

# DH-HAC-HDW1209TQ(-A)-LED

2MP Full-color HDCVI Quick-to-install Eyeball Camera



- 24/7 color imaging
- 40 m illumination distance
- Max. 30 fps@1080p
- Quick-to-install eyeball saves installation time
- CVI/CVBS/AHD/TVI switchable
- Fixed lens (2.8 mm; 3.6 mm optional)
- IP67, 12V±30% DC



## System Overview

Experience 2MP full HD color video and the simplicity of reusing existing coaxial infrastructure with HDCVI. The full-color starlight HDCVI camera presents a high quality color image with rich details even in total dark conditions. It offers various fixed lens models with a multi-language OSD and HD/SD switchable output. It adopts one powerful warm white LED illuminators, covering an effective range up to 40 m (131.23 ft). The LEDs switch on automatically in darkness to capture detail-packed full-color images 24/7, ensuring authentic identification of objects. It is an ideal choice for applications such as schools, retail centers and parking lots.

## Functions

### Full-color

The camera adopts F1.6 large aperture lens and 1/2.8" high performance sensor. With higher amount of absorbed light and advanced image processing algorithm, the camera can present 24/7 colored image that provides color details to accurately identify people or objects in low light conditions.

### Warm Supplemental lights

With one warm supplemental LED lights, the camera is able to provide a colorful and vivid image even in total dark. By default, the camera is set to smart light mode, in which the camera can automatically adjust the exposure time and light sensitivity simultaneously to avoid overexposing of the objects in the image center. Also, the sensitivity and intensity of the LED lights can be remotely controlled by OSD menu.

### Broadcast-quality Audio\*

Audio information is used as supplementary evidence in video surveillance applications. The HDCVI camera supports audio signal transmission over coaxial cable. In addition, it adopts unique audio processing and transmission technology that best restores source audio and eliminates noise, guaranteeing the quality and effectiveness of collected audio information.

\*This function is available for select models.

### 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.

\*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 700 m for 2MP HD video via coaxial cable, and up to 300 m via UTP cable.\*

\*Actual results verified by real-scene testing in Dahua's test laboratory.

### Multiple-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.

### 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.

### Easy Installation

HDCVI Quick-to-install eyeball adopts quick-to-install pedestal, which can achieve easier installation than conventional eyeball. Quick-to-install camera reduces time and labor costs.

Technical Specification						Noise Reduction	2D NR
Camera						Smart Light	Yes
Image Sensor		1/2.8 inch CMOS				Mirror	Off/On
Effective Pixels		1920 (H) × 1080 (V), 2MP				Privacy Masking	Off/On (8 area, rectangle)
Scanning System		Progressive				Certifications	
Electronic Shutter Speed		PAL: 1/25 s–1/100000 s NTSC: 1/30 s–1/100000 s				Certifications	CE (EN55032, EN55024, EN50130-4,EN60950-1) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014)
S/N Ratio		>65 dB				Port	
Minimum Illumination		0.01 Lux/F1.6, 0 Lux white light on				Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port
Illumination Distance		Distance up to 40 m (131.23 ft)				Power	
Illuminator On/Off Control		Auto; manual				Power Supply	12V ±30% DC
Illuminator Number		2				Power Consumption	Max 4.9W (12V DC, white light on)
Pan/Tilt/Rotation Range		Pan: 0°–360° Tilt: 0°-78° Rotation: 0°–360°				Environment	
Lens						Operating Temperature	–40°C to +60°C (–40°F to 140°F); <95% (non-condensation)
Lens Type		Fixed-focal				Storage Temperature	–40°C to +60°C (–40°F to 140°F); <95% (non-condensation)
Mount Type		M12				Protection Grade	IP67
Focal Length		2.8 mm; 3.6 mm				Structure	
Max. Aperture		F1.6				Casing	Inner core: metal Cover: plastic Pedestal: plastic
Field of View		2.8 mm: 126.2° × 106° × 56.5° (diagonal × horizontal × vertical); 3.6 mm: 103.6° × 86.9° × 46.3° (diagonal × horizontal × vertical)				Camera Dimensions	φ109.9 mm × 100.9 mm (φ4.33" × 3.97")
Iris Type		Fixed iris				Net Weight	0.32 kg (0.71 lb)
Close Focus Distance		2.8 mm: 0.7 m (2.29 ft); 3.6 mm: 1.2 m (3.94 ft)				Gross Weight	0.49 kg (1.08 lb)
DORI Distance	Lens	Detect	Observe	Recognize	Identify		
	2.8 mm	43.9 m (144.02 ft)	17.5 m (57.41 ft)	8.8 m (28.87 ft)	4.4 m (14.43 ft)		
	3.6 mm	55.2 m (181.1 ft)	22.1 m (72.5 ft)	11.0 m (36.1 ft)	5.5 m (18.0 ft)		
Video							
Frame Rate		CVI: PAL: 1080p@25 fps; 720p@25 fps; NTSC: 1080p@30 fps; 720p@30 fps; AHD: PAL: 1080p@25 fps; NTSC: 1080p@30 fps TVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps CVBS: PAL: 960H; NTSC: 960H					
Resolution		1080p (1920 × 1080); 720p (1280× 720); 960H (960 × 576/960 × 480)					
BLC		BLC/DWDR					
WDR		DWDR					
White Balance		Auto; manual					
Gain Control		Auto; manual					

## Ordering Information

Type	Part Number	Description
2MP Camera	DH-HAC-HDW1209TQP-LED 2.8 mm	2MP Full-color HDCVI Quick-to-install Eyeball Camera
	DH-HAC-HDW1209TQN-LED 2.8 mm	
	DH-HAC-HDW1209TQP-LED 3.6 mm	
	DH-HAC-HDW1209TQN-LED 3.6 mm	
	DH-HAC-HDW1209TQP-A-LED 2.8 mm	
	DH-HAC-HDW1209TQN-A-LED 2.8 mm	
	DH-HAC-HDW1209TQP-A-LED 3.6 mm	
	DH-HAC-HDW1209TQN-A-LED 3.6 mm	
Accessories	PFA13G	Junction Box
	PFA130-E	IP66 Junction Box
	PFB205W	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFM321D	12V 1A Power Adapter
	PFM904	Integrated Mount Tester
	PFM820	UTC controller (Only 1080p and below are available)
	PFM800-E	Passive HDCVI Balun

## Accessories

### Optional:



PFA13G  
Junction Box



PFA130-E  
IP66 Junction Box



PFB205W  
Wall Mount Bracket



PFA152-E  
Pole Mount Bracket



PFM321D  
12V 1A Power Adapter



PFM904  
Integrated Mount Tester



PFM820  
UTC controller  
(Only 1080p and below  
are available)



PFM800-E  
Passive HDCVI Balun

Junction Mount	Wall Mount	Pole Mount(Vertical)

## Dimensions (mm[inch])

