



dahua DH-IPC-HFW2849S-S-IL WizSense Network Camera Owner's Manual

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dahua DH-IPC-HFW2849S-S-IL WizSense Network Camera



Product Information

- **Product Name:** DH-IPC-HFW2849S-S-IL
- **Description:** 8MP Smart Dual Illumination Fixed-focal Bullet WizSense Network Camera
- **Manufacturer:** Dahua Technology
- **Series:** WizSense

Overview:

The DH-IPC-HFW2849S-S-IL is a network camera from Dahua's WizSense series. It features advanced AI technology and deep learning algorithms for accurate human and vehicle detection. With intelligent functions like perimeter protection and smart motion detection, this camera provides high-quality images even in low-light conditions.

Product Usage Instructions

1. **Mounting:** Choose a suitable location for the camera and securely mount it using the provided mounting hardware.
2. **Power Connection:** Connect the camera to a power source using the included power adapter.
3. **Network Connection:** Connect the camera to your network using an Ethernet cable. Make sure the camera is properly connected to your router or switch.
4. **Camera Configuration:** Access the camera's configuration interface using a web browser on a computer connected to the same network. Enter the camera's IP address in the browser's address bar to access the configuration page.
5. **Video Settings:** Adjust the video settings according to your preferences. You can set the resolution, frame rate, and other parameters to optimize the image quality and storage requirements.
6. **Motion Detection:** Enable the Smart Motion Detection feature to detect and categorize motion triggers accurately. You can customize the sensitivity and target types for effective alarm notifications.
7. **Perimeter Protection:** Utilize the deep learning algorithm of Dahua Perimeter Protection technology to recognize human and vehicle targets accurately. Configure restricted areas and set up intrusion or tripwire detection to reduce false alarms.
8. **Dual Illuminators:** Take advantage of the Smart Dual Illuminators feature to enhance image quality in low-light conditions. The camera can automatically switch between IR and warm light illuminators based on the lighting conditions.

9. **Video Encoding:** Optimize video encoding using Dahua's smart encoding technology. This technology provides higher encoding efficiency than H.265 and H.264, reducing storage and transmission costs while maintaining high-quality video.
10. **Cyber Security:** Ensure the camera's cyber security by enabling security authentication, access control protocols, and encrypted transmission. Regularly update the camera's firmware to protect against potential cyber threats.

For more information and detailed instructions, please refer to the user manual provided by Dahua Technology or visit their official website www.dahuasecurity.com.

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chips and deep learning algorithms. It focuses on humans and vehicles 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 an advanced deep learning algorithm, the 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

Smart Dual Illuminators

Dahua Smart Dual Illuminators technology adopts a smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshots and videos with full-color images. When the target is out of the monitoring area, the white light is off and the IR illuminator is on, which reduces light pollution efficiently.

SMD Plus

With an 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 alarms.

Perimeter Protection

With a deep learning algorithm, Dahua Perimeter Protection technology can recognize humans and vehicles accurately. In restricted areas (such as pedestrian areas and vehicle areas), the false alarms of intelligent detection based on target type (such as tripwire, intrusion) are largely reduced.

- 8-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 8 MP (3840 × 2160) @20 fps, and supports 2688×1520 (2688 × 1520) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in warm light and IR LED, the max. illumination distance is 30 m and the max. warm light 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, and digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, and tripwire (the two functions support the classification and accurate detection of vehicle and human).

- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Supports max. 256 G Micro SD card; built-in MIC.
- 12 VDC/PoE power supply, easy for installation.
- IP67 protection.
- SMD Plus.



Smart H.265+ & Smart H.264+

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

Full-color

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

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 tests on dust and soak. It has a 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 environments with instable voltage.

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Max. Resolution	3840 (H) × 2160 (V)
ROM	128 MB
RAM	256 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.008 lux@F1.6 (Color, 30 IRE) 0.0008 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	30 m (98.43 ft) (IR); 30 m (98.43 ft) (Warm light)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	1 (IR LED); 1 (Warm light)
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: 111°; V: 58°; D: 132°			
		3.6 mm: H: 87°; V: 49°; D: 100°			
Iris Control		Fixed			
Close Focus Distance		1.5 m (4.92 ft); 1.9 m (6.23 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	84.8 m (278.22 ft)	33.9 m (111.22 ft)	17.0 m (55.77 ft)	8.5 m (27.89 ft)
	3.6 mm	98.7 m (350.07 ft)	39.5 m (129.59 ft)	19.7 m (64.63 ft)	9.9 m (32.48 ft)

Intelligence

IVS (Perimeter Protection)	Intrusion, and tripwire (the two functions support the classification and accurate detection of vehicles and humans)
Smart Search	Work together with Smart NVR to perform a refined 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+
Video Frame Rate	Main stream: 3840 × 2160 @(1–20 fps)/2688 × 1520@ (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	3840 × 2160 (3840 × 2160); 3072 × 2048 (3072 × 2048); 3072 × 1728 (3072 × 1728); 2880 × 1620 (2880 × 1620); 2688 × 1520 (2688 × 1520); 3M (2048 × 1536); 2304 × 1296 (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	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)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 2688×1520 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 ; audio detection; voltage detection; SMD; 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; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone
User/Host	20 (Total bandwidth: 48 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	IE Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Client	iOS; Android

