

# DH-HAC-HDW2802T-A

4K Starlight HDCVI IR Eyeball Camera

## HDCVI



- Starlight, 120dB True WDR, 3DNR
- Max. 4K resolution
- HD/SD switchable
- Audio in interface, built-in mic
- 3.6mm fixed lens (2.8mm, 6mm optional)
- Max. IR length 50m, Smart IR
- IP67, DC12V±30%



### System Overview

Experience 4K video surveillance with the simplicity of reusing existing coaxial infrastructure. The 4K HDCVI camera adopts a powerful Dahua ISP and advanced 1/1.8" image sensor, which provides superior high quality images. It also supports Starlight and 120dB true WDR for a clear image in poor lighting conditions. In addition, the camera features broadcast-quality audio to provide enhanced supplementary evidence collection. Ultra-high definition and a complete set of features makes the 4K HDCVI camera an ideal choice for mid to large-size businesses and projects where both highly reliable surveillance and construction flexibility are demanded.

### Functions

#### 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. Moreover, HDCVI technology supports PoC for construction flexibility.

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

#### Long Distance Transmission

HDCVI technology guarantees real-time transmission at long distance without any loss. It supports up to 700m transmission for 4K and 4MP HD video via coaxial cable, and up to 300m 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.

#### Starlight

With the adoption of large sized high performance sensor, the camera is able to provide incomparable performance even under extreme lowlight environment. The starlight feature allows more details to be captured and accurate color to be recognized at night or in scenes with limited illumination.

#### 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.

#### Multiple-formats

The camera supports multiple video formats including HDCVI, CVBS, and other two common HD analog formats in the market. A DIP switch located on the cable allows you to quickly toggle formats, further simplifying installation and debugging. This feature makes the camera compatible with not only XVRs, but also most existing HD/SD DVRs.

#### Wide Dynamic Range

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

#### Advanced 3DNR

3DNR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. Dahua's advanced 3DNR technology allows remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. Besides, the advanced 3DNR effectively decreases the band width and saves the storage space.

#### 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.

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             | 1/1.8" CMOS                                   |
| Effective Pixels         | 3840(H)×2160(V), 8MP                          |
| Scanning System          | Progressive                                   |
| Electronic Shutter Speed | PAL: 1/4s~1/100,000s<br>NTSC: 1/3s~1/100,000s |
| Minimum Illumination     | 0.005Lux/F1.6, 30IRE, 0Lux IR on              |
| S/N Ratio                | More than 65dB                                |
| IR Distance              | Up to 50m (164feet)                           |
| IR On/Off Control        | Auto / Manual                                 |
| IR LEDs                  | 2                                             |

|                      |                                                    |
|----------------------|----------------------------------------------------|
| Lens                 |                                                    |
| Lens Type            | Fixed lens / Fixed iris                            |
| Mount Type           | Board-in                                           |
| Focal Length         | 3.6mm (2.8mm, 6mm Optional)                        |
| Max Aperture         | F1.6                                               |
| Angle of View        | H: 87° (110.8°/55°)                                |
| Focus Control        | Auto / Manual                                      |
| Close Focus Distance | 2500mm (1800mm, 6100mm)<br>98.43" (70.87", 240.2") |

DORI Distance

| Note: The DORI distance is a “general proximity” of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively. |                   |                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                              | DORI Definition   | Distance                                                  |
| Detect                                                                                                                                                                                                                                                                                                                       | 25px/m (8px/ft)   | 2.8mm:84m(276ft)<br>3.6mm: 104m(341ft)<br>6mm:164m(538ft) |
| Observe                                                                                                                                                                                                                                                                                                                      | 63px/m (19px/ft)  | 2.8mm:34m(112ft)<br>3.6mm:42m(138ft)<br>6mm:66m(217ft)    |
| Recognize                                                                                                                                                                                                                                                                                                                    | 125px/m (38px/ft) | 2.8mm:17m(56ft)<br>3.6mm: 21m(69ft)<br>6mm: 33m(108ft)    |
| Identify                                                                                                                                                                                                                                                                                                                     | 250px/m (76px/ft) | 2.8mm:8m(26ft)<br>3.6mm:10m(33ft)<br>6mm:16m(52ft)        |

