



DH-IPC-HFW5442E-Z4E

4MP IR Vari-focal 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

Driven by deep learning algorithms, Dahua WizMind S Series network camera offers a variety of intelligent functions that greatly improve the accuracy of audio and video analysis. It supports video metadata, smart sound detection, face detection, perimeter protection, people counting and more. The camera also adopts advanced image processing AI-Powered Image technology and has the Deeplight night vision effect. The camera is dustproof, waterproof and vandal-proof, and is certified as IP67 and IK10 (the type of protection varies depending on the model).

Functions

AI-Powered Image

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

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.

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.

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.

- * The parameters and datasheets below can only be applied to 5442-Z-S3 series.
- 4-MP 1/1.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4MP (2688×1520) @25/30 fps.
- Built-in IR LED, and the max. illumination distance is 120 m.
- ROI, SVC, SMART H.264+/H.265+, AI H.264/H.265, encoding after filter, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- With deep learning algorithm, it supports: video metadata, smart sound detection, IVS, face detection, smart object detection, and people counting, etc.
- Alarm: 2 in, 1 out; audio: 1 in, 1 out; supports max. 512 GB Micro SD card, built-in MIC.
- 12 VDC/PoE power supply; ePoE.
- IP67 and IK10 protection.

• SMD 3.0.



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.

Smart Sound Detection

With deep learning algorithm, Dahua Smart Sound Detection technology can detect and identifies the sound of scream and glass breaking, etc.

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 work normally 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 $\pm 30\%$ (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		4 GB			
RAM		1 GB			
Scanning System		Progressive			
Electronic Shutter Speed		Auto/Manual 1/3 s-1/100,000 s			
Min. Illumination		0.0007 lux@F1.6 (Color, 30 IRE) 0.0004 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)			
S/N Ratio		>56 dB			
Illumination Distance		Up to 120 m (393.70 ft) (IR)			
Illuminator On/Off Control		Auto; Zoomprio; Manual			
Illuminator Number		4 (IR LED)			
Angle Adjustment		Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°			
Lens					
Lens Type		Motorized vari-focal			
Lens Mount		Module			
Focal Length		8 mm–32 mm			
Max. Aperture		F1.6			
Field of View		H: 43°–15°; V: 24°–9°; D: 50°–17°			
Iris Control		Auto			
Close Focus Distance		1.5 m (4.92 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	147.3 m (483.27 ft)	58.9 m (193.24 ft)	29.5 m (96.78 ft)	14.7 m (48.23 ft)
	т	395.0 m (1295.93 ft)	158.0 m (518.37 ft)	79.0 m (259.19 ft)	39.5 m (129.59 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.				

Intelligence

Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection		
t abandoned object; smart missing object		
3.0		
deep learning algorithms and works with back-end es to accurately match targets, such as people and r vehicles, and search through live and recorded is to quickly locate targets.		

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, one-inch photo or custom; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting	
People Counting	Tripwire people counting, generating and exporting report (day/week/month/year); people counting in area and queue management, generating and exporting report (day/week/month); 4 rules can be set for tripwire people counting in area and queue management.	
Heat Map	Yes	
Video Metadata	Motor vehicle, non-motor vehicle, face, human body detection; track; snapshot; snapshot optimization; optimal face snapshot upload. Motor vehicle attributes: vehicle type, vehicle color, vehicle logo and other attributes : seatbelt, smoking, calling. Non-motor vehicle attributes: type, color, number of people, top type and color, hat. Human body attributes: gender, top/bottom type and color, bag, hat 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	
Smart Sound Detection	Yes	
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 fps–25/30 fps) /1920 × 1080 (1 fps–50/60 fps) Sub stream: D1@(1–25/30 fps) Third stream: 1080p@(1–25/30 fps) Fourth stream: 720p@(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	4 streams	
Resolution	4M (2688 × 1520); 3.6M (2560 × 1440); 3M (2048 × 1536); 3M (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: 32 kbps-16384 kbps;H.265: 12 kbps-11008 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	
Noise Reduction	3D NR	

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Motion Detection	OFF/ON (4 areas, rectangular)	
Region of Interest (Rol)	Yes (4 areas)	
Image Stabilization	Electronic Image Stabilization (EIS)	
Smart Illumination	Yes	
Defog	Yes	
	0°/90°/180°/270° (Support 90°/270° with 4M (2688 ×	
Image Rotation	1520) resolution and lower)	
Mirror	Yes	
Privacy Masking	8 areas	
LDC	Yes	
Audio		
Built-in MIC	Yes	
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; 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; video metadata; SMD; people counting in area; stay detection; geople counting; people number error detection; queue people number alarm; queue time alarm; security exception; defocus detection	
Network		
Network Port	RJ-45 (10/100 Enhancement 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; SAMBA; PPPoE; SNMP; P2P	
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI	
User/Host	20 (Total bandwidth: 80 M)	
Storage	FTP; SFTP; Micro SD card (support max. 512 GB); NAS	
Browser	IE: IE 9 and later Chrome: Chrome 102 and later Firefox: Firefox 88 and later	
Management Software	SmartPSS Lite; DSS; DMSS	
Mobile Client	iOS; Android	
Cyber Security	Configuration encryption; trusted execution; Digest; security logs; WSSE; account lockout; 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; FCC: 47 CFR FCC Part 15, Subpart B; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14	
Port		
Audio Input	1 channel (RCA port)	
Audio Output	1 channel (RCA port)	

Alarm Input	2 channels in: wet contact, 5mA 3V–5V DC		
Alarm Output	1 channel out: wet contact, 300mA 12V DC		
Power			
Power Supply	12 VDC/PoE (802.3af)/ePoE		
Dual Power Backup	When the power adapter and PoE provide power at the same time, disconnect one of them. The device will continue to work, but will not restart.		
Power Consumption	Basic: 3.7 W (12 VDC); 4.9 W (PoE) Max. (H.265+ WDR+ Intelligence on+IR on): 9.8 W (12 VDC); 12.3 W (PoE)		
Environment			
Operating Temperature	-30 °C to +60 °C (-22 °F to +140 °F)		
Operating Humidity	≤95%		
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)		
Storage Humidity	10%–95% (RH), non-condensing		
Protection	IP67; IK10		
Structure			
Casing Material	Metal + plastic		
Product Dimensions	273.2 mm × 95.0 mm × 95.0 mm (10.76" × 3.74" × 3.74" (L × W × H)		
Net Weight	1.13 kg (2.49 lb)		
Gross Weight	1.68 kg (3.70 lb)		

Ordering Information				
Туре	Model	Description		
4MP Camera	DH-IPC-HFW5442E-Z4E	4MP IR Vari-focal Bullet WizMind Network Camera		
	IPC-HFW5442E-Z4E	4MP IR Vari-focal Bullet WizMind Network Camera		
Accessories (Optional)	PFA121	Water-proof Junction Box		
	PFA156	Pole mount Bracket		
	PFM321D	12 VDC 1 A Power Adapter		
	PFM900-E	Integrated Mount Tester		
	TF-P100	MicroSD Memory Card		

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Accessories

Optional:



PFA121 Water-proof Junction Box



Pole mount

Bracket

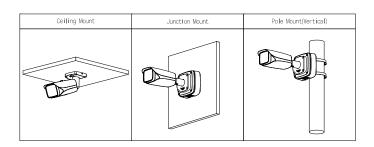
PFM321D 12 VDC 1 A Power Adapter





PFM900-E Integrated Mount Tester

TF-P100 MicroSD Memory Card



Dimensions (mm[inch])

