DH-IPC-HFW5541EP-ZE
5MP IR Vari-focal Bullet WizMind Network Camera

· 1/2.7" 5Megapixel progressive scan CMOS
· ROI, SMART H.264+/H.265+, flexible coding, applicable to various
  bandwidth and storage environments
· 25/30 fps@2592 × 1944, 50/60 fps@1080P(1920 × 1080)
· WDR (120 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
· Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
· 2.7 mm–13.5 mm motorized lens
· 2/1 Alarm in/out, 1/1 audio in/out
· Max. IR LEDs Length 50 m
· Micro SD memory, IP67, IK10

ePoE **WizMind**

5Mp | Face Detection | Face Attributes | Perimeter Protection | People counting | Starlight

Launched by Dahua Technology, Dahua WizMind is a full portfolio of so-lutions 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 starlight solution and deep learning algorithm, Dahua WizMind 5 Series network camera has various intelligent functions, including face capture, perimeter protection and people counting, 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, track-ing, capturing and selecting the best face image, and then outputs face snapshot.

Face Attributes

With deep learning algorithm, the network camera can recognize face attributes, such as gender, age, expression, glasses, mouth mask, and beard.

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 detec-tion based on target type (such as tripwire, intrusion, fast moving, park-ing detection, loitering detection and gathering detection) are largely reduced.

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.

ePoE

Dahua ePoE technology provides a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves con-struction and wiring cost. This technology, designed by adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 LAN Cable or coaxial cable media, without repeater.

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 works normal 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 ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to out-door environment with instable voltage.

Onvif

Technical Specification

Camera

Image Sensor	1/2.7" 5Megapixel progressive scan CMOS
Max. Resolution	2592 (H) × 1944 (V)
RAM/ROM	1 GB/128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3 s–1/100000 s
S/N Ratio	> 56 dB
Minimum Illumination	Color : 0.005 Lux @ F1.5 Black & White : 0.003 Lux@F1.5, 0Lux@F1.5(IR On)
Illumination Distance	Distance up to 50 m (164 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	4(IR LED)

Lens

Lens Type	Motorized vari-focal
Mount Type	Board-in
Focal Length	2.7 mm–13.5 mm
Max. Aperture	F1.5
Angle of View	H: 100°–28°, V: 72°–21° (2592 × 1944) H: 104°–29°, V: 55°–16° (2688 × 1520)
Aperture Type	Auto
Close Focus Distance	0.8 m (2.62 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	64m(210ft)	26m(85ft)	13m(43ft)	6m(20ft)
	T	212m(696ft)	85m(279ft)	42m(138ft)	21m(69ft)

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0˚–360˚; Tilt: 0˚–90˚; Rotation: 0˚–360˚

Artificial Intelligence

Face Detection	Face detection; track; optimization; snapshot; report high quality picture; face enhancement; face exposure; face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear), mask, beard; face matting setting: face, single inch photo;three snapshot methods: real-time snapshot, optimization snapshot, quality priority; face angle filter; optimization time setting
Perimeter Protection	Tripwire; intrusion; abnormal motion [fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection; people gathering; parking detection]
People Counting	Support the counting of enter number, leave number, and pass number, and displaying and outputting yearly/monthly/daily reports. Support the counting of number in area, and 4 rules configuration. Count number of people or stay time and link alarm. Support queue management, and 4 rules configuration. Count number of people or stay time and link alarm

General Intelligence

Event Trigger	Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access, Storage anomaly
General Intelligence	Object Abandoned/Missing
Heat Map	Yes

