

DH-IPC-HUM4431S1-L4

4MP Fixed-focal Pinhole Network Camera-PoE



Series 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 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.

- 4-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 4 MP (2688 × 1520)@20 fps, and supports 3.6 MP (2560 × 1440) @25/30 fps
- H.265 codec, high compression rate, ultra-low bit rate.
- WDR, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- ROI, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Abnormality detection: Motion detection, video tampering, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, external alarm and security exception.
- Alarm: 2 in, 1 out; audio: 1 in, 1 out; supports max. 256 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply, easy for installation.



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 cameras employ a series of security technologies, including security authentication and authorization, access control protocols, trusted protection, encrypted transmission and encrypted storage. These technologies improve the camera's defense against external cyber threats and prevent malicious programs from comprising the device.

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	128 MB
RAM	128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.01 lux@F2.0 (Color, 30 IRE) 0.001 lux@F2.0 (B/W, 30 IRE)
S/N Ratio	>56 dB

Lens

Lens Type	Fixed-focal				
Lens Mount	M12				
Focal Length	2.8 mm				
Max. Aperture	F2.0				
Field of View	Horizontal: 100°; Vertical: 57°; Diagonal: 114°				
Iris Control	Fixed				
Close Focus Distance	0.8 m (2.62 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	61.0 m (200.13 ft)	24.4 m (80.05 ft)	12.2 m (40.03 ft)	6.1 m (20.01 ft)
	*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.				

Video

Video Compression	H.265; H.264; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+; Smart H.264+
Video Frame Rate	Main stream: 2688 × 1520 @(1–20 fps)/2560 × 1440 @(1–25/30 fps) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @(1–30 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	4M (2688 × 1520); 3.6 M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1920 × 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: 3 kbps–6144 kbps H.265: 3 kbps–6144 kbps
Day/Night	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)
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; PCM; G.726

Alarm

Alarm Event	No SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access; motion detection, video tampering, audio detection; external alarm; security exception
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Network

Network Port	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; Session Security; Security Warning
Network Protocol	IPv4; IPv6; HTTP; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; SNMP; P2P; Bonjour
Interoperability	ONVIF (Profile S & Profile G & Profile T); CGI
User/Host	6 (Total bandwidth: 24 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS; Auto Network Replenishment (ANR)
Browser	IE Chrome Firefox
Management Software	Smart PSS Lite; DSS; DMSS; DoLynk Care

Certification

Certifications	CE-LVD:EN62368-1; CE-EMC:Electromagnetic Compatibility Directive 2014/30/EU
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Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	2 channels in: wet contact, 5 mA 3–5 VDC
Alarm Output	1 channel out: dry contact, 1,000 mA 30 VDC/500 mA 50 VAC

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Power

Power Supply	12 VDC; PoE (802.3af)
Power Consumption	Basic: 1.7 W (12 VDC); 2.7 W (PoE) Max.(H.265 + WDR): 2.1 W (12 VDC); 3.5 W (PoE)

Environment

Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Humidity	≤95%
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)

Structure

Casing	Metal
Product Dimensions	67.5 mm × 53.4 mm × 48.2 mm (2.66" × 2.1" × 1.9") (L × W × H)
Net Weight	155 g (0.34 lb)
Gross Weight	190 g (0.42 lb)

Ordering Information

Type	Model	Description
4MP Camera	DH-IPC-HUM4431S1-L4	4MP Fixed-focal Pinhole Network Camera-PoE
Accessories	PFM321D	DC12V1A Power Adapter

Accessories

Optional:



DC12V1A
Power
Adapter

Dimensions (mm[inch])

