



DH-IPC-HFW2541S-S

5MP IR Fixed-focal Bullet WizSense Network Camera





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.

- *The parameters and datasheets below can only be applied to 2541-S2 series.
- 5-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 5 MP (2960 × 1668) @20 fps, and supports 2688 ×1520 (2688 × 1520) @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).
- 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.
- 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 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.

Image Sessor	Technical	Specification	on						Main stream: 2960 × 1668@(1–20 fps)/2688 × 1520@
Make Resolution	Camera				VI 5 D.	- ' ' ' ' - '			
Mail	Image Sensor		1/2.7" CMOS				Video Frame Rate	*The values above are the max. frame rates of each	
Marco 179.50	Max. Resolution		2960 (H) × 1668 (V)					the state of the s	
Semining System	ROM		128 MB				Stream Capability	2 streams	
Resolution 1966;79414 + 1986;1968 1997 + 1980;194 1992 + 1980;194 1997 + 1980;194 1997 + 1980;194 1997	RAM		256 MB				Resolution	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	
	Scanning System		Progressive						
Min. Illumination 0.0007 Lux 8F 1.6 (RW, 2018F) Oliz (Illuminator On)	Electronic Shutter Speed		Auto/Manual 1/3 s–1/100,000 s						
S/N Ratio	Min. Illumination		0.0007 lux@F	1.6 (B/W, 30 IF				Bit Rate Control	
Day/Night	S/N Ratio						Video Bit Rate	· · · · · · · · · · · · · · · · · · ·	
Illuminator On/Off Control Auto; Manual Illuminator Number I (IR LED) Pan/Tit/Rotation Range Pan: 0"-360" III: 0"-90" Rotation of Julia Pan: 0"-360" Region of Interest (Rol) Region of Interest		Distance					Day/Night	Auto(ICR)/Color/B/W	
HLC Yes							BLC	Yes	
Pan/Titl/Rotation Range Pan: 0"-360" Tit: 0"-90" Rotation: 0"-360" White Balance Auto, natural; street lamp; outdoor; manual; regional control Auto, natural; street lamp; outdoor; street Auto, natural; street lamp; outdoor; street, street							HLC	Yes	
Pan/Tilt/Rotation Range Rotation: 0"-360" White Balance Auto-natural; street lamp; outdoor; manual; regional custom Custom Auto-natural; street lamp; outdoor; manual; regional custom Auto-natural; street lamp; outdoor Auto-natural; street lamp; outdoor; outdoor Auto-natural; street lamp; outdoor Auto-natural; street Auto-natural	illullillator N	iuilibei						WDR	120 dB
Lens Mount M12 Fixed focal Lens Mount M12 Focal Length 2.8 mm;3.6 mm Max. Aperture F1.6 Field of View 2.8 mm;1.5 m; 5.8°; 0.132° 3.6 mm; H: 111°; V: 58°; 0.132° 3.6 mm; 1.1 m; 3.61 ft; 5.6 mm; 1.7 m;5.58 ft; 1.10° Lens Detect Observe Recognize Identify Audio Distance 2.8 mm; 1.7 m;5.58 ft; 1.7 m;	Pan/Tilt/Rotation Range		Tilt: 0°-90°				White Balance		
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: 92'; V: 48'; D: 110' Iris Control Fixed Mirror Ves Lens Detect Observe Recognize Identify (21.00 ft) 2.8 mm; 1.7 m (5.58 ft) Lens Detect Observe Recognize Identify (21.00 ft) 2.8 mm (208.66 ft) (83.33 ft) (41.67 ft) (21.00 ft) Alarm DORI Distance (61-52-6-4) 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, feel for installation and accurate detection of vehicle and human) Intelligence IVS (Perimeter Protection) Smart Search Work Search, event extraction and merging to event videos Video Compression H.265; H.264; H.264; H.264e; MJPEG (Only supported by the sub stream) Smart Codec Smart H.265; Smart H.264+	Lens						Gain Control	Auto;Manual	
Focal Length 2.8 mm; 3.6 mm	Lens Type		Fixed-focal				Noise Reduction	3D NR	
Max. Aperture FI.6 Field of View 2.8 mm: H: 111"; V: 58"; D: 132" 3.6 mm: H: 92"; V: 45"; D: 110" Iris Control Fixed Close Focus Distance 2.8 mm: 1.1 m (3.61 ft) 3.6 mm: 1.7 m (5.58 ft) Lens Detect Observe Recognize (28.6 mm; 1.5 m (5.58 ft) 3.6 mm: 1.7 m (5.58 ft) 4.1 m (20.8 6ft) (28.3 mt) (28.3 m	Lens Mount	Lens Mount		M12				Motion Detection	OFF/ON (4 areas, rectangular)
Field of View 3.8 mm; H: 111°; V: 58°; D: 132° 3.6 mm; H: 92°; V: 45°; D: 110° Iris Control Fixed Mirror Yes Lens Detect Observe Recognize Identify (3.6 mm; H: 7 m (5.58 ft) Addio DORI 2.8 mm; 1.1 m (3.61 ft) 3.6 mm; 1.7 m (5.58 ft) Lens Detect Observe Recognize Identify (21.00 ft) Built-in MIC Yes 2.8 mm (208.66 ft) 25.4 m (208.66 ft) (41.67 ft) (21.00 ft) Built-in MIC Yes DORI (280.18 ft) (112.20 ft) (56.10 ft) (27.89 ft) Stance (180.2576-4) for defining the ability of a person viewing the video to distinguish persons or objects within a cowered 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) Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Video Compression H.265; H.264; H.264H; H.264B; MIPEG (Only supported by the sub stream) Smart Codec Smart H.265+; Smart H.264+	Focal Length		2.8 mm;3.6 mm				Region of Interest (RoI)	Yes (4 areas)	
Iris Control Fixed Close Focus Distance 2.8 mm: 1.1 m (3.61 ft) 3.6 mm: 1.7 m (5.58 ft) Lens Detect Observe Recognize Lens Detect (28.8 mm) 63.6 m (28.3 mm) (38.3 m) (28.3 mm) (28.0 lt ft) (28.3 mm) (28.0 lt ft) (28.3 mm) (28.0 lt ft) (28.0 lt ft) (21.0 oft) (27.9 lt ft) (29.0 ft) (21.0 oft) (27.9 lt ft) Aldrio Built-in MIC Yes Audio Built-in MIC Yes Audio Compression Alarm No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; video tampering; tripwire; intrusion; a	Max. Apertu	re	F1.6				Smart Illumination	Yes	
