

DH-HAC-HDW1801T-Z-IL-A

4K Smart Dual Light HDCVI Motorized Vari-Focal Eyeball Camera



Series 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

Built-in Mic

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.

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.

Smart Zoom Lighting

Smart zoom lighting automatically adjusts the brightness of the illuminator based on the zoom level, ensuring clear, stable images in low-light conditions across all focal lengths. Smart brightness control reduces power consumption and saves energy.

- * The parameters and datasheets below can only be applied to 1801-IL-S3 series.
- * In order to use the Smart Dual Light HDCVI camera, the firmware of XVR must be upgraded to V4.001.0000004.1.R.220323 or later version.
- Starlight, 3D NR.
- Max 15 fps@4K.
- Smart Dual Light.
- Smart Zoom Lighting.
- 80 m illumination distance.
- Built-in Mic.
- 2.7–13.5 mm motorized lens.
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.



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.

Protection (IP67, 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.

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.

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.

Technical Specification

Camera	
Image Sensor	4K CMOS
Max. Resolution	3840 (H) × 2160 (V)
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25 s–1/100,000 s; NTSC: 1/30 s–1/100,000 s
Min. Illumination	0.01 lux@F1.6 (Color, 30 IRE) 0.001 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>65 dB
Illumination Distance	IR: 80 m (262.47 ft) ; Warm Light: 60 m (196.85 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	4 (Multi-core light)
Angle Adjustment	Pan: 0°–360° Tilt: 0°–90° Rotation: 0°–360°

Lens	
Lens Type	Motorized vari-focal
Auto Focus	No
Lens Mount	ϕ14
Focal Length	2.7 mm–13.5 mm
Max. Aperture	F1.6
Field of View	H: 32.7°–111.8°; V: 18.4°–58.3°; D: 37.5°–135.2°
Iris Control	Fixed
Close Focus Distance	1.2 m (3.94 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	87.2 m (286.09 ft)	34.9 m (114.50 ft)	17.4 m (57.09 ft)	8.7 m (28.54 ft)
	T	269.3 m (883.53 ft)	107.7 m (353.35 ft)	53.9 m (176.84 ft)	26.9 m (88.25 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				

Video	
Video Frame Rate	CVI: PAL: 4K@15 fps NTSC: 4K@15 fps AHD: PAL: 4K@15 fps NTSC: 4K@15 fps TVI: PAL: 4K@15 fps NTSC: 4K@15 fps CVBS: PAL: 960H@50 fps NTSC: 960H@60 fps
Resolution	4K (3840 × 2160); 960H (960 × 576/960 × 480)
Day/Night	Auto(ICR)/Color/B/W

BLC	BLC; HLC; WDR
WDR	WDR
White Balance	Auto
Gain Control	Auto/Manual
Noise Reduction	3D NR
Illumination Mode	Smart IR&WL (CVI, TVI); WL Mode; IR Mode
Mirror	Yes

Certification	
Certifications	CE-LVD: EN 62368-1; CE-EMC: EN 55032; EN 55035

Audio	
Built-in Mic	Yes
Camera Audio	CVI; TVI
Pick-up Distance	8 m (26.25 ft)

Port	
Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port (DIP Switch)

Power	
Power Supply	12 VDC (±30%)
Power Consumption	Max 7.4 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
Anti-corrosion Level	Basic Protection *The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection.

Structure	
Casing Material	Metal
Product Dimensions	Φ122 mm × 108.2 mm (Φ4.80" × 4.26")
Net Weight	0.6 kg (1.32 lb)
Gross Weight	0.76 kg (1.68 lb)
Installation	Wall mount; ceiling mount; vertical pole mount

Ordering Information

Type	Model	Description
HDCVI CAMERA	DH-HAC-HDW1801TN-Z-IL-A	4K Smart Dual Light HDCVI Motorized Vari-Focal Eyeball Camera,NTSC
	DH-HAC-HDW1801TP-Z-IL-A	4K Smart Dual Light HDCVI Motorized Vari-Focal Eyeball Camera,PAL
Accessories (Optional)	DH-PFA106	Mount Adapter
	DH-PFB220C	Ceiling Mount Bracket
	DH-PFA151	Corner Mount Bracket
	DH-PFB305W	Wall Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFB2203W	Wall Mount Bracket
	DH-PFA156	Pole Mount Bracket
	DH-PFA137	Junction Box
	DH-PFM800-4K	1 Channel Passive HDCVI Balun
	DH-PFM321-EN	DC12V1A power adapter
	DH-PFM325D-1210EN	DC12V 1A Power Adapter
	DH-PFM320D-EN	DC12V2A power adapter
	PFM904	Integrated Mount Tester

Accessories

Optional:



DH-PFA106
Mount Adapter



DH-PFB220C
Ceiling Mount Bracket



DH-PFA151
Corner Mount Bracket



DH-PFB305W
Wall Mount Bracket



DH-PFA150
Pole Mount Bracket



DH-PFB2203W
Wall Mount Bracket



DH-PFA156
Pole Mount Bracket



DH-PFA137
Junction Box



DH-PFM800-4K
1 Channel Passive HDCVI
Balun

Optional:



DH-PFM321-EN
DC12V1A power adapter



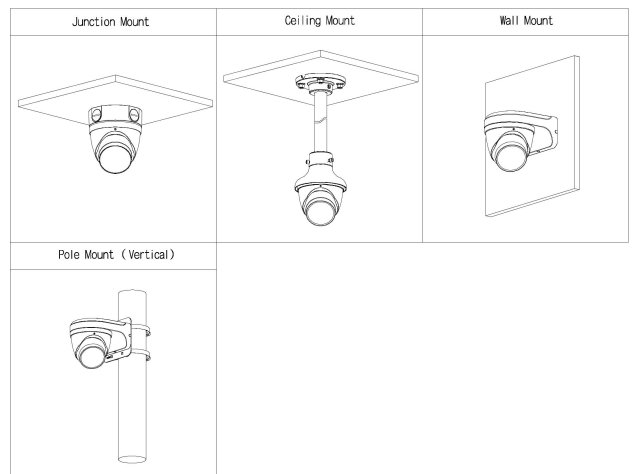
DH-PFM325D-1210EN
DC12V 1A Power Adapter



DH-PFM320D-EN
DC12V2A power adapter



PFM904
Integrated Mount Tester



Dimensions (mm[inch])

