

2MP HDCVI Vari-focal Dome Camera

Starlight Technology and 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 motorized zoom lens, a multi-language On-screen Display, and HD/SD switchable output. The camera is ideal for hosting diverse applications — Starlight Technology 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

Starlight Technology

For challenging low-light applications, Dahua's Starlight 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.

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.

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 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.

- 1/2.8-in. 2 MP Progressive-scan CMOS Sensor
- 2 MP (1920 x 1080) at 30 fps Maximum Resolution
- 2.7 mm to 13.5 mm Motorized Lens
- Starlight Technology for Low-light Applications
- True Wide Dynamic Range (120 dB) and 2D/3D Noise Reduction
- Supports Multiple Video Formats: HDCVI, CVBS, AHD and TVI
- HD or SD Output, Switchable
- Maximum IR Length 30 m (98 ft), Smart IR
- IP67 Ingress Protection and IK10 Vandal Resistance
- 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.

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.

Protection

The camera complies with an IK10 impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.). Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes 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** 1/2.8-in. CMOS Sensor **Effective Pixels** 1920 (H) x 1080 (V), 2 MP Scanning System Progressive **Electronic Shutter Speed** 1/3 s to 1/100,000 s Color: 0.004 lux at F1.6, 30 IRE Minimum Illumination 0 lux at F1.6 with IR On S/N Ratio More than 65 dB IR Distance Up to 30.0 m (98.43 ft) IR Control Auto, Manual IR LEDs Two (2) Lens Motorized Lens, Fixed Iris Lens Type Mount Type Board-in 2.7 mm to 13.5 mm Focal Length Maximum Aperture F1.6 Horizontal: 108.7° to 28.7° Angle of View Close Focus Distance 200.0 mm (7.87 in.) Installation Angle Pan: 0° to 355° Tilt: 0° to 75° Range Rotation: 0° to 355° DORI Distances¹ Detect Observe Recognize Identify (8 ppf) (19 ppf) (38 ppf) (76 ppf) 44 m 18 m 9 m 5 m Wide (144 ft) (59 ft) (30 ft) (16 ft) 153 m 61 m 31 m 15 m Tele (502 ft) (200 ft) (102 ft) (49 ft)

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Maximum Resolution 1080p (1920 x 10		080)	
Frame Rate	1080p at 30 fps o	or 720p at 60 fps	
Video Output	One (1) BNC, Transmits HDCVI High-definition signal or CVBS AHD or TVI Channel, switchable		
Video Transmission ²	RG-59/U Coax	720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft)	
	RG-6/U Coax	720p: 1200 m (3937.01 ft) 1080p: 800 m (2624.67 ft)	
	CAT 6 UTP (balun required)	720p: 450 m (1476.38 ft) 1080p: 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

Electrical	
Power Supply	24 VAC ± 30% or 12 VDC ± 30%
Power Consumption	Maximum 5.9 W (12 VDC, IR On)

Input: One (1) Channel, RCA Jack

Environmental

Operating Conditions	-40° C to +60° C (-40° F to +140° F) Less than 90% RH *Initiate start up above -40° C (-40° F)
Storage Conditions	-40° C to +60° C (-40° F to +140° F) Less than 90% RH
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Aluminium
Dimensions	ø122.0 mm x 88.90 mm (ø4.80 in. x 3.50 in.)
Net Weight	0.43 kg (0.95 lb)
Gross Weight	0.53 kg (1.17 lb)

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.

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			
Туре	Part Number	Description	
2 MP Camera	A22CMAZ	2 MP Starlight 2.7 mm to 13.5 mm Vari- focal Lens Dome Camera, True WDR	
	PFA106	Mount Adapter (For use with PFB305W or PFB220C)	
	PFA137	Junction Box (For use alone)	
	PFA151	Corner Mount (For use with PFA106 and PFB305W)	
	PFA152-E	Pole Mount (For use with PFB203W wall mount)	
	PFB200C	In-ceiling Mount	
Accessories,	PFA200W	Sun/Rain Shield	
optional	PFB220C	Ceiling Mount (For use with PFA106 mount adapter)	
	PFB203W	Wall Mount (For use alone or with PFA152-E pole mount)	
	PFB305W	Wall Mount (For use with PFA106 mount adapter)	
	PFM800-E	Passive HDCVI Balun	
	DH-PFM321D-US	12 VDC, 1 A Power Adapter	
	DH-PFM320D-US	12 VDC, 2 A Power Adapter	
Audio Accessories,	HAP100	Pinhole Pickup	
optional	HAP200	High-fidelity Pickup	

Wall Mount Pole Mount PFB203W PFB203W + PFA152-E Ceiling Mount (Extensible) Wall Mount with Rain Shade PFA137+PFA200W PFA106+PFB220C Pole Mount with Rain Shade PFA137+PFA200W+PFA152-E Dimensions (mm/in.)

Accessories

Optional:



PFA106 Mount Adapter



PFA137 Junction Box



PFA151 Corner Mount



PFA152-E Pole Mount

PFB305W

Wall Mount



PFB200C



PFB203W



PFB220C Ceiling Mount



DH-PFM321D-US Power Adapter



PFM800-E Passive HDCVI Balun



HAP100 Pinhole Pickup

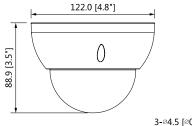
Rev 001.002



DH-PFM320D-US

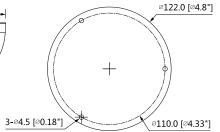
Power Adapter

HAP200 High-fidelity Pickup



Junction Mount

PFA137



In-ceiling Mount

PFB200C

