

# 4K HDCVI Fixed Bullet Camera

8MP Starlight IR Bullet Camera

## HDCVI



- 1/1.8-in. 8MP Progressive-scan CMOS Sensor
- 4K (3840 x 2160) at 15 fps Maximum Resolution
- 3.6 mm Fixed Lens
- Starlight Technology for Ultra Low-light Applications
- True Wide Dynamic Range (120 dB) and 2D/3D Noise Reduction
- HD or SD Output, Switchable
- Built-in Microphone
- Maximum IR Length 80 m (262 ft), Smart IR
- IP67 Ingress Protection
- Five-year Warranty\*



### System Overview

Experience the superior clarity of Dahua's Ultra 4K HDCVI cameras for vast coverage and superior image details. Dahua Ultra 4K HDCVI series leverages existing coax infrastructures to deliver forensic-level images seamlessly and over long distances. The 4K HDCVI camera uses next-generation ISP chip technology developed by Dahua to deliver stunning video. This home-grown ISP features the latest image processing algorithms and is optimized for security camera operations. With total control of the ISP features and production, Dahua can offer the latest security systems at a cost-effective price.

### Functions

#### Three Signals over One Coaxial Cable

HDCVI technology simultaneously transmits video, audio and data over a single coaxial cable. Dual-way data transmission allows the HDCVI camera to communicate with an HCVR to send control signals or to trigger alarms.

#### Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology captures details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

#### Long Distance Transmission

HDCVI technology guarantees real-time transmission over long distances without loss of video quality. HDCVI cameras provide the same resolution as most IP network camera systems using existing RG-59, RG-6, or CAT 6 UTP cabling.

#### Simplicity

HDCVI technology seamlessly integrates traditional analog security systems with upgraded, high-quality HD video, making it the best choice to protect security investments. The plug and play approach enables full HD video security without the hassles of configuring a network.

#### Broadcast-quality Audio

Audio information is used as supplementary evidence in video security applications. This HDCVI camera transmits audio signals over the coaxial cable, eliminating the need for separate audio wiring. In addition, the camera uses unique audio processing and transmission technology that eliminates noise to best duplicate source audio, guaranteeing high-quality and highly effective audio information.

#### Multiple-format Support

The camera supports multiple video formats including, HDCVI, CVBS, AHD, and TVI. The camera can switch between these four formats via the OSD menu or the switch located on the video output cable, making the camera compatible with not only HDCVI DVRs but also most existing HD/SD DVRs.

#### True Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) 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 delivers remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. 3DNR, in addition, effectively decreases the bandwidth and saves storage space.

#### Protection

The camera allows for  $\pm 30\%$  input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 4KV lightning rating provides effective protection for both the camera and its structure against lightning, and its IP67 ingress protection make it the choice for installation in even the most unforgiving environments.

Technical Specification

|                          |  |
|--------------------------|--|
| Camera                   |  |
| Image Sensor             | 1/1.8-in. CMOS Sensor                                |
| Effective Pixels         | 3840 (H) x 2160 (V), 8 P                             |
| Scanning System          | Progressive  |
| Electronic Shutter Speed | 1/3 s to 1/100,000 s                                 |
| Minimum Illumination     | Color: 0.005 Lux at F1.6, 30 IRE<br>0 Lux with IR on |
| S/N Ratio                | More than 65 dB                                      |
| IR Distance              | Up to 80.0 m (262.47 ft)                             |
| IR On/Off Control        | Auto, Manual   |
| IR LEDs                  | Four (4)   |

|                      |                        |
|----------------------|------------------------|
| Lens                 |                        |
| Lens Type            | Fixed Lens, Fixed Iris |
| Mount Type           | Board-in               |
| Focal Length         | 3.6 mm                 |
| Maximum Aperture     | F1.6                   |
| Angle of View        | Horizontal: 87°        |
| Close Focus Distance | 2500 mm (98.43 in.)    |

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

|                             |                     |                       |                      |
|-----------------------------|---------------------|-----------------------|----------------------|
| DORI Distances <sup>1</sup> |                     |                       |                      |
| Detect<br>(8 ppf)           | Observe<br>(19 ppf) | Recognize<br>(38 ppf) | Identify<br>(76 ppf) |
| 104 m<br>(341 ft)           | 42 m<br>(138 ft)    | 21 m<br>(69 ft)       | 10 m<br>(33 ft)      |

|                    |  |  |
|--------------------|--|--|
| Video              |  |  |
| Maximum Resolution | 8 MP (3840 x 2160)   |  |
| Frame Rate         | HDCVI  | 8MP at 15 fps,<br>6MP at 20 fps, or<br>4MP at 30 fps |
|                    | TVI  | 5MP at 20 fps<br>4MP at 30 fps                       |
|                    | AHD  | 5MP at 20 fps<br>4MP at 30 fps                       |
|                    | CVBS   | 960H   |
| Video Output       | One (1) BNC HDCVI 4K Ultra High-definition Channel or,<br>One (1) BNC CVBS Channel, switchable |  |

