

# DH-IPC-HUM8441-E2

# 4 MP 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 and face recognition. 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.

### **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.

### **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.

- Starlight 4-MP 1/2.7" CMOS image sensor, excellent low luminance performance and high definition of images.
- Outputs max. 2 channels 5 MP (2592 × 1944) @20 fps. 4 MP (2688 ×1520)@25/30 fps.
- H.265 codec allows high compression ratio and ultra-low bit rate.
- ROI, SMART H.264 +/H.265+, flexible coding, applicable to various bandwidth and storage environments.
- Rotation mode, 3D NR, HLC, BLC, digital watermarking, applicable to various monitoring scenes.
- Intelligent detection: Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and face detection.
- · Object monitoring: abandoned object, missing object.
- Abnormality detection: Motion detection, privacy masking, scene changing, audio detection, no SD card, SD card space warning, 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 facilitates installation.
- · Multiple Lens Unit optional.
- Require a Lens Unit to work together.













### **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 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.

Carrier	Technical Sp	ecificatio	on					Stream Capability	2 streams
Maps	-					5M (2592 × 1944); 4M (2688 × 1520); 3.6M (2560 ×			
RAM	Image Sensor		1/2.7" CMOS				Resolution	(1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 ×	
Mary	Max. Resolution		2592 (H) × 1944 (V)					Bit Rate Control	CBR/VBR
Total   Tot	ROM		128 MB					Video Bit Rate	
Scanning System	RAM		1 GB					Day/Night	
Electron shitters   Septemble   Min.   Illumination   1/3 +   1/100000	Scanning System	ı	Progressive						
Min.	Electronic Shutt	er Speed	Auto/Manual 1/3 s–1/100,000 s						
Some Self-adaptation   Yes   Some Self-adaptation   Yes   Some Self-adaptation   Yes   Lens   Yes   Lens   Yes   Lens   Yes	Min. Illuminatio	Min. Illumination							
Lens Yupe	S/N Ratio								
Lens Mount	Lens							Scene Self-adaptation	
Noise Reduction   30 NR	Lens Type		Fixed-focal					White Balance	The state of the s
Max. Aperture	Lens Mount		M12					Gain Control	Manual; auto
Field of View   1,1/14;   Horizontal; 196*, Vertical; 55°, Diagonal; 110°   13; Horizontal; 102°, Vertical; 55°, Diagonal; 112°   12; Horizontal; 102°, Vertical; 55°, Diagonal; 115°   12; Horizontal; 102°, Vertical; 55°, Vertical; 55°, Diagonal; 115°   12°   15°	Focal Length		2.8 mm				Noise Reduction	3D NR	
Section   1.2   Section   1.	Max. Aperture		F2.0				Motion Detection	OFF/ON (4 areas, rectangular)	
1.5. Horizontale 1.95°, Verticale 1.54°, Diagonale 1.15°   1.5. Horizontale 1.95°, Verticale 1.54°, Diagonale 1.15°   1.5. Horizontale 1.95°, Verticale 1.54°, Diagonale 1.15°   1.5. Horizontale 1.5°   1.5°	Field of View	Field of View						Region of Interest (RoI)	Yes (4 areas)
Close Focus Distance		ricia di view						Defog	Yes
Close Focus Distance   Close Focus Distance Protection   Close Focus Distance Protection   Close Focus Distance Protection   Close Focus Distance Protection   Close Focus Distance Distance Protection   Close Focus Distance Pr		Iris Control						Image Rotation	
DORI Distance   L1/L4-2.8   61 m   24.4 m   12.2 m   61 m   mm   (200.11 ft)   (80.05 ft)   (40.03 ft)   (20.01 ft)   (40.001 ft)   (20.01 ft)   (40.001 ft)   (20.01 ft)   (40.001 ft)   (20.01 ft)   (40.001 ft	Close Focus Dist							Mirror	
DORI Distance   Mark   (200.13 ft)   (80.05 ft)   (40.03 ft)   (20.01 ft)   Audio					-			Privacy Masking	8 areas
L3-2.8	DODLD' .							Audio	
Intelligence  IVS (Perimeter Protection)  IVS (Perimeter P	DORI Distance							Audio Compression	G.711a; G.711Mu; PCM; G.726; G.723
Intelligence  IVS (Perimeter Protection)  Tripwire, intrusion, fast moving (the three functions support the classification and accurate detection of vehicle and human); loitering detection, people gathering, and parking detection, of vehicle and human); loitering detection, people gathering, and parking detection, obtaining detection, obtaining detection, obtaining detection, optimal face spashot upload; face enhancement; face exposure; face attribute extraction including of attributes (gender, age, glasses, expressions, mask and beard) and 8 expressions (anger, calm, happiness, sadness, disgust, suprise, confusion and fear); face snapshot set as face or one-inch photo; 3 snapshot strategies (real-time snapshot, optimal face); face snapshot set as face or one-inch photo; 3 snapshot, and quality priority); face angle filter; optimization snapshot, optimal search, event extraction and merging to event videos  Work together with Smart NVR to perform refine liteliligent search, event extraction and merging to event videos  Video  Video  Ware H. 265; H. 264; H. 264H; H. 264B; MJPEG (only supported by the sub stream)  Main stream: 2592 × 1944 @(1-20 fps.), 2688 × 1520 @ (1-25/30 fps.)  Wideo Frame Rate  Wideo Frame Rate  Wideo Frame Rate  Network Port RJ-45 (10/100 Base-T)  Network Port RJ-45 (10/100 Base-T)  SDK and API  Yes  Wetwork Protocol  Network Protocol  Network Protocol  Pry4; PVe; HTTP;TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; STP; DHCP; DNS; DNDS; QoS; UPPP, NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPDE; SNMP  Wetwork Protocol  Network Prot								Alarm	