Close Focus Distance 2.8 mm: 1.1 m (3.61 ft) 3.6 mm: 1.7 m (5.58 ft) Lens Detect Detect Description 2.8 mm 63.6 m (20.66 ft) (83.33 ft) (41.67 ft) (210.0 ft) 3.6 mm 85.4 m (280.18 ft) (280.	Field of View						Image Rotation		
Lens Detect Observe Recognize Identify 2.8 mm 63.6 m 25.4 m 12.7 m 6.4 m (208.66 ft) (83.33 ft) (41.67 ft) (21.00 ft) DORI Distance 3.6 mm 85.4 m (280.8 ft) (112.20 ft) (56.10 ft) (27.89 ft) **DORI (Detect, Observe, Recognize, Identify) is a standard system (R-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) Smart Search Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Wideo Compression H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream) Smart Codec Smart H.265+; Smart H.264+	Iris Control		Fixed				Mirror	Yes	
2.8 mm	Close Focus I	Distance	, ,				Privacy Masking	4 areas	
DORI Distance 3.6 mm		Lens	Detect	Observe	Recognize	Identify		Audio	
DORI Distance 3.6 mm 85.4 m 34.2 m (280.18 ft) (112.20 ft) (56.10 ft) (27.89 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, refer to installation and commissioning manual/ project design tool. Intelligence IVS (Perimeter Protection) Smart Search Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Video Video Compression 8.5 m (27.11 m (36.711 Mu; PCM; G.726 Alarm Alarm Event Alarm Event Alarm Event 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 Network Network Network Port SDK and API Yes Network Protocol IPv4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; SMTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; SMTP; TP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Boujour; P2P 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+		2.8 mm						Built-in MIC	Yes
#Distance (280.18 tt) (112.20 tt) (27.89 tt) (27.		2.6 mm						Audio Compression	G.711a; G.711Mu; PCM; G.726
(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, refer to installation and commissioning manual/project design tool. Intelligence Network 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 (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 disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; SMD; security exception Network Network Network Port RJ-45 (10/100 Base-T) SDK and API Yes Network Protocol IPv4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTSP; RTSP; RTMP; NTP; MUlticast; ICMP; IGMP; NFS; PPPoE; Boujour; P2P 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+							Alarm		
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 Network Port RJ-45 (10/100 Base-T) 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; P2P Interoperability ONVIF (Profile S/Profile G/Profile T); CGI User/Host 20 (Total bandwidth: 48 M)	(EN-62676-4) for distinguish persor this table do not function distance		for defining the ability of a person viewing the video to rsons or objects within a covered area. The numbers in lot reflect intelligent function distances. For intelligent nces, refer to installation and commissioning manual/				Alarm Event	disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio	
IVS (Perimeter Protection) classification and accurate detection of vehicle and human) SDK and API Yes Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Video Video Video Compression H.265; H.264; H.264B; MJPEG (Only supported by the sub stream) SDK and API Yes 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; P2P Interoperability ONVIF (Profile S/Profile G/Profile T); CGI User/Host 20 (Total bandwidth: 48 M)					Network				
human) Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos Network Protocol	_						Network Port	RJ-45 (10/100 Base-T)	
Smart Search intelligent search, event extraction and merging to event videos Network Protocol Netwo	(r e.ietc. : rotestion,		human)					SDK and API	Yes
Video Compression H.265; H.264; H.264B; MJPEG (Only supported by the sub stream) Smart Codec Smart H.265+; Smart H.264+ H.264B; MJPEG (Only supported by the sub stream) User/Host ONVIF (Profile S/Profile G/Profile T); CGI User/Host			intelligent search, event extraction and merging to event					Network Protocol	SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;
by the sub stream) User/Host 20 (Total bandwidth: 48 M) Smart Codec Smart H.265+; Smart H.264+				H.265: H.264: H.264H: H.264B: MIPFG (Only supported				Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI
	Video Compression						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

Wiz Sense | DH-IPC-HFW2541S-S

Browser	IE Chrome Firefox		
Management Software	SmartPSS Lite; 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; firmware encryption; generation and importing of X.509 certification		

Certification

Certifications	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU:	
Certifications	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: 2.2 W (12 VDC); 2.9 W (PoE) Max. (H.265+ max. resolution + max. stream+ WDR + IR intensity + IVS): 4.1 W (12 VDC); 5.0 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)		
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	0.48 kg (1.06 lb)	
Gross Weight	0.59 kg (1.30 lb)	

Ordering Information			
Туре	Model	Description	
5MP Camera	DH-IPC-HFW2541S-S	5MP IR 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:







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])





