DH-IPC-MFW7459K2-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, 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 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

Xinghan Large-Scale AI Models-Vision

Xinghan Large-Scale AI Models-Vision seamlessly expands the storage and operational capacity of algorithmic models through the powerful integration of edge AI model algorithms and NPU computing power. Engineered with a lightweight transformer architecture and enhanced by model distillation and quantization techniques, it optimizes the computing power consumption of ViT operators. This enables the system to collaborate on multiple tasks simultaneously through joint inference between small and large models optimized for edge devices.

AI-ISP

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

Time-Division Exposure

Time-Division Exposure technology ensures that when the device is taking multiple snapshots of more than one targets, the quality of the snapshots will not be affected. It can also be used to adjust the brightness, speed and more of targets, to produce high quality snapshots. It is widely used in scenes that have pedestrians and vehicles, and captures clear images of faces and license plates.

- Dual 4-MP 1/1.8"CMOS image sensors, low luminance, and high definition image.
- Outputs max 4 MP (2688 × 1520)@25/30 fps.
- Switchable intelligent resources:
  Channel 1 (Detail): Perimeter Protection, face recognition, face detection, ANPR, people counting, video metadata, and heat map.
  Channel 2 (Panoramic): Perimeter Protection.
- Advanced image processing technologies: Time-Division Exposure, Ghost-free WDR, Xinghan face exposure, and Xinghan precise focusing.
- Alarm: 3 in, 2 out; audio: 2 in, 1 out; RS-485; BNC; supports max 1 TB Micro SD card.
- The built-in dual Mic utilizes Dahua's noise reduction algorithms for adaptive noise cancellation. Sound pickup reaches 20 m.
- Built-in Hi-Fi large-diameter speaker covers an auditory range of 30 meters when used indoors.
- 12 VDC/PoE power supply, 12 VDC power output, max current 165 mA, and peak current 700 mA, easy for installation.
- Designed with Stray Light Suppression Structure and a front cover that tilts at an angle of ≥8°, which reduces the impact of headlights on nighttime snapshots.
- Supports adjusting the angle of the panoramic view manually.
- Encrypted with TPM2.0 (FIPS 140-2 level 2).
- Displays the working status with indicators for simplified installation and commissioning.
- Supports window heating.
- IP67 protection.



Dual Visual Angle

With the technology of Dual Visual Angle, the camera can monitor two separate scenes at the same time.

ANPR

With high-performance GPU chip, deep learning algorithm, and lots of sample training learning, Dahua ANPR technology can automatically collect and recognize the vehicle information, including license plate, logo, vehicle type, and vehicle color.

Technical Specification

Camera

Image Sensor	Channel 1 (Detail): 1/1.8"CMOS; Channel 2 (Panoramic): 1/1.8"CMOS
Max. Resolution	Channel 1 (Detail): 2688 (H) × 1520 (V); Channel 2 (Panoramic): 2688 (H) × 1520 (V)
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	Channel 1 (Detail): 0.001 lux (Color, 30 IRE); 0.0001 lux (B/W, 30 IRE); 0 lux (Illuminator on) Channel 2 (Panoramic): 0.001 lux (Color, 30 IRE); 0.0001 lux (B/W, 30 IRE); 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	Up to 80 m (262.47 ft) (Warm light) Up to 130 m (426.51 ft) (IR)
Illuminator On/Off Control	Auto; Manual; Zoomprio
Illuminator Number	6 (Mixed (IR LED+warm) light)
Angle Adjustment	Channel 1 (Detail): NA; Channel 2 (Panoramic): Tilt: ±10°

Lens

Lens Type	Channel 1 (Detail): Motorized vari-focal; Channel 2 (Panoramic): Fixed-focal
Lens Mount	Channel 1 (Detail): Module; Channel 2 (Panoramic): M12
Focal Length	Channel 1 (Detail): 8 mm–56 mm; Channel 2 (Panoramic): 3.6 mm
Max. Aperture	Channel 1 (Detail): F1.2; Channel 2 (Panoramic): F1.0
Field of View	Channel 1 (Detail): H: 43.56°–10.84°; V: 24.17°–6.21° D: 50.69°–12.4°; Channel 2 (Panoramic): H: 93° V: 49°; D: 110°
Iris Control	Channel 1 (Detail): Auto; Channel 2 (Panoramic) : Fixed
Iris Control Type	Channel 1 (Detail): DC-Iris; Channel 2 (Panoramic) : NA

