

# 2 MP HDCVI PTZ Camera

12x Starlight WDR



## HDCVI

- 1/2.8-in. 2 MP STARVIS™ Progressive-scan CMOS Sensor
- Powerful 12x 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
- IP66 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 12x 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 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

#### 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.

#### 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.

#### 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.

#### 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.

#### 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 built-in heater and a temperature range of  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$ ), 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 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                             |
| 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<br>B/W: 0.0005 lux at F1.6 |
| S/N Ratio                | More than 50 dB                                     |

#### Lens

|                      |   |
|----------------------|---|
| Focal Length         | 5.3 mm to 64 mm                           |
| Max. Aperture        | F1.6 to F3.0                              |
| Angle of View        | Horizontal: 4.9° to 58.4°                 |
| Optical Zoom         | 12x                                       |
| 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) |
|-----------------|------------------|--------------------|-------------------|
| 883 m (2987 ft) | 353 m (1158 ft)  | 177 m (581 ft)     | 88 m (289 ft)     |

#### PTZ

|                      |   |
|----------------------|---|
| Pan/Tilt Range       | Pan: 0° to 360° endless<br>Tilt: -2° to 90°<br>Auto flip 180°                       |
| Manual Control Speed | Pan: 0.1° to 300° /s<br>Tilt: 0.1° to 120° /s                                       |
| Preset Speed         | Pan: 300° /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 × 1080)<br>720p (1280 × 720)   |
| Frame Rate                         | 1080p at 30 fps or 720p at 30/60 fps   |
| Video Output                       | One (1) Channel, BNC<br>High-definition Video Output (HDCVI, AHD, TVI) or CVBS Standard Definition Video Output (switchable) |
| Transmission Distance <sup>2</sup> | RG-59/U Coax<br>720p: 500 m (1640.42 ft)<br>1080p: 400 m (1312.34 ft)  |
|                                    | RG-6/U Coax<br>720p: 800 m (2624.67 ft)<br>1080p: 600 m (1968.50 ft)   |
|                                    | CAT 6 UTP (balun required)<br>720p: 380 m (1246.72 ft)<br>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<br>ANSI C63.4- 2014 |

#### Interface

|       |  |
|-------|--|
| Video | Output: One (1) BNC                                |
| Audio | Input: One (1) Channel                             |
| RS485 | One (1) Port                                       |
| Alarm | Input: Two (2) Channels<br>Output: One (1) Channel |

#### Electrical

|                   |                           |
|-------------------|---------------------------|
| Power Supply      | 24 VAC, 1.5 A (±10%)      |
| Power Consumption | 10 W, 19 W with heater on |

#### Environmental

|                      |  |
|----------------------|--|
| Operating Conditions | -40 °C to 60 °C (-40 °F to +140 °F),<br>Less than 90% RH |
| Ingress Protection   | IP66   |
| Vandal Resistance    | IK10   |

#### Construction

|              |   |
|--------------|---|
| Casing       | Metal   |
| Dimensions   | ø186.20 mm x 234.40 mm (ø7.33 in. x 9.23 in.) |
| Net Weight   | 2.30 kg (5.07 lb)                             |
| Gross Weight | 4.30 kg (9.48 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       | 40212IC     | 2 MP 12x 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



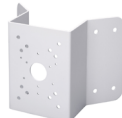
PFB300C  
Ceiling Mount



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**

