DH-IPC-HDW8441X-3D

4MP WizMind Dual-Lens People Counting 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.
- IP67and 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 leaning 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 leaning 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)

	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 (29.52 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 People Counting Network Camera
	IPC-HDW8441X-3D	4MP WizMind Dual-Lens People Counting Network Camera
Accessories (Optional)	PFB110W	Ceiling Mount Bracket
	PFA156	Pole Mount Bracket

Accessories

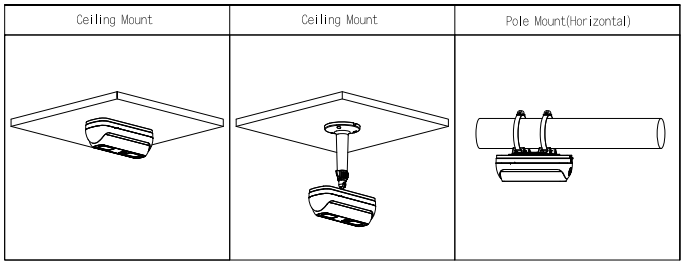
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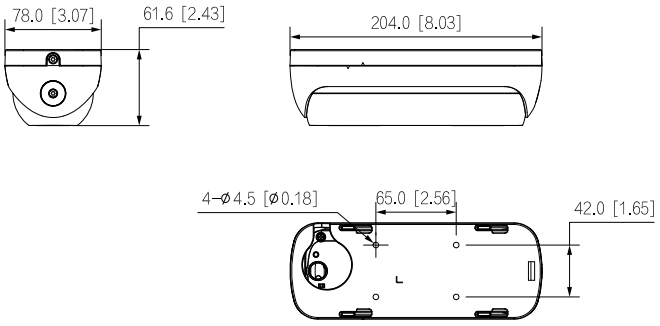
PFB110W
Ceiling Mount
Bracket



PFA156
Pole Mount
Bracket



Dimensions (mm[inch])



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