

# DH-IPC-HDW5231R-Z

## 2MP WDR IR Eyeball Network Camera



### System Overview

Eco-savvy products by upgrading H.265 encoding technology, bringing high efficient video compression. It saves bandwidth and storage, energy-saving design to enhance the monitoring system. Meanwhile, the series offers features such as starlight, Smart IR technology, intelligent image analysis techniques. It provides excellent image quality and intelligent and efficient event reminders. This series provides IP67 weatherproof and IK10 vandal-proof protection feature. Give customers more value

### Functions

#### Starlight Technology

Featuring Dahua's Starlight Technology, this camera is ideal for applications with challenging lighting conditions. Its low-light performance delivers usable video with minimal ambient light. Even in extreme low-light conditions, Starlight Technology is capable of delivering color images in near complete darkness (0.006 lux).

#### Wide Dynamic Range

Embedded with industry leading wide dynamic range (WDR) technology, vivid pictures are achieved even in the most intense contrast lighting conditions. For applications with both bright and low lighting conditions that change quickly, True WDR (120dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

#### Intelligent Video System (IVS)

With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed, People Counting, ideal for business intelligence, and Facial Detection, for searching or identification of individuals.

#### Environmental

With a temperature range of -30 °C to +60 °C (-22 °F to +140 °F), the

- 1/2.8" 2Megapixel progressive scan Exmor CMOS
- H.265&H.264 triple-stream encoding
- 50/60fps@1080(1920×1080)
- Smart Detection supported
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.7mm ~12mm motorized lens
- Max. IR LEDs Length 50m
- IP67, PoE
- Micro SD card memory



camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications. For environments with rain, sleet, snow and fog, an integrated wiper provides users with clear visibility at all times.

#### Protection

Supporting ±30% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.

#### Smart H.265+

Deliver high quality video without straining the network, Smart H.265+ is the optimized implementation of H.265. The Smart H.265+ encoding technology includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing saving of up to 70% of bandwidth and storage when compared with standard H.265.

#### HEVC (H.265)

H.265 ITU-T VCEG is a new video coding standard. H.265 Following standard developed around the existing video coding standard H.264, some retain the original technology, while some of the relevant technology to improve the new technology uses advanced technology to improve the relationship between the code stream, encoding quality, and the delay between algorithm complexity, optimize settings specific contents include: Improve compression efficiency, improve the robustness and error recovery capabilities, real-time to reduce the delay, reduce channel acquisition time and a random access delay, reduce complexity, etc

**Technical Specification**

## Camera

|                      |  |
|----------------------|--|
| Image Sensor         | 1/2.8" 2Megapixel progressive scan CMOS  |
| Effective Pixels     | 1920(H) x 1080(V)                        |
| RAM/ROM              | 256MB/32MB                               |
| Scanning System      | Progressive                              |
| Minimum Illumination | 0.006Lux/F1.4 (Color); 0Lux/F1.4 (IR on) |
| S/N Ratio            | More than 50dB                           |
| IR Distance          | Distance up to 50m (164ft)               |
| IR On/Off Control    | Auto/ Manual                             |
| IR LEDs              | 2  |

## Lens

|                      |                          |
|----------------------|--------------------------|
| Lens Type            | Motorized/ Auto Iris(DC) |
| Mount Type           | Board-in                 |
| Focal Length         | 2.7mm~12mm               |
| Max. Aperture        | F1.4                     |
| Angle of View        | H: 97°~34°, V: 52°~20°   |
| Optical Zoom         | 4x                       |
| Focus Control        | Motorized                |
| Close Focus Distance | 0.3m                     |

## Pan/Tilt/Rotation

|                         |  |
|-------------------------|--|
| Pan/Tilt/Rotation Range | Pan:0°~360°; Tilt:0°~78°; Rotation:0°~360° |
|-------------------------|--|

## Intelligence

|                                |   |
|--------------------------------|---|
| IVS (optional)                 | Tripwire, Intrusion, Object Abandoned/Missing |
| Advanced Intelligent Functions | Face Detection                                |

## Video

|                      |  |
|----------------------|--|
| Compression          | H.265+/H.265/H.264+/H.264  |
| Streaming Capability | 3 Streams  |
| Resolution           | 1080P(1920x1080)/1.3M(1280x960)/720P(1280x720)/D1(704x576/704x480)/VGA(640x480)/CIF(352x288/352x240) |
| Frame Rate           | Main Stream: 1080P(1~50/60fps)   |
|                      | Sub Stream: D1(1~50/60fps)   |
|                      | Third Stream: 1080P(1~25/30fps)  |
| Bit Rate Control     | CBR/VBR  |
| Bit Rate             | H.264: 24~9472Kbps<br>H.265: 14~5632Kbps   |
| Day/Night            | Auto(ICR) / Color / B/W  |
| BLC Mode             | BLC / HLC / WDR(120dB)   |

|                                      |   |
|--------------------------------------|---|
| White Balance                        | Auto/Natural/Street Lamp/Outdoor/Manual |
| Gain Control                         | Auto/Manual                             |
| Noise Reduction                      | 3D DNR                                  |
| Motion Detetion                      | Off / On (4 Zone, Rectangle)            |
| Region of Interest                   | Off / On (4 Zone)                       |
| Electronic Image Stabilization (EIS) | N/A                                     |
| Smart IR                             | Support                                 |
| Defog                                | N/A                                     |
| Digital Zoom                         | 16x                                     |
| Flip                                 | 0°/90°/180°/270°                        |
| Mirror                               | Off / On                                |
| Privacy Masking                      | Off / On (4 Area, Rectangle)            |

