

# DH-IPC-HUM4231-S2

## 2MP Fixde-focal Pinhole Network Camera



- 2MP, 1/2.8" CMOS image sensor, low illuminance, high definition image
- Outputs max. 2MP (1920 × 1080) @30 fps
- H.265 codec, high compression rate, ultra-low bit rate
- RoI, SMART H.264+/H.265+, flexible coding, applicable to various band width and storage environments
- Rotation mode, WDR 120dB, 3D DNR, HLC, BLC, digital watermarking, applicable to various monitoring scenes
- Intelligent detection: Tripwire and intrusion
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, network disconnection, IP conflict, illegal access, voltage detection
- Audio: 1 in, 1 out
- 12 V DC power supply



### System Overview

Dahua Pinhole series network camera includes one-in-all camera and separated camera. Separated camera can work with different lens to meet the requirements in different installation scenes. Pinhole Series camera is widely applied in hidden or small scenes such as banks and advertising screen.

### Functions

#### Smart Codec

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.

#### Protection (wide voltage)

Wide voltage: The camera allows  $\pm 30\%$  input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

#### 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.

## Technical Specification

### Camera

Image Sensor	1/2.8" CMOS
Effective Pixels	1920 (H) × 1080 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
S/N Ratio	> 56 dB
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 Lux@F2.0 (Color, 30IRE) 0.0005 Lux@F2.0 (B/W, 30IRE)

### Lens

Lens Type	Fixed-focal				
Mount Type	M12				
Focal Length	2.8 mm				
Max. Aperture	F2.0				
Field of View	Horizontal: 108° × Vertical: 59° × Diagonal: 118°				
Iris Type	Fixed				
Close Focus Distance	0.6 m				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8mm	42.1 m (138.1 ft)	16.8 m (55.1ft)	8.4 m (27.6 ft)	4.2 m (13.8 ft)

### Smart Event

IVS	Tripwire; intrusion
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### Video

Video Compression	Main stream: H.264; H.264H; H.264b; H.265 Sub stream:H.264; H.264H; H.264b; H.265; MJPEG
Smart Codec	Yes
Video Frame Rate	Main stream: 1920 × 1080 @1-25/30 fps Sub stream: 704 × 576 @25 fps; 704 × 480 @30 fps
Stream Capability	2 streams
Resolution	Main stream: 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); Sub stream:D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 3 kbps–6144 kbps H.265: 3 kbps–6144 kbps
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)
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower.)
Mirror	Yes
Privacy Masking	4 areas

### Audio

Audio Compression	G.711A; G.711Mu; G.726
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### Network

Network	RJ-45 (10/100 Base-T)
Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTS; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; Bonjour
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
Interoperability	ONVIF (Profile S); CGI; Milestone; Genetec
User/Host	20 (Total bandwidth: 64 M)
Edge Storage	FTP; SFTP; NAS
Browser	IE: IE8; IE9; IE11 Chrome Firefox
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

### Certifications

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
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### Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)

### Power

Power Supply	12V DC
Power Consumption	Basic power consumption: 1.3W (12V DC) Max. power consumption (IVS): 1.4W (12V DC)

### Environment

Operating Conditions	–40 °C to +60 °C (–40 °F to +140 °F)/Less than 95% RH
Storage Conditions	–40 °C to +60 °C (–40 °F to +140 °F)

### Structure

Casing	Metal
Dimensions	34.6 mm × 44 mm × 30 mm (1.4" × 1.7" × 1.2")
Net Weight	82 g (0.2 lb)
Gross Weight	128 g (0.3 lb)

**Ordering Information**

Type	Part Number	Description
2MP Camera	DH-IPC-HUM4231P-S2	2MP Fixed-focal Pinhole Network Camera, PAL
	DH-IPC-HUM4231N-S2	2MP Fixed-focal Pinhole Network Camera, NTSC
Accessories (optional)	PFM900-E	Junction Box
	PFM321D	DC12V1A Power Adapter

**Accessories**

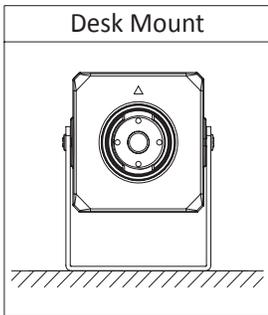
**Optional:**



PFM900-E  
Integrated Mount Tester



PFM321D  
DC12V1A Power Adapter



**Dimensions (mm[inch])**

