

# DH-IPC-HDW2421R-ZS

4MP WDR IR Eyeball Network Camera



- 1/3" 4Megapixel progressive CMOS
- H.264+ & H.264 dual-stream encoding
- 20fps@4M(2688x15320) & 25/30fps@3M (2304x1296)
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- Micro SD card slot, up to 128GB
- 2.7~12mm varifocal lens
- Max IR LEDs Length 60m
- IP67, PoE



## System Overview

The IR Megapixel Vari-focal Eyeball camera delivers 4MP resolution with a motorized 2.7mm – 12mm varifocal lens. The camera's elegant blend of aesthetics combined with a range of easy mounting solutions provides an excellent choice for a variety of small to mid-size applications at an affordable price.

## Functions

### True Day/Night

A day/night mechanical IR cut filter makes this camera ideal for applications with fluctuating lighting conditions, delivering color images during the day and automatically switching to monochrome as the scene darkens

### Regions of interest

Regions of Interest (ROI) is a user defined feature that allows the operator to monitor specific areas of a scene while still maintaining overall situational awareness of less important areas

### Smart IR

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object. Smart IR technology prevents IR LEDs from whiting out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 60m (197ft).

### 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.

### Image flip

Capturing unnecessary data such as surrounding hallway walls can increase storage requirements without any added value. The image flip feature allows the camera's image to be rotated in 90° increments for better video optimization.

### Protection

Supporting ±10% 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.

### Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer

### Smart H.264+

Delivering high quality video without straining the network, Smart H.264+ is the optimized implementation of H.264. The Smart H.264+ encoding platform includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing a savings of up to 70% of bandwidth and storage when compared with standard H.264.

## Technical Specification

### Camera

|                      |                                      |
|----------------------|--------------------------------------|
| Image Sensor         | 1/3" 4Megapixel progressive CMOS     |
| Effective Pixels     | 2688(H) x1520(V)                     |
| RAM/ROM              | 256MB/16MB                           |
| Scanning System      | Progressive                          |
| Minimum Illumination | 0.1Lux/F1.4(Color), 0Lux/F1.4(IR on) |
| S/N Ratio            | More than 50dB                       |
| IR Distance          | Distance up to 60m(197ft)            |
| IR On/Off Control    | Auto/ Manual                         |
| IR LEDs              | 2                                    |

### Lens

|                      |                       |
|----------------------|-----------------------|
| Lens Type            | Motorized             |
| Mount Type           | Board-in              |
| Focal Length         | 2.7mm~12mm            |
| Max. Aperture        | F1.4                  |
| Angle of View        | H:100°~35°, V:54°~20° |
| Focus Control        | Motorized             |
| Close Focus Distance | 0.3m                  |

### PTZ

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

### Video

|                      |                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------|
| Compression          | H.264+/H.264                                                                                                        |
| Streaming Capability | 2 Streams                                                                                                           |
| Resolution           | 4M(2688×1520)/3M(2304×1296)/1080P(1920×1080)/1.3M(1280×960)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240) |
| Frame Rate           | 4M(1~20fps)<br>D1/CIF(1 ~ 25/30fps)/3M(1~25/30fps)                                                                  |
| Bit Rate Control     | CBR/VBR                                                                                                             |
| Bit Rate             | H264:24K ~ 8Mbps                                                                                                    |
| 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                                 |
| Digital Zoom                        | 16x                                     |
| Flip                                | 0°/90°/180°/270°                        |
| Mirror                              | Off / On                                |
| Privacy Masking                     | Off / On (4 Area, Rectangle)            |

### Audio

|             |     |
|-------------|-----|
| Compression | N/A |
|-------------|-----|

### 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;IGMP;ICMP; |
| Interoperability    | ONVIF, PSIA, CGI                                                                                                      |
| Streaming Method    | Unicast / Multicast                                                                                                   |
| Max. User Access    | 10 Users/20 Users                                                                                                     |
| Edge Storage        | NAS(Network Attached Storage), Local PC for instant recording<br>Micro 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 | N/A |
| RS485           | N/A |
| Alarm           | N/A |

### Electrical

|                   |                              |
|-------------------|------------------------------|
| Power Supply      | DC12V PoE (802.3af)(Class 0) |
| Power Consumption | <9.75W                       |

## 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 x 104.9mm(4.8" x 4.1") |
| Net Weight   | 0.59Kg(1.30lb)                |
| Gross Weight | 0.71Kg(1.57lb)                |

## Ordering Information

| Type                   | Part Number         | Description                             |
|------------------------|---------------------|-----------------------------------------|
|                        | DH-IPC-HDW2421RP-ZS | 4MP WDR IR Eyeball Network Camera, PAL  |
|                        | DH-IPC-HDW2421RN-ZS | 4MP WDR IR Eyeball Network Camera, NTSC |
|                        | IPC-HDW2421RP-ZS    | 4MP WDR IR Eyeball Network Camera, PAL  |
|                        | IPC-HDW2421RN-ZS    | 4MP WDR IR Eyeball Network Camera, NTSC |
| Accessories (optional) | PFA137              | Junction box                            |
|                        | PFB203W             | Wall mount                              |
|                        | PFA152              | Pole mount                              |

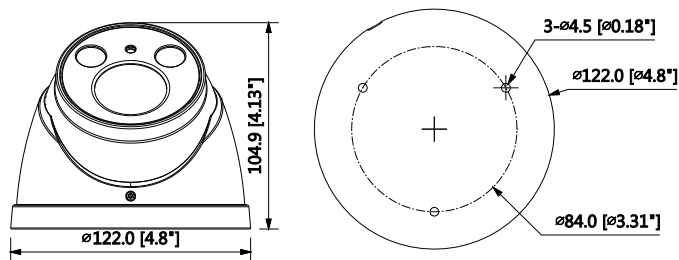
## Accessories

### Optional:



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

## Dimensions (mm/inch)



## ООО "Компания Строимир"

г. Киев, ул. Борщаговская 154А, оф. 435  
+38 (044) 331-15-43 info@smartel.ua  
www.smartel.ua

