# DH-HAC-HDW1230TL/TL-A

## 2MP Starlight HDCVI IR Eyeball Camera

· Starlight

· Max. 30fps@1080P

· CVI/CVBS/AHD/TVI switchable

· 3.6mm fixed lens (2.8mm optional)

· Max. IR length 30m, Smart IR

· IP67, DC12V

| Lite Series | 1080p FULL HD | 30m IR | IP67 | DC 12V | Temperature | Starlight | Audio |

## System Overview

Experience 1080P full HD video and the simplicity of using existing cabling infrastructure with HDCVI. The 1080P starlight HDCVI camera presents a high quality image with rich details even under extreme low-light conditions. Also, the Lite series features compact design and friendly price. It offers various motorized 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 XVR, such as sending control signal or triggering alarm.

\* 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 800m(1080P)/1200m(720P) transmission via coaxial cable, and up to 300m(1080P)/450m(720P) 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 ana-log 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 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.

### Smart IR

The camera is designed with IR LED illumination for best lowlight perfor-mance. 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.

### Broadcast-quality Audio

Audio information is used as supplementary evidence in video surveil-lance 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 elimi-nates noise, guaran¬teeing the quality and effectiveness of collected audio information.

\*Broadcast-quality audio is available for some models of HDCVI cameras.

### 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 or by PFM820(UTC controller). This feature makes the camera to be compatible with 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 de-sign. 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 | 1/2.8 inch CMOS |
| Effective Pixels | 1920 (H)×1080 (V), 2MP |
| Electronic Shutter Speed | PAL: 1/25s–1/100000s<br>NTSC: 1/30s–1/100000s |
| Minimum Illumination | 0.005Lux/F1.6, 30IRE, 0Lux IR on |
| IR Distance | 30m (98.42ft) |
| IR On/Off Control | Auto; manual |
| IR LEDs 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 | F1.6/F1.6 |
| Angle of View | 2.8mm: 126.2°×106.0°×56.5° (diagonal×horizontal×vertical)<br>3.6mm: 103.6°×86.9°×46.3° (diagonal×horizontal×vertical) |
| Iris Type | Fixed iris |
| Close Focus Distance | 0.6m (1.97ft)/1.2m (3.94ft) |
| DORI Distance | 2.8mm: D: 39m (128ft); O: 15m (49ft); R: 8m (26ft); I: 4m (13ft)<br>3.6mm: D: 55m (180ft); O: 22m (72ft); R: 11m (36ft); I: 6m (20ft) |

### Video

| | |
|---|---|
| Video Frame Rate | CVI:<br>PAL: 1080P@25fp; 720P@25fps; 720@50fps<br>NTSC: 1080P@30fp; 720P@30fps; 720@60fps<br>AHD:<br>PAL: 1080P@25fp; 720P@25fps<br>NTSC: 1080P@30fp; 720P@30fps<br>TVI:<br>PAL: 1080P@25fp; 720P@25fps; 720@50fps<br>NTSC: 1080P@30fp; 720P@30fps; 720@60fps<br>CVBS:<br>PAL: 960H<br>NTSC: 960H |
| Resolution | 1080P (1920×1080); 720P (1280×720); 960H (960×576/960×480) |
| Day/Night | Auto switch by ICR |
| BLC | BLC/HLC/DWDR |
| 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) |

### Certification

| | |
|---|---|
| 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) |

### Port

| | |
|---|---|
| Video Port | Video output choices of CVI/TVI/AHD/CVBS by one BNC port |
| Audio Port | Built-in mic (-A) |

### Power

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

### Environment

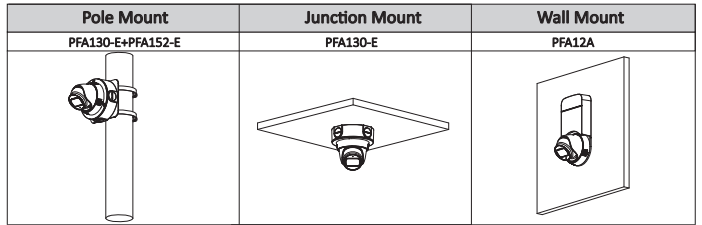| | |
|---|---|
| Operating Temperature | -40°C to +60°C (-40°F to +140°F); <95% (non-condensation) |
| Storage Temperature | -40°C to +60°C (-40°F to +140°F); <95% (non-condensation) |
| Protection Grade | IP67 |

### Structure

| | |
|---|---|
| Casing | Inner core: metal+plastic;  cover: plastic |
| Dimensions | Φ97.0mm×85.8mm (Φ3.82"×3.38") |
| Net Weight | 0.22kg (0.49lb) |
| Gross Weight | 0.28kg (0.62lb) |

## Ordering Information

| Type | Part Number | Description |
|---|---|---|
| 2MP Camera | DH-HAC-HDW1230TLP-A 2.8mm | 2MP Starlight HDCVI IR Eyeball Camera, PAL |
| | DH-HAC-HDW1230TLP-A 3.6mm | |
| | DH-HAC-HDW1230TLN-A 2.8mm | 2MP Starlight HDCVI IR Eyeball Camera, NTSC |
| | DH-HAC-HDW1230TLN-A 3.6mm | |
| | DH-HAC-HDW1230TLP 2.8mm | 2MP Starlight HDCVI IR Eyeball Camera, PAL |
| | DH-HAC-HDW1230TLP 3.6mm | |
| | DH-HAC-HDW1230TLN 2.8mm | 2MP Starlight HDCVI IR Eyeball Camera, NTSC |
| | DH-HAC-HDW1230TLN 3.6mm | |
| Accessories | PFA130-E | Junction box (For use alone or with PFA152-E pole mount) |
| | PFA12A | Plastic Junction box (For use alone) |
| | PFA152-E | Pole box (For usewith PFA130-E junction mount) |
| | PFM820 | UTC Controller |
| | PFM800-E | Passive HDCVI Balun |
| | PFM800-4K | Passive Video Balun |
| | PFM800B-4K | Passive Video Balun |
| | PFM320D-015 | 12V 1.5A Power Adapter |
| | PFM300 | 12V 2A Power Adapter |

## Accessories

### Optional:



PFA130-E
Junction box
(For use alone or with PFA152-E pole mount)

PFA12A
Plastic Junction box
(For use alone)

PFA152-E
Pole box
(For usewith PFA130-E junction mount)

PFM820
UTC Controller

PFM800-E
Passive HDCVI Balun

PFM800-4K
Passive Video Balun

PFM800B-4K
Passive Video Balun

PFM320D-015
12V 1.5A Power Adapter

PFM300
12V 2A Power Adapter

| Pole Mount | Junction Mount | Wall Mount |
|---|---|---|
| PFA130-E+PFA152-E | PFA130-E | PFA12A |

## Dimensions (mm/inch)



85.8 [3.38]

∅97 [∅3.82]

10 。

∅4.5 [∅0.18]

∅70 [∅2.76]