DH-HAC-HDBW3231E-Z

2MP Starlight HDCVI IR Dome Camera

* The parameters and datasheets below can only be applied to 3231-S2 series.

- Max 30 fps@1080p
- Starlight, 120dB true WDR, 3D NR
- Auto focus,2.7 mm–13.5 mm motorized lens
- CVI/CVBS/AHD/TVI switchable
- Super Adpat and SMD Plus
- Max. IR length 60 m, Smart IR
- IP67, IK10, 24 VAC/12 VDC

System Overview

The Pro Series contains a series of highly reliable and flexible cameras, making it a great choice for SMB solutions and projects. It has Starlight technology, up to 130 dB true WDR and 3DNR, and produces vivid images in rich detail even under difficult lighting conditions.

Functions

Starlight

With its large image sensor and large aperture, the camera delivers high performance and quality, even in lowlight conditions. The starlight feature allows the camera to capture highly detailed images in accurate color, recognizing targets even at night or in scenes with limited light.

Wide Dynamic Range

With its advanced Wide Dynamic Range technology (WDR), the camera captures highly detailed images and produces high-definition recordings in high-contrast lighting conditions, and in scenes with backlighting or shadows.

Super Adapt

With its intelligent algorithm, the camera automatically adjusts its parameters to provide optimal performance and vivid images.

4 Signals over 1 Coaxial Cable

HDCVI technology supports 4 signals (video, audio*, data and power) which are simultaneously transmitted over a coaxial cable. Dual-way data transmission allows the HDCVI camera to interact with the XVR to perform various actions such as sending control signals and triggering alarms. HDCVI technology also supports PoC, which makes the camera easy and quick to install.

* Audio input is available for select HDCVI camera models.

Advanced 3DNR

Dahua's advanced 3DNR technology reduces image noise with little to no impact on image sharpness, especially in poor lighting conditions. It detects the noise, and compares the sequential frames to effectively reduce the noise. It also makes efficient use of bandwidth, saving on storage space.

Smart IR Illumination

With its IR illumination, the camera provides optimal performance in low light conditions, ensuring uniformity in the brightness of B/W images. Through its smart IR technology, the camera also compensates for the distance of targets by adjusting the intensity of its IR LEDs, preventing overexposure of images as targets move closer to the camera.

Protection

IP67: The camera passed a series of rigorous dust and immersion tests. Its enclosure is both dust-proof and waterproof, and can function normally while being immersed in 1 m deep water for up to 30 minutes.
IK10: The enclosure can withstand up to 5 punches from a 5 kg hammer falling from a height of 40 cm (impact energy is 20 J).
Wide voltage: The camera has ±30% input voltage tolerance (for some power supplies) and a wide voltage range, making it suitable for a variety of outdoor scenarios.

SMD Plus

SMD Plus With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm. *SMD Plus takes effect when SMD or IVS&SMD is selected in AI Mode.

Technical Specification

Camera

Pixel	2 MP
Image Sensor	2 MP CMOS
Max. Resolution	1920 (H) × 1080 (V)
Scanning System	Progressive
Electronic Shutter Speed	PAL: 1/25 s–1/100,000 s NTSC: 1/30 s–1/100,000 s
Min. Illumination	0.001 lux@F1.5 (Color, 30 IRE) 0.0001 lux@F1.5 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>65 dB
Illumination Distance	60 m (196.85 ft)
Illuminator On/Off Control	Auto
Illuminator Number	3 (IR light)
Pan/Tilt/Rotation Range	Pan: 0°–355° Tilt: 0°–70° Rotation: 0°–355°

Lens

Lens Type	Motorized Vari-focal
Auto Focus	Yes
Lens Mount	φ14
Focal Length	2.7–13.5 mm
Max. Aperture	F1.5
Field of View	H: 109°–30°; V: 56°–17°; D: 131°–35°
Iris Control	Auto
Close Focus Distance	0.8 m (2.62 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	44.1 m (144.69 ft)	17.7 m (58.07 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	T	144.8 m (475.07 ft)	57.9 m (189.96 ft)	29.0 m (95.14 ft)	14.5 m (47.57 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

Video Frame Rate	CVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps; AHD: PAL: 1080p@25 fps; NTSC: 1080p@30 fps; TVI: PAL: 1080p@25 fps; NTSC: 1080p@30 fps; CVBS: PAL: 960 × 576H; NTSC: 960 × 480H
Resolution	1080p (1920 × 1080); 960H (960 × 576/960 × 480)

