

# DH-HAC-D3A51-Z

## 5MP IR HDCVI Motorized Vari-Focal Dome Camera



### 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.

#### 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.

- \* The parameters and datasheets below can only be applied to A51-S3 series.
- \* 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).
- Smart IR Illumination.
- 30 m illumination distance.
- 2.7-13.5 mm motorized lens.
- CVI/CVBS/AHD/TVI switchable.
- IP67, 12 VDC.



### 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.

### Multiple Formats

The camera supports videos in HDCVI, CVBS, TVI and AHD formats. The DIP switch on the cable allows you to quickly change formats through simple installation and debugging procedures. This feature makes the camera compatible with both XVRs and HD/SD XVRs.

\* The DIP Switch is available for select HDCVI camera models.

### 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.

### 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.

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@F1.6 (Color, 30 IRE) 0.002 lux@F1.6 (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	2 (IR light)
Angle Adjustment	Pan: 0°–355° Tilt: 0°–75° Rotation: 0°–355°

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	0.3 m (0.98 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	65.4 m ( 214.57 ft)	26.16 m ( 85.83 ft)	13.08 m ( 42.91 ft)	6.54 m ( 21.46 ft)
	T	202 m ( 662.73 ft)	80.8 m ( 265.09 ft)	40.4 m ( 132.55 ft)	20.2 m ( 66.27 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@10 fps; 5M@20 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 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/Manual
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 4.9 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	Plastic
Product Dimensions	Φ122 mm × 97.6 mm (Φ4.8" × 3.84")
Net Weight	0.34 kg (0.75 lb)
Gross Weight	0.49 kg (1.08 lb)
Installation	Wall mount; ceiling mount; vertical pole mount

Ordering Information

Type	Model	Description
HDCVI CAMERA	DH-HAC-D3A51N-Z	5MP IR HDCVI Motorized Vari-Focal Dome Camera,NTSC
	DH-HAC-D3A51P-Z	5MP IR HDCVI Motorized Vari-Focal Dome Camera,PAL
Accessories (Optional)	DH-PFA106	Mount Adapter
	DH-PFB220C	Ceiling Mount Bracket
	DH-PFB305W	Wall Mount Bracket
	DH-PFA151	Corner Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFB2203W	Wall Mount Bracket
	DH-PFA152-E	Pole Mount Bracket
	DH-PFA137	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-PFA137  
Junction Box



DH-PFA150  
Pole Mount Bracket



DH-PFA151  
Corner Mount Bracket



DH-PFA152-E  
Pole Mount Bracket



DH-PFB2203W  
Wall Mount Bracket



DH-PFB220C  
Ceiling Mount Bracket



DH-PFB305W  
Wall Mount Bracket



DH-PFM320D-EN  
DC12V2A power adapter



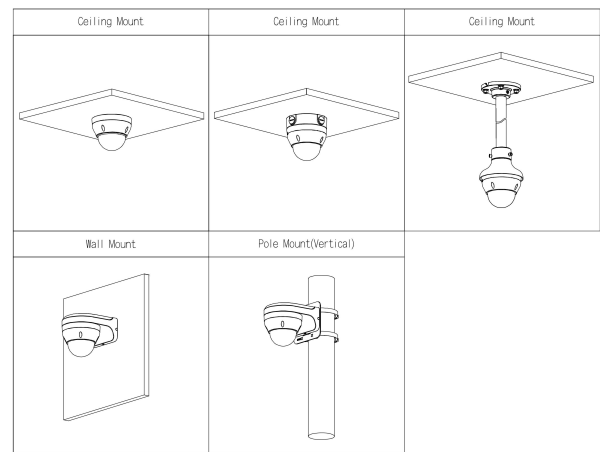
DH-PFM321-EN  
DC12V1A power adapter



DH-PFM800-4K  
1 Channel Passive HDCVI  
Balun



PFM904  
Integrated Mount Tester



Dimensions (mm[inch])

