# DH-HAC-HDW1800TL/TL-A

## 4K Real-time HDCVI IR Eyeball Camera

- Max. 4K resolution, real-time video transmission
- CVI/CVBS/AHD/TVI switchable
- Built-in mic (-A)
- Fixed lens (2.8mm; 3.6mm optional)
- Max. IR length 30m, Smart IR
- IP67, 12V±30%DC

Lite Series | 4K REAL-TIME | 30m IR | Audio | DC 12V | IP67

## 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 1/2.7" CMOS sensor, which provides superior high quality images. In addition, the camera features broadcastquality 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 technol¬ogy 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.

### Broadcast-quality Audio

Audio information is used as supplementary evidence in video sur-veillance applications. The HDCVI camera supports audio signal transmis¬sion 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 col-lected audio information.

### Multiple-formats

The camera supports multiple video formats including HDCVI, CVBS, and other two common HD analog formats in the market. This feature makes the camera compatible with not only XVRs, but also most existing HD/ SD DVRs. *

*Use OSD menu to switch HDCVI to other video formats. Use PFM820 UTC Controller to switch CVBS to HDCVI video format.

### Protection

The camera's outstanding reliability is unsurpassed due to its rugged de-sign. 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 protectionagainst the camera and its structure from the effects of lightning.

### Smart IR

The camera is designed with microcrystalline LED IR illumination for best lowlight performance. Smart IR is a technology to ensure brightness uni-formity 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.

### 4K Real-time Image Display

Used together with 4K Real-time XVR, the camera can output 4K real-time video stream with clear details and no lag or smear.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.7 inch CMOS |
| Effective Pixels | 3840 (H)× 2160 (V), 4K |
| Scanning System | Progressive |
| Electronic Shutter Speed | PAL: 1/25s–1/100000s<br>NTSC: 1/30s–1/100000s |
| S/N Ratio | >65dB |
| Minimum Illumination | 0.03Lux/F2.0, 30IRE, 0Lux IR on |
| Fill Light Working Distance | 30 m (98.4 ft) |
| IR On/Off Control | Auto; manual |
| IR LED Number | 1 |
| 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 | 2.8mm; 3.6mm |
| Max. Aperture | F2.0 |
| Angle of View | 2.8mm: 125° x 105° x 56° (diagonal x horizontal x vertical)<br>3.6mm: 104° x 87° x 47° (diagonal x horizontal x vertical) |
| Iris Type | Fixed iris |
| Close Focus Distance | 2.8mm: 1.0 m (3.3 ft)<br>3.6mm: 1.9 m (6.2 ft) |

| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| | 2.8mm | 74.7 m (245.1 ft) | 29.9 m (98.1 ft) | 14.9 m (48.9ft) | 7.5 m (24.6 ft) |
| | 3.6mm | 106.7 m (350.1 ft) | 42.7 m (140.1 ft) | 21.3 m (69.9 ft) | 10.7 m (35.1 ft) |

### Video

| | |
|---|---|
| Frame Rate | CVI: 4K@25/30fps; 4K@15fps; 5M@20fps;<br>4M@25fps/30fps;<br>AHD: 4K@15fps;<br>TVI: 4K@15fps;<br>CVBS: 960H |
| Resolution | 4K (3840 × 2160); 5M (2592 × 1944); 4M (2560 × 1440);<br>960H (960 × 576/960 × 480) |
| Day/Night | Auto switch by ICR |
| BLC | BLC/HLC/WDR |
| WDR | DWDR |
| White Balance | Auto; manual |
| Gain Control | Auto; manual |
| Noise Reduction | 2D NR |
| Smart IR | 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 Input | One channel, built-in mic (-A) |

### Power

| | |
|---|---|
| Power Supply | 12V ±30% DC |
| Power Consumption | Max 4.3W (12V DC, IR on) |

