

# DH-IPC-HFW2241S-S

## 2MP IR Fixed-focal Bullet WizSense Network Camera



### WizSense

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

#### Series Overview

With advanced deep learning algorithm, Dahua WizSense 2 Series network camera supports intelligent functions, such as perimeter protection and smart motion detection. With starlight technology, this series camera provides a better image effect in the condition of low illuminance.

#### Functions

##### SMD Plus

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

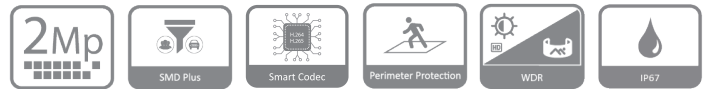
##### Smart H.265+ & Smart H.264+

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.

##### 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) are largely reduced.

- 2-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 30 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.
- Intelligent monitoring: Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)
- Supports max. 256 G Micro SD card; built in MIC.
- 12 VDC/PoE power supply.
- IP67 protection.
- SMD Plus.



#### 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.

#### 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 comprising 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 normally 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.

## Technical Specification

### Camera

Image Sensor	1/2.8" CMOS
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.002 lux@F1.6 (Color, 30 IRE) 0.0002 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	30 m (98.43 ft) (IR LED)
Illuminator On/Off Control	Auto; manual
Illuminator Number	1 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

### Lens

Lens Type	Fixed-focal				
Lens Mount	M12				
Focal Length	2.8 mm; 3.6 mm				
Max. Aperture	F1.6				
Field of View	2.8 mm: H: 107°; V: 56°; D: 127° 3.6 mm: H: 88°; V: 44°; D: 105°				
Iris Control	Fixed				
Close Focus Distance	2.8 mm: 0.7 m (2.30 ft) 3.6 mm: 1.3 m (4.37 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	43.9 m (144.03 ft)	17.5 m (57.41 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	3.6 mm	58.9 m (193.24 ft)	23.6 m (77.43 ft)	11.8 m (38.71 ft)	5.9 m (19.36 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

IVS (Perimeter Protection)	Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)
Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

### Video

Video Compression	H.264H; H.265; H.264; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+

### Video Frame Rate

Main stream: 1920 × 1080@ (1–25/30 fps)  
Sub stream: 704 × 576@ (1–25 fps)/704 × 480@ (1–30 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

2 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–6144 kbps  
H.265: 12 kbps–6144 kbps

### Day/Night

Auto (ICR)/Color/B/W

### BLC

Yes

### HLC

Yes

### WDR

120 dB

### 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)

### Image Rotation

0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower)

### Mirror

Yes

### Privacy Masking

4 areas

### Audio

Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; PCM; G.726

### Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detecton; video tampering; tripwire; intrusion; SMD; voltage detecton; security exception
-------------	---

### 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; NTP; Multicast; ICMP; IGMP; P2P
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI
User/Host	6 (Total bandwidth: 36 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB)
Browser	IE Chrome Firefox
Management Software	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;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
Power	
Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2.1 W (12 VDC); 2.4 W (PoE); Max. (ICR + H.265 + max. resolution + main stream + IR intensity + WDR + IVS): 4.2 W (12 VDC); 5.1 W (PoE)
Environment	
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Humidity	≤95%
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Protection	IP67
Structure	
Casing Material	Metal
Product Dimensions	166.2 mm × 70 mm × 70 mm (6.54" × 2.76" × 2.76") (L × W × H)
Net Weight	0.48 kg (1.06 lb)
Gross Weight	0.59 kg (1.30 lb)

## Ordering Information

Type	Model	Description
2MP camera	DH-IPC-HFW2241S-S	2MP IR Fixed-focal Bullet WizSense Network Camera
Accessories (Optional)	PFA134	Junction Box
	PFA130-E	IP66 Junction Box
	PFA152-E	Pole Mount Bracket
	PFM321D	12 VDC 1A Power Adapter
	PFM900-E	Integrated Mount Tester
	P100	MicroSD Memory Card

## Accessories

Optional:



PFA134  
Junction  
Box



PFA130-E  
IP66 Junction  
Box



PFA152-E  
Pole Mount  
Bracket



PFM321D  
12 VDC 1 A  
Power Adapter



PFM900-E  
Integrated  
Mount Tester



P100  
MicroSD  
Memory Card

Ceiling Mount	Wall Mount	Pole Mount(Vertical)