

# DH-IPC-HDBW3441R-AS-P

## 4MP Wide Angle Fixed 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

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

#### EPTZ

With advanced target detection and tracking algorithms, Dahua EPTZ technology can simultaneously zoom in and track multiple humans and vehicles that trigger alarms. It provides rich details and a panoramic view at the same time.

#### SMD 3.0

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.

#### 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.

#### 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) are largely reduced.

- 4-MP 1/2.7" CMOS starlight-grade image sensor, low luminance, and high definition image.
- Outputs 4 MP (2688 × 1520) @25/30 fps, and supports max. 5 MP (2880 × 1620) @20 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 15 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. 256 G Micro SD card; built in MIC.
- 12 VDC/PoE power supply.
- IP67, IK10 protection.
- EPTZ: Enlarge and track the targets of intelligent alarms.
- SMD 3.0.



### Cyber Security

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading 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 works normal 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 40 cm (Impact energy is 20J).

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            | 2880 (H) × 1620 (V)                                                                     |
| ROM                        | 128 MB                                                                                  |
| RAM                        | 512 MB                                                                                  |
| Scanning System            | Progressive                                                                             |
| Electronic Shutter Speed   | Auto/Manual 1/3 s–1/100,000 s                                                           |
| Min. Illumination          | 0.01 lux@F2.0 (Color, 30 IRE)<br>0.001 lux@F2.0 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio                  | >56 dB                                                                                  |
| Illumination Distance      | 15 m (49.21 ft) (IR LED)                                                                |
| Illuminator On/Off Control | Auto                                                                                    |
| Illuminator Number         | 3 (IR LED)                                                                              |
| Pan/Tilt/Rotation Range    | Pan: 0°–355°<br>Tilt: 0°–80°<br>Rotation: 0°–355°                                       |

### Lens

|                      |        |                                                                                                                                                        |                      |                      |                     |
|----------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|---------------------|
| Lens Type            |        | Fixed-focal                                                                                                                                            |                      |                      |                     |
| Lens Mount           |        | M12                                                                                                                                                    |                      |                      |                     |
| Focal Length         |        | 2.1 mm                                                                                                                                                 |                      |                      |                     |
| Max. Aperture        |        | F2.0                                                                                                                                                   |                      |                      |                     |
| Field of View        |        | LDC is disabled:<br>Horizontal: 180°; Vertical: 78°; Diagonal: 180°<br>LDC is enabled (by default):<br>Horizontal: 170°; Vertical: 75°; Diagonal: 175° |                      |                      |                     |
| Close Focus Distance |        | 0.6 m (1.97 ft)                                                                                                                                        |                      |                      |                     |
| DORI Distance        | Lens   | Detect                                                                                                                                                 | Observe              | Recognize            | Identify            |
|                      | 2.1 mm | 52.0 m<br>(170.60 ft)                                                                                                                                  | 20.8 m<br>(68.24 ft) | 10.4 m<br>(34.12 ft) | 5.2 m<br>(17.06 ft) |

### Intelligence

|                            |                                                                                                                 |
|----------------------------|-----------------------------------------------------------------------------------------------------------------|
| IVS (Perimeter Protection) | Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)  |
| SMD 3.0                    | 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 |

### Video

|                   |                                                                |
|-------------------|----------------------------------------------------------------|
| Video Compression | H.265; H.264; 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: 2880 × 1620 @ (1–20 fps) / 2688 × 1520 @ (1–25/30 fps)<br>sub stream: 704 × 576 @ (1–25 fps) / 704 × 480 @ (1–30 fps)<br>third stream: 1920 × 1080 @ (1–25/30 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                  | 5M (2880 × 1620); 4M (2688 × 1520/2560 × 1440); 3M (2048 × 1536); 2304 × 296 ; 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: 3 kbps–8192 kbps;<br>H.265: 3 kbps–8192 kbps                                                                                                                                                                                                                                                                              |
| Day/Night                   | Auto (ICR)/Color/B/W                                                                                                                                                                                                                                                                                                             |
| BLC                         | Yes                                                                                                                                                                                                                                                                                                                              |
| HLC                         | Yes                                                                                                                                                                                                                                                                                                                              |
| WDR                         | 120dB                                                                                                                                                                                                                                                                                                                            |
| 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)                                                                                                                                                                                                                                                                                                                    |
| 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                                |
| 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; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; voltage detection; external alarm; SMD; security exception |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Network

|              |                       |
|--------------|-----------------------|
| Network Port | RJ-45 (10/100 Base-T) |
| SDK and API  | Yes                   |

