

DH-IPC-HDW8441X-3D

4MP WizMind Dual-Lens Network Camera




Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

Series Overview

Equipped with advanced chip and large aperture lens, Dahua WizMind Dual-Lens series network camera provides excellent image effects. With advanced deep learning algorithm, the camera supports various intelligent functions, such as people counting, queue management, perimeter protection and face detection, which provides better intelligent application solutions based on scenes.

Functions

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.

Starlight

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot. largely reduced.

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.

- 4-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2560 × 1440) @25/30 fps.
- Built-in IR LED, and the max. illumination distance is 20 m.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- People counting: Queue management, people counting in area, entry/exit/pass number counting, and it can output daily/monthly/yearly report.
- Alarm: 2 in, 2 out; audio: 2 in, 1 out; 485, BNC, supports max. 512 G Micro SD card; built in MIC and speaker.
- 12 VDC/PoE power supply, 12 VDC power output, and max. current 165 mA, easy for installation.
- IP67 and IK10 protection.
- Supports altitude self-adaptive, which adapts the altitude and angle of installation to improve the detection effect of people.
- Supports crowd detection and leave post detection.



Tripwire People Counting

With deep learning algorithm, Dahua People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., pass No. Working with management platform, it outputs reports to meet your requirements.

In Area No.

With advanced stereo image technology and deep learning algorithm, Dahua In Area No. technology recognizes human targets accurately to count people in area in real-time. You can set people quantity threshold, when the number larger or smaller than the threshold, it triggers linkage. It is applicable in the scene that has limit on people quantity.

Queue Management

With advanced image processing technology and deep learning algorithm, Dahua Queue Management technology counts people quantity in selected area in real time to realize queue management. It supports multiple polygon areas. When No. in area/strand time is not smaller or not larger than the threshold, it triggers alarm.

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.

Technical Specification

Camera

| | |
|----------------------------|--|
| Image Sensor | 1/2.8"4Megapixel progressive CMOS |
| Max. Resolution | 2560 (H) × 1440 (V) |
| ROM | 4GB |
| RAM | 1GB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 2.0 mm: 0.007 lux@F2.0 (Color, 30 IRE) 0.0007 lux@F2.0 (B/W, 30 IRE) 0 lux (Illuminator on) 2.8 mm: 0.005 lux@F1.6 (Color, 30 IRE) 0.0005 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on) |
| S/N Ratio | >56 dB |
| Illumination Distance | 20 m (65.62 ft) (IR LED) |
| Illuminator On/Off Control | Auto |
| Illuminator Number | 1 (IR LED) |
| Pan/Tilt/Rotation Range | Tilt: –10° to 70° |

Lens

| | | | | | |
|----------------------|---|--------------------|-------------------|-------------------|------------------|
| Lens Type | Fixed-focal | | | | |
| Lens Mount | M12 | | | | |
| Focal Length | 2.0 mm; 2.8 mm | | | | |
| Max. Aperture | 2.0 mm: F2.0 2.8 mm: F1.6 | | | | |
| Field of View | 2.0 mm: Horizontal: 122°; Vertical: 72°; Diagonal: 141° 2.8 mm: Horizontal: 95°; Vertical: 52°; Diagonal: 114° | | | | |
| Iris Control | Fixed | | | | |
| Close Focus Distance | 2.0 mm: 0.5 m (1.64 ft) 2.8 mm: 1.1 m (3.61 ft) | | | | |
| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
| | 2.0 mm | 44.8 m (146.98 ft) | 17.9 m (58.73 ft) | 9.0 m (29.52 ft) | 4.5 m (14.76 ft) |
| | 2.8 mm | 63.6 m (126.64 ft) | 25.4 m (50.52 ft) | 12.7 m (25.26 ft) | 6.4 m (12.80 ft) |

Smart Event

| | |
|-----|----------------------------------|
| IVS | Abandoned object; missing object |
|-----|----------------------------------|

