

5MP HDCVI Fixed Bullet Camera

Starlight IR Camera with 16:9 Aspect Ratio

HDCVI



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

Three Signals over One Coaxial Cable

HDCVI technology simultaneously transmits video, audio, and data over a single coaxial cable. Dual-way data transmission allows the HDCVI camera to communicate with an HDCVI DVR to send control signals or to trigger alarms.

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers captures details in low-light applications. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

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.

- 1/2.7-in. 5MP Progressive-scan CMOS Sensor
- 5 MP (2880 x 1620) at 25 fps Maximum Resolution
- 2.8 mm Fixed Lens
- 16:9 Aspect Ratio for no Image Stretching
- Starlight Technology for Low-light Applications
- True Wide Dynamic Range (120 dB) and 3D Noise Reduction
- Built-in Microphone
- HDCVI, AHD, TVI, or CVBS Output, Switchable
- Maximum IR Length 40 m (131.23 ft), Smart IR
- ArcticPro Series Camera - Operational down to -40° C (-40° F)
- IP67 Ingress Protection
- Five-year Warranty*



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.

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.

True Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

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 ±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 Ratio¹	16:9
Scanning System	Progressive
Electronic Shutter Speed	1/4 s to 1/100,000 s
Minimum Illumination	Color: 0.001 lux at F1.6, 30 IRE 0 lux with IR on
S/N Ratio	More than 65 dB
IR Distance	Up to 40.0 m (131.23 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Two (2)

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°
Iris Type	Fixed
Close Focus Distance	900 mm (35.43 in.)

Installation Angle	
Range	Pan: 0° to 360° Tilt: 0° to 90° Rotation: 0° to 360°

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)	12.70 m (41.70 ft)	6.40 m (21.0 ft)

Video		
Resolution Output		5MP (2880 x 1620), 4MP (2560 x 1440), 1080p (1920 x 1080), 720p (1280 x 720), 960H (960 x 480), D1 (704 x 480), CIF (352 x 240)
Maximum Frame Rate	HDCVI	5MP at 25 fps, 4MP 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

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.

Video Transmission³	RG-59/U Coax	720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 5 MP: 500 m (1640.42 ft)
	RG-6/U Coax	720p: 1200 m (3937.01 ft) 1080p: 800 m (2624.67 ft) 5 MP: 700 m (2296.59 ft)
	CAT 6 UTP (balun required)	720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 5 MP: 300 m (984.25 ft)
Day/Night		Auto (ICR)
OSD Menu		Multi-language
BLC Mode		BLC, HLC, HLC-Pro, True WDR
WDR		120 dB
Gain Control		Auto, Manual
Noise Reduction		2D/3D NR
White Balance		Auto, Manual
Advanced Features		Smart IR Mirror
Privacy Masking		Off, On (8 Areas, rectangular)

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

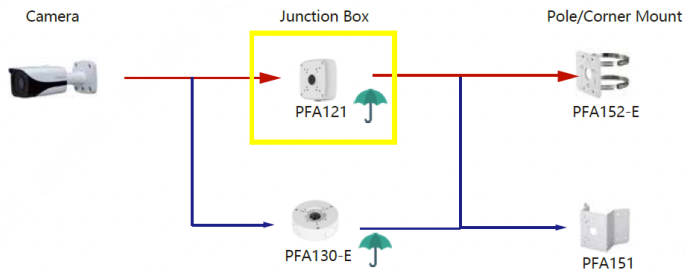
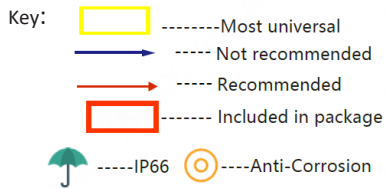
Interface	
Audio	One (1) Built-in Microphone

Electrical	
Power Supply	12 VDC ± 30%
Power Consumption	Maximum 5.9 W (12 VDC, IR on)

Environmental	
Operating Conditions	−40° C to +60° C (−40° F to +140° F) Less than 95% RH, non condensing
Storage Conditions	−40° C to +60° C (−40° F to +140° F) Less than 95% RH, non condensing
Ingress Protection	IP67

Construction	
Casing	Metal and Plastic
Dimensions	179.90 mm x 70.0 mm x 70.0 mm (7.08 in. x 2.75 in. x 2.75 in.)
Net Weight	0.42 kg (0.93 lb)
Gross Weight	0.56 kg (1.23 lb)

Mounting Diagram



For all possible accessory combinations for this camera, please scan or click the QR code below to go to our accessory selector.



Dimensions (mm/in.)

