# DH-IPC-HDBW2831R-ZAS-S2

## 8MP Lite IR Vari-focal Dome Network Camera



- · 8MP, 1/2.7" CMOS image sensor, low illuminance, high definition image
- · Outputs max. 8MP (3840 × 2160)@15 fps, and supports 2688 × 1520 (2688 × 1520)@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+, 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, local alarm, voltage detection, audio detection
- · Alarm: 1 in, 1 out; audio: 1 in, 1 out; supports max. 256 GB Micro SD card
- · 12 V DC/PoE power supply
- · IP67, IK10 protection



### 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.

### IVS

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

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

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.7" CMOS |
| Max. Resolution | 3840 (H) × 2160 (V) |
| ROM | 128 MB |
| RAM | 256 MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual 1/3 s–1/100,000 s |
| Min. Illumination | 0.008 Lux@F1.5 |
| 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°<br>Tilt: 0°–67°<br>Rotation: 0°–355° |

### Lens

| | |
|---|---|
| Lens Type | Motorized vari-focal |
| Mount Type | ϕ14 |
| Focal Length | 2.7 mm–13.5 mm |
| Max. Aperture | F1.5 |
| Field of View | Pan: 113°–31°<br>Tilt: 58°–17°<br>Diagonal: 138°–36° |
| Iris Type | Fixed |
| Close Focus Distance | 0.8m–0.8m (2.62 ft–2.62 ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| | W | 85.3 m (279.9 ft) | 34.1 m (111.9 ft) | 17 m (55.8 ft) | 8.5 m (27.9 ft) |
| | T | 280 m (918.6 ft) | 112 m (367.5 ft) | 56 m (183.7 ft) | 28 m (91.9 ft) |

### Smart Event

| | |
|---|---|
| IVS | Tripwire; intrusion |

### Video

| | |
|---|---|
| Video Compression | H.265; H.264; H.264B; MJPEG (only supported by the sub stream) |
| Smart Codec | Smart H.265+/ Smart H.264+ |
| Video Frame Rate | Main stream:<br>3840 × 2160 (1 fps–15 fps)<br>2688 × 1520 (1 fps–25/30 fps)<br>Sub stream:<br>704 × 576 (1 fps–25 fps)<br>704 × 480 (1 fps–30 fps) |
| Stream Capability | 2 streams |

| | |
|---|---|
| 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<br>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 2688 × 1520 resolution and lower.) |
| Mirror | Yes |
| Privacy Masking | 4 areas |

### Audio

| | |
|---|---|
| Audio Compression | G.711a; G.711Mu; G.726 |

### 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; audio detection; safety exception; local alarm |

### 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<br>Chrome<br>Firefox |
| Management Software | Smart PSS; DSS; DMSS |

| Mobile Phone | IOS; Android |
|---|---|

## Certification

| Certifications | CE-LVD: EN62368-1<br>CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU<br>FCC: 47 CFR FCC Part 15, Subpart B<br>UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07 |
|---|---|

## Port

| Audio Input | 1 channel (RCA port) |
|---|---|
| Audio Output | 1 channel (RCA port) |
| Alarm Input | 1 channel In: 5mA 5V DC |
| Alarm Output | 1 channel Out: 300mA 12V DC |

## Power

| Power Supply | 12 V DC/PoE (802.3af) |
|---|---|
| Power Consumption | < 7.4 W |

## Environment

| Operating Conditions | −30 °C to +60 °C (−22 °F to +140 °F)/less than ≤ 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

| Type | Part Number | Description |
|---|---|---|
| 8MP Camera | DH-IPC-HDBW2831RP-ZAS-S2 | 8MP Lite IR Vari-focal Dome Network Camera,PAL |
| | DH-IPC-HDBW2831RN-ZAS-S2 | 8MP Lite IR Vari-focal Dome Network Camera,NTSC |
| Accessories (optional) | PFA137 | Junction Box |
| | PFB203W | Wall Mount |
| | PFA152-E | Pole Mount |
| | PFA200W | Rain Shade |
| | PFA106 | Mount Adapter |
| | PFB220C | Ceiling Mount |
| | PFB200C | In-Ceiling Mount |
| | PFM321D | DC12 V 1A Power Adapter |
| | LR1002-1ET/1EC | Single-port Long Reach Ethernet over Coax Extender |
| | PFM900-E | Integrated Mount Tester |
| | PFM114 | TLC SD Card |

## Accessories

### Optional:



PFA137
Junction Box

PFB203W
Wall Mount

PFA152-E
Pole Mount

PFA200W
Rain Shade

PFA106
Mount Adapter

PFB220C
Ceiling Mount

PFB200C
In-Ceiling Mount

PFM321D
DC12V1A Power Adapter

LR1002-1ET/1EC
Single-port Long Reach Ethernet over Coax Extender
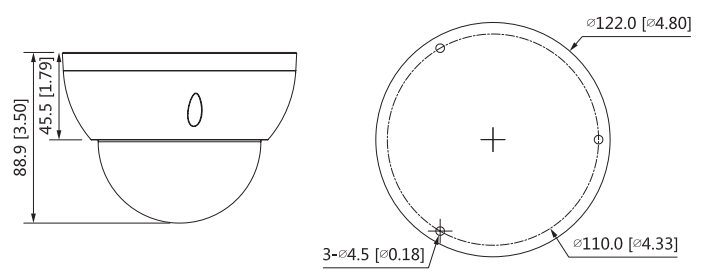
PFM900-E
Integrated Mount Tester

PFM114
TLC SD Card

| Junction Mount | Wall Mount | Wall Mount | Pole Mount |
|---|---|---|---|
| PFA137 | PFA137+PFA200W | PFB203W | PFB203W+PFA152-E |

| Ceiling Mount | In-Ceiling Mount |
|---|---|
| PFA106+PFB220C | PFB200C |

## Dimensions (mm[inch])



88.9 [3.50]  45.5 [1.79]

∅122.0 [∅4.80]
∅110.0 [∅4.33]
3-∅4.5 [∅0.18]