



DH-IPC-HDW2841T-ZS

8MP IR Vari-focal Eyeball 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.

System 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.

- 8-MP 1/2.7" CMOS image sensor, low luminance, and high definition
- Outputs max. 8 MP (3840 × 2160)@20 fps and supports 2688 × 1520 $(2688 \times 1520)@25/30$ fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 40 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.













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

Page	Technical Specification							Stream Capability	2 streams
Mass. Resolution	Camera					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			
Max. Max Ma	Image Sensor		1/2.7" CMOS					Resolution	
RAM	Max. Resolution		3840 (H) × 2160 (V)						
Second Projection	ROM		128 MB					Bit Rate Control	CBR/VBR
Search Progression Progression Progression Progression Progression Day/Night Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Day/Night Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto/Cety/Calox/R/W Auto-Cety/Cety/Calox/R/W Auto-Cety/Cety/Cety/Cety/Cety/Cety/Cety/Cety/	RAM		256 MB					Video Bit Rate	· ·
BeC Yes No.	Scanning Sys	stem	Progressive					Doy/Night	
Min. Illumination Min. Illumination	Electronic Sh	nutter Speed	Auto/Manual 1/3 s-1/100,000 s						
S/N Ratio	Min. Illumin	Min. Illumination		0.0008 lux@F1.5 (B/W, 30 IRE)					
Illumination Distance	S/N Ratio							WDR	120 dB
Motion M		Distance						White Balance	, , , , , , , , , , , , , , , , , , , ,
Pan/Tit/Rotation Range	Illuminator (On/Off Control	Auto; Manual					Gain Control	Auto;Manual
Pan/Till/Rotation Range	Illuminator N	Number	2 (IR LED)					Noise Reduction	3D NR
Lens Type	Pan/Tilt/Rot	ation Range						Motion Detection	OFF/ON (4 areas, rectangular)
Lens Mount	Lana			Rotation: 0°–360°				Region of Interest (RoI)	Yes (4 areas)
Lens Mount								Smart Illumination	Yes
Max. Aperture F1.5 Field of View H: 113*-31*; V: 58*-18*; D: 138*-36* Audio Built-in MiC Ves Audio Compression G.711a; G.711Mu; PCM; G.726 Alarm DORI DORI DORI DISTANCE T 280.0 m (279.86 ft) 111.2 m (918.64 ft) 121.0 m (918.64 ft) 122.0 m (118.37 ft) 123.0 m (118.37 ft) 124.0 m (118.37 ft) 125.0 m Description of view of the two functions support the classification and accurate detection of vehicle and human) Work together with Smart NNR to perform refine intelligent search, event extraction and merging to event wides Video Video Compression H.265; H.264; H.264H; H.264B; MIPEG (Only supported by the sub stream) Video Frame Rate Video Close Focus Distance Audio Audio Audio Audio Audio Audio Audio Ompression G.711a; G.711Mu; PCM; G.726 Alarm Video Malitria MiC Ves Alarm Video Sab on Alarm Video Sab on Alarm Video Sab on Alarm Video Sab on Alarm Video Frame Rate Video Fram								Image Rotation	
Field of View H: 113"-31"; V: 58"-18"; D: 138"-36" Audio Built-in MIC Yes Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Audio Compression G: 711a; G: 711Mu; PCM; G: 726 Alarm Alarm Alarm Alarm Alarm Alarm Alarm Event Alarm Alarm Event Alarm Alarm Event Alarm Alarm Event Alarm Alarm Event Alarm Event Alarm Alarm Alarm Alarm Alarm Alarm Alarm Event Alarm Alarm Alarm Alarm Event Alarm	Focal Length	1	2.7 mm-13.5 mm					Mirror	Yes
Iris Control Fixed Built-in MIC Yes	Max. Apertu	ıre	F1.5					Privacy Masking	4 areas
Close Focus Distance Lens Detect Detect Detect Dobserve Recognize Identify Alarm Alarm Event Alarm No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection, voltage detection; voltage 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 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) "The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected Mobile Client Mobile Client Multicals; (LMP) Alarm Alarm No SD card; SD card full; SD card error; network disconnection; IP conflict; Decay for network disconnection; IP conflict, Illegal access; motion detection, video tampering; tripwire; intrusion; audio detection; video tampering; tripwire; i	Field of View	V	H: 113°-31°; V: 58°-18°; D: 138°-36°					Audio	
Lens Detect Observe Recognize Identify W 85.3 m (279.86 ft) (111.88 ft) (56.10 ft) (27.89 ft) T 280.0 m 112.0 m (98.64 ft) (183.73 ft) (97.86 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 Compression H.265; H.264; H.264B; M.JPEG (Only supported by the sub stream) Smart Codec Smart H.264+ Wideo Frame Rate Lens Detect Observe Recognize Identify Alarm Alarm Event disconnection; IP conflict; illegal access; motion detection; video cand human detection; video 28.0 m (97.86 ft) Network Network Network Network Port RJ-45 (10/100 Base-T) SDK and API Yes Network Protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FFF; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; INS; PPP6; Boujour Video Compression Smart H.264; H.264B; M.JPEG (Only supported by the sub stream) Smart Codec Smart H.265+; Smart H.264+ Video Frame Rate Video Frame Rate Video Frame Rate Network Port RJ-45 (10/100 Base-T) SDK and API Yes Network Protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; ISF; PPP6; Boujour Network Protocol Notice (10 Interoperability Description) Network Protocol Only (10 Interoperability Description) Network Protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; ISF; PPP6; Boujour Network Protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; ISF; PPP6; Boujour Network Protocol Description of the protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; ISF; PPP6; Boujour Network Protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; ISF; PPP6; Boujour Network Protocol Pip4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; ISF; PPP6; Boujour Network Protocol Pip4; IPv6; HTTP; TCP; UDP	Iris Control							Built-in MIC	Yes
DORI Distance W	Close Focus	Distance	0.8 m (2.62 ft)					Audio Compression	G.711a; G.711Mu; PCM; G.726
Distance Vision Vision Vision Vision Vision Vision Video Vide		Lens	Detect	Observe	Recognize	Identify		Alarm	
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 Video Smart L265; 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) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) sub stream; for multiple streams, the values will be subjected Network Network Network Protocol Network Protocol Network Protocol IPv4; IPv6; HTTP; TCP; UDP; ARP; RTSP; RTCP; RTMP; Multicast; ICMP; IGMP; NFS; PPPoE; Boujour Network Protocol 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 Management Software Mobile Client Mobile Client IOS; Android		W	(279.86 ft)	(111.88 ft)	(56.10 ft)	(27.89 ft)	Alarm Event	disconnection; IP conflict; illegal access; motion	
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 Video Compression Was tream: 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 Network Protoc									
Classification and accurate detection of vehicle and human Classification and accurate detection of vehicle and human	Intelligen	ce						Network	
Smart Search 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 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 Wideo Frame Rate Video Frame Rate Video Frame Rate Video Frame Rate Main stream: 3840 × 2160@(1–25 fps)/2688 × 1520@ (1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 fps) fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected Mobile Client Network Protocol 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 Management Software Mobile Client Mobile Client IOS; Android	IVS (Perimet	er Protection)	classification and accurate detection of vehicle and					Network Port	RJ-45 (10/100 Base-T)
Video Video Compression Video Smart H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream) Video Smart H.265+; Smart H.264+ Video Frame Rate Network Protocol SMTP; FTP; DHCP; DNS; DDNS; QoS; UPnP; NTIP; Multicast; ICMP; INMP; MICP; NTIMP; MICP; NTIMP; MICP; NTIMP; MICP; MICP; NTIMP; MICP; M								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+ Storage 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 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 Management Software Mobile Client Mobile Client IOS; Android								Network Protocol	SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;
by the sub stream) 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) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected Mobile Client Octoral bandwidth: 48 M) Storage FTP; SFTP; Micro SD card (support max. 256 GB); NAS Browser IE; Chrome; Firefox Management Software Smart PSS; DSS; DMSS	video		LI 265, LI 264, LI 264D, LI 264D, MIDEC (Only supported					Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone
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) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected 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	Video Compression							User/Host	20 (Total bandwidth: 48 M)
(1–25/30 fps) sub stream: 704 × 576@(1–25 fps)/704 × 480@(1–30 Video Frame Rate fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected Mobile Client iOS; Android	Smart Code	Smart Codec		Smart H.265+; Smart H.264+				Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Video Frame Rate fps)			(1-25/30 fps)					Browser	IE; Chrome; Firefox
stream; for multiple streams, the values will be subjected Mobile Client iOS; Android	Video Frame Rate		fps)					Management Software	Smart PSS; 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: UL60950-1 CAN/CSA C22.2 No.60950-1-07		
Power			
Power Supply	12 VDC/PoE (802.3af)		
Power Consumption	Basic: 2.8 W (12 VDC); 3.6 W (PoE) Max. (H.265+ max. resolution + max. stream+ WDR + IR intensity + IVS): 6.4 W (12 VDC); 7.6 W (PoE)		
Fundament.			

