System Overview
Experience the superior clarity of Full HD 1080p video while leveraging your existing coaxial infrastructure. The camera features 120 dB True WDR for applications under complex dynamic range and presents high quality images with clear details and accurate color rendition. The camera offers a multi-language on-screen display and HD and SD dual-output. The outstanding performance and easy installation make the camera an ideal choice for mid- to large-size businesses and for projects where highly reliable surveillance and construction flexibility are valued.

Functions

Four Signals over a Single Coaxial Cable
HDCVI technology simultaneously transmits four signals (audio, video, power, and data)1 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. Moreover, HDCVI technology supports PoC for construction flexibility.

Long Distance Transmission
HDCVI technology guarantees real-time transmission over long distances without loss of video quality. The camera supports transmission up to 800 m (0.50 miles) via coaxial cable, and up to 300 m (0.19 miles) via UTP cable.2

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
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.

Advanced 3DNR
3DNR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. Dahua’s advanced 3DNR technology allows remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. Advanced 3DNR effectively decreases bandwidth and saves storage space.

Multi-outputs
The camera supports simultaneous HDCVI and CVBS signal outputs over two BNC connectors. The camera also features a second CVBS as a tester output to connect a local monitor to aid camera setup. These output signals allow the camera to integrate with various devices, including analog matrix systems and monitors.

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 30 m (98 ft).

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. The camera complies with IK10 impact resistant rating to provide maximum durability against vandals, making it capable of withstanding the equivalent of 55 kg (120 lbs) of force. 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. Audio input is available for certain HDCVI cameras.
2. Actual results verified by real-scene testing in Dahua’s test laboratory.

www.dahuasecurity.com
### Technical Specification

#### Camera
- **Image Sensor**: 1/2.7-in. CMOS
- **Effective Pixels**: 1928(H) × 1088(V), 2.1 MP
- **Scanning System**: Progressive
- **Electronic Shutter Speed**: 1 s to 1/30000 s
- **Minimum Illumination**: 0.03 Lux @ F2.0
- **S/N Ratio**: More than 65 dB
- **IR Distance**: Up to 30 m (98 ft)
- **IR On/Off Control**: Auto / Manual
- **IR LEDs**: 24

#### Lens
- **Lens Type**: Fixed lens / Fixed iris
- **Mount Type**: Board-in
- **Focal Length**: 2.8 mm, 3.6 mm, or 6 mm
- **Max Aperture**: F2.0
- **Angle of View**: H: 90° (115.6°/59.4°)
- **Close Focus Distance**: 500 mm, 800 mm, or 1800 mm (19.69 in., 31.50 in., or 70.87 in.)

#### Pan / Tilt / Rotation
- **Pan/Tilt/Rotation**: Pan: 0° to 355°
  Tilt: 0° to 65°
  Rotation: 0° to 355°

#### Video
- **Resolution**: 1080p (1920 × 1080)
- **Frame Rate**: 25/30 fps @ 1080p
  25/30/50/60 fps @ 720p
- **Video Output**: One (1) BNC HDCVI High-definition Channel and,
  One (1) BNC CVBS Channel, plus
  One (1) CVBS Tester Channel
- **Day/Night**: Auto (ICR) / Manual
- **OSD Menu**: Multi-language
- **BLC Mode**: BLC / HLC / WDR
- **WDR**: 120 dB
- **Gain Control**: AGC
- **Noise Reduction**: 2D / 3D
- **White Balance**: Auto / Manual
- **Smart IR**: Auto / Manual

### Certifications

#### Certifications
- **CE (EN55032, EN55024, EN50130-4)**
- **FCC (CFR 47 FCC Part 15 Subpart B)**
- **ANSI C63.4-2014)**
- **UL (UL60950-1+CAN/CSA C22.2 No.60950-1)**

#### Electrical
- **Power Supply**: 12V DC ±25%
- **Power Consumption**: Max 5.5 W (12V DC, IR on)

#### Environmental
- **Operating Conditions**: -30°C to +60°C (-22°F to +140°F), Less than 90% RH
  Initiate start up above -30°C (-22°F)
- **Storage Conditions**: -30°C to +60°C (-22°F to +140°F), Less than 90% RH
- **Ingress Protection**: IP67
- **Vandal Resistance**: IK10

#### Construction
- **Casing**: Aluminium
- **Dimensions**: Φ109.9 mm × 81.0 mm (Φ4.33 in. × 3.19 in.)
- **Net Weight**: 0.31 kg (0.68 lb)
- **Gross Weight**: 0.41 kg (0.90 lb)
## Ordering Information

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<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>2MP Camera</td>
<td>DH-HAC-HDBW22A1EN</td>
<td>2MP WDR HDCVI IR Dome Camera, 2.8 mm, NTSC</td>
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<tr>
<td></td>
<td>DH-HAC-HDBW22A1EN</td>
<td>2MP WDR HDCVI IR Dome Camera, 3.6 mm, NTSC</td>
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<td></td>
<td>DH-HAC-HDBW22A1EN</td>
<td>2MP WDR HDCVI IR Dome Camera, 6 mm, NTSC</td>
</tr>
<tr>
<td>Accessories</td>
<td>PFA136</td>
<td>Junction box (For use alone)</td>
</tr>
<tr>
<td></td>
<td>PFB203W</td>
<td>Wall mount (For use alone or with PFA152 pole mount)</td>
</tr>
<tr>
<td></td>
<td>PFA152</td>
<td>Pole mount (For use with PFB203W wall mount)</td>
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</tbody>
</table>

## Accessories

### Optional:
- PFA136            Junction box
- PFB203W           Wall mount
- PFA152            Pole mount
- PFB203W + PFA152  Wall Mount

### Dimensions (mm/inch)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
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<tr>
<td>Ø109.9 (4.31&quot;)</td>
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<td>Ø3.047 (0.12&quot;)</td>
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