

DH-HAC-HDW2802TMQ-Z-A-DP

4K Starlight HDCVI Motorized Vari-focal IR Quick-to-install Eyeball Camera



System Overview

The Pro Series contains a series of highly reliable and flexible cameras, making it a great choice for SMB solutions and projects. It has Starlight technology, up to 130 dB true WDR and 3DNR, and produces vivid images in rich detail even under difficult lighting conditions.

Functions

Starlight

With its large image sensor and large aperture, the camera delivers high performance and quality, even in low-light conditions. The starlight feature allows the camera to capture highly detailed images in accurate color, recognizing targets even at night or in scenes with limited light.

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.

Wide Dynamic Range

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

Super Adapt

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

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.

* The parameters and datasheets below can only be applied to 2802-S2 series.

- Max. 15 fps@4K.
- Starlight, 120 dB true WDR, 3D NR.
- Smart IR Illumination.
- 60 m illumination distance.
- Super Adapt.
- Built-in MIC.
- Quick-to-install eyeball saves installation time.
- Auto focus, 2.7 mm–13.5 mm motorized lens.
- CVI/CVBS/AHD/TVI switchable.
- IP67, 24 VAC/12 VDC.



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.

Long Distance Transmission

HDCVI technology provides long distance transmission in real time without transmission loss. It supports transmission distances up to 700 m for 2-MP/5-MP/8-MP HD videos through coaxial cables, and up to 300 m through UTP cables. The results were obtained and verified through rigorous testing in Dahua's test laboratory.

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.

Protection (IP67)

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.

Easy Installation

HDCVI quick-to-install eyeball adopts quick-to-install pedestal, which can achieve easier installation than conventional eyeball. Quick-to-install camera reduces time and labor costs.

Technical Specification

| | |
|----------------------------|---|
| Camera | |
| Image Sensor | 4K CMOS |
| Max. Resolution | 3840 (H) × 2160 (V) |
| Scanning System | Progressive |
| Electronic Shutter Speed | PAL: 1/3 s–1/100000 s NTSC: 1/4 s–1/100000 s |
| Min. Illumination | 0.001 lux@F1.5 (Color, 30 IRE) 0.0001 lux@F1.5 (B/W, 30 IRE) 0 lux (Illuminator on) |
| S/N Ratio | >65 dB |
| Illumination Distance | 60 m (196.85 ft) |
| Illuminator On/Off Control | Auto |
| Illuminator Number | 2 (IR light) |
| Pan/Tilt/Rotation Range | Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360° |

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|----------------------|---|--------------------------------------|-----------------------|-----------------------|----------------------|
| 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 | | H: 113°–47°; V: 60°–26°; D: 133°–53° | | | |
| Iris Control | | Fixed | | | |
| Close Focus Distance | | 1.2 m (3.94 ft) | | | |
| DORI Distance | Lens | Detect | Observe | Recognize | Identify |
| | 2.7 mm | 83.4 m (273.62 ft) | 33.4 m (109.58 ft) | 16.7 m (54.79 ft) | 8.3 m (27.23 ft) |
| | 13.5 mm | 189.6 m (622.05 ft) | 75.8 m (248.69 ft) | 37.9 m (124.34 ft) | 19.0 m (62.34 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. | | | | |
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| Video | |
| Video Frame Rate | CVI: PAL: 4K@15 fps; 5M@25 fps; 4M@25 fps NTSC: 4K@15 fps; 5M@25 fps; 4M@30 fps AHD: PAL: 4K@15 fps; NTSC: 4K@15 fps TVI: PAL: 4K@15 fps; NTSC: 4K@15 fps CVBS: PAL: 960H; NTSC: 960H |
| Resolution | 4K (3840 × 2160); 5M (2880 × 1620); 4M (2560 × 1440); 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 |

