DH-HAC-HDBW2501E

5MP Starlight HDCVI IR Dome 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
- 3.6 mm fixed lens (2.8 mm optional)
- Max. IR length 30 m, Smart IR
- IP67, IK10, DC12V±30%

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.

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 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.

Multi-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. This feature makes the camera to be compatible with most end users' existing HD/SD DVRs.

Multi-language OSD

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 detect. The camera supports 11 languages for OSD menu, namely, Chinese, English, French, German, Spanish, Portuguese, Italian, Japanese, Korean, Russian and Polish.

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 ascene 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.

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 4 KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/2.7 inch CMOS
Max. Resolution	2880 (H) × 1620 (V)
Pixel	5 MP
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, 0Lux IR on
Illumination Distance	30 m (98.4 ft)
Illuminator On/Off Control	Auto / Manual
Illuminator Number	12
Pan/Tilt/Rotation Range	Pan: 0°–355° Tilt: 0°–65° Rotation: 0°–355°

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm; 3.6 mm
Max. Aperture	F1.6
Field of View	2.8 mm: 132° x 111°x 58° (diagonal x horizontal x vertical) 3.6 mm: 109° x 92°x 48° (diagonal x horizontal x vertical)
Iris Type	Fixed iris
Close Focus Distance	2.8 mm: 0.9 m (3.0 ft) 3.6 mm: 1.6 m (5.2 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.8 mm	63.6 m (208.7 ft)	25.4 m (83.3 ft)	12.7 m (41.7 ft)	6.4 m (21.0 ft)
	3.6 mm	80 m (262.5 ft)	32 m (105.0 ft)	16 m (52.5 ft)	8 m (26.2 ft)

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	2D NR/3D NR
Smart IR	Yes
Mirror	Off/On
Privacy Masking	Off/On (8 areas, rectangle)

Certifications

Certifications	CE (EN55032:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN55024:2010+A1:2015, EN 55035:2017, EN50130-4:2011+A1:2014, EN 62368-1:2014+A11:2017) FCC (CFR 47 FCC Part 15 subpartB, ANSI C63.4-2014) UL (UL60950-1+CAN/CSA C22.2 No.60950-1)

Port

Video Output	Video output choices of CVI/TVI/AHD/CVBS by one BNC port (DIP Switch)

Power

Power Supply	DC 12V ±30%
Power Consumption	Max 4.5W (12V DC, IR on)

Environment

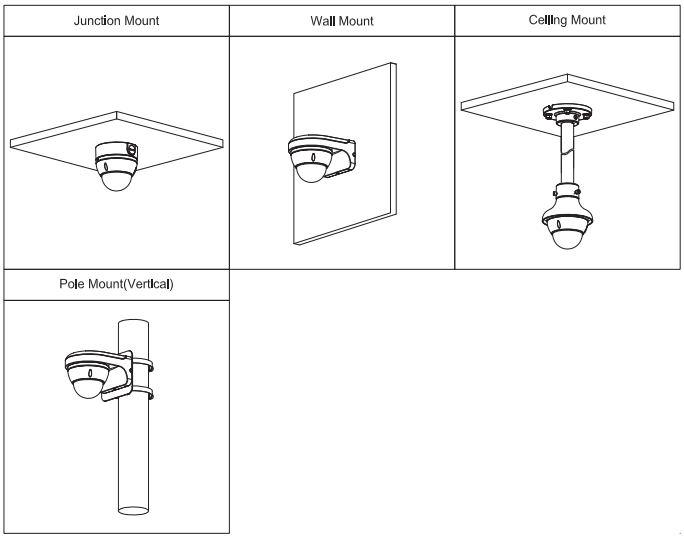
Operating Temperature	–40°C to +60°C (–40°F to +140°F); < 95% (non-condensation)
Storage Temperature	–40°C to +60°C (–40°F to +140°F); < 95% (non-condensation)
Protection Grade	IP67, IK10

Structure

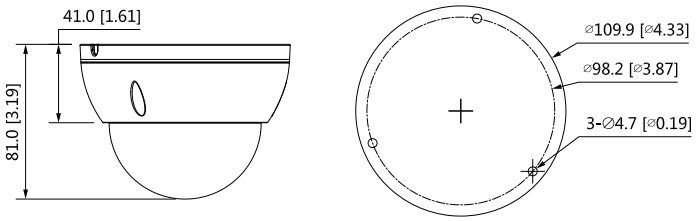
Casing	Plastic dome cover+metal upper casing+metal pedestal
Camera Dimensions	ϕ109.9 mm × 81.0 mm (ϕ4.33" × 3.19")
Net Weight	0.33 kg (0.73 lb)
Gross Weight	0.47 kg (1.04 lb)

Ordering Information

Type	Part Number	Description
5MP Camera	DH-HAC-HDBW2501EP 2.8 mm	5MP Starlight HDCVI IR Dome Camera
	DH-HAC-HDBW2501EN 2.8 mm	
	DH-HAC-HDBW2501EP 3.6 mm	
	DH-HAC-HDBW2501EN 3.6 mm	
Accessories	PFA136	Junction Box
	PFA123	IP66 Junction box
	PFB203W	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
	PFM904	Integrated Mount Tester



Dimensions (mm[inch])



Accessories

Optional:

PFA136
Junction Box

PFA123
IP66 Junction box

PFB203W
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

PFM904
Integrated Mount Tester

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