Tripwire, intrusion, fast moving (the three functions support the classification and accurate detection of vehicle and human), lottering detection, people gathering, and parking detection, people gathering, and parking detection.  Abandoned object, missing object  Face detection; track; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attribute extraction including 6 attributes (gender, age, glasses, expressions, mask and beard) and 8 expressions (langer, calm, happiness, sadhess, disgust, surprise, confusion and fear); face snapshot set as face or one-inch photo; 3 snapshot strategies (real-time snapshot, optimization snapshot, and quality priority); face angle filter; optimization snapshot, and quality priority); face angle filter; optimization snapshot, and quality priority); face angle filter; optimization and merging to event videos  Video  Video  Video Compression  Main stream: 2592 x 1944 @(1–20 fps), 2688 x 1520 @  Monagement Software  Min stream: 2592 x 1944 @(1–20 fps), 2688 x 1520 @  Management Software  Video Clear in the substream of the substream in the substream: Total x 576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Clear in the substream is supported by substream: Total x 576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Clear in the substream in the substream in the substream in the substream in the substream; Total x 576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Clear in the substream in the substream in the substream; Total x 576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Client in the substream in the substream in the substream; Total x 576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Client in the substream in the substream; Total x 576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Client in the substream in the substream; Total x 4576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)  Video Client in the substream in the substream in the substream; Total x 4576 @(1–25 fps)/704 x 480 @ (1–30 Mabile Client)	Intelligence	111111	(204.07 11)	(91.0911)	(40.0811)	(20.34 11)			No SD card, SD card full, SD card error, network
Abandoned object, missing object  Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attribute extraction including 6 attributes (gender, age, glasses, expressions, mask and beard) and 8 expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear); face anapshot set as face or one-inch photo; 3 snapshot, and quality priority); face angle filter; optimization time setting  Smart Search  Work vegether 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  Main stream: 2592 × 1944 @(1–20 fps.), 2688 × 1520 @ (1–25/30 fps.)  Sub stream: 704 × 576 @(1–25 fps.)/704 × 480 @ (1–30  Mobile Client  Network  Network  Network  Network  Network  Network  Network Protocol  RJ-45 (10/100 Base-T)  Retwork Port  RJ-45 (10/100 Base-T)  Retwork  Network Port  RJ-45 (10/100 Base-T)  Retwork Port  Retwork Port  RJ-45 (10/100 Base-T)  Retwork			support the classification and accurate detection of vehicle and human); loitering detection, people				Alarm Event	video tampering, tripwire, intrusion, fast moving, missing object, abandoned object, parking detection, loitering detection, people gathering; scene changing, audio detection, voltage detection, external alarm, face	
Face Detection  Face antirbute extraction including 6 attributes (gender, age, glasses, expressions, mask and beard) and 8 expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear); face snapshot startaglies (real-time snapshot, optimization startaglies (real-time snapshot, optimization snapshot, and quality priority); face angle filter, optimization time setting  Face Detection  Face Detection  Face Detection  Face Detection  Face And API  Face A	Object Monitori	ng	Abandoned object, missing object				Notwork	detection, and security exception	
