

DH-IPC-HDBW2231F-AS-S2

2MP Lite IR Fixed-focal Dome Network Camera



- 2MP, 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 DNR, 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 supply
- IP67, IK10 protection



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 to the standards of IP67 and IK10.

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

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

IVS

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

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 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 cm (Impact energy is 20J).

Wide voltage: The camera allows $\pm 30\%$ 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" 2Megapixel progressive 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
S/N Ratio	> 56 dB
Minimum Illumination	0.002 Lux @ F1.6
Illumination Distance	30 m (98.4 ft)
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 F1.6				
Field of View	2.8 mm: Horizontal 106° × Vertical 56° × Diagonal 126° 3.6 mm: Horizontal 87° × Vertical 46° × Diagonal 104°				
Iris Type	Fixed				
Close Focus Distance	2.8 mm: 0.6 m (2.0 ft) 3.6 mm: 1.2 m (3.9 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	56.0 m (183.7 ft)	22.4 m (73.5 ft)	11.2 m (36.7 ft)	5.6 m (8.5 ft)
	3.6mm	80.0 m (262.5 ft)	32.0 m (105.0 ft)	16.0 m (52.5 ft)	8.0 m (26.2 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)
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 DNR
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; AAC

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
Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; PPPoE; 802.1x; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; Genetec; P2P
User/Host	20
Edge Storage	Dahua Cloud; FTP; SFTP; Micro SD card (support max. 256 G); NAS
Browser	IE Chrome 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/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)
Ingress 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
	PFA152-E	Pole Mount
	PFB220C	Mount Adapter
	PFA106	Ceiling Mount
	PFM321D	12V DC 1A Power Adapter
	LR1002-1ET/1EC	Single-port Long Reach Ethernet over Coax Extender
	PFM900-E	Integrated Mount Tester
PFM114	TLC SD Card	

Accessories

Optional:



PFA139 Junction Box



PFB204W Wall Mount



PFA152-E Pole Mount



PFB220C Ceiling Mount



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



PFM114 TLC SD Card

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

Dimensions (mm[inch])

