

# DH-IPC-HDW2241T-S

## 2MP IR Fixed-focal Eyeball 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.

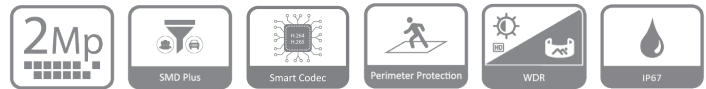
##### Smart H.265+ & Smart H.264+

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.
- Support Triple Stream
- 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  $\pm 30\%$  (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	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°–78° 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)

**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) Third stream: CIF@1fp *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	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 detection; video tampering; tripwire; intrusion; SMD; voltage detection; security exception
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**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
Interoperability	ONVIF (Profile S/Profile T); CGI; P2P; Milestone
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	onfiguration 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
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**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	Inner core: Metal Cover: Plastic
Product Dimensions	100.9 mm × Φ109.9 mm (3.97" × Φ4.33")
Net Weight	0.37 kg (0.82 lb)
Gross Weight	0.56 kg (1.23 lb)

**Ordering Information**

Type	Model	Description
2MP camera	DH-IPC-HDW2241T-S	2MP IR Fixed-focal Eyeball WizSense Network Camera
Accessories (Optional)	PFA13G	Junction Box
	PFB205W-E	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFA109	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	PFM321D	12 VDC 1A Power Adapter
	PFM900-E	Integrated Mount Tester
P100	MicroSD Memory Card	

**Accessories**

Optional:



PFA13G  
Junction  
Box



PFB205W-E  
Wall Mount  
Bracket



PFA152-E  
Pole Mount  
Bracket



PFA109  
Mount  
Adapter



PFB220C  
Ceiling  
Mount



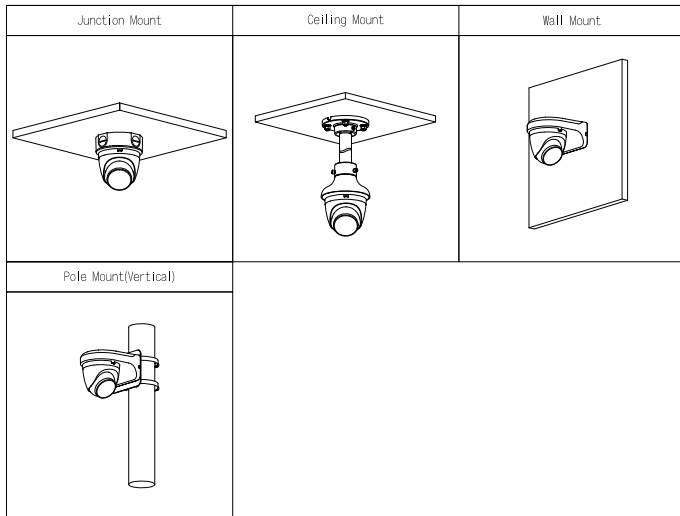
PFM321D  
12 VDC 1 A  
Power Adapter



PFM900-E  
Integrated  
Mount Tester



TF-P100  
MicroSD  
Memory Card



**Dimensions (mm[inch])**

