

DH-IPC-HFW5241E-Z12E

2MP 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 ISP 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-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.

Self-Learning

Empowered by deep learning technology, the device recognizes different types of targets and their statuses through learning and analyzing target features to detect targets and filter out false alarms.

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.

AcuPick

This industry-leading search technology effectively utilizes both frontend and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

- * The parameters and datasheets below can only be applied to 5241-Z-S3 series.
- 2-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2MP (1920×1080) @25/30 fps.
- Built-in IR LED, and the max. illumination distance is 150 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. 1 TB Micro SD card, built-in MIC.
- 12 VDC/PoE power supply; ePoE.
- IP67 and IK10 protection.

• SMD 3.0.



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.

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.

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		1/2.8" CMOS			
Max. Resolution		1920 (H) × 1080 (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@F1.5 (Color, 30 IRE) 0.0004 lux@F1.5 (B/W, 30 IRE) 0 lux (Illuminator on)			
S/N Ratio		>56dB			
Illumination Distance		Up to 150 m (492.13 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		5 mm-60 mm			
Max. Aperture		F1.5			
Field of View		H: 59°–5°; V: 33°–3°; D: 66°–6°			
Iris Control		Auto			
Close Focus Distance		1 m (3.28 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	73.1 m (239.83 ft)	29.2 m (95.80 ft)	14.6 m (47.90 ft)	7.3 m (23.95 ft)
	т	551.7 m (1810.04 ft)	220.7 m (724.08 ft)	110.3 m (361.88 ft)	55.2 m (181.10 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.				

numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.

Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle, animal and human); loitering detection, people gathering, parking detection. Supports long- distance mode. Supports self-learning, it filters out false alarms.	
Smart Object Detection	Smart abandoned object; smart missing object	
SMD	SMD 3.0	
AcuPick	Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people, animal, and motor vehicles, and search through live and recorded videos to quickly locate targets.	
AI SSA	Yes	

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: 1080p@(1–25/30 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	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-12032 kbps; H.265: 12 kbps-7424 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		

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Wiz Mind S | DH-IPC-HFW5241E-Z12E

Alarm Input

Motion Detection	OFF/ON (4 areas, rectangular)		
Region of Interest (Rol)	Yes (4 areas)		
Image Stabilization	Electronic Image Stabilization (EIS)		
Defog	Yes		
	0°/90°/180°/270° (Support 90°/270° with 1080p		
Image Rotation	resolution and lower)		
Mirror	Yes		
Privacy Masking	8 areas		
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; people 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; Auto Register		
Interoperability	ONVIF (Profile S/Profile G/Profile T/Profile M); CGI;		
User/Host	20 (Total bandwidth: 80 M)		
Storage	FTP; SFTP; Micro SD card (support max. 1 TB); 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		
Mobile Client Security	iOS; Android Trusted execution; Digest; Security logs; WSSE; Account lockout; Syslog; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Generation and importing of X.509 certification		
	Trusted execution; Digest; Security logs; WSSE; Account lockout; Syslog; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Generation and importing of		
Security	Trusted execution; Digest; Security logs; WSSE; Account lockout; Syslog; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Generation and importing of		
Security Certification	Trusted execution; Digest; Security logs; WSSE; Account lockout; Syslog; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Generation and importing of X.509 certification CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B;		
Security Certification Certifications	Trusted execution; Digest; Security logs; WSSE; Account lockout; Syslog; 802.1x; IP/MAC filtering; HTTPS; Trusted upgrade; Trusted boot; Generation and importing of X.509 certification CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B;		

2 channels in: wet contact, 5mA 3V–5V DC

1 channel out: wet contact, 300mA 12V DC				
Power				
12 VDC/PoE (802.3af)/ePoE				
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.				
Basic: 3.4 W (12 VDC); 4.6 W (PoE) Max. (H.265+ WDR+ Intelligence on+IR on): 9.7 W (12 VDC); 12.1 W (PoE)				
Environment				
-30 °C to +60 °C (-22 °F to +140 °F)				
≤95%				
-40 °C to +60 °C (-40 °F to +140 °F)				
10%–95% (RH), non-condensing				
IP67; IK10				
Structure				
Metal				
273.2 mm × 95.0 mm × 95.0 mm (10.76" × 3.74" × 3.74") (L × W × H)				
1.12 kg (2.47 lb)				
1.66 kg (3.66 lb)				

Ordering Information					
Туре	Model	Description			
2MP Camera	DH-IPC-HFW5241E-Z12E	2MP IR Vari-focal Bullet WizMind Network Camera			
	IPC-HFW5241E-Z12E	2MP 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			

Wiz Mind S | DH-IPC-HFW5241E-Z12E

Accessories

Optional:



PFA121 Water-proof Junction Box



PEA156



PFM321D

12 VDC 1 A Power

Adapter

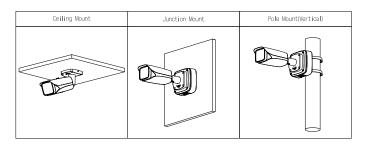
PFA156 Pole Mount Bracket



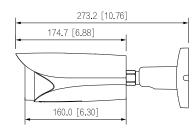
PFM900-E Integrated Mount Tester



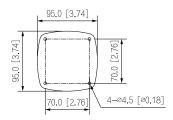
TF-P100 MicroSD Memory Card



Dimensions (mm[inch])







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