5MP Enhanced Starlight HDCVI Eyeball Camera (Vari-focal)

IR Camera with True WDR and 2D/3D Noise Reduction

- 1/2.8-in. 5 MP Progressive-scan STARVIS™ CMOS Sensor
- 5 MP (2592 x 1944) at 20 fps Maximum Resolution
- 2.7 mm to 13.5 mm Motorized Vari-focal Lens
- Starlight Technology for Low-light Applications
- True Wide Dynamic Range (120 dB) and 2D/3D Noise Reduction
- Built-in Microphone
- HD or SD Output, Switchable
- Maximum IR Length 60 m (196 ft), Smart IR
- IP67 Ingress Protection
- Dual Power Input, 24 VAC or 12 VDC
- Five-year Warranty*

System Overview

Experience the superior clarity of Dahua's 5 MP HDCVI cameras for vast coverage and superior image details. The 5 MP HDCVI series leverages existing coax infrastructures to deliver forensic-level images seamlessly and over long distances. The camera uses a STARVIS™ sensor and next-generation ISP chip technology developed by Dahua to deliver stunning video. This home-grown ISP features the latest image processing algorithms and is optimized for security camera operations. With total control of the ISP features and production, Dahua can offer the latest security systems at a cost-effective price.

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 HCVR to send control signals or to trigger alarms.

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing 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.

Broadcast-quality Audio

Audio information is used as supplementary evidence in video security applications. This HDCVI camera transmits audio signals over the coaxial cable, eliminating the need for separate audio wiring. In addition, the camera uses unique audio processing and transmission technology that eliminates noise to best duplicate source audio, guaranteeing high-quality and highly effective audio information.

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.

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.

Advanced 3DNR

3DNR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. Dahua's advanced 3DNR technology delivers remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. 3DNR, in addition, effectively decreases the bandwidth and saves storage space.

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.

*Warranty applies to products sold through an authorized Dahua Dealer.

Technical Specification

Camera

Image Sensor	1/2.8-in. STARVIS™ CMOS Sensor
Effective Pixels	2592 (H) x 1944 (V), 5 MP
Scanning System	Progressive
Electronic Shutter Speed	1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.005 lux at F1.3, 30 IRE 0 lux with IR on
S/N Ratio	More than 65 dB
IR Distance	Up to 60.0 m (196.85 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Two (2)

Lens

Lens Type	Motorized Lens, Fixed Iris
Mount Type	Board-in
Focal Length	2.7 mm to 13.5 mm
Maximum Aperture	F1.3
Angle of View	Horizontal: 102° to 29°
Focus Control	Auto, Manual
Close Focus Distance	200 mm (7.87 in.)

Installation Angle

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

DORI Distances[1]

	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
Wide	64 m (210 ft)	26 m (85 ft)	13 m (43 ft)	6 m (20 ft)
Tele	222 m (728 ft)	89 m (292 ft)	44 m (144 ft)	22 m (72 ft)

Video

Maximum Resolution	5 MP (2592 x 1944)
Frame Rate	5 MP at 20 fps, 4 MP at 30 fps, 1080p at 30 fps
Video Output	One (1) BNC HDCVI High-definition Channel or, One (1) BNC CVBS Channel, switchable

Video Transmission[2]	RG-59/U Coax	720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft)
	RG-6/U Coax	720p: 1200 m (3937.01 ft) 1080p: 800 m (2624.67 ft) 4 MP: 700 m (2296.59 ft)
	CAT 6 UTP (balun required)	720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft)
Day/Night		Auto (ICR), Manual
OSD Menu		Multi-language
BLC Mode		BLC, HLC, True WDR
WDR		120 dB
Gain Control		AGC
Noise Reduction		2D, 3D
White Balance		Auto, Manual
Smart IR		Auto, Manual

Certifications

CE	EN55032 EN55024 EN50130-4
Safety	UL60950-1 CAN/CSA C22.2 No.60950-1
Electromagnetic Compatibility (EMC)	FCC CFR 47 Part 15 subpart B, ANSI C63.4-2014

