

# DH-HAC-T2A51

## 5MP HDCVI Fixed IR Eyeball Camera

### HDCVI



\* The parameters and datasheets below can only be applied to A51-S2 series.

- Max. 25 fps@5MP (16:9 video output)
- CVI/CVBS/AHD/TVI switchable
- 3.6 mm fixed lens (2.8 mm optional)
- Max. IR length 20 m, Smart IR
- IP67, DC12V



#### System Overview

Experience 5MP video and the simplicity of using existing cabling infrastructure with HDCVI. The Cooper series 5MP HDCVI camera features a compact design and offers a high quality image at a friendly price. It offers various vari-focal/fixed lens models with a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance makes the camera an ideal choice for SMB solutions.

#### 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 for 5MP 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.

##### Smart IR

The camera is designed with microcrystalline LED IR illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. Dahua's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object come closer to the camera.

#### Multi-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. This feature makes the camera to be compatible with not only XVRs but also most end users' existing HD/SD DVRs.

#### Multi-language OSD

OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

#### 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" CMOS                                   |
| Max. Resolution            | 2880 (H) × 1620 (V)                           |
| Pixel                      | 5MP                                           |
| Scanning System            | Progressive                                   |
| Electronic Shutter Speed   | PAL: 1/25–1/100000 s<br>NTSC: 1/30–1/100000 s |
| Min. Illumination          | 0.02 Lux/F2.0, 30IRE, 0 Lux IR on             |
| S/N Ratio                  | More than 65 dB                               |
| Illumination Distance      | 20 m (66 feet)                                |
| Illuminator On/Off Control | Auto;manual                                   |

### Lens

|                      |                                                                                                                                   |                      |                     |                     |                    |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|---------------------|--------------------|
| Lens Type            | Fixed lens / Fixed iris                                                                                                           |                      |                     |                     |                    |
| Mount Type           | M12                                                                                                                               |                      |                     |                     |                    |
| Focal Length         | 3.6 mm (2.8 mm Optional)                                                                                                          |                      |                     |                     |                    |
| Max Aperture         | F2.0                                                                                                                              |                      |                     |                     |                    |
| Angle of View        | 2.8 mm: 125° × 106° × 56°<br>(diagonal × horizontal × vertical)<br>3.6 mm: 104° × 88° × 46°<br>(diagonal × horizontal × vertical) |                      |                     |                     |                    |
| Focus Control        | N/A                                                                                                                               |                      |                     |                     |                    |
| Close Focus Distance | 2.8 mm: 0.8 m (2.6 ft)<br>3.6 mm: 1.2 m (3.9 ft)                                                                                  |                      |                     |                     |                    |
| DORI distance        | Lens                                                                                                                              | Detect               | Observe             | Recognize           | Identify           |
|                      | 2.8mm                                                                                                                             | 56.0 m<br>(183.7 ft) | 22.4 m<br>(73.5 ft) | 11.2 m<br>(36.7 ft) | 5.6 m<br>(18.4 ft) |
|                      | 3.6mm                                                                                                                             | 80 m<br>(262.5 ft)   | 32 m<br>(105.0 ft)  | 16 m<br>(52.5 ft)   | 8 m<br>(26.2 ft)   |

### Pan / Tilt / Rotation

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| Pan/Tilt/Rotation | Pan: 0° – 360°<br>Tilt: 0° – 78°<br>Rotation: 0° – 360° |
|-------------------|---------------------------------------------------------|

### Video

|              |                                                                                                                                                                                                       |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resolution   | 5M (2880 × 1620); 4M (2560 × 1440);<br>1080P (1920 × 1080);960H (960 × 576/960 × 480)                                                                                                                 |
| Frame Rate   | CVI:<br>PAL:5M@25 fps; 4M@25 fps; 1080P@25 fps<br>NTSC:5M@25 fps; 4M@30 fps; 1080P@30 fps<br>AHD:<br>PAL:4M@25 fps;<br>NTSC:4M@30 fps;<br>TVI:<br>PAL:4M@25 fps;<br>NTSC:4M@30 fps;<br>CVBS:<br>960H; |
| Video Output | Video output choices of CVI/TVI/AHD/CVBS by one BNC port                                                                                                                                              |
| Day/Night    | Auto (ICR) / Manual                                                                                                                                                                                   |
| OSD Menu     | Multi-language                                                                                                                                                                                        |

|                 |                              |
|-----------------|------------------------------|
| BLC Mode        | BLC / HLC / DWDR             |
| WDR             | DWDR                         |
| Gain Control    | AGC                          |
| Noise Reduction | 2D                           |
| White Balance   | Auto;manual                  |
| Smart IR        | Yes                          |
| Mirror          | Off/On                       |
| Privacy Masking | Off / On (8 area, rectangle) |