Face Detection    Gender, age, glasses, expressions, mask and beard) and 8 expressions (anger, calm, happiness, sadness, disgust, surprise, confusion and fear); face snapshot set as face or one-inch photo; 3 snapshot strategies (real-time snapshot, optimization snapshot, and quality priority); face angle filter; optimization time setting   Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos   Video Compression   H.265; H.264; H.264B; MJPEG (only supported by the sub stream)   Smart Codec   Smart H.265+ Smart H.265+ Smart H.266+   Smart H.266+   Main stream: 2592 × 1944 @(1–20 fps), 2688 × 1520 @ (1–25/30 fps) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30 supported limited in the sub stream)   Mobile Client   Mosping Client   Mosp			optimal face snapshot upload; face enhancement; face exposure; face attribute extraction including 6 attributes (gender, age, glasses, expressions, mask and beard) and					DI 45 (40/400 Days T)	
surprise, confusion and fear); face snapshot set as face or one-inch photo; 3 snapshot, and quality priority); face angle filter; optimization snapshot, and quality priority); face angle filter; optimization time setting  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+  Wideo Frame Rate  Network Protocol  IPv4; IPv6; HTTP;TCP; UDP; ARP; RTSP; RTCP; RTMP, SMTP; RTSP; RTCP; RTMP, SMTP; FTP; DMCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPOE; SNMP  Interoperability  ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone Genete  User/Host  20 (Total bandwidth: 64 M)  Storage  FTP; SFTP; Micro SD card (support max. 256 G); NAS  IE: IE8, IE9, and IE11  Chrome Firefox  Wain stream: 2592 × 1944 @(1–20 fps ), 2688 × 1520 @  (1–25/30 fps ) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30  Mobile Client  iOS: Android									
snapshot, optimization snapshot, and quality priority); face angle filter; optimization time setting  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+  Wain stream: 2592 × 1944 @(1–20 fps), 2688 × 1520 @ (1–25/30 fps) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30 Mobile Client  Smart P.S. Protocol  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 Genete  User/Host  20 (Total bandwidth: 64 M)  Storage  FTP; SFTP; Micro SD card (support max. 256 G); NAS  IE: IE8, IE9, and IE11 Chrome Firefox  Management Software  Video Frame Rate  Management Software  Mobile Client  Mobile Client  iOS: Android	Face Detection	Face Detection		surprise, confusion and fear); face snapshot set as face				SDK and API	
Smart Search intelligent search, event extraction and merging to event videos  Video  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: 2592 × 1944 @(1–20 fps), 2688 × 1520 @ (1–25/30 fps) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30  Mobile Client  Interoperability  Storage  FTP; SFTP; Micro SD card (support max. 256 G); NAS  IE: IE8, IE9, and IE11 Chrome Firefox  Management Software  Smart PSS; DSS; DMSS  Mobile Client  Mobile Client  Interoperability  Genete  User/Host  20 (Total bandwidth: 64 M)  Management Soft and intervent and in			snapshot, optimization snapshot, and quality priority);					Network Protocol	SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP;
Video Compression         H.265; H.264; H.264B; MJPEG (only supported by the sub stream)         Storage         FTP; SFTP; Micro SD card (support max. 256 G); NAS           Smart Codec         Smart H.265+ Smart H.264+         Browser         Chrome Firefox           Video Frame Rate         Main stream: 2592 × 1944 @(1–20 fps ), 2688 × 1520 @ (1–25/30 fps ) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30 sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30 sub stream: 704 × 576 @(1–25 fps)/704 × 480 @(1–30 sub stream: 70	Smart Search		intelligent search, event extraction and merging to event					Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; P2P; Milestone; Genete
Video Compression         the sub stream)         Browser         IE: IE8, IE9, and IE11           Smart H.265+ Smart H.264+         Browser         Chrome Firefox           Wain stream: 2592 × 1944 @(1–20 fps ), 2688 × 1520 @ (1–25/30 fps ) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30         Management Software         Smart PSS; DSS; DMSS           Wobile Client         jOS; Android	Video							User/Host	20 (Total bandwidth: 64 M)
Smart Codec         Smart H.265+ Smart H.264+         Browser         IE: IE8, IE9, and IE11 Chrome Firefox           Video Frame Rate         Main stream: 2592 × 1944 @(1–20 fps ), 2688 × 1520 @ (1–25/30 fps ) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30         Management Software         Smart PSS; DSS; DMSS           Wobile Client         jOS: Android	Video Compression							Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS
Video Frame Rate (1–25/30 fps ) sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30 Mobile Client iOS: Android	Smart Codec		Smart H.265+					Browser	Chrome
sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30							Management Software	Smart PSS; DSS; DMSS	
	Video Frame Ra	Video Frame Rate		sub stream: 704 × 576 @(1–25 fps)/704 × 480 @ (1–30				Mobile Client	iOS; Android

