alhua TECHNOLOGY

DH-HAC-B2A51-A
5 MP HDCVI Fixed IR Bullet Camera

HDCVI

* The parameters and datasheets below can only be applied to A51-S2 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@5 MP (16:9 video output)
- CVI/CVBS/AHD/TVI switchable
- 3.6mm fixed lens (2.8 mm optional)
- Max. IR length 20 m, Smart IR
- Built-in mic
- IP67, 12 VDC

Cooper Series | 5Mp | 20m IR | DC 12V | IP67 | Temperature | Audio

System Overview

Cooper Series offers simple and highly cost-effective HDCVI solutions. It offers 24/7 reliable monitoring with high-quality image performance, saving both product and labor costs. It is also highly guaranteed by Dahua quality standard.

Functions

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the HCVR, such as sending control signal or triggering alarm. Moreover, HDCVI technology supports PoC for construction flexibility.

* Audio input is available for some models of HDCVI cameras.

Broadcast-quality Audio

Audio information is used as supplementary evidence in video surveillance applications. The HDCVI camera supports audio signal transmission over coaxial cable. In addition, it adopts unique audio processing and transmission technology that best restores source audio and eliminates noise, guaranteeing the quality and effectiveness of collected audio information.

Long Distance Transmission

HDCVI technology guarantees real-time transmission at long distance without any loss. It supports up to 700m for 5MP HD video via coaxial cable, and up to 300m via UTP cable.

*Actual results verified by real-scene testing in Dahua's test laboratory.

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables high definition video surveillance without the hassle of configuring a network.

Smart Illumination

The camera is designed with microcrystalline LED IR illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. Dahua's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object come closer to the camera.

Multi-formats

The camera supports multiple video formats including HDCVI, CVBS and other two common HD analog formats in the market. The four formats can be switched over through OSD menu. This feature makes the camera to be compatible with not only XVRs but also most end users' existing HD/SD DVRs.

Multi-language OSD

OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Protection

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.
Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera

Image Sensor	5 MP CMOS
Max. Resolution	2880 (H) × 1620 (V)
Pixel	5MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25–1/100,000 s NTSC: 1/30–1/100,000 s
Min. Illumination	0.02 Lux/F2.0, 30 IRE, 0 Lux IR on
S/N Ratio	> 65 dB
Illumination Distance	20 m (65.6 ft)
Illuminator On/Off Control	Auto; manual
Pan/Tilt/Rotation	Pan: 0° – 360° Tilt: 0° – 90° Rotation: 0° – 360°

Lens

Lens Type	Fixed lens / Fixed iris
Mount Type	M12
Focal Length	3.6 mm (2.8 mm Optional)
Max Aperture	F2.0
Angle of View	2.8 mm: 125° × 106° × 56° (diagonal × horizontal × vertical) 3.6 mm: 104° × 88° × 46° (diagonal × horizontal × vertical)
Focus Control	N/A
Close Focus Distance	2.8 mm: 0.8 m (2.6 ft) 3.6 mm: 1.2 m (3.9 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI distance	2.8mm	56.0 m (183.7 ft)	22.4 m (73.5 ft)	11.2 m (36.7 ft)	5.6 m (18.4 ft)
	3.6mm	80 m (262.5 ft)	32 m (105.0 ft)	16 m (52.5 ft)	8 m (26.2 ft)

Video

Resolution	5M (2880 × 1620); 4M (2560 × 1440) 1080p (1920 × 1080); 960H (960 × 576/960 × 480)
Frame Rate	CVI: PAL: 5M@25 fps; 4M@25fps; 1080p@25fps NTSC: 5M@25 fps; 4M@30fps; 1080p@30fps AHD: PAL: 4M@25 fps; NTSC: 4M@30 fps; TVI: PAL: 4M@25 fps; NTSC: 4M@30 fps; CVBS: 960H;
Day/Night	Auto (ICR)/Manual
OSD Menu	Multi-language
BLC Mode	BLC/HLC/DWDR

WDR	DWDR
Gain Control	AGC
Noise Reduction	2D
White Balance	Auto; manual
Smart IR	Yes
Mirror	Off/On
Privacy Masking	Off/On (8 area, rectangle)

Certifications

Certifications	CE (EN55032, EN55024, EN50130-4,EN60950-1, EN 62368-1: 2014+A11: 2017) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014)

Port

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

Eelectrical

Power Supply	12 VDC ±30%
Power Consumption	Max. 3.7 W (12 VDC, IR on)

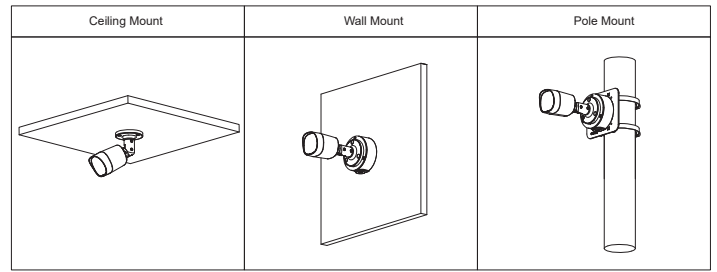### Environmental

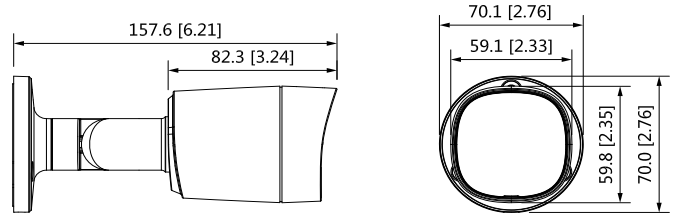|	
Operating Conditions	–40 °C to +60 °C (–40 °F to +140 °F) /Less than 95% RH * Start up should be done at above –40 °C (–40 °F)
Storage Conditions	–40 °C to +60 °C (–40 °F to +140 °F) /Less than 95% RH
Ingress Protection & Vandal Resistance	IP67

Construction

Casing	Metal throughout the whole casing
Dimensions	70.1 mm × 70.1 mm × 157.6 mm (2.76" × 2.76" × 6.21")
Net Weight	0.24 kg (0.53 lb)
Gross Weight	0.34 kg (0.75 lb)

Ordering Information

Type	Part Number	Description
5 MP Camera	DH-HAC-B2A51P-A 2.8 mm	5 MP HDCVI Fixed IR Bullet Camera, PAL
	DH-HAC-B2A51P-A 3.6 mm	
	DH-HAC-B2A51N-A 2.8 mm	5 MP HDCVI Fixed IR Bullet Camera, NTSC
	DH-HAC-B2A51N-A 3.6 mm	
Accessories	PFA134	Junction Box
	PFA152-E	Water-proof Junction Box+Pole Mount Bracket
	PFM800-4K	Passive Video Balun
	PFM321	12V 1A Power Adapter
	PFM904	Integrated Mount Tester

Ceiling Mount	Wall Mount	Pole Mount

Dimensions (mm[inch])

157.6 [6.21]
82.3 [3.24]
70.1 [2.76]
59.1 [2.33]
59.8 [2.35]
70.0 [2.76]

⌀70.1 [⌀2.76]
3-⌀4.5 [⌀0.18]
⌀56.0 [⌀2.2]

Accessories

Optional:

PFA134
Junction Box

PFA152-E
Pole Mount Bracket

PFM800-4K
Passive Video Balun

PFM321
12V 1A Power Adapter

PFM904
Integrated Mount Tester