### Certifications

|                |                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------|
| Certifications | CE (EN55032, EN55024, EN50130-4,EN60950-1,<br>EN 62368-1:2014+A11:2017)<br>FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) |
|----------------|-------------------------------------------------------------------------------------------------------------------------------|

### Interface

|                 |     |
|-----------------|-----|
| Audio Interface | N/A |
|-----------------|-----|

### Eelectrical

|                   |                           |
|-------------------|---------------------------|
| Power Supply      | 12V DC ±30%               |
| Power Consumption | Max. 3.7W (12V DC, IR on) |

### Environmental

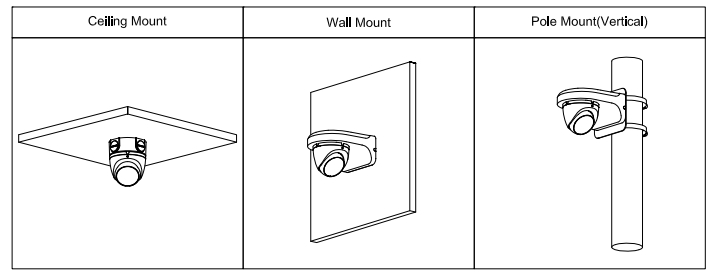
|                                        |                                                                                                        |
|----------------------------------------|--------------------------------------------------------------------------------------------------------|
| Operating Conditions                   | –40°C to +60°C (–40°F to +140°F) /Less than 95% RH<br>* Start up should be done at above –40°C (–40°F) |
| Storage Conditions                     | –40°C to +60°C (–40°F to +140°F) /Less than 95% RH                                                     |
| Ingress Protection & Vandal Resistance | IP67                                                                                                   |

### Construction

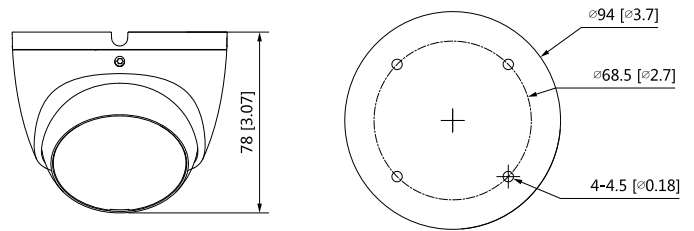
|              |                                |
|--------------|--------------------------------|
| Casing       | Aluminium                      |
| Dimensions   | φ94 mm × 78 mm (φ3.7" × 3.07") |
| Net Weight   | 0.27 kg (0.60 lb)              |
| Gross Weight | 0.33 kg (0.73 lb)              |

## Ordering Information

| Type        | Part Number          | Description                             |
|-------------|----------------------|-----------------------------------------|
| 5MP Camera  | DH-HAC-T2A51P 2.8mm  | 5MP HDCVI Fixed IR Eyeball Camera, PAL  |
|             | DH-HAC-T2A51P 3.6 mm |                                         |
|             | DH-HAC-T2A51N 2.8mm  | 5MP HDCVI Fixed IR Eyeball Camera, NTSC |
|             | DH-HAC-T2A51N 3.6 mm |                                         |
| Accessories | PFA13A-E             | Water-proof Junction Box                |
|             | PFA152-E             | Pole Mount Bracket                      |
|             | PFB204W              | Water-proof Wall Mount Bracket          |
|             | PFM800-4K            | Passive Video Balun                     |
|             | PFM321               | 12V 1A Power Adapter                    |
|             | PFM904               | Integrated Mount Tester                 |



## Dimensions (mm/inch)



## Accessories

Optional:



PFA13A-E  
Junction box



PFB204W  
Wall mount



PFA152-E  
Pole Mount Bracket



PFM800-4K  
Passive Video Balun



PFM321  
12V 1A Power Adapter



PFM904  
Integrated Mount Tester