# DH-IPC-HDBW2831E-S-S2

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

- 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
- H.265 codec, high compression rate, ultra-low bit rate
- Built-in IR LED, max IR distance: 30 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

| 8Mp | Smart Codec | WDR | Starlight | IVS | IP67 | IK10 |

## 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 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, 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.
Wide voltage: The camera allows ±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 | 1/2.7" 8Megapixel progressive 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 | 0.009 Lux@F2.0 |
| S/N Ratio | >56 dB |
| Illumination Distance | 30 m (98.43 ft) |
| Illuminator On/Off Control | Auto/Manual |
| Illuminator Number | 3 (IR LED) |
| Pan/Tilt/Rotation Range | Pan: 0°–355°<br>Tilt: 0°–65°<br>Rotation: 0°–355° |

### Lens

| | |
|---|---|
| Lens Type | Fixed-focal |
| Mount Type | M12 |
| Focal Length | 2.8 mm<br>3.6 mm |
| Max. Aperture | F2.0<br>F2.0 |
| Field of View | 2.8 mm: Horizontal 105° × Vertical 56° × Diagonal 125°<br>3.6 mm: Horizontal 87° × Vertical 47° × Diagonal 104° |
| Iris Type | Fixed |
| Close Focus Distance | 2.8 mm: 1.0 m  (3.3 ft)<br>3.6 mm: 1.9 m  (6.2 ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| | 2.8mm | 74.7 m (245.1 ft) | 29.9 m (98.1 ft) | 14.9 m (48.9 ft) | 7.5 m (24.6 ft) |
| | 3.6mm | 106.7 m (350.1 ft) | 42.7 m (140.1 ft) | 21.3 m (69.6 ft) | 10.7 m (35.1 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 3840 × 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<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 |
|---|---|

## Power

| Power Supply | 12V DC/PoE (802.3af) |
|---|---|
| Power Consumption | < 6.2W |

## Environment

| Power Consumption | −40°C to +60°C (−40°F to +140°F)/less than ≤ 95% RH |
|---|---|
| Storage Temperature | −40°C to +60°C (−40°F to +140°F) |
| Protection Grade | IP67; IK10 |

## Structure

| Casing | Metal |
|---|---|
| Dimensions | 81 mm × Φ109.9 mm (3.19" × Φ4.33") |
| Net Weight | 0.350 kg (0.77 lb) |
| Gross Weight | 0.491 kg (1.08 lb) |

## Ordering Information

| Type | Part Number | Description |
|---|---|---|
| 8MP Camera | DH-IPC-HDBW2831EP-S-S2 | 8MP Lite IR Fixed-focal Dome Network Camera,PAL |
| | DH-IPC-HDBW2831EN-S-S2 | 8MP ILite IR Fixed-focal Dome Network Camera,NTSC |
| Accessories (optional) | PFA136 | Junction Box |
| | PFA200W | Rain Shade |
| | PFB203W | Wall Mount |
| | PFA152-E | Pole Mount |
| | PFA106 | Mount Adapter |
| | PFB220C | 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:**

PFA136 Junction Box | PFA200W Rain Shade | PFB203W Wall Mount
PFA152-E Pole Mount | PFA106 Mount Adapter | PFB220C 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

| Junction Mount | Wall Mount | Wall Mount | Pole Mount |
|---|---|---|---|
| PFA136 | PFA136+PFA200W | PFB203W | PFB203W+PFA152-E |
| Ceiling Mount | | | |
| PFA106+PFB220C | | | |

## Dimensions (mm[inch])

41.0 [1.61] | 81.0 [3.19] | ⌀109.9 [⌀4.33] | ⌀98.2 [⌀3.87] | 3-⌀4.7 [⌀0.19]