

DH-IPC-HDBW7442H-Z4

4MP AI IR Dome Network Camera





System Overview

With Hisilicon advanced chip, image sensor and deep learning algorithm, Dahua Ultra-Al series network camera supports various intelligent functions and meet customers' requirements in different scenes. Adopting excellent image processing technology, Dahua Al network camera performs good in WD and low illuminance environment. For intelligent functions, it supports face detection, people counting, perimeter protection, video structurization (vehicle, non-motor vehicle, people detection and snapshot), and ANPR. The camera provides better solution to image processing and intelligent application.

Functions

Face Capture

Face capture is a software application that automatically captures faces from within a digital image or a video frame from a video source. Dahua cameras use advanced deep learning algorithms and are trained by a large number of face data sources, enabling the camera to locate faces quickly and accurately from the video source and capture facial images.

People Counting

People counting adopts deep learning algorithm to detect human body target, and track the target in real time, which realizes independent statistics of entry number and exit number. And the accuracy rate is up to 98%.

Video Structurization

Video structurization adopts deep learning algorithm to detect vehicle, non-motor vehicle and people in the image, track the target in real time, and then snapshot the target and extract attributes.

Ultra WDR

Standard WDR/HDR camera can provide 120dB dynamic range. However, for some scenes with wider contrast range, 120dB is slightly insufficient. By adopting the latest technology, Dahua Cameras can provide an amazing dynamic range up to 140dB.

Smart H.265+

Smart H.265+ is an effective coding method based on H.265. Comparing with H.265, smart H.265+ improves efficiency more than 70% through auto scene judgement, dynamic ROI and dynamic GOP. Smart H.265+ provides better solution to save storage, bandwidth and power consumption.

- \cdot 4MP, 1/1.8" CMOS image sensor, low illuminance, high image definition \cdot Max outputs 4MP (2688 × 1520) @ 25 fps/30 fps, meets high frame rate
- requirement, and max. supports 50 fps/60 fps
- · H.256 coding, high compression ration, low bit rate · Max IR distance: 80 m (262.5ft)
- · Rotation mode, WDR, 3D DNR, HLC, BLC, digital watermarking
- \cdot ROI, SVC, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments
- · Defog detection, intrusion, tripwire, abandoned/missing object, scene changing, loitering detection, people gathering, fast moving, parking detection, audio detection, external alarm, face detection, people counting, ANPR, video metadata (Snapshot of vehicle, non-motor vehicle, and person detection, and attributes recognition)
- \cdot Alarm: 3 in, 2 out, audio:in, out, RS-485, BNC, 256 G SD card, built-in ports, without cables
- \cdot 24V AC/POE/12V DC power support, 12V power output and the max current 165mA
- · Five streams for three-channel HD video
- · IP67, IK10 protection grade

















EPOE

Dahua ePoE technology, designed internally, adopts advanced 2D-PAM3 coding modulation from physical layer, and realizes full duplex transmission over 800 meters at the speed of 10Mbps, or 300 meters at the speed of 100Mbps via Cat 5 or coaxial cable media. Besides, it supports PoE and PoC power supply technology which has greatly simplified construction and wiring. Dahua ePoE technology offer 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

Dahua's Perimeter Protection functions significantly improved accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or to a mobile client reduces system requirements and resources resulting in greater surveillance system efficiency.



Technical S	Specification						ANPR, track, priority, snapshot Vehicle attributes: license plate, vehicle type, vehicle
Camera						ANPR	color, vehicle brand Other attributes: sun visor, seat belt, smoking,
Image Sensor		1/1.8" 4Megapixel progressive CMOS					phoning, in-car accessories, annual vehicle inspection
Effective Pixels		2688 (H) × 1520 (V)				Video Structurization	Vehicle detection, non-motor vehicle detection, personnel detection, face detection, track, snapshot, optimization, report high quality picture, vehicle attributes (license plate, vehicle type, vehicle color, and vehicle brand), other attributes (sun visor, seatbelt, smoking, phoning, in-car accessories, and annual vehicle inspection mark), non-motor vehicle attributes: vehicle type, vehicle color, driver number, cloth type, cloth color, and hat), personnel attribute (cloth type, trousers type, cloth color, trousers color, knapsack, and gender), face attribute (gender, age, glasses, mask, and beard)
ROM		4 GB					
RAM		2 GB					
Scanning System		Progressive					
Electronic Shutter Speed		Auto/Manual 1/3 s–1/100000 s					
Min. Illumination		0.001 Lux@F1.6					
IR Distance		Distance up to 80 m (262.5 ft)				Intelligent Search	Work together with Smart NVR to perform refine intelligent search, event extraction and merging to event videos.
IR On/Off Control		Auto					
IR LEDs Numb	er	3 (IR LEDs)				Video	
Pan/Tilt/Potation Panga		Horizontal: 0°–355° Vertical: 0°–80°				Video Compression	H.265, H.264, H.264H, H.264B, MJPEG
rany mit/Notal	Pan/Tilt/Rotation Range		–355°			Smart Codec	H.264: Yes H.265: Yes
Lens							Main Stream: 2688 × 1520 (1–50/60 fps)
Lens Type		Electric zoom				Video Frame Rate	sub stream 1: 704 × 576 (1–25/30 fps) sub stream 2: 1920 × 1080 (1–25/30 fps) sub stream 3: 1920 × 1080 (1–25/30 fps) sub stream 4: 704 × 576 (1–25/30 fps)
Mount Type		Module interface					
Focal Length		8 mm-32 mm				Stream Capability	5 streams
Max. Aperture Field of View		F1.6 Horizontal: 40° (W)–15° (T) Vertical: 23° (W)–9° (T)				Resolution	4M (2688 × 1520), 3M (2304 × 1296), 1080p (1920 × 1080), 1.3M (1280 × 960), 720p (1280 × 720), D1 (704 × 576/704 × 480), VGA (640 × 480), CIF (352 × 288/35 × 240)
Optical Zoom		Diagonal: 46° (W)–18° (T) 4 times				Bit Rate Control	CBR/VBR
Iris Type		Auto aperture				Video Bit Rate	H.264: 32 Kbps-10240 Kbps
Close Focus Distance		W: 2.5 m (W: 8.20 ft)				Day/Night	H.265: 12 Kbps–10240 Kbps ICR switch
Close Focus Di		T: 6 m (T: 19				BLC	Yes
	Lens	Detect	Observe 60.7 m	Recognize	Identify	WDR	140 dB
DORI Distance	W	151 m (495.4 ft)	(199.1 ft)	30.3 m (99.4 ft)	15.1 m (49.5 ft)		Auto/natural/street lamp/outdoor/manual/regional
	Т	400 m (1312.3 ft)	160 m (524.9 ft)		40 m (131.2 ft)	White Balance	custom
Smart event		(Gain Control	Manual/Auto
General IVS Ar	nalytics	Abandoned object, moving object				Noise Reduction	3D DNR
Professional, intelligent		, , , ,				Motion Detection	Yes
Perimeter Protection		Tripwire, intrusion, fast moving, loitering detection,				Region of Interest(RoI)	Yes (4 areas)
		parking detection and people gathering.				Electronic Image Stabilization(EIS)	Yes
Face Snapshot		Yes Face detection, track, priority, snapshot, face				Smart IR	Yes
Face Detection		enhancement, face exposure, face attribute extract, 6 attributes and 8 expressions: Gender, age, glasses, expressions (anger, sadness, disgust, fear, surprise, calm, happiness and confusion), 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				Defog	Yes
						Image Rotation	0°/90°/180°/270° (Supports 90°/270° with 1080p resolution or below.)
						Mirror	Yes
						Privacy Masking	4 areas
People Counting		Count the entry number and exit number , display and				Audio	
		output daily/monthly/annual report Count people in area, display and output daily/ monthly/annual report					

