

# 2 MP HDCVI PTZ Camera

30x Starlight WDR



## HDCVI

- 1/2.8-in. 2 MP STARVIS™ Progressive-scan CMOS Sensor
- Powerful 30x Optical Zoom
- Supports Multiple Video Formats: HDCVI, CVBS, AHD and TVI
- Starlight Technology for Ultra-low Light Sensitivity
- 1080p at 30 fps or 720p at 30/60 fps, Maximum Resolution
- True Wide Dynamic Range (120 dB), 3D DNR
- IP67 Ingress Protection, IK10 Vandal Resistance
- Designed for Extreme Temperature Environments
- Five-year Warranty\*



### System Overview

The 2 MP Starlight IR PTZ Dome camera features a 1/2.8-in. STARVIS™ CMOS imager with a 30x optical zoom lens, and provides an all in one solution for capturing long-distance video surveillance for outdoor applications, day or night. The camera offers a built-in heater and IP67 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

#### Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers light sensitivity that captures details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

#### 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 or via dip switch settings, located inside the camera housing, 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.

#### Dual Video Output Signals

The camera offers one (1) BNC video output connection to transmit either 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.

#### 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 +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. 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.

#### Protection

This camera suits even the harsh conditions for outdoor applications. Its 6KV lightning rating provides protection against the camera and its structure from the effects of lightning.

## Technical Specification

### Camera

Image Sensor	1/2.8 in. STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2 MP
Scanning System	Progressive
Electronic Shutter Speed	1/3 s to 1/300,000 s
Minimum Illumination	Color: 0.005 lux at F1.6 B/W: 0.0005 lux at F1.6
S/N Ratio	More than 55dB

### Lens

Focal Length	4.5 mm to 135 mm
Max. Aperture	F1.6 to F5.0
Angle of View	Horizontal: 2.4° to 67.8°
Optical Zoom	30x
Focus Control	Auto, Manual
Close Focus Distance	100 mm to 1000 mm (3.94 in. to 39.37 in.)

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

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
1862 m (6109 ft)	744 m (2441 ft)	372 m (1220 ft)	186 m (610 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 / 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 × 1080) 720p (1280 × 720)
Frame Rate	1080p at 30 fps or 720p at 30/60 fps
Video Output	One (1) Channel, BNC High-definition Video Output (HDCVI, AHD, TVI) or CVBS Standard Definition Video Output (switchable)
Transmission Distance <sup>2</sup>	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, ATW, Indoor, Outdoor, Manual
Gain Control	Auto, Manual
Noise Reduction	Ultra DNR (2D/3D)
Advanced Features	Defog
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

### 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
Audio	Input: One (1) Channel
RS485	One (1) Port
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 IR 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 (ø7.35 in. x 9.97 in.)
Net Weight	2.50 kg (5.51 lb)
Gross Weight	4.50 kg (9.92 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 PTZ Camera	50230IC	2 MP 30x Starlight 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 Supply 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



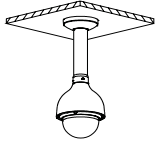
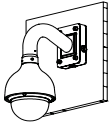
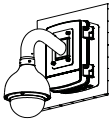
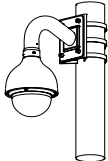

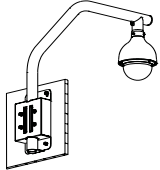
PFA150  
Pole Mount



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)**

