

DH-HAC-HDW2221M

2MP WDR HDCVI IR Eyeball Camera

HDCVI



- 120dB true WDR, 3DNR
- Max 30fps@1080P
- HD and SD dual-output
- 3.6mm fixed lens (6mm optional)
- Max. IR length 30m, Smart IR
- IP67, DC12V



System Overview

Experience 1080P full HD video and the simplicity of reusing existing coaxial infrastructure with HDCVI. The camera features 120dB true WDR, which presents a high quality image with rich details and accurate color rendition for applications with complex lighting conditions. It offers various motorized/fixed lens models with a multi-language OSD and HD&SD dual-output. The outstanding performance and true WDR feature makes the camera an ideal choice for mid to large-size business and common projects where both highly reliable surveillance and construction flexibility are needed.

Functions

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals to be transmitted over 1 coaxial cable simultaneously, i.e. video, audio*, data and power. Dual-way data transmission allows the HDCVI camera to interact with the HCVR, such as sending control signal or triggering alarm. Moreover, HDCVI technology supports PoC for construction flexibility.

* Audio input is available for some models of HDCVI cameras.

Long Distance Transmission

HDCVI technology guarantees long-distance and real-time transmission without any loss. It supports up to 800m for 1080P Full HD video via coaxial cable, and up to 300m via UTP cable.*

*Actual results verified by real-scene testing in Dahua's test laboratory.

Simplicity

HDCVI technology inherits the born feature of simplicity from traditional analog surveillance system, making itself a best choice for investment protection. HDCVI system can seamlessly upgrade the traditional analog system without replacing existing coaxial cabling. The plug and play approach enables full HD video surveillance without the hassle of configuring a network.

Wide Dynamic Range

Embedded with industry leading wide dynamic range (WDR) technology, vivid pictures are achieved even in the most intense contrast lighting conditions. True WDR (120dB) 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. Besides, the advanced 3DNR effectively decreases the band width and saves the storage space.

Multi-outputs

The camera supports HDCVI and CVBS signal outputs simultaneously with two BNC connectors. Multi-outputs facilitates construction in such situations as debugging through a tester. It also offers the possibility for cooperating with multiple devices including analog matrix or monitor.

Smart IR

The camera is designed with microcrystalline LED IR illumination for best lowlight performance. Smart IR is a technology to ensure brightness uniformity in B/W image under low illumination. Dahua's unique Smart IR adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object, and prevents IR LEDs from overexposing images as the object come closer to the camera.

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.

Supporting $\pm 25\%$ 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.

Technical Specification

Camera

| | |
|--------------------------|---|
| Image Sensor | 1/2.7" CMOS |
| Effective Pixels | 1928(H)×1088(V), 2.1MP |
| Scanning System | Progressive |
| Electronic Shutter Speed | PAL: 1.3s~1/30000s NTSC: 1s~1/30000s |
| Minimum Illumination | 0.03Lux/F2.0, 30IRE, 0Lux IR on |
| S/N Ratio | More than 65dB |
| IR Distance | Up to 30m (98feet) |
| IR On/Off Control | Auto / Manual |
| IR LEDs | 12 |

Lens

| | |
|----------------------|-----------------------------------|
| Lens Type | Fixed lens / Fixed iris |
| Mount Type | Board-in |
| Focal Length | 3.6mm (6mm Optional) |
| Max Aperture | F2.0 |
| Angle of View | H: 90° (59.4°) |
| Focus Control | N/A |
| Close Focus Distance | 800mm (1800mm) 31.50" (70.87") |

DORI Distance

Note: The DORI distance is a "general proximity" of distance which makes it easy to pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specification and lab test result according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify respectively.

| | DORI Definition | Distance |
|-----------|----------------------|--------------------------------------|
| Detect | 25px/m (8px/ft) | 3.6mm: 53m(175ft) 6mm: 78m(257ft) |
| Observe | 63px/m (19px/ft) | 3.6mm: 21m(70ft) 6mm: 31m(103ft) |
| Recognize | 125px/m (38px/ft) | 3.6mm: 11m(35ft) 6mm: 16m(51ft) |
| Identify | 250ppm (76px/ft) | 3.6mm: 5m(17ft) 6mm: 8m(26ft) |

Pan / Tilt / Rotation

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|-------------------|---|
| Pan/Tilt/Rotation | Pan: 0° ~ 360° Tilt: 0° ~ 90° Rotation: 0° ~ 360° |
|-------------------|---|

