

# DH-IPC-HDBW2831R-ZS-S2

8MP Lite IR Vari-focal Dome Network Camera



#### **Series Overview**

With upgraded H.265 encoding technology, Dahua Lite series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better color image in the condition of low illumination. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

#### Functions

#### 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.

#### 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.

#### Starlight

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

- 8MP, 1/2.7" CMOS image sensor, low illuminance, high image definition
- Outputs max. 8MP (3840 × 2160) @15 fps, and supports 2688×1520 (2688 × 1520) @25/30 fps
- Support Triple Stream
- 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+, 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
- Abnormality detection: Motion detection, video tampering, no SD

card, SD card full, SD card error, network disconnection, IP conflict,

- illegal access, voltage detection
- Supports max. 256 GB Micro SD card
- 12V DC/PoE power supply
- IP67, IK10 protection



#### IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

#### **Cyber Security**

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading 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 works normal 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% input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

# Lite Series | DH-IPC-HDBW2831R-ZS-S2

# **Technical Specification**

Stream Capability

3 streams

CameraImage Sensor1/2.7" 8Megapixel progressive CMOSMax. Resolution3840 (H) × 2160 (V)ROM128 MBRAM256 MBScanning SystemProgressiveElectronic Shutter SpeedAuto/Manual 1/3 s-1/100,000 sMin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination DistanceAuto/ManualIlluminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tilt/Rotation RangePan: 0°-355° Rotation: 0°-355° Rotation: 0°-355°					
Max. Resolution3840 (H) × 2160 (V)ROM128 MBRAM256 MBScanning SystemProgressiveElectronic Shutter SpeedAuto/Manual 1/3 s-1/100,000 sMin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination Distance40 m (131.2 ft)Illuminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tilt/Rotation RangePan: 0°-355° Tilt: 0°-67°					
ROM128 MBRAM256 MBScanning SystemProgressiveElectronic Shutter SpeedAuto/Manual 1/3 s-1/100,000 sMin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination Distance40 m (131.2 ft)Illuminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tillt/Rotation RangePan: 0°-355° Tilt: 0°-67°					
RAM256 MBScanning SystemProgressiveElectronic Shutter SpeedAuto/Manual 1/3 s-1/100,000 sMin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination Distance40 m (131.2 ft)Illuminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tilt/Rotation RangePan: 0°-355° Tilt: 0°-67°					
Scanning SystemProgressiveElectronic Shutter SpeedAuto/Manual 1/3 s-1/100,000 sMin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination Distance40 m (131.2 ft)Illuminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tilt/Rotation RangePan: 0°-355° Tilt: 0°-67°					
Electronic Shutter SpeedAuto/Manual 1/3 s-1/100,000 sMin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination Distance40 m (131.2 ft)Illuminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tilt/Rotation RangePan: 0°-355° Tilt: 0°-67°					
Nin. Illumination0.008 Lux@F1.5S/N Ratio>56 dBIllumination Distance40 m (131.2 ft)Illuminator On/Off ControlAuto/ManualIlluminator Number2 (IR LED)Pan/Tilt/Rotation RangePan: 0°-355° Tilt: 0°-67°					
S/N Ratio >56 dB   Illumination Distance 40 m (131.2 ft)   Illuminator On/Off Control Auto/Manual   Illuminator Number 2 (IR LED)   Pan/Tilt/Rotation Range Pan: 0°–355° Tilt: 0°–67°					
Illumination Distance 40 m (131.2 ft)   Illuminator On/Off Control Auto/Manual   Illuminator Number 2 (IR LED)   Pan/Tilt/Rotation Range Pan: 0°–355° Tilt: 0°–67°					
Illuminator On/Off Control Auto/Manual   Illuminator Number 2 (IR LED)   Pan/Tilt/Rotation Range Tilt: 0°–355° Tilt: 0°–67°					
Illuminator Number 2 (IR LED)   Pan/Tilt/Rotation Range Tilt: 0°–355°					
Pan: 0°–355° Pan/Tilt/Rotation Range Tilt: 0°–67°					
Pan/Tilt/Rotation Range Tilt: 0°–67°					
	Tilt: 0°-67°				
Lens					
Lens Type Motorized vari-focal					
Mount Type $ arrow 14$	φ14				
Focal Length 2.7 mm–13.5 mm	2.7 mm–13.5 mm				
Max. Aperture F1.5	F1.5				
Field of ViewVertical: 58°-17°Diagonal: 138°-36°	Vertical: 58°–17°				
Iris Type Fixed	Fixed				
Close Focus Distance 0.8m–0.8m (2.62 ft–2.62 ft)	0.8m–0.8m (2.62 ft–2.62 ft)				
Lens Detect Observe Recognize Ide	entify				
W	5 m 7.9 ft)				
	8 m 1.9 ft)				
Smart Event					
IVS Tripwire; intrusion					
Video					
Video Compression     H.265; H.264; H.264B; MJPEG (only supported by sub stream)	H.265; H.264; H.264B; MJPEG (only supported by the sub stream)				
Smart Codec Smart H.265+/ Smart H.264+	Smart H.265+/ Smart H.264+				
Main stream: 3840 × 2160 (1 fps–15 fps) 2688 × 1520 (1 fps–25/30 fps) Sub stream: 704 × 576 (1 fps–25 fps); 704 × 480 (1 fps–30 fps) Third stream: CIF@1fps	3840 × 2160 (1 fps−15 fps) 2688 × 1520 (1 fps−25/30 fps) Sub stream: 704 × 576 (1 fps−25 fps); 704 × 480 (1 fps−30 fps)				