Pan / Tilt / Rotation

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| Pan/Tilt/Rotation | Pan: 0° ~ 360°<br>Tilt: 0° ~ 70°<br>Rotation: 0° ~ 360° |
|-------------------|---------------------------------------------------------|

|              |                                                                             |
|--------------|-----------------------------------------------------------------------------|
| Video        |                                                                             |
| Resolution   | 8MP (3840×2160)                                                             |
| Frame Rate   | 15fps@4K, 20fps@6MP, 25/30fps@4MP                                           |
| Video Output | 1-channel BNC high definition video output / CVBS video output (DIP switch) |

|                 |                     |
|-----------------|---------------------|
| Day/Night       | Auto (ICR) / Manual |
| OSD Menu        | Multi-language      |
| BLC Mode        | BLC / HLC / WDR     |
| WDR             | 120dB               |
| Gain Control    | AGC                 |
| Noise Reduction | 2D/3D               |
| White Balance   | Auto / Manual       |
| Smart IR        | Auto / Manual       |

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

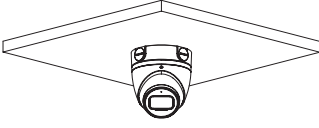
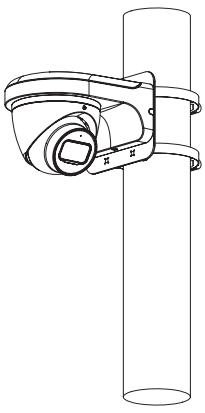
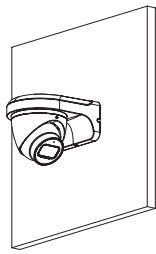
|                 |                       |
|-----------------|-----------------------|
| Interface       |                       |
| Audio Interface | 1ch in & Built-in Mic |

|                   |                        |
|-------------------|------------------------|
| Eelectrical       |                        |
| Power Supply      | 12V DC ±30%            |
| Power Consumption | Max 8W (12V DC, IR on) |

|                                        |                                                                                                      |
|----------------------------------------|------------------------------------------------------------------------------------------------------|
| Environmental                          |                                                                                                      |
| Operating Conditions                   | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH<br>* Start up should be done at above-30°C (-22°F) |
| Storage Conditions                     | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH                                                    |
| Ingress Protection & Vandal Resistance | IP67                                                                                                 |

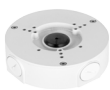
|              |                             |
|--------------|-----------------------------|
| Construction |                             |
| Casing       | Aluminium                   |
| Dimensions   | Φ106mm×99.2mm (Φ4.17"×3.9") |
| Net Weight   | 0.5kg (1.10b)               |
| Gross Weight | 0.62kg (1.37lb)             |

| Ordering Information |                          |                                                        |
|----------------------|--------------------------|--------------------------------------------------------|
| Type                 | Part Number              | Description                                            |
| 4K Camera            | DH-HAC-HDW2802TP-A 2.8mm | 4K starlight HDCVI IR Eyeball Camera, PAL              |
|                      | DH-HAC-HDW2802TP-A 3.6mm |                                                        |
|                      | DH-HAC-HDW2802TP-A 6mm   |                                                        |
|                      | DH-HAC-HDW2802TN-A 2.8mm | 4K starlight HDCVI IR Eyeball Camera, NTSC             |
|                      | DH-HAC-HDW2802TN-A 3.6mm |                                                        |
|                      | DH-HAC-HDW2802TN-A 6mm   |                                                        |
| Accessories          | PFA130-E                 | Junction box (For use alone)                           |
|                      | PFB204W                  | Wall mount (For use alone or with PFA152-E pole mount) |
|                      | PFA152-E                 | Pole mount (For use with PFB203W wall mount)           |
|                      | PFM800-E                 | Passive HDCVI Balun                                    |
|                      | FM321                    | 12V 1A Power Adapter                                   |
|                      | FM320                    | 12V 2A Power Adapter                                   |
|                      | PFM320D-015              | 12V 1.5A Power Adapter                                 |

| Junction Mount                                                                     | Pole Mount                                                                          |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| PFA130-E                                                                           | PFB204W + PFA152-E                                                                  |
|  |  |
| Wall Mount                                                                         |                                                                                     |
| PFB204W                                                                            |                                                                                     |
|  |                                                                                     |
| Dimensions (mm/inch)                                                               |                                                                                     |

Accessories

Optional:



PFA130-E  
Junction box



PFB204W  
Wall mount



PFA152-E  
Pole mount



PFM321  
12V 1A Power Adapter



PFM320  
12V 2A Power Adapter



PFM800-E  
Passive HDCVI Balun



PFM320D-015  
Power Adapter

