# DH-IPC-HDBW3449R1-ZAS-PV

## 4MP Smart Dual Light Active Deterrence Vari-focal Dome 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

Dahua WizSense 3 Series Network Camera greatly saves on bandwidth and storage space through its AI Coding technology. Driven by its advanced deep learning algorithms, the camera supports intelligent functions such as perimeter protection, smart motion detection (SMD), AcuPick, and AI SSA (AI Scene Self-adaptation), making it easy and convenient to use. Starlight technology and its large aperture lens also allow the camera to produce clear, vivid images even in poor lighting conditions.

### 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.

**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.

**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.

**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.

*The parameters and datasheets below can only be applied to 3449-PV-S5 series.*

· 4-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
· Outputs max. 4 MP (2688 × 1520)@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 50 m and max warm light distance is 40 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 functions support the classification and accurate detection of vehicle and human).
· Abnormality detection: Motion detection, video tampering, 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. 512 G Micro SD card; built-in dual MICs; 1-ch speaker; Support two-way talk.
· 12 VDC/PoE power supply, easy for installation.
· IP67,IK10 protection.
· Sound and light alarm (red and blue lights).
· SMD 4.0.
· Supports AI SSA and one-tap arming and disarming.
· SMD area can be set in warm light areas that support triggering alarms.

| 4Mp | Active Deterrence | Smart Dual Light | AI Coding | AcuPick | IP67&IK10 |
|---|---|---|---|---|---|

### 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, IK10, 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.
IK10+: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 100 cm (Impact energy is 50J).
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 | 1/2.7" CMOS |
| Max. Resolution | 2688 (H) × 1520 (V) |
| ROM | 256 MB |
| RAM | 1 GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.003 lux@F1.0 (Color, 30 IRE)<br>0.0003 lux@F1.0 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio | >56 dB |
| Illumination Distance | Up to 50 m (164.64 ft) (IR)<br>Up to 40 m (131.23 ft) (Warm light) |
| Illuminator On/Off Control | Auto;Manual |
| Illuminator Number | 2 (IR LED); 2 (Warm light) |
| Angle Adjustment | Pan: 0°–360°<br>Tilt: 0°–90°<br>Rotation: 0°–360° |

### Lens

| | |
|---|---|
| Lens Type | Motorized vari-focal |
| Lens Mount | φ16 |
| Focal Length | 2.7 mm–13.5 mm |
| Max. Aperture | F1.0 |
| Field of View | H: 103°–33°<br>V: 54°–18°<br>D: 124°–38° |
| Iris Control | Fixed |
| Close Focus Distance | 1.5 m (4.92 ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | W | 65.2 m (213.91 ft) | 26.1 m (85.63 ft) | 13.0 m (42.65 ft) | 6.5 m (21.33 ft) |
| | T | 186.6 m (612.20 ft) | 74.6 m (244.75 ft) | 37.3 m (122.38 ft) | 18.7 m (61.35 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 4.0 |
| AcuPick | Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets. |
| AI SSA | Adopt deep learning algorithms to adjust the parameters of the image to suit the conditions. |
| 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 sub stream) |
| Smart Codec | Smart H.265+; Smart H.264+ |
| AI Coding | AI H.265; AI H.264 |
| Video Frame Rate | Main stream: 2688 × 1520@ (1 fps–25/30 fps)<br>Sub stream: 704 × 576@(1 fps–25 fps)/704 × 480@(1 fps–30 fps)<br>Third stream:1920 × 1080@ (1 fps–25/30 fps)<br>*The values above are the max. frame rates of each stream; for multple streams, the values will be subjected to the total encoding capacity. |
| Stream Capability | 3 streams |
| Resolution | 4M (2688 × 1520/2560 × 1440); 3M (2304 × 1296/2048 × 1536); 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/ABR |
| Video Bit Rate | H.264:3 kbps–16384 kbps<br>H.265:3 kbps–16384 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/Manual |
| Noise Reduction | 3D NR |
| Motion Detection | OFF/ON (4 areas, rectangular) |
| Region of Interest (RoI) | Yes (4 areas) |
| Image Stabilization | Electronic Image Stabilization (EIS) |
| Smart Illumination | Yes |
| Defog | Yes |
| Image Rotation | 0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower) |
| Mirror | Yes |
| Privacy Masking | 4 areas |

