DH-HAC-HDW2501T-Z-A-DP

5MP Starlight HDCVI IR Eyeball Camera



* The parameters and datasheets below can only be applied to 2501-S2 series.
* In order to use the 5MP 16:9 HDCVI camera, the firmware of XVR must be upgraded to V4.001.0000001.0.R.200908 or later version.

· Max. 25 fps@5MP (16:9 video output)

· Starlight, 120 dB true WDR, 3D NR

· CVI/CVBS/AHD/TVI switchable

· Built-in mic

· 2.7 mm–13.5 mm motorized lens

· Max. IR length 60 m, Smart IR

· IP67, 24V AC/12V DC



System Overview

Experience 5MP full HD video and the simplicity of using existing cabling infrastructure with HDCVI. The Pro series 5MP HDCVI camera features a compact design and offers a high quality image at a friendly price. It offers various motorized/fixed lens models with 120 dB true WDR and a multi-language OSD and HD/SD switchable output. Its structural flexibility and high cost-performance make 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 700 m for 5MP 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.

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 large sized 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.

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.

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 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.

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 (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

Advanced 3D NR

3D NR is noise reduction technology that detects and eliminates random noises by comparing two sequential frames. Dahua's advanced 3D NR technology allows remarkable noise reduction with little impact to sharpness, especially under limited lighting condition. Besides, the advanced 3D NR effectively decreases the band width and saves the storage space.

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. 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.

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Technical Specification

Camera

Image Sensor	1/2.7 inch CMOS
Max. Resolution	2880 (H) × 1620 (V)
Pixel	5MP
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/3 s–1/100,000 s NTSC: 1/4 s–1/100,000 s
S/N Ratio	> 65 dB
Min. Illumination	0.001 Lux/F1.6; 30IRE; 0 Lux IR on
Illumination Distance	60 m (196.9 ft)
Illuminator On/Off Control	Auto; manual
Illuminator Number	2
Pan/Tilt/Rotation Range	Pan: 0°–360° Tilt: 0°–78° Rotation: 0°–360°

Lens

Lens Type	Motorized vari-focal
Auto Focus	Yes
Mount Type	ϕ14
Focal Length	2.7 mm–13.5 mm
Max. Aperture	F1.6
Field of View	Horizontal: 31.4°–113° Vertical: 17.6°–58° Diagonal: 36°–138°
Iris Type	Fixed iris
Close Focus Distance	0.8 m (2.6 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI distance	2.7mm	64.0 m (210.0 ft)	25.6 m (84.0 ft)	12.8 m (42.0 ft)	6.4 m (21.0 ft)
	13.5mm	210.0 m (689.0 ft)	84.0 m (275.6 ft)	42.0 m (137.8 ft)	21.0 m (68.9 ft)

*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/ project design tool.

Video

Frame Rate	CVI: PAL: 5M@25 fps; 4M@25 fps; 1080p@25 fps NTSC: 5M@25 fps; 4M@30 fps; 1080p@30 fps AHD: PAL: 4M@25 fps NTSC: 4M@30 fps TVI: PAL: 4M@25 fps NTSC: 4M@30 fps CVBS: PAL: 960H NTSC: 960H
Resolution	5M (2880 × 1620); 4M (2560 × 1440); 1080p (1920 × 1080); 960H (960 × 576/960 × 480)
Day/Night	Auto switch by ICR
BLC	BLC/HLC/WDR/HLC-Pro
WDR	120 dB
White Balance	Auto; manual
Gain Control	Auto; manual
Noise Reduction	3D NR
Smart Illumination	Yes
Digital Zoom	4x
Defog	Electronic defog
Mirror	Off/On
Privacy Masking	Off/On (8 areas, rectangle)

Certifications

Certifications	CE (EN55032:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN55024:2010+A1:2015, EN55035:2017, EN50130-4:2011+A1:2014, EN62368-1:2014+A11:2017) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)

Port

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

Power

Power Supply	24V AC±25%/12V DC±10%
Power Consumption	Max. 9.5W (12V DC, IR on)

Environmental

Operating Temperature	–30°C to +60°C (–22°F to +140°F); < 95% (non-condensation)
Storage Temperature	–30°C to +60°C (–22°F to +140°F); < 95% (non-condensation)
Protection Grade	IP67

Structure

Casing	Metal throughout the whole casing
Camera Dimensions	Φ122 mm × 104.8 mm (Φ4.8" × 4.13")
Net Weight	0.63 kg (1.40 lb)
Gross Weight	0.79 kg (1.70 lb)

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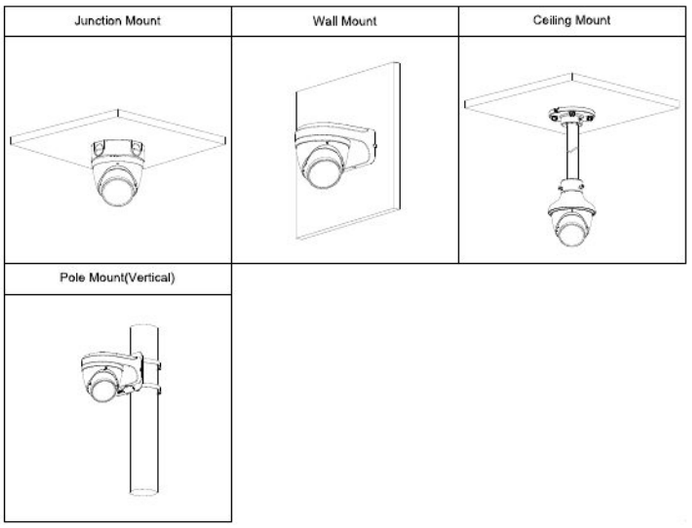
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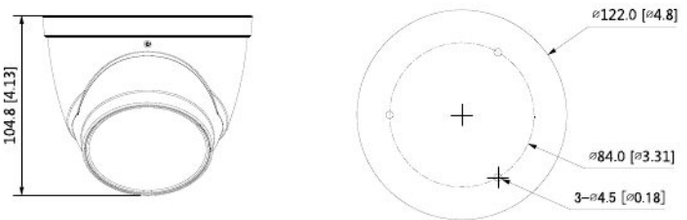
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Ordering Information

Type	Part Number	Description
5MP Camera	DH-HAC-HDW2501TP-Z-A-DP 2.7 mm–13.5 mm	5MP Starlight HDCVI IR EyeballCamera
	DH-HAC-HDW2501TN-Z-A-DP 2.7 mm–13.5 mm	
Accessories	PFA137	Junction Box
	PFA130-E	IP66 Junction box
	PFB205W	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFA106	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	PFM800-4K	Passive HDCVI Balun
	PFM321D	12V 1A Power Adapter
	PFM320D-015	12V 1.5A Power Adapter
	PFM904	Integrated Mount Tester



Dimensions (mm [inch])



Accessories

Optional:



PFA137
Junction Box



PFA130-E
IP66 Junction box

PFB205W
Wall Mount Bracket



PFA152-E
Pole Mount Bracket



PFA106
Mount Adapter



PFB220C
Ceiling Mount Bracket



PFM800-4K
Passive HDCVI Balun



PFM321D
12V 1A Power Adapter



PFM320D-015
12V 1.5A Power Adapter



PFM904
Integrated Mount Tester

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