

# DH-HAC-HDBW2241RA-Z-A-POC

## 2 MP Starlight HDCVI Motorized Vari-focal IR Dome Camera



\* The parameters and datasheets below can only be applied to 2241-S2-POC series.

- Max 30 fps@1080p
- Starlight, 130 dB true WDR, 3D NR
- Auto focus, 2.7 mm–13.5 mm motorized lens
- CVI/CVBS/AHD/TVI switchable
- Super Adapt
- Built-in mic
- Max. IR length 60 m, Smart IR
- IP67, IK10, PoC (only CVI)/12V±30% DC



### System Overview

PoC Series features camera powered directly by the recorder over the same coaxial cable in which video is transmitted. Dahua PoC transmission distance can reach up to 400 meters for AF cameras and 200 meters for AT cameras, that can help decrease material and installation cost and simplify the system.

### Functions

#### Starlight

With the adoption of large sized high performance sensor and large aperture lens, 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.

#### Broadcast-quality Audio

Audio information is used as supplementary evidence in video surveillance applications. The HDCVI camera supports audio signal transmission over coaxial cable. In addition, it adopts unique audio processing and transmission technology that best restores source audio and eliminates noise, guaranteeing the quality and effectiveness of collected audio information.

\* Audio input is available for some models of HDCVI cameras.

#### Wide Dynamic Range

With advanced Wide Dynamic Range (WDR) technology, Dahua HDCVI camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

#### Super Adapt

Embedded with intelligent algorithm, for changing external environment, camera can automatically adjust parameters to present the optimal image, and it solves the trouble of configuration.

### 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.

### Smart Illumination

The camera is designed with 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.

### Protection (IP67, IK10, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).

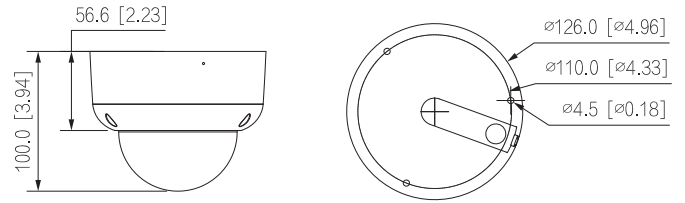
Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

