

# DH-HAC-HDBW2231F-M

2MP Mobile HDCVI IR Dome Camera

## HDCVI



- Starlight, 120dB true WDR, 3DNR
- Max 30fps@1080P
- HDCVI output (Aviation connector)
- 3.6mm fixed lens (2.8mm, 6mm optional)
- Max. IR length 20m, Smart IR
- IP67, IK10, DC12V
- Shock-proof



### System Overview

Experience a 1080P full HD mobile video surveillance solution with the simplicity of analog infrastructure. The mobile camera is designed with a shock-proof, compact case, which makes it convenient to install and adaptable to various applications. It offers a high quality image as well as a multi-language OSD. In addition, the camera employs the strengths of HDCVI to ensure real-time transmission.

### Functions

#### Elaborate Design

For better adapting the applications for vehicles, the mobile camera is designed with compact case, which minimizes the interference against on-going activities. Taking aesthetics requirements into consideration, the body and front face of the camera is all-black.

#### Shock-proof

Vibration is inevitable in mobile applications. In order to avoid image or connection failure, the hardware structure of the mobile camera is shock-proof with the certification of EN50155. Plus, the mobile camera adopts M12 aviation connector for stable connection with MCVR.

#### 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.

#### 4 Signals over 1 Coaxial Cable

HDCVI Mobile Camera supports 4 signals to be transmitted over 1 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.

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

#### 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.

#### 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.

#### Smart IR

The camera is designed with micro-crystalline 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.

#### Large Aperture Lens

The camera adopts high-end F1.6 large aperture lens. With higher amount of absorbed light, the camera presents an impressive lowlight performance.

#### 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.

### Technical Specification

#### Camera

Image Sensor	1/2.8" CMOS
Effective Pixels	1937(H)×1097(V), 2.1MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/4s~1/100000s NTSC: 1/3s~1/100000s
Minimum Illumination	0.005Lux/F1.6, 30IRE, 0Lux IR on
S/N Ratio	More than 65dB
IR Distance	Up to 20m (66feet)
IR On/Off Control	Auto / Manual
IR LEDs	8

#### Lens

Lens Type	Fixed lens / Fixed iris
Mount Type	Board-in
Focal Length	3.6mm (2.8mm, 6mm Optional)
Max Aperture	F1.6
Angle of View	H: 87° (110.5°/52.9°)
Focus Control	N/A
Close Focus Distance	1200mm (500mm, 1800mm) 47.24" (19.69", 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)	2.8mm: 42m(138ft) 3.6mm: 55m(180ft) 6mm: 81m(266ft)
Observe	63px/m (19px/ft)	2.8mm: 17m(56ft) 3.6mm: 22m(72ft) 6mm: 32m(105ft)
Recognize	125px/m (38px/ft)	2.8mm: 8m(26ft) 3.6mm: 11m(36ft) 6mm: 16m(52ft)
Identify	250ppm (76px/ft)	2.8mm: 4m(13ft) 3.6mm: 6m(20ft) 6mm: 8m(26ft)

#### Pan / Tilt / Rotation

Pan/Tilt/Rotation	Pan: 0° ~ 60° Tilt: 0° ~ 80° Rotation: 0° ~ 360°
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#### Video

Resolution	1080P (1920×1080)
Frame Rate	25/30fps@1080P
Video Output	1-channel BNC HDCVI high definition video output(Aviation connector)
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	ECE (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) EN50155 (EN50121-3-2, IEC61373)
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#### Interface

Audio Interface	N/A
Aviation Connector Interface	1-power 2-video ground 3-power ground 4-video

#### Electrical

Power Supply	12V DC ±25%
Power Consumption	Max 2.4W (12V DC, IR 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

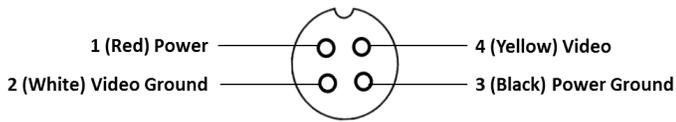
#### Construction

Casing	Aluminium
Dimensions	Φ106mm×50.3mm (Φ4.17"×1.98")
Net Weight	0.31kg (0.68lb)
Gross Weight	0.45kg (0.99lb)

**Ordering Information**

Type	Part Number	Description
2MP Camera	DH-HAC-HDBW2231FP-M 2.8mm	2MP Mobile HDCVI IR Dome Camera, PAL
	DH-HAC-HDBW2231FP-M 3.6mm	
	DH-HAC-HDBW2231FP-M 6mm	
	DH-HAC-HDBW2231FN-M 2.8mm	2MP Mobile HDCVI IR Dome Camera, NTSC
	DH-HAC-HDBW2231FN-M 3.6mm	
	DH-HAC-HDBW2231FN-M 6mm	

**Aviation Connector**



**Dimensions (mm/inch)**

