

# DH-HAC-HDW1209TLQ(-A)-LED

## 2MP Full-color HDCVI Eyeball Camera



### 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

#### 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.

#### 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.

#### Super Adapt

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

#### 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 Warm Light Illumination

In dark environments, the camera produces vivid images in rich color through its warm LED lights. With its smart light mode setting, it automatically adjusts its exposure time and light sensitivity to avoid the overexposure of objects in the center of the image.

\* The parameters and datasheets below can only be applied to 1209-S2 series.

- Max. 30 fps@1080p.
- 24/7 color imaging.
- 20 m illumination distance.
- Super Adapt.
- Built-in MIC (-A).
- Quick-to-install eyeball saves installation time.
- 3.6 mm fixed lens (2.8 mm optional).
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.



### 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.

### 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.

| Technical Specification    |                                                   |
|----------------------------|---------------------------------------------------|
| Camera                     |                                                   |
| Pixel                      | 2 MP                                              |
| Image Sensor               | 2 MP CMOS                                         |
| Max. Resolution            | 1920 (H) × 1080 (V)                               |
| Scanning System            | Progressive                                       |
| Electronic Shutter Speed   | PAL: 1/25 s–1/100000 s<br>NTSC: 1/30 s–1/100000 s |
| Min. Illumination          | 0.005 lux@F1.6 (Color)<br>0 lux (Illuminator on)  |
| S/N Ratio                  | >65 dB                                            |
| Illumination Distance      | 20 m (65.62 ft)                                   |
| Illuminator On/Off Control | Auto/Manual                                       |
| Illuminator Number         | 1 (Warm light)                                    |
| Pan/Tilt/Rotation Range    | 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        |        | F1.6                                                                |                      |                      |                     |
| Field of View        |        | 2.8 mm: H: 108°; V: 58°; D: 127°<br>3.6 mm: H: 84°; V: 43°; D: 102° |                      |                      |                     |
| Iris Control         |        | Fixed                                                               |                      |                      |                     |
| Close Focus Distance |        | 2.8 mm: 0.7 m (2.30 ft)<br>3.6 mm: 1.3 m (4.27 ft)                  |                      |                      |                     |
| DORI Distance        | Lens   | Detect                                                              | Observe              | Recognize            | Identify            |
|                      | 2.8 mm | 42.2 m<br>(138.45 ft)                                               | 16.9 m<br>(55.45 ft) | 8.4 m<br>(27.56 ft)  | 4.2 m<br>(13.78 ft) |
|                      | 3.6 mm | 59.0 m<br>(193.57 ft)                                               | 23.6 m<br>(77.43 ft) | 11.8 m<br>(38.71 ft) | 5.9 m<br>(19.36 ft) |

|                   |                                                                                                                                                                       |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video             |                                                                                                                                                                       |
| Video Frame Rate  | CVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps<br>AHD: PAL: 1080p@25 fps; NTSC: 1080p@30 fps<br>TVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps<br>CVBS: PAL: 960H; NTSC: 960H |
| Resolution        | 1080P (1920 × 1080); 960H (960 × 576/960 × 480)                                                                                                                       |
| Day/Night         | Color                                                                                                                                                                 |
| BLC               | BLC; HLC; DWDR;                                                                                                                                                       |
| WDR               | DWDR                                                                                                                                                                  |
| White Balance     | Auto;Area white balance                                                                                                                                               |
| Gain Control      | Auto                                                                                                                                                                  |
| Noise Reduction   | 3D NR                                                                                                                                                                 |
| Illumination Mode | Smart Light                                                                                                                                                           |
| 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 |

