# DH-HAC-HDW1249SM-A-PRO

## 2MP WizColor HDCVI Fixed-focal Eyeball Camera

* The parameters and datasheets below can only be applied to 1249 series.

- 24/7 color imaging, max 30 fps@1080p.
- AI-ISP.
- Distortion Correction.
- Smart Light+.
- 30 m illumination distance.
- Super Adapt, 130 dB true WDR, 3D NR.
- Built-in Dual Mic.
- Quick-to-install eyeball saves installation time.
- 3.6 mm fixed lens (2.8 mm optional).
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.

## Series 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

### WizColor Technology

Dahua WizColor Technology seamlessly combines with the powerful AI-ISP and large aperture in cameras. This unique integration enables cameras to effortlessly capture high-quality images with vibrant colors during nighttime scenarios, ensuring fine details are preserved and minimizing motion blur. Unlike traditional self-illuminating cameras, Dahua WizColor Technology maximizes the utilization of weak light sources, such as moonlight and city lights reflected in the sky, delivering captivating full-color images of the entire scene. It also ensures that monitoring distances are not compromised at night due to limited illumination ranges, facilitating full-color image capture even over long distances.

### AI-ISP

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

### Distortion Correction

With advanced distortion correction algorithm, Dahua Distortion Correction corrects the image distortion in both horizontal and vertical directions to be consistent with the actual situation.

### Built-in Dual Mic

Equipped with Dual Mic audio processing technology combined with intelligent noise reduction algorithms, HDCVI cameras effectively suppress environmental background noise and enhance audio clarity and pickup distance, ensuring the authenticity and reliability of the captured audio information. This technology protects the integrity of audio evidence in video surveillance, making it particularly suitable for scenes that require both audio and videos for verification.

### Full-color

With its advanced image processing algorithm and capability to absorb large quantities of light, the camera provides 24/7 color monitoring that collects clear and highly detailed information, significantly increasing the reliability of the human and vehicle images that are collected as evidence for intelligent analysis.

### Smart Light+

Equipped with advanced LEDs and beam processing technology, the camera effectively reduces interference of stray light, ensuring concentrated illumination within the lens's field of view. This allows the camera to easily produce clear images that reveal the fine details of targets even in low light conditions.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 2 MP CMOS |
| Max. Resolution | 1920 (H) × 1080 (V) |
| Scanning System | Progressive |
| Electronic Shutter Speed | PAL: 1/25 s–1/100,000 s<br>NTSC: 1/30 s–1/100,000 s |
| Min. Illumination | 0.0001 lux@F1.0 (Color, 30 IRE)<br>0.00001 lux@F1.0 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| S/N Ratio | >65 dB |
| Illumination Distance | Warm light: 30 m (98.43 ft) |
| Illuminator On/Off Control | Auto/Manual |
| Illuminator Number | 2 (Warm light) |
| Angle Adjustment | Pan: 0°–360°<br>Tilt: 0°–78°<br>Rotation: 0°–360° |

### Lens

| | |
|---|---|
| Lens Type | Fixed-focal |
| Lens Mount | M12 |
| Focal Length | 2.8 mm; 3.6 mm |
| Max. Aperture | F1.0 |
| Field of View | 2.8 mm: H: 101°; V: 53.4°; D: 119.5°<br>3.6 mm: H: 81.5°; V: 44.3°; D: 95.7° |
| Iris Control | Fixed |
| Close Focus Distance | 2.8 mm: 1.1 m (3.61 ft)<br>3.6 mm: 1.7 m (5.58 ft) |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | 2.8 mm | 47.1 m ( 154.53 ft) | 18.9 m ( 62.01 ft) | 9.4 m ( 30.84 ft) | 4.7 m ( 15.42 ft) |
| | 3.6 mm | 55.7 m ( 182.74 ft) | 22.3 m ( 73.16 ft) | 11.1 m ( 36.42 ft) | 5.6 m ( 18.37 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: 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: 960H<br>NTSC: 960H |
| Resolution | 1080p (1920 × 1080); 960H (960 × 576/960 × 480) |
| Day/Night | Color |
| BLC | BLC; HLC; WDR |
| WDR | 130 dB |
| White Balance | Auto |
| Gain Control | Auto |
| Noise Reduction | 3D NR |
| Motion Detection | Yes (It needs to be controlled through the XVR) |
| Illumination Mode | Smart Light |
| Mirror | Yes (It needs to be controlled through the XVR) |

### Certification

| | |
|---|---|
| Certifications | CE-LVD: EN 62368-1<br>CE-EMC: EN 55032; EN 55035 |

