DH-IPC-HDBW4441E-AS

4MP IR Fixed-focal Dome WizMind Network Camera

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

Powered by its advanced deep learning algorithms, Dahua WizMind 4 Series cameras are ahead of their time advancing functions such as perimeter protection, smart motion detection and face detection. With its Starlight sensors and large aperture lenses, cameras in this series deliver excellent image quality even in environments with low illuminance. This series is IP67-rated and IK10-rated (depending on the model) giving you the confidence and precision you are looking for in a camera.

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.

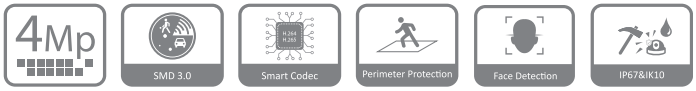
SMD 3.0

With intelligent algorithm, Dahua Smart Motion Detection technology can categorize the targets that trigger motion detection and filter the motion detection alarm triggered by non-concerned targets to realize effective and accurate alarm.

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) are largely reduced.

- 4-MP 1/3" CMOS image sensor, excellent low luminance performance and high definition of images.
- Outputs max. 4 MP (2688 × 1520) @25/30 fps.
- H.265 codec, high compression rate, ultra-low bit rate.
- Built-in IR LED, max. IR distance: 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.
- Supports the AFSA (Anti-flicker Self-adaption) function, which automatically eliminates flicker.
- Intelligent detection: Intrusion, tripwire (support the classification and accurate detection of vehicle and human); face detection.
- 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: 1 in, 1 out; audio: 1 in, 1 out; max. 512 G Micro SD card; built-in Mic.
- 12 VDC/PoE power supply facilitates installation.
- IP67, IK10 protection.
- SMD 3.0



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.

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 works normal 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 ±30% (for some power supplies) input voltage tolerance (wide voltage range), and it is widely applied to outdoor environment with instable voltage.

Technical Specification

Camera

Image Sensor	1/3" CMOS
Max. Resolution	2688 (H) × 1520 (V)
ROM	128 MB
RAM	512 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 lux@F1.4 (Color, 30 IRE) 0.0005 lux@F1.4 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	>56 dB
Illumination Distance	50 m (164.04 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	3 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–355°; Tilt: 0°–75°; Rotation: 0°–355°

Lens

Lens Type	Fixed-focal
Lens Mount	M12
Focal Length	2.8 mm; 3.6 mm; 6 mm
Max. Aperture	F1.4
Field of View	2.8 mm: Horizontal:102°; vertical: 54°; diagonal: 121° 3.6 mm: Horizontal:84°; vertical: 42°; diagonal: 101° 6 mm: Horizontal:52°; vertical: 28° ; diagonal: 61°
Iris Control	Fixed
Close Focus Distance	2.8 mm: 1.1 m (3.6 ft) 3.6 mm: 1.7 m (5.6 ft) 6 mm: 3.2 m (10.5 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	2.8 mm	63.6 m (208.66 ft)	25.4 m (83.33 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 m (406.82 ft)	49.6 m (162.72 ft)	24.8 m (81.36 ft)	12.4 m (40.68 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)	Tripwire, intrusion (support the classification and accurate detection of vehicle and human)
SMD 3.0	Less false alarm, longer detection distance
Face Detection	Face detection; track; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; 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
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 Sub stream 1: 704 × 576 @ (1–25 fps)/704 × 480 @ (1–30 fps) Sub stream 2: 1920 × 1080 @ (1–25/30 fps) Sub stream 3: 1280 × 720 @ (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	4 streams
Resolution	4M (2688 × 1520); 3.6M (2560 × 1440); 3M (2048 × 1536); 3M (2304×1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240); VGA (640 × 480)
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
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 90°/270° with 2688×1520 resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Built-in MIC	Yes
Audio Compression	G.711a; G.711Mu; PCM; 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, face detection, SMD and security exception

Network

Network Port	RJ-45 (10/100 Base-T)
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
Security	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/Profile G/Profile T); CGI; P2P; Milestone; Genetec
User/Host	20 (Total bandwidth: 64 M)
Storage	FTP; SFTP; Micro SD card (support max. 512 G); NAS
Browser	IE:IE11 Chrome Firefox
Management Software	Smart PSS; 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; UL/CUL: UL62368-1 & CAN/CSA C22.2 No. 62368-1-14

