DH-IPC-MFW7442K1-Z7-T40

4+4MP Dual-Sight Bullet WizMind 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

With advanced deep learning algorithm, Dahua WizMind 7 Series network camera supports various intelligent functions and satisfies the requirements in different scenes. The camera can accurately recognize person, vehicle, and non-motor vehicle, face, ANPR, and liveness. This series camera has ultra starlight night version effect, and works with ultra-low stream. It supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

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, optical technology, and image sensor of large target surface, Dahua Starlight+ technology can provide clear colorful video in the environment of ultra-low illuminance. It applies to various environments of low illuminance.

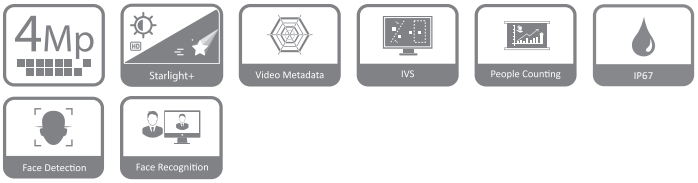
Video Metadata

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.

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.

- 4-MP 1/1.7" CMOS image sensor and 4-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520)@25/30 fps.
- Built-in GPU chip and deep learning algorithm, which can improve the detection accuracy.
- Switch among five intelligent resources: IVS, face detection, video metadata, people counting and face recognition.
- Built-in warm light/IR LED that has a maximum IR illumination distance of 120 m and warm light distance of 80 m.
- 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Alarm: 3 in, 2 out; audio: 2 in, 1 out; RS-485; BNC;supports max. 256 G Micro SD card.
- Designed with the Dahua Noise Reduction Algorithm and built-in dual microphones, the device performs active noise control, eliminating noise of wind scale 3. It has a pick-up distance up to 20 m.
- Built-in Hi-Fi large-diameter speaker covers an auditory range of 30 m when used indoors.
- Sound and light alarms are generated when an alarm is triggered.
- 12 VDC/PoE power supply, 12 VDC power output, max. current 165 mA, easy for installation.
- IP67 protection.



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.

IVS

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

Protection (IP67, 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. 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.

Face Recognition

Dahua Face Recognition technology extracts the features of captured faces and compares them with that in face database to recognize the person identity.

Technical Specification

Camera

Image Sensor	Channel 1: 1/1.7" CMOS Channel 2: 1/2.7" CMOS
Max. Resolution	2688 (H) × 1520 (V)
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	Channel 1: 0.0015 lux @F1.2(Color,30IRE) 0.0003 lux@F1.2(B/W,30IRE) 0 lux (Illuminator on) Channel 2: 0.002 lux @F1.0(Color,30IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
Illumination Distance	Channel 1: 120 m (393.70 ft) (IR)80 m (262.47 ft) (warm light) Channel 2: 20 m (65.62 ft) (warm light)
Illuminator Number	Channel 1: 4 (Mixed (IR + warm) light) Channel 2: 2 (warm LED)

Lens

Lens Type	Channel 1: Motorized vari-focal Channel 2: Fixed-focal
Lens Mount	Channel 1: Module Channel 2: M12
Focal Length	Channel 1: 8 mm–56 mm Channel 2: 3.6 mm
Max. Aperture	Channel 1: F1.2 Channel 2: F1.0
Field of View	Channel 1: Horizontal: 40° (W)–9° (T) Vertical: 22° (W)–5° (T) Diagonal: 46° (W)–10° (T) Channel 2: Horizontal: 81° Vertical: 43° Diagonal: 95°
Close Focus Distance	Channel 1: W: 1 m (3.28 ft); T: 2 m (6.56 ft) Channel 2: 2 m (6.56 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	W	Channel 1: 8 mm–56 mm 151 m (495.41 ft) Channel 2: 3.6 mm 80 m (262.47 ft)	Channel 1: 8 mm–56 mm 60.7 m (199.15 ft) Channel 2: 3.6 mm 32 m (104.99 ft)	Channel 1: 8 mm–56 mm 30 m (98.43 ft) Channel 2: 3.6 mm 16 m (52.49 ft)	Channel 1: 8 mm–56 mm 15.1 m (49.54 ft) Channel 2: 3.6 mm 8 m (26.25 ft)
	T	Channel 1: 8 mm–56 mm 640 m (2,099.74 ft)	Channel 1: 8 mm–56 mm 256 m (839.90 ft)	Channel 1: 8 mm–56 mm 128 m (419.95ft)	Channel 1: 8 mm–56 mm 64 m (209.97ft)

Smart Event

IVS	Abandoned object; missing object

Intelligence

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, face 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); optimization time setting
Face Recognition	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes (gender, age, glasses, expressions, face 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); optimization time setting. Dahua Face Recognition Technology extracts attributes from the captured face, compares it against the attributes in the face library, and then identifies the person. Management of 5 group face libraries,Max supports face contrast in face library with 25,000 faces
People Counting	Tripwire people counting, people counting in area and queue management, generating and exporting report (day/month/year); 4 rules can be set for tripwire, people counting in area and queue management
Video Metadata	Motor vehicle, non-motor vehicle, face, human detection; track; snapshot; snapshot optimization; optimal face snapshot upload. Motor vehicle attributes: license plate, vehicle type, vehicle color, vehicle logo, seatbelt, smoking, calling,etc. Non-motor vehicle attributes: type, color, number of people, top type and color ,helmet. Human body attributes: top/bottom type and color, bag, hat, gender, and umbrella. Face attributes: gender, age, expressions, glasses, face mask and beard.
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	Channel 1: 50 Hz Main Stream: 2688 × 1520@25 fps Sub stream: 704 × 576@25 fps Third stream: 1920 × 1080@25 fps 60 Hz Main Stream: 2688 × 1520@30 fps Sub stream: 704 × 480@30 fps Third stream: 1920 × 1080@30 fps Channel 2: 50 Hz Main Stream: 2688 × 1520@25 fps Sub stream: 704 × 576@25 fps Third stream: 1920 × 1080@25 fps 60 Hz Main Stream: 2688 × 1520@30 fps Sub stream: 704 × 480@30 fps Third stream: 1920 × 1080@30 fps
Resolution	Main Stream: 2688 × 1520 (default); 2560 × 1440; 2304 × 1296; 1920 × 1080; 1280 × 960; 1280 × 720 Sub Stream 1: 704 × 576 (default); 640 × 480; 352 × 288 Sub Stream 2: 1920 × 1080; 1280 × 720; 704 × 576 (default); 640 × 480

Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 32 kbps–8192 kbps
Day/Night	Channel 1: Auto(ICR)/Color/B/W Channel 2: Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Noise Reduction	3D NR
Region of Interest (RoI)	4 areas
Image Stabilization	Electronic Image Stabilization (EIS)
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688 × 1520 resolution and lower.)
Privacy Masking	8 areas

Audio

Audio Compression	PCM; G.711A; G.711Mu; G.726; MPEG2-Layer2; G.722.1; G.729; G.723

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; license plate recognition, people number error; tripwire; input error; intrusion; intensity change; fast moving; people counting; people gathering; motion detection; missing object; parking detection; loitering detection; defocus detection; face detection; abandoned object; stay detection; human detection; queuing stay time; people number error detection; face recognition; video tampering; scene changing

Network

Network Port	RJ-45 (10/100/1000 Base-T)
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; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI
User/Host	20 (Total bandwidth: 160 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	Plug-in: IE: IE 9 and later Chrome: Chrome 86 and earlier Firefox: Firefox 86 and earlier Without Plug-in: Edge Chrome: Chrome 86 and later Firefox: Firefox 86 and later

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B

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	3 channels in: 5 mA 3 V–5 VDC
Alarm Output	2 channels out: 300 mA 12 VDC

Power

Power Supply	12 VDC/PoE
Power Consumption	Basic: 5.5 W (12 VDC); 6.4 W (PoE) Max. (ICR + vari-focal + IR intensity): 19.2 W (12 VDC); 24.6 W (PoE)

Environment

Operating Temperature	–30 °C to +60 °C (–22 °F to 140 °F)
Operating Humidity	≤ 95%
Storage Temperature	–40 °C to +70 °C (–40 °F to +158 °F)
Protection	IP67

Structure

Casing	Metal + plastic
Product Dimensions	283.1 mm × 123.2 mm × 109.5 mm (11.14" × 4.85" × 4.31") (L × W × H)
Net Weight	1,905 g (4.20 lb)
Gross Weight	2,185 g (4.82 lb)

Ordering Information

Type	Model	Description
4 MP Camera	DH-IPC-MFW7442K1-Z7-T40	4+4 MP Dual-Sight Bullet WizMind Network Camera
	IPC-MFW7442K1-Z7-T40	4+4 MP Dual-Sight Bullet WizMind Network Camera
Accessories (Optional)	PFA150-SG	Pole Mount Bracket
	PFA162-SG	Housing Bracket
	PFB605W-SG	Wall Mount Bracket
	PFB603C-SG	Ceiling Mount

Accessories

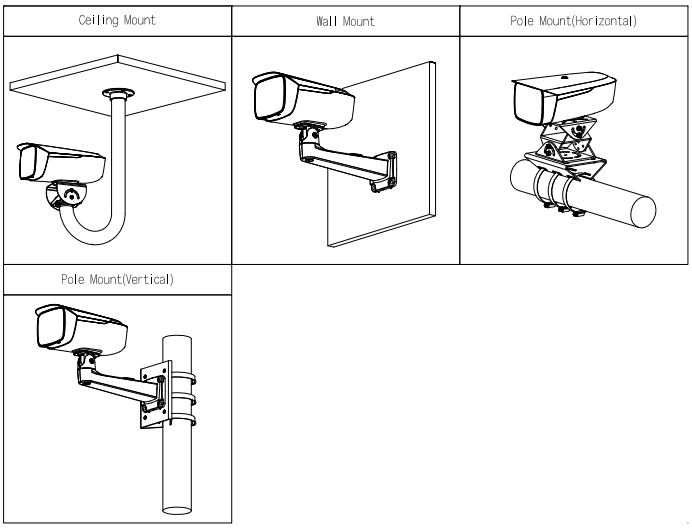
Optional:

PFA150-SG
Pole Mount
Bracket

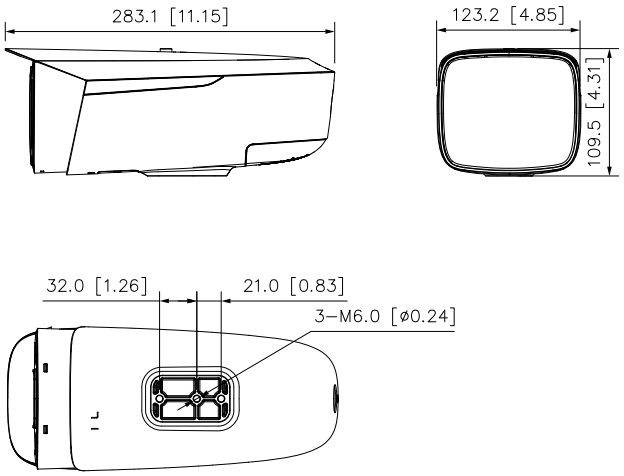
PFA162-SG
Housing
Bracket

PFB605W-SG
Wall Mount
Bracket

PFB603C-SG
Ceiling
Mount



Dimensions (mm[inch])



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