

4 MP HDCVI Dome Camera

4 MP WDR HDCVI IR Vari-focal Dome Camera

HDCVI



System Overview

Experience the superior clarity of real-time 4 MP video while leveraging your existing coaxial infrastructure. The camera features 120 dB True WDR for applications under complex dynamic range and presents high quality images with clear details and accurate color rendition. The camera offers a multi-language on-screen display and HD and SD dual-output. The outstanding performance and easy installation make the camera an ideal choice for mid- to large-size businesses and for projects where highly reliable surveillance and construction flexibility are valued.

Functions

Three Signals over One Coaxial Cable

HDCVI technology simultaneously transmits video, power, 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. HDCVI along with PoC technology delivers power¹ to devices at the edge, simplifying installation.

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.

Multi-outputs

The camera supports HDCVI and CVBS signal outputs simultaneously with two BNC connectors. These output signals allow the camera to integrate with various devices, including analog matrix systems and monitors.

- 1/3-in Progressive-scan CMOS Sensor
- Maximum 4 MP Resolution in Real-time
- 2.7 mm to 13.5 mm Motorized Lens
- True Wide Dynamic Range (120 dB) and 3DNR
- HD and SD Dual-output
- Maximum IR length 30 m (98 ft), Smart IR
- IP67 Ingress Protection, IK10 Vandalism Protection
- 24 VAC / 12 VDC Power Supply













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 camera's infrared LEDs to compensate 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 up to 30 m (98 ft).

Wide Dynamic Range

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.

Large Aperture Lens

The camera uses a high-end F1.3 large-aperture lens, allowing more absorbed light into the camera for impressive low-light performance.

Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67, making it suitable for indoor or outdoor environments.

With a working temperature range of -30 °C to +60 °C (-22 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting $\pm 25\%$ input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

^{1.} Requires PoC Transceivers for each channel and an external power supply for each transceiver.

