

# DH-IPC-HDBW2241R-Z(A)S

2MP IR Vari-focal Dome WizSense Network Camera



# Wiz Sense

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 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.
- 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 and IK10 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, IK10, 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.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J). 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.

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# **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		40 m (131.23	40 m (131.23 ft) (IR LED)			
Illuminator On/Off Control		Auto; Manual				
Illuminator Number		2 (IR LED)				
Pan/Tilt/Rotation Range		Pan: 0°–355° Tilt: 0°–67° Rotation: 0°–355°				
Lens						
Lens Type		Motorized vari-focal				
Lens Mount		φ14				
Focal Length		2.7 mm–13.5 mm				
Max. Apertu	re	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)				
	Lens	Detect	Observe	Recognize	Identify	
DORI Distance	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)	
	Т	144.8 m (475.07 ft)	57.9 m (189.96 ft)	29.0 m (96.14 ft)	14.5 m (47.57 ft)	
Intelligen	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.		

ResolutionSoSOp (1920 × 1080); 1.3M (1280 × 960); 720 p (1280 \$720); 1/70 × 557/70 × 480); VGA (640 × 480); CIG (352 × 240)Bit Rate ControlCBR/VBRVideo Bit RateH.264: 32 kbps-6144 kbpsDay/NightAtol(CR)/Color/B/WBLCVsMDR120 dBWDRColor JackWhite BalanceNanual; street lamp; outdoor; manual; regional customNoise ReductionOF/ON (4 areas, rectangular)Motion DetectionVesMarge RotationVesSmart IlluminationVesMardio CompressionVesAudio CompressionVesAudio CompressionVesMardio CompressionVesMardio CompressionSoSonard SU (Support 90'/270' with 1080pMirrorVesAudioVesAudioSoSonard SD card full; SD card error; network disconnertor; Pic Youffi, Illegal access; motion alter CompressionAudioSoSonard; SD card full; SD card error; network of sciencertor; Pic Onflict; Illegal access; motion alter CompressionNetwork PortNo SD card; SD card full; SD card error; network of sciencertor; Pic Onflict; Illegal access; motion alter CompressionNetwork PortNo SD card; SD card full; SD card error; network of sciencertor; Pic Onflict; Illegal access; motion alter Compression of acceter Science Compression Science Acceter Science Compression science Pic	Stream Capability	2 streams
Video Bit RateH264: 32 kBps-6144 kBpsIvary NightAuto(ICR)/Color/B/WBLCVsHLCVsWard20 dBWhite BalanceAuto; natural; street lamp; outdoor; manual; regional distomGain ControlManual; AutoNoise ReductionSPF/ON (4 areas, rectangular)Motion DetectionVsMarge RotationVsMirrorVsMarge RotationVsMitro Support Soft Soft Soft Soft Soft Soft Soft Sof	Resolution	× 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF
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BLC   Yes     BLC   Yes     HLC   120 dB     White Balance   Auto; natural; street lamp; outdoor; manual; regional custom     Gain Control   Manual; Auto     Noise Reduction   JD NR     Motion Detection   OFF/ON (4 areas, rectangular)     Region of Interest (Rol)   Yes (4 areas)     Smart Illumination   Yes     Image Rotation   O'90'/180'/270' (Support 90'/270* with 1080p resolution and lower)     Mirror   Yes     Privacy Masking   4 areas     Audio   Soluti-in MIC     Juadio Compression   G71aig:711Mu; G.726; PCM     Alarm   Sols Card; DS Card; DS Card full; SD Card; Illegal access; Putwork disconnection; PE conflic; Illegal a	Video Bit Rate	
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IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP;     SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast;     ICMP; IGMP     ONVIF (Profile S/Profile T); CGI; P2P; Milestone     User/Host   6 (Total bandwidth: 36 M)     Storage   FTP; SFTP; Micro SD card (support max. 256 GB)     Browser   IE     Management Software   Smart PSS; DSS; DMSS	Network Port	RJ-45 (10/100 Base-T)
Network Protocol SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast; ICMP; IGMP   Interoperability ONVIF (Profile S/Profile T); CGI; P2P; Milestone   User/Host 6 (Total bandwidth: 36 M)   Storage FTP; SFTP; Micro SD card (support max. 256 GB)   Browser IE Chrome Firefox   Management Software Smart PSS; DSS; DMSS	SDK and API	Yes
User/Host 6 (Total bandwidth: 36 M)   Storage FTP; SFTP; Micro SD card (support max. 256 GB)   Browser IE Chrome Firefox   Management Software Smart PSS; DMSS	Network Protocol	SMTP; FTP; SFTP; DHCP; DNS; DDNS; NTP; Multicast;
Storage FTP; SFTP; Micro SD card (support max. 256 GB)   Browser IE Chrome Firefox   Management Software Smart PSS; DSS; DMSS	Interoperability	ONVIF (Profile S/Profile T); CGI; P2P; Milestone
Browser IE Chrome Firefox   Management Software Smart PSS; DSS; DMSS	User/Host	6 (Total bandwidth: 36 M)
Browser Chrome Firefox   Management Software Smart PSS; DSS; DMSS	Storage	FTP; SFTP; Micro SD card (support max. 256 GB)
	Browser	Chrome
Mobile Client iOS; Android	Management Software	Smart PSS; DSS; DMSS
	Mobile Client	iOS; Android