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|-------------------|-----------------------------|
| Noise Reduction | 3D NR |
| Illumination Mode | Smart IR |
| Defog | Electronic defog |
| Digital Zoom | 4× |
| Mirror | Yes |
| Privacy Masking | Off/On (8 areas, rectangle) |

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

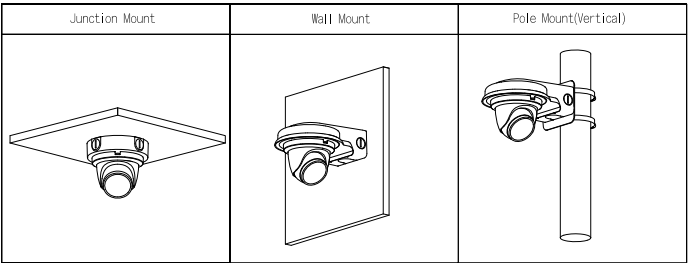
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|--------------|---|
| Port | |
| Video Output | Video output choices of CVI/TVI/AHD/CVBS by one BNC port (DIP Switch) |
| Audio Input | One channel built-in MIC |

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|-------------------|----------------------------|
| Power | |
| Power Supply | 12 VDC ± 10%; 24 VAC ± 25% |
| Power Consumption | Max 10.0 W (12 VDC, IR on) |

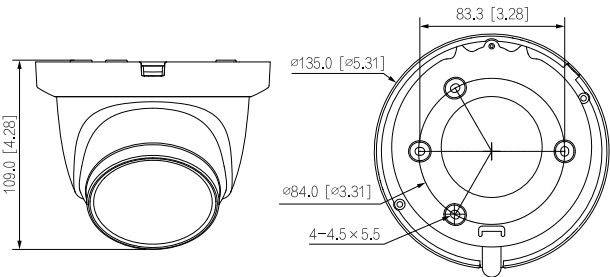
| | |
|-----------------------|--------------------------------------|
| Environment | |
| Operating Temperature | –30 °C to +60 °C (–22 °F to +140 °F) |
| Operating Humidity | <95% (RH), non-condensing |
| Storage Temperature | –30 °C to +60 °C (–22 °F to +140 °F) |
| Storage Humidity | <95% (RH), non-condensing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

| | |
|--------------------|---|
| Structure | |
| Casing Material | Metal dome + metal enclosure + plastic mounting plate |
| Product Dimensions | φ135 mm × 109 mm (φ5.31" × 4.28") |
| Net Weight | 0.56 kg (1.20 lb) |
| Gross Weight | 0.73 kg (1.60 lb) |
| Installation | Wall mount; ceiling mount; vertical pole mount |

| Ordering Information | | |
|---------------------------|----------------------------|--|
| Type | Part Number | Description |
| 4K Camera | DH-HAC-HDW2802T-MQP-Z-A-DP | 4K Starlight HDCVI Motorized Vari-focal IR Quick-to-install Eyeball Camera, PAL |
| | DH-HAC-HDW2802T-MQN-Z-A-DP | 4K Starlight HDCVI Motorized Vari-focal IR Quick-to-install Eyeball Camera, NTSC |
| Accessories (Optional) | PFA13F | Junction Box |
| | PFB211W | Wall Mount Bracket |
| | PFA152-E | Pole Mount Bracket |
| | PFA10C | Mount Adapter |
| | PFB220C | Ceiling Mount Bracket |
| | PFM800-4K | 1-CH Passive Video Balun |
| | PFM321D | 12V 1A Power Adapter |
| | PFM904 | Integrated Mount Tester |



Dimensions (mm[inch])



Accessories

Optional:



PFA13F
Junction
Box



PFB211W
Wall Mount
Bracket



PFA152-E
Pole Mount
Bracket



PFA10C
Mount
Adapter



PFB220C
Ceiling Mount
Bracket



PFM800-4K
1-CH Passive
Video Balun



PFM321D
12V 1A Power
Adapter



PFM904
Integrated
Mount Tester