

# DH-IPC-HFW5541E-ZE-OPAT

## 5 MP DHOP Vandal-proof IR Dome Network Camera



- 5 MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 5 MP (2592 × 1944)@20 fps and supports 4 MP (2688 × 1520)@25/30 fps
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED; the max. IR illumination distance is 60 m.
- ROI, SMART 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.
- Abnormality detection: motion detection, privacy masking, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card.
- 12 VDC/PoE power supply, ePoE, transmission over long distance, easy for installations of various scenes.
- IP67 protection.



### Series Overview

Dahua DHOP series network cameras adopt open application platform, allows 3rd party applications to be downloaded and installed on this series cameras. It provides end-users with the right solutions to optimize their security or IoT environment. Flexibility is also guaranteed as users can always remove existing applications and upload new solutions.

### Functions

#### DHOP (Dahua Hardware Open Platform)

With open architecture, encapsulated hardware make it easier to develop and upgrade software this series cameras. It has a diverse ecosystem, various applications are available for the users to select the suitable solutions. Find more available applications here: <https://depp.dahuasecurity.com/OpenPlatform>.

#### Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

#### WDR

With advanced Wide Dynamic Range (WDR) technology, Dahua network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

#### ePOE

Dahua's innovative ePoE technology offers a new solution to transmit power and data over long distances between cameras and network switch, allowing more flexible design of surveillance system, improving reliability, reducing installation time and saving money. ePoE technology encompasses pure network systems where a single CAT6 cable can carry signals up to 300 m (984 ft) at 100 Mbps, 800 m (2625 ft) at 10 Mbps.

### 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 work normal after soaking in 1 m deep water for 30 minutes.

**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**

DHOP

Computing Power	1T computing power for enhanced performance
Flash	58M
System Memory	380M
Multimedia Memory	256M
DHOP Partners	A.I.Tech, ACIC, Grekko, Kobi, Retailflux, Siteeye, TechnoAware, etc. ( <a href="https://depp.dahuasecurity.com/OpenPlatform">https://depp.dahuasecurity.com/OpenPlatform</a> )

Camera

Image Sensor	1/2.7" CMOS
Max. Resolution	2592 (H) × 1944 (V)
ROM	128 MB
RAM	1 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 Lux@F1.5 (Color,30 IRE) 0.0005 Lux@F1.5 (B/W,30 IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
Illumination Distance	60 m (196.9 ft) (IR)
Illuminator On/Off Control	Auto, manual
Illuminator Number	4 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

Lens

Lens Type	Motorized vari-focal
Lens Mount	φ14
Focal Length	2.7 mm–13.5 mm
Max. Aperture	F1.5
Field of View	Horizontal: 104°-29° Vertical: 72°-21° Diagonal: 138°-36°
Iris Control	Auto
Close Focus Distance	0.8 m (2.6 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	64 m (210 ft)	25.6 m (84 ft)	12.8 m (42 ft)	6.4 m (21 ft)
	T	212 m (696 ft)	84.8 m (278.2 ft)	42.4 m (139.1 ft)	21.2 m (69.6 ft)

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+

Video Frame Rate	Main stream: 2592 × 1944@(1 fps–20 fps)/2688 × 1520 @ (1 fps–30 fps) Sub stream: 704 × 576@(1 fps–25 fps)/704 × 480@(1 fps–30 fps) Third stream: 1920 × 1080@(1 fps–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	5M (2592 × 1944); 4M (2688 × 1520/2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); VGA (640 × 480); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 3 kbps–20480 kbps H.265: 3 kbps–20480 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; 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 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	8 areas

Audio

Audio Compression	PCM; G.711a; G.711Mu; G.726; G.723
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Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; scene changing; audio detection; voltage detection; external alarm; security exception
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Network

Network Port	RJ-45 (10/100 Enhancement Base-T)
SDK and API	Yes
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
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
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; DHOP SDK
User/Host	20 (Total bandwidth: 72 M)

Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS
Browser	IE: IE8/9/11 Chrome Firefox
Management Software	Smart PSS; DSS
Certification	
Certification	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC:47 CFR FCC Part 15, Subpart B
Port	
Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5mA 3V–5 VDC
Alarm Output	1 channel out: 300 mA 12 VDC
Power	
Power Supply	DC12V/PoE (802.3af)
Power Consumption	Basic power consumption: 3W (12V DC); 3.7W (PoE) Max. power consumption (max. stream + IR LED + focus): 9.9W (12V DC); 10.9W (PoE)

Environment	
Operating Temperature	-30 °C to +60 °C (-22 °F to +140 °F)
Operating Humidity	≤ 95%
Storage Temperature	-30 °C to +60 °C (-22 °F to +140 °F)
Protection	IP67

Structure	
Casing	Metal + plastic
Product Dimensions	273.2 mm × 95.0 mm × 95.0 mm (10.8" × 3.7" × 3.7") (L × W × H)
Net Weight	1.11 kg (2.4 lb)
Gross Weight	1.51 kg (3.3 lb)

Ordering Information		
Type	Model	Description
5MP Camera	DH-IPC-HDBW5541E-ZE-OPAT	5MP DHOP Vandal-proof IR Dome Network Camera
	IPC-HDBW5541E-ZE-OPAT	5MP DHOP Vandal-proof IR Dome Network Camera
Accessories (Optional)	PFA138	Junction Box
	PFB211W	Wall mount
	PFB300C	Ceiling mount
	PFA152-E	Pole mount
	PFA101	Mount adapter
	PFB201C	In-ceiling mount

## Accessories

### Optional:



PFA138  
Junction Box



PFB211W  
Wall mount



PFB300C  
Ceiling mount



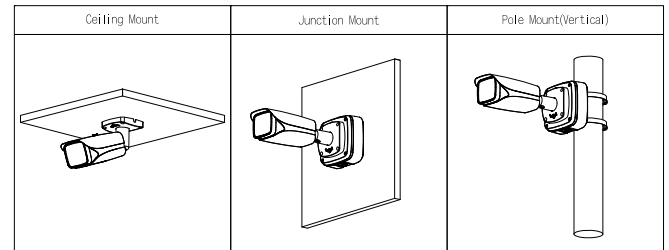
PFA152-E  
Pole mount



PFA101  
Mount adapter



PFB201C  
In-ceiling mount



## Dimensions (mm[inch])

