

5MP HDCVI Fixed Eyeball Camera

IR Camera with 16:9 Aspect Ratio



- 1/2.7-in. 5MP Progressive-scan CMOS Sensor
- 5MP (2880 x 1620) at 25 fps Maximum Resolution
- 16:9 Aspect Ratio for no Image Stretching
- 2.8 mm Fixed Lens
- HDCVI, AHD, TVI, or CVBS Output, Switchable
- Maximum IR Length 30 m (98.43 ft), Smart IR
- ArcticPro Series Camera - Operational down to -40°C (-40°F)
- IP67 Ingress Protection
- Five-year Warranty*



System Overview

Experience the superior clarity of Dahua's 5MP HDCVI cameras for vast coverage and superior image details. The 5MP HDCVI series leverages existing coax infrastructures to deliver forensic-level images seamlessly and over long distances. The HDCVI camera offers multiple output formats that are easily switchable and a 16:9 aspect ratio. With a 16:9 format, images maintain a true, undistorted view without stretching, a feature not found on many 5MP HD over coax cameras. The camera is suitable for most applications, offering IR illumination for difficult lighting conditions, input voltage tolerance for inconsistent power supplies, and IP67 certification for operation in harsh outdoor environmental conditions.

Functions

Long Distance Transmission

HDCVI technology guarantees real-time transmission over long distances without loss of video quality. HDCVI cameras provide the same resolution as most IP network camera systems using existing RG-59, RG-6, or CAT 6 UTP cabling.

Simplicity

HDCVI technology seamlessly integrates traditional analog security systems with upgraded, high-quality HD video, making it the best choice to protect security investments. The plug and play approach enables full HD video security without the hassles of configuring a network.

Multiple-format Support

The camera supports multiple video formats including, HDCVI, CVBS, AHD, and TVI. The camera can switch between these four formats via the OSD menu or the switch located on the video output cable, making the camera compatible with not only HDCVI DVRs but also most existing HD/SD DVRs.

ArcticPro

The Dahua ArcticPro Series of extreme-environment cameras combine temperature-tolerant components with a waterproof enclosure to ensure flawless operation in temperatures as low as -40°C (-40°F) without the need for an internal heater. The lack of a heater reduces the camera's power consumption and saves operating costs. For applications that demand high-resolution video with advanced features in extremely cold environments, the Dahua ArcticPro Series offers a camera to satisfy the most demanding requirements.

Smart IR

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of the camera's infrared LEDs to compensate for the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high-performance in extreme low-light environments.

Protection

The camera is subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating making it suitable for demanding outdoor applications. The camera allows for $\pm 30\%$ input voltage tolerance, suitable for the most unstable conditions for outdoor applications, and its 4KV lightning rating provides effective protection for both the camera and its structure against lightning.

Technical Specification

Camera

Image Sensor	1/2.7-in. CMOS Sensor
Effective Pixels	2880 (H) x 1620 (V), 5MP
Aspect Ratio ¹	16:9
Scanning System	Progressive
Electronic Shutter Speed	1/30 s to 1/100,000 s
Minimum Illumination	Color: 0.01 lux at F1.6, 30 IRE 0 lux with IR on
S/N Ratio	More than 65 dB
IR Distance	Up to 30.0 m (98.43 ft)
IR On/Off Control	Auto, Manual
IR LEDs	One (1)

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm
Maximum Aperture	F1.6
Angle of View	Horizontal: 111° Vertical: 58° Diagonal: 132°
Close Focus Distance	900.0 mm (35.43 in.)

