

# DH-HAC-HDW1509T(-A)-LED

## 5MP Full-color Starlight HDCVI Eyeball Camera



- Full-color starlight
- 40 m LED distance
- Max. 20fps@5MP
- CVI/CVBS/AHD/TVI switchable
- Built-in mic (-A)
- 3.6 mm fixed lens
- IP67, 12V±30% DC



### System Overview

Experience 5MP full HD color video and the simplicity of reusing existing coaxial infrastructure with HDCVI. The full-color starlight HDCVI camera presents a high quality color image with rich details even in total darkness conditions. It offers various fixed lens models with a multi-language OSD and HD/SD switchable output. It adopts two powerful warm white LED illuminators, covering an effective range up to 40m (131.23 ft). The LEDs switch on automatically in darkness to capture detail-packed full-color images 24/7, ensuring authentic identification of objects. It is an ideal choice for applications such as schools, retail centers and parking lots.

### Functions

#### Full-color Starlight

The camera adopts F1.2 large aperture lens and 1/2.7" high performance sensor. With higher amount of absorbed light and advanced image processing algorithm, the camera presents an impressive lowlight performance with an exceptional balance between noise reduction and the blur of moving object.

#### Warm Supplemental lights

With two warm supplemental LED lights, the camera is able to provide a colorful and vivid image even in total dark. By default, the camera is set to smart light mode, in which the camera can automatically adjust the exposure time and light sensitivity simultaneously to avoid overexposure of the objects in the image center. Also, the sensitivity and intensity of the LED lights can be remotely controlled by OSD menu.

#### Broadcast-quality Audio\*

Audio information is used as supplementary evidence in video surveillance applications. The HDCVI camera supports audio signal transmission over coaxial cable. In addition, it adopts unique audio processing and transmission technology that best restores source audio and eliminates noise, guaranteeing the quality and effectiveness of collected audio information.

\*This function is available for select models.

#### 4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio\*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the HCVR, such as sending control signal or triggering alarm.

\*Audio input is available for some models of HDCVI cameras.

#### Long Distance Transmission

HDCVI technology guarantees long-distance and real-time transmission without any loss. It supports up to 700 m for 5MP HD video via coaxial cable, and up to 300 m via UTP cable.\*

\*Actual results verified by real-scene testing in Dahua's test laboratory.

#### Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring a network.

#### Multiple-formats

The camera supports multiple video formats including HDCVI, CVBS and other two common HD analog formats in the market. The four formats can be switched over through OSD menu or by PFM820(UTC controller). This feature makes the camera to be compatible with most end users' existing HD/SD DVRs.

#### Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 ranking, making it suitable for indoor or outdoor environments. With working temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting ±30% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

### Technical Specification

#### Camera

|                                   |   |
|-----------------------------------|---|
| Image Sensor                      | 1/2.7 inch CMOS                                   |
| Effective Pixels                  | 2592 (H) × 1944 (V), 5MP                          |
| Scanning System                   | Progressive                                       |
| Electronic Shutter Speed          | PAL: 1/25s–1/100000s<br>NTSC: 1/30s–1/100000s     |
| S/N Ratio                         | >65dB   |
| Minimum Illumination              | 0.005Lux/F1.2, 0Lux White Light on                |
| Fill Light (White Light) Distance | Distance up to 40 m (131.23 ft)                   |
| Fill Light On/Off Control         | Auto; manual                                      |
| Fill Light Number                 | 2   |
| Pan/Tilt/Rotation Range           | Pan: 0°–360°<br>Tilt: 0°–78°<br>Rotation: 0°–360° |

#### Lens

|                      |  |                      |                      |                     |                    |
|----------------------|--|----------------------|----------------------|---------------------|--------------------|
| Lens Type            | Fixed-focal  |                      |                      |                     |                    |
| Mount Type           | M12  |                      |                      |                     |                    |
| Focal Length         | 3.6 mm   |                      |                      |                     |                    |
| Max. Aperture        | F1.2   |                      |                      |                     |                    |
| Field of View        | 3.6 mm: 111° × 83° × 56°<br>(diagonal × horizontal × vertical) |                      |                      |                     |                    |
| Iris Type            | Fixed iris   |                      |                      |                     |                    |
| Close Focus Distance | 3.6 mm: 2.1 m (6.89 ft)  |                      |                      |                     |                    |
| DORI Distance        | Lens   | Detect               | Observe              | Recognize           | Identify           |
|                      | 3.6 mm   | 80.0 m<br>(262.5 ft) | 32.0 m<br>(105.0 ft) | 16.0 m<br>(52.5 ft) | 8.0 m<br>(26.2 ft) |

#### Video

|                 |   |
|-----------------|---|
| Frame Rate      | CVI:<br>PAL: 5M@20fps, 4M@25fps, 1080P@25fps;<br>NTSC: 5M@20fps, 4M@30fps, 1080P@30fps<br>AHD:<br>PAL: 5M@20fps, 4M@25fps;<br>NTSC: 5M@20fps, 4M@30fps<br>TVI:<br>PAL: 5M@20fps, 4M@25fps;<br>NTSC: 5M@20fps, 4M@30fps<br>CVBS:<br>PAL: 960H;<br>NTSC: 960H |
| Resolution      | 5M (2592 × 1944); 4M (2560 × 1440); 1080P (1920 × 1080); 960H (704 × 576/704 × 480)   |
| BLC             | BLC/HLC/WDR   |
| WDR             | DWDR  |
| White Balance   | Auto; manual  |
| Gain Control    | Auto; manual  |
| Noise Reduction | 2D NR   |
| Smart Light     | Yes   |
| Mirror          | Off/On  |

|                 |                            |
|-----------------|----------------------------|
| Privacy Masking | Off/On (8 area, rectangle) |
|-----------------|----------------------------|

