DH-HAC-HFW2241TU-A

2MP Starlight HDCVI Fixed IR Bullet Camera

* The parameters and datasheets below can only be applied to2241-S2 series.

· Max 30 fps@1080p

· Starlight, 130 dB true WDR, 3D NR

· 3.6 mm fixed lens (6 mm, 8 mm optional)

· CVI/CVBS/AHD/TVI switchable

· Super Adapt

· Built-in mic

· Max. IR length 80 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.

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 ±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

Camera

Image Sensor	2MP CMOS
Max. Resolution	1920 (H) × 1080 (V)
Pixel	2MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25 s–1/100,000 s NTSC: 1/30 s–1/100,000 s
S/N Ratio	> 65 dB
Min. Illumination	0.001 Lux/F1.6, 30 IRE, 0 Lux IR on
Illumination Distance	80 m (262.5 ft)
Illuminator On/Off Control	Auto; manual
Illuminator Number	2 (IR light)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

Lens

Lens Type	Fixed lens
Mount Type	M12
Focal Length	3.6 mm; 6 mm; 8 mm
Max. Aperture	F1.6
Field of View	3.6 mm: H: 86°; V: 46°; D: 101° 6 mm: H: 54°; V: 29°; D: 63° 8 mm: H: 41°; V: 22°; D: 47°
Iris Type	Fixed iris
Close Focus Distance	3.6 mm: 1.1 m (3.6 ft) 6 mm: 2.8 m (9.2 ft) 8 mm: 4.0 m (13.1 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	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)
	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)
	8 mm	110.3 m (361.9 ft)	44.1 m (144.7 ft)	22.1 m (72.5 ft)	11 m (36.1 ft)

Video

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)
Day/Night	Auto switch by ICR
BLC	BLC/WDR/HLC
WDR	130 dB
White Balance	Auto; manual
Gain Control	Auto; manual
Noise Reduction	3D NR
Smart IR	Yes
Mirror	Off/On
Privacy Masking	Off/On (8 area, rectangle)

Certifications

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)

Port

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

Power

Power Supply	12 V ±30% DC
Power Consumption	Max 7.7 W (12 V DC, IR on)

Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to 140 °F); < 95% (non-condensation)
Storage Temperature	–40 °C to +60 °C (–40 °F to 140 °F); < 95% (non-condensation)
Protection Grade	IP67

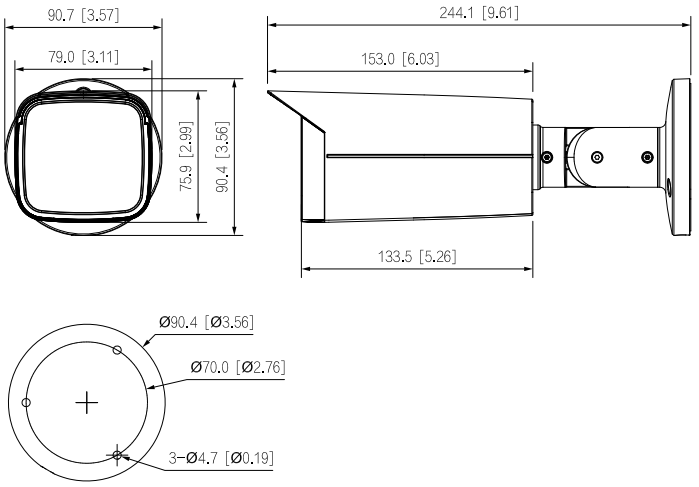
Structure

Casing	Metal throughout the whole casing
Camera Dimensions	244.1 mm × 79 mm × 75.9 mm (9.61" × 3.11" × 2.99")
Net Weight	0.77 kg (1.70 lb)
Gross Weight	1.04 kg (2.29 lb)

Ordering Information

Type	Model	Description
2M Camera	DH-HAC-HFW2241TUP-A	2MP Starlight HDCVI Fixed IR Bullet Camera, PAL
	DH-HAC-HFW2241TUN-A	2MP Starlight HDCVI Fixed IR Bullet Camera, NTSC
Accessories (Optional)	PFA130-E	Junction Mount
	PFA152-E	Pole Mount Bracket
	PFM800-E	Passive HDCVI Balun
	PFM321D	12 V 1A Power Adapter
	PFM904	Integrated Mount Tester

Dimensions (mm[inch])



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Passive HDCVI Balun

PFM321D
12V 1A Power Adapter

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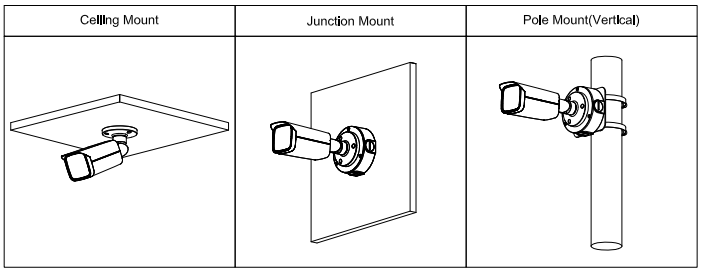

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