### Audio

| | |
|---|---|
| Built-in Mic | Yes, built-in dual Mic |
| Camera Audio | CVI |
| Pick-up Distance | 12 m (39.37 ft) |

### Port

| | |
|---|---|
| Video Output | Video output choices of CVI/TVI/AHD/CVBS by one BNC port (DIP Switch) |

### Power

| | |
|---|---|
| Power Supply | 12 VDC (±30%) |
| Power Consumption | Max 3.9 W (12 VDC, LED on) |

### Environment

| | |
|---|---|
| Operating Temperature | –40 °C to +60 °C (–40 °F to +140 °F) |
| Operating Humidity | <95% (RH), non-condensing |
| Storage Temperature | –40 °C to +60 °C (–40 °F to +140 °F) |
| Storage Humidity | <95% (RH), non-condensing |
| Protection | IP67 |
| Anti-corrosion Level | Basic Protection<br>*The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection. |

### Structure

| | |
|---|---|
| Casing Material | Metal |
| Product Dimensions | Φ94.0 mm × 83.7 mm (Φ3.70" × 3.30") |
| Net Weight | 0.34 kg (0.75 lb) |
| Gross Weight | 0.43 kg (0.95 lb) |
| Installation | Wall mount; ceiling mount; vertical pole mount |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| HDCVI CAMERA | DH-HAC-HDW1249SMN-A-PRO | 2MP WizColor HDCVI Fixed-focal Eyeball Camera,NTSC |
| | DH-HAC-HDW1249SMP-A-PRO | 2MP WizColor HDCVI Fixed-focal Eyeball Camera,PAL |
| Accessories (Optional) | DH-PFB220C | Ceiling Mount Bracket |
| | DH-PFA106 | Mount Adapter |
| | DH-PFB305W | Wall Mount Bracket |
| | DH-PFA151 | Corner Mount Bracket |
| | DH-PFA150 | Pole Mount Bracket |
| | DH-PFA156 | Pole Mount Bracket |
| | DH-PFB2204W | Wall Mount Bracket |
| | G3416GW | G3/4" Water Joint |
| | DH-PFA130-E | Water-proof Junction Box |
| | DH-PFM800-E | 1 Channel Passive HDCVI Balun |
| | DH-PFM321-EN | DC12V1A power adapter |
| | DH-PFM325D-1210EN | DC12V 1A Power Adapter |
| | DH-PFM320D-EN | DC12V2A power adapter |
| | PFM904 | Integrated Mount Tester |

## Accessories

Optional:

DH-PFB220C
Ceiling Mount Bracket

DH-PFA106
Mount Adapter

DH-PFB305W
Wall Mount Bracket

DH-PFA151
Corner Mount Bracket

DH-PFA150
Pole Mount Bracket

DH-PFA156
Pole Mount Bracket

DH-PFB2204W
Wall Mount Bracket

G3416GW
G3/4" Water Joint

DH-PFA130-E
Water-proof Junction Box

Optional:

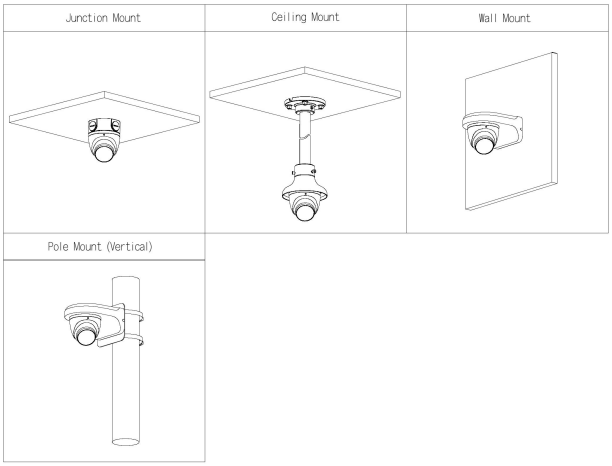
DH-PFM800-E
1 Channel Passive HDCVI Balun

DH-PFM321-EN
DC12V1A power adapter

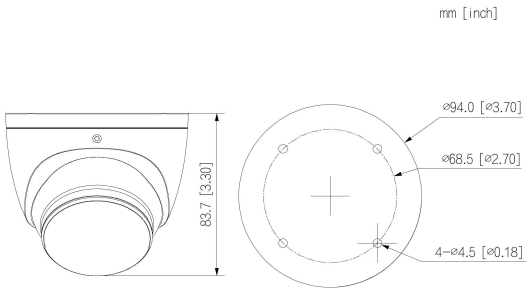
DH-PFM325D-1210EN
DC12V 1A Power Adapter

DH-PFM320D-EN
DC12V2A power adapter

PFM904
Integrated Mount Tester




## Dimensions (mm[inch])

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