DH-HAC-HFW2509TU-A-LED

5MP Full-color HDCVI Bullet Camera

* In order to use the 5MP 16:9 HDCVI camera, the firmware of XVR must be upgraded to V4.001.0000001.0.R.200908 or later version.

- Max 25 fps@5MP (16:9 video output)
- 120 dB true WDR, 3D NR
- 24/7 color imaging
- 60 m illumination distance
- Super Adapt
- Built-in mic
- 3.6 mm fixed lens (2.8 mm, 6 mm optional)
- CVI/CVBS/AHD/TVI switchable
- IP67, DC12V

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

Full-color

Full-color camera adopts large aperture lens and high performance sensor. With higher amount of absorbed light and advanced image processing algorithm, the camera provides 24/7 color monitoring that collects clear and vivid information,significantly increasing probability of gathering valid human, vehicle, and event evidence that can be used for further intelligent analysis.

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.

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.

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the XVR, such as sending control signal or triggering alarm. Moreover, HDCVI technology supports PoC for construction flexibility.

* Audio input is available for some models of HDCVI cameras.

Long Distance Transmission

HDCVI technology guarantees real-time transmission at long distance without any loss. It supports up to 700m transmission for 2MP/5MP/8MP HD video via coaxial cable, and up to 300m via UTP cable.

*Actual results verified by real-scene testing in Dahua's test laboratory.

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 work 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.

Technical Specification

Camera

Image Sensor	5MP CMOS
Max. Resolution	2880 (H) × 1620 (V)
Pixel	5MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/3 s–1/100,000 s NTSC: 1/4 s–1/100,000 s
S/N Ratio	> 65 dB
Min. Illumination	0.0002 Lux/F1.0, 0 Lux warm light on
Illumination Distance	60 m (196.8 ft)
Illuminator On/Off Control	Auto; manual
Illuminator Number	4 (Warm light)
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm; 3.6 mm; 6 mm
Max. Aperture	F1.0
Field of View	2.8 mm: H: 111°; V: 57°; D: 131° 3.6 mm: H: 88°; V: 46°; D: 104° 6 mm: H: 59°; V: 32°; D: 67°
Iris Type	Fixed iris
Close Focus Distance	2.8 mm: 1.5 m (4.9 ft) 3.6 mm: 2.3 m (7.5 ft) 6 mm: 4.5 m (14.8 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.8 mm	66 m (216.5 ft)	26.4 m (86.6 ft)	13.2 m (43.3 ft)	6.6 m (21.7 ft)
	3.6 mm	80 m (262.5 ft)	32 m (105 ft)	16 m (52.5 ft)	8 m (26.2 ft)
	6 mm	120 m (393.7 ft)	48 m (157.4 ft)	24 m (78.7 ft)	12 m (39.3 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

Frame Rate	CVI: PAL: 5M@25 fps; 4M@25 fps; 1080p@25 fps NTSC: 5M@25 fps; 4M@30 fps; 1080p@30 fps AHD: PAL: 4M@25 fps; NTSC: 4M@30 fps TVI: PAL: 4M@25 fps; NTSC: 4M@30 fps CVBS: PAL: 960H; NTSC: 960H
Resolution	5M (2880 × 1620); 4M (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480);
BLC	BLC/HLC/WDR/HLC-Pro
WDR	120 dB
White Balance	Auto; Area white balance
Gain Control	Auto; manual
Noise Reduction	3D NR
Smart Illumination	Yes
Defog	Electronic defog
Digital Zoom	4×
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	12V ±30% DC
Power Consumption	Max 10.7 W (12 VDC, warm light 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 × 90.4 mm × 90.4 mm (9.61" × 3.56" × 3.56")
Net Weight	0.78 kg (1.72 lb)
Gross Weight	1.04 kg (2.29 lb)

Ordering Information

Type	Model	Description
5MP Camera	DH-HAC-HFW2509TUP-A-LED	5MP Full-color HDCVI Bullet Camera, PAL
	DH-HAC-HFW2509TUN-A-LED	5MP Full-color HDCVI Bullet Camera, NTSC
Accessories (Optional)	PFA135	Junction Box
	PFA130-E	Water-proof Junction Box
	PFA130-E+PFA152-E	Water-proof Junction Box + Pole Mount Bracket
	PFM800-4K	1-CH Passive Video Balun
	PFM321	12 VDC 1A Power Adapter
	PFM904	Integrated Mount Tester

Accessories

Optional:

PFA135
Junction Box

PFA130-E
Water-proof Junction Box

PFA130-E+PFA152-E
Water-proof Junction Box + Pole Mount Bracket

PFM800-4K
1-CH Passive Video Balun

PFM321
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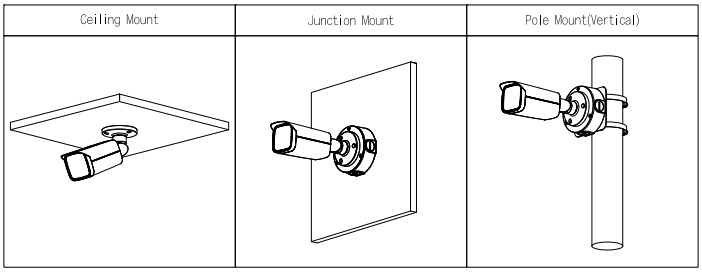

Dimensions (mm[inch])