

DH-IPC-HDBW3441DR1-AST-4G-LA

4MP IR fixed focal Dome WizSense 4G Network Camera



WizSense

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

Series Overview

Dahua WizSense 3 Series Network Camera greatly saves on bandwidth and storage space through its AI Coding technology. Driven by its advanced deep learning algorithms, the camera supports intelligent functions such as perimeter protection, smart motion detection (SMD), Quick Pick, and AI SSA (AI Scene Self-adaptation), making it easy and convenient to use. Starlight technology and its large aperture lens also allow the camera to produce clear, vivid images even in poor lighting conditions.

Functions

SMD 4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

4G

With a built-in high-performance 4G mobile network module, the camera can be directly registered to cloud platforms after a 4G SIM card has been inserted into it. It can be installed anywhere without the hassle of network cables. Users can perform real-time monitoring and remote control of the camera from a mobile client through 4G network.

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.

- 4-MP 1/2.7" CMOS image sensor, low luminance, and high definition image.
- Outputs 4 MP (2688 × 1520) @25/30 fps, and supports max. 5 MP (2880 × 1620) @20 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, and the max. illumination distance is 50 m.
- 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 detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human).
- 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-485; supports max. 256 G Micro SD card; built in Mic and speaker; support two-way talk.
- 12 VDC power supply, 12 VDC power output, max. current 165 mA, peak current 700 mA, easy for installation.
- IP67 and IK10 protection.
- SMD 4.0
- Supports 4G.



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.

Protection (IP67, IK10, Wide Voltage)

IP67: The camera passes a series of strict test on dust and soak. It has dust-proof function, and the enclosure can work normally after soaking in 1 m deep water for 30 minutes.

IK10: The enclosure can stand the punch more than 5 times from a 5 kg hammer falling from a height of 40 cm (Impact energy is 20J).

Wide voltage: The camera allows $\pm 30\%$ (for some power supplies) 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 compromising the device.

Technical Specification

Camera

Image Sensor	1/2.7" CMOS
Max. Resolution	2880 (H) × 1620 (V)
ROM	128 MB
RAM	1 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 lux@F1.6 (Color,30 IRE) 0.0005 lux@F1.6 (B/W,30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	Up to 50 m (164.04 ft) (IR)
Illuminator On/Off Control	Auto; Manual
Illuminator Number	3 (IR LED)
Angle Adjustment	Pan: 0°–355° Tilt: 0°–80° Rotation: 0°–355°

Lens

Lens Type	Fixed-focal				
Lens Mount	M12				
Focal Length	2.8 mm; 3.6 mm; 6 mm				
Max. Aperture	F1.6				
Field of View	2.8 mm: H: 102°; V: 54°; D: 121° 3.6 mm: H: 84°; V: 42°; D: 101° 6 mm: H: 52°; V: 28°; D: 61°				
Iris Control	Fixed				
Close Focus Distance	2.8 mm: 1.1 m (3.61 ft) 3.6 mm: 1.7 m (5.58 ft) 6 mm: 3.2 m (10.50 ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	63.6 m (208.66 ft)	25.4 m (93.33 ft)	12.7 m (41.67 ft)	6.4 m (21.00 ft)
	3.6 mm	85.4 m (280.18 ft)	34.2 m (112.20 ft)	17.1 m (56.10 ft)	8.5 m (27.89 ft)
	6 mm	124.0 m (406.82 ft)	49.6 m (162.73 ft)	24.8 m (81.36 ft)	12.4 m (40.68 ft)

Intelligence

SMD	SMD4.0
Quick Pick	With AI NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events
IVS (Perimeter Protection)	Tripwire, intrusion (support the classification and accurate detection of vehicle and human)
AI SSA	Adopt deep learning algorithms to adjust the parameters of the image to suit the conditions.
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+
AI Coding	AI H.265; AI H.264
Video Frame Rate	Main stream: 2688 × 1520 @ (1–25/30) fps/2880 × 1620@(1–20 fps) 15 fps by default sub stream: 704 × 576@(1–30 fps) /704 × 480@(1–30 fps) third stream: 1920 × 1080@(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	3 streams
Resolution	4M (2880 × 1620/2688 × 1520); 3.6M (2560 × 1440); 3M (2048 × 1536/2304 × 1296); 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–8192 kbps H.265: 3 kbps–8192 kbps
Day/Night	Auto(ICR)/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)
Smart Illumination	Yes
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 2688 × 1520 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in Mic	Yes, built-in Mic
Built-in Speaker	Yes, built-in speaker
Audio Compression	PCM; G.711a; G.711Mu; G.726; G.723

Alarm

Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; tripwire; intrusion; scene changing; audio detection; voltage detection; external alarm; SMD; security exception
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Network

