

# 2MP Night Color 2.0 HDCVI Eyeball Camera

Fixed-lens True Wide Dynamic Range



## System Overview

Experience the superior clarity of Dahua's 2 MP HDCVI camera for vast coverage and superior image details. The 2 MP HDCVI series leverages existing coax infrastructures to deliver forensic-level images seamlessly and over long distances. The camera offers a 2.8 mm fixed lens, a multi-language On-screen Display, and HD/SD switchable output. The camera is ideal for hosting diverse applications — Night Color and True Wide Dynamic Range allow the camera to operate in any lighting condition and the IP67 rating makes the camera suitable for the harshest environments.

## Functions

### Night Color Technology

Dahua cameras with Night Color Technology incorporate a high-performance sensor and a large aperture lens to produce crisp, clear color images in low light environments. This light-sensitive technology allows the camera to capture more available light and reproduce color images with superior detail and contrast. The Night Color camera incorporates white-light LEDs to offer full-color images in total darkness, as well as an effective visual deterrent. This technology provides smart illumination where the camera automatically activates the white-light illuminators when ambient light levels fall and adjusts exposure time and LED intensity to prevent overexposing the image.

### 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.

### Super Adapt

Super Adapt technology monitors external lighting conditions and automatically adjusts the camera settings to provide optimal video images, whether indoors or outdoors. Plus, with this technology installers no longer have to take time to set the optical parameters manually, the camera automatically adjusts to the optimal settings, saving time and money.

- 1/2.8 in. Progressive-scan 2 MP CMOS Sensor
- 2 MP (1920 x 1080) at 30 fps Maximum Resolution
- 2.8 mm Fixed Lens
- Night Color Technology with White-light LEDs for Color Images in Total Darkness
- True Wide Dynamic Range (120 dB) and 3D Noise Reduction
- ArcticPro Series Camera — Operational down to -40° C (-40° F)
- Supports Multiple Video Formats: HDCVI, CVBS, AHD and TVI
- Built-in Microphone
- IP67 Ingress Protection
- Five-year Warranty\*



## Broadcast-quality Audio

Audio information is used as supplementary evidence in video surveillance 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.

## Simplicity

HDCVI technology seamlessly integrates traditional analog surveillance 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 surveillance 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 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.

## 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.

## Technical Specification

## Camera

Image Sensor	1/2.8-in. CMOS Sensor
Effective Pixels	1920 (H) x 1080 (V), 2 MP
Scanning System	Progressive
Electronic Shutter Speed	1/4 s to 1/100,000 s
Minimum Illumination	Color: 0.0002 lux at F1.0
S/N Ratio	More than 65 dB
Illuminator Type	White-light
Illuminator Distance	40.0 m (131.23 ft)
Illuminator Control	Auto, Manual
Illuminator LED	Two (2)

Lens

Lens Type	Fixed Lens
Mount Type	M12
Focal Length	2.8 mm
Maximum Aperture	F1.0
Angle of View	Horizontal: 106° Vertical: 55° Diagonal: 125°
Iris Type	Fixed
Close Focus Distance	1000.0 mm (3.30 ft)

## Installation Angle

Range	Pan: 0° to 360° Tilt: 0° to 78° Rotation: 0° to 360°
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## DORI Distances<sup>1</sup>

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
45.50 m (149.30 ft)	18.20 m (59.70 ft)	9.10 m (29.90 ft)	4.60 m (15.10 ft)

## Video

Resolution	1080p (1920 x 1080), 960H (960 x 480)	
Frame Rate	1080p at 30 fps	
Video Output	One (1) BNC, Transmits HDCVI High-definition signal or CVBS, AHD or TVI Channel, switchable	
Video Transmission <sup>2</sup>	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 (f required)	720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft)
Day/Night		Color
OSD Menu		Multi-language
BLC Mode		BLC, HLC, HLC-Pro, True WDR
WDR		120 dB
Noise Reduction		3D NR
White Balance		Auto, Manual
Gain Control		Auto, Manual
Mirror		On, Off
Privacy Masking		On, Off (8 areas, rectangular)

## Interface

Audio	One (1) Built-in Microphone
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## Electrical

Power Supply	12 VDC $\pm$ 30%
Power Consumption	Maximum 5.8 W (12 VDC with Illuminator 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

## Certifications

CE	EN55032, EN55024, EN50130-4, EN62368-1
Safety	UL 62368-1 CSA C22.2 NO. 62368-1-14
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 subpart B, ANSI C63.4-2014

## Construction

Casing	Metal
Dimensions	ø106.0 mm x 93.60 mm (ø4.17 in. x 3.69 in.)
Net Weight	0.48 kg (1.06 lb)
Gross Weight	0.63 kg (1.39 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.

## Ordering Information

Type	Part Number	Description
2 MP HDCVI Camera	A22CJN2	2 MP Night Color HDCVI 2.8 mm Fixed Lens Eyeball Camera
Accessories, optional	PFA106	Mount Adapter
	PFA117	Extension Pole for PFB220C
	PFA130-E	Waterproof Junction Box
	PFA139	Junction Box
	PFA152-E	Pole Mount (use with PFA130-E, PFA139, or PFB204W)
	PFB204W	Wall Mount (use alone or with PFA152-E pole mount)
	PFB220C	Pole Mount (use with PFA106 mount adapter)
	DH-PFM321D-US	12 VDC, 1 A Power Adapter
	PFM800-E	Passive HDCVI Balun

## Accessories

Optional:



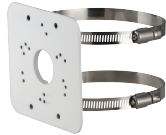
PFA106  
Mount Adapter



PFA130-E  
Waterproof  
Junction Box



PFA139  
Junction Box



PFA152-E  
Pole Mount



PFB204W  
Wall Mount



PFB220C  
Ceiling Mount



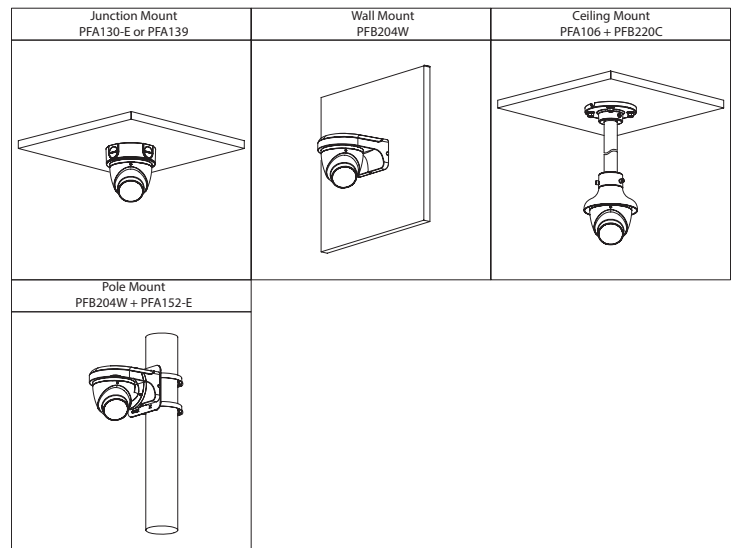
PFA117  
Extension Pole  
for PFB220C



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



PFM800-E  
Passive HDCVI Balun



## Dimensions (mm/in.)