Port

Audio Input	1 channel (RCA port)
Audio Output	1 channel (RCA port)
Alarm Input	1 channel in: 5 mA 3–5 VDC
Alarm Output	1 channel out: 300 mA 12 VDC

Power

Power Supply	12 VDC/PoE (802.3af)
Power Consumption	Basic: 2.8 W (12 VDC); 3.5 W (PoE) Max. (WDR + IR intensity + Intelligence): 7.1 W (12 VDC); 8.3 W (PoE)

Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to 140 °F) /Less than 95% RH
Storage Temperature	–40 °C to +60 °C (–40 °F to 140 °F)
Protection	IP67; IK10

Structure

Casing	Metal
Product Dimensions	89.1 mm × Φ111.7 mm (3.51" × Φ4.40")
Net Weight	516 g (1.14 lb)
Gross Weight	670 g (1.48 lb)

Ordering Information

Type	Model	Description
4MP Camera	DH-IPC-HDBW4441EP-AS-0280B	4MP IR Fixed-focal Dome WizMind Network Camera
	DH-IPC-HDBW4441EP-AS-0360B	4MP IR Fixed-focal Dome WizMind Network Camera
	DH-IPC-HDBW4441EP-AS-0600B	4MP IR Fixed-focal Dome WizMind Network Camera
Accessories (Optional)	PFA136	Junction Box
	PFA109	Mount Adapter
	PFB220C	Ceiling Mount Brack
	PFB203W	Wall Mount
	PFA152-E	Pole mount
	PFM321D	12 VDC 1 A Power Adapter
	PFM900-E	Integrated Mount Tester
	TF-P100	MicroSD Memory Card

Accessories

Optional:

PFA136
Junction
Box

PFA109
Mount
Adapter

PFB220C
Ceiling Mount
Brack

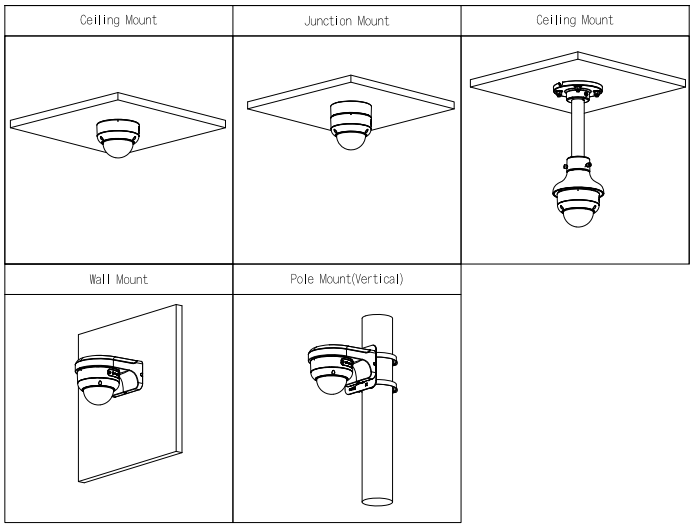
PFB203W
Wall
Mount

PFA152-E
Pole
mount

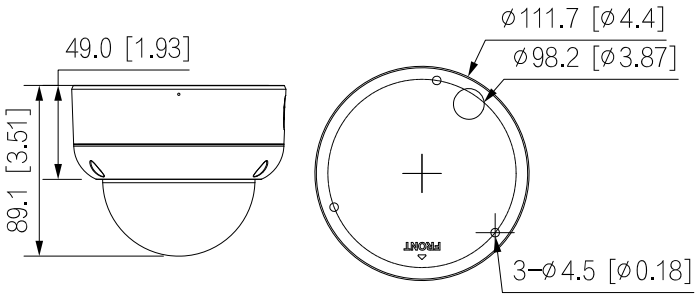
PFM321D
12 VDC 1 A
Power Adapter

PFM900-E
Integrated
Mount Tester

TF-P100
TLC SD
Card



Dimensions (mm[inch])



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