

DH-IPC-HDBW5441E-ZE-HDMI

4MP IR Vari-focal Vandal-proof Dome WizMind Network Camera



Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS, 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

With starlight solution and deep learning algorithm, Dahua WizMind 5 Series network camera has various intelligent functions, including face capture, perimeter protection and people counting, which greatly improve the accuracy of video analysis. The series camera supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

Video Metadata

With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

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.

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., and In Area No. Working with management platform, it outputs reports to meet your requirements.

- 4-MP 1/2.9" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4MP (2688×1520) @25/30 fps.
- Built-in IR LED, and the max. illumination distance is 40 m.
- ROI, SVC, SMART H.264+/H.265+, AI H.264/H.265, encoding after filter, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- With deep learning algorithm, it supports: video metadata, IVS, face detection, smart object detection, and people counting, etc.
- Alarm: 2 in, 1 out; audio: 1 in, 1 out; supports max. 512 GB Micro SD card, built-in MIC.
- 12 VDC/PoE power supply; ePoE.
- IP67 and IK10 protection.
- Supports HDMI 1.4a and outputs a max resolution of 2560 × 1440@25/30 fps through the HDMI port. The max frame rate supported for 1080p and 720p is 50/60 fps.
- Features HDMI self-adaptation, which automatically adjusts the output resolution based on the max resolution supported by both the camera and the display.
- SMD 3.0.



Heat Map

Dahua heat map technology is used to display the crowd density and people appearance probability. Display the crowd status by different colors. Generally, the crowd status is the statistics of people quantity in space and time dimensions.

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 40 cm (Impact energy is 20J).

Wide voltage: The camera allows $\pm 30\%$ (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 | 1/2.9" 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 | 0.002 lux@F1.6 (Color, 30 IRE) 0.0002 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on) |
| S/N Ratio | > 56 dB |
| Illumination Distance | Up to 40 m (131.23 ft) (IR) |
| Illuminator On/Off Control | Auto;Manual;Zoomprio |
| Illuminator Number | 3 (IR LED) |
| Angle Adjustment | Pan: 0°–355°; Tilt: 0°–65°; Rotation: 0°–355° |

Lens

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|----------------------|--------------------------------------|
| Lens Type | Motorized vari-focal |
| Lens Mount | φ14 |
| Focal Length | 2.7 mm–13.5mm |
| Max. Aperture | F1.6 |
| Field of View | H: 104°–29°; V: 54°–16°; D: 125°–34° |
| Iris Control | Auto |
| Close Focus Distance | 0.1 m (0.33 ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---------------|------|-------------------------|------------------------|------------------------|-----------------------|
| | W | 64.0 m (209.97 ft) | 25.6 m (83.99 ft) | 12.8 m (41.99 ft) | 6.4 m (21.00 ft) |
| | T | 210.0 m (688.98 ft) | 84.0 m (275.59 ft) | 42.0 m (137.80 ft) | 21.0 m (68.90 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

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|----------------------------|--|
| 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 |
| Smart Object Detection | Smart abandoned object; smart missing object |
| SMD | SMD 3.0 |
| 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. |

| | |
|-----------------|---|
| Face Detection | Face detection; snapshot; snapshot optimization; optimal face snapshot upload; face snapshot enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions; 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 and people counting in area; generating and exporting report (day/week/month/year); 4 rules can be set for tripwire, people counting in area and queue management. |
| Heat Map | Yes |
| Video Metadata | Motor vehicle, non-motor vehicle, face, and human body detection; snapshot; snapshot optimization; optimal face snapshot upload. Extraction of motor vehicle and non-motor vehicle attributes: extracts 6 attributes for motor vehicle and 6 attributes for non-motor vehicle Extraction of face and human body attributes: extracts 6 attributes for face and 8 attributes for human body. |

