dahua TECHNOLOGY

DH-HAC-HDBW2221R-Z
2MP WDR HDCVI IR Dome Camera

HDCVI

· 120dB true WDR, 3DNR
· Max 30fps@1080P
· HD and SD dual-output
· 2.7-12mm motorized lens
· Max. IR length 30m, Smart IR
· IP67, IK10, DC12V

| Pro Series | 1080p FULL HD | WDR | 30m IR | DC 12V | IP67 | Vandal-proof |

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 array 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.
The camera complies with IK10 impact resistant rating to provide maximum durability against vandals, making it capable of withstanding the equivalent of 55kg (120lbs) 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.

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/F1.4, 30IRE, 0Lux IR on
S/N Ratio	More than 65dB
IR Distance	Up to 30m (98feet)
IR On/Off Control	Auto / Manual
IR LEDs	2

Lens

Lens Type	Motorized lens / Fixed iris
Mount Type	Board-in
Focal Length	2.7-12mm
Max Aperture	F1.4
Angle of View	H: 99°~37°
Focus Control	Auto / Manual
Close Focus Distance	300mm 11.81''

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	
		Wide	Tele
Detect	25px/m (8px/ft)	47m(154ft)	129m(422ft)
Observe	63px/m (19px/ft)	19m(61ft)	51m(169ft)
Recognize	125px/m (38px/ft)	9m(31ft)	26m(84ft)
Identify	250ppm (76px/ft)	5m(15ft)	13m(42ft)

Pan / Tilt / Rotation

Pan/Tilt/Rotation	Pan: 0° ~ 355° Tilt: 0° ~ 75° Rotation: 0° ~ 355°

Video

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 CVBS tester out

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

Audio Interface	N/A

Eelectrical

Power Supply	12V DC ±25%
Power Consumption	Max 5W (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 & IK10

Construction

Casing	Aluminium
Dimensions	Φ122mm×88.9mm (Φ4.8"×3.5")
Net Weight	0.45kg (0.99lb)
Gross Weight	0.60kg (1.32lb)

Ordering Information

Type	Part Number	Description
2MP Camera	DH-HAC-HDBW2221RP-Z	2MP WDR HDCVI IR Dome Camera, PAL
	DH-HAC-HDBW2221RN-Z	2MP WDR HDCVI IR Dome Camera, NTSC
Accessories	PFA137	Junction box (For use alone)
	PFB200C	In-ceiling mount (For use alone)
	PFB203W	Wall mount (For use alone or with PFA152-E pole mount)
	PFA152-E	Pole mount (For use with PFB203W wall mount)
	PFA200W	Rain shade (For use with PFB203W wall mount or with PFB203W wall mount and PFA152-E pole mount)
	PFA106	Adapter Plate(For use with PFB220C)
	PFB220C	Ceiling Mount Bracket of Mini Dome & Eyeball Camera
	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:

PFA137
Junction box

PFB200C
Inceiling mount

PFB203W
Junction box

PFA152-E
Pole mount

PFA200W
Rain shade

PFA106
Adapter plate

PFB220C
Ceiling mount bracket

PFM820
UTC Controller

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

Junction Mount	In-ceiling Mount
PFA137	PFB200C

Wall Mount	Pole Mount
PFB203W	PFB203W + PFA152-E

Wall Mount with Rain Shade	Ceiling Mount (Extensible)
PFA137+PFA200W	PFA106+PFB220C

Pole Mount with Rain Shade
PFA137+PFA200W+PFA152-E

Dimensions (mm/inch)

122.0 [4.8"]

88.9 [3.5"]

⌀122.0 [⌀4.8"]

3-⌀4.5 [⌀0.18"]

⌀110.0 [⌀4.33"]

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