### Audio

| | |
|---|---|
| Built-in MIC | Yes; built-in dual Mic |
| Built-in Speaker | Yes; built-in speaker |
| 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; 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; SNMP; P2P |
| 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 GB); NAS |
| Browser | IE: IE 9/11<br>Chrome<br>Firefox |
| Management Software | SmartPSS Lite; DSS; DMSS |
| Mobile Client | iOS;Android |
| Cyber Security | Video encryption;Firmware encryption;Configuration encryption;Digest;WSSE;Account lockout;Security logs;IP/MAC filtering;Generation and importing of X.509 ce rtification;syslog;HTTPS;802.1x;Trusted boot;Trusted execution;Trusted upgrade |

## Certification

| | |
|---|---|
| Certifications | CE-LVD: EN 62368-1;<br>CE-EMC: Electromagnetc Compatbility Directve 2014/30/EU<br>FCC: 47 CFR FCC Part 15, Subpart B |

## 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: 2.8 W (12 VDC); 3.6 W (PoE)<br>Max. (H.265+WDR+ warm light+siren and light active deterrence + intelligence on): 7.9 W (12 VDC); 9.2 W (PoE) |

## Environment

| | |
|---|---|
| Operating Temperature | −30 °C to +60 °C (−22 °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; IK10 |

## Structure

| | |
|---|---|
| Casing Material | Metal |
| Product Dimensions | 105 mm × Φ126.0 mm (4.13" × Φ4.96") |
| Net Weight | 0.73 kg (1.61 lb) |
| Gross Weight | 0.9 kg (1.98 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 4MP Camera | DH-IPC-HFW3449R1-ZAS-PV | 4MP Smart Dual Light Active Deterrence Vari-focal Dome WizSense Network Camera |
| Accessories (Optional) | PFA197R | Junction Box |
| | PFB206W | Wall Mount |
| | PFA156 | Pole Mount |
| | PFA109 | Ceiling Mount Bracket |
| | PFB220C | Ceiling Mount Bracket |
| | PFM321D | 12 VDC 1A Power Adapter |
| | PFM900-E | Integrated Mount Tester |
| | TF-P100 | TLC SD Card |

## Accessories

Optional:

PFA197R
Junction Box

PFB206W
Wall Mount Bracket

PFA156
Pole Mount Bracket

PFA109
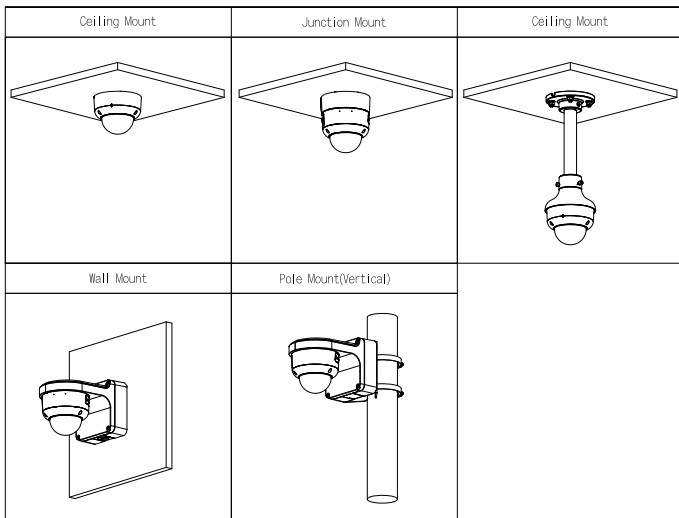Ceiling Mount Bracket

PFB220C
Ceiling Mount Bracket

PFM321D
12 VDC 1A Power Adapter

PFM900-E
Integrated Mount Tester

TF-P100
Ceiling Mount Bracket

| Ceiling Mount | Junction Mount | Ceiling Mount |
|---|---|---|

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

## Dimensions (mm[inch])

61.6 [2.43]

105.0 [4.13]

⌀126.0 [⌀4.96]

3-⌀4.5 [⌀0.18]

⌀110.0 [⌀4.33]