Network Port	RJ-45 (10/100 Base-T)
Carrier Network System	4G: FDD-LTE: B1/2/3/4/5/7/8/12/17/28/66 TDD-LTE: B38/40 Applicable region: Latin America Power class3: 23dBm ±2.7dB 3G: WCDMA: B1/2/3/4/5/8 Applicable region: Latin America Power class3: 24dBm +1/-3dB 2G: GSM/GPRS/EDGE: B2/3/5/8 Applicable region: Latin America Power class0: 30dBm ±2dB (GSM850/900) Power class5: 33dBm ±2dB (GSM1800/1900)
SDK and API	Yes
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
Interoperability	ONVIF (Profile S; Profile G; Profile T); CGI
User/Host	20 (Total bandwidth: 64 M)
Storage	FTP; SFTP; Micro SD card (support max. 256 GB); NAS
Browser	IE; Chrome; Firefox; Edge
Management Software	Smart PSS Lite; DSS; DMSS
Mobile Client	iOS; Android
Cyber Security	Configuration encryption; trusted execution; Digest; security logs; WSSE; account lockout; syslog; video encryption; 802.1x; IP/MAC filtering; HTTPS; trusted upgrade; trusted boot; firmware encryption; generation and importing of X.509 certification

Certification

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

RS-485	1 (baud rate range:1200 bps–115200 bps)
Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	2 channels in: wet contact, 5mA 3V–5V DC
Alarm Output	2 channels out: wet contact, 300mA 12V DC

Power

Power Supply	12 VDC
Power Consumption	Basic: 3.6 W (12 VDC) Max. (IR on + 4G+ Mic on+ power output): 12 W (12 VDC)

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)
Storage Humidity	≤95%
Protection	IP67; IK10

Structure

Casing Material	Metal
Product Dimensions	105 mm × Φ126 mm (4.13" × Φ4.96")
Net Weight	798 g (1.76 lb)
Gross Weight	990 g (2.18 lb)

Ordering Information

Type	Model	Description
4MP Camera	DH-IPC-HDBW3441DR1-AST-4G-LA	4MP IR fixed focal Dome WizSense 4G Network Camera
	IPC-HDBW3441DR1-AST-4G-LA	4MP IR fixed focal Dome WizSense 4G Network Camera
Accessories (Optional)	PFA197R	Junction Box
	PFA109	Mount Adapter
	PFB220C	Ceiling Mount Bracket
	PFB206W	Wall Mount Bracket
	PFB305W	Wall Mount Bracket
	PFA151	Corner Mount Bracket
	PFA156	Pole Mount Bracket
	PFA150	Pole Mount Bracket
	PFM321D	12 VDC 1 A Power Adapter
	PFM900-E	Integrated Mount Tester
	TF-P100	MicroSD Memory Card

Accessories

Optional:



PFA197R
Junction
Box



PFA109
Mount
Adapter



PFB220C
Ceiling Mount
Bracket



PFB206W
Wall Mount
Bracket



PFB305W
Wall Mount
Bracket



PFA151
Corner Mount
Bracket



PFA156
Pole Mount
Bracket



PFA150
Pole Mount
Bracket



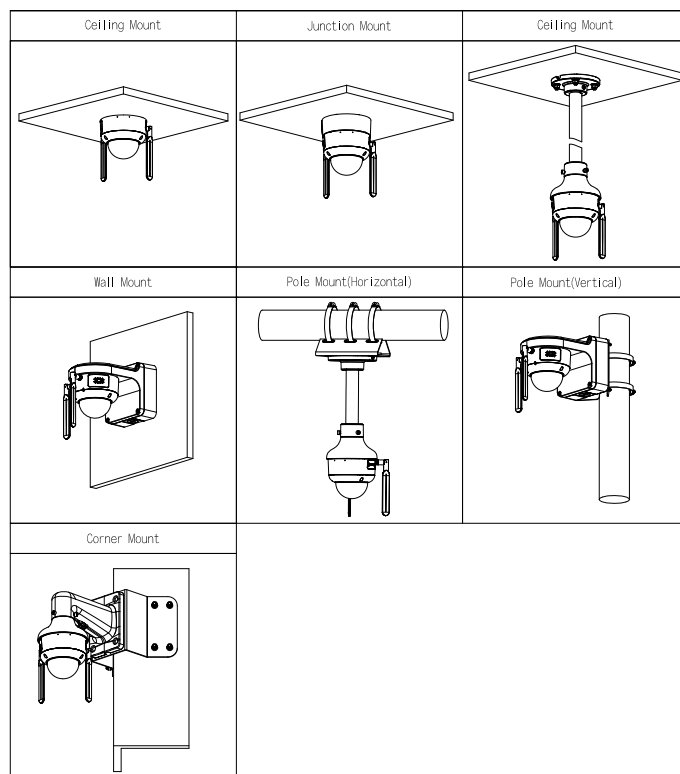
PFM321D
12 VDC 1 A
Power Adapter



PFM900-E
Integrated
Mount Tester



TF-P100
MicroSD Memory
Card



Dimensions (mm[inch])

