2 MP HDCVI Fixed Eyeball Camera
2 MP HDCVI IR Eyeball Camera

System Overview
Experience the superior clarity of Full HD 1080p video while leveraging your existing coaxial infrastructure. The camera features Smart IR technology to deliver clear images in near total darkness. The camera offers a multi-language on-screen display and HD and SD dual-output. The outstanding performance and low price make the camera an ideal choice for small businesses that value surveillance.

Functions
Three Signals over a Single Coaxial Cable
HDCVI technology simultaneously transmits video, power, and data 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. HDCVI along with PoC technology delivers power¹ to devices at the edge, simplifying installation.

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.

Smart IR
With IR illumination, detailed images can be captured in low light or total darkness. The camera’s Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera’s integrated infrared illumination provides high performance in extreme low-light environments up to 50 m (164 ft).

Multi-format 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 HCVRs but also most existing HD/SD DVRs.

Multi-language OSD
The OSD menu provides multiple image adjustments and function settings to meet the requirements of different monitoring scenes. The OSD menu includes configurations such as backlight mode, day/night, white balance, privacy mask and motion detection and offers Chinese, English, French, German, Spanish, Italian, Japanese, Korean, Russian, Polish, and Portuguese variations.

Protection
The camera’s outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67, making it suitable for indoor or outdoor environments.

With a working temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting ±25% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

1. Requires PoC Transceivers for each channel and an external power supply for each transceiver.
### Technical Specification

**Camera**
- **Image Sensor**: 1/2.9-in. CMOS
- **Effective Pixels**: 1920(H) x 1080(V), 2 MP
- **Scanning System**: Progressive
- **Electronic Shutter Speed**: 1/30 s to 1/100000 s
- **Minimum Illumination**: 0.02 Lux at F2.0, 0 Lux (with IR on)
- **S/N Ratio**: More than 65 dB
- **IR Distance**: Up to 50 m (164 ft)
- **IR On/Off Control**: Auto, Manual
- **IR LEDs**: One (1)

**Lens**
- **Lens Type**: Fixed Lens / Fixed Iris
- **Mount Type**: Board-in
- **Focal Length**: A21BG02: 2.8 mm, A21BG03: 3.6 mm
- **Max Aperture**: F2.0
- **Angle of View, Horizontal**: A21BG02: 106°, A21BG03: 82.8°
- **Close Focus Distance**: A21BG02: 500 m (19.7 in.), A21BG03: 800 m (31.5 in.)

**Pan / Tilt / Rotation**
- **Range**: Pan: 0° to 360°, Tilt: 0° to 78°, Rotation: 0° to 360°

**Video**
- **Resolution**: 1080p (1920 x 1080)
- **Frame Rate**: 1080p at 30 fps, 720p at 30/60 fps
- **Video Output**: One (1) BNC HDCVI High-definition Channel, One (1) BNC CVBS, AHD or TVI Channel, switchable

**Video Transmission**
- **Video Transmission²**: RG-59/U Coax, 720p: 800 m (2624.67 ft), 1080p: 500 m (1640.42 ft)
- **RG-6/U Coax**: 720p: 1200 m (3937.01 ft), 1080p: 800 m (2624.67 ft)
- **CAT 6 UTP** (balun required): 720p: 450 m (1476.38 ft), 1080p: 300 m (984.25 ft)

**Day/Night**
- **Auto (ICR), Manual**

**OSD Menu**
- **Multi-language**

**BLC Mode**
- **BLC, HLC, DWDR**

**WDR**
- **Digital WDR**

**Gain Control**
- **AGC**

**Noise Reduction**
- **2D**

**White Balance**
- **Auto, Manual**

**Smart IR**
- **Auto, Manual**

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### Certifications

**Safety**
- EN55032, EN55024, EN50130-4, UL60950-1+CAN/CSA C22.2 No.60950-1

**Electromagnetic Compatibility (EMC)**
- FCC CFR 47 FCC Part 15 Subpart B ANSI C63.4-2014

### Electrical

#### Power Supply
- 12 VDC ±25%

#### Power Consumption
- Max 2.9 W (12 VDC with IR on)

### Environmental

#### Operating Conditions
- -40°C to +60°C (-40°F to +140°F), Less than 95% RH

#### Storage Conditions
- -40°C to +60°C (-40°F to +140°F), Less than 95% RH

#### Ingress Protection
- IP67

### Construction

#### Casing
- Aluminium

#### Dimensions
- ø106.0 mm x 93.70 mm (ø4.17 in. x 3.69 in.)

#### Net Weight
- 0.44 kg (0.97 lb)

#### Gross Weight
- 0.58 kg (1.28 lb)

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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.

www.dahuasecurity.com/en/us
## Ordering Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 MP Camera</td>
<td>A21BG02</td>
<td>2 MP HDCVI IR Eyeball Camera, 2.8 mm</td>
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<tr>
<td></td>
<td>A21BG03</td>
<td>2 MP HDCVI IR Eyeball Camera, 3.6 mm</td>
</tr>
<tr>
<td>Accessories, optional</td>
<td>PFA139</td>
<td>Junction box (For use alone)</td>
</tr>
<tr>
<td></td>
<td>PFB204W</td>
<td>Wall mount (For use alone or with PFA152 pole mount)</td>
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<tr>
<td></td>
<td>PFA152</td>
<td>Pole mount (For use with PFB204W wall mount)</td>
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<tr>
<td></td>
<td>PFM321</td>
<td>12 VDC, 1 A Power Adapter</td>
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<tr>
<td></td>
<td>PFM810</td>
<td>PoC Transceiver</td>
</tr>
<tr>
<td></td>
<td>PFM820</td>
<td>UTC Controller</td>
</tr>
</tbody>
</table>

## Accessories

**Optional:**

- PFA139 Junction box
- PFB204W Wall mount
- PFA152 Pole mount
- PFM321 Power Adapter
- PFM810 PoC Transceiver
- PFM820 UTC Controller

## Dimensions (mm/inch)

### Junction Mount

- PFA139

### Pole Mount

- PFB204W + PFA152

### Wall Mount

- PFB204W