## Audio

|             |                             |
|-------------|-----------------------------|
| Compression | G.711a/ G.711Mu/ AAC/ G.726 |
|-------------|-----------------------------|

## Network

|                     |  |
|---------------------|--|
| Ethernet            | RJ-45 (10/100Base-T)   |
| Protocol            | HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; QoS; UPnP;NTP; Bonjour; 802.1x; Multicast; ICMP; IGMP; SNMP |
| Interoperability    | ONVIF, PSIA, CGI   |
| Streaming Method    | Unicast / Multicast  |
| Max. User Access    | 10 Users /20 Users   |
| Edge Storage        | NAS<br>Local PC for instant recording<br>Mirco SD card 128GB   |
| Web Viewer          | IE, Chrome, Firefox, Safari  |
| Management Software | Smart PSS, DSS, Easy4ip  |
| Smart Phone         | IOS, Android   |

## Certifications

|                |  |
|----------------|--|
| Certifications | CE (EN 60950:2000)<br>UL:UL60950-1<br>FCC: FCC Part 15 Subpart B |
|----------------|--|

## Interface

|                 |              |
|-----------------|--------------|
| Video Interface | N/A          |
| Audio Interface | Built-in Mic |
| RS485           | N/A          |
| Alarm           | N/A          |

## Electrical

|                   |                              |
|-------------------|------------------------------|
| Power Supply      | DC12V, PoE(802.3af)(Class 0) |
| Power Consumption | <8.5W                        |

Environmental

|                      |   |
|----------------------|---|
| Operating Conditions | -30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH |
| Storage Conditions   | -30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH |
| Ingress Protection   | IP67  |
| Vandal Resistance    | N/A   |

Construction

|              |                             |
|--------------|-----------------------------|
| Casing       | Metal                       |
| Dimensions   | Φ122mm×104.9mm( 4.8"×4.13") |
| Net Weight   | 0.6Kg (1.32lb)              |
| Gross Weight | 0.71Kg (1.57lb)             |

Ordering Information

| Type                   | Part Number        | Description                              |
|------------------------|--------------------|--|
| 2MP camera             | DH-IPC-HDW5231RP-Z | 2MP IR Eyeball Network Camera, WDR, PAL  |
|                        | DH-IPC-HDW5231RN-Z | 2MP IR Eyeball Network Camera, WDR, NTSC |
|                        | IPC-HDW5231RP-Z    | 2MP IR Eyeball Network Camera, WDR, PAL  |
|                        | IPC-HDW5231RN-Z    | 2MP IR Eyeball Network Camera, WDR, NTSC |
| Accessories (optional) | PFB203W            | Wall mount                               |
|                        | PFA137             | Junction box                             |
|                        | PFA152             | Pole Mount                               |

Accessories

Optional:



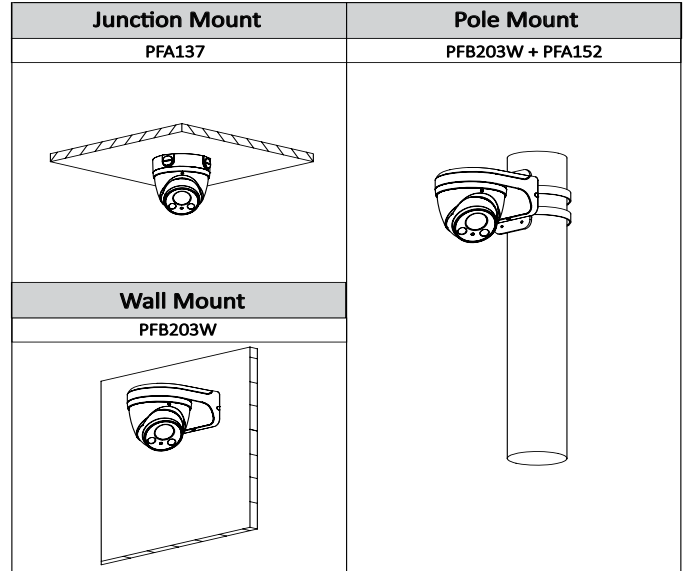
PFA152 Pole Mount



PFB203W Wall Mount



PFA137 Junction Box



Dimensions (mm/inch)