Smart Event

IVS	Channel 1(Detail): Abandoned object; missing object; Channel 2 (Panoramic) : NA

Intelligence

Intelligence Notes	Channel 1 (Detail): Perimeter Protection, face recognition, face detection, ANPR, people counting, video metadata, and heat map. Channel 2 (Panoramic): Perimeter Protection. Intelligent functions cannot be enabled both on Channel 1 and Channel 2 at the same time.
IVS (Perimeter Protection)	Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human), loitering detection, people gathering, parking detection, stay detection, abandoned object, and missing object. Offers Perimeter Protection Large-Scale AI Models to extend the target detection range and reduce the rate of false alarm.
Face Detection	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face 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); 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 and 8 expressions; 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
Heat Map	Yes
ANPR	ANPR, track, priority, snapshot. Vehicle atributes: License plate, vehicle type, vehicle color. Other atributes: Seat belt, smoking, calling.Support up to 10,000 blocklist records and 10,000 allowlist records. The camera can recognize plate numbers of vehicles moving at speeds of up to 60km/h
Video Metadata	Motor vehicle, non-motor vehicle, face, human detection; track; snapshot; snapshot optimization; optimal face snapshot upload. Generates flow statistics for people, motor vehicles, and non-motor vehicles based on the direction, and exports reports. Motor vehicle attributes: License plate, vehicle type, vehicle color, vehicle logo, seatbelt, smoking, and calling. Non-motor vehicle attributes: Type, color, number of people, top type and color, and hat. Human body attributes: Top and bottom type and color, bag, hat, gender, and umbrella.
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)
AI Coding	AI H.265;AI H.264 *Includes smart codec technology, Smart H.265+ and Smart H.264+
Video Frame Rate	Channel 1 (Detail): Main stream: 2688 × 1520@(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) third stream: 1280 × 720@(1–25/30 fps) Channel 2 (Panoramic) : Main stream: 2688 × 1520@(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) third stream: 1280 × 720@(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.
Streaming Capability	3 streams
Resolution	4M (2688 × 1520/2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240); VGA (640 × 480);
Bit Rate Control	VBR; CBR; ABR
Video Bit Rate	H.264: 40 kbps–10240 kbps; H.265: 16 kbps–10240 kbps"
Day/Night	Channel 1(Detail): Color/B/W; Channel 2 (Panoramic) : 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)	4 areas
Image Stabilization	Electronic Image Stabilization (EIS)
Smart Illumination	Yes
Defog	Yes
Image Rotation	Yes
Mirror	Yes
Privacy Masking	8 areas
LDC	Yes
Time-Division Exposure	Yes

Audio

Built-in MIC	Yes, built-in dual Mic
Built-in Speaker	Yes, built-in speaker
Audio Compression	PCM; G.711a; G.711Mu; G.726; AAC; 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
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;TPM 2.0 (FIPS 140-2 level 2);SSL/TLS1.1
Interoperability	ONVIF (Profile S & Profile G & Profile T & Profile M); CGI
User/Host	20 (Total bandwidth: 80M)
Storage	FTP; SFTP; Micro SD card (support max.1 TB); NAS
Browser	IE: IE11 and later Chrome: Chrome 102.0.5005.115 and later Firefox: Firefox130.0.1 and later
Management Software	SmartPSS Lite; DSS Pro; DMSS;

Function

Heater (Window Heating)	Quickly removes water,ice,snow,and mist from the glass to keep images clear

Certification

Certifications	CE LVD: EN IEC62368-1 CE EMC: EN 55032; EN 50130-4; EN 55035; EN 61000-3-3; EN IEC 61000-3-2

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: supports wet contact connection (max load 5 mA 3–5 VDC); supports dry contact connection
Alarm Output	2 channels out: dry contact, max load 1,000 mA 30 VDC/500 mA 50 VAC
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 (±25%); PoE+ (802.3at)
Dual Power Backup	Yes
Power Consumption	Basic: 6.6W (12 VDC); 9.1 W (PoE); Max.: 22.9 W (12 VDC); 25.3 W (PoE) (ICR + vari-focal + IR intensity)

