

# 2 MP HDCVI Fixed Eyeball Camera

2 MP Mobile HDCVI IR Eyeball Camera

## HDCVI



- 1/2.9-in. Progressive-scan CMOS Sensor
- Maximum 1080p at 30 fps Resolution
- Aviation Connector for HDCVI Output
- 3.6 mm or 6 mm Fixed Lens Options
- Built-in Microphone
- Maximum IR Distance 20 m (66 ft) with Smart IR
- IP67 Ingress Protection and Shock-proof
- Five-year Warranty\*



### System Overview

Dahua Mobile Solutions offers a durable mobile video surveillance solution that provides reliable security for transit agencies. The Mobile Solution cameras operate across different transportation networks. The fixed dome camera provides Full HD 1080p image quality in real-time. The camera features Smart IR technology to deliver clear images in near total darkness and is suitable for interior or exterior applications.

### Functions

#### Design for Mobile Surveillance

The compact, black housing blends in with most vehicle interiors and minimizes interference with other installed devices. The design also minimizes vibration and shock from normal driving situations. The hardware of the mobile camera is certified to EN50155 to avoid image distortions or connection failures. The camera uses an M12 aviation connector to connect to an MVR as an added level of stability.

#### Four Signals over a Single Coaxial Cable

HDCVI technology simultaneously transmits four signals (audio, video, power, and data)<sup>1</sup> over a single coaxial cable. Dual-way data transmission allows the HDCVI camera to communicate with an HCVR to send control signals or to trigger alarms. Moreover, HDCVI technology supports PoC for construction flexibility.

#### Long Distance Transmission

HDCVI technology guarantees real-time transmission over long distances without loss of video quality. HDCVI cameras provide the same resolution as most IP network camera systems using existing RG-59, RG-6, or CAT 6 UTP cabling.

#### Smart IR

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 20 m (66 ft).

#### Multi-language On-Screen Display (OSD)

The 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 detection and offers Chinese, English, French, German, Spanish, Italian, Japanese, Korean, Russian, Polish, and Portuguese variations.

#### 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.

With a working temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature 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.

1. Audio input is available for certain HDCVI cameras.

## Technical Specification

### Camera

Image Sensor	1/2.9-in. CMOS
Effective Pixels	1920(H) x 1080(V), 2.0 MP
Scanning System	Progressive
Electronic Shutter Speed	1/30 s to 1/100000 s
Minimum Illumination	0.02 Lux at F2.0 0 Lux (with IR on)
S/N Ratio	More than 65 dB
IR Distance	Up to 20 m (65.62 ft)
IR On/Off Control	Auto, Manual
IR LEDs	One (1)

### Lens

Lens Type	Fixed Lens / Fixed Iris
Mount Type	Board-in
Focal Length	3.6 mm or 6.0 mm
Max Aperture	F2.0
Angle of View, Horizontal	3.6 mm Lens: 82.8° 6 mm Lens: 51.2°
Close Focus Distance	3.6 mm: 800 mm (31.50 in.) 6 mm: 1900 mm (74.80 in.)

### Pan / Tilt / Rotation

Range	Pan: 0° to 360° Tilt: 0° to 80° Rotation: 0° to 360°
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### Video

Resolution	1080p (1920 x 1080)	
Frame Rate	1080p at 30 fps 720p at 30/60 fps	
Video Output	One (1) BNC HDCVI High-definition Channel, M12 A-coded Aviation Connector	
Video Transmission <sup>2</sup>	RG-59/U Coax	720p: 800 m (2624.67 ft) 1080p: 500 m (1640.42 ft)
	RG-6/U Coax	720p: 1200 m (3937.01 ft) 1080p: 800 m (2624.67 ft)
	CAT 6 UTP (balun required)	720p: 450 m (1476.38 ft) 1080p: 300 m (984.25 ft)
Day/Night	Auto (ICR), Manual	
OSD Menu	Multi-language	
BLC Mode	BLC, HLC, DWDR	
WDR	Digital WDR	
Gain Control	AGC	
Noise Reduction	2D	
White Balance	Auto, Manual	
Smart IR	Auto, Manual	

### Certifications

Safety	EN50155 (EN50121-3-2, IEC 61373) EN55032, EN55024, EN50130-4 UL60950-1+CAN/CSA C22.2 No.60950-1
Electromagnetic Compatibility (EMC)	FCC CFR 47 FCC Part 15 Subpart B ANSI C63.4-2014

### Interface

Audio	Built-in Microphone
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### Electrical

Power Supply	12 VDC ±25%
Power Consumption	Maximum 2.9 W (12 VDC with IR on)

### Environmental

Operating Conditions	-40° C to +60° C (-40° F to +140° F), Less than 90% RH Initiate startup above -40° C (-40° F)
Storage Conditions	-40° C to +60° C (-40° F to +140° F), Less than 90% RH
Ingress Protection	IP67

### Construction

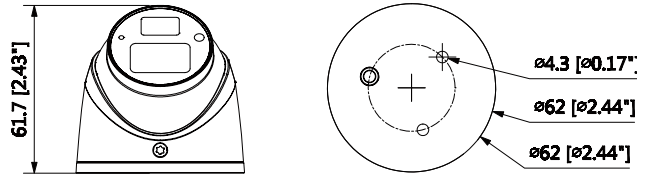
Casing	Aluminium
Dimensions	ø62.0 mm x 62.0 mm (ø2.44 in. x 2.44 in.)
Net Weight	0.16 kg (0.35 lb)
Gross Weight	0.23 kg (0.51 lb)

2. Transmission distance results verified by real-scene testing in Dahua's test laboratory. Actual transmission distances may vary due to external influences, cable quality, and wiring structures.

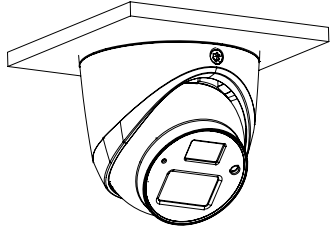
**Ordering Information**

Type	Part Number	Description
2 MP Camera	DH-HAC-HDW1220GN-M 3.6 mm	2 MP Mobile HDCVI IR Eyeball Camera, 3.6 mm
	DH-HAC-HDW1220GN-M 6.0 mm	2 MP Mobile HDCVI IR Eyeball Camera, 6 mm

**Dimensions (mm/inch)**



**Ceiling Mount**



**Wall Mount**