Image Sensor	Technical Specification	•		
Effective Pixels	Camera			
Progressive Progressive Electronic Shutter Speed 1/3 s to 1/100,000 s 1/3 s to 1/3 s to 1/100,000 s 1/3 s to 1/3 s to 1/100,000 s 1/3 s to 1		· ·		
Electronic Shutter Speed 1/3 s to 1/100,000 s Minimum Illumination 0.01 Lux at F1.3 0 Lux with IR on S/N Ratio More than 65 dB IR Distance Up to 30 m (98 ft) IR On/Off Control Auto, Manual IR LEDS Two (2) Lens Lens Lens Type Motorized Lens / Fixed Iris Mount Type Board-In Focal Length 2.7 mm to 1.3.5 mm Max Aperture F1.3 Angle of View Horizontal: 26* to 98* Focus Control Auto, Manual Close Focus Distance 200 mm (7.87 in.) Pan: 0* to 355* Tilt: 0* to 75* Rotation: 0* to 355* Video Resolution 4 MP (2560 x 1440) 4 MP at 25 fps 1080 p at 30 fps 720 p at 30 fps 1080 p 550 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 700 m (2296.59 ft) CAT 6 UTP (balun required) Day/Night Auto (ICR), Manual OSD Menu Multi-language BLC Mode BLC, HLC, WDR WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	Effective Pixels	2688(H) x 1520(V),	4.1 MP	
Minimum Illumination O.01 Lux at F1.3 O Lux with IR on S/N Ratio More than 65 dB IR Distance Up to 30 m (98 ft) IR On/Off Control Auto, Manual IR LEDS Two (2) Lens Lens Lens Lens Type Motorized Lens / Fixed Iris Mount Type Board-in Focal Length 2.7 mm to 1.3.5 mm Max Aperture F1.3 Angle of View Horizontal: 26* to 98* Focus Control Auto, Manual Close Focus Distance 200 mm (7.87 in.) Pan / Tilt / Rotation Range Tilt: 0" to 75" Rotation: 0" to 355* Video Resolution 4 MP (2560 x 1440) 4 MP at 25 fps 1080p at 30 fps 720p at 30 fps 720p at 30 fps 720p at 30 fps 720p at 30 fps Con (1640.42 ft) 1080p: 500 m (1640.42 ft) 1080p: 500 m (1640.42 ft) 1080p: 300 m (2624.67 ft) 1080p: 300 m (3624.67 ft) 10				
Minimum Humination O Lux with IR on	Electronic Shutter Speed		S	
R Distance	Minimum Illumination			
R COn/Off Control Auto, Manual Two (2)	S/N Ratio	More than 65 dB	More than 65 dB	
Residution Amp Continued	IR Distance	Up to 30 m (98 ft)	Up to 30 m (98 ft)	
Lens Type	IR On/Off Control	Auto, Manual	Auto, Manual	
Mount Type	IR LEDs	Two (2)		
Mount Type Board-in Focal Length 2.7 mm to 1.3.5 mm Max Aperture F1.3 Angle of View Horizontal: 26° to 98° Focus Control Auto, Manual Close Focus Distance 200 mm (7.87 in.) Pan: 0° to 355° Tilt: 0° to 75° Range Pan: 0° to 355° Video Video Resolution 4 MP (2560 x 1440) Frame Rate 1080p at 30 fps Video Output One (1) BNC HDCVI High-definition Channel and, One (1) BNC CVBS Channel RG-59/U Coax 720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 1080p: 800 m (2624.67 ft) 1080p: 800 m (2624.67 ft) 1080p: 800 m (2624.67 ft) 4 MP: 700 m (2296.59 ft) Video Transmission² RG-6/U Coax 720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft) Day/Night Auto (ICR), Manual Day/Night Auto (ICR), Manual WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	Lens			
Focal Length 2.7 mm to 1.3.5 mm Max Aperture F1.3 Angle of View Horizontal: 26° to 98° Focus Control Auto, Manual Close Focus Distance 200 mm (7.87 in.) Pan / Tilt / Rotation Range Pan: 0° to 355° Tilt: 0° to 75° Rotation: 0° to 355° Video Resolution 4 MP (2560 x 1440) Frame Rate 1800 pa t 30 fps 720p at 30 fps	Lens Type	Motorized Lens / Fi	xed Iris	
Max Aperture	Mount Type	Board-in		
Angle of View	Focal Length	2.7 mm to 1.3.5 mr	n	
Focus Control Close Focus Distance 200 mm (7.87 in.) Pan / Tilt / Rotation Range Pan: 0° to 355° Tilt: 0° to 75° Rotation: 0° to 355° Video Resolution 4 MP (2560 x 1440) 4 MP at 25 fps 1080p at 30 fps 720p at 30 fps Video Output One (1) BNC CVBS Channel RG-59/U Coax RG-59/U Coax RG-6/U Co	Max Aperture	F1.3		
Pan / Tilt / Rotation	Angle of View	Horizontal: 26° to 9	8°	
Pan / Tilt / Rotation Range Pan: 0° to 355° Tilt: 0° to 75° Rotation: 0° to 355° Video Resolution 4 MP (2560 x 1440) Frame Rate 1080p at 30 fps 720p at 30 fps Video Output One (1) BNC HDCVI High-definition Channel and, One (1) BNC CVBS Channel RG-59/U Coax 720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 1080p: 800 m (2624.67 ft) 1080p: 800 m (984.25 ft) 1080p: 300 m (984.25 ft) 1080p:	Focus Control	Auto, Manual		
Pan: 0° to 355° Tilt: 0° to 75° Rotation: 0° to 75° Rotation: 0° to 355°	Close Focus Distance	200 mm (7.87 in.)	200 mm (7.87 in.)	
Tilt: 0° to 75° Rotation: 0° to 355° Video	Pan / Tilt / Rotation			
Resolution 4 MP (2560 x 1440) 4 MP at 25 fps 1080p at 30 fps 720p at 30 fps Video Output One (1) BNC High-definition Channel and, One (1) BNC CVBS Channel Video Transmission² RG-59/U Coax 720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 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) 4 MP: 300 m (984.25 ft) Day/Night Auto (ICR), Manual OSD Menu Multi-language BLC Mode BLC, HLC, WDR WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	Range	Tilt: 0° to 75°	Tilt: 0° to 75°	
Frame Rate 4 MP at 25 fps 1080p at 30 fps 720p at 30 fps 720p at 30 fps 720p at 30 fps 720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 500 m (2624.67 ft) 1080p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (2624.67 ft) 4 MP: 500 m (2624.67 ft) 4 MP: 500 m (2624.67 ft) 4 MP: 700 m (2926.59 ft) CAT 6 UTP (balun required) CAT 6 UTP (balun required) Day/Night Auto (ICR), Manual OSD Menu Multi-language BLC Mode BLC, HLC, WDR WDR 120 dB Gain Control AGC Noise Reduction Auto, Manual White Balance Auto, Manual	Video			
Frame Rate 1080p at 30 fps 720p at 30 fps 720p at 30 fps Video Output One (1) BNC HDCVI High-definition Channel and, One (1) BNC CVBS Channel RG-59/U Coax 720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 1080p: 800 m (2624.67 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) 4 MP: 300 m (984.25 ft) Day/Night Auto (ICR), Manual OSD Menu Multi-language BLC Mode BLC, HLC, WDR WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	Resolution	4 MP (2560 x 1440)		
Video Output One (1) BNC CVBS Channel RG-59/U Coax 720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 4 MP: 500 m (1640.42 ft) 1080p: 800 m (2624.67 ft) 1080p: 800 m (2624.67 ft) 4 MP: 700 m (2296.59 ft) 720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft) 4 MP: 300 m (984.25 ft) 720p: 450 m (1476.38 ft) 1080p: 450	Frame Rate	1080p at 30 fps	1080p at 30 fps	
RG-59/U Coax	Video Output		One (1) BNC HDCVI High-definition Channel and,	
Video Transmission ² RG-6/U Coax 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, WDR WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual		RG-59/U Coax	1080p: 500 m (1640.42 ft)	
CAT & OTP (balun required) 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, WDR WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	Video Transmission ²	RG-6/U Coax	1080p: 800 m (2624.67 ft)	
OSD Menu Multi-language BLC Mode BLC, HLC, WDR WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual			1080p: 300 m (984.25 ft)	
BLC Mode BLC, HLC, WDR 120 dB Gain Control AGC Noise Reduction White Balance Auto, Manual	Day/Night	Auto (ICR), Manual		
WDR 120 dB Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	OSD Menu	Multi-language	Multi-language	
Gain Control AGC Noise Reduction 2D/3D White Balance Auto, Manual	BLC Mode	BLC, HLC, WDR		
Noise Reduction 2D/3D White Balance Auto, Manual	WDR	120 dB		
White Balance Auto, Manual	Gain Control	AGC	AGC	
	Noise Reduction	2D/3D	2D/3D	
Smart IR Auto, Manual	White Balance	Auto, Manual	Auto, Manual	
	Smart IR	Auto, Manual	Auto, Manual	

