

# DH-HAC-HFW1801R-Z-A

## 4K Starlight HDCVI Motorized Vari-focal IR Bullet Camera



\* The parameters and datasheets below can only be applied to 1801-S2 series.

- Max. 15 fps@4K.
- 120 dB true WDR, 3D NR.
- Smart IR Illumination.
- 80 m illumination distance.
- Super Adapt.
- Built-in MIC.
- Auto focus, 2.7 mm–13.5 mm motorized lens.
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.

### System Overview

The Lite Series is a great choice for consumers looking for high quality monitoring products at a reasonable price. Its low cost and high performance make it ideal for residential areas and SMB solutions. This series is equipped with a wide range of technologies, such as full-color and starlight, providing various solutions for different scenarios.

### Functions

#### Wide Dynamic Range

With its advanced Wide Dynamic Range technology (WDR), the camera captures highly detailed images and produces high-definition recordings in high-contrast lighting conditions, and in scenes with backlighting or shadows.

#### Advanced 3DNR

Dahua's advanced 3DNR technology reduces image noise with little to no impact on image sharpness, especially in poor lighting conditions. It detects the noise, and compares the sequential frames to effectively reduce the noise. It also makes efficient use of bandwidth, saving on storage space.

#### Smart IR Illumination

With its IR illumination, the camera provides optimal performance in low light conditions, ensuring uniformity in the brightness of B/W images. Through its smart IR technology, the camera also compensates for the distance of targets by adjusting the intensity of its IR LEDs, preventing overexposure of images as targets move closer to the camera.

#### Super Adapt

With its intelligent algorithm, the camera automatically adjusts its parameters to provide optimal performance and vivid images.



### 4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals (video, audio\*, data and power) which are simultaneously transmitted over a coaxial cable. Dual-way data transmission allows the HDCVI camera to interact with the XVR to perform various actions such as sending control signals and triggering alarms. HDCVI technology also supports PoC, which makes the camera easy and quick to install.

\* Audio input is available for select HDCVI camera models.

### Protection (IP67, Wide Voltage)

IP67: The camera passed a series of rigorous dust and immersion tests. Its enclosure is both dust-proof and waterproof, and can function normally while being immersed in 1 m deep water for up to 30 minutes. Wide voltage: The camera has  $\pm 30\%$  input voltage tolerance (for some power supplies) and a wide voltage range, making it suitable for a variety of outdoor scenarios.

### Broadcast-quality Audio

Audio signal transmission over coaxial cables is supported by the HDCVI camera. It adopts a unique audio processing and transmission technology that restores source audio and eliminates noise, ensuring the quality and reliability of the audio information that is collected. This becomes important for video surveillance applications that use audio information as a type of supplementary evidence.

| Technical Specification    |                                                                                         |
|----------------------------|-----------------------------------------------------------------------------------------|
| Camera                     |                                                                                         |
| Pixel                      | 8 MP                                                                                    |
| Image Sensor               | 4K CMOS                                                                                 |
| Max. Resolution            | 3840 (H) × 2160 (V)                                                                     |
| Scanning System            | Progressive                                                                             |
| Electronic Shutter Speed   | PAL: 1/25 s–1/100000 s<br>NTSC: 1/30 s–1/100000 s                                       |
| Min. Illumination          | 0.01 lux@F1.5 (Color, 30 IRE)<br>0.001 lux@F1.5 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio                  | >65 dB                                                                                  |
| Illumination Distance      | 80 m (262.47 ft)                                                                        |
| Illuminator On/Off Control | Auto/Manual                                                                             |
| Illuminator Number         | 4 (IR light)                                                                            |
| Pan/Tilt/Rotation Range    | Pan: 0°–360°<br>Tilt: 0°–90°<br>Rotation: 0°–360°                                       |

|                      |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                 |                        |                       |                      |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------|-----------------------|----------------------|
| Lens                 |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                 |                        |                       |                      |
| Lens Type            |                                                                                                                                                                                                                                                                                                                                                                                 | Motorized Vari-focal                                            |                        |                       |                      |
| Auto Focus           |                                                                                                                                                                                                                                                                                                                                                                                 | Yes                                                             |                        |                       |                      |
| Lens Mount           |                                                                                                                                                                                                                                                                                                                                                                                 | ϕ14                                                             |                        |                       |                      |
| Focal Length         |                                                                                                                                                                                                                                                                                                                                                                                 | 2.7 mm–13.5 mm                                                  |                        |                       |                      |
| Max. Aperture        |                                                                                                                                                                                                                                                                                                                                                                                 | F1.5                                                            |                        |                       |                      |
| Field of View        |                                                                                                                                                                                                                                                                                                                                                                                 | Horizontal: 114°–32°<br>Vertical: 58°–17°<br>Diagonal: 138°–36° |                        |                       |                      |
| Iris Control         |                                                                                                                                                                                                                                                                                                                                                                                 | Fixed                                                           |                        |                       |                      |
| Close Focus Distance |                                                                                                                                                                                                                                                                                                                                                                                 | 0.8m                                                            |                        |                       |                      |
| DORI Distance        | Lens                                                                                                                                                                                                                                                                                                                                                                            | Detect                                                          | Observe                | Recognize             | Identify             |
|                      | W                                                                                                                                                                                                                                                                                                                                                                               | 85.3 m<br>(279.86 ft)                                           | 34.1 m<br>(111.88 ft)  | 17.1 m<br>(56.10 ft)  | 8.5 m<br>(27.89 ft)  |
|                      | T                                                                                                                                                                                                                                                                                                                                                                               | 280.0 m<br>(918.64 ft)                                          | 112.0 m<br>(367.45 ft) | 56.0 m<br>(183.73 ft) | 28.0 m<br>(91.87 ft) |
|                      | *DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool. |                                                                 |                        |                       |                      |
|                      |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                 |                        |                       |                      |

