

# DH-IPC-HDBW3241R-Z(A)S-S2

2MP IR Vari-focal Dome 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**

Dahua WizSense 3 Series Network Camera greatly saves on bandwidth and storage space through its Al Coding technology. Driven by its advanced deep learning algorithms, the camera supports intelligent functions such as perimeter protection, smart motion detection (SMD), Quick Pick, and Al SSA (Al Scene Self-adaptation), making it easy and convenient to use. Starlight technology and its large aperture lens also allow the camera to produce clear, vivid images even in poor lighting conditions.

## **Functions**

#### **SMD 4.0**

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

#### AI SSA

Dahua AI Scene Self-adaptation (AI SSA) adopts deep learning algorithms to detect environmental conditions, such as rain, fog, backlight, low light and flicker, to adjust the parameters of the image to suit the conditions, ensuring that clear images are always produced.

### 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.

- 2-MP 1/2.8" CMOS image sensor, excellent low luminance performance and high definition of images.
- Outputs max. 2 MP (1920 × 1080) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- · Built-in IR LED, max. IR distance: 40 m.
- ROI, SMART H.264 +/H.265+, AI 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 detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human).
- Abnormality detection: Motion detection, privacy masking, scene changing, 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); max. 256 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply facilitates installation.
- IP67, IK10 protection.
- SMD 4.0, AI SSA.













#### **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.

#### 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.

#### **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 comprising the device.

Technical Specification								Main stream: 1920 × 1080 @ (1–25/30) fps
Camera								Sub stream 1: $704 \times 576$ @ $(1-20 \text{ fps})/704 \times 480$ @ $(1-30 \text{ fps})$ Sub stream 2: $1920 \times 1080$ @ $(1-25/30 \text{ fps})$ *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity
Image Sensor		1/2.8" CMOS					Video Frame Rate	
Max. Resolution		1920 (H) × 1080 (V)						
ROM		128 MB					Stream Capability	3 streams
RAM		512 MB					Resolution	1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240); VGA (640 × 480)
Scanning System		Progressive					Bit Rate Control	CBR/VBR
Electronic Shutter Speed		Auto/Manual 1/3 s-1/100,000 s					Video Bit Rate	H.264: 3 kbps–8192 kbps
Min. Illumination		0.002 lux@F1.5 (Color, 30 IRE) 0.0002 lux@F1.5 (B/W, 30 IRE) 0 lux (Illuminator on )					Day/Night	H.265: 3 kbps–8192 kbps Auto (ICR)/Color/B/W
S/N Ratio		>56 dB					BLC	Yes
Illumination	Illumination Distance		Up to 40 m (131.23 ft)				HLC	Yes
Illuminator On/Off Control		Auto/Manual					WDR	120 dB
Illuminator Number		3 (IR LED)					Scene Self-adaptation	Yes
Pan/Tilt/Rota	ation Range	Pan: 0°-355°; Tilt: 0°-80°; Rotation: 0°-355°					(SSA)	
Lens							White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Lens Type		Motorized vari-focal					Gain Control	Auto
Lens Mount		ф14					Noise Reduction	3D NR
Focal Length		2.7 mm-13.5 mm					Motion Detection	OFF/ON (4 areas, rectangular)
Max. Apertu	ire	F1.5					Image Stabilization	Electronic Image Stabilization (EIS)
Field of View		Horizontal: 109°–30° Vertical: 56° –17°					Region of Interest (RoI)	Yes (4 areas)
	rield of view		Diagonal: 137° –35°				Defog	Yes
Iris Control		Fixed					AFSA	Yes
Close Focus		0.8 m (2.62 ft)					Image Rotation	$0^{\circ}/90^{\circ}/180^{\circ}/270^{\circ}$ (support $90^{\circ}/270^{\circ}$ with $1920\times1080$ resolution and lower)
	Lens	Detect	Observe 17.6 m	Recognize	Identify 4.4 m		Mirror	Yes
DORI Distance	W	44.1 m (144.69 ft)	(57.74 ft)	8.8 m (28.87 ft)	4.4 m (14.45 ft)		Privacy Masking	4 areas
	Т	144.8 m (475.07 ft)	57.9 m (189.96 ft)	28.9 m (94.82 ft)	14.8 m (48.56 ft)		Audio	
Intelligen	ce						Built-in MIC	Yes
IVS (Perimeter Protection)		Tripwire, intrusion (support the classification and accurate detection of vehicle and human)					Audio Compression	G.711a; G.711Mu; PCM; G.726; G.723
AI SSA		Yes					Alarm	
Quick Pick		With AI NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events					Alarm Event	-ZAS:  No SD card; SD card full; SD card error; service life warning (only supported by Dahua card); network disconnection; IP conflict; illegal access; motion detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; defocus detection; external alarm; SMD; safety exception
Smart Search		Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos						
Video				-ZS: No SD card; SD card full; SD card error; service life				
Video Compression		H.265; H.264; H.264H; H.264B; MJPEG (only supported by the sub stream)						warning (only supported by Dahua card); network disconnection; IP conflict; illegal access; motion detection; video tampering; intrusion; tripwire; scene changing; audio detection; voltage detection; defocus detection; SMD; safety exception
Smart Codec		Smart H.265+ Smart H.264+						
AI Coding		AI H.265 AI H.264						

