

DH-HAC-HDBW1509RA-IL-A

5MP Smart Dual Light HDCVI Fixed-focal Vandal-proof Dome Camera



* The parameters and datasheets below can only be applied to 1509-IL series.

* In order to use the 5MP 16:9 and the Smart Dual Light HDCVI camera, the firmware of XVR must be upgraded to V4.001.0000004.1.R.220323 or later version.

- Max 25 fps@5MP (16:9 video output).
- 120 dB true WDR, 3D NR.
- Smart Dual Light.
- 40 m illumination distance.
- Super Adapt.
- Built-in Mic.
- 3.6 mm fixed lens (2.8 mm optional).
- CVI/CVBS/AHD/TVI switchable.
- IP67, IK10, 12 VDC.



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

Smart Dual Light

With its smart dual light mechanism, the camera automatically turns on the white light when Perimeter Protection/SMD Plus function of AI XVR detects a target in the rule area to capture clear, vivid images. When the target leaves the rule area, the camera automatically switches over from the white light to the IR light to significantly reduce light pollution.

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.

Wide Dynamic Range

With its advanced Wide Dynamic Range technology (WDR), the camera captures highly detailed images and produces high-definition recordings in high-contrast lighting conditions, and in scenes with backlighting or shadows.

Protection (IP67, IK10, 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.

IK10: The enclosure can withstand up to 5 punches from a 5 kg hammer falling from a height of 40 cm (impact energy is 20 J).

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.

Technical Specification	
Camera	
Image Sensor	5 MP CMOS
Max. Resolution	2880 (H) × 1620 (V)
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/3 s–1/100,000 s; NTSC: 1/4 s–1/100,000 s
Min. Illumination	0.001 lux@F1.0 (Color, 30 IRE) 0.0001 lux@F1.0 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>65dB
Illumination Distance	IR: 40 m (131.23 ft); Warm light: 40 m (131.23 ft)
Illuminator On/Off Control	Auto
Illuminator Number	3 (Warm light);3 (IR light)
Angle Adjustment	Pan: 0°–355° Tilt: 0°–80° Rotation: 0°–355°

Lens					
Lens Type		Fixed-focal			
Lens Mount		M12			
Focal Length		2.8 mm;3.6 mm			
Max. Aperture		F1.2			
Field of View		2.8 mm: H: 112°; V: 58°; D: 136° 3.6 mm: H: 92°; V: 48°; D: 108°			
Iris Control		Fixed			
Close Focus Distance		2.8 mm: 1.4 m (4.59 ft) 3.6 mm: 2 m (6.56 ft)			
DORI distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	63.8 m (209.32 ft)	25.5 m (83.66 ft)	12.8 m (41.99 ft)	6.4 m (21.00 ft)
	3.6 mm	77.8 m (255.25 ft)	31.1 m (102.03 ft)	15.6 m (51.18 ft)	7.8 m (25.59 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	
Video Frame Rate	CVI: PAL: 5M@25 fps; 5M@12.5 fps; 4M@25 fps; 1080p@25 fps NTSC: 5M@30 fps; 5M@10 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)

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
Noise Reduction	3D NR
Illumination Mode	Smart IR&WL; WL Mode; IR Mode
Defog	Electronic defog
Mirror	Yes
Privacy Masking	Off/On (8 areas, rectangle)

Certifications	
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

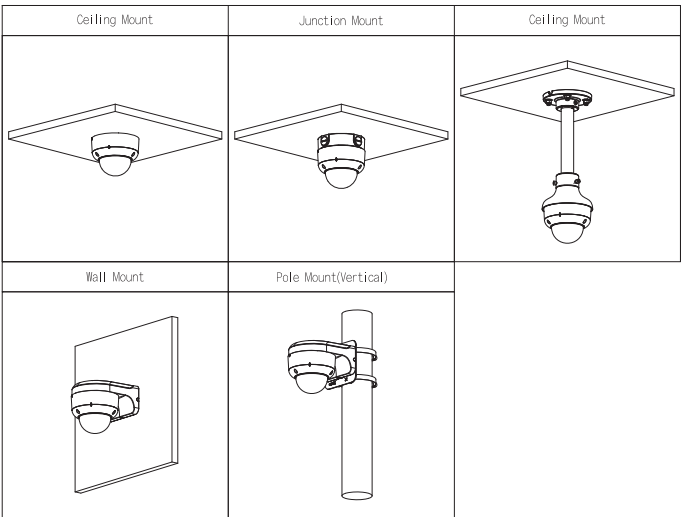
Port	
Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port
Audio Input	One channel built-in Mic

Power	
Power Supply	12 VDC ± 30%
Power Consumption	Max 6.4 W (12 VDC, WLED on)

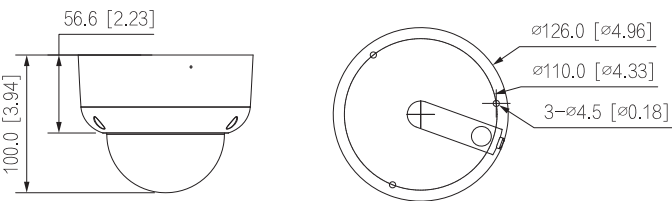
Environment	
Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	<95% (RH), non-condensing
Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Storage Humidity	<95% (RH), non-condensing
Protection	IK10;IP67
Anti-corrosion Level	Basic Protection

Structure	
Casing Material	Metal
Product Dimensions	Φ126.0 mm × 100 mm (Φ4.96" × 3.94")
Net Weight	0.59 kg (1.30 lb)
Gross Weight	0.75 kg (1.65 lb)
Installation	Wall mount; ceiling mount; vertical pole mount

Ordering Information		
Type	Part Number	Description
2MP Camera	DH-HAC-HDBW1509RAP-IL-A	5MP Smart Dual Light HDCVI Fixed-focal Vandal-proof Dome Camera, PAL
	DH-HAC-HDBW1509RAN-IL-A	5MP Smart Dual Light HDCVI Fixed-focal Vandal-proof Dome Camera, NTSC
Accessories (Optional)	PFB206W	Wall Mount Bracket
	PFA197R	Junction Box
	PFA109	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	PFA156	Pole Mount Bracket
	PFM800-E	Passive HDCVI Balun
	PFM321D	12V 1A Power Adapter
	PFM904	Integrated Mount Tester



Dimensions (mm[inch])



Accessories

Optional:



PFB206W
Wall Mount
Bracket



PFA197R
Junction Box



PFA109
Mount Adapter



PFB220C
Ceiling Mount
Bracket



PFA156
Pole Mount Bracket



PFM800-E
Passive HDCVI
Balun



PFM321D
12V 1A Power
Adapter



PFM904
Integrated Mount
Tester