DH-IPC-HDBW2231F-AS-S2

2MP Lite IR Fixed-focal Dome Network Camera

Series Overview

With upgraded H.265 encoding technology, Dahua Lite series network camera has efficient video encoding capacity, which saves bandwidth and storage space. This camera adopts the latest starlight technology and displays better color image in the condition of low illumination. It supports SD card storage, dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

WDR

With advanced Wide Dynamic Range (WDR) technology, Dahua network camera provides clear details in the environment of strong brightness contrast. The bright and dark area can get clear video even in high brightness environment or with backlight shadow.

Starlight

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

- 2-MP, 1/2.8" CMOS image sensor, low illuminance, high image definition.
- Outputs max. 2MP (1920 × 1080) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, max. IR distance: 30 m.
- RoI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent detection: Intrusion, tripwire.
- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, voltage detection.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out; built-in Mic; supports max. 256 GB Micro SD card.
- 12V DC/PoE power suppply.
- IP67, IK10 protection.

IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

Cyber Security

Dahua network camera is equipped with a series of key security technologies, such as security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage, which improve its security defense and data protection, and prevent malicious programs from invading the device.

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 work normally 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 cm (Impact energy is 20J).
Wide voltage: The camera allows ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Minimum Illumination	0.002 lux@F1.6 (Color, 30 IRE) 0.0002 lux@F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
Illumination Distance	30 m (98.4 ft)(IR)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	8 (IR LED)
Pan/Tilt/Rotation Range	Pan: −30°–30° Tilt: 0°–80° Rotation: 0°–360°

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: H: 108°; V: 56°; D: 128° 3.6 mm: H: 88°; V: 46°; D: 104°
Iris Type	Fixed
Close Focus Distance	2.8 mm: 0.7 m (2.3 ft) 3.6 mm: 1.1 m (3.6 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.8mm	43.9 m (144.03 ft)	17.5 m (57.41 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	3.6mm	54.8 m (179.79 ft)	21.9 m (71.85 ft)	11.0 m (36.09 ft)	5.5 m (18.04 ft)

Smart Event

IVS	Tripwire; intrusion

Video

Video Compression	H.265; H.264; H.264B; MJPEG (only supported by sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Main stream: 1920 × 1080 @(1fps–25/30 fps) Sub stream: 704 × 576 @(1fps–25/30 fps) 704 × 480 @(1fps–25/30 fps) *The values above are the max. frame rates of each stream; for multiple streams, the values will be subjected to the total encoding capacity.
Stream Capability	2 streams

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	Auto (ICR)/Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
White Balance	Auto; natural; street lamp; outdoor; manual; regional custom
Gain Control	Auto; Manual
Noise Reduction	3D NR
Motion Detection	OFF/ON (4 areas, rectangular)
Region of Interest (RoI)	Yes (4 areas)
Smart Illumination	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; G.726

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; audio detection; voltage detection; security exception; local alarm

Network

Network	RJ-45 (10/100 Base-T)
SDK and API	Yes
Cyber Security	Video encryption; firmware encryption; configuration encryption; Digest; WSSE; account lockout; security logs; IP/MAC filtering; generation and importing of X.509 certification; syslog; HTTPS; 802.1x; trusted boot; trusted execution; trusted upgrade
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP ; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec
User/Host	20
Storage	FTP; SFTP; Micro SD Card (support max. 256 GB); NAS
Browser	IE; Chrome; Firefox
Management Software	Smart PSS; DSS; DMSS

Mobile Phone	IOS; Android

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07

Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5mA 3V–5V DC
Alarm Output	1 channel out: 300mA 12V DC

Power

Power Supply	12V DC/PoE
Power Consumption	<5.4W

Environment

Operating Temperature	−40°C to +60°C (−40°F to +140°F)/less than ≤ 95% RH
Storage Temperature	−40°C to +60°C (−40°F to +140°F)
Protection	IP67; IK10

Structure

Casing	Metal
Dimensions	55 mm × Φ108.9 mm (2.2" × Φ4.3")
Net Weight	0.38 kg (0.8 lb)
Gross Weight	0.52 kg (1.1 lb)

Ordering Information

Type	Part Number	Description
2MP Camera	DH-IPC-HDBW2231FP-AS-S2	2MP Lite IR Fixed-focal Dome Network Camera,PAL
	DH-IPC-HDBW2231FN-AS-S2	2MP Lite IR Fixed-focal Dome Network Camera,NTSC
Accessories (optional)	PFA139	Junction Box
	PFB204W	Wall Mount Bracket
	PFA152-E	Pole Mount Bracket
	PFB220C	Ceiling Mount Bracket
	PFA106	Mount Adapter
	PFM321D	12V DC 1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
	TF-P100	MicroSD Memory Card

Accessories

Optional:

PFA139
Junction Box

PFB204W
Wall Mount Bracket

PFA152-E
Pole Mount Bracket

PFB220C
Ceiling Mount Bracket

PFA106
Mount Adapter

PFM321D
12V DC 1A Power Adapter

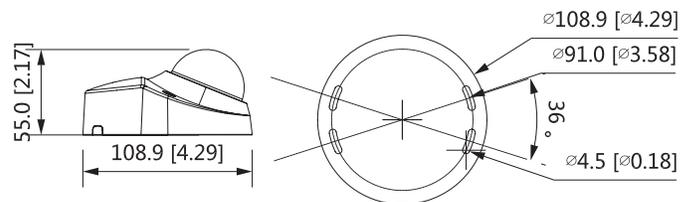LR1002-1ET/1EC
Single-port Long Reach Ethernet over Coax Extender

PFM900-E
Integrated Mount Tester

TF-P100
MicroSD Memory Card

Junction Mount	Wall Mount	Pole Mount	Celling Mount
PFA139	PFB204W	PFB204W+PFA152-E	PFB220C+PFA106

Dimensions (mm[inch])