Video

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|-----------------------------|---|
| 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@(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) third stream: 1920 × 1080@(1–25/30 fps) *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 | 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 | VBR;CBR |
| Video Bit Rate | H.264: 3 kbps–16384 kbps; H.265: 3 kbps–16384 kbps |
| HDMI Output | 2560 × 1440@25/30 fps; 1920 × 1080@25/30/50/60 fps; 1280 × 720@25/30/50/60 fps |
| 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) |

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|--------------------|---------|
| Smart Illumination | Yes |
| Defog | Yes |
| Image Rotation | Yes |
| Mirror | Yes |
| Privacy Masking | 4 areas |
| LDC | Yes |

Audio

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| Built-in MIC | Yes, built-in Mic |
| Audio Compression | PCM; G.711a; G.711Mu; G.726; G.723 |

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; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; voltage detection; external alarm; face detection; video metadata; SMD; people counting in area; stay detection; people counting; people number error detection; queue people number alarm; queue time alarm; security exception; defocus detection |
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Network

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|---------------------|---|
| 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: 80 M) |
| Storage | FTP; SFTP; Micro SD card (support max. 512 GB); NAS |
| Browser | IE: IE 11 and later; Chrome: Chrome 45 and later; Firefox: Firefox 46 and later; Safari: Safari 12 and later |
| 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 certification; syslog; HTTPS; 802.1x; Trusted boot; Trusted execution; Trusted upgrade |

Certification

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

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|--------------|--|
| HDMI | HDMI 1.4a, type A, female plug |
| Audio Input | 1 channel (RCA port) |
| Audio Output | 1 channel (RCA port) |
| Alarm Input | 2 channels in: wet contact, 5 mA 3–5 VDC |

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|--------------|---|
| Alarm Output | 1 channel out: wet contact, 300 mA 12 VDC |
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Power

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| Power Supply | 12 VDC; PoE (802.3af); ePoE |
| Dual Power Backup | When the power adapter and PoE provide power at the same time, disconnect one of them. The device will continue to work, but will not restart. |
| Power Consumption | Basic: 3.6 W (12 VDC), 4.7 W (PoE); Max.: 8.3 W (12 VDC), 8.8 W (PoE) (H.265+ WDR+ Intelligence on+IR on) |

Environment

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|-----------------------|--------------------------------------|
| 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

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|--------------------|---------------------------------------|
| Casing Material | Metal |
| Product Dimensions | Φ159.1 mm × 118.1 mm (6.26" × Φ4.65") |
| Net Weight | 0.92 kg (2.03 lb) |
| Gross Weight | 1.22 kg (2.69 lb) |

Ordering Information

| Type | Model | Description | |
|-------------------|--------------------------|--|--------------------|
| IP CAMERA | DH-IPC-HDBW5441E-ZE-HDMI | 4MP IR Vari-focal Vandal-proof Dome WizMind Network Camera | |
| | DH-PFB300C | Ceiling Mount Bracket | |
| | DH-PFA101 | Mount adapter | |
| | DH-PFB302S | Wall mount bracket | |
| | DH-PFA151 | Corner mount bracket | |
| | G3416GW | G3/4" Water Joint | |
| | DH-PFA150 | Pole Mount Bracket | |
| | DH-PFB211W | Wall mount bracket | |
| | Accessories (Optional) | DH-PFA152-E | Pole Mount Bracket |
| | | DH-PFA138 | Junction Box |
| DH-PFB201C | | In-Ceiling 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-P100/512GB | MicroSD Card | | |

Accessories

Dimensions (mm[inch])

Optional:



DH-PFB300C
Ceiling Mount Bracket



DH-PFA101
Mount adapter



DH-PFB302S
Wall mount bracket



DH-PFA151
Corner mount bracket



G3416GW
G3/4" Water Joint



DH-PFA150
Pole Mount Bracket



DH-PFB211W
Wall mount bracket



DH-PFA152-E
Pole Mount Bracket



DH-PFA138
Junction Box



DH-PFB201C
In-Ceiling 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-P100/512GB
MicroSD Card