Professional, intelligent

| | |
|----------------------------|--|
| IVS (Perimeter Protection) | Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection |
| Face Detection | Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting |

| | |
|----------------------------|---|
| People Counting | Tripwire people counting, drawing polygonal lines for tripwire, generating and exporting report (day/week/month/year); People counting in area, generating and exporting report (day/week/month); Queue management, generating and exporting report (day/week/month); 4 rules can be set for tripwire, people counting in area and queue management; Supports crowd detection; Supports intelligence trajectory. |
| Abnormal Behavior Analysis | Leave post detection which triggers alarms when no one is in the detection area, personnel have left their post or there is an abnormal number of people on duty in the detection area. Supports setting up to 20 personnel on duty at the same time. |
| 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: 2560 × 1440 @ (1–25/30 fps) Sub stream: 704 × 576 @ (1–25 fps)/704 × 480 @ (1–30 fps) Third stream: 1920 × 1080 @ (1–25/30 fps) |
| Stream Capability | 3 streams |
| Resolution | 4 M (2560 × 1440); 3 M (2048 × 1536/2304 × 1296); 1080p (1920 × 1080); 1.3 M (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: 32 kbps–8192 kbps H.265: 12 kbps–8192 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 |
| Noise Reduction | 3D NR |
| Motion Detection | OFF/ON (4 areas, rectangular) |
| Region of Interest (RoI) | Yes (4 areas) |
| Smart Illumination | Yes |
| Defog | Yes |
| Privacy Masking | 4 areas |
| Audio | |
| Built-in MIC | Yes |
| Built-in Speaker | Yes |
| Audio Compression | PCM; G.711a; G.711Mu; 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; face detection; In Area No.; stay alarm; people counting; abnormal number of people detection; security exception |
|-------------|---|

Network

| | |
|---------------------|---|
| Network Port | RJ-45 (10/100/1000 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 |
| 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 and later Chrome Firefox Safari: Safari 12 and later |
| Management Software | Smart PSS; DSS; DMSS |
| Mobile Client | iOS; Android |

Certification

| | |
|----------------|--|
| Certifications | CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC:47 CFR FCC Part 15, Subpart B; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14 |
|----------------|--|

Port

| | |
|---------------|--|
| RS-485 | 1 (baud rate range: 1200 bps–115200 bps) |
| Audio Input | 2 channels (RCA port) |
| Audio Output | 1 channel (RCA port) |
| Alarm Input | 2 channels in: 5 mA 3 V–5 VDC |
| Alarm Output | 2 channels out: 300 mA 12 VDC |
| Analog Output | 1 channel (CVBS output: BNC) |

Power

| | |
|-------------------|--|
| Power Supply | 12 VDC/PoE (802.3af) |
| Power Consumption | Basic: 4 W (12 VDC); 6.4 W (PoE) Max. (H.265+main stream/IR intensity+IR on): 11.3 W (12 VDC); 12.9 W (PoE) |

Environment

| | |
|-----------------------|--------------------------------------|
| Operating Temperature | –40 °C to +60 °C (–40 °F to +140 °F) |
| Operating Humidity | ≤95% |
| Storage Temperature | –40 °C to +60 °C (–40 °F to +140 °F) |

| | |
|------------|------------|
| Protection | IP67; IK10 |
|------------|------------|

Structure

| | |
|--------------------|--|
| Casing | Metal |
| Product Dimensions | 204.0 mm × 78.0 mm × 61.6 mm (8.03" × 3.07" × 2.43") (L × W × H) |
| Net Weight | 0.82 kg (1.81 lb) |
| Gross Weight | 1.18 kg (2.60 lb) |

Ordering Information

| Type | Model | Description |
|------------------------|--------------------|--------------------------------------|
| 4MP Camera | DH-IPC-HDW8441X-3D | 4MP WizMind Dual-Lens Network Camera |
| | IPC-HDW8441X-3D | 4MP WizMind Dual-Lens Network Camera |
| Accessories (Optional) | PFB110W | Ceiling Mount Bracket |
| | PFA156 | Pole Mount Bracket |

Accessories

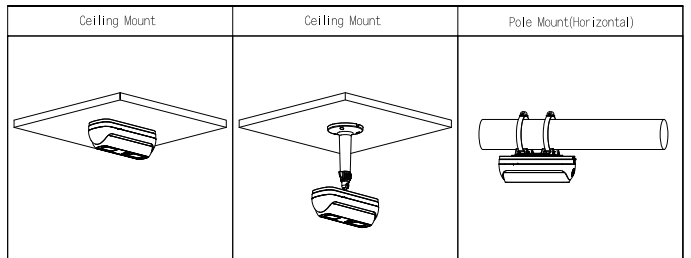
Optional:



PFB110W
Ceiling Mount
Bracket



PFA156
Pole Mount
Bracket



Dimensions (mm[inch])