Video

Compression	H.265,H.264,H.264B,H.264H, MJPEG (only supported by sub stream)
Smart Codec	Smart H.265+/ Smart H.264+
Streaming Capability	3 Streams
Resolution	2592 × 1944/2688 × 1520/2560 × 1440/2304 × 1296/1080P (1920 × 1080)/1.3M (1280 × 960)/720P (1280 × 720)/D1 (704 × 576/704 × 480)/VGA (640 × 480)/CIF (352 × 288/352 × 240)
Frame Rate	Main Stream: 2592 × 1944 (1 fps–25/30 fps) 2560 × 1440 (1 fps–25/30 fps) 1920 × 1080 (1 fps–50/60 fps) Sub Stream: D1 (1 fps–20/30 fps) D1 (1 fps–50 fps) Third Stream: 1080P (1 fps–17 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 Kbps–8192 Kbps H.265: 19 Kbps–8192 Kbps
Day/Night	Auto(ICR)/Color/B/W
BLC Mode	BLC/HLC/WDR (120 dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Off/On (4 Zone, Rectangle)
Region of Interest	Off/On (4 Zone)
Electronic Image Stabilization (EIS)	Yes
Smart Illumination	Yes
Defog	Yes
Flip	0°/90°/180°/270°
Mirror	Off/On
Privacy Masking	Off/On (5 Area, Rectangle)

Audio

Audio Compression	G.711a, G.711Mu, AAC, 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;Defocus Detection;scene changing;intrusion;tripwire;abandoned object;missing object;fast moving;parking detection;loitering detection;people gathering;audio detection;people counting;face detection;voltage detection;People counting in area;Stay alarm;People No. exception detection;Queue Management

Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Protocol	IPv4;IPv6;HTTP;HTTPS;TCP;UDP;ARP;RTP;RTSP;RTCP;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP;NTP;Multicast;ICMP;NFS;PPPoE;IEEE802.1x;SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T), CGI, Milestone, Genetec, P2P
User/Host	20 Users
Storage	NAS;FTP;SFTP;Dahua Cloud Micro SD card 256 GB
Browser	IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)
Management Software	Smart PSS, DSS, DMSS
Mobile Phone	iOS, Android

Certifications

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Interface

Audio Interface	1/1 channel In/Out
Alarm	2 channel In: 5mA 5V DC 1 channel Out: 300mA 12V DC

Electrical

Power Supply	DC 12V (±30%), PoE (IEEE 802.3af)
Power Consumption	<10.9W

Environmental

Operating Conditions	-30° C to +60° C (-22° F to +140° F) /Less than 95% RH
Storage Conditions	-40° C to +60° C (-40° F to +140° F)
Protection Grade	IP67,IK10

Construction

Casing	Metal, plastic
Dimensions	273.2 mm × 95.0 mm × 95.0 mm (10.76" × 3.74" × 3.74")
Net Weight	1.11 kg (2.44 lb)
Gross Weight	1.51 kg (3.33 lb)

Ordering Information

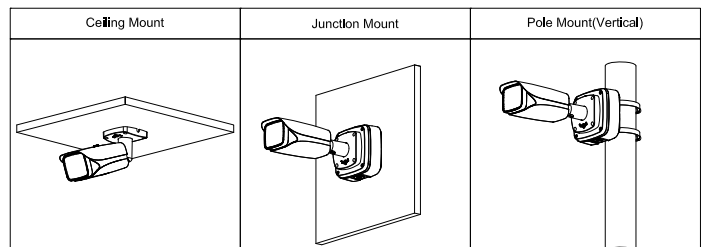| Type	Part Number	Description
5MP camera	DH-IPC-HFW5541EP-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, PAL
	DH-IPC-HFW5541EN-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, NTSC
	IPC-HFW5541EP-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, PAL
	IPC-HFW5541EN-ZE	5MP IR Vari-focal Bullet WizMind Network Camera, WDR, NTSC
Accessories (optional)	PFA152-E PFA121	Pole mount Junction Box

Accessories

Optional:

PFA152-E Pole Mount	LR1002 ePoE Over Coax Converter	PFA121 Junction Box

Ceiling Mount	Junction Mount	Pole Mount(Vertical)

Dimensions (mm[inch])

273.2 [10.76"]
174.7 [6.88"]
100.0 [3.94"]
95.0 [3.74"]
88.9 [3.5"]
79.7 [3.14"]
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