DH-HAC-T2A51-U

5MP IR HDCVI Fixed-focal Eyeball Camera



* The parameters and datasheets below can only be applied to A51-S3 series.

- Max 25 fps@5MP (16:9 video output)
- Smart IR Illumination.
- 30 m illumination distance.
- 3.6 mm fixed lens (2.8 mm, 6 mm optional).
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.



Series Overview

The Cooper Series offers simple and highly cost-effective HDCVI solutions. It provides 24/7 reliable monitoring with high-quality image performance, saving cost on both material and labor force. It is also designed and built to the specific standards of Dahua.

Functions

Smart IR Illumination

With its IR illumination, the camera provides optimal performance in low light conditions, ensuring uniformity in the brightness of B/W images. Through its smart IR technology, the camera also compensates for the distance of targets by adjusting the intensity of its IR LEDs, preventing overexposure of images as targets move closer to the camera.

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 ±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.

Simplicity

HDCVI technology inherits the simplicity of traditional analog surveillance systems, making it a great mechanism for protecting your valuables. HDCVI can be upgraded from the traditional analog system without replacing the existing coaxial cabling. Its plug and play design enables it to produce high-definition videos during surveillance without the hassle of configuring a network.

Multi-language OSD

The OSD offers multiple functions to meet the many requirements of a monitoring scene, such as backlight mode, day/night mode, white balance, privacy mask, and motion detection. 11 languages are available for OSD: Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Technical Specification

Camera

Image Sensor	5 MP CMOS
Max. Resolution	2880 (H) × 1620 (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	0.02 lux@F2.0 (Color, 30 IRE) 0.002 lux@F2.0 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>65 dB
Illumination Distance	IR: 30 m (98.43 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	3 (IR light)
Angle Adjustment	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Lens Mount	M12
Focal Length	2.8 mm; 3.6 mm; 6 mm
Max. Aperture	F2.0
Field of View	2.8 mm: H: 105.5°; V: 56.5°; D: 125.3° 3.6 mm: H: 86°; V: 46.1°; D: 104.3° 6 mm: H: 53.9°; V: 30.7°; D: 62.1°
Close Focus Distance	2.8 mm: 1.0 m (3.28 ft) 3.6 mm: 1.4 m (4.59 ft) 6 mm: 2.6 m (8.53 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.8 mm	66.0 m (216.54 ft)	26.4 m (86.61 ft)	13.2 m (43.31 ft)	6.6 m (21.65 ft)
	3.6 mm	79.4 m (260.50 ft)	31.8 m (104.33 ft)	15.9 m (52.17 ft)	7.9 m (25.92 ft)
	6 mm	118 m (387.14 ft)	47.2 m (154.86 ft)	23.6 m (77.43 ft)	11.8 m (38.71 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@25 fps; 5M@20 fps; 5M@10 fps; 4M@30 fps; 1080p@30 fps AHD: PAL: 4M@25 fps NTSC: 4M@30 fps TVI: PAL: 5M 16:9@20 fps NTSC: 5M 16:9@20 fps
Video Frame Rate	CVBS: PAL: 960H NTSC: 960H
Resolution	5M (2880 × 1620); 4M (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480); TVI 5M 16:9 (2960 × 1665)
Day/Night	Auto(ICR)/Color/B/W
BLC	BLC; HLC; WDR
WDR	DWDR
White Balance	Auto;Area white balance
Gain Control	Auto
Noise Reduction	2D NR
Illumination Mode	Smart IR
Mirror	Yes
Privacy Masking	Off/On (8 areas, rectangle)

Certification

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

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 3.5 W (12 VDC, IR 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	IP67
Anti-corrosion Level	Basic Protection

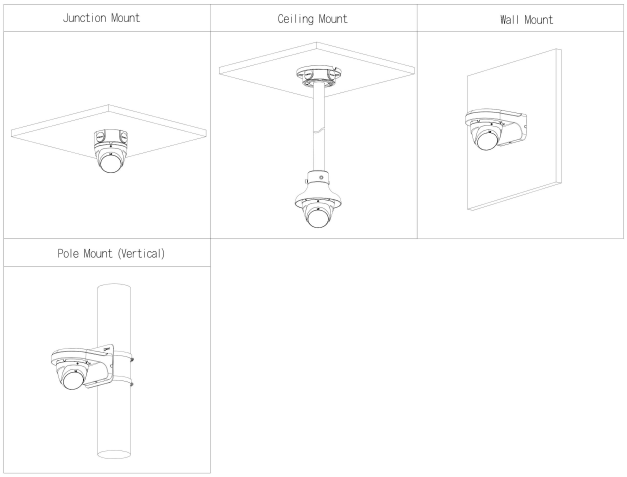
Structure

Casing Material	Metal
Product Dimensions	Φ94.0 mm × 77.9 mm (Φ3.70" × 3.07")
Net Weight	0.30 kg (0.66 lb)
Gross Weight	0.36 kg (0.79 lb)
Installation	Wall mount; ceiling mount; vertical pole mount

Ordering Information

Type	Model	Description
HDCVI CAMERA	DH-HAC-T2A51N-U	5MP IR HDCVI Fixed-focal Eyeball Camera,NTSC
	DH-HAC-T2A51P-U	5MP IR HDCVI Fixed-focal Eyeball Camera,PAL

Type	Model	Description
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-PFB2204W	Wall Mount Bracket
	DH-PFA152-E	Pole Mount Bracket
	DH-PFA13A-E	Junction Box
	DH-PFM800-4K	1 Channel Passive HDCVI Balun
	DH-PFM321-EN	DC12V1A power adapter
	DH-PFM320D-EN	DC12V2A power adapter
	PFM904	Integrated Mount Tester



Accessories

Optional:



DH-PFA106
Mount Adapter



DH-PFA13A-E
Junction Box



DH-PFA150
Pole Mount Bracket



DH-PFA151
Corner Mount Bracket



DH-PFA152-E
Pole Mount Bracket



DH-PFB2204W
Wall Mount Bracket



DH-PFB220C
Ceiling Mount Bracket



DH-PFB305W
Wall Mount Bracket



DH-PFM320D-EN
DC12V2A power adapter



DH-PFM321-EN
DC12V1A power adapter



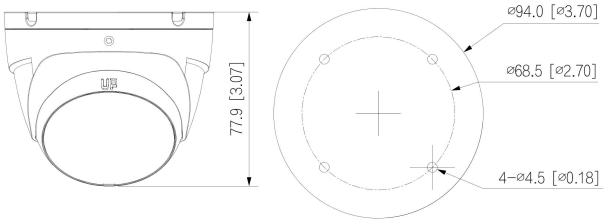
DH-PFM800-4K
1 Channel Passive HDCVI Balun



PFM904
Integrated Mount Tester

Dimensions (mm[inch])

mm [inch]



Rev 002.000 © 2025 Dahua. All rights reserved. Design and specificatons are subject to change without notce.
Pictures in the document are for reference only, and the actual product shall prevail.