ahua TECHNOLOGY

2MP HDCVI PTZ Camera
4x True Wide Dynamic Range

HDCVI

- 1/2.8-in. 2MP STARVIS™ CMOS Sensor
- 4x Optical Zoom
- Supports Multiple Video Formats: HDCVI, CVBS, AHD and TVI
- 1080p at 30 fps or 720p at 30/60 fps, Maximum Resolution
- True Wide Dynamic Range (120 dB), 3D DNR
- IP66 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty*

| IP66 | WDR | Day/Night | 2Mp |

System Overview

The 2MP Starlight PTZ Dome camera features a 1/2.8-in. STARVIS™ CMOS imager with a 4x optical zoom lens, and provides an all in one solution to capture video security images for indoor or outdoor applications. The camera offers IP66 Ingress Protection to extend its use to the harshest environments. The PTZ camera is equipped with quick and accurate pan/tilt/zoom control and True WDR for applications with direct sunlight or glare.

Functions

Multi-Format Output 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 making the camera compatible with not only HDCVI DVRs but also most existing HD/SD DVRs.

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.

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.

Environmental

With a temperature range of −30° C to +60° C (−22° F to 140° F), the camera is designed for extreme temperature environments. The camera complies with the IK10 Vandal Resistance 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 to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection

This camera suits even the harsh conditions for outdoor applications. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.8 in. STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2MP
Scanning System	Progressive
Electronic Shutter Speed	1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.05 lux at F1.6 B/W: 0.005 lux at F1.6

Lens

Focal Length	2.7 mm to 11 mm
Max. Aperture	F1.6 to F2.70
Angle of View	Horizontal: 30° to 112.5° Vertical: 19.9° to 54.2° Diagonal: 40.6° to 122.3°
Optical Zoom	4x
Iris Control	Fixed
Focus Control	Auto, Semi-automatic, Manual
Close Focus Distance	500 mm to 1000 mm (19.69 in. to 39.37 in.)

DORI Distance[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
120.0 m (393.70 ft)	48.0 m (157.48 ft)	24.0 m (78.74 ft)	12.0 m (39.37 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 355°; Tilt: 0° to 90°
Manual Control Speed	Pan: 0.1° to 100° /s; Tilt: 0.1° to 60° /s
Preset Speed	Pan: 100° /s Tilt: 60° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan, Auto Scan
Speed Setup	Human-oriented Focal Length / Speed Adaptation
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset, Scan, Tour, Pattern if there is no command in the specified period
Protocol	DH-SD, Pelco-P/D (Auto recognition)

Video

Resolution	1080p (1920 x 1080), 720p (1280 x 720), D1 (704 x 580)	
Frame Rate	1080p at 30 fps or 720p at 60 fps	
Video Output	One (1) Channel, BNC High-definition Video Output (HDCVI, AHD, TVI) or CVBS Standard Definition Video Output (switchable)	
Transmission Distance²	RG-59/U Coax	720p: 500 m (1640.42 ft) 1080p: 400 m (1312.34 ft)
	RG-6/U Coax	720p: 800 m (2624.67 ft) 1080p: 600 m (1968.50 ft)
	CAT 6 UTP (balun required)	720p: 380 m (1246.72 ft) 1080p: 380 m (1246.72 ft)
Day/Night	Auto (ICR), Color, B/W	
OSD Menu	English, French, German, Italian, Japanese, Polish, Portuguese, Russian, Spanish	
Backlight Compensation	BLC, HLC, WDR (120 dB)	
White Balance	Auto, Indoor, Outdoor, Tracking, Manual, Sodium Lamp, Natural Light, Street Lamp	
Gain Control	Auto, Manual	
Noise Reduction	2D/3D	
Advanced Features	Defog	
Digital Zoom	16x	
Flip	0° / 180°	

Certifications

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

Interface

Video	Output: One (1) BNC
RS485	One (1) Port (baud rate range: 1200 bps to 9600 bps)

