

# DH-IPC-HFW2849S-S-IL

## 8MP Smart Dual Light Fixed-focal Bullet WizSense Network Camera



Launched by Dahua Technology, WizSense is a series of Al products and solutions that adopt independent Al 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**

#### **Smart Dual Light**

Dahua Smart Dual Light technology adopts 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 snapshot and video with full-color image. 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 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.

#### **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.

- 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, digital watermarking, applicable to various monitoring scenes.
- Intelligent monitoring: Intrusion, 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 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.

#### **Full-color**

With high-performance sensor and large aperture lens, Dahua Full-color technology can display clear colorful image 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 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.

Camera	Technical	Specification	on				Stream Capability	2 streams	
Max. Resolution	Camera							3840 × 2160 (3840 × 2160); 3072 × 2048 (3072 × 2048);	
Max.   Resolution   Safe 34 1/20 (tr)   Saf	Image Sensor		1/2.7" CMOS				Posolution		
RAM	Max. Resolution		3840 (H) × 2160 (V)				Resolution	960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA	
Seaming System	ROM		128 MB				Rit Rate Control		
Securing System   Progressive   Progressiv	RAM		256 MB						
Min.   Illumination	Scanning Sys	tem	Progressive				Video Bit Rate		
Min. Illumination	Electronic Sh	utter Speed	Auto/Manua	1/3 s-1/100,0	00 s		Day/Night	Auto(ICR)/Color/B/W	
S/N Ratio   S-56 dB							BLC	Yes	
Illumination Distance   up to 30 m (98.43 ft) (98; up to 30 m (98.43 ft) (Warm light)	Min. Illumination		, ,				HLC	Yes	
Illuminator Ont/Off Control   Auto: Manual   Auto	S/N Ratio		>56 dB				WDR	120 dB	
	Illumination	Illumination Distance					White Balance		
Pan/Tilt/Rotation Range Pan/O-360° Tilt 0°-90° Rotation:0°-360° Tilt 0°-90° Rotation:0°-360° Tilt 0°-90° Rotation:0°-360° Tilt 0°-90° Rotation:0°-360° Region of interest (Rol) Yes (4 areas) Smart Illumination Yes  Lens Wount Mil2 Focal Length 2.8 mm; 3.6 mm Mil2 Filed of View 3.6 mm; H: 37: V: 49° D. 132° Filed of View 3.6 mm; H: 37: V: 49° D. 100° Tilt Control Filed of View 2.8 mm; H: 37: V: 49° D. 100° Tilt Control	Illuminator C	n/Off Control	Auto; Manual				Gain Control	Auto; Manual	
Pan/Titt/Rotation Range   Rotation: 0"-380"   Region of Interest (Rol)   Yes (4 arcas)	Illuminator N	lumber	1 (IR LED); 1(Warm light)				Noise Reduction	3D NR	
Lens   Flaxed-focal   Image Rotation   Viss   Smart Illumination   Viss   Smart Illumination   Viss   Image Rotation   Viss			Pan: 0°–360°				Motion Detection	OFF/ON (4 areas, rectangular)	
Lens Mount	Pan/Tilt/Rotation Range						Region of Interes	t (RoI) Yes (4 areas)	
Lens Mount   M12   Mirror   Yes	Lens	Lens					Smart Illuminatio	n Yes	
Mirror Yes  Max. Aperture F1.6 Field of View 2.8 mm; H: 111": V-88": D-132" 3.6 mm; H: 87"; V-49"; D: 100"  Built-in MIC Ves  Audio  Built-in MIC Ves  Audio Compression G,711a: G,711Mu: PCM: G,726  Alarm  Lens Detect 1.5 m (4,92 ft): 1,9 m (6,23 ft)  Lens Detect 0 beserve Recognize Identify 15,7 m (7,10 m) 15,5 m (7,12 st) 15,7 m (7,10 m) 15,7 m (7	Lens Type		Fixed-focal				Image Rotation	, ,,	
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"  Fixed  Close Focus Distance  1.5 m (4.92 ft): 1.9 m (6.23 ft)  Alarm  Lens  Detect  Observe  Recognize  Identify  2.8 mm  B4.8 m  G278.22 ft)  (111.22 ft) (55.77 ft) (27.89 ft)  3.6 mm  98.7 m  99.7 m  99.7 m  39.5 m  (129.59 ft) (64.63 ft) (32.48 ft)  Network  Network Port  Smart Search  Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event wideos  Video  Video Compression  H.265: H.264: H.264H: H.264B: MJPEG (Only supported by the sub stream)  Video Frame Rate  Video Frame Rate  Video Frame Rate  Fixed  Audio  Built-in MIC  Yes  Audio Compression  G.711a: G.711Mu: PCM: G.726  Alarm  Alarm  No SD card : SD card full: SD card error; network disconnection; Pi conflict, Illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; video tampering; tripwire; i	Lens Mount		M12				Mirror	Yes	
