alhua
TECHNOLOGY

DH-IPC-HDW2231T-AS-S2

2MP WDR IR Eyeball 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, 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, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, voltage detection
- Supports max. 256 GB Micro SD card, built-in Mic
- 12V DC/PoE power support
- IP67 protection

| 2Mp | H.265+ | WDR | Starlight | IVS | IP67 |

System Overview

With upgraded 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, complying to the standards of IP67.

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, 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.

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"2Megapixel progressive 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	30 m (98.4 ft)
IR On/Off Control	Auto/Manual
IR LEDs Number	2
Pan/Tilt/Rotation Range	Horizontal: 0°–360° Vertical: 0°–78° 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 aperture
Close Focus Distance	2.8 mm: 0.6 m (2.0 ft) 3.6 mm: 1.2 m (3.9ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	38.6 m (126.6 ft)	15.4 m (50.5 ft)	7.7 m (25.3 ft)	3.9 m (12.8 ft)
	3.6 mm	55.2 m (181.1 ft)	22.1 m (72.5 ft)	11.0 m (36.1 ft)	5.5 m (18.0 ft)

Smart event

General IVS Analytics	Tripwire; intrusion

Video

Video Compression	H.265; H.264; H.264B; MJPEG
Smart Codec	H.264: Yes H.265: Yes
Video Frame Rate	50 Hz Main stream (1920 × 1080@25 fps); sub stream(704 × 576@25 fps) 60 Hz Main stream (1920 × 1080@30 fps), sub stream(704 × 480@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	ICR auto 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	OFF/ON (4 areas, rectangular)
Region of Interest(RoI)	Yes (4 areas)
Smart IR	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 1080p resolution.)
Mirror	Yes
Privacy Masking	4 areas

Audio

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

Network

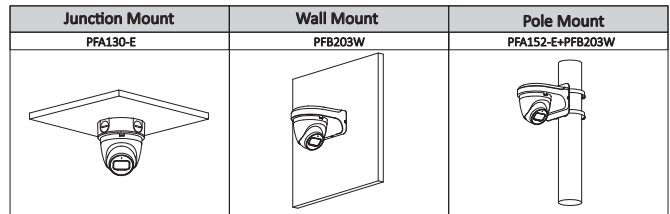|	
Network	RJ-45 (10/100 Base-T)
Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; QoS; UPnP; NTP; RTMP; Multicast; HTTPS; SFTP; 802.1x; ICMP; IGMP
Interoperability	ONVIF (Profile S/Profile G); CGI; Milestone; Genetec
User/Host	20
Edge Storage	Dahua Cloud; FTP; Micro SD Card (support max. 256 GB); NFS
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

Power

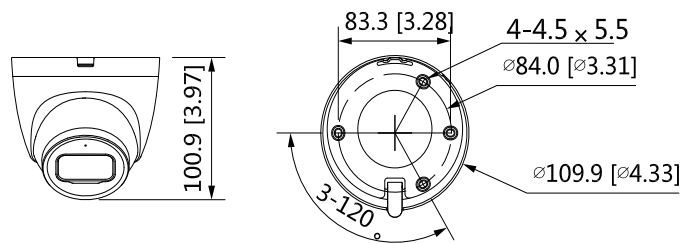|	
Power Supply	12V DC/PoE

Power Consumption	Basic power consumption: 1.9W (12V DC); 2.4W (PoE) Max. power consumption (H.265 + max. resolution + max. stream + WDR + IR full intensity + IVS enabled): 5.6W (12V DC); 6.5W (PoE)

Environment

Operating Conditions	-40°C to +60°C (-40°F to +140°F) /less than≤95%
Strorage Conditions	-40°C to +60°C (-40°F to +140°F)
Ingress Protection	IP67

Structure

Casing	Metal + plastic
Dimensions	100.9 mm × Φ109.9 mm (4.0" × Φ4.3")
Net Weight	0.39 kg (0.9 lb)
Gross Weight	0.52 kg (1.1 lb)

Junction Mount	Wall Mount	Pole Mount
PFA130-E	PFB203W	PFA152-E+PFB203W

Dimensions (mm[inch])

83.3 [3.28]
100.9 [3.97]
4-4.5 × 5.5
∅84.0 [∅3.31]
∅109.9 [∅4.33]
3-120

Ordering Information

Type	Part Number	Description
2MP Camera	DH-IPC-HDW2231TP-AS-S2	2MP WDR IR Eyeball Network Camera,PAL
	DH-IPC-HDW2231TN-AS-S2	2MP WDR IR Eyeball Network Camera, NTSC
Accessories	PFA130-E	Junction Box
	PFB203W	Wall mount
	PFA152-E	Pole 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:

PFA130-E
Junction Box

PFB203W
Wall mount

PFA152-E
Pole 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

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