Interface

Audio[3]	Input: One (1) Channel, RCA Jack plus One (1) Built-in Microphone

Electrical

Power Supply	24 VAC ± 30% or 12 VDC ± 30%
Power Output	12 VDC, 2 W Maximum
Power Consumption	Maximum 14.1 W (12 VDC, IR on)

Environmental

Operating Conditions	–30° C to +60° C (–22° F to +140° F) Less than 90% RH *Initiate start up above –30° C (–22° F)
Storage Conditions	–30° C to +60° C (–22° F to +140° F) Less than 90% RH
Ingress Protection	IP67

Construction

Casing	Aluminium
Dimensions	ø122.0 mm x 104.0 mm (ø4.80 in. x 4..09 in.)
Net Weight	0.64 kg (1.41 lb)
Gross Weight	0.84 kg (1.85 lb)

1. 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.
2. 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.
3. The default audio input is via the built-in microphone; users must access the Advanced menu to switch the audio input to the cable option. The camera accepts audio from only one input source.

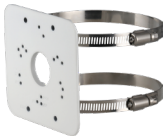
Ordering Information

Type	Part Number	Description
5 MP HDCVI Camera	A52AJ6Z	5 MP Starlight HDCVI IR 2.7 mm to 13.5 mm Vari-focal Eyeball Camera, True WDR
Accessories, optional	PFA130-E	Waterproof Junction Box
	PFA152-E	Pole Mount (Use alone or with PFB203W Wall Mount)
	PFB203W	Wall Mount (Use alone or with PFA152-E Pole Mount)
	DH-PFM320D-015	12 VDC, 2 A Power Adapter
	DH-PFM321D-US	12 VDC, 1 A Power Adapter
	DH-PFM800-4K	4K Passive HDCVI Balun
Audio Accessories, optional	HAP100	Pinhole Pickup
	HAP200	High-fidelity Pickup

Accessories

Optional:

PFA130-E
Waterproof
Junction Box



PFA152-E
Pole Mount

PFB203W
Waterproof
Wall Mount

DH-PFM320D-015
12 VDC, 2 A
Power Adapter

DH-PFM321D-US
12 VDC, 1 A
Power Adapter

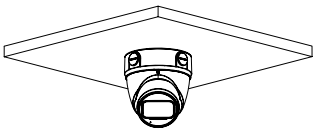
DH-PFM800-4K
4K Passive HDCVI
Balun

HAP100
Pinhole Pickup

HAP200
High-fidelity Pickup

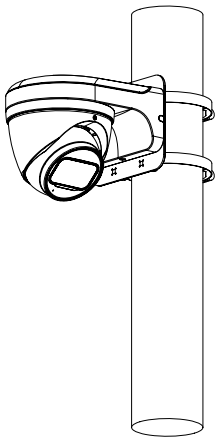
Junction Mount

PFA130-E



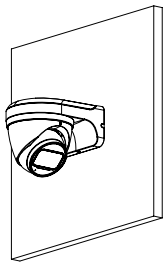
Pole Mount

PFB203W + PFA152-E

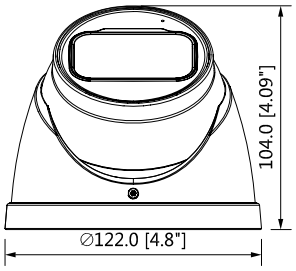


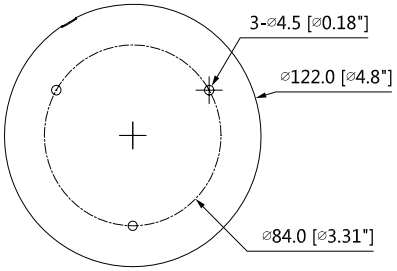
Wall Mount

PFB203W



Dimensions (mm/in.)





© 2018 Dahua. All rights reserved. Design and specifications are subject to change without notice.