Field of View 2.8 mm; H; 111*; V; 58*; D; 132*; 3.6 mm; H; 87*; V; 49*; D; 100*; Built-in MIC Yes  Audio Compression G; 711a; G; 711Mu; PCM; G; 726  Alarm  Lens Detect Observe Recognize Identify DoRI Distance 2.8 mm 84.8 m (278.22 ft) (111.2 gt) (55.77 ft) (27.89 ft) 3.6 mm 98.7 m 39.5 m (129.59 ft) (64.63 ft) (32.48 ft)  Intelligence  IVS (Perimeter Protection) Consider the architecture with Smart NVR to perform refine intelligent search, event extraction and merging to event videos  Video  Video Compression H; 265; H; 264; H; 264B; MJPEG (Only supported by the sub stream)  Video Frame Rate  Video Support man architecture with Smart NVR to @(1-20 fps) 7/04 × 480@(1-30 fps) sub stream; or multiple streams, the values will be subjected of Mobile Client (Instead of Spatial) substream; or multiple streams, the values will be subjected of Mobile Client (Instead of Spatial) sub-vision (Instead of Spatial) sub-visions; the values will be subjected of Mobile Client (Instead of Spatial) sub-vision (Instead	Focal Length		2.8 mm; 3.6 mm				Privacy Masking	4 areas	
Field of View  2.8 mm; H: 37'; V: 49'; D: 100'  Iris Control  Fixed  Close Focus Distance  1.5 m (4,92 ft): 1.9 m (6.23 ft)  Lens  Detect  Observe  Recognize  Lens  Detect  Observe  Recognize  1.7 m  Recognize  1.7 m  Recognize  1.8 m  Recognize  1.9 m  Recognize  1.1 m (4,92 ft): 1.9 m (6.23 ft)  Alarm  No SD card: SD card full: SD card error: network disconnection, if conflict, lifegal access, motion detection, if conflict, lifegal access, motion detection; violation, if profile callegal access, motion detection; violation, if profile; intrusion, audio detection; voltage detection; SMD; security exception  Network  Intelligence  IVS (Perimeter Protection)  Smart Search  Work together with Smart NVR to perform refine intelligents access, event extraction and merging to event videos  Video  Video  Video Compression  H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)  Smart Codec  Smart L.65+; Smart H.264+  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) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream: 705	Max. Apertu	re	F1.6				Audio		
Tris Control   Fixed   Audio Compression   G.711a; G.711Mu; PCM; G.726	Field of View	,						Yes	
Close Focus Distance   1.5 m (4.92 ft): 1.9 m (6.23 ft)   Alarm	Iris Control		Fixed				Audio Compression	on G.711a: G.711Mu: PCM: G.726	
Lens	Close Focus I	Distance	1.5 m (4.92 ft); 1.9 m (6.23 ft)					·	
DORI Distance  2.8 mm  84.8 m (278.22 ft)  (111.22 ft)  (55.77 ft)  (72.89 ft)  3.6 mm  98.7 m (35.0.7 ft)  3.6 mm  98.7 m (35.0.7 ft)  19.7 m (64.63 ft)  19.7 m (64.63 ft)  Network  Network  Network Port  RJ-45 (10/100 Base-T)  SDK and API  Yes  Network Protocol  Work together with Smart NVR to perform refine 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  Walls stream: 3840 × 2160 @(1-20 fps)/2688 × 1520@ (1-25/30 fps) sub stream: 704 × 576@(1-25 fps)/704 × 480@(1-30 fps) sub stream; for multiple streams, the values above are the max. frame rates of each stream; for multiple streams, the values will be subjected  Alarm Event disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; video tamp		Lens	Detect	Observe	Recognize	Identify	Aldilli	No SD cord, SD cord full, SD cord orror, patwork	
3.6 mm  98.7 m (39.5 m) (129.59 ft)  Intelligence  IVS (Perimeter Protection)  Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)  Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos  Video  Video Compression  H.265; H.264H; H.264H; H.264B; MJPEG (Only supported by the sub stream)  Smart Codec  Smart H.265+; Smart H.264+  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) sub stream: 704 × 576@(1–		2.8 mm					Alarm Event	disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio	
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.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)  Smart Codec  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  Network Protocol  SDK and API  Yes  Network Protocol  IPV4; IPV6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; OoS; UPPP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Boujour  Video  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  IE Chrome Firefox  Management Software  Smart PSS; DSS; DMSS  *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected	Distance	3.6 mm	98.7 m	39.5 m		9.9 m		detection; voltage detection; SMD; security exception	
Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human)  Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos  Video  Video Compression  Wain 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  Smart Classification and accurate detection of vehicle and human)  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; Boujour  Video NoVIF (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  IE Chrome Firefox  Wanagement Software  Smart PSS: DSS; DMSS  *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected  Mahila Client  IPv4: IPv6; HTTP: TCP: UDP: ARP: RTP; RTSP; RTCP; RTMP; MIMP; MIMP			(350.07 ft)	(129.59 ft)	(64.63 ft)	(32.48 ft)	Network		
Classification and accurate detection of vehicle and human)   SDR and API   Yes	Intelligen	ce				ort the	Network Port	RJ-45 (10/100 Base-T)	
Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos  Network Protocol  SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPOE; Boujour  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+  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)  Network Protocol  SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPOE; Boujour  User/Host  20 (Total bandwidth: 48 M)  Storage  FTP; SFTP; Micro SD card (support max. 256 GB); NAS  IE Chrome Firefox  Video Frame Rate  Video Frame Rate  Management Software  Smart PSS; DSS; DMSS  Mobile Client  Mobile Client  IOS: Android	IVS (Perimete	er Protection)	classification and accurate detection of vehicle and				SDK and API		
Video Compression     H.265; H.264; H.264B; MJPEG (Only supported by the sub stream)     User/Host     20 (Total bandwidth: 48 M)       Smart Codec     Smart H.265+; Smart H.264+     Storage     FTP; SFTP; Micro SD card (support max. 256 GB); NAS       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)     Browser     IE Chrome Firefox       Video Frame Rate     Management Software     Smart PSS; DSS; DMSS	Smart Search		intelligent search, event extraction and merging to event				Network Protoco	SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;	
by the sub stream)  Smart Codec  Smart H.265+; Smart H.264+  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  by the sub stream  Storage  FTP; SFTP; Micro SD card (support max. 256 GB); NAS  Browser  Chrome Firefox  Management Software  Smart PSS; DSS; DMSS  Mobile Client  iOS: Android	Video						Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone	
Smart Codec  Smart H.265+; Smart H.264+  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  Mobile Client  IE Chrome Firefox  Management Software Smart PSS; DSS; DMSS	Video Compression					nly supported	User/Host	20 (Total bandwidth: 48 M)	
Main stream: 3840 × 2160 @(1–20 fps )/2688 × 1520@ (1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30  Video Frame Rate  Video Frame Rate  Firefox  Management Software  Smart PSS; DSS; DMSS  *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected  Mobile Client  iOS: Android	Smart Codec		Smart H.265+; Smart H.264+				Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS	
Video Frame Rate fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected  Management Software Smart PSS; DSS; DMSS  Mobile Client iOS: Android			(1–25/30 fps)				Browser	Chrome	
	Video Frame Rate		fps)				Management Sof	tware Smart PSS; DSS; DMSS	
							Mobile Client	iOS; Android	

## Wiz Sense | DH-IPC-HFW2849S-S-IL

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; firmware encryption; generation and importing of X.509 certification
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#### Certification

	CE-LVD: EN62368-1;
	CE-EMC: Electromagnetic Compatibility Directive
Certifications	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: 2.7 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 $\times$ 70 mm $\times$ 70 mm (6.54" $\times$ 2.76" $\times$ 2.76") (L $\times$ W $\times$ H)
Net Weight	0.47 kg (1.04 lb)
Gross Weight	0.59 kg (1.30 lb)

Ordering Information			
Туре	Model	Description	
8MP Camera	DH-IPC-HFW2849S-S-IL	8MP Smart Dual Light Fixed-focal Bullet WizSense Network Camera	
	PFA134	Junction Box	
	PFA130-E	Water-proof Junction Box	
Accessories	PFA152-E	Pole Mount Bracket	
(Optional)	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 (mm[inch])