# Wiz Sense | DH-IPC-HDBW2241R-Z(A)S

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: 1.8 W (12 VDC); 2.6 W (PoE) Max. (H.265+intelligence on +WDR +IR on): 6.2 W (12 VDC); 7.1 W (PoE) -ZAS: Basic: 1.8 W (12 VDC); 2.6 W (PoE) Max. (H.265+intelligence on +WDR +IR on): 6.3 W (12 VDC); 7.2 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			
Structure				
Casing Material	Metal			
Product Dimensions	93.4 mm × Φ122 mm (3.68"× Φ4.80")			
Net Weight	-ZS: 0.49 kg (1.08 lb) -ZAS: 0.52 kg (1.15 lb)			
Gross Weight	-ZS: 0.66 kg (1.46 lb) -ZAS: 0.68 kg(1.50 lb)			

Ordering Information				
Туре	Model	Description		
2MP Camera	DH-IPC-HDBW2241R-ZAS	2MP IR Vari-focal Dome WizSense Network Camera		
	DH-IPC-HDBW2241R-ZS	2MP IR Vari-focal Dome WizSense Network Camera		
	PFA137	Junction Box		
	PFB203W	Wall Mount Bracket		
	PFA109	Mount Adapter		
Accessories	PFB220C	Ceiling Mount Bracket		
(Optional)	PFA152-E	Pole Mount Bracket		
	PFM321D	12 VDC 1A Power Adapter		
	РҒМ900-Е	Integrated Mount Tester		
	TF-P100	MicroSD Memory Card		

# Accessories

## Optional:



PFA137





PFA109 Mount Adapter



PFM321D 12 VDC 1A Power Adapter



Wall Mount Bracket

PFB203W



PFA152-E Pole Moun



PFB220C Ceiling Mount

Bracket

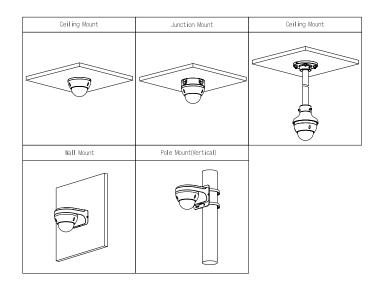
PFM900-E Integrated Mount Tester

Pole Mount Bracket

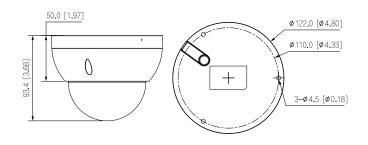


TF-P100 MicroSD Memory Card

# Wiz Sense | DH-IPC-HDBW2241R-Z(A)S



# Dimensions (mm[inch])



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