# DH-HAC-HFW2401E

## 4MP HDCVI WDR IR Bullet Camera

HDCVI

- 120dB True WDR, 3DNR
- Max 4MP real-time
- HD and SD dual-output
- 3.6mm fixed lens (2.8mm, 6mm optional)
- Max. IR length 40m, Smart IR
- IP67, DC12V

Pro Series | 4Mp | WDR | 40m IR | DC 12V | IP67

### System Overview

Experience superior 4MP video, a complete set of features, and the simplicity of reusing existing coaxial infrastructure with HDCVI. The 4MP HDCVI camera with 120dB true WDR presents a high quality image with rich details and accurate color rendition for applications with complex lighting conditions. It offers various motorized/fixed lens models with a multi-language OSD and HD&SD dual output. Its high resolution and complete set of features makes the 4MP HDCVI camera an ideal choice for mid to large-size businesses and projects where both highly reliable surveillance and construction flexibility are needed.

### 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 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.

**Multi-outputs**

The camera supports HDCVI and CVBS signal outputs simultaneously with two BNC connectors. Multi-outputs facilitates construction in such situations as debugging through a tester. It also offers the possibility for cooperating with multiple devices including analog matrix or monitor.

**Smart IR**

The camera is designed with array 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.

**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.

**Large Aperture Lens**

The camera adopts high-end F1.5 large aperture lens. With higher amount of absorbed light, the camera presents an impressive lowlight performance.

**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 ±25% 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.

**Elaborate Design**

In order to minimize the interference against on-going business activities, as well as meeting aesthetics requirements, the front face of camera is designed with dark glass.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/3" CMOS |
| Effective Pixels | 2688(H)×1520(V), 4.1MP |
| Scanning System | Progressive |
| Electronic Shutter Speed | PAL: 1/4s~1/100,000s<br>NTSC: 1/3s~1/100,000s |
| Minimum Illumination | 0.01Lux/F1.5, 30IRE, 0Lux IR on |
| S/N Ratio | More than 65dB |
| IR Distance | Up to 40m (130feet) |
| 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 | F1.5 |
| Angle of View | H: 79° (99.7°/48.6°) |
| Focus Control | N/A |
| Close Focus Distance | 1500mm (900mm, 1700mm)<br>59.06'' (35.43'', 66.93'') |

### 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:63m(208ft)<br>3.6mm: 80m(262ft)<br>6mm:120m(394ft) |
| Observe | 63px/m (19px/ft) | 2.8mm:25m(83ft)<br>3.6mm: 32m(105ft)<br>6mm:48m(157ft) |
| Recognize | 125px/m (38px/ft) | 2.8mm:13m(42ft)<br>3.6mm: 16m(52ft)<br>6mm: 24m(79ft) |
| Identify | 250px/m (76px/ft) | 2.8mm:6m(21ft)<br>3.6mm: 8m(26ft)<br>6mm: 12m(39ft) |

### Pan / Tilt / Rotation

| | |
|---|---|
| Pan/Tilt/Rotation | Pan: 0° ~ 360°<br>Tilt: 0° ~ 90°<br>Rotation: 0° ~ 360° |

### Video

| | |
|---|---|
| Resolution | 4MP (2560×1440) |
| Frame Rate | 25fps@4MP, 25/30fps@1080P, 25/30fps@720P |
| Video Output | 1-channel BNC HDCVI high definition video output &<br>1-channel BNC CVBS video output |
| 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 | N/A |

### Eelectrical

| | |
|---|---|
| Power Supply | 12V DC ±25% |
| Power Consumption | Max 5.9W (12V DC, IR on) |

### Environmental

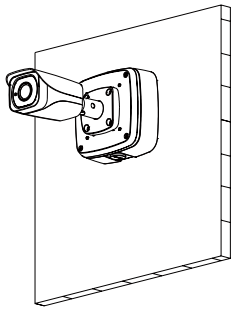
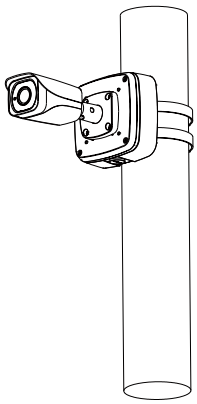
| | |
|---|---|
| Operating Conditions | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH<br>* Start up should be done at above-30°C (-22°F) |
| Storage Conditions | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH |
| Ingress Protection & Vandal Resistance | IP67 |

### Construction

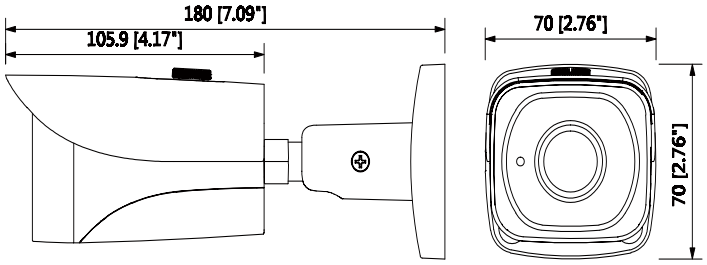
| | |
|---|---|
| Casing | Aluminium |
| Dimensions | 180mm×70mm×70mm (7.09"×2.76"×2.76") |
| Net Weight | 0.40kg (0.89lb) |
| Gross Weight | 0.51kg (1.12lb) |

## Ordering Information

| Type | Part Number | Description |
|---|---|---|
| 4MP Camera | DH-HAC-HFW2401EP 2.8mm | 4MP HDCVI WDR IR Bullet Camera, PAL |
| | DH-HAC-HFW2401EP 3.6mm | |
| | DH-HAC-HFW2401EP 6mm | |
| | DH-HAC-HFW2401EN 2.8mm | 4MP HDCVI WDR IR Bullet Camera, NTSC |
| | DH-HAC-HFW2401EN 3.6mm | |
| | DH-HAC-HFW2401EN 6mm | |
| Accessories | PFA121 | Junction box (For use alone or with PFA152-E pole mount) |
| | PFA152-E | Pole mount (For use with PFA121 junction box) |
| | PFM800-E | Passive HDCVI Balun |
| | PFM800-4MP | Passive HDCVI Balun |
| | PFM801-4MP | Passive HDCVI Balun With Power |
| | PFM809-4MP | 16 channel Passive HDCVI Balun Receiver |
| | PFM321 | 12V 1A Power Adapter |
| | PFM320 | 12V 2A Power Adapter |
| | PFM320D-015 | 12V 1.5A Power Adapter |

| Junction Mount | Pole Mount |
|---|---|
| PFA121 | PFB121 + PFA152-E |
|  |  |

## Dimensions (mm/inch)




## Accessories

Optional:

PFA121
Junction box

PFA152-E
Pole mount

PFM800-4MP
Passive HDCVI Balun

PFM801-4MP
Passive HDCVI Balun
With Power

PFM809-4MP
16Channel Passive
HDCVI Balun Receiver

PFM321
12V 1A Power
Adapter

PFM320
12V 2A Power
Adapter

PFM800-E
Passive HDCVI Balun

PFM320D-015
Power Adapter