

# DH-HAC-HFW3231E-ZH

## 2MP Starlight HDCVI IR Bullet Camera

### HDCVI



- Starlight, 120dB true WDR, 3DNR
- Max 30fps@1080P
- HD and SD dual-output
- 2.7-12mm motorized lens
- Max. IR length 100m, Smart IR
- IP67, IK10, AC24V/DC12V, Heater



#### System Overview

Experience 1080P full HD video, a complete set of features, and the simplicity of reusing existing coaxial infrastructure with HDCVI. The Starlight HDCVI camera with 120dB true WDR presents a high quality image with rich details even in extreme low-light conditions. It offers various auto-iris lens models with a multi-language OSD and multiple interfaces, including HD&SD video, audio, and alarm, all in an elegant case design. Its superior image performance and project-oriented features make the camera an ideal choice for mid to large-size businesses and projects in all industries.

#### 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.

##### Starlight

With the adoption of high performance sensor, the camera is able to provide incomparable performance even under extreme lowlight environment. The starlight feature allows more details to be captured and accurate color to be recognized at night or in scenes with limited illumination.

##### 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.

##### Multi-interfaces

The camera is designed with multi-interfaces for transmitting/receiving various signals. It supports HDCVI and CVBS video outputs simultaneously with two BNC connectors, and tester out interface for debugging. It also supports audio input interface as well as alarm input/output for connecting external devices. Multi-interfaces covers different requirements of monitoring scenes and facilitates deployment and construction.

##### Smart IR

The camera is designed with array LED IR illumination for best lowlight performance at maximum distance. 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 comes 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  $\pm 25\%$  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.

##### Elegant Design

As projected-oriented product, the camera adopts elegant appearance design to express feeling of high reliability for industrial grade application. Meanwhile, the front face of camera is designed with dark glass in order to minimize the interference against on-going business activities.

### Technical Specification

#### Camera

Image Sensor	1/2.8" CMOS
Effective Pixels	1945(H)×1097(V), 2.1MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1.3s~1/30000s NTSC: 1s~1/30000s
Minimum Illumination	0.005Lux/F1.4, 30IRE, 0Lux IR on
S/N Ratio	More than 65dB
IR Distance	Up to 100m (328feet)
IR On/Off Control	Auto / Manual
IR LEDs	4

#### Lens

Lens Type	Motorized lens / Auto iris
Mount Type	Board-in
Focal Length	2.7-12mm
Max Aperture	F1.4
Angle of View	H: 95°~36°
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)	48m(159ft)	133m(437ft)
Observe	63px/m (19px/ft)	19m(64ft)	53m(175ft)
Recognize	125px/m (38px/ft)	10m(32ft)	27m(87ft)
Identify	250px/m (76px/ft)	5m(17ft)	13m(44ft)

#### Pan / Tilt / Rotation

Pan/Tilt/Rotation	Pan: 0° ~ 360° Tilt: 0° ~ 90° Rotation: 0° ~ 360°
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#### 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	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	1-channel audio in
Alarm Interface	1-channel alarm in & 1-channel alarm out

#### Electrical

Power Supply	AC 24V±25% / DC 12V±25%
Power Consumption	Max 22.9W (12V DC, IR & heater on)

#### Environmental

Operating Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH * Start up should be done at above -40°C (-40°F)
Storage Conditions	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Ingress Protection & Vandal Resistance	IP67 & IK10

#### Construction

Casing	Aluminium
Dimensions	273.2mm×95.0mm×95.0mm (10.76"×3.74"×3.74")
Net Weight	1.16kg (2.56lb)
Gross Weight	1.52kg (3.35lb)

**Ordering Information**

Type	Part Number	Description
2MP Camera	DH-HAC-HFW3231EP-ZH 2.7~12mm	2MP Starlight HDCVI IR Bullet Camera, PAL
	DH-HAC-HFW3231EN-ZH 2.7~12mm	2MP Starlight HDCVI IR Bullet Camera, NTSC
Accessories	PFA121	Junction box (For use alone or with PFA152-E pole mount)
	PFA152-E	Pole mount (For use with PFA121 junction box)
	PFM800-E	1 Channel Passive HDCVI Balun
	FM320	12V 2A Power Adapter

**Accessories**

Optional:



PFA121  
Junction box



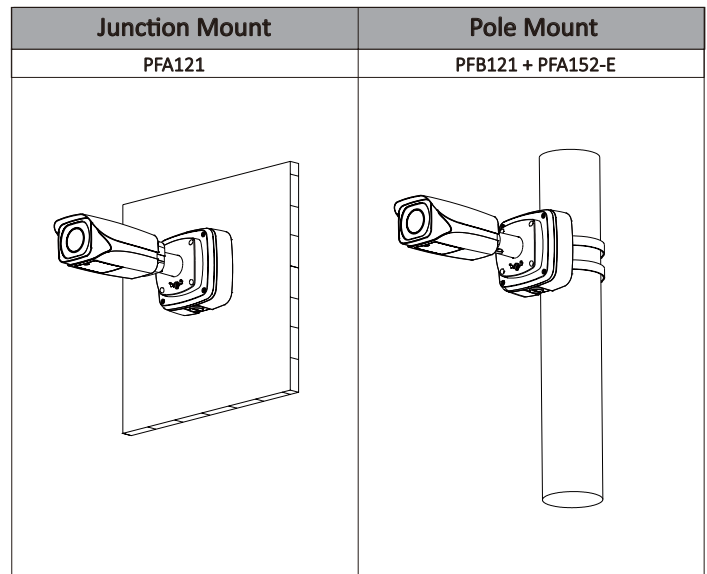
PFA152-E  
Pole mount



PFM800-E  
Passive HDCVI Balun



PFM320  
12V 2A Power Adapter



**Dimensions (mm/inch)**

