DH-IPC-HDW8441X-BV-3D

4MP WizMind Dual-Lens Stereo Analysis 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.

System 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, stereo analysis, perimeter protection and face detection, which provides better intelligent application solutions based on scenes.

Functions

Two-way Talk

With its built-in high-sensitivity microphone and high-power speaker, the camera realizes two-way talk through the mobile app.

IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

Stereo Analysis

With deep learning algorithm and scene 3-dimensional information, Dahua Stereo Analysis technology can recognize people's behaviors, such as fall detection, violence detection, stay detection, and people approaching detection, and then generates alarm signals and triggers linkage.

Privacy Protection

Dahua Privacy Protection technology can mask the detected face and human body to protect the privacy of some special targets.

Height Self-adaptation

Conveniently adjusts the size of the field of view according to the camera installation height and angle, and improves detection performed by the algorithms via increasing the proportion of the target's effective pixels in the video.

- 4-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520)@25/30 fps.
- Built-in GPU chips, binocular stereo vision and deep learning algorithm, which can improve the detection accuracy.
- Intelligent functions: Stereo analysis and IVS.
- Stereo analysis: Crossing warning line, warning area intrusion, running detection, people approaching detection, violence detection, fall detection, abnormal number of people detection and people stay detection.
- Privacy Protection: Mosaics can be automatically placed over the face or body of a person to protect their privacy.
- Built-in IR LED, and the max. illumination distance is 20 m.
- Sound Management: With its built-in Mic and Dahua noise reduction algorithms, the camera supports the sound management function, using it to collect vocals, adaptively reduce noise, and filter non-human voices.
- ROI, SMART H.264+/H.265+, AI H.264/H.265, flexible coding, applicable to various bandwidth and storage environments.
- Height self-adaptation and height filtering.
- Alarm: 2 in, 2 out; audio: 2 in, 1 out; RS-485; BNC; supports max. 512 G Micro SD card; Built in Mic and speaker, support two-way talk.
- 12 VDC/PoE/ePoE power supply, 12 VDC power output, max. current 165 mA, and peak current 700 mA, easy for installation.
- IP67 and IK10 protection.



AI Coding

Through Dahua AI Coding technology, the camera adopts advanced scene adaptive bit rate control algorithms to improve the efficiency of coding using H.265 and H.264 codecs. It offers the basic bit rate control technologies of constant bitrate (CBR) and variable bitrate (VBR), along with the new average bitrate (ABR). ABR allocates bit rate in each period more reasonably under expected storage conditions, and combines the advantages of CBR's maintenance of bit rate stability over the long term and VBR's prioritization of image quality over the short term.

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" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	4 GB
RAM	2 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	2.0 mm: 0.005 lux@F2.0 (Color,30 IRE) 0.0005 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	Up to 20 m (65.62 ft) (IR)
Illuminator On/Off Control	Auto;Manual
Illuminator Number	1 (IR LED)
Angle Adjustment	Tilt:-10° to 70°

Lens

Lens Type	Fixed-focal
Lens Mount	M12
Focal Length	2.8 mm;2.0 mm
Max. Aperture	2.0 mm: F2.0 2.8 mm: F1.6
Field of View	2.0 mm: H: 108°; V: 74°; D: 117° 2.8 mm: H: 87°; V: 55°; D: 97°
Iris Control	Fixed
Close Focus Distance	2.0 mm: 0.4 m (1.31 ft) 2.8 mm: 1.1 m (3.61 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.0 mm	44.8 m (146.98 ft)	17.9 m (58.73 ft)	9.0 m (29.53 ft)	4.5 m (14.76 ft)
	2.8 mm	63.6 m (208.66 ft)	25.4 m (83.33 ft)	12.7 m (41.67 ft)	6.4 m (21.00 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.