### Environment

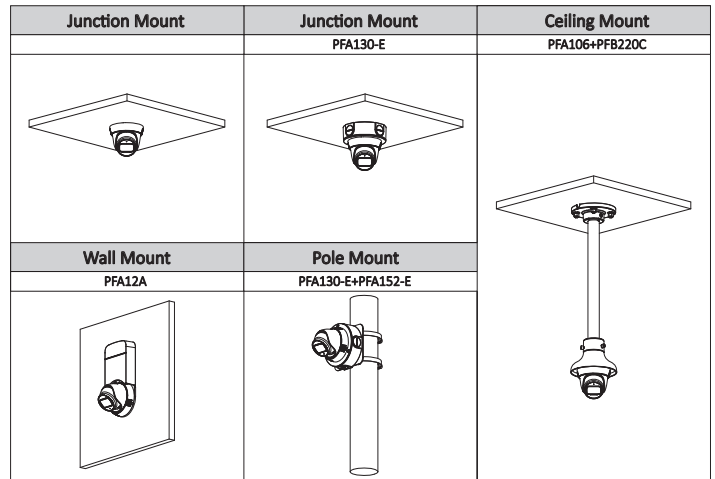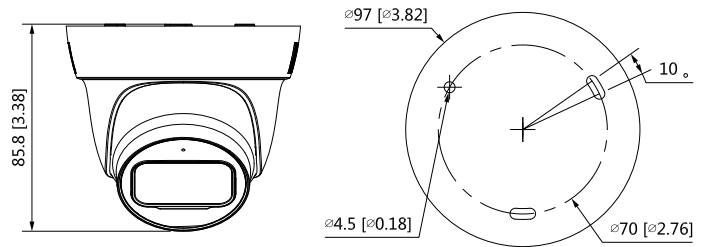| | |
|---|---|
| Operating Temperature | -40°C to +60°C (-40°F to 140°F);<br><95% (non-condensation) |
| Storage Temperature | -40°C to +60°C (-40°F to 140°F);<br><95% (non-condensation) |
| Protection Grade | IP67 |

### Structure

| | |
|---|---|
| Casing | Cover: plastic; inner core: metal |
| Camera Dimensions | Φ97 mm × 85.8 mm (Φ3.82"×3.38") |
| Net Weight | 0.3Kg (0.66lb) |
| Gross Weight | 0.38Kg (0.84lb) |

## Ordering Information

| Type | Part Number | Description |
|------|-------------|-------------|
| 4K Camera | DH-HAC-HDW1800TLP-2.8 mm | 4K HDCVI IR Eyeball Camera |
| | DH-HAC-HDW1800TLP-3.6 mm | |
| | DH-HAC-HDW1800TLN-2.8 mm | |
| | DH-HAC-HDW1800TLN-3.6 mm | |
| | DH-HAC-HDW1800TLP-A-2.8 mm | |
| | DH-HAC-HDW1800TLP-A-3.6 mm | |
| | DH-HAC-HDW1800TLN-A-2.8 mm | |
| | DH-HAC-HDW1800TLN-A-3.6 mm | |
| Accessories | PFA130-E | Water-proof Junction Box |
| | PFA12A | Plastic Junction Box |
| | PFA130-E+PFA152-E | Water-proof Junction Box+Pole Mount Bracket |
| | PFA106+PFB220C | Adapter Plate + Ceiling Mount Bracket |
| | PFM800-4K | Passive Video Balun |
| | PFM800B-4K | Passive Video Balun |
| | PFM320D-015 | 12V 1.5A Power Adapter |

| Junction Mount | Junction Mount | Ceiling Mount |
|---|---|---|
| | PFA130-E | PFA106+PFB220C |
| Wall Mount | Pole Mount | |
| PFA12A | PFA130-E+PFA152-E | |

## Dimensions (mm[inch])

85.8 [3.38]

⌀97 [⌀3.82]

10°

⌀4.5 [⌀0.18]

⌀70 [⌀2.76]

## Accessories

### Optional:

PFA130-E
Water-proof Junction Box

DH-PFA12A
Plastic Junction Box

PFA130-E+PFA152-E
Water-proof Junction Box+Pole Mount Bracket

PFA106+PFB220C
Adapter Plate + Ceiling Mount Bracket

PFM800-4K
Passive Video Balun

PFM800B-4K
Passive Video Balun

PFM320D-015
DC12V1.5A Power Adapter