dahua
TECHNOLOGY

DH-IPC-HDBW2231R-ZS-S2

2MP WDR IR Dome Network Camera

- 2MP, 1/2.8" CMOS image sensor, low illuminance, high image definition
- Outputs 2MP (1920 × 1080)@25/30 fps
- H.265 coding, high compression ration, low bit rate
- Built-in IR LED, max IR distance: 40 m
- ROI, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments
- Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
- Intelligent detection: Intrusion, tripwire
- Abnormality detection: Motion detection, video tempering, no SD card, SD card full, SD card error, network disconnected, IP conflict, illegal access, voltage detection
- Max. 256 GB SD card
- 12V DC/POE power support
- IP67, IK10 protection grade

| 2Mp | H.265+ | WDR | Starlight | IVS | IP67 | Vandal-proof |

System Overview

With updraded H.265 encoding technology, Dahua Lite series camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better colorful image in the environment of low illumination. It supports SD card storage, waterproof function, dust-proof function and tamper-proof function, complying to the standards of IP67 and IK10.

Functions

Smart(H.265+ & H.264+)

Adopting advanced algorithm of auto stream control according to the environment, Dahua smart encoding technology realizes the higher efficiency than (H.265 & H.264), providing high-quality video, and reducing the cost of storage and transmission.

Wide dynamic range (WDR)

Dahua adopts advanced Wide Dynamic Range (WDR) technology. You can get clear details in the environment of strong brightness contrast. In high brightness and back- light environment, bright region and dark region with strong light source, you can also get clear images.

Starlight

Dahua Starlight technology mainly applies to the environment of low illumination, and it can provide clear colorful video. Even in the environment of min. illumination, the technology can guarantee the good image effect.

Intelligent Video Analysis (IVS)

With advanced video algorithm, Dahua camera supports intelligent detection, such as tripwire and intrusion and so on.

Protection (IP67, IK10, wide voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can works normal after soaking in 1 m deep water for 30 minutes.
IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 m (Impact energy is 20J).
Wide voltage: The camera allows ±30% input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

ONVIF

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Effective Pixels	1920 (H) × 1080 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100000 s
Min. Illumination	0.002 Lux @ F1.6
IR Distance	40 m (131.23 ft) (IR)
IR On/Off Control	Auto/Manual
IR LEDs Number	2 (IR LED)
Pan/Tilt/Rotation Range	Horizonal: 0°–355° Vertical: 0°–75° Rotation: 0°–355°

Lens

Lens Type	Motorized vari-focal
Mount Type	φ14
Focal Length	2.7mm–13.5mm
Max. Aperture	F1.6
Field of View	Horizonal: 109°–28° Vertical: 57°–16° Diagonal: 131°–33
Optical Zoom	5 times
Iris Type	Fixed
Close Focus Distance	0.8m–0.8m (2.62 ft–2.62 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	44.1 m (144.69 ft)	17.6 m (57.74 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	T	151.7 m (497.70 ft)	60.6 m (198.82 ft)	30.3 m (99.41 ft)	15.1 m (49.65 ft)

Smart Event

General IVS Analytics	Intrusion; tripwire

Video

Video Compression	H.265; H.264; H.264B; MJPEG
Smart Codec	H.264: Yes H.265: Yes
Video Frame Rate	50Hz Main stream (1920 × 1080@25 fps); sub stream (704 × 576@25 fps) 60Hz Main stream (1920 × 1080@30 fps); sub stream (704 × 480@30 fps)
Stream Capability	Main stream; sub stream
Resolution	1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 ×720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR

Video Bit Rate	H.264: 32 kbps–6144 kbps H.265: 12 kbps–6144 kbps
Day/Night	ICR switch
BLC	Yes
WDR	120 dB
White Balance	Auto/natural/street lamp/outdoor/manual/regional custom
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Disable/Enable (4 areas, rectangle)
Region of Interest(RoI)	Yes (4 areas)
Smart IR	Yes
Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 1080p resolution.)
Mirror	Yes
Privacy Masking	4 areas

Network

Network	RJ-45 (10/100 Base-T)
Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; QoS; UPnP; NTP; RTMP; Multicast; HTTPS; SFTP; 802.1x; ICMP;IGMP
Interoperability	ONVIF (Profile S/Profile G); CGI; Milestone; Genetec
User/Host	20
Edge Storage	Dahua Cloud; FTP; Micro SD card (max. 256 GB); NFS
Browser	IE Google Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

Certification

Certifications	CE-LVD: EN60950-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL: UL60950-1 CAN

Power

Power Supply	12V DC/POE
Power Consumption	Basic power consumption: 2W (12V DC); 2.7W (POE) Max power consumption: (H.265, Max resolution, Max stream, WDR, IR full intensity, IVS): 5.8W (12V DC), 6.4W (POE)

Environment

Operating Temperature	-30°C to +60°C (-22°F to +140°F)
Operating Humidity	≤95%
Storage Temperature	-40°C to +60°C (-40°F to +140°F)
Storage Humidity	≤95%
Protection Grade	IP67, IK10

Structure

Casing	Metal
Dimensions	Φ122 mm × 88.9 mm (Φ4.80" × 3.50")
Net Weight	0.47 kg (1.04 lb)
Gross Weight	0.63 kg (1.39 lb)

Ordering Information

Type	Part Number	Description
2MP Camera	DH-IPC-HDBW2231RP-ZS-S2	2MP WDR IR Dome Network Camera,PAL
	DH-IPC-HDBW2231RN-ZS-S2	2MP WDR IR Dome Network Camera,NTSC
Accessories (optional)	PFA137	Junction Box
	PFB203W	Wall Mount
	PFA152-E	Pole Mount
	PFA200W	Rain Shade
	PFA106	Mount Adapter
	PFB220C	Celling Mount
	PFB200C	In-Celling Mount
	PFM321D	DC12V1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
	PFM114	TLC SD Card

Accessories

Optional:

PFA137
Junction Box

PFB203W
Wall Mount

PFA152-E
Pole Mount

PFA200W
Rain Shade

PFA106
Mount Adapter

PFB220C
Celling Mount

PFB200C
In-Celling Mount

PFM321D
DC12V1A Power Adapter

LR1002-1ET/1EC
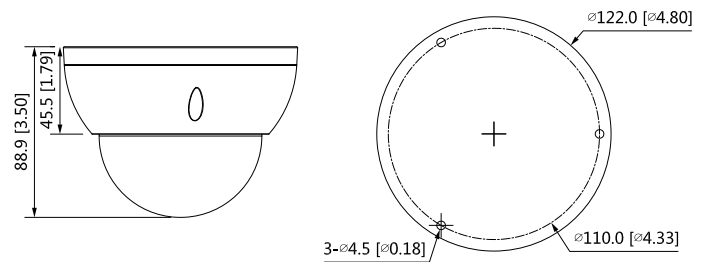Single-port long reach ethernet over coax extender

PFM900-E
Integrated Mount tester

PFM114
TLC SD card

Junction Mount	Wall Mount	Wall Mount	Pole Mount
PFA137	PFA137+PFA200W	PFB203W	PFB203W+PFA152-E
Ceiling Mount	In-Ceiling Mount		
PFA106+PFB220C	PFB200C		

Dimensions (mm[inch])

⌀122.0 [⌀4.80]

88.9 [3.50]

45.5 [1.79]

3-⌀4.5 [⌀0.18]

⌀110.0 [⌀4.33]