Smart Event

IVS	Abandoned object; missing object

Intelligence

IVS (Perimeter Protection)	Tripwire; intrusion; fast moving (the three functions support the classification and accurate detection of vehicle and human); parking detection; people gathering; loitering detection; privacy protection
Stereo Analysis	Crossing warning line; warning area intrusion; running detection (only supported by inclined mount cameras); people approaching detection; violence detection (including fighting and smashing); fall detection; abnormal number of people detection; people stay detection; privacy protection; height filtering
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+
AI Coding	AI H.265; AI H.264
Video Frame Rate	Main stream: 2688 × 1520@(1–25/30 fps) sub stream: 1920 × 1080@(1–25/30 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	ABR;CBR;VBR
Video Bit Rate	H.264: 3 kbps–8192 kbps H.265: 3 kbps–8192 kbps
Day/Night	Auto(ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	DWDR
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)
Image Stabilization	Electronic Image Stabilization (EIS)
Smart Illumination	Yes
Defog	Yes
Privacy Masking	8 areas

Audio

Built-in MIC	Yes, built-in 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; voltage detection; illegal access; motion detection; video tampering; scene changing; audio detection; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; crossing warning line; warning area intrusion; running detection; abnormal number of people detection; fall detection; people approaching detection; violence detection; people stay detection

Network

Network Port	RJ-45 (10/100/1000 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; auto registration
Interoperability	ONVIF (Profile S; Profile G; Profile T); P2P; CGI
User/Host	20
Storage	FTP; SFTP; Micro SD card (support max. 512 GB); NAS
Browser	IE: IE 9 and later Chrome: Chrome 41 and later Firefox: Firefox 50 and later Safari: Safari 10 and later
Management Software	Smart PSS Lite; DSS; DMSS
Mobile Client	iOS;Android
Cyber Security	Configuration encryption;Trusted execution;Session security;Digest;Security logs;WSSE;Account lockout;Security warning;syslog;Video encryption;802.1x;IP/MAC filtering;HTTPS;Trusted upgrade;Trusted boot;Firmware encryption;Generation and importing of X.509 certification

Certification

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

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: wet contact, 5 mA 3–5 VDC
Alarm Output	2 channels out: wet contact, 300 mA 12VDC
Analog Output	1 channel (CVBS output: BNC)
Power Output	12 VDC power output, max. current 165 mA, peak current 700 mA

Power

Power Supply	12 VDC/PoE (802.3af)/ePoE
Power Consumption	Basic: 5.9 W (12 VDC), 7 W (PoE); Max. (intelligence on + IR intensity + turn on the speaker+ power output): 10.8 W (12 VDC), 12.9 W (PoE)

Environment

Operating Temperature	–40 °C to +60 °C (–40 °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	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	1.14 kg (2.51 lb)

Ordering Information

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

Accessories

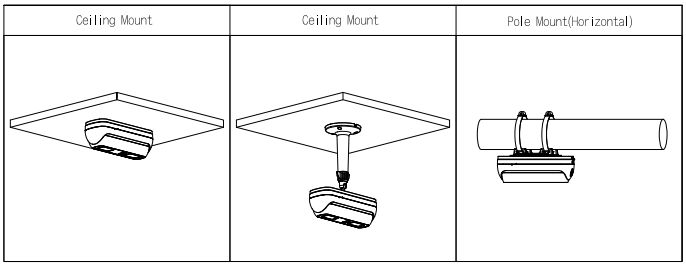
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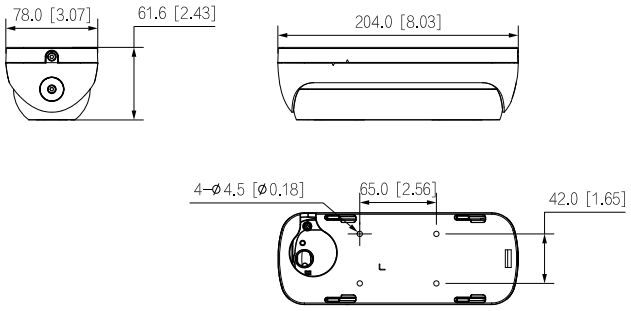
PFA156
Pole Mount Bracket



PFB110W
Ceiling Mount Bracket



Dimensions (mm[inch])



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