DH-IPC-HUM8241-E1

2MP Covert Pinhole WizMind Network Camera-Main Box

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

Series Overview

With deep learning algorithm, the separate pinhole camera supports functions such as perimeter protection. Working with different types of lenses, the camera is widely applied to hidden or small scenes such as banks and advertising screens, meeting requirements in different installation scenes.

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.

Perimeter Protection

With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion, fast moving, parking detection, loitering detection and gathering detection) are largely reduced.

- Starlight 2-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs max. 2 MP (1920 × 1080)@25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- ROI, SMART H.264+/H.265+, AI 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 monitoring: Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); smart abandoned object, smart missing object, loitering detection, people gathering and face detection.
- Abnormality detection: Motion detection, video tampering, scene changing, audio detection, no SD card, SD card full, SD card error, network disconnection, IP conflict, illegal access, and voltage detection.
- Alarm: 2 in, 2 out; audio: 1 in, 1 out; RS-232; max. 256 G Micro SD card
- 12 VDC/PoE power supply, easy for installation.
- IP67 protection (L3).
- Multiple lens unit optional; require a lens unit to work together.

| 2Mp | Smart Codec | Perimeter Protection | Face Detection | Face Attributes | WDR |

Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

Face Attributes

With deep learning algorithm, the network camera can recognize face attributes, such as gender, age, expression, glasses, mouth mask, and beard.

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	1/2.7" CMOS
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	512 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.002 lux@F1.6 (Color, 30 IRE) 0.0002 lux@F1.6 (B/W, 30 IRE)
S/N Ratio	>56 dB

Lens

Lens Type	Fixed-focal
Lens Mount	M12
Focal Length	2.8 mm
Max. Aperture	L1/L4/L5: F2.0 L3: F1.6
Field of View	L1/L4: Horizontal: 105°; Vertical: 58°; Diagonal: 118° L3: Horizontal: 109°; Vertical: 58°; Diagonal: 127° L5: Horizontal: 109°; Vertical: 58°; Diagonal: 127°
Iris Control	Fixed
Close Focus Distance	0.5 m

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	L1/L4-2.8 mm	42.1 m (138.12 ft)	16.8 m (55.12 ft)	8.4 m (27.56 ft)	4.2 m (13.78 ft)
	L3-2.8 mm	43.9 m (144.03 ft)	17.5 m (57.41 ft)	8.8 m (28.87 ft)	4.4 m (14.44 ft)
	L5-2.8 mm	42.9 m (140.75 ft)	17.2 m (56.43 ft)	8.6 m (28.22 ft)	4.3 m (14.11 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.

Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection
Smart Object Detection	Smart abandoned object; smart missing object
Face Detection	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes (gender, age, glasses, expressions, mask, and beard) and 8 expressions (angry, sad, disgusted, scared, surprised, calm, happy, confused); face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting
Smart Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos

Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG (Only supported by the sub stream)
Smart Codec	Smart H.265+;Smart H.264+
Video Frame Rate	Main stream: 1920 × 1080@(1–25/30 fps) sub stream: 704 × 576 (1–25 fps)/704 × 480@(1–30 fps) third stream: 1920 × 1080@(1–25/30 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	3 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: 3 kbps–20480 kbps; H.265: 3 kbps–20480 kbps
Day/Night	Color/B/W
BLC	Yes
HLC	Yes
WDR	120 dB
Scene Self-adaptation (SSA)	Yes
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)
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 1080P resolution and lower)
Mirror	Yes
Privacy Masking	8 areas

Audio

Audio Compression	G.711a; G.711Mu; PCM; G.726; G.723; PCM

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; voltage detection; external alarm; face detection; security exception

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

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
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genetec
User/Host	20 (Total bandwidth: 64 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	IE Chrome Firefox
Management Software	SmartPSS Lite; DSS; DMSS
Mobile Client	iOS; Android

Certification

Certifications	CE-LVD: EN62368-1; CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU; FCC: 47 CFR FCC Part 15, Subpart B

