alhua TECHNOLOGY

DH-HAC-HDW1220EM-A

2MP HDCVI IR Eyeball Camera

· Max 30fps@1080P

· HD and SD output switchable

· 3.6mm fixed lens (2.8mm, 6mm optional)

· Built-in mic

· Max. IR length 50m, Smart IR

· IP67, DC12V

Lite Series | 1080p FULL HD | 50m IR | IP67 | Audio | DC 12V

System Overview

Experience 1080P full HD video and the simplicity of using existing cabling infrastructure with HDCVI. The Lite series 1080P HDCVI camera features a compact design and offers a high quality image at a friendly price. It offers various motorized/fixed lens models with a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance makes the camera an ideal choice for SMB solutions.

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 XVR, 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 real-time transmission at long distance without any loss. It supports up to 800m(1080p)/1200m(720P) transmission via coaxial cable, and up to 300m(1080P)/450m(720P) via UTP cable.*

*This function is available for select models.

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.

Smart IR

The camera is designed with IR LED 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.

Multi-formats

The camera supports multiple video formats including HDCVI, CVBS and other two common HD analog formats in the market. The four formats can be switched over through OSD menu or by PFM820(UTC controller). This feature makes the camera to be compatible with most end users' existing HD/SD DVRs.

Multi-language OSD

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 detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

Protection

The camera's outstanding reliability is unsurpassed due to its rugged design. The camera is protected against water and dust with IP67 ranking, making it suitable for indoor or outdoor environments.
With working temperature range of-40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting ±30% 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 inch CMOS
Effective Pixels	1920(H)×1080(V), 2MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25s–1/100000s NTSC: 1/30s–1/100000s
S/N Ratio	>65dB
Minimum Illumination	0.02Lux/F1.9, 30IRE, 0Lux IR on
Fill Light Working Distance	50 m (164 ft)
IR On/Off Control	Auto; manual
IR LED Number	1
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm; 3.6 mm; 6 mm
Max. Aperture	F1.9
Field of View	2.8 mm: 119° x 101° x 54° (diagonal x horizontal x vertical) 3.6 mm: 100° x 84° x 45° (diagonal x horizontal x vertical) 6 mm: 60° x 56° x 30° (diagonal x horizontal x vertical)
Iris Type	Fixed iris
Close Focus Distance	2.8 mm: 0.5 m (1.7 ft) 3.6 mm: 0.8 m (2.6 ft) 6 mm: 2 m (6.6 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	38.6 m (126.6 ft)	15.4 m (50.5 ft)	7.7 m (25.3 ft)	3.9 m (12.8 ft)
	3.6 mm	49.7 m (163.1 ft)	19.9 m (65.3 ft)	9.9 m (32.5 ft)	5 m (16.4 ft)
	6 mm	82.8 m (271.7 ft)	33.1 m (108.6 ft)	16.6 m (54.5 ft)	8.3 m (27.2 ft)

Video

Frame Rate	CVI: 1080P@25/30fps; 720P@25/30fps; 720P@50/60fps; AHD: 1080P@25/30fps; 720P@25/30fps; TVI: 1080P@25/30fps; 720P@25/30fps; 720P@50/60fps; CVBS: 960H
Resolution	1080P (1920×1080); 720P (1280×720); 960H (960×576/960×480)
Day/Night	Auto switch by ICR
BLC	BLC/HLC/DWDR
WDR	DWDR
White Balance	Auto; manual

Gain Control	Auto; manual
Noise Reduction	2D NR
Smart IR	Yes
Electronic Defog	Yes
Mirror	Off/On
Privacy Masking	Off/On (8 area, rectangle)

Certifications

Certifications	CE (EN55032:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN55024:2010+A1:2015, EN 55035:2017, EN50130-4:2011+A1:2014) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)

Port

Audio Output	One channel built-in mic (-A)
Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port

Power

Power Supply	12V ±30% DC
Power Consumption	Max 3.2W (12V DC, IR on)

Environment

Operating Temperature	-40°C to +60°C (-40°F to 140°F); <95% (non-condensation)
Storage Temperature	-40°C to +60°C (-40°F to 140°F); <95% (non-condensation)
Protection Grade	IP67

Structure

Casing	Metal throughout the whole casing
Camera Dimensions	φ106.0 mm × 93.6 mm (φ4.17" × 3.69")
Net Weight	0.44 Kg (0.97 lb)
Gross Weight	0.59 Kg (1.3 lb)

Ordering Information

Type	Part Number	Description
2MP Camera	DH-HAC-HDW1220EMP-A 2.8mm	2MP HDCVI IR Eyeball Camera
	DH-HAC-HDW1220EMN-A 2.8mm	
	DH-HAC-HDW1220EMP-A 3.6mm	
	DH-HAC-HDW1220EMN-A 3.6mm	
	DH-HAC-HDW1220EMP-A 6mm	
	DH-HAC-HDW1220EMN-A 6mm	
	DH-HAC-HDW1220EMP-A 2.8mm	
	DH-HAC-HDW1220EMN-A 2.8mm	
	DH-HAC-HDW1220EMP-A 3.6mm	
	DH-HAC-HDW1220EMN-A 3.6mm	
	DH-HAC-HDW1220EMP-A 6mm	
	DH-HAC-HDW1220EMN-A 6mm	
Accessories	PFA139	Junction box
	PFA130-E	P66 Junction box
	PFB204W	Wall Mount Bracket (For use alone or with PFA152-E)
	PFA152-E	Pole Mount Bracket (For use with PFB204W)
	PFA106	Mount Adapter (For use with PFB220C)
	PFB220C	Ceiling Mount Bracket (For use with PFA106)
	PFM800-E	Passive HDCVI Balun
	PFM321D	12V 1A Power Adapter

Accessories

Optional:

PFA139
Junction box

PFA130-E
P66 Junction box

PFB204W
Wall Mount Bracket
(For use alone or with
PFA152-E)

PFA152-E
Pole Mount Bracket
(For use with PFB204W)

PFA106
Mount Adapter
(For use with PFB220C)

PFB220C
Ceiling Mount Bracket
(For use with PFA106)

PFM800-E
Passive HDCVI Balun

PFM321D
12V 1A Power Adapter

PFM820
UTC Controller

PFM904
Integrated Mount Tester

Ceiling Mount	Wall Mount	Hanging Mount	Pole Mount
PFA130-E	PFB204W	PFA106+PFB220C	PFA152-E+PFB204W

Dimensions (mm[inch])

93.6 [3.69]

⌀106.0 [⌀4.17]

⌀69.0 [⌀2.72]

4−⌀4.5 [⌀0.18]