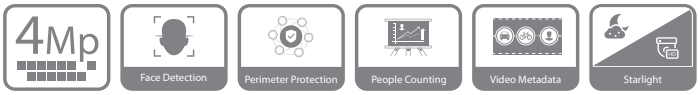
DH-IPC-HDPW5442G-Z

4MP Pro AI IR Vari-focal Dome Network Camera

- 1/1.8” 4Megapixel progressive scan CMOS
- H.265 & H.264 triple-stream encoding
- 25/30 fps@2688 × 1520, 50/60 fps@1080P (1920 × 1080)
- WDR (140 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
- 2.7 mm–12.0 mm motorized lens
- 1/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 40 m
- Micro SD memory



System Overview

Pro AI series contains Face Detection, Perimeter Protection and People Counting functions.Powered by deep-learning Artificial Intelligence algorithms, significantly improved accuracy. Meanwhile, the series features starlight and smart IR technology.

Functions

Face Detection

Face Detection 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.

Face Attributes

Through the use of deep learning algorithms to analyze facial images, Dahua cameras can extract six facial attributes from each frame, including Age, Gender,Expression(Jolly/Surprise/Normal/Rage/Sad/Disgusted/Confused/Frightened), Glasses,Mouth Mask, Moustache & Beard. Customers can acquire data of interest via face attributes statistics.

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.

People Counting

People Counting function uses advanced image processing technology to capture depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals’ entrance and exit with up to 95% counting accuracy.

Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. Dahua face detection camera can extract six facial attributes and output the metadata for analysis.

Technical Specification

Camera

Image Sensor	1/1.8" 4Megapixel progressive scan CMOS
Effective Pixels	2688 (H) × 1520 (V)
RAM/ROM	1 GB/128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto/Manual, 1/3 s–1/100000 s
Minimum Illumination	0.003 Lux@F1.8
IR Distance	Distance up to 40 m (131 ft)
IR On/Off Control	Auto/Manual
IR LEDs	3

Lens

Lens Type	Motorized vari-focal
Mount Type	Board-in
Focal Length	2.7 mm–12.0 mm
Max. Aperture	F1.8
Angle of View	H: 114°–47°, V: 62°–26°
Aperture Type	Auto
Close Focus Distance	1.2 m (3.94 ft)

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	W	58m(190ft)	23m(75ft)	12m(39ft)	6m(20ft)
	T	131m(430ft)	52m(171ft)	26m(85ft)	13m(43ft)

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan: 0°–355°; Tilt: 0°–75°; Rotation: 0°–355°

Artificial Intelligence

Face Detection	Support face image capture
Face Attributes	Support 6 kinds of face attributes extraction: Age, Gender, Expression(Jolly, Surprise, Normal, Rage, Sad, Disgusted, Confused, Frightened), Glasses,Mouth Mask, Moustache & Beard
Perimeter Protection	Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering
People Counting	Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection

General Intelligence

Event Trigger	Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access,Storage anomaly
General Intelligence	Object Abandoned/Missing
Heat Map	Yes

Video

Compression	H.265,H.264,H.264B,H.264H, MJPEG (sub stream)
Smart Codec	Yes
Streaming Capability	3 Streams
Resolution	2688 × 1520/2560 × 1440/2304 × 1296/1080P (1920 × 1080)/1.3M (1280 × 960)/720P (1280 × 720)/D1 (704 × 576/704 × 480)/VGA (640 × 480)/CIF (352 × 288/352 × 240)
Frame Rate	Main Stream: 2688 × 1520 (1 fps–25/30 fps) 2560 × 1440 (1 fps–25/30 fps) 1920 × 1080 (1 fps–50/60 fps)
	Sub Stream: D1 (1 fps–25/30 fps) D1 (1 fps–50/60 fps)
	Third Stream: 1080P (1 fps–16 fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 Kbps–8192 Kbps H.265: 19 Kbps–8192 Kbps
Day/Night	Auto(ICR)/Color/B/W
BLC Mode	BLC/HLC/WDR (140 dB)
White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Gain Control	Auto/Manual
Noise Reduction	3D DNR
Motion Detection	Off/On (4 Zone, Rectangle)
Region of Interest	Off/On (4 Zone)
Electronic Image Stabilization (EIS)	Yes
Smart IR	Yes
Defog	Yes
Flip	0°/90°/180°/270°
Mirror	Off/On
Privacy Masking	Off/On (4 Area, Rectangle)

Audio

Compression	G.711a, G.711Mu, G.726, AAC, G.723

Network

Ethernet	RJ-45 (10/100 Base-T)
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;PPPoE;802.1x;SNMP
Interoperability	ONVIF (Profile S/Profile G/Profile T), CGI, Milstone, Genetec, P2P
Streaming Method	Unicast/Multicast
Max. User Access	20 Users
Edge Storage	NAS;FTP;SFTP;Micro SD card 256 GB
Web Viewer	IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)
Management Software	Smart PSS, DSS, DMSS
Smart Phone	iOS, Android

Certifications

Certifications	CE-LVD: EN60950-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B

Interface

Audio Interface	1/1 channel In/Out
RS485	N/A
Alarm	1 channel In: 5mA 5V DC 1 channel Out: 300mA 12V DC

Electrical

Power Supply	DC 12V (±30%), PoE (802.3af) (Class 0)
Power Consumption	<11W

Environmental

Operating Conditions	-30° C to +60° C (-22° F to +140° F)/Less than 95% RH
Storage Conditions	-30° C to +60° C (-22° F to +140° F)

Construction

Casing	plastic
Dimensions	Φ180.5 mm × 131.4 mm (7.11" × 5.17")
Net Weight	0.51 kg (1.12 lb)
Gross Weight	0.73 kg (1.61 lb)

Ordering Information

Type	Part Number	Description
4MP camera	DH-IPC-HDPW5442GP-Z	4MP Pro AI IR Vari-focal Dome Network Camera, PAL
	DH-IPC-HDPW5442GN-Z	4MP Pro AI IR Vari-focal Dome Network Camera, NTSC
	IPC-HDPW5442GP-Z	4MP Pro AI IR Vari-focal Dome Network Camera, PAL
	IPC-HDPW5442GN-Z	4MP Pro AI IR Vari-focal Dome Network Camera, NTSC
Accessories (optional)	PFA701	Junction Box

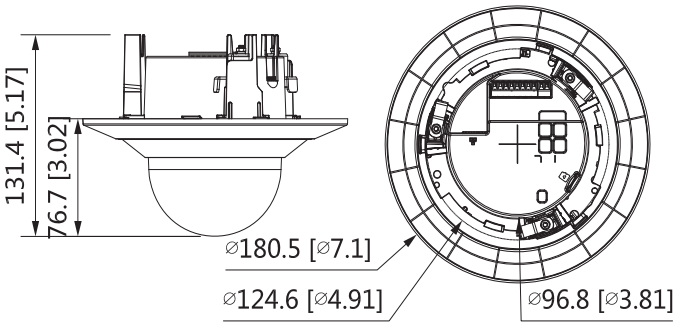
Accessories

Optional:

PFA701
Junction Box

In-ceiling Mount	Ceiling Mount
	PFA701

Dimensions (mm[inch])



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