|                     |                                                                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cyber Security      | Video encryption; configuration encryption; Digest; WSSE; account lockout; security logs; generation and importing of X.509 certification; HTTPS; trusted boot; trusted execution; trusted upgrade |
| 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; SAMBA; PPPoE; SNMP                                           |
| Interoperability    | ONVIF (Profile S/Profile G/Profile T); CGI; P2P                                                                                                                                                    |
| User/Host           | 20 (Total bandwidth: 64 M)                                                                                                                                                                         |
| Storage             | FTP; SFTP; Micro SD card (support max. 256 GB); NAS                                                                                                                                                |
| Browser             | IE<br>Chrome<br>Firefox                                                                                                                                                                            |
| Management Software | Smart PSS; DSS; DMSS                                                                                                                                                                               |
| Mobile Client       | iOS; Android                                                                                                                                                                                       |

### Certification

|                |                                                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Certifications | CE-LVD: EN62368-1;<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

|              |                                             |
|--------------|---------------------------------------------|
| Audio Input  | 1 channel (RCA port)                        |
| Audio Output | 1 channel (RCA port)                        |
| Alarm Input  | 1 channel in: 5 mA 3–5V DC                  |
| Alarm Output | 1 channel out: 1,000 mA 30V DC/500mA 50V DC |

### Power

|                   |                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------|
| Power Supply      | 12 VDC/PoE                                                                                                     |
| Power Consumption | Basic: 3.2W (12 V DC); 3.9 W (PoE)<br>Max. (H.265+main stream/IR intensity+IR on): 6.4 W (12V DC); 7.7 W (PoE) |

### Environment

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| Operating Temperature | –40 °C to +60 °C (–40 °F to +140 °F)/Less than 95% RH |
| Storage Temperature   | –40 °C to +60 °C (–40 °F to +140 °F)                  |
| Protection            | IP67, IK10                                            |

### Structure

|                    |                                    |
|--------------------|------------------------------------|
| Casing             | Metal                              |
| Product Dimensions | 94 mm × Φ122.0 mm (3.70" × Φ4.80") |
| Net Weight         | 500 g (1.10 lb)                    |
| Gross Weight       | 770 g (1.69 lb)                    |

### Ordering Information

| Type                   | Model                 | Description                                       |
|------------------------|-----------------------|---------------------------------------------------|
| 4MP Camera             | DH-IPC-HDBW3441R-AS-P | 4MP Wide Angle Fixed Dome WizSense Network Camera |
|                        | IPC-HDBW3441R-AS-P    | 4MP Wide Angle Fixed Dome WizSense Network Camera |
| Accessories (optional) | PFA137                | Junction Box Bracket                              |
|                        | PFA109                | Mount Adapter                                     |
|                        | PFB220C               | Ceiling Mount Bracket                             |
|                        | PFB203W               | Wall Mount                                        |
|                        | PFA152-E              | Pole Mount                                        |
|                        | PFM321D               | 12 VDC 1 A Power Adapter                          |
|                        | PFM900-E              | Integrated Mount Tester                           |
|                        | TF-P100               | TLC SD Card                                       |

### Accessories

Optional:



PFA137  
Junction  
Box Bracket



PFA109  
Mount  
Adapter



PFB220C  
Ceiling Mount  
Bracket



PFM321D  
12 VDC 1 A  
Power Adapter



PFB203W  
Wall  
Mount



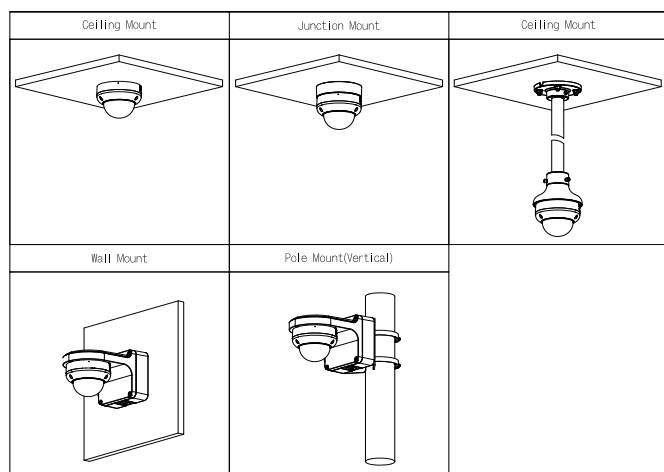
PFA152-E  
Pole  
Mount



PFM900-E  
Integrated  
Mount Tester



TF-P100  
TLC SD  
Card



## Dimensions (mm[inch])

