

# DH-IPC-HDBW5442E-ZE

4MP Pro Al IR Vari-focal Dome Network Camera





# **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. This series fully protected from dust and water, certified to IP67 and vandal resistant to IK10 standard.

#### **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.

- · 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, IP67, IK10













#### **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.

#### ePoE technology

The ePoE technology of Dahua, 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.

# Protection(IP67, IK10, wide voltage)

The camera allows for  $\pm 30\%$  input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning. Subjected and certified to rigorous dust and immersion tests (IP67) and impact tests (IK10), the camera is the choice for installation in even the most unforgiving environments.





Camera Image Sensor Effective Pixels	. (1 0)			Streaming Capability	
Ü	4 /4 0 // 44 4	Camera			3 Streams
Effective Pixels	1/1.8" 4Megapixel progressive scan CMOS				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)
	2688 (H) × 1520 (V)		Resolution		
RAM/ROM	1 GB/128 MB				Main Stream: 2688 × 1520 (1 fps–25/30 fps)
Scanning System	Progressive				2560 × 1440 (1 fps-25/30 fps) 1920 × 1080 (1 fps-50/60 fps)
Electronic Shutter Speed	eed Auto/Manual, 1/3 s-1/100000 s			Frame Rate	Sub Stream: D1 (1 fps-25/30 fps)
Minimum Illumination	um Illumination 0.003 Lux@F1.8				D1 (1 fps-50/60 fps)  Third Stream: 1080P (1 fps-16 fps)
IR Distance	istance Distance up to 40 m (131 ft)			Bit Rate Control	CBR/VBR
IR On/Off Control	Auto/Manual			Bit Nate Control	H.264: 32 Kbps-8192 Kbps
IR LEDs	3			Bit Rate	H.265: 19 Kbps–8192 Kbps
Lens				Day/Night	Auto(ICR)/Color/B/W
Lens Type	Motorized vari-focal			BLC Mode	BLC/HLC/WDR (140 dB)
Mount Type	Board-in			White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Focal Length	2.7 mm-12.0 mm	2.7 mm-12.0 mm			Auto/Manual
Max. Aperture	F1.8			Noise Reduction	3D DNR
Angle of View	H: 114°–47°, V: 62°–26°		Motion Detection	Off/On (4 Zone, Rectangle)	
Aperture Type	Auto		Region of Interest	Off/On (4 Zone)	
Close Focus Distance	1.2 m (3.94 ft)	1.2 m (3.94 ft)		Electronic Image Stabilization (EIS)	Yes
Lens	Detect Observe	Recognize	Identify	Smart IR	Yes
DORI Distance W	58m(190ft) 23m(75ft)	12m(39ft)	6m(20ft)	Defog	Yes
Т	131m(430ft) 52m(171ft)	26m(85ft)	13m(43ft)	Flip	0°/90°/180°/270°
Pan/Tilt/Rotation				Mirror	Off/On
Pan/Tilt/Rotation Range	Pan: 0°-355°; Tilt: 0°-65°;	Rotation: 0°–3	55°	Privacy Masking	Off/On (4 Area, Rectangle)
Artificial Intelligence				Audio	
Face Detection	Support face image captu	ire		Compression	G.711a, G.711Mu, G.726, AAC, G.723
Face Attributes	Support 6 kinds of face at Gender, Expression (Jolly	Surprise, Norr	mal, Rage,	Network	
	Sad, Disgusted, Confused Mouth Mask, Moustache		Glasses,	Ethernet	RJ-45 (10/100 Base-T)
Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering		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		
People Counting	Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection			Interoperability	ONVIF (Profile S/Profile G/Profile T), CGI, Milstone, Genetec, P2P
General Intelligence		Streaming Method	Unicast/Multicast		
	Motion detection, Video tampering, Scene changing,		Max. User Access	20 Users	
Event Trigger	Network disconnection , IP address conflict, Illegal Access,Storage anomaly		Edge Storage	NAS;FTP;SFTP Micro SD card 256 GB	
General Intelligence Object Abandoned/Missing		Web Viewer	IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)		
Heat Map Yes				Management Software	Smart PSS, DSS, DMSS
Video				Smart Phone	iOS, Android
Compression	H.265,H.264,H.264B,H.264H, MJPEG (sub stream)		Certifications		

# Pro Al Series | DH-IPC-HDBW5442E-ZE

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%), AC 24V (±30%), PoE (802.3af) (Class 0)
Power Consumption	<12.4W

# 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)
Ingress Protection	IP67
Vandal Resistance	IK10

#### Construction

Casing	Metal
Dimensions	Φ159.0 mm × 117.9 mm (6.26" × 4.64")
Net Weight	0.95 kg (2.09 lb)
Gross Weight	1.20 kg (2.65 lb)

Ordering Ir	nformation	
Type	Part Number	Description
4MP camera	DH-IPC- HDBW5442EP-ZE	4MP Pro Al IR Vari-focal Dome Network Camera, PAL
	DH-IPC- HDBW5442EN-ZE	4MP Pro Al IR Vari-focal Dome Network Camera, NTSC
	IPC-HDBW5442EP- ZE	4MP Pro Al IR Vari-focal Dome Network Camera, PAL
	IPC-HDBW5442EN- ZE	4MP Pro Al IR Vari-focal Dome Network Camera, NTSC
	PFA138	Junction Box
	PFB210W	Wall mount
Accessories (optional)	PFB300C	Ceiling mount
	PFA152-E	Pole mount
	PFA101	Mount adapter
	PFB201C	In-ceiling mount

# **Accessories**

# **Optional:**









PFB210W Wall mount

PFA138 Juntion Box

In-ceiling mount

LR1002 ePoE Over Coax Converter







PFB300C Ceiling mount

PFA152-E Pole mount

PFA101 Mount adapter

In-ceiling Mount	Junction Mount	Pole Mount	
PFB201C	PFA138	PFB210W + PFA152-E	
5			
Ceiling Mount	Wall Mount		
PFA101 + PFB300C	PFB210W(Indoor)	PFB210W(Outdoor)	

# Dimensions (mm[inch])