Environment

Operating Temperature	−30 °C to +60 °C (−22 °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	108.3 mm × Φ122 mm (4.26" × Φ4.80")
Net Weight	0.70 kg (1.54 lb)
Gross Weight	0.88 kg (1.94 lb)

Ordering Information				
Туре	Model	Description		
8MP Camera	DH-IPC-HDW2841T-ZS	8MP IR Vari-focal Eyeball WizSense Network Camera		
	PFA130-E	Water-proof Junction Box		
	PFB205W	Wall Mount Bracket		
	PFA152-E	Pole Mount Bracket		
Accessories	PFA106	Mount Adapter		
(Optional)	PFB220C	Ceiling Mount Bracket		
	PFM321D	12 VDC 1A Power Adapter		
	PFM900-E	Integrated Mount Tester		
	TF-P100	MicroSD Memory Card		

Accessories

Optional:







PFB205W Wall Mount Bracket



PFA152-E Pole Mount Bracket



PFA106 Mount Adapter



PFB220C Ceiling Mount Bracket



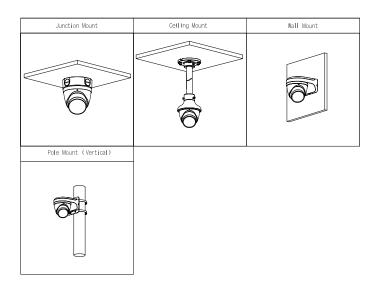
PFM321D 12 VDC 1A Power Adapter



PFM900-E Integrated Mount Tester



TF-P100 MicroSD Memory Card



Dimensions (mm[inch])

