

# DH-HAC-HDBW3231E-Z

2MP Starlight HDCVI IR Dome Camera

## HDCVI



- Starlight, 120dB true WDR, 3DNR
- Max 30fps@1080P
- HD and SD dual-output
- 2.7-12mm motorized lens
- Max. IR length 50m, Smart IR
- IP67, IK10, AC24V/DC12V



### System Overview

Experience 1080P full HD video, a complete set of features, and the simplicity of reusing existing coaxial infrastructure with HDCVI. The Starlight HDCVI camera with 120dB true WDR presents a high quality image with rich details even in extreme low-light conditions. It offers various auto-iris lens models with a multi-language OSD and multiple interfaces, including HD&SD video, audio, and alarm, all in an elegant case design. Its superior image performance and project-oriented features make the camera an ideal choice for mid to large-size businesses 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 an IK10 vandal resistance rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in).

Supporting  $\pm 25\%$  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.

| 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, 30IRE, 0Lux IR on        |
| S/N Ratio                | More than 65dB                          |
| IR Distance              | Up to 50m (164feet)                     |
| IR On/Off Control        | Auto / Manual                           |
| IR LEDs                  | 3                                       |

|                      |                            |
|----------------------|----------------------------|
| 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"            |

| 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   |             |
|                                                                                                                                                                                                                                                                                                                              |                   | Wide       | Tele        |
| Detect                                                                                                                                                                                                                                                                                                                       | 25px/m (8px/ft)   | 48m(159ft) | 133m(437ft) |
| Observe                                                                                                                                                                                                                                                                                                                      | 63px/m (19px/ft)  | 19m(64ft)  | 53m(175ft)  |
| Recognize                                                                                                                                                                                                                                                                                                                    | 125px/m (38px/ft) | 10m(32ft)  | 27m(87ft)   |
| Identify                                                                                                                                                                                                                                                                                                                     | 250px/m (76px/ft) | 5m(17ft)   | 13m(44ft)   |

|                       |                                                         |
|-----------------------|---------------------------------------------------------|
| Pan / Tilt / Rotation |                                                         |
| Pan/Tilt/Rotation     | Pan: 0° ~ 355°<br>Tilt: 0° ~ 65°<br>Rotation: 0° ~ 355° |

|              |                                                                                                          |
|--------------|----------------------------------------------------------------------------------------------------------|
| Video        |                                                                                                          |
| Resolution   | 1080P (1920×1080)                                                                                        |
| Frame Rate   | 25/30fps@1080P, 25/30/50/60fps@720P                                                                      |
| Video Output | 1-channel BNC HDCVI high definition video output &<br>1-channel BNC CVBS 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  | 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 | 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 12.5W (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 & IK10                                                                                          |

|              |                                 |
|--------------|---------------------------------|
| Construction |                                 |
| Casing       | Aluminium                       |
| Dimensions   | Φ159.1mm×117.9mm (Φ6.26"×4.64") |
| Net Weight   | 0.90kg (1.98lb)                 |
| Gross Weight | 1.20kg (2.65lb)                 |

## Ordering Information

| Type        | Part Number                  | Description                                            |
|-------------|------------------------------|--------------------------------------------------------|
| 2MP Camera  | DH-HAC-HDBW3231EP-Z 2.7~12mm | 2MP Starlight HDCVI IR Dome Camera, PAL                |
|             | DH-HAC-HDBW3231EN-Z 2.7~12mm | 2MP Starlight HDCVI IR Dome Camera, NTSC               |
| Accessories | PFA138                       | Junction box (For use alone)                           |
|             | PFB210W                      | Wall mount (For use alone or with PFA152-E pole mount) |
|             | PFA152-E                     | Pole mount (For use with PFB210W wall mount)           |
|             | PFA101                       | Mount adapter (For use with PFB300C ceiling mount)     |
|             | PFB300C                      | Ceiling mount (For use with PFA101 mount adapter)      |
|             | PFB201C                      | In-ceiling mount (For use alone)                       |
|             | PFM800-E                     | 1 Channel Passive HDCVI Balun                          |
|             | PFM320                       | 12V 2A Power Adapter                                   |
|             | PFM320D-015                  | 12V 1.5A Power Adapter                                 |

## Accessories

Optional:



PFA138  
Junction box



PFB210W  
Wall mount



PFA152-E  
Pole mount



PFA101  
Mount adapter



PFB300C  
Ceiling mount



PFB201C  
In-ceiling mount



PFM800-E  
Passive HDCVI Balun



PFM320  
12V 2A Power Adapter



PFM320D-015  
Power Adapter

| In-ceiling Mount | Junction Mount   | Pole Mount        |
|------------------|------------------|-------------------|
| PFB201C          | PFA138           | PFB210W+PFA152-E  |
|                  |                  |                   |
| Ceiling Mount    | Wall Mount       |                   |
| PFA101+PFB300C   | PFB210W (Indoor) | PFB210W (Outdoor) |
|                  |                  |                   |

## Dimensions (mm/inch)