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; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P			
Cyber Security	Video encryption; Firmware 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			
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI			
User/Host	20 (Total bandwidth: 64 M)			
Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS			
Browser	IE: IE11 Chrome Firefox			
Management Software	SmartPSS Lite; DSS; DMSS			
Mobile Client	iOS; Android			
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: 5 mA 3–5 VDC (Only- ZAS supports)			
Alarm Output	1 channel out: 300 mA 12 VDC (Only- ZAS supports)			
Power				
Power Supply	12 VDC/PoE (802.3af)			
Power Consumption	Basic: 2.3 W (12 VDC); 2.9 W (PoE) Max. (WDR + IR intensity + Intelligence): 6.6 W (12 VDC); 7.7 W (PoE)			
Environment				
Operating Temperature	$-30~^{\circ}\text{C}$ to +60 $^{\circ}\text{C}$ (–22 $^{\circ}\text{F}$ to 140 $^{\circ}\text{F}) / \text{Less than 95\% RH}$			
Storage Temperature	-40°C to +60°C (-40°F to 140°F)			
Protection	IP67; IK10			
Structure				
Casing	Metal			
Product Dimensions	94 mm × Φ122 mm (3.7" × Φ4.8")			
Net Weight	713 g (1.57 lb)			
Gross Weight	986 g (2.02 lb)			

Ordering Information						
Туре	Model	Description				
2MP Camera	DH-IPC-HDBW3241R-ZAS-S2	2MP IR Vari-focal Dome WizSense Network Camera				
ZIVIP Calliera	DH-IPC-HDBW3241R-ZS-S2	2MP IR Vari-focal Dome WizSense Network Camera				
	PFA137	Junction Box Bracket				
	PFA109	Mount Adapter				
	PFB220C	Ceiling Mount Bracket				
Accessories	PFB206W	Wall Mount				
(Optional)	PFA152-E	Pole Mount				
	PFM321D	12 VDC 1 A Power Adapter				
	PFM900-E	Integrated Mount Tester				
	TF-P100	TLC SD Card				

## Accessories

## Optional:







PFA109 Mount Adapter



PFB220C Ceiling Mount Bracket



PFM321D 12 VDC 1 A Power Adapter



PFB206W Wall Mount



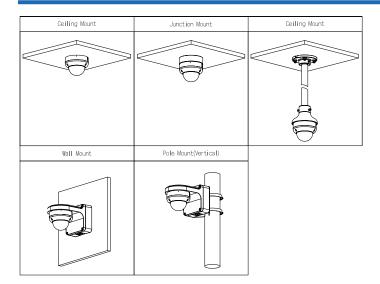
PFA152-E Pole Mount



PFM900-E Integrated Mount Tester



TF-P100 TLC SD Card



# Dimensions (mm[inch])

