Dahua TECHNOLOGY

DH-IPC-HDBW7842H-Z4

8MP IR Dome WizMind Network Camera

ePoE   **WizMind**

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 advanced deep learning algorithm, Dahua WizMind 7 Series network camera supports various intelligent functions and satisfies the requirements in different scenes. The camera can accurately recognize person, vehicle, and non-motor vehicle, face, ANPR, and liveness. This series camera has ultra starlight night version effect, and works with ultra-low stream. It supports dust-proof function, waterproof function and vandal-proof function, complying with the standards of IP67 and IK10 (Supported by some select models).

Functions

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.

People Counting

With deep learning algorithm, Dahua People Counting technology can track and process moving human body targets to realize the accurate statistics of enter No., leave No., and In Area No. Working with management platform, it outputs reports to meet your requirements.

Video Metadata

With deep learning algorithm, Dahua Video Metadata technology can detect, track, capture vehicle, non-motor vehicle and people, and select the best images, and extract attributes.

- 8MP, 1/1.8" CMOS image sensor, low illuminance, high image definition
- Outputs max. 8MP(3840 × 2160) @25/30 fps
- H.264&H.265 coding, high compression ration
- WDR, day/night, 3D NR, AWB, HLC, BLC
- ROI, SVC, SMART H.264+/H.265+, flexible coding, applicable to various bandwidth and storage environments
- With deep learning algorithm, it supports people counting, face detection, perimeter protection etc
- Alarm: 3 in, 2 out; audio: 1 in, 1 out; RS-485; BNC; supports max. 256 G SD card
- 24V AC/PoE/12V DC power support
- Five streams for three-channel HD video
- IP67, IK10 protection
- Anti-corrosion coating(optional)
- 12V DC power output, max. current 165mA , easy for installation

8Mp	Starlight	People counting	ANPR	Face Detection	Video Metadata

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.

ePoE

Dahua ePoE technology provides a new way to accomplish long distance transmission between IP camera and network switch. It allows more flexible surveillance system design, improves reliability and saves construction and wiring cost.

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.

ANPR

With high-performance GPU chip, deep learning algorithm, and lots of sample training learning, Dahua ANPR technology can automatically collect and recognize the vehicle information, including license plate, logo, vehicle type, and vehicle color.

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.

Queue Management

With advanced image processing technology and deep leaning algorithm, Dahua Queue Management technology counts people quantity in selected area in real time to realize queue management. It supports multiple polygon areas. When No. in area/strand time is not smaller or not larger than the threshold, it triggers alarm.

Technical Specification

Camera

Image Sensor	1/1.8"8Megapixel progressive CMOS
Max. Resolution	3840 (H) × 2160 (V)
ROM	4 G
RAM	2 G
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual 1/3 s–1/100,000 s
Min. Illumination	0.005 Lux@F1.6 (Color, 30IRE) 0.0005 Lux@F1.6 (B/W, 30IRE) 0 Lux (Illuminator on)
S/N Ratio	> 56 dB
Illumination Distance	80 m (262.5 ft)
Illuminator On/Off Control	Auto/Manual
Illuminator Number	3 (IR LED)
Pan/Tilt/Rotation Range	Pan: 0°–355° Tilt: 0°–80° Rotation: 0°–355°

Lens

Lens Type	Motorized vari-focal
Mount Type	Module
Focal Length	8 mm–32 mm
Max. Aperture	F1.6 (Constant)
Field of View	Horizontal: 40° (W)–15° (T) Vertical: 23° (W)–9° (T) Diagonal: 45° (W)–17° (T)
Iris Type	Auto; Precise iris control
Close Focus Distance	W: 2.5 m (8.20 ft) T: 6 m (19.68 ft)

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	218.0 m (715.2 ft)	87.0 m (285.4 ft)	43.0 m (141.1 ft)	21.0 m (68.9 ft)
	T	580.0 m (1902.9 ft)	232.0 m (761.2 ft)	116.0 m (380.6 ft)	58.0 m (190.3 ft)

Smart Event

IVS	Abandoned object; moving object

Professional, intelligent

IVS (Perimeter Protection)	Tripwire, intrusion, fast moving (the three functions support the classification and accurate detection of vehicle and human); parking detection, loitering detection, and people gathering.
Face Detection	Face detection, track, priority, snapshot; Upload Optimized snapshot picture; Face enhancement, face exposure, face attribute extract,6 attributes and 8 expressions: Gender, age, glasses,expressions (anger, sadness, disgust, fear, surprise,calm, happiness and confusion), Mouth mask, beard; Face matting setting: face, single inch photo; Three snapshot methods: real-time snapshot, priority snapshot, quality priority; Face angle filter Priority time setting; Support Duration Optimal,Non-living Filtering
People Counting	Support tripwire number counting; people counting in area, and displaying and outputting yearly/monthly/daily reports. Support queue management, and displaying and outputting yearly/monthly/daily reports. Support 4 tripwire rule configuration, people counting in 4 areas, and 4 queue managements.
ANPR	ANPR, track, priority, snapshot Vehicle attributes: license plate, vehicle type, vehicle color, vehicle brand Other attributes: sun visor, seat belt, smoking, phoning, in-car accessories, annual vehicle inspection mark
Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle detection detection; track, priority, snapshot, Upload Optimized snapshot picture; Motor vehicle attributes: Plate Namember, Vehicle type,Vehicle color, Car Logo,Sunsheild,Seatbelt, Smoke, Ornament,Inspection Sticker;Calling; Non-motor vehicle attributes:(Vehicle Type,Vehicle Color,Occupancy,Top,Top Color,Hat) Human body attributes:(Top,Bottom,Top Color,Bottom Color,Bag,Hat,Umbrella,Gender) Human face attributes:(Gender, age, glasses, expressions, Mouth mask, beard)
Intelligent 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+/H.264+
Video Frame Rate	Main Stream: 3840 × 2160 (1-25/30 fps) Sub stream: 704 × 576 (1-25 fps)/704 × 480 (1–30 fps) Third stream: 1920 × 1080 (1-25/30 fps) Fourth stream: 1920 × 1080 (1-25/30 fps) Fifth stream: 704 × 576 (1-25)/704 × 480 (1–30 fps)
Stream Capability	5 streams
Resolution	8M (3840 × 2160); 6M (3072 × 2048/3072 × 1728); 5M (2592 × 1944); 4M (2688 × 1520); CIF (352 × 288/352 × 240); 3M (2048 × 1536/2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 32 kbps–16384 kbps H.265: 12 kbps–16384 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)
Electronic Image Stabilization (EIS)	Yes
Smart Illumination	Yes
Defog	Yes
Image Rotation	0°/90°/180°/270° (Support 90°/270° with 1080p resolution and lower)
Mirror	Yes
Privacy Masking	4 areas