Video

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|--------------|---|
| Resolution | 1080P (1920×1080) |
| Frame Rate | 25/30fps@1080P, 25/30/50/60fps@720P |
| Video Output | 1-channel BNC HDCVI high definition video output & 1-channel BNC CVBS video output |
| Day/Night | Auto (ICR) / Manual |
| OSD Menu | Multi-language |

| | |
|-----------------|-----------------|
| BLC Mode | BLC / HLC / WDR |
| WDR | 120dB |
| 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 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1) |
|----------------|---|

Interface

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|-----------------|-----|
| Audio Interface | N/A |
|-----------------|-----|

Electrical

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|-------------------|------------------------|
| Power Supply | 12V DC ±25% |
| Power Consumption | Max 4W (12V DC, IR on) |

Environmental

| | |
|--|--|
| Operating Conditions | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH * Start up should be done at above-30°C (-22°F) |
| Storage Conditions | -30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH |
| Ingress Protection & Vandal Resistance | IP67 |

Construction

| | |
|--------------|-------------------------------|
| Casing | Aluminium |
| Dimensions | Φ93.4mm×79.4mm (Φ3.68"×3.13") |
| Net Weight | 0.28kg (0.62lb) |
| Gross Weight | 0.35kg (0.77lb) |

Ordering Information

| Type | Part Number | Description |
|-------------|------------------------|--|
| 2MP Camera | DH-HAC-HDW2221MP 3.6mm | 2MP WDR HDCVI IR Eyeball Camera, PAL |
| | DH-HAC-HDW2221MP 6mm | 2MP WDR HDCVI IR Eyeball Camera, PAL |
| | DH-HAC-HDW2221MN 3.6mm | 2MP WDR HDCVI IR Eyeball Camera, NTSC |
| | DH-HAC-HDW2221MN 6mm | 2MP WDR HDCVI IR Eyeball Camera, NTSC |
| Accessories | PFA13A | Junction box (For use alone) |
| | PFB204W | Wall mount (For use alone or with PFA152-E pole mount) |
| | PFA152-E | Pole mount (For use with PFB204W wall mount) |
| | PFM800-E | Passive HDCVI Balun |
| | PFM800-4MP | Passive HDCVI Balun |
| | PFM801-4MP | Passive HDCVI Balun With Power |
| | PFM809-4MP | 16 channel Passive HDCVI Balun Receiver |
| | PFM321 | 12V 1A Power Adapter |
| | PFM320 | 12V 2A Power Adapter |
| | PFM320D-015 | 12V 1.5A Power Adapter |

Accessories

Optional:



PFA13A
Junction box



PFB204W
Wall mount



PFA152-E
Pole mount



PFM800-E
Passive HDCVI Balun



PFM800-4MP
Passive HDCVI Balun



PFM801-4MP
Passive HDCVI Balun
With Power



PFM809-4MP
16Channel Passive
HDCVI Balun Receiver



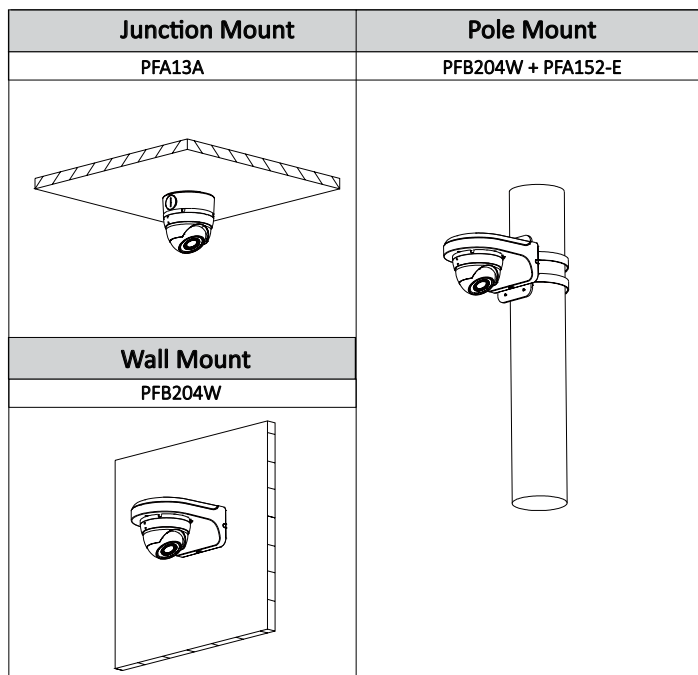
PFM321
12V 1A Power
Adapter



PFM320
12V 2A Power
Adapter



PFM320D-015
Power Adapter



Dimensions (mm/inch)