Electromagnetic Compatibility (EMC) Electrical Power Supply 24 VAC ±25%, 12 VDC ±25% Power Consumption Environmental Operating Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White Dimensions PCC CFR 47 FCC Part 15 Subpart B ANSI C63.4-2014 FCC Part 14 Subpart B ANSI C63.4-2014 FCC Part 14 Subpa	Certifications	
(EMC) ANSI C63.4-2014 Electrical 24 VAC ±25%, 12 VDC ±25% Power Supply 24 VAC ±25%, 12 VDC ±25% Power Consumption Maximum 10.1 W (12 VDC with IR on) Environmental -30° C to +60° C (-22° F to +140° F), Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	Safety	UL60950-1+CAN/CSA C22.2 No.60950-1
Power Supply 24 VAC ±25%, 12 VDC ±25% Power Consumption Maximum 10.1 W (12 VDC with IR on) Environmental Operating Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	. ,	·
Power Consumption Environmental Operating Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	Electrical	
Environmental Operating Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	Power Supply	24 VAC ±25%, 12 VDC ±25%
Operating Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	Power Consumption	Maximum 10.1 W (12 VDC with IR on)
Operating Conditions Less than 90% RH * Start up should be done above -30° C (-22° F) Storage Conditions -30° C to +60° C (-22° F to +140° F), Less than 90% RH Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	Environmental	
Ingress Protection IP67 Vandal Resistance IK10 Construction Casing Aluminium Color White	Operating Conditions	Less than 90% RH
Vandal Resistance IK10 Construction Casing Aluminium Color White	Storage Conditions	
Construction Casing Aluminium Color White	Ingress Protection	IP67
Casing Aluminium Color White	Vandal Resistance	IK10
Color White	Construction	
	Casing	Aluminium
Dimensions ø122.0 mm x 88.90 mm (ø4.80 in. x 3.50 in.)	Color	White
	Dimensions	ø122.0 mm x 88.90 mm (ø4.80 in. x 3.50 in.)

0.48 kg (1.06 lb)

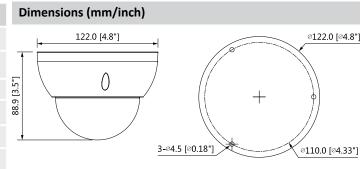
0.63 kg (1.39 lb)

Net Weight

Gross Weight

^{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				
Туре	Part Number	Description		
4 MP Camera	A42AM2Z	4 MP WDR HDCVI IR Dome Camera, White		
Accessories, optional	PFA137	Junction box (For use alone)		
	PFB203W	Wall mount (For use alone or with PFA152 pole mount)		
	PFA152	Pole mount (For use with PFB203W wall mount)		
	PFB200C	In-ceiling mount (For use alone)		
	PFM810	PoC Transceiver		



Accessories

Optional:







PFA137 Junction box

PFB203W Wall mount

PFA152 Pole mount







PFM810 PoC Transceiver

Junction Mount	Inceiling Mount
PFA137	PFB200C
Wall Mount	Pole Mount
PFB203W	PFB203W + PFA152