Resolution	3840 × 2160 (3840 × 2160); 3072 × 2048 (3072 × 2048); 3072 ×1728 (3072 × 1728); 2592 × 1944 (2592 × 1944); 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 (640 × 480); CIF (352 × 288/352 × 240)	
Bit Rate Control	CBR/VBR	
Video Bit Rate	H.264: 32 kbps–8192 kbps H.265: 12 kbps–8192 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	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° (Supports 90°/270° with 3840 $\times$ 2160 resolution and lower.)	
Mirror	Yes	
Privacy Masking	4 areas	
Alarm		
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; motion detection; video tampering; tripwire; intrusion; illegal access; voltage detection; safety exception	
Network		
Network	RJ-45 (10/100 Base-T)	
SDK and API	Yes	
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	
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPNP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour	
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec	
User/Host	20	
Storage	FTP; SFTP; Micro SD Card (support max. 256 GB); NAS	
Browser	IE Chrome Firefox	
Management Software	Smart PSS; DSS; DMSS	
Mobile Phone	IOS; Android	

# Lite Series | DH-IPC-HDBW2831R-ZS-S2

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	12V DC/PoE (802.3af)			
Power Consumption	< 7.4W			
Environment				
Operating Conditions	$-30^{\circ}$ C to +60°C (−22°F to +140°F)/less than $\leq$ 95% RH			
Storage Temperature	-40°C to +60°C (-40°F to +140°F)			
Protection	IP67; IK10			
Structure				
Casing	Metal			
Dimensions	Φ122 mm × 88.9 mm (Φ4.80" × 3.50")			
Net Weight	0.47 kg (1.1 lb)			
Gross Weight	0.63 kg (1.4 lb)			

### **Ordering Information**

Туре	Part Number	Description
8MP Camera	DH-IPC-HDBW2831RP-ZS-S2	8MP Lite IR Vari-focal Dome Network Camera,PAL
	DH-IPC-HDBW2831RN-ZS-S2	8MP Lite IR Vari-focal Dome Network Camera,NTSC
	PFA137	Junction Box
	PFB203W	Wall Mount
	PFA152-E	Pole Mount
	PFA200W	Rain Shade
	PFA106	Mount Adapter
Accessories	PFB220C	Celling Mount
(optional)	PFB200C	In-Celling Mount
	PFM321D	DC12V1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
	PFM114	TLC SD Card

## Accessories

#### **Optional:**



Junction Box



PFB203W

Wall Mount



PFA152-E Pole Mount



PFA200W Rain Shade



PFA106 unt Adapter







PFM321D

DC12V1A Power

Adapter



LR1002-1ET/1EC Single-port Long Reach Ethernet over Coax Extender

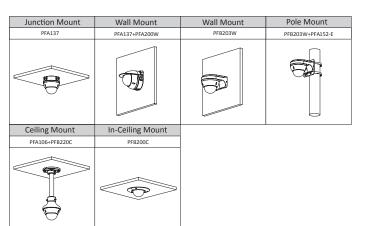


PFB200C

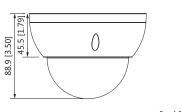
In-Celling Mount

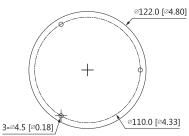
PFM900-E Integrated Mount Tester





## Dimensions (mm[inch])





Rev 001.001 © 2020 Dahua. All rights reserved. Design and specifications are subject to change without notice. Pictures in the document are for reference only, and the actual product shall prevail.