Cyber Security	Configuration encryption; trusted execution; Digest; security logs; WSS E; account lockout; syslog; Video encryption; 802.1x; IP/MAC filtering; HTTPS; trusted upgrade; trusted boot; firmware encryption; 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: UL60950-1 CAN/CSA C22.2 No.60950-1-07
Power	
Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2.7 W (12 VDC); 3.4 W (PoE) Max. (H.265+ max. resolution + max. stream+ WDR + warm light intensity + IVS): 5 W (12 VDC); 5.9 W (PoE)
Environment	
Operating Temperature	−40 °C to +55 °C (−40 °F to +131 °F)
Operating Humidity	≤95%
Storage Temperature	−40 °C to +60 °C (−40 °F to +140 °F)
Storage Humidity	≤95%
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	0.47 kg (1.04 lb)
Gross Weight	0.59 kg (1.30 lb)

Ordering Information

Ordering Information		
Type	Model	Description
8MP Camera	DH-IPC-HFW2849S-S-IL	8MP Smart Dual Illumination Fixed-focal Bullet WizSense Network Camera
Accessories (Optional)	PFA134	Junction Box
	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:



PFA134
Junction Box



PFA130-E
Water-proof
Junction Box



PFA152-E
Pole Mount
Bracket



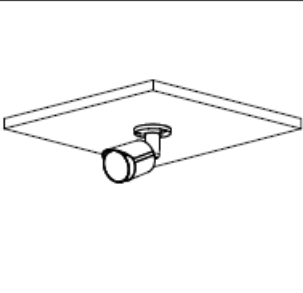
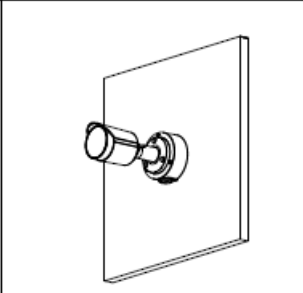
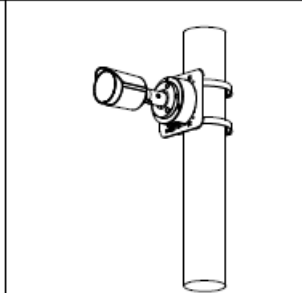
PFM321D
12 VDC 1A Power
Adapter



PFM900-E
Integrated Mount
Tester

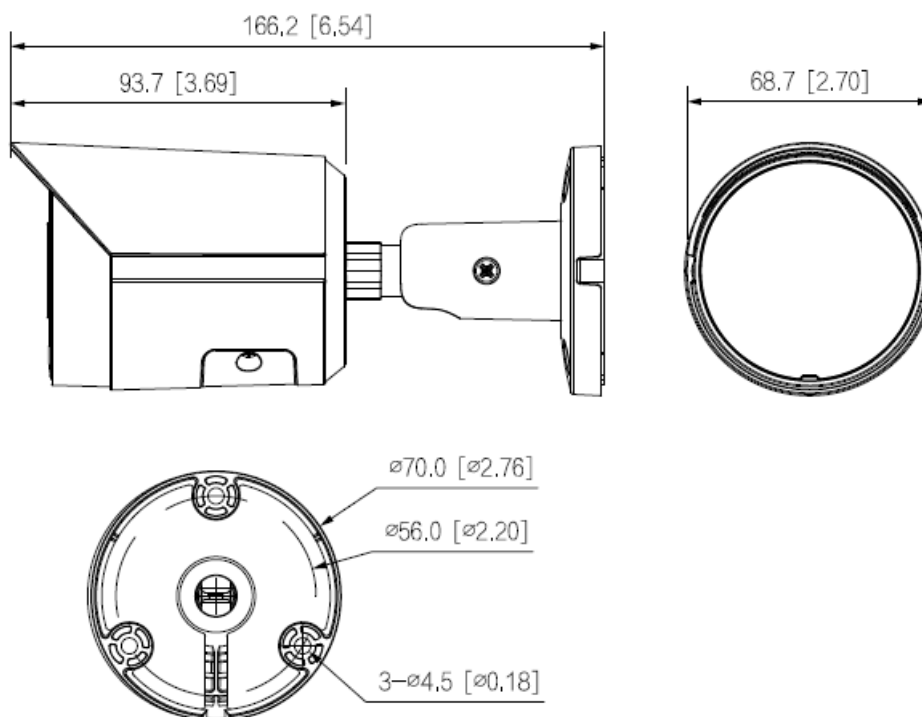


TF-P100
MicroSD Memory
Card

Ceiling Mount	Junction Mount	Pole Mount(Vertical)
		

Dimensions


Dimensions (mm[inch])



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www.dahuasecurity.com.

Documents / Resources

	<p>dahua DH-IPC-HFW2849S-S-IL WizSense Network Camera [pdf] Owner's Manual DH-IPC-HFW2849S-S-IL WizSense Network Camera, DH-IPC-HFW2849S-S-IL, WizSense Network Camera, Network Camera, Camera</p>
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References

- [@ Dahua Technology USA Inc - Dahua Technology USA Inc](#)