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dahua TECHNOLOGY

DH-HAC-HFW2221S
2MP WDR HDCVI IR Bullet Camera

HDCVI

· 120dB true WDR, 3DNR
· Max 30fps@1080P
· HD and SD dual-output
· 3.6mm fixed lens (2.8mm, 6mm, 8mm optional)
· Max. IR length 30m, Smart IR
· IP67, DC12V

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

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 ±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	18

Lens

Lens Type	Fixed lens / Fixed iris
Mount Type	Board-in
Focal Length	3.6mm (2.8mm, 6mm, 8mm Optional)
Max Aperture	F2.0
Angle of View	H: 90° (115.6°/59.4°/41.4°)
Focus Control	N/A
Close Focus Distance	800mm (500mm, 1800mm, 3000mm) 31.50'' (19.69'', 70.87'', 118.11'')

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)	2.8mm:40m(132ft) 3.6mm: 53m(175ft) 6mm: 78m(257ft) 8mm:107m(350ft)
Observe	63px/m (19px/ft)	2.8mm:16m(53ft) 3.6mm: 21m(70ft) 6mm: 31m(103ft) 8mm:43m(140ft)
Recognize	125px/m (38px/ft)	2.8mm:8m(26ft) 3.6mm: 11m(35ft) 6mm: 16m(51ft) 8mm:21m(70ft)
Identify	250ppm (76px/ft)	2.8mm:4m(13ft) 3.6mm: 5m(17ft) 6mm: 8m(26ft) 8mm:11m(35ft)

Pan / Tilt / Rotation

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

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
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

Construction

Casing	Aluminium
Dimensions	164.7mm×70mm×71.6mm (6.48"×2.76"×2.82")
Net Weight	0.35kg (0.77lb)
Gross Weight	0.44kg (0.97lb)

Ordering Information

Type	Part Number	Description
2MP Camera	DH-HAC-HFW2221SP 2.8mm	2MP WDR HDCVI IR Bullet Camera, PAL
	DH-HAC-HFW2221SP 3.6mm	
	DH-HAC-HFW2221SP 6mm	
	DH-HAC-HFW2221SP 8mm	
	DH-HAC-HFW2221SN 2.8mm	2MP WDR HDCVI IR Bullet Camera, NTSC
	DH-HAC-HFW2221SN 3.6mm	
	DH-HAC-HFW2221SN 6mm	
	DH-HAC-HFW2221SN 8mm	
Accessories	PFA134	Junction box (For use alone or with PFA152-E pole mount)
	PFA152-E	Pole mount (For use with PFA134 junction box)
	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

Junction Mount	Pole Mount
PFA134	PFB134 + PFA152-E

Dimensions (mm/inch)

164.7 [6.48"] 92 [3.62"] 70 [2.76"] 71.6 [2.82"]

Accessories

Optional:

PFA134 Junction box

PFA152-E Pole mount

PFM800-E Passive HDCVI Balun

PFM800-4MP Passive HDCVI Balun

PFM801-4MP Passive HDCVI Balun With Power

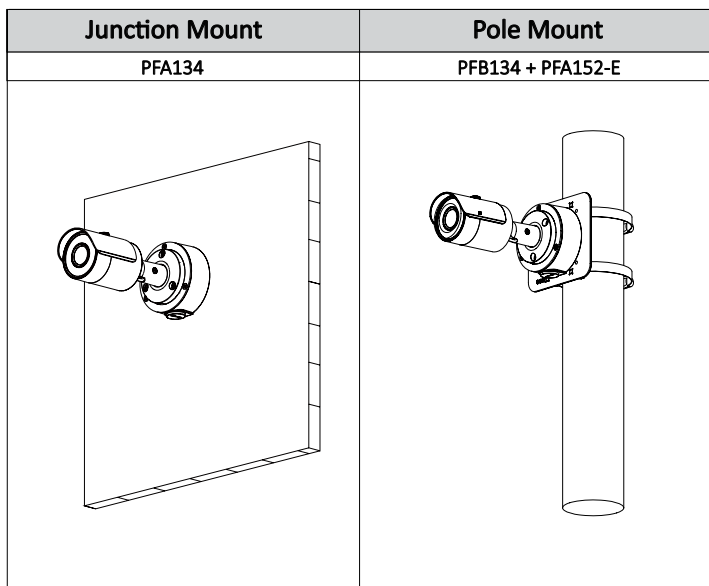PFM809-4MP 16Channel Passive HDCVI Balun Receiver

PFM321 12V 1A Power Adapter

PFM320 12V 2A Power Adapter

PFM320D-015 Power Adapter