

DH-HAC-HDW2241TMQ-A

2MP Starlight HDCVI Fixed IR Quick-to-install Eyeball Camera



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

- Max 30 fps@1080p
- Starlight, 130 dB true WDR, 3D NR
- 3.6 mm fixed lens (2.8 mm, 6 mm optional)
- CVI/CVBS/AHD/TVI switchable
- Super Adapt
- Built-in mic
- Max. IR length 60 m, Smart IR
- IP67, DC12 V



System Overview

Pro Series is a perfect choice for SMB solutions and projects where both high reliability and flexibility are required. All cameras are equipped with Starlight feature, 120dB true WDR and 3DNR, and are able to provide clear images and rich details even under tough lighting conditions.

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.

Multiple-formats

The camera supports multiple video formats including HDCVI, CVBS, and other two common HD analog formats in the market. A DIP switch located on the cable allows you to quickly toggle formats, further simplifying installation and debugging. This feature makes the camera compatible with not only XVRs, but also most existing HD/SD XVRs.

* DIP Switch 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.

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.

Protection (IP67, 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.

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

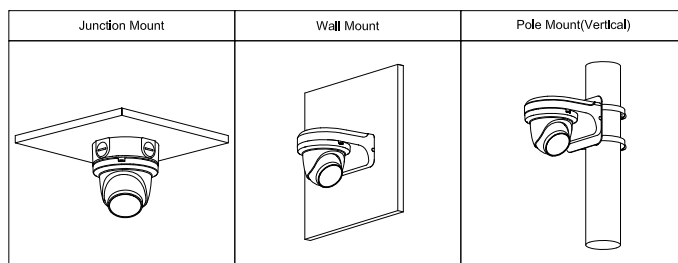
Broadcast-quality Audio

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.

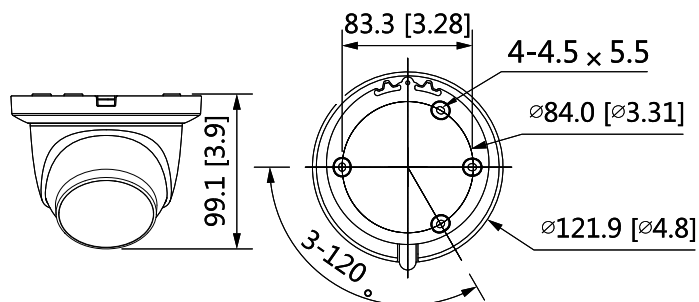
Technical Specification						Day/Night	Auto switch by ICR
Camera						BLC	BLC/WDR/HLC
Image Sensor		2MP CMOS				WDR	130 dB
Max. Resolution		1920 (H) × 1080 (V)				White Balance	Auto; manual
Pixel		2MP				Gain Control	Auto; manual
Scanning System		Progressive				Noise Reduction	3D NR
Electronic Shutter Speed		PAL: 1/25 s–1/100,000 s NTSC: 1/30 s–1/100,000 s				Smart IR	Yes
S/N Ratio		> 65 dB				Mirror	Off/On
Min. Illumination		0.001 Lux/F1.6, 30 IRE, 0 Lux IR on				Privacy Masking	Off/On (8 area, rectangle)
Illumination Distance		60 m (196.9 ft)				Certifications	
Illuminator On/Off Control		Auto; manual				Certifications	CE (EN55032, EN55024, EN50130-4) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)
Illuminator Number		2 (IR light)				Port	
Pan/Tilt/Rotation Range		Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°				Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port (DIP Switch)
Lens						Audio Input	One channel built-in mic
Lens Type		Fixed lens				Power	
Mount Type		M12				Power Supply	12 V ±30% DC
Focal Length		2.8 mm; 3.6 mm; 6 mm				Power Consumption	Max 5.1 W (12 V DC, IR on)
Max. Aperture		F1.6				Environment	
Field of View		2.8 mm:H: 109°; V: 58°; D: 127° 3.6 mm:H: 86°; V: 46°; D: 101° 6 mm:H: 54°; V: 29°; D: 63°				Operating Temperature	–40 °C to +60 °C (–40 °F to 140 °F); < 95% (non-condensation)
Iris Type		Fixed iris				Storage Temperature	–40 °C to +60 °C (–40 °F to 140 °F); < 95% (non-condensation)
Close Focus Distance		2.8 mm: 0.7 m (2.3 ft) 3.6 mm: 1.1 m (3.6 ft) 6 mm: 2.8 m (9.2 ft)				Protection Grade	IP67
DORI Distance	Lens	Detect	Observe	Recognize	Identify	Structure	
	2.8 mm	42.2 m (138.5 ft)	16.9 m (55.4 ft)	8.4 m (27.6 ft)	4.2 m (13.8 ft)	Casing	Metal throughout the whole casing
	3.6 mm	53.7 m (176.2 ft)	21.5 m (70.5 ft)	10.7 m (35.1 ft)	5.4 m (17.7 ft)	Camera Dimensions	Φ121.9 mm × 99.1 mm (Φ4.8" × 3.9")
	6 mm	88.3 m (289.7 ft)	35.3 m (115.8 ft)	17.7 m (58.1 ft)	8.8 m (28.9 ft)	Net Weight	0.43 kg (0.95 lb)
Video						Gross Weight	0.6 kg (1.32 lb)
Frame Rate		CVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps; AHD: PAL: 1080p@25 fps; NTSC: 1080p@30 fps; TVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps; CVBS: PAL: 960 × 576H; NTSC: 960 × 480H					
Resolution		1080p (1920 × 1080); 960H (960 × 576 / 960 × 480)					

Ordering Information

Type	Model	Description
2M Camera	DH-HAC-HDW2241TMQP-A	2MP Starlight HDCVI Fixed IR Quick-to-install Eyeball Camera, PAL
	DH-HAC-HDW2241TMQN-A	2MP Starlight HDCVI Fixed IR Quick-to-install Eyeball Camera, NTSC
Accessories (Optional)	PFA130-E	Water-proof Junction Box
	PFB205W	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFB220C	Ceiling Mount Bracket of Mini Dome & Eyeball Camera
	PFA109	Mount Adapter
	PFM800-E	Passive HDCVI Balun
	PFM321D	12 V 1A Power Adapter
	PFM904	Integrated Mount Tester



Dimensions (mm[inch])



Accessories

Optional:



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Water-proof Junction Box



PFB205W
Wall Mount Bracket



PFA152-E
Pole Mount Bracket



PFB220C
Ceiling Mount Bracket
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Camera



PFA109
Mount Adapter



PFM800-E
Passive HDCVI Balun



PFM321D
12V 1A Power Adapter



PFM904
Integrated Mount Tester