Installation Angle

Range	Pan: 0° to 360° Tilt: 0° to 78° Rotation: 0° to 360°
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DORI Distances²

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
63.60 m (208.70 ft)	25.40 m (83.30 ft)	12.701 m (41.70 ft)	6.40 m (21.0 ft)

Video

Resolution	5MP (2880 x 1620), 4MP (2560 x 1440), 1080p (1920 x 1080), 960H (960 x 480)	
Maximum Frame Rate	HDCVI	5MP at 25 fps, 4MP at 30 fps, 1080p at 30 fps
	AHD	4MP at 30 fps
	TVI	4MP at 30 fps
	CVBS	960H
Video Output	One (1) BNC Output, HDCVI, AHD, TVI, CVBS switchable	
Video Transmission ³	RG-59/U Coax	720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 5MP: 500 m (1640.42 ft)
	RG-6/U Coax	720p: 1200 m (3937.01 ft) 1080p: 800 m (2624.67 ft) 5MP: 700 m (2296.59 ft)
	CAT 6 UTP (balun required)	720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 5MP: 300 m (984.25 ft)
Day/Night	Auto (ICR)	
OSD Menu	Multi-language	
BLC Mode	BLC, HLC, DWDR	
WDR	Digital WDR	
Gain Control	Auto, Manual	
Noise Reduction	2D NR	
White Balance	Auto, Manual	
Smart IR	Auto, Manual	

Certifications

Safety	UL60950-1 CAN/CSA C22.2 No.60950-1
Electromagnetic Compatibility (EMC)	FCC CFR 47 Part 15 subpart B, ANSI C63.4-2014, EN55032:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN55024:2010+A1:2015, EN 55035:2017, EN50130-4:2011+A1:2014, EN 62368-1:2014+A11:2017

Electrical

Power Supply	12 VDC ± 30%
Power Consumption	Maximum 3.2 W (12 VDC, IR on)

Environmental

Operating Conditions	-40° C to +60° C (-40° F to +140° F) Less than 95% RH
Storage Conditions	-40° C to +60° C (-40° F to +140° F) Less than 95% RH
Ingress Protection	IP67

Construction

Casing	Metal
Dimensions	ø94.0 mm x 85.60 mm (ø3.70 in. x 3.37 in.)
Net Weight	0.31 kg (0.68 lb)
Gross Weight	0.44 kg (0.97 lb)

1. To view the 16:9 video output on a Dahua HDCVI DVR you must update the DVR to the latest firmware. Obtain the latest firmware on the Dahua Wiki at <https://dahuawiki.com/Recorders>.

2. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4, the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

3. Transmission distance results verified by real-scene testing in Dahua's test laboratory. Actual transmission distances may vary due to external influences, cable quality, and wiring structures.

Ordering Information

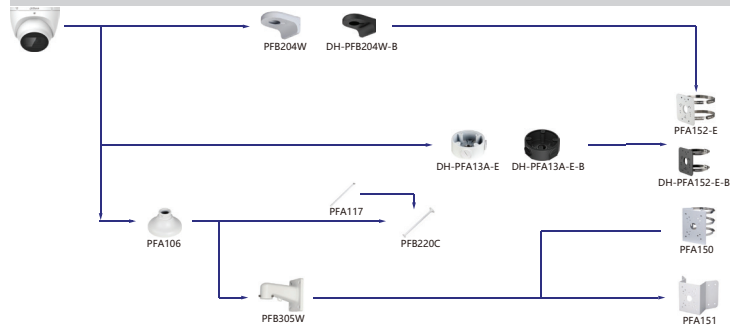
Type	Part Number	Description
SMP HDCVI Camera	A51BJ02	SMP HDCVI IR 2.8 mm Fixed Lens Eyeball Camera, 16:9 Aspect Ratio
Accessories, optional	PFA106	Mount Adapter (For use with PFB305W wall mount)
	DH-PFA13A-E	Junction Box (For use alone or with PFA152-E pole mount)
	PFA150	Pole Mount (For use with PFA106 and PFB305W)
	PFA151	Corner Mount (For use with PFA106 and PFB305W)
	PFA152-E	Pole Mount (For use with PFA13A-E or PFB204W)
	PFA200G	Gang Box Adapter
	PFB204W	Wall Mount
	PFB220C	Ceiling Mont (For use with PFA106)
	PFB305W	Wall Mount (For use with PFA106)
	DH-PFM321D-US	12 VDC, 1 A Power Adapter
	DH-PFM800-4K	4K Passive HDCVI Balun

Accessories

Optional:



Mounting Diagram



Dimensions (mm/in.)

