

# 4 MP PTZ HDCVI Camera

30x PTZ HDCVI Camera



- 1/3-in. 4 MP Progressive-scan CMOS Sensor
- Powerful 30x Optical Zoom
- True WDR (120 dB), 3D DNR
- 4 MP or 3 MP at 30 fps, 1080p at 30/60 fps
- Defog Feature for Improved Images in Low-contrast Interference
- Compass Direction Display for Easier Positioning
- IP67 Ingress Protection and IK10 Vandal Resistance
- Designed for Extreme Temperature Environments
- Five-year Warranty



## System Overview

The 4 MP PTZ HDCVI Dome camera features a 1/3-in. CMOS imager with a 30x optical zoom lens, and provides an all in one solution for capturing long-distance video surveillance for outdoor applications. The camera features 120 dB True WDR, suitable for applications with complex dynamic range, ensuring both the bright and dark areas are seen clearly. The camera is also equipped with quick and accurate pan/tilt/zoom control for excellent camera control.

## Functions

### Three Signals over One Coaxial Cable

HDCVI technology simultaneously transmits three signals (video, audio, and control) 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. Moreover, HDCVI technology supports PoC for construction flexibility.

### 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.

### Dual Video Output Signals

The camera offers one (1) BNC video output connection to transmit an HDCVI or a CVBS signal. These output signals allow the camera to integrate with various devices, including analog matrix systems and monitors.

### 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.

### 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.

### Defog

Utilizing Dahua's advanced algorithm technology, the Defog feature dynamically adjusts the camera's contrast settings to provide improved image quality in scenes affected by fog, smog, mist, smoke or other low-contrast interference.

### Environmental

With a built-in heater and a temperature range of -40 °C to +70 °C (-40 °F to +158 °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 55 kg (120 lbs) of force. Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.

## Technical Specification

### Camera

Image Sensor	1/3-in. CMOS Sensor
Effective Pixels	2592(H) x 1520(V), 4 MP
Scanning System	Progressive
Electronic Shutter Speed	1/3 s to 1/300,000 s
Minimum Illumination	Color: 0.05 lux at F1.6 B/W: 0.005 lux at F1.6
S/N Ratio	More than 55 dB

### Lens

Focal Length	4.5 mm to 135 mm
Maximum Aperture	F1.6 to F4.4
Horizontal Angle of View	60° to 2.2°
Optical Zoom	30x
Focus Control	Auto, Manual
Close Focus Distance	100 mm to 1000 mm (3.94 in. to 39.37 in.)

### DORI Distance<sup>1</sup>

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
2700 m (8858 ft)	1080 m (3543 ft)	540 m (1772 ft)	270 m (886 ft)

### PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: 0° to 90° Auto Flip 180°
Manual Control Speed	Pan: 0.1° to 350° /s Tilt: 0.1° to 250° /s
Preset Speed	Pan: 500° /s Tilt: 500° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan, Auto Scan
Speed Setup	Human-oriented Focal Length and 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)

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.

### Video

Resolution	4 MP (2560 x 1440), 1080p (1920 x 1080), 720p (1280 x 720), 960H (960 x 480)
Frame Rate	4 MP or 3 MP at 30 fps; 1080p at 30/60 fps
Video Output	HDCVI: 4 MP AHD or TVI: 2 MP CVBS: 960H
Video Transmission <sup>2</sup>	RG-59/U Coax 720p: 500 m (1640.42 ft) 1080p: 400 m (1312.34 ft) 4 MP: 300 m (984.25 ft)
	RG-6/U Coax 720p: 800 m (2624.67 ft) 1080p: 600 m (1968.50 ft) 4 MP: 600 m (1968.50 ft)
	CAT 6 UTP (balun required) 720p: 380 m (1246.72 ft) 1080p: 380 m (1246.72 ft) 4 MP: 200 m (656.17 ft)
Day/Night	Auto (ICR), Color, B/W
OSD Menu	Support
Backlight Compensation	BLC, HLC, True WDR (120 dB)
White Balance	Auto, ATW, Indoor, Outdoor, Manual
Gain Control	Auto, Manual
Noise Reduction	Ultra DNR (2D/3D)
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

### Certifications

CE	EN 55032 EN 55024 EN 50130-4
UL	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) Channel HDCVI or CVBS, BNC
Audio Input	One (1) Channel
RS485	One (1)
Alarm	Input: Two (2) Channels Output: One (1) Channel

### Electrical

Power Supply	24 VAC, 1.5 A (± 10%)
Power Consumption	13 W, 23 W with heater on

### Environmental

Operating Conditions	-40° C to 60° C (-40° F to +140° F), Less than 90% RH
Ingress Protection	IP67
Vandal Resistance	IK10

### Construction

Casing	Metal
Dimensions	ø186.0 mm x 253.0 mm (ø7.32 in. x 9.96 in.)
Net Weight	2.50 kg (5.51 lb)
Gross Weight	4.50 kg (9.92 lb)

**Ordering Information**

Type	Part Number	Description
4 MP PTZ Camera	50430IC	4 MP 30x PTZ HDCVI Camera, Built-in Heater, True WDR
Accessories, Included	AC24V/1.5A	Power Supply
	PFA110	Mount Adapter
	PFB300S	Wall Mount
Accessories, Optional	PFA120	Junction Box
	PFA140	Power Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	PFB300C	Ceiling Mount
	PFB303S	Parapet Mount

**Accessories**

Included:



PFB300S  
Wall Mount



PFA110  
Mount Adapter



AC24V/1.5A  
Power Supply

Optional :



PFA140  
Power box



PFB300C  
Ceiling Mount



PFA120  
Junction Box



PFA150  
Pole Mount



PFA151  
Corner Mount



PFB303S  
Parapet Mount

Ceiling Mount	Junction Mount
PFA110 + PFB300C	PFA110 + PFB300S + PFA120
Power Box Mount	Pole Mount
PFA110 + PFB300S + PFA140	PFA110 + PFB300S + PFA150
Corner Mount	Parapet Mount
PFA110 + PFB300S + PFA151	PFA110 + PFB303S

**Dimensions (mm/in.)**

