# DH-IPC-HDW5442TM-AS

## 4MP WDR IR Eyeball AI Network Camera

· 1/1.8" 4Megapixel progressive scan CMOS

· H.265&H.264 triple-stream encoding

· 25/30fps@2688×1520

· WDR(120dB), Day/Night(ICR), 3D DNR, AWB, AGC, BLC

· Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS

· 2.8mm fixed lens (3.6mm, 6mm optional)

· Max. IR LEDs Length 51m

· Micro SD memory, IP67

Dahua AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

## System Overview

Pro AI series contains Face Capture, Perimeter Protection and People Counting functions.Powered by deep-learning Artificial Intelligence algorithms, significantly improved accuracy. Meanwhile, the series features starlight and smart IR technology. This series fully protected from dust and water, certified to IP67 standard.

## Functions

### Perimeter Protection

Dahua's Perimeter Protection functions significantly improved accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or to a mobile client reduces system requirements and resources resulting in greater surveillance system efficiency.

### People Counting

People Counting function uses advanced image processing technology to capture depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals' entrance and exit with up to 95% counting accuracy.

### Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. Dahua face detection camera can extract six facial attributes and output the metadata for analysis.

### Protection(IP67, wide voltage)

The camera allows for ±30% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67) , the camera is the choice for installation in even the most unforgiving environments.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/1.8" 4Megapixel progressive scan CMOS |
| Effective Pixels | 2688(H) x 1520(V) |
| RAM/ROM | 512MB/128MB |
| Scanning System | Progressive |
| Electronic Shutter Speed | Auto/Manual, 1/3~1/100000s |
| Minimum Illumination | 0.0016Lux/F1.6 ( Color,1/3s,30IRE)<br>0.015Lux/F1.6 ( Color,1/30s,30IRE)<br>0Lux/F1.6(IR on) |
| IR Distance | Distance up to 51m (167ft) |
| IR On/Off Control | Auto/ Manual |
| IR LEDs | 2 |

### Lens

| | |
|---|---|
| Lens Type | Fixed |
| Mount Type | Board-in |
| Focal Length | 2.8mm,3.6mm,6.0mm |
| Max. Aperture | F1.6 |
| Angle of View | H: 113°, V:60°/H: 89°, V:48°/H: 56°, V:31° |
| Optical Zoom | N/A |
| Aperture Type | Fixed |
| Close Focus Distance | 1.3m(4.27ft)/1.9m(6.23ft)/3.8m(12.47ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | 2.8mm | 58m(190ft) | 23m(75ft) | 12m(39ft) | 6m(20ft) |
| | 3.6mm | 72m(236ft) | 29m(95ft) | 14m(46ft) | 7m(23ft) |
| | 6.0mm | 113m(371ft) | 45m(148ft) | 23m(75ft) | 11m(36ft) |

### Pan/Tilt/Rotation

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

### Artificial Intelligence

| | |
|---|---|
| Perimeter Protection | Tripwire, Intrusion(Human & Vehicle classification) |
| People Counting | Line crossing people counting, Region people counting |

### General Intelligence

| | |
|---|---|
| Event Trigger | Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access,Storage anomaly |
| General Intelligence | Object Abandoned/Missing |

### Video

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|---|---|
| Compression | H.265+/H.265/H.264+/H.264/H.264B/H.264H/ MJPEG(sub stream) |
| Streaming Capability | 3 Streams |
| Resolution | 2688×1520/2304×1296/1080P(1920×1080)/1.3M(1280×960)/720P(1280×720)/D1(704×576/704×480)/VGA(640×480)/CIF(352×288/352×240) |

| | |
|---|---|
| Frame Rate | Main Stream: 2688×1520(1~25/30fps) |
| | Sub Stream: D1(1~25/30fps) |
| | Third Stream: 1080P(1~11fps) |
| Bit Rate Control | CBR/VBR |
| Bit Rate | H.264: 32~ 8192Kbps<br>H.265: 19~ 8192kbps |
| 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 | Support |
| Digital Zoom | N/A |
| Flip | 0°/90°/180°/270° |
| Mirror | Off / On |
| Privacy Masking | Off / On (4 Area, Rectangle) |

