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DH-IPC-HFW5449T1-ZE-LED

4MP Full-color Vari-focal Warm LED 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 full color solution and deep learning algorithm, Dahua WizMind 5 Series network camera has various intelligent functions, including video metadata, face detection, perimeter protection and people counting,etc. which greatly improve the accuracy of video analysis. The series camera supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

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.

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.

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.

The parameters and datasheets below can only be applied to 5449-ZE-S2 series.

· 4-MP 1/1.8" CMOS image sensor, low illuminance, high image definition.

· Outputs max. 4 MP (2688 × 1520) @30 fps.

· Built-in warm light and the max. illumination distance is 70 m.

· ROI, SVC, 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.

· With deep learning algorithm, it supports: video metadata,IVS, face detection, smart object detection, and people counting, etc.

· Alarm: 2 in, 1 out; audio: 1 in, 1 out; supports max. 512 G Micro SD card, built-in dual Mic and speaker.

· 12 VDC/PoE power supply; ePoE.

· IP67 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 yearly/monthly/daily reports to meet your requirements

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, 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.

Full-color

With high-performance sensor and large aperture lens, Dahua Full-color technology can display clear colorful image in the environment of ultra-low illuminance. With this photosensitivity technology, the camera can capture more available light, and display more colorful image details.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	256 MB
RAM	1 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.0005 lux@F1.0
S/N Ratio	> 56 dB
Illumination Distance	Up to 70 m (229.66 ft)
Illuminator On/Off Control	Auto; Manual; Zoomprio
Illuminator Number	4 (Warm light)
Angle Adjustment	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

Lens

Lens Type	Motorized vari-focal
Lens Mount	Module
Focal Length	2.7 mm–12 mm
Max. Aperture	F1.0 (Constant)
Field of View	H: 104.7°–56.1° V: 54.9°–31.4° D: 127.6°–64.9°
Iris Control	Auto
Close Focus Distance	1.5 m (4.92 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	65.10 m (213.58 ft)	26.04 m (85.43 ft)	13.02 m (42.72 ft)	6.51 m (21.36 ft)
	T	111.45 m (365.65 ft)	44.58 m (146.26 ft)	22.29 m (73.13 ft)	11.14 m (36.55 ft)

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
Smart Object Detection	Smart abandoned object; smart missing object
SMD 3.0	Less false alarm, longer detection distance
Face Detection	Face detection; 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); face angle filter; optimization time setting.
People Counting	Tripwire people counting and people counting in area; generating and exporting report (day/month/year); 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, and human body detection; snapshot; snapshot optimization; optimal face snapshot upload. Extraction of motor vehicle and non-motor vehicle attributes: extracts 6 attributes for motor vehicle and 6 attributes for non-motor vehicle Extraction of face and human body attributes: extracts 6 attributes for face and 8 attributes for human body.
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 fps–25/30 fps) Sub stream: D1@(1 fps–25/30 fps) Third stream: 1080p@(1 fps–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; 2560 × 1440; 2048 × 1536; 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–8192 kbps H.265: 12 kbps–8192 kbps
Day/Night	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)
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 4M resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
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; scene changing; audio detection; voltage detection; external alarm; face detection; SMD; security exception; people detection; area people counting; stay alarm; people counting; people number exception detection

Network

Network Port	RJ-45 (10/100 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; 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	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

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU

Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	2 channel in: wet contact, 5mA 3V–5V DC
Alarm Output	1 channel out: wet contact, 300mA 12V DC

Power

Power Supply	12 VDC/PoE+ (802.3at)/ePoE
Power Consumption	Basic: 2.7 W (12 VDC); 4.2 W (PoE) Max. (H.265+ warm light+ intelligence on + three streams): 11.3 W (12 VDC); 13 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)
Protection	IP67
Storage Humidity	10%–95% (RH), non-condensing

Structure

Casing Material	Metal
Product Dimensions	288.4 mm × 94.4 mm × 84.7 mm (11.35" × 3.72" × 3.33") (L × W × H)
Net Weight	1050 g (2.31 lb)
Gross Weight	1470 g (3.24 lb)

Ordering Information

Type	Model	Description
4MP Camera	DH-IPC-HFW5449T1-ZE-LED	4MP Full-color Vari-focal Warm LED Bullet WizMind Network Camera
	IPC-HFW5449T1-ZE-LED	4MP Full-color Vari-focal Warm LED Bullet WizMind Network Camera
Accessories (Optional)	PFA130-E	Water-proof Junction Box
	PFA152-E	Pole Mount Bracket
	PFM321D	12 VDC 1A Power Adapter
	PFM900-E	Integrated Mount Tester
	TF-P100	MicroSD Memory Card

Accessories

Optional:

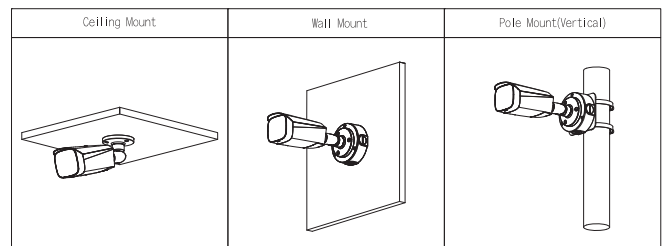PFA130-E
Water-proof
Junction Box

PFA152-E
Pole Mount Bracket

PFM321D
12 VDC 1A Power Adapter

PFM900-E
Integrated Mount
Tester

TF-P100
MicroSD
Memory Card

Ceiling Mount	Wall Mount	Pole Mount(Vertical)

Dimensions (mm[inch])

288.4 [11.35]

197.3 [7.77]

94.4 [3.72]

84.7 [3.33]

⌀90.4 [⌀3.56]

⌀70.0 [⌀2.76]

3−⌀4.7 [⌀0.19]