Port

Audio Input	1 channel (3.5mm JACK port)
Audio Output	1 channel (3.5mm JACK port)
Alarm Input	2 channels in: 5mA 3V–5V DC
Alarm Output	2 channels out: max. 1,000 mA 30 VDC/max. 500 mA 50 VAC

Power

Power Supply	12 VDC/PoE
Dual Power Backup	When the power adapter and PoE provide power at the same time, disconnect one of them. The device will continue to work, but will not restart.
Power Consumption	Basic: 2.4 W (12 VDC); 3.2 W (PoE) Max. (Intelligence + WDR): 3.8 W (12 VDC); 4.5 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)
Protection	IP67 (L3)

Structure

Casing	Metal
Product Dimensions	E1: 110 mm × 83 mm × 24 mm (4.33" × 3.27" × 0.94") L3: Φ30.5 mm × 55.4 mm (Φ1.20" × 2.18")
Net Weight	554 g (1.22 lb)
Gross Weight	724 g (1.60 lb)

Ordering Information

Type	Model	Description
2MP Camera	DH-IPC-HUM8241-E1	2MP Covert Pinhole WizMind Network Camera-Main Box
Accessories (Optional)	IPC-HUM8241-L1	2MP Covert Pinhole WizMind Network Camera-Lens Unit
	IPC-HUM8241-L3-S2	2MP Covert Pinhole WizMind Network Camera-Lens Unit
	IPC-HUM8241-L4	2MP Covert Pinhole WizMind Network Camera-Lens Unit
	IPC-HUM8241-L5	2MP Covert Pinhole WizMind Network Camera-Lens Unit

Accessories

Optional

IPC-HUM8241-L1
2MP Covert Pinhole
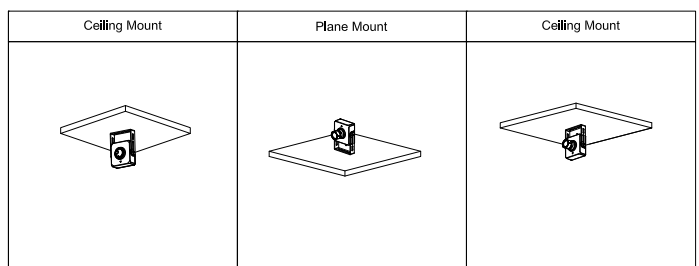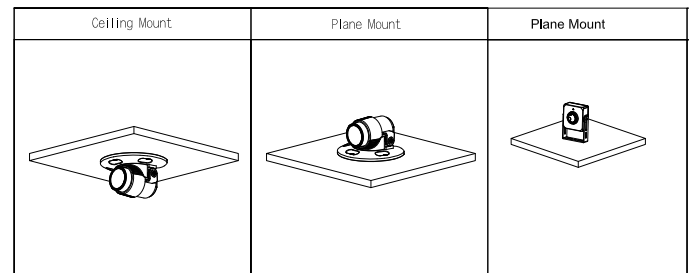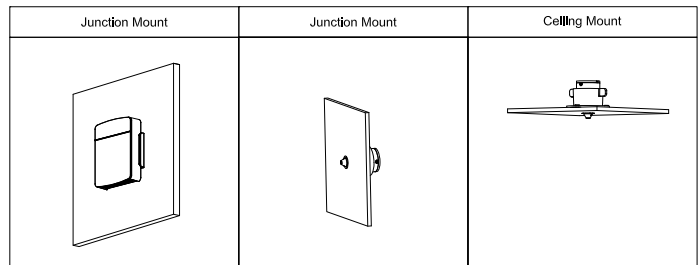WizMind Network
Camera-Lens Unit

