DAHUA TECHNOLOGY

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*

WDR | 0.005Lux | ICR D/N | IP67 | Vandal-proof

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 best-in-class light sensitivity, capturing color details in low light down to 0.005 lx. 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 a UTC controller (PFM820), 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 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.

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 lx at F1.6 B/W: 0.0005 lx 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[1] 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[2]	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
	PFM820	UTC Controller

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

PFM820
UTC Controller

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)

ø47.0 mm
(ø1.85 in.)

25.0 mm
(0.98 in.)

140.0 mm
(5.51 in.)

253.0 mm
(9.96 in.)

9.0 mm
(0.39 in.)

ø140.0 mm
(ø5.51 in.)

ø186.0 mm
(ø7.32 in.)