### Audio

| | |
|---|---|
| Compression | G.711a/G.711Mu/G.726/AAC/G.723 |

### Network

| | |
|---|---|
| Ethernet | RJ-45 (10/100Base-T) |
| Protocol | HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP;SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; SNMP;QoS; UPnP;NTP |
| Interoperability | ONVIF(Profile S/Profile G), CGI,Milstone,Genetec,P2P |
| Streaming Method | Unicast / Multicast |
| Max. User Access | 20 Users |
| Edge Storage | NAS<br>FTP<br>Mirco SD card 256GB |
| Web Viewer | IE(versions newer than IE8), Chrome, Firefox, Safari(versions newer than Safari 12) |
| Management Software | Smart PSS, DSS, P2P |
| Smart Phone | iOS, Android |

### Certifications

| | |
|---|---|
| Certifications | CE-LVD:EN60950-1<br>CE-EMC:Electromagnetic Compatibility Directive 2014/30/EU<br>FCC:47 CFR FCC Part 15, Subpart B<br>UL/CUL:<br>UL60950-1<br>CAN/CSA C22.2 No.60950-1-07 |

## Interface

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

## Electrical

| | |
|---|---|
| Power Supply | DC12V(±30%), PoE(802.3af)(Class 0) |
| Power Consumption | DC12V:2.1W 6.2W(IR on) <br> PoE:2.6W 7.2W(IR on) |

## Environmental

| | |
|---|---|
| Operating Conditions | -30° C ~ +60° C (-22° F ~ +140° F) / 10%RH~95% RH |
| Strorage Conditions | +5° C ~ +40° C (+41° F ~ +104° F) (daily temperature difference within 15° C/59° F ) / 10%RH~95% RH |
| Ingress Protection | IP67 |

## Construction

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|---|---|
| Casing | Metal |
| Dimensions | Φ106mm×99.2mm (4.17"×3.91") |
| Net Weight | 0.55Kg (1.21lb) |
| Gross Weight | 0.71Kg (1.57lb) |

## Ordering Information

| Type | Part Number | Description |
|---|---|---|
| 4MP camera | DH-IPC-HDW5442TMP-AS | 4MP WDR IR Eyeball AI Network Camera, WDR,PAL |
| | DH-IPC-HDW5442TMN-AS | 4MP WDR IR Eyeball AI Network Camera, WDR,NTSC |
| | IPC-HDW5442TMP-AS | 4MP WDR IR Eyeball AI Network Camera, WDR,PAL |
| | IPC-HDW5442TMN-AS | 4MP WDR IR Eyeball AI Network Camera, WDR,NTSC |
| Accessories (optional) | PFA130-E | Junction box |
| | PFA151 | Corner Mount |
| | PFB204W | Wall Mount |
| | PFA106 | Mount Adapter |
| | PFB220C | Ceiling Mount |
| | PFA152-E | Pole Mount |

## Accessories

### Optional:

| PFA130-E <br> Junction box | PFA151 <br> Corner Mount | PFB204W <br> Wall Mount | PFA106 <br> Mount Adapter |
|---|---|---|---|

| PFB220C <br> Ceiling Mount | PFA152-E <br> Pole Mount |
|---|---|

| Junction Mount | Corner Mount |
|---|---|
| PFA130-E | PFA151+PFB204W |

| Wall Mount | Ceiling Mount |
|---|---|
| PFB204W | PFA106+PFB220C |

| Ceiling Mount | Pole Mount |
|---|---|
| | PFB204W + PFA152-E |

## Dimensions (mm/inch)

⌀106.0 [⌀4.17"]
99.2 [3.9"]
⌀69.0 [⌀2.72"]
4−⌀4.5 [⌀0.18"]

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