IPC-HUM8241-L3-S2
2MP Covert Pinhole
WizMind Network
Camera-Lens Unit

IPC-HUM8241-L4
2MP Covert Pinhole
WizMind Network
Camera-Lens Unit

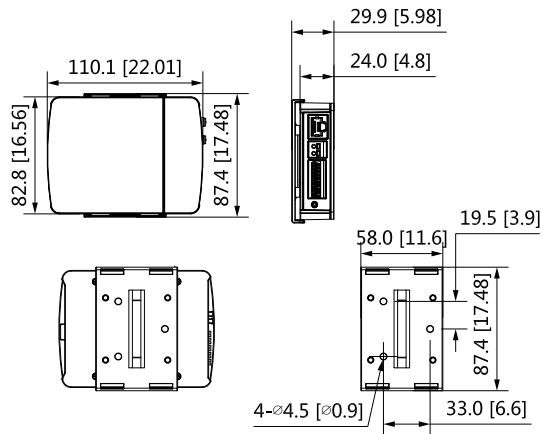IPC-HUM8241-L5
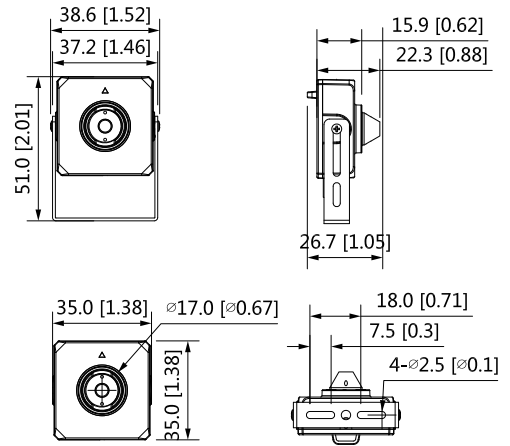2MP Covert Pinhole
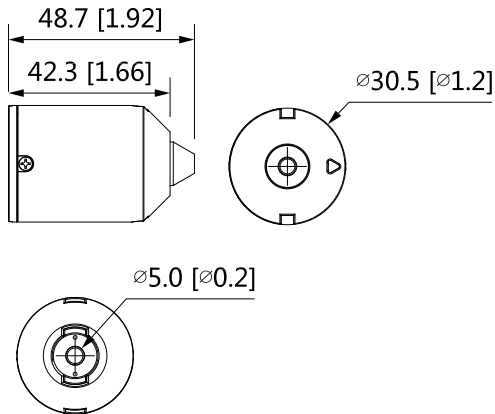WizMind Network
Camera-Lens Unit

Junction Mount	Junction Mount	Ceiling Mount

Ceiling Mount	Plane Mount	Plane Mount

Ceiling Mount	Plane Mount	Ceiling Mount

Dimensions (mm[inch])

IPC-HUM8241-E1

29.9 [5.98]
24.0 [4.8]
110.1 [22.01]
82.8 [16.56]
87.4 [17.48]
19.5 [3.9]
58.0 [11.6]
87.4 [17.48]
4-∅4.5 [∅0.9]
33.0 [6.6]

IPC-HUM8241-L4

38.6 [1.52]
37.2 [1.46]
51.0 [2.01]
15.9 [0.62]
22.3 [0.88]
26.7 [1.05]
35.0 [1.38]
∅17.0 [∅0.67]
35.0 [1.38]
18.0 [0.71]
7.5 [0.3]
4-∅2.5 [∅0.1]

IPC-HUM8241-L1

48.7 [1.92]
42.3 [1.66]
∅30.5 [∅1.2]
∅5.0 [∅0.2]

IPC-HUM8241-L5

38.6 [1.52]
37.2 [1.46]
51.0 [2.01]
15.9 [0.62]
25 [0.98]
28.4 [1.12]
∅17.0 [∅0.67]
35.0 [1.38]
35.0 [1.38]
18.0 [0.71]
7.5 [0.3]
4-∅2.5 [∅0.1]

IPC-HUM8241-L3-S2

55.4 [2.18]
41.5 [1.63]
27.0 [1.06]
∅30.5 [∅1.20]