Wiz Mind	DH-IPC-HUM8441-E2	
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	
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 (3.5 mm JACK port)	
Audio Output	1 channel (3.5 mm JACK port)	
Alarm Input	2 channels in: 5 mA 3-5 VDC	
Alarm Output	2 channels out: 1,000 mA 30 VDC/500 mA 50 VDC	
Power		
Power Supply	12 VDC/PoE(802.3af)	
Power Consumption	Basic: 3.2W (12 VDC); 5.1W (PoE) Max. (Max. Resolution+ Intelligence): 4.7 W (12 VDC); 7.2 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 Structure

Casing	Metal	
Product Dimensions	E2: 110 mm × 83 mm × 24 mm (4.33" × 3.27" × 0.94") L1: \$\phi 30.5 \text{ mm × 48.7 mm (\$\phi 1.20" × 1.92")} L3: \$\phi 30.5 \text{ mm × 57.6 mm (\$\phi 1.20" × 2.27")} L4: \$35 \text{ mm × 35 mm × 26.7 mm (1.38" × 1.38" × 1.05")} L5: \$35 \text{ mm × 35 mm × 28.4 mm (1.38" × 1.38" × 1.12")}	
Net Weight	210 g (0.5 lb)	
Gross Weight	376 g (0.8 lb)	

IP66 (L3)

Ordering Information				
Туре	Model	Description		
4 MP Camera	DH-IPC- HUM8441-E2	4 MP Covert Pinhole WizMind Network Camera-Main Box		
	IPC-HUM8441-L1- 0280B	4 MP Covert Pinhole WizMind Network Camera-Lens Unit		
Accessories	IPC-HUM8441-L3- 0280B	4 MP Covert Pinhole WizMind Network Camera-Lens Unit		
(optional)	IPC-HUM8441-L4- 0280B	4 MP Covert Pinhole WizMind Network Camera-Lens Unit		
	IPC-HUM8441-L5- 0280B	4 MP Covert Pinhole WizMind Network Camera-Lens Unit		

# Accessories

# Optional:







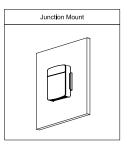
IPC-HUM8441-L1-0280B Separate Pinhole Lens

3 IPC-HUM8441-L3-0280B Separate Pinhole Lens

IPC-HUM8441-L4-0280B Separate Pinhole Lens



IPC-HUM8441-L5-0280B Separate Pinhole Lens



Junction Mount	Ceiling Mount

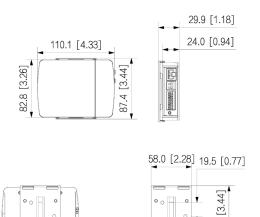
Plane Mount	Ceiling Mount
	<b>35</b>

Plane Mount	Ceiling Mount

Plane Mount	Ceiling Mount

# Dimensions (mm[inch])

# DH-IPC-HUM8441-E2

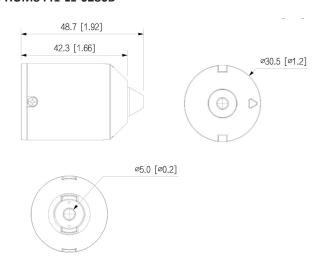


3-Ø4.5 [Ø0.18]

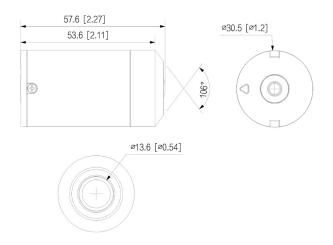
87.

33.0 [1.3]

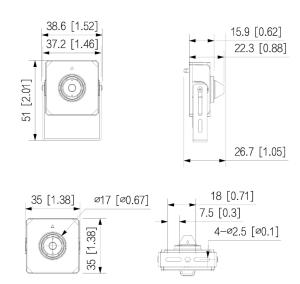
## IPC-HUM8441-L1-0280B



### IPC-HUM8441-L3-0280B



### IPC-HUM8441-L4-0280B



# IPC-HUM8441-L5-0280B