Network	RJ-45 (100/1000 Base-T)	
Protocol	HTTP, TCP, ARP, RTSP, RTP, UDP, RTCP, SMTP, FTP, DHCF DNS, DDNS, PPPOE, IPv4/v6, SNMP, QoS, UPnP, NTP	
Interoperability	ONVIF(Profile S/Profile G); CGI; P2P; RTMP	
Scene Self-adaptation	Yes	
User/Host	20	
Edge Storage	FTP; Micro SD card (256 G); NAS; SFTP	
Browser	IE: Versions later than IE9 Google: Versions later than Chrome 42, Firefox: Versions later than Firefox 48.0.2,	
Management Software	Smart PSS, DSS PRO, NVR, IVSS	
Mobile Phone	IOS, Android	
Certification		
Certifications	CE-LVD: EN60950-1 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	
Port		
RS-485	1 (Bit rate: 1200 bps–115200 bps)	
Audio Input	Audia Interface: 1/1 abancal la/Quit	
Audio Output	Audio Interface: 1/1 channel In/Out	
Video Port	1 Channel CVBS (2 pin white socket at interval of 1.25 mm, with BNC cable)	
Alarm Input	3 channel In: 5mA 5V DC	
Alarm Output	2 channel Out: 1000mA 30V DC/500mA 50V AC	
Power		
Power Supply	12V DC/24V AC/POE	
Power Consumption	Basic power consumption: 5.4W (12V DC); 5W (24V AC active power); 4.9W (POE); Max power consumption (ICR switch, and IR full intensity): 16.7W (12V DC); 15.7W (24V AC active power); 15.6W (POE);	
Environment		
Operating Temperature	-40°C to +60°C (-40°F to +140°F)	
Storage Temperature	≤95%	
Storage Temperature	-40°C to +60°C (-40°F to +140°F)	
Ingress Protection	IP67, IK10	
Structure		
Dimensions	129.1 mm \times Φ 157.9 mm (5.08" \times Φ 6.22") (L \times W \times H)	
Box Dimensions	212 mm \times 212 mm \times 200 mm (8.35" \times 8.35" \times 7.87") (L \times W \times H)	
Gross Weight	1600 g (3.53 lb)	
Installation		

Installation

Ordering Information							
Туре	Part Number	Description					
	DH-IPC- HDBW7442HP-Z4	4MP AI IR Dome Network Camera					
4MP Camera	DH-IPC- HDBW7442HN-Z4	4MP AI IR Dome Network Camera					
Gainera	IPC- HDBW7442HP-Z4	4MP AI IR Dome Network Camera					
	IPC- HDBW7442HN-Z4	4MP AI IR Dome Network Camera					
	PFA773	Wall Mount					
	PFB210W	Pole Mount					
Accessories	PFA152-E	Pole Mount					
	PFA101	Ceiling Mount					
	PFB300C	Ceiling Mount					

Accessories

Optional:







PFA773 Wall Mount

PFB210W Pole Mount

PFA152-E Pole Mount



PFA101 Ceiling Mount



Ceiling Mount	Wall Mount	Wall Mount
	PFA773	PFA210W
Wall Mount	Pole Mount	Hang Mount
PFA210W	PFB210W+PFA152-E	PFB300C+PFA101

ceiling-mounted, side-mounted, and pole-mounted

Dimensions (mm[inch])