| Technical Specification    |  |                       |                     |                     |                     |
|----------------------------|--|-----------------------|---------------------|---------------------|---------------------|
| <b>Camera</b>              |  |                       |                     |                     |                     |
| Image Sensor               | 2 MP CMOS  |                       |                     |                     |                     |
| Max. Resolution            | 1920 (H) × 1080 (V)  |                       |                     |                     |                     |
| Pixel                      | 2 MP   |                       |                     |                     |                     |
| Scanning System            | Progressive  |                       |                     |                     |                     |
| Electronic Shutter Speed   | PAL: 1/25 s–1/100,000 s<br>NTSC: 1/30 s–1/100,000 s  |                       |                     |                     |                     |
| S/N Ratio                  | > 65 dB  |                       |                     |                     |                     |
| Min. Illumination          | 0.001 Lux/F1.6, 30 IRE, 0 Lux IR on  |                       |                     |                     |                     |
| Illumination Distance      | 60 m (196.9 ft)  |                       |                     |                     |                     |
| Illuminator On/Off Control | Auto   |                       |                     |                     |                     |
| Illuminator Number         | 3 (IR light)   |                       |                     |                     |                     |
| Pan/Tilt/Rotation Range    | Pan: 0°–355°<br>Tilt: 0°–80°<br>Rotation: 0°–355°  |                       |                     |                     |                     |
| <b>Lens</b>                |  |                       |                     |                     |                     |
| Lens Type                  | Motorized Vari-focal   |                       |                     |                     |                     |
| Auto Focus                 | Yes  |                       |                     |                     |                     |
| Mount Type                 | φ14  |                       |                     |                     |                     |
| Focal Length               | 2.7 mm-13.5 mm   |                       |                     |                     |                     |
| Max. Aperture              | F1.6   |                       |                     |                     |                     |
| Field of View              | Diagonal: 131°–35°<br>Horizontal: 108°–30°<br>Vertical: 56°–17°  |                       |                     |                     |                     |
| Iris Type                  | Fixed  |                       |                     |                     |                     |
| Close Focus Distance       | 0.8 m (2.6 ft)   |                       |                     |                     |                     |
| DORI Distance              | Lens   | Detect                | Observe             | Recognize           | Identify            |
|                            | 2.7 mm   | 44.1 m<br>(144.7 ft)  | 17.6 m<br>(57.7 ft) | 8.8 m<br>(28.9 ft)  | 4.4 m<br>(14.4 ft)  |
|                            | 13.5 mm  | 144.8 m<br>(475.1 ft) | 57.9 m<br>(190 ft)  | 28.9 m<br>(94.8 ft) | 14.8 m<br>(48.6 ft) |
| <b>Video</b>               |  |                       |                     |                     |                     |
| Frame Rate                 | CVI:<br>PAL: 1080p@25 fps;<br>NTSC: 1080p@30 fps;<br>AHD:<br>PAL: 1080p@25 fps;<br>NTSC: 1080p@30 fps;<br>TVI:<br>PAL: 1080p@25 fps;<br>NTSC: 1080p@30 fps;<br>CVBS:<br>PAL: 960 × 576H;<br>NTSC: 960 × 480H |                       |                     |                     |                     |
| Resolution                 | 1080p (1920 × 1080); 960H (960 × 576 / 960 × 480)  |                       |                     |                     |                     |
| Day/Night                  | Auto switch by ICR   |                       |                     |                     |                     |
| BLC                        | BLC/WDR/HLC  |                       |                     |                     |                     |
| WDR                        | 130 dB   |                       |                     |                     |                     |
| White Balance              | Auto/Area WB   |                       |                     |                     |                     |
| Gain Control               | Auto; manual   |                       |                     |                     |                     |
| Noise Reduction            | 3D NR  |                       |                     |                     |                     |
| Smart IR                   | Yes  |                       |                     |                     |                     |
| Mirror                     | Yes  |                       |                     |                     |                     |
| Privacy Masking            | Off/On (8 area, rectangle)   |                       |                     |                     |                     |
| <b>Certifications</b>      |  |                       |                     |                     |                     |
| 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)  |                       |                     |                     |                     |
| <b>Port</b>                |  |                       |                     |                     |                     |
| Video Output               | Video output choices of CVI/TVI/AHD/CVBS by one BNC port   |                       |                     |                     |                     |
| Audio Input                | One channel built-in mic   |                       |                     |                     |                     |
| <b>Power</b>               |  |                       |                     |                     |                     |
| Power Supply               | POC (only CVI)/12 V±30% DC   |                       |                     |                     |                     |
| Power Consumption          | Max6.9 W (12 VDC, IR on) PoC (AT)  |                       |                     |                     |                     |
| <b>Environment</b>         |  |                       |                     |                     |                     |
| Operating Temperature      | –30 °C to +60 °C (–22 °F to 140 °F); < 95% (non-condensation)  |                       |                     |                     |                     |
| Storage Temperature        | –30 °C to +60 °C (–22 °F to 140 °F); < 95% (non-condensation)  |                       |                     |                     |                     |
| Protection Grade           | IP67; IK10   |                       |                     |                     |                     |
| <b>Structure</b>           |  |                       |                     |                     |                     |
| Casing                     | Metal throughout the whole casing  |                       |                     |                     |                     |
| Camera Dimensions          | φ126 mm × 100 mm (φ5" × 3.9")  |                       |                     |                     |                     |
| Net Weight                 | 0.65 kg (1.4 lb)   |                       |                     |                     |                     |
| Gross Weight               | 0.83 kg (1.8 lb)   |                       |                     |                     |                     |

**Ordering Information**

| Type                   | Model                      | Description  |
|------------------------|----------------------------|--|
| 2 MP Camera            | DH-HAC-HDBW2241RAP-Z-A-POC | 2 MP Starlight HDCVI Motorized Vari-focal IR Dome Camera, PAL  |
|                        | DH-HAC-HDBW2241RAN-Z-A-POC | 2 MP Starlight HDCVI Motorized Vari-focal IR Dome Camera, NTSC |
| Accessories (Optional) | PFM321D                    | 12V 1A Power Adapter   |
|                        | PFM904                     | Integrated Mount Tester  |

**Dimensions (mm[inch])**



**Accessories**

**Optional:**



PFM321D  
12V 1A Power Adapter



PFM904  
Integrated Mount Tester

| Junction Mount               | Wall Mount | Ceiling Mount |
|------------------------------|------------|---------------|
|                              |            |               |
| <b>Pole Mount (Vertical)</b> |            |               |
|                              |            |               |