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

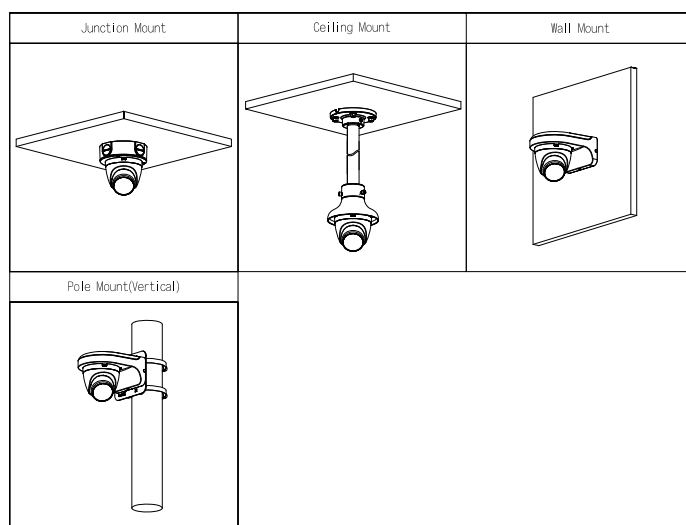
|                   |                             |
|-------------------|-----------------------------|
| Power             |                             |
| Power Supply      | 12 VDC ± 30%                |
| Power Consumption | Max 3.3 W (12 V DC, LED on) |

|                       |                                      |
|-----------------------|--------------------------------------|
| 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) |
| Protection            | IP67                                 |

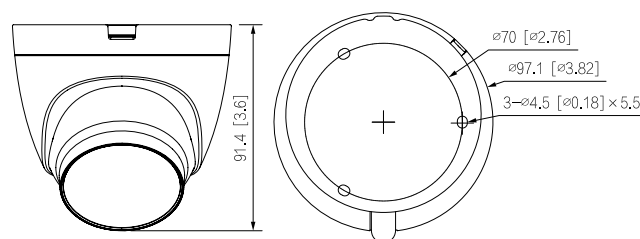
|                      |                                                  |
|----------------------|--------------------------------------------------|
| Structure            |                                                  |
| Casing Material      | Dome (metal + plastic) + plastic enclosure       |
| Product Dimensions   | Φ97.1 mm × 91.4 mm (Φ3.82" × 3.60")              |
| Packaging Dimensions | 121 mm × 118 mm × 109 mm (4.76" × 4.65" × 4.29") |
| Net Weight           | 0.22 kg (0.49 lb)                                |
| Gross Weight         | 0.29 kg (0.64 lb)                                |
| Installation         | Wall mount; ceiling mount; vertical pole mount   |

## Ordering Information

| Type                   | Part Number               | Description                               |
|------------------------|---------------------------|-------------------------------------------|
| 2MP Camera             | DH-HAC-HD-W1209TLQP-LED   | 2MP Full-color HDCVI Eyeball Camera, PAL  |
|                        | DH-HAC-HD-W1209TLQN-LED   | 2MP Full-color HDCVI Eyeball Camera, NTSC |
|                        | DH-HAC-HD-W1209TLQP-A-LED | 2MP Full-color HDCVI Eyeball Camera, PAL  |
|                        | DH-HAC-HD-W1209TLQN-A-LED | 2MP Full-color HDCVI Eyeball Camera, NTSC |
| Accessories (Optional) | PFA13G                    | Junction Box                              |
|                        | PFA130-E                  | Water-proof Junction Box                  |
|                        | PFB205W-E                 | Wall Mount Bracket                        |
|                        | PFA109                    | Mount Adapter                             |
|                        | PFB220C                   | Ceiling Mount Bracket                     |
|                        | PFA152-E                  | Pole Mount Bracket                        |
|                        | PFM800-E                  | 1 Channel Passive HDCVI Balun             |
|                        | PFM321D                   | 12V 1A Power Adapter                      |
|                        | PFM904                    | Integrated Mount Tester                   |



## Dimensions (mm[inch])



## Accessories

Optional:



PFA13G  
Junction  
Box



PFA130-E  
Water-proof  
Junction Box



PFB205W-E  
Wall Mount  
Bracket



PFA109  
Mount Adapter



PFB220C  
Ceiling Mount  
Bracket



PFA152-E  
Pole Mount  
Bracket



PFM800-E  
1 Channel Passive  
HDCVI Balun



PFM321D  
12V 1A Power  
Adapter



PFM904  
Integrated Mount  
Tester