Environment

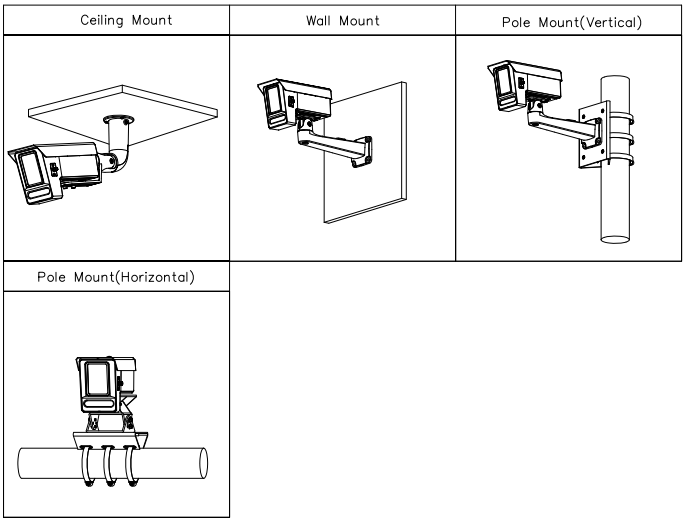
Operating Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
Operating Humidity	≤95% (RH), non-condensing
Storage Temperature	–30 °C to +60 °C (–22 °F to +140 °F)
Storage Humidity	≤95% (RH), non-condensing
Protection	IP67
Anti-corrosion Level	Basic Protection *The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection.

Structure

Casing Material	Metal + plastic
Product Dimensions	243.1 mm × 107.7 mm × 145.5 mm (9.57" × 4.24" × 5.73") (L × W × H)
Net Weight	1700 g (3.75 lb)
Gross Weight	1800 g (3.97 lb)

Ordering Information

Type	Model	Description
IP CAMERA	DH-IPC-MFW7459K2-Z4-T40	4+4MP Dual-Sight Bullet WizMind Network Camera
Accessories (Included)	DH-PFB605W-SG	Wall Mount Bracket
Accessories (Optional)	DH-PFB5111C	Ceiling Mount Bracket
	DH-PFA150-SG	Pole Mount Bracket
	DH-PFA162-SG	Universal Joint
	DH-PFM320D-EN	DC12V2A power adapter
	PFM900-E	Integrated Mount Tester
	DHI-TF-P100/1TB	MicroSD Card



Accessories

Included:



DH-PFB605W-SG
Wall Mount Bracket

Optional:



DH-PFB5111C
Ceiling Mount Bracket



DH-PFA150-SG
Pole Mount Bracket



DH-PFA162-SG
Universal Joint



DH-PFM320D-EN
DC12V2A power adapter

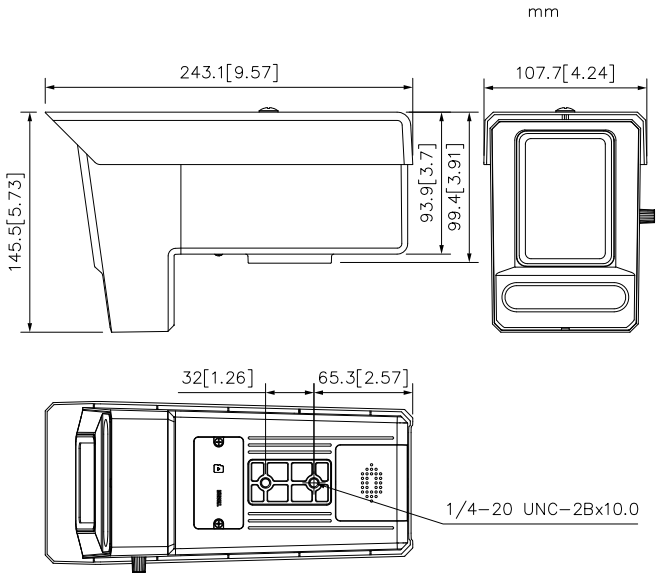


PFM900-E
Integrated Mount Tester



DHI-TF-P100/256GB
MicroSD Card

Dimensions (mm[inch])



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