#### Certifications

|                |  |
|----------------|--|
| Certifications | CE (EN55032, EN55024, EN50130-4, EN60950-1)<br>FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014)<br>UL (UL60950-1+CAN/CSA C22.2 No.60950-1) |
|----------------|--|

#### Port

|              |  |
|--------------|--|
| Video Output | Video output choices of CVI/TVI/AHD/CVBS by one BNC port |
|--------------|--|

#### Audio Interface

|             |                  |
|-------------|------------------|
| Audio Input | Built-in mic(-A) |
|-------------|------------------|

#### Power

|                   |                                   |
|-------------------|-----------------------------------|
| Power Supply      | 12V ±30% DC                       |
| Power Consumption | Max 5.0W (12V DC, white light on) |

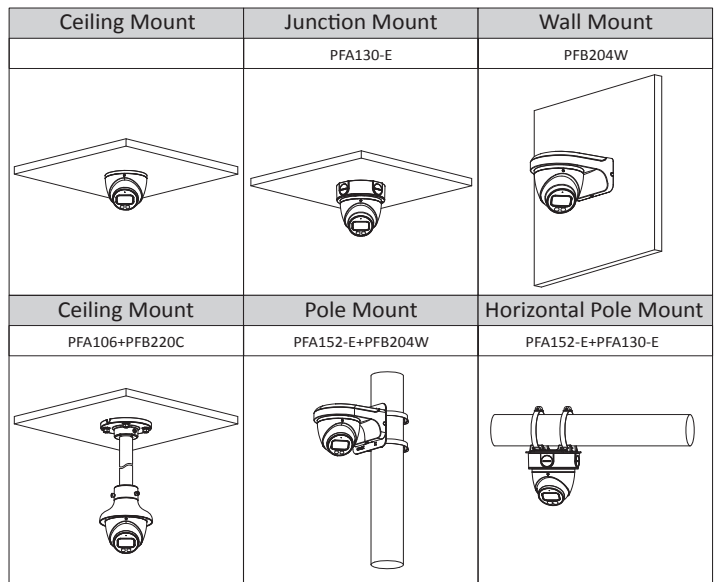
#### Environment

|                       |  |
|-----------------------|--|
| Operating Temperature | -40°C to +60°C (-40°F to 140°F); <95% (non-condensation) |
| Storage Temperature   | -40°C to +60°C (-40°F to 140°F); <95% (non-condensation) |
| Protection Grade      | IP67   |

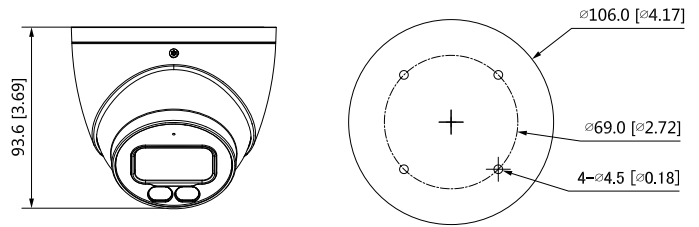
#### Structure

|                   |                                      |
|-------------------|--------------------------------------|
| Casing            | Metal throughout the whole casing    |
| Camera Dimensions | φ106.0 mm × 93.6 mm (φ4.17" × 3.69") |
| Net Weight        | 0.46 Kg (1.01 lb)                    |
| Gross Weight      | 0.61 Kg (1.34 lb)                    |

| Ordering Information |   |   |
|----------------------|---|---|
| Type                 | Part Number                                 | Description   |
| SMP Camera           | DH-HAC-HDW1509TP-A-LED 0360B                | SMP Full-color Starlight HDCVI Eyeball Camera   |
|                      | DH-HAC-HDW1509TN-A-LED 0360B                |   |
|                      | DH-HAC-HDW1509TP-LED 0360B                  |   |
|                      | DH-HAC-HDW1509TN-LED 0360B                  |   |
| Accessories          | PFA130-E                                    | Water-proof Junction Box  |
|                      | PFB204W                                     | Water-proof Wall Mount Bracket  |
|                      | PFA106 + PFB220C                            | Adapter Plate of Mini Dome & Eyeball Camera + Ceiling Mount Bracket of Mini Dome & Eyeball Camera |
|                      | PFA152-E + PFB204W                          | Pole Mount Bracket + Water-proof Wall Mount Bracket   |
|                      | PFA152-E + PFA130-E                         | Pole Mount Bracket + Water-proof Junction Box   |
|                      | PFM820 (Only 1080P and below are available) | UTC Controller  |
|                      | PFM800-E                                    | Passive HDCVI Balun   |
|                      | PFM800-4K                                   | Passive Video Balun   |
|                      | PFM907                                      | Integrated Mount Tester   |
|                      | PFM320D                                     | 12V 2A DC power adapter   |



**Dimensions (mm[inch])**



**Accessories**

**Optional:**