Day/Night	Auto (ICR)/Color/B/W
BLC	BLC; HLC; WDR; AUTO
WDR	120 dB
White Balance	Auto; Area white balance
Gain Control	Auto
Noise Reduction	3D NR
Smart Motion Detection	Yes
Smart Illumination	Yes
Defog	Electronic defog
Mirror	Yes
Privacy Masking	Off/On (8 areas, rectangle)

Certification

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)

Port

Video Output	Video output choices of CVI/TVI/AHD/CVBS
Audio Input	1-channel audio in (RCA)
Alarm Input	1 channel
Alarm Output	1 channel
Menu Settings	1 Five-direction button
Test Port	1-channel 2-pin CVBS video output
Upgrade Port	1-channel 4-pin Ethernet input

Power

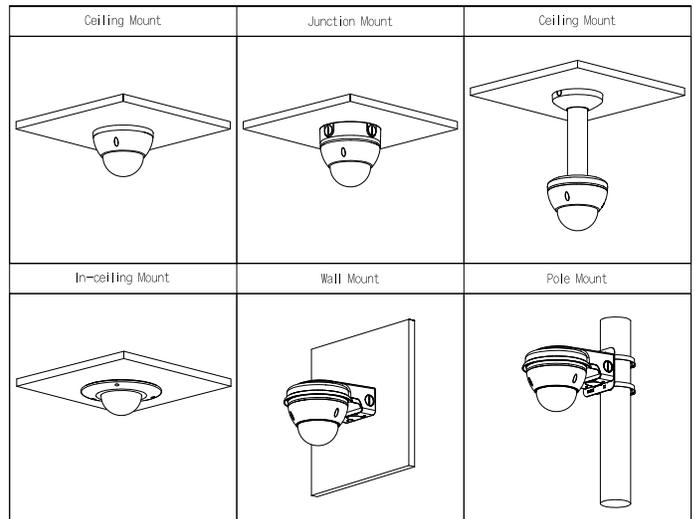|	
Power Supply	12 VDC ± 10%; 24 VAC ± 25%
Power Consumption	Max. 13 W (12 VDC, IR on)

Environment

Operating Temperature	−30 °C to +60 °C (−22 °F to +140 °F)
Operating Humidity	<95% (RH), non-condensing
Storage Temperature	−30 °C to +60 °C (−22 °F to +140 °F)
Protection	IP67; IK10

Structure
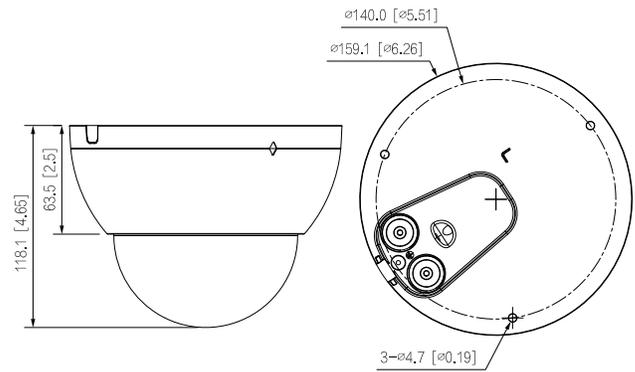
Casing	Metal
Product Dimensions	Φ159.1 mm × 118.1 mm (Φ6.26" × 4.65")
Packaging Dimensions	183 mm × 181 mm × 145 mm (7.20" × 7.13" × 5.71")
Net Weight	0.90 kg (1.98 lb)
Gross Weight	1.20 kg (2.65 lb)
Installation	Wall mount; ceiling mount; horizontal pole mount

Ordering Information

Type	Model	Description
2M Camera	DH-HAC-HDBW3231EP-Z	2MP Starlight HDCVI IR Dome Camera, PAL
	DH-HAC-HDBW3231EN-Z	2MP Starlight HDCVI IR Dome Camera, NTSC
Accessories (Optional)	PFB211W	Wall Mount Bracket
	PFB201C	In-ceiling Mount Bracket
	PFA101	Mount Adapter
	PFB300C	Ceiling Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFM800-E	Passive HDCVI Balun
	PFM320D	12V 2A Power Adapter
	PFM904	Integrated Mount Tester

Accessories

Optional:

PFB211W
Wall Mount
Bracket

PFB201C
In-ceiling Mount
Bracket

PFA101
Mount
Adapter

PFB300C
Ceiling Mount
Bracket

PFA152-E
Pole Mount
Bracket

PFM800-E
Passive HDCVI
Balun

PFM320D
12V 2A Power
Adapter

PFM904
Integrated Mount
Tester

Dimensions (mm[inch])