# DH-HAC-HFW3231E-ZT

## 2MP Starlight HDCVI IR Bullet Camera

**HDCVI**

· Starlight, 120dB true WDR, 3DNR
· Max 30fps@1080P
· HD and SD dual-output
· 2.7-12mm motorized lens
· Max. IR length 100m, Smart IR
· IP67, IK10, AC24V/DC12V

| Ultra Series | 1080p FULL HD | Starlight | WDR | 100m IR | AC 24V DC 12V | IP67 | Vandal-proof |
|---|---|---|---|---|---|---|---|

## System Overview

Experience full HD 1080P video and complete features with the simplicity of using existing coaxial infrastructure. The starlight HDCVI camera presents high quality image with rich details even under extreme lowlight environment and supports 120dB true WDR. It offers various auto-iris lens models with multi-language OSD and multi-interfaces including HD&SD video, audio and alarm, all come with elegant case design. The superior image performance and project-oriented features make the Ultra series HDCVI camera an ideal choice for mid to large-size business and projects in all industries.

## 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 long-distance and real-time transmission without any loss. It supports up to 800m for 1080P Full 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 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.

### 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.

### Multi-interfaces

The camera is designed with multi-interfaces for transmitting/receiving various signals. It supports HDCVI and CVBS video outputs simultaneously with two BNC connectors, and tester out interface for debugging. It also supports audio input interface as well as alarm input/output for connecting external devices. Multi-interfaces covers different requirements of monitoring scenes and facilitates deployment and construction.

### Smart IR

The camera is designed with array LED IR illumination for best lowlight performance at maximum distance. 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 comes closer to the camera.

### Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67, making it suitable for indoor or outdoor environments.
The camera complies with IK10 impact resistant rating to provide maximum durability against vandals, making it capable of withstanding the equivalent of 55kg (120lbs) of force.
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.

### Elegant Design

As projected-oriented product, the camera adopts elegant appearance design to express feeling of high reliability for industrial grade application. Meanwhile, the front face of camera is designed with dark glass in order to minimize the interference against on-going business activities.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" CMOS |
| Effective Pixels | 1945(H)×1097(V), 2.1MP |
| Scanning System | Progressive |
| Electronic Shutter Speed | PAL: 1.3s~1/30000s<br>NTSC: 1s~1/30000s |
| Minimum Illumination | 0.005Lux/F1.4, 0Lux IR on |
| S/N Ratio | More than 65dB |
| IR Distance | Up to 100m (328feet) |
| IR On/Off Control | Auto / Manual |
| IR LEDs | 4 |

### Lens

| | |
|---|---|
| Lens Type | Motorized lens / Auto iris |
| Mount Type | Board-in |
| Focal Length | 2.7-12mm |
| Max Aperture | F1.4 |
| Angle of View | H: 95°~36° |
| Focus Control | Auto / Manual |
| Close Focus Distance | 300mm<br>11.81'' |

### Pan / Tilt / Rotation

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

### Video

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|---|---|
| Resolution | 1080P (1920×1080) |
| Frame Rate | 25/30fps@1080P, 25/30/50/60fps@720P |
| Video Output | 1-channel BNC HDCVI high definition video output & 1-channel BNC CVBS video output & 1-channel BNC SDI video output<br>CVBS tester out |
| 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

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|---|---|
| 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

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|---|---|
| Audio Interface | 1-channel audio in |
| Alarm Interface | 1-channel alarm in & 1-channel alarm out |

### Eelectrical

| | |
|---|---|
| Power Supply | AC 24V±25% / DC 12V±25% |
| Power Consumption | Max 16.6W (12V DC, IR on) |

### Environmental

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|---|---|
| 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 & IK10 |

### Construction

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|---|---|
| Casing | Aluminium |
| Dimensions | 273.2mm×95.0mm×95.0mm (10.76"×3.74"×3.74") |
| Net Weight | 1.16kg (2.56lb) |
| Gross Weight | 1.52kg (3.35lb) |

## Ordering Information

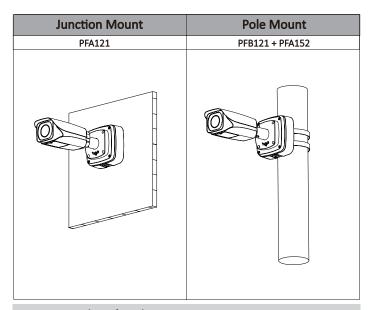| Type | Part Number | Description |
|---|---|---|
| 2MP Camera | DH-HAC-HFW3231E-ZT 2.7~12mm | 2MP Starlight HDCVI IR Bullet Camera, PAL |
| | DH-HAC-HFW3231E-ZT 2.7~12mm | 2MP Starlight HDCVI IR Bullet Camera, NTSC |
| Accessories | PFA121 | Junction box (For use alone or with PFA152 pole mount) |
| | PFA152 | Pole mount (For use with PFA121 junction box) |

## Accessories

Optional:

PFA121
Junction box

PFA152
Pole mount

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

## Dimensions (mm/inch)

273.2 [10.76"]

174.7 [6.88"]

95.0 [3.74"]

95.0 [3.74"]