

DH-HAC-HDW1801T-IL-A

4K Smart Dual Light HDCVI Fixed-focal Eyeball Camera



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

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.

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.

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.

Super Adapt

With its intelligent algorithm, the camera automatically adjusts its parameters to provide optimal performance and vivid images.

* The parameters and datasheets below can only be applied to 1801-IL 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.

- Max. 15 fps@4K.
- 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, 12 VDC.



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.

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals (video, audio*, data and power) which are simultaneously transmitted over a coaxial cable. Dual-way data transmission allows the HDCVI camera to interact with the XVR to perform various actions such as sending control signals and triggering alarms. HDCVI technology also supports PoC, which makes the camera easy and quick to install.

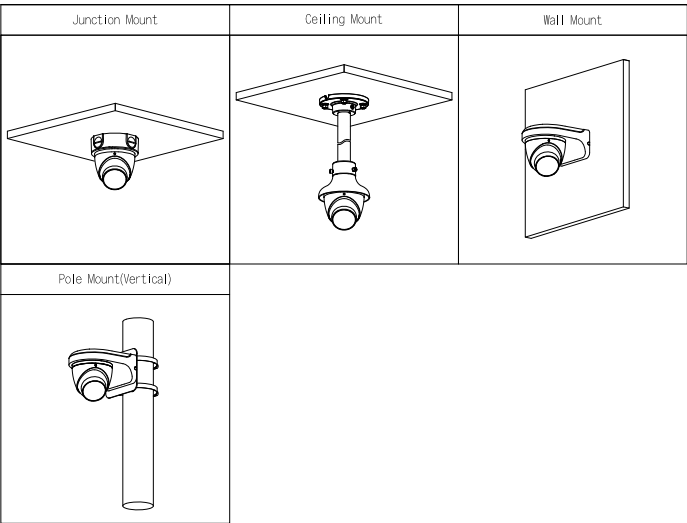
* Audio input is available for select HDCVI camera models.

Long Distance Transmission

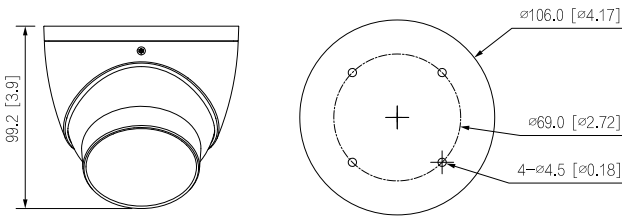
HDCVI technology provides long distance transmission in real time without transmission loss. It supports transmission distances up to 700 m for 2-MP/5-MP/8-MP HD videos through coaxial cables, and up to 300 m through UTP cables. The results were obtained and verified through rigorous testing in Dahua's test laboratory.

Technical Specification						White Balance		Auto; Area white balance	
Camera						Gain Control		Auto/Manual	
Image Sensor		4K CMOS				Noise Reduction		3D NR	
Max. Resolution		3840 (H) × 2160 (V)				Illumination Mode		Smart IR&WL; WL Mode; IR Mode	
Scanning System		Progressive				Defog		Electronic defog	
Electronic Shutter Speed		PAL: 1/25 s–1/100000 s NTSC: 1/30 s–1/100000 s				Mirror		Yes	
Min. Illumination		0.01 lux@F2.0 (Color, 30 IRE) 0.001 lux@F2.0 (B/W, 30 IRE) 0 lux (Illuminator on)				Privacy Masking		Off/On (8 areas, rectangle)	
S/N Ratio		>65 dB				Certification			
Illumination Distance		IR: 40 m (131.23 ft) Warm light: 40 m (131.23 ft)				Certifications			
Illuminator On/Off Control		Auto/Manual				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			
Illuminator Number		2 (Warm light); 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	
						Audio Input		One channel built-in MIC	
Lens						Power			
Lens Type		Fixed-focal				Power Supply		12 VDC ± 30%	
Lens Mount		M12				Power Consumption		Max 5.7 W (12 VDC, LED on)	
Focal Length		2.8 mm; 3.6 mm				Environment			
Max. Aperture		F2.0				Operating Temperature		–40 °C to +60 °C (–40 °F to +140 °F)	
Field of View		2.8 mm: H: 106°; V: 56°; D: 125° 3.6 mm: H: 88°; V: 46°; D: 105°				Operating Humidity		<95% (RH), non-condensing	
Iris Control		Fixed				Storage Temperature		–40 °C to +60 °C (–40 °F to +140 °F)	
Close Focus Distance		2.8 mm: 1.3 m (4.27 ft) 3.6 mm: 1.9 m (6.23 ft)				Storage Humidity		<95% (RH), non-condensing	
DORI Distance	Lens	Detect	Observe	Recognize	Identify	Protection		IP67	
	2.8 mm	88 m (288.71 ft)	35.2 m (115.49 ft)	17.6 m (57.74 ft)	8.8 m (28.87 ft)	Anti-corrosion Level		Low	
	3.6 mm	106.7 m (350.07 ft)	42.7 m (140.09 ft)	21.3 m (69.88 ft)	10.7 m (35.10 ft)	Structure			
Video						Casing Material		Metal	
Video Frame Rate		CVI: PAL: 4K@15 fps; 5M@25 fps; 4M@25 fps; 1080p@25 fps NTSC: 4K@15 fps; 5M@25 fps; 4M@30 fps; 1080p@30 fps AHD: PAL: 4K@15 fps NTSC: 4K@15 fps TVI: PAL: 4K@15 fps NTSC: 4K@15 fps CVBS: PAL: 960H NTSC: 960H				Product Dimensions		φ106.0 mm × 99.2 mm (φ4.17" × 3.91")	
Resolution		4K (3840 × 2160); 5M (2880 × 1620); 4M (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480)				Net Weight		0.47 kg (1.04 lb)	
Day/Night		Auto(ICR)/Color/B/W				Gross Weight		0.69 kg (1.52 lb)	
BLC		BLC; HLC; WDR; HLC-Pro				Installation		Wall mount; ceiling mount; vertical pole mount	
WDR		120 dB							

Ordering Information		
Type	Model	Description
4K Camera	DH-HAC-HDW1801TP-IL-A	4K Smart Dual Light HDCVI Fixed-focal Eyeball Camera, PAL
	DH-HAC-HDW1801TN-IL-A	4K Smart Dual Light HDCVI Fixed-focal Eyeball Camera, NTSC
Accessories (Optional)	PFA130-E	Water-proof Junction Box
	PFB204W	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFA106	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	PFM800-4K	1 Channel Passive HDCVI Balun
	PFM321D	12V 1A Power Adapter
	PFM904	Integrated Mount Tester



Dimensions (mm [inch])



Accessories

Optional:



PFA130-E
Water-proof
Junction Box



PFB204W
Wall Mount
Bracket



PFA152-E
Pole Mount
Bracket



PFA106
Mount
Adapter



PFB220C
Ceiling Mount
Bracket



PFM800-4K
1 Channel Passive
HDCVI Balun



PFM321D
12V 1A Power
Adapter



PFM904
Integrated Mount
Tester