Dahua TECHNOLOGY

DH-IPC-HDBW5442E-Z4E

4MP IR Vari-focal Dome WizMind Network Camera

WizMind

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

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.

Functions

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.

Face Attributes

With deep learning algorithm, the network camera can recognize face attributes, such as gender, age, expression, glasses, mouth mask, and beard.

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 yearly/monthly/daily reports to meet your requirements.

- 4-MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520)@30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 100 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, fast moving (the three functions support the classification and accurate detection of vehicle and human); abandoned object, missing object, loitering detection, people gathering, parking detection, heat map and face detection.
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict and illegal access.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card.
- 24 VAC/12 VDC/PoE power supply, easy for installation.
- ePoE; IP67, IK10 protection.
- SMD 3.0

ePoE

Dahua's innovative ePoE technology offers a new solution to transmit power and data over long distances between cameras and network switch, allowing more flexible design of surveillance system, improving reliability, reducing installation time and saving money. ePoE technology encompasses pure network systems where a single CAT6 cable can carry signals up to 300 m (984 ft) at 100 Mbps, 800 m (2625 ft) at 10 Mbps.

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 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	1/1.8" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	128MB
RAM	1GB
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	100 m (328.08 ft)
Illuminator On/Off Control	Auto; Manual; Zoomprio
Illuminator Number	3 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–355° Tilt: 0°–65° Rotation: 0°–355°

Lens

Lens Type	Motorized vari-focal
Lens Mount	Module
Focal Length	8 mm–32 mm
Max. Aperture	F1.6
Field of View	Horizontal: 43°–15° Vertical: 23°–8° Diagonal: 50°–17°
Iris Control	Hall
Close Focus Distance	W: 2.5 m (8.20 ft) T: 6 m (19.69 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	W	151.1 m (495.4 ft)	60.7 m (199.1 ft)	30.3 m (99.4 ft)	15.1 m (49.5 ft)
	T	400.0 m (1312.3 ft)	160.0 m (524.9 ft)	80.0 m (262.5ft)	40.0 m (131.2ft)

Smart Event

IVS	Abandoned object; missing object
Heat Map	Yes

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
SMD 3.0	Less false alarm, longer detection distance
Face Detection	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 face attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); face snapshot set as face, one-inch photo or custom; 3 snapshot strategies (real-time snapshot, optimization snapshot and quality first); face angle filter; optimization time setting
People Counting	Tripwire people counting; generating and exporting report (day/month); people counting in area; queue management; 4 rules can be set for tripwire, people counting in area and queue management.
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: D1@ (1–25/30 fps) Third stream: 1080p@ (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	2688 × 1520; 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	CBR/VBR
Video Bit Rate	H.264: 3 kbps–20480 kbps H.265: 3 kbps–20480 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	140 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)
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 4M resolution and lower)
Mirror	Yes
Privacy Masking	8 areas

Audio

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; defocus detection; external alarm; face detection; SMD; people counting in area; stay detection; people counting; security exception

Network

Network Port	RJ-45 (10/100 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; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; P2P
User/Host	20 (Total bandwidth: 80 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	IE: IE 8 and later Chrome Firefox Safari: Safari 12 and later
Management Software	Smart PSS; DSS; DMSS
Mobile Client	iOS; Android

Certification

Certifications	CE-LVD: EN60950-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B; UL/CUL: UL60950-1; CAN/CSA C22.2 No.60950-1-07

Port

Audio Input	1 channel (terminal)
Audio Output	1 channel (terminal)
Alarm Input	1 channel in: 5 mA 3V–5 VDC
Alarm Output	1 channel out: 300 mA 12 VDC

Power

Power Supply	12 VDC/24 VAC/PoE (802.3af)/ePoE
Power Consumption	Basic: 4.9 W (12 VDC); 5.1 W (24 VAC); 5.2 W (PoE) Max. (H.265+three streams+intelligence on+IR on): 12.4 W (12 VDC); 11.9 W (24 VAC); 11.6 W (PoE)

Environment

Operating Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
Operating Humidity	≤ 95%
Storage Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
Protection	IP67; IK10

Structure

Casing	Metal + plastic
Product Dimensions	Φ159.1 mm × 118.1 mm (Φ6.26" × 4.65")
Net Weight	950 g (2.09 lb)
Gross Weight	1200 g (2.65 lb)

Ordering Information

Type	Model	Description
4MP Camera	DH-IPC-HDBW5442EP-Z4E	4MP IR Vari-focal Dome WizMind Network Camera, PAL
	DH-IPC-HDBW5442EN-Z4E	4MP IR Vari-focal Dome WizMind Network Camera, NTSC
Accessories	PFA138	Junction Box Bracket
	PFB210W	Wall Mount Bracket
	PFB300C	Ceiling Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFB201C	In-ceiling Mount Bracket
	PFA101	Mount Adapter
	PFM321D	12 VDC 1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester

Accessories

Optional:

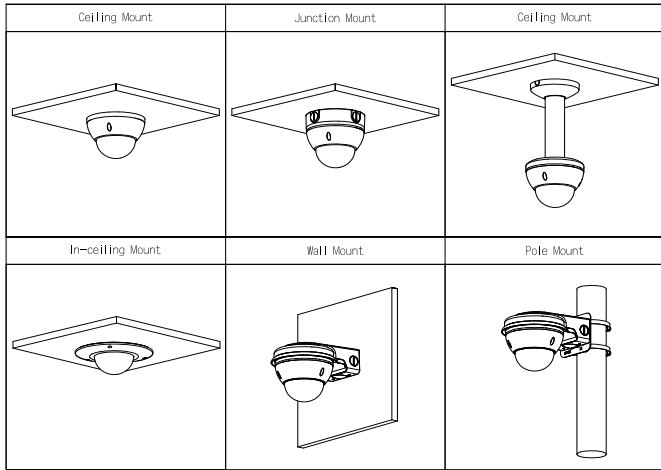|		
PFA138 Junction Box Bracket	PFB210W Wall Mount Bracket	PFB300C Ceiling Mount Bracket
PFA152-E Pole Mount Bracket	PFB201C In-ceiling Mount Bracket	PFA101 Mount Adapter
PFM321D 12 VDC 1A Power Adapter	LR1002-1ET/1EC Single-port Long Reach Ethernet Over Coax Extender	PFM900-E Integrated Mount Tester

Ceiling Mount	Junction Mount	Ceiling Mount
In-ceiling Mount	Wall Mount	Pole Mount

Dimensions (mm[inch])

⌀140.0 [⌀5.51]

⌀159.1 [⌀6.26]

118.1 [4.65]

63.5 [2.5]

3-⌀4.7 [⌀0.19]