 °F to +140 °F)/Less than 95% RH |
| Storage Conditions | −40 °C to +60 °C (−40 °F to +140 °F) |
| Protection Grade | IP67 |

## Structure

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|---|---|
| Casing | Metal + plastic |
| Dimensions | 288.4 mm × 94.4 mm × 84.7 mm<br>(11.35" × 3.72" × 3.33") (L × W × H) |
| Net Weight | 1.0 kg (2.20 lb) |
| Gross Weight | 1.23 kg (2.71 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 8MP Camera | DH-IPC-HFW3849T1-AS-PV | 8MP Smart Dual Illumination Active Deterrence Fixed-focal Bullet WizSense Network Camera |
| | IPC-HFW3849T1-AS-PV | 8MP Smart Dual Illumination Active Deterrence Fixed-focal Bullet WizSense Network Camera |
| Accessories (Optional) | PFA135 | Junction Box |
| | PFA130-E | Water-proof Junction Box |
| | PFA152-E | Pole Mount Backet |
| | PFM321D | 12 VDC 1A Power Adapter |
| | PFM900-E | Integrated Mount Tester |
| | TF-P100 | MicroSD Memory Card |

## Accessories

Optional:



PFA135
Junction Box

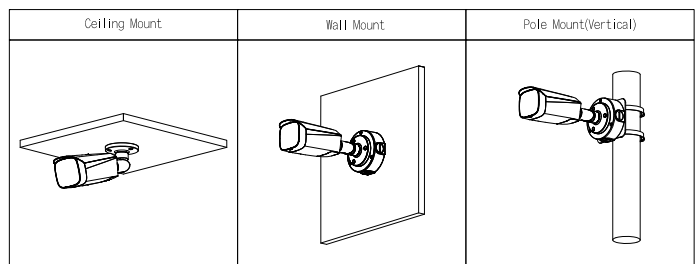PFA130-E
Water-proof Junction Box

PFA152-E
Pole Mount Bracket

PFM321D
12 VDC 1A Power Adapter

PFM900-E
Integrated Mount Tester

TF-P100
MicroSD Memory Card

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

## Dimensions (mm[inch])

288.4 [11.35]

197.3 [7.77]

94.4 [3.72]

84.7 [3.33]

⌀90.4 [⌀3.56]

⌀70.0 [⌀2.76]

3−⌀4.7 [⌀0.19]