



DH-IPC-HFW2541T-AS

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 80 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.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; Supports max. 256 G Micro SD card; built in MIC.
- 12 VDC/PoE power supply, easy for installation.
- IP67, IK10 (optional) protection.
- · SMD Plus.













WDF

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 ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Max. Regolution 2950 (tr) x 1688 (tr)	Technical	Specification	on					Video	
Max. Resolution	Camera				Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)			
Main Resolution 200 (II) + 1608 (V)	Image Sensor		1/2.7" CMOS				Smart Codec		
Manual 12 Mile Mi	Max. Resolution 2960 (H) × 1668 (V)								
Saming System	ROM		128 MB				Video Frame Rate	sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps)	
Electronic Shutter Speed	RAM		256 MB						
Min. Illumination	Scanning System		Progressive						
Min. Illumination 0.0007 Loop E1 (ARM, 20 IRE) 0.100 (Illuminator on) 0.100 (Illuminatoro On) 0.100 (Illuminatoro On) 0.100 (Illuminat	Electronic Shutter Speed		Auto/Manual 1/3 s-1/100,000 s				Stream Capability	2 streams	
	Min. Illumination		0.0007 Lux@F1.6 (B/W, 30 IRE)				Resolution		
Illuminator On/Off Control Auto; Manual Video Bit Rate H, 264: 32 hbps-8192 hbps; H, 265: 124 hbps-8192 hbps: H, 265: 124 hbps-8192 hbps-8192 hbps-8192 hbps-8192 hbps-8192 hbps-8192 hbps-8192 hbps-8192 hb	S/N Ratio		> 56 dB					480); VGA (640 × 480); CIF (352 × 288/352 × 240)	
Bluminator Number 4 (RLED) Day/Night Auto(ICR)/Color/B/W	Illumination	Distance	Up to 80 m (2	262.47 ft) (IR)				Bit Rate Control	CBR/VBR
Pan/Tilt/Rotation Range Pan: 0"-360" Tilt: 0"-90" Tilt: 0	Illuminator (On/Off Control	Auto; Manual				Video Bit Rate		
Pan/Tilt/Rotation Range Rotation: 0"-360" BLC Yes	Illuminator N	Number	4 (IR LED)				Day/Night	Auto(ICR)/Color/B/W	
Lens Type Fixed-focal WDR 120 dB Lens Mount M12 White Balance Auto; natural; street lamp; outdoor; manual; regional custom Max. Aperture F1.6 Noise Reduction 3D NR Field of View 6 mm; H: 57°; V: 30°; D: 65° 8 mm; H: 43°; V: 24°; D: 48° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Iris Control Fixed Smm; H: 45°; V: 30°; D: 65° Region of Interest (Roi) Yes (4 areas) Image Rotation OF/ON/180°/270° (Support 80°/270° with 2688 × 1520 Privacy Masking 4 areas Audio Image Rotation Ves Privacy Masking 4 areas Audio Interest Roil Smm; H: 40°; Region Smm; H: 40°; Region of Interest (Roi) Yes Audio Privacy Masking 4 areas Audio Built-in MIC Yes Audio Roil Roi	Pan/Tilt/Rot	ation Range	Tilt: 0°-90°				BLC	Yes	
Lens Mount M12 Focal Length 3.6 mm;6 mm;8 mm Max. Aperture F1.6 Field of View 6 mm; H: 97'; V: 45'; D: 110' 6 mm; H: 57'; V: 30'; D: 55' 8 mm; H: 57'; V: 30'; D: 50'; D:	lens		Rotation: 0°–360°				HLC	Yes	
Lens Mount M12 Focal Length 3.6 mm; 8 mm Max. Aperture F1.6 Si.6 mm; H: 92"; V: 45"; D: 110" Genrm; H: 52"; V: 45"; D: 110" Genrm; H: 52"; V: 45"; D: 110" Genrm; H: 52"; V: 45"; D: 10" Genrm; H: 45"; V: 24"; D: 48" White Balance Cain 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 x 1520 resolution and lower) Mirror Yes Privacy Masking 4 areas Audio Audio Privacy Masking 4 areas Audio Audio Compression Genral and Control of Compression Genral and Compressi			Fixed focal				WDR	120 dB	
Max. Aperture F1.6 Field of View 3.6 mm: H: 92°; V: 45°; D: 110° 6 mm: H: 57°; V: 30°; D: 55° 8 mm: H: 43°; V: 24°; D: 48° Liris Control Fixed Close Focus Distance Acceptable form: 3.2 m (10.50 nt) 8 mm: 4.5 m (15.09 nt) 9 mm: 4.5 m (15.09 nt) 11.2 nt							White Balance		
Field of View 3.6 mm; H: 57°; V: 30°; D: 65° 8 mm; H: 43°; V: 24°; D: 48° Iris Control Fixed Close Focus Distance 6 mm; H: 57°; V: 30°; D: 65° 8 mm; H: 43°; V: 24°; D: 48° Close Focus Distance Lens Detect 6 mm; 3.6 mm; 1.7 m (5.58 ft) 8 mm; 4.6 m (15.09 ft) 8 mm; 4.6 m (15.09 ft) 8 mm; 4.6 m (15.09 ft) 6 mm 124.0 m (280.18 ft) (112.20 ft) (162.73 ft) (162.73 ft) (162.73 ft) (167.75 ft) (Focal Length	Focal Length		3.6 mm;6 mm;8 mm				Gain Control	Auto; Manual
Field of View 6 mm: H: 57'; Y: 30'; D: 65' 8 mm: H: 37'; V: 24'; D: 48' Iris Control Fixed Close Focus Distance 6 mm: 3.2 m (10.50 ft) 8 mm: 4.6 m (15.09 ft) 8 mm: 4.6 m (15.73 ft) 8 mm: 4.6 m (15.09 ft) 8 mm: 4.6 m (10.00 ft) 9 mirror 10 mage Rotation 9 more of port/120 ft) 9 mirror 9 mage Rotation 9 more of port/120 ft) 9 mirror 9 mage R	Max. Apertu	ire	F1.6				Noise Reduction	3D NR	
Region of Interest (RoI) Yes (4 areas)	Field of View	ı					Motion Detection	OFF/ON (4 areas, rectangular)	
Close Focus Distance Close Focus Distance 3.6 mm: 1.7 m (5.58 ft) 6 mm: 3.2 m (10.50 ft) 8 mm: 4.6 m (15.09 ft)							Region of Interest (RoI)	Yes (4 areas)	
Close Focus Distance 6 mm: 3.2 m (10.50 ft) 8 mm: 4.6 m (15.09 ft) Lens Detect 7 lens 1 l	Iris Control		Fixed				Smart Illumination	Yes	
