**dahua** TECHNOLOGY

# 2MP HDCVI PTZ Camera
## 25x Starlight IR HDCVI PTZ Camera



- 1/2.8-in. 2MP STARVIS™ CMOS Sensor
- Powerful 25x Optical Zoom
- Starlight Technology for Ultra-low Light Sensitivity
- 1080p at 30 fps, 720p at 60 fps Maximum Resolution
- Supports Multiple Video Formats: HDCVI, CVBS, AHD and TVI
- Maximum IR Distance up to 100 m (328 ft)
- Predictive Focus Analysis (PFA) Technology
- ArcticPro Series Camera - Operational down to −40° C (−40° F)
- IP66 Ingress Protection
- Five-year Warranty*

**WDR** | **0.005Lux** | **ICR D/N** | **IP66**

## System Overview

The 2MP Starlight IR PTZ Dome camera features a 1/2.8-in. STARVIS™ CMOS imager with a 25x optical zoom lens, and provides an all in one solution for capturing long-distance video security for indoor and 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 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.

### Simplicity
HDCVI technology seamlessly integrates traditional analog security 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 security without the hassles of configuring a network.

### 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.

### 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.

### Predictive Focus Analysis Technology
The camera uses innovative PFA Technology to improve zoom accuracy and to decrease focus time. A series of advanced algorithms more accurately judge the direction and the distance to a subject, improving picture clarity throughout the zooming process.

### 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.

### ArcticPro
The Dahua ArcticPro Series of extreme-environment cameras combine temperature-tolerant components, a waterproof enclosure, and an integrated heater to ensure flawless operation in temperatures as low as −40° C (−40° F). For applications that demand high-resolution video with advanced features in extremely cold environments, the Dahua ArcticPro Series offers a camera to satisfy the most demanding requirements.

### 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. Subjected and certified to rigorous dust and water immersion tests, the IP66 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 Sensor |
| 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: 0.005 lux at F1.6<br>B/W: 0.0005 lux at F1.6<br>0 lux at F1.6 with IR on |
| IR Distance | Distance up to 100.0 m (328.08 ft) |
| IR On/Off Control | Auto, Manual, Timer |
| IR LEDs | Six (6) |

### Lens

| | |
|---|---|
| Focal Length | 4.8 mm to 120 mm |
| Max. Aperture | F1.6 to F3.5 |
| Angle of View | Horizontal: 2.8° to 61.0°<br>Vertical: 0.40° to 22.60° |
| Optical Zoom | 25x |
| Focus Control | Auto, Semi-automatic, Manual |
| Close Focus Distance | 100 mm to 1500 mm (3.93 in. to 59.06 in.) |

### DORI Distance[1]

| Detect (8 ppf) | Observe (19 ppf) | Recognize (38 ppf) | Identify (76 ppf) |
|---|---|---|---|
| 1655.20 m<br>(5430.45 ft) | 656.80 m<br>(2154.86 ft) | 331.0 m<br>(1085.96 ft) | 165.50 m<br>(542.98 ft) |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0° to 360°<br>Tilt: −15° to 90° |
| Manual Control Speed | Pan: 0.1° to 200° /s<br>Tilt: 0.1° to 120° /s |
| Preset Speed | Pan: 240° /s<br>Tilt: 200° /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 30/60 fps |
| Transmission Rates[2] | RG-59/U Coax | 720p: 500 m (1640.42 ft)<br>1080p: 400 m (1312.34 ft) |
| | RG-6/U Coax | 720p: 800 m (2624.67 ft)<br>1080p: 600 m (1968.50 ft) |
| | CAT 6 UTP (balun required) | 720p: 380 m (1246.72 ft)<br>1080p: 380 m (1246.72 ft) |
| Day/Night | | Auto (ICR), Color, B/W, Timer |
| 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 | | Motion Detection, Region of Interest, Defog, Image Stabilization, Defog |
| Digital Zoom | | 16x |
| Flip | | 0° / 180° |
| Privacy Masking | | Up to 24 areas |

### Certifications

| | |
|---|---|
| CE | EN 55032<br>EN 55024<br>EN 50130-4 |
| UL | UL60950-1 + CAN/CSA C22.2, No.60950-1 |
| Electromagnetic Compatibility (EMC) | FCC Part 15 Subpart B<br>ANSI C63.4-2014 |

### Interface

| | |
|---|---|
| Video | One (1) BNC High-definition Video Output (HDCVI, AHD, TVI) or CVBS Standard Definition Video Output (switchable) |
| Audio | Input: One (1) Channel |
| Alarm | Input: Two (2) Channels<br>Output: One (1) Channel |

### Electrical

| | |
|---|---|
| Power Supply | 12 VDC, 3 A ± 10% |
| Power Consumption | 9.6 W, 23.2 W with IR on |

### Environmental

| | |
|---|---|
| Operating Conditions | −40° C to 70° C (−40° F to +158° F), with built-in heater, Less than 95% RH |
| Ingress Protection | IP66 |
| Surge Protection | TVS 6000V |

### Construction

| | |
|---|---|
| Casing | Metal |
| Dimensions | ø160.0 mm x 295.4 mm<br>(ø6.30 in. x 11.63 in.) |
| Net Weight | 3.0 kg (6.61 lb) |
| Gross Weight | 4.20 kg (9.26 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 | 49225ICLA | 2MP 25x Starlight IR HDCVI PTZ Camera, True WDR |
| Accessories, included | PFB305W | Wall Mount |
| Accessories, optional | PFA111 | Mount Adapter |
| | PFA120 | Water-proof Junction Box |
| | PFA140 | Power Box |
| | PFA150 | Pole Mount |
| | PFA151 | Corner Mount |
| | PFB300C | Ceiling Mount |
| | PFB303S | Parapet Mount |
| | S042-1A120300HU | Power Adapter |

## Accessories

Included:



PFB305W
Wall Mount

Optional :



PFA111
Mount Adapter

PFA120
Junction Box

PFA140
Power Box

S042-1A120300HU
12 VDC, 3 A Power Adapter

PFB300C
Ceiling Mount

PFA151
Corner Mount

PFA150
Pole Mount

PFB303S
Parapet Mount

| Ceiling Mount | Junction Mount |
|---------------|----------------|
| PFA111 + PFB300C | PFB305W + PFA120 |
|  |  |
| **Power Box Mount** | **Pole Mount** |
| PFB305W + PFA140 | PFB305W + PFA150 |
|  |  |
| **Corner Mount** | **Parapet Mount** |
| PFB305W + PFA151 | PFA111+ PFB303S |
|  |  |

## Dimensions (mm/in.)



50.0 mm (1.97 in.)
109.0 mm (4.29 in.)
295.0 mm (11.61 in.)
140.0 mm (5.51 in.)
ø160.0 mm (ø6.30 in.)