

DH-IPC-HFW2241T-Z(A)S

2MP IR Vari-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.

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.

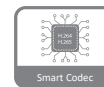
Smart H.265+ & Smart H.264+

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.

- 2-MP 1/2.8" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 60 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 (Only - ZAS supports); audio: 1 in, 1 out (Only - ZAS supports); supports max. 256 G Micro SD card; built in MIC.
- 12 VDC/PoE power supply, easy for installation.
- IP67, IK10 (optional) 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.

Technical Specification					
Camera					
Image Sensor		1/2.8" CMOS			
Max. Resolution		1920 (H) × 1080 (V)			
ROM		128 MB			
RAM		128 MB			
Scanning System		Progressive			
Electronic Shutter Speed		Auto/Manual 1/3 s–1/100,000 s			
Min. Illumination		0.002 lux@F1.5 (Color, 30 IRE) 0.0002 lux@F1.5 (B/W, 30 IRE) 0 lux (Illuminator on)			
S/N Ratio		>56 dB			
Illumination Distance		Up to 60 m (196.85 ft) (IR LED)			
Illuminator On/Off Control		Auto;Manual			
Illuminator Number		4 (IR LED)			
Pan/Tilt/Rotation Range		Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°			
Lens					
Lens Type		Motorized vari-focal			
Lens Mount		ϕ14			
Focal Length		2.7 mm–13.5 mm			
Max. Aperture		F1.5			
Field of View		H: 108°–30°; V: 56°–17°; D: 131°–35°			
Iris Control		Fixed			
Close Focus Distance		0.8 m (2.62 ft)			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	44.1 m (144.69 ft)	17.7 m (58.07 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	T	144.8 m (475.07 ft)	57.9 m (189.96 ft)	29.0 m (96.14 ft)	14.5 m (47.57 ft)
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		Smart H.265+; Smart H.264+			
Video Frame Rate		Main stream: 1920 × 1080@(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		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–6144 kbps H.265: 12 kbps–6144 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		Manual;Auto	
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 1080p resolution and lower)	
Mirror		Yes	
Privacy Masking		4 areas	
Audio			
Built-in MIC		Yes	
Audio Compression		G.711a; G.711Mu; G.726; PCM	
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; defocus detection; external alarm (Only- ZAS supports); SMD; security exception	
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; NTP; Multicast; ICMP; IGMP; P2P	
Interoperability		ONVIF (Profile S/Profile T); CGI	
User/Host		6 (Total bandwidth: 36 M)	
Storage		FTP; SFTP; Micro SD card (support max. 256 GB)	
Browser		IE Chrome Firefox	
Management Software		SmartPSS Lite; DSS; DMSS	
Mobile Client		iOS; Android	

Cyber Security	Video encryption; Configuration encryption; Digest; WSSE; Account lockout; Security logs; IP/MAC filtering; Generation and importing of X.509 certification; syslog; HTTPS; 802.1x; Trusted boot; Trusted execution; Trusted upgrade
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
Port	
Audio Input	1 channel (RCA port) (Only- ZAS supports)
Audio Output	1 channel (RCA port) (Only- ZAS supports)
Alarm Input	1 channel in: 5mA 3V–5V DC (Only- ZAS supports)
Alarm Output	1 channel out: 300mA 12V DC (Only- ZAS supports)
Power	
Power Supply	12 VDC/PoE (802.3af)
Power Consumption	-ZS: Basic: 2W (12 VDC); 2.6 W (PoE) Max. (H.265+intelligence on +WDR +IR on): 8.5 W (12 VDC); 9.8 W (PoE) -ZAS: Basic: 2W (12 VDC); 2.6 W (PoE) Max. (H.265+intelligence on +WDR +IR on): 8.6 W (12 VDC); 9.9 W (PoE)
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)
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	-ZS: 0.73 kg (1.6 lb) -ZAS: 0.76 kg (1.7 lb)
Gross Weight	-ZS: 0.99 kg (2.2 lb) -ZAS: 1.02 kg (2.2 lb)

Ordering Information

Type	Model	Description
2MP Camera	DH-IPC-HFW2241T-ZAS	2MP IR Vari-focal Bullet WizSense Network Camera
	DH-IPC-HFW2241T-ZS	2MP IR Vari-focal Bullet WizSense Network Camera
Accessories (Optional)	PFA130-E	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:



PFA130-E
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])