1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 , the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.  
2. Transmission distance results verified by real-scene testing in Dahua's test laboratory. Actual transmission distances may vary due to external influences, cable quality, and wiring structures.

|                                 |                               |  |
|---------------------------------|-------------------------------|--|
| Video Transmission <sup>2</sup> | RG-59/U Coax                  | 720p: 800 m (2624.67 ft)<br>1080p: 500 m (1640.42 ft)<br>4K: 500 m (1640.42 ft)  |
|                                 | RG-6/U Coax                   | 720p: 1200 m (3937.01 ft)<br>1080p: 800 m (2624.67 ft)<br>4K: 700 m (2296.59 ft) |
|                                 | CAT 6 UTP<br>(balun required) | 720p: 450 m (1476.38 ft)<br>1080p: 300 m (984.25 ft)<br>4K: 300 m (984.25 ft)    |
| Day/Night                       |                               | Auto (ICR), Manual   |
| OSD Menu                        |                               | Multi-language   |
| BLC Mode                        |                               | BLC, HLC, True WDR   |
| WDR                             |                               | 120 dB   |
| Gain Control                    |                               | AGC  |
| Noise Reduction                 |                               | 2D/3D  |
| White Balance                   |                               | Auto, Manual   |
| Smart IR                        |                               | Auto, Manual   |

|                                     |  |
|-------------------------------------|--|
| Certifications                      |  |
| CE                                  | EN55032<br>EN55024<br>EN50130-4                  |
| Safety                              | UL60950-1<br>CAN/CSA C22.2 No.60950-1            |
| Electromagnetic Compatibility (EMC) | FCC CFR 47 Part 15 subpart B,<br>ANSI C63.4-2014 |

|           |  |
|-----------|--|
| Interface |  |
| Audio     | Input: One (1) Channel, RCA Jack and Built-in Microphone |

|                   |                                |
|-------------------|--------------------------------|
| Electrical        |                                |
| Power Supply      | 12 VDC ± 30%                   |
| Power Consumption | Maximum 11.3 W (12 VDC, IR on) |

|                      |  |
|----------------------|--|
| Environmental        |  |
| Operating Conditions | −30° C to +60° C (−22° F to +140° F)<br>Less than 90% RH<br>*Initiate start up above −30° C (−22° F) |
| Storage Conditions   | −30° C to +60° C (−22° F to +140° F)<br>Less than 90% RH   |
| Ingress Protection   | IP67   |

|              |   |
|--------------|---|
| Construction |   |
| Casing       | Aluminium   |
| Dimensions   | 244.10 mm x 90.40 mm x 90.40 mm<br>(9.61 in. x 3.56 in. x 3.56 in.) |
| Net Weight   | 0.42 kg (0.93 lb)   |
| Gross Weight | 0.53 kg (1.17 lb)   |

**Ordering Information**

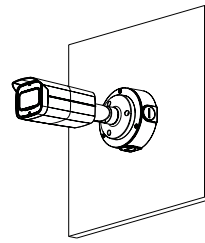
| Type                           | Part Number   | Description  |
|--------------------------------|---------------|--|
| 4K HDCVI Camera                | A82AF53       | 4K Starlight HDCVI IR 3.6 mm Fixed Lens Bullet Camera, True WDR        |
| Accessories,<br>optional       | PFA130-E      | Junction Box<br>(For use alone or with PFA152-E pole mount)            |
|                                | DH-PFA142     | Outdoor Junction Box   |
|                                | PFA151        | Corner Mount<br>(For use with PFA130-E junction box)                   |
|                                | PFA152-E      | Pole Mount<br>(For use with PFA130-E junction box)                     |
|                                | DH-PFA153     | Heavy-duty Pole Mount Bracket<br>(For use with DH-PFA142 junction box) |
|                                | DH-PFM320D-US | 12 VDC, 2 A Power Adapter  |
|                                | DH-PFM321D-US | 12 VDC, 1 A Power Adapter  |
| Audio Accessories,<br>optional | HAP100        | Pinhole Pickup   |
|                                |               |  |

**Accessories**

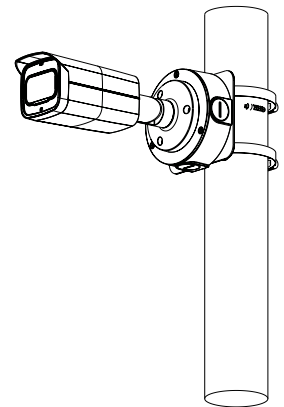
Optional:

PFA130-E  
Junction BoxPFA152-E  
Pole MountPFA151  
Corner MountDH-PFM320D-US  
12 VDC, 2 A Power AdapterDH-PFM321D-US  
12 VDC, 1 A Power AdapterHAP100  
Pinhole Pickup**Junction Mount**

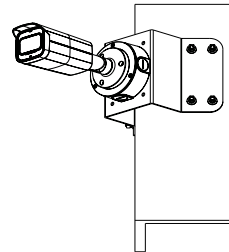
PFA130-E

**Pole Mount**

PFA130-E + PFA152-E

**Corner Mount**

PFA130-E + PFA151

**Dimensions (mm/in.)**