Electrical

Power Supply	12 VDC, 1.5 A ±10%
Power Consumption	5 W or 6 W (with PTZ on)

Environmental

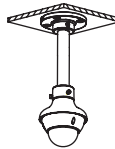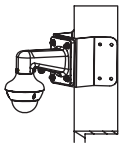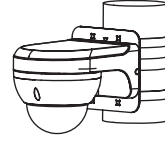|	
Operating Conditions	−30 °C to 60 °C (−22 °F to +140 °F), Less than 95% RH
Ingress Protection	IP66
Vandal Resistance	IK10
Surge Protection	TVS 4000V

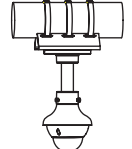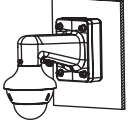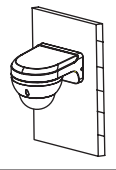### Construction
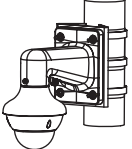
Casing	Metal
Dimensions	ø122.0 mm x 89.0 mm (ø4.80 in. x 3.50 in.)
Net Weight	0.60 kg (1.32 lb)
Gross Weight	0.65 kg (1.43 lb)

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
2MP PTZ Camera	22204ICLB	2MP 4x PTZ HDCVI Camera, True WDR
Accessories, optional	DC12V/1.5A	Power Supply
	PFA106	Mount Adapter
	PFA120	Junction Box (use with PFB305W wall mount)
	PFA150	Pole Mount (use with PFB305W wall mount)
	PFA151	Corner Mount (use with PFB305W wall mount)
	PFA152-E	Pole Mount (use with PFB203 wall mount)
	PFB203W	Wall Mount
	PFB220C	Ceiling Mount (use with PFA106 mount adapter)
	PFB305W	Wall Mount (use with PFA106 mount adapter)

Accessories

Optional:
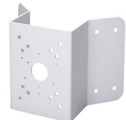
DC12V/1.5A
Power Supply

PFA106
Mount Adapter

PFA120
Junction Box

PFA150
Pole Mount

PFA151
Corner Mount

PFA152-E
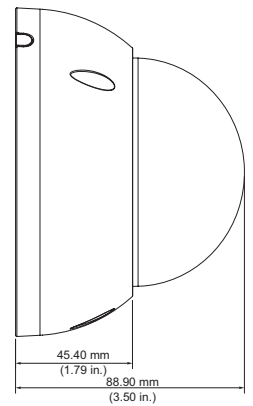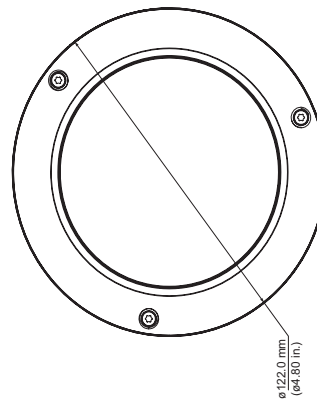Parapet Mount

PFB203W
Wall Mount

PFB220C
Ceiling Mount

PFB305W
Wall Mount

Mounting Diagram

Camera	Adapter	Wall Mount	Ceiling Mount	Junction Box	Pole/Corner Mount

PFA137
PFA200W
PFA123
PFA152-E
PFB203W
PFB200C
PFA106
PFB305W
PFA117
PFB220C
PFA151
PFA150

Ceiling Mount	Ceiling Mount	Corner Mount
PFA106+PFB220C		PFA106+PFB305W+PFA151

Pole Mount(Vertical)	Pole Mount(Vertical)	Pole Mount(Horizontal)
PFA106+PFB305W+PFA150	PFB203W+PFA152-E	PFA106+PFB220C+PFA150

Wall Mount	Wall Mount
PFA106+PFB305W+PFA120	PFB203W

Dimensions (mm)

ø122.0 mm
(ø4.80 in.)

45.40 mm
(1.79 in.)

88.90 mm
(3.50 in.)

alhua TECHNOLOGY