Audio

Audio Compression	G.711a; G.711Mu; G726; 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; fast moving; abandoned object; missing object; loitering detection; people gathering; parking detection; scene changing; audio detection; defocus detection; external alarm; face detection; people counting in area; stay alarm; people counting; people No. exception detectiong exception detection; safety exception,queue management

Network

Network	RJ-45 (10/100/1000 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
Protocol	IPv4; IPv6; HTTP; HTTPS; TCP; UDP; ARP; RTP; RTSP; RTCP; RTMP; SMTP; FTP; SFTP; DHCP; DNS; DDNS; QoS; UPnP; NTP; Multicast; ICMP; IGMP; NFS; SAMBA; PPPoE; 802.1x; SNMP; Bonjour
Interoperability	ONVIF (Profile S/Profile G/Profile T); CGI; Milestone; Genetec; P2P; RTMP
User/Host	20 (Total bandwidth: 160M)
Storage	FTP; SFTP; Micro SD card (support max. 256 G); NAS
Browser	IE: IE9 and earlier Chrome: Chrome 42 and earlier Firefox: Firefox 48.0.2 and earlier
Management Software	Smart PSS; DSS; DMSS
Mobile Phone	IOS; Android

Certification

Certification	CE-LVD: EN62368-1,EN60950-22 (optional) CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07,UL 50E NEMA Type 4X (optional))

Port

RS-485	1 (baud rate range: 1200 bps–115200 bps)
Audio Input	1 channel (3-pin terminal with 2.54mm clearance; with audio cable)
Audio Output	1 channel (3-pin terminal with 2.54mm clearance; with audio cable)
Alarm Input	3 channels in: 5mA 3V–5V DC
Alarm Output	2 channels out: 1,000mA 30V DC/500mA 50V DC

Power

Power Supply	12V DC/24V AC/PoE+ (802.3at); ePoE
Power Consumption	Basic power consumption: 5.4W (12V DC); 5W(24V AC); 4.9W (PoE) Max. power consumption (Max. stream + intelligent function + IR LED + focus): 16.7W (12V DC);15.7W(24V AC); 15.6W (PoE) Heat power consumption: 3.3W (12V DC);5.5W(24V AC); 5.5W (PoE)

Environment

Operating Conditions	–40°C to +60°C (–40°F to 140°F)/Less than 95% RH
Strorage Conditions	–40°C to +60°C (–40°F to +140°F)
Protection Grade	IP67, IK10, Anti-Corrosion Protection: NEMA 4X (optional)

Structure

Casing	Metal + plastic
Dimensions	129.1 mm × Φ157.9 mm (5.08" × Φ6.22")
Net Weight	1500 g (3.31 lb)
Gross Weight	1600 g (3.53 lb)

Ordering Information

Type	Model	Description
8M Camera	DH-IPC-HDBW7842HP-Z4	8MP IR Dome WizMind Network Camera, PAL
	DH-IPC-HDBW7842HN-Z4	8MP IR Dome WizMind Network Camera, NTSC
	IPC-HDBW7842HP-Z4	8MP IR Dome WizMind Network Camera, PAL
	IPC-HDBW7842HN-Z4	8MP IR Dome WizMind Network Camera, NTSC
Accessories (Optional)	PFA773	Sun Shade
	PFB211W	Wall Mount
	PFA152-E	Pole Mount
	PFA101	Mount Adapter
	PFB300C	Ceiling Mount

Accessories
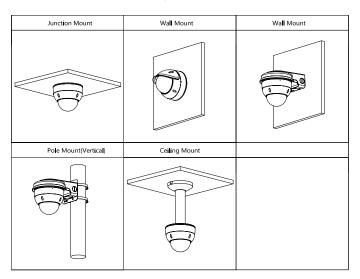
Optional

PFA773
Wall Mount

PFB211W
Wall Mount

PFA152-E
Pole Mount

PFA101
Wall Mount

PFB300C
Ceiling Mount

Junction Mount	Wall Mount	Wall Mount
Pole Mount(Vertical)	Ceiling Mount	

Dimensions (mm[inch])

74.5 [2.93]

129.1 [5.08]

⌀157.9 [⌀6.22]

4-⌀4.7 [⌀0.19]

⌀142.0 [⌀5.59]

⌀142.0 [⌀5.59]

⌀140.0 [⌀5.51]

4-⌀3.7 [⌀0.15]

3-⌀4.5 [⌀0.18]