Lens Detect Observe Recognize Identify 3.6 mm 85.4 m (280.18 ft) 17.1 m (112.20 ft) 6 mm 124.0 m (406.82 ft) 150.4 m (197.51 ft) (98.75 ft) 150.8 mm Privacy Masking 4 areas Audio Built-in MIC Yes Audio Compression For 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) Work together with Smart NVR to perform refine intelligent syde or wind project design tool. Work together with Smart NVR to perform refine intelligent syde or wind project device of the two functions support the classification and accurate detection of vehicle and human) Work together with Smart NVR to perform refine intelligent syde or wind project devices are a construction and merging to event with standard project devices are a constructed and merging to event wind project devices are a constructed and merging to event wind project devices are a constructed and project devices are a constructed and human) Privacy Masking 4 areas Audio Built-in MIC Yes Alarm Alarm No SD card; SD card full; SD card error; network disconnection; Pc conflict; illegal access; motion detection; voltage and human) Network Network Network Network Port SDK and API Yes	Close Focus	Distance	6 mm: 3.2 m (10.50 ft)			Image Rotation			
3.6 mm (280.18 ft) (112.20 ft) (56.10 ft) (27.89 ft) 6 mm (124.0 m (406.82 ft) (162.73 ft) (81.36 ft) (40.68 ft) DORI Distance 8 mm (150.4 m (493.44 ft) (197.51 ft) (98.75 ft) (49.21 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. 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 virideor.		Lens	Detect	Observe	Recognize	Identify		Mirror	Yes
DORI Distance 8 mm 124.0 m		3.6 mm						Privacy Masking	4 areas
DORI Distance 8 mm 150.4 m 60.2 m 30.1 m (49.21 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 Intrusion, tripwire (the two functions support the classification and accurate detection of vehicle and human) Work together with Smart NVR to perform refine smart Search Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event with search of the same and search and solve the classification and merging to event with search and search with search and merging to event with search and search and search with search and merging to event with search and merging to event with search and search with search and merging to event with search and search								Audio	
Distance 8 mm (493.44 ft) (497.51 ft) (98.75 ft) (49.21 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 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 Work compression G.711a; G.711Mu; PCM; G.726 Alarm 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; external alarm Network Network Network Port RJ-45 (10/100 Base-T) SDK and API Yes	DOBI	6 mm						Built-in MIC	Yes
(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 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 videor. Smart Search 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; external alarm Network Network Network Port RJ-45 (10/100 Base-T) SDK and API Yes		8 mm						Audio Compression	G.711a; G.711Mu; PCM; G.726
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 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 videors. Smart Search 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; external alarm Network Network Network Port RJ-45 (10/100 Base-T) SDK and API Yes								Alarm	
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 videor.	distinguish pe this table do function dista		ersons or objects within a covered area. The numbers in not reflect intelligent function distances. For intelligent ances, refer to installation and commissioning manual/					Alarm Event	disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio 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 videor.	Intelligen	ce						Network	
Work together with Smart NVR to perform refine SDK and API Smart Search intelligent search, event extraction and merging to event	IVS (Perimeter Protection)		classification and accurate detection of vehicle and					RJ-45 (10/100 Base-T)	
videos IPv4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTSP; RTCP; RTM	Smart Searc	Smart Search		Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event				SDK and API	Yes
Network ProtocolSMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;Multicast; ICMP; IGMP; NFS; PPPoE; Boujour; P2P			videos					Network Protocol	

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Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI		
User/Host	20 (Total bandwidth: 48 M)		
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS		
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; FCC: 47 CFR FCC Part 15, Subpart B; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14
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Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5mA 3V–5V DC
Alarm Output	1 channel out: 300mA 12V DC

Power

Power Supply	12 VDC/PoE (802.3af)		
Power Consumption	Basic: 2.2 W (12 VDC); 3.1 W (PoE) Max. (H.265+ max. resolution + max. stream+ WDR + IR intensity + IVS): 7.4 W (12 VDC); 8.8 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; IK10 (optional)		

Structure

Casing Material	Metal
Product Dimensions	238.5 mm × 90.7 mm × 90.7 mm (9.39" × 3.57" × 3.57") (L × W × H)
Net Weight	0.72 kg (1.59 lb)
Gross Weight	0.95 kg (2.09 lb)

Ordering Information			
Туре	Model	Description	
5MP Camera	DH-IPC-HFW2541T-AS	5MP IR Fixed-focal Bullet WizSense Network Camera	
	PFA130-E	Water-proof Junction Box	
	PFA152-E	Pole Mount Bracket	
Accessories (Optional)	PFM321D	12 VDC 1 A 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])