|                  |                                                                                                                                                                                                                                                 |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video            |                                                                                                                                                                                                                                                 |
| Video Frame Rate | CVI:<br>PAL: 4K@15 fps; 5M@25 fps; 4M@25 fps; 1080p@25 fps<br>NTSC: 4K@15 fps; 5M@25 fps; 4M@30 fps; 1080p@30 fps<br>TVI:<br>PAL: 4K@15 fps<br>NTSC: 4K@15 fps<br>AHD:<br>PAL: 4K@15 fps<br>NTSC: 4K@15 fps<br>CVBS:<br>PAL: 960H<br>NTSC: 960H |

|                   |                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------|
| Resolution        | 4K (3840 × 2160);<br>5M (2880 × 1620);<br>4M (2560 × 1440);<br>1080p (1920 × 1080);<br>960H (960 × 576/960 × 480) |
| Day/Night         | Auto(ICR)/Color/B/W                                                                                               |
| BLC               | BLC; HLC; WDR; HLC-Pro                                                                                            |
| WDR               | 120 dB                                                                                                            |
| White Balance     | Auto;Area white balance                                                                                           |
| Gain Control      | Auto/Manual                                                                                                       |
| Noise Reduction   | 3D NR                                                                                                             |
| Motion Detection  | Yes                                                                                                               |
| Illumination Mode | Smart IR                                                                                                          |
| Defog             | Electronic defog                                                                                                  |
| Digital Zoom      | 4×                                                                                                                |
| Mirror            | Yes                                                                                                               |
| Privacy Masking   | Off/On (8 areas, rectangle)                                                                                       |

|                |                                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Certification  |                                                                                                                                           |
| Certifications | CE-LVD: EN 62368-1;<br>CE-EMC: EN 55032; EN 55035;<br>FCC: 47 CFR FCC Part 15, Subpart B;<br>UL: UL62368-1 + CAN/CSA C22.2 No. 62368-1-14 |

|              |                                                          |
|--------------|----------------------------------------------------------|
| Port         |                                                          |
| Video Output | Video output choices of CVI/TVI/AHD/CVBS by one BNC port |
| Audio Input  | One channel built-in MIC (-A)                            |

|                   |                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------|
| Power             |                                                                                            |
| Power Supply      | 12 VDC ± 30% (It is recommended to use a power adapter to supply the power for one camera) |
| Power Consumption | Max 10.6W (12 VDC, IR on)                                                                  |

|                       |                                      |
|-----------------------|--------------------------------------|
| Environment           |                                      |
| Operating Temperature | –30 °C to +60 °C (–22 °F to +140 °F) |
| Operating Humidity    | <95% (RH), non-condensing            |
| Storage Temperature   | –30 °C to +60 °C (–22 °F to +140 °F) |
| Protection            | IP67                                 |

|                    |                                                    |
|--------------------|----------------------------------------------------|
| Structure          |                                                    |
| Casing Material    | Metal                                              |
| Product Dimensions | 90.4 mm × 90.1mm ×209.6 mm (3.56" × 3.55" × 8.25") |
| Net Weight         | 0.55 kg (1.21 lb)                                  |
| Gross Weight       | 0.72 kg (1.59 lb)                                  |
| Installation       | Wall mount; ceiling mount; vertical pole mount     |

Ordering Information

| Type                      | Part Number          | Description                     |
|---------------------------|----------------------|---------------------------------|
| 4K Camera                 | DH-HAC-HFW1801RP-Z-A | 4K HDCVI IR Bullet Camera, PAL  |
|                           | DH-HAC-HFW1801RN-Z-A | 4K HDCVI IR Bullet Camera, NTSC |
| Accessories<br>(Optional) | PFA130-E             | Water-proof Junction Box        |
|                           | PFA152-E             | Pole Mount Bracket              |
|                           | PFM800-4K            | 1-CH Passive Video Balun        |
|                           | PFM321D              | 12V 1A Power Adapter            |
|                           | PFM904               | Integrated Mount Tester         |

Accessories

Optional:



PFA130-E  
Water-proof  
Junction Box



PFA152-E  
Pole Mount  
Bracket



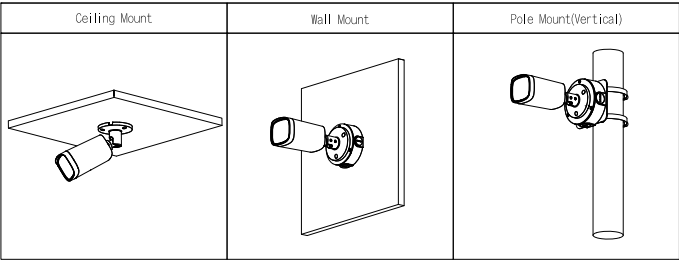
PFM800-4K  
1-CH Passive  
Video Balun



PFM321D  
12V 1A Power  
Adapter



PFM904  
Integrated Mount  
Tester



Dimensions (mm[inch])

