

# DH-IPC-HFW8241X-3D

## 2MP Dual-Lens Stereo Vision AI Network Camera



Deep AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People counting, behavior analysis, traffic data statistics, etc. The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

### System Overview

The Dahua Stereo Vision Behavior Analysis camera uses dual-lens imaging technology to capture 3D 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 five types analysis, like fall detection, strand detection, people approach, people NO. error detection and violence detection.

### Functions

#### Starlight Technology

Featuring Dahua's Starlight Technology, this camera is ideal for applications with challenging lighting conditions. Its low-light performance delivers usable video with minimal ambient light. Even in extreme low-light conditions, Starlight Technology is capable of delivering color images in near complete darkness (0.003 lux).

#### 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. 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

- Two 1/2.8" 2Megapixel progressive scan STARVISTM CMOS
- H.265&H.264 triple-stream encoding
- 25fps/30fps@1080P(1920×1080)
- WDR(120dB), Day/Night(ICR), 3DNR,AWB,AGC,BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.8mm fixed lens (3.6mm, 6mm optional)
- 3/2 Alarm in/out, 1/1 audio in/out, build-in MIC
- Max. IR LEDs Length 40m
- Micro SD memory 256GB, IP67, PoE
- Five Types Stereo Analysis: Support fall detection, strand detection, people approach, people NO. error detection, violence detection



and wiring cost.

#### Wide dynamic range (WDR)

Embedded with industry leading wide dynamic range (WDR) technology, vivid pictures are achieved even in the most intense contrast lighting conditions. For applications with both bright and low lighting conditions that change quickly, True WDR (120dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

#### Smart Codec (H.265+ & H.264+)

Smart Codec is the optimized implementation of standard video compression (H.265 & H.264) that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart Codec technology reduces bit rate and storage requirements by up to 70% when compared to the standard video compression.

#### Protection (IP67, wide voltage)

Supporting  $\pm 30\%$  input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 4KV lightning rating provides effective protection for both the camera and its structure against lightning. IP67 is supported by the camera, which makes it suitable for both indoor and outdoor environments.

#### Stereo analysis

Dahua Stereo analysis camera including fall detection, strand detection, people approach, people NO. error detection and violence detection five types analysis, is designed to provide a high-efficiency, real-time and cost-effective system powered by artificial intelligence and binocular stereo vision technology. Behavior analysis and AI-enabled security products can offer precise and real-time alarm alert, and realize fast alarm video retrieval in time.

**Technical Specification**

Camera

Image Sensor	Two 1/2.8"2Megapixel progressive scan CMOS
Effective Pixels	1920(H) x 1080(V)
RAM/ROM	4096MB/4096MB
Scanning System	Progressive
Minimum Illumination	0.003Lux/F1.4 (Color,1/3s,30IRE) 0.03Lux/F1.4 (Color,1/30s,30IRE) 0Lux/F1.4(IR on)
IR Distance	Distance up to 40m(131ft)
IR On/Off Control	Auto/ Manual
IR LEDs	2

Lens

Lens Type	Fixed				
Mount Type	Board-in				
Focal Length	2.8mm (3.6mm, 6mm)				
Max. Aperture	F1.4				
Angle of View	H: 111° (86°,54°), V:62° (46°,30°),				
Optical Zoom	N/A				
Focus Control	Fixed				
Close Focus Distance	0.7m (1.2m,2.4m)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	29m(95ft)	16m(52ft)	6m(20ft)	3m(10ft)
	3.6 mm	43m(141ft)	17m(56ft)	9m(30ft)	4m(13ft)
	6 mm	50m(164ft)	20m(66ft)	10m(33ft)	5m(16ft)

Pan/Tilt/Rotation

Pan/Tilt/Rotation Range	Pan:0°~355°; Tilt:0°~64°; Rotation:0°~355°
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Artificial Intelligence

Behavior analysis	Fall detection, Strand detection, People approach, People NO. error detection, Violence detection
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General Intelligence

Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, Ip address conflict, Illegal access, Storage anomaly
General Intelligence	Tripwire, Intrusion, Object Abandoned/Missing, Heat Map

Video

Compression	H.265/H.264H/MJPEG(Sub Stream)
Smart Codec	Support H.265+/H.264+
Streaming Capability	3 Streams
Resolution	1080P(1920x1080)/ 1.3M(1280x960)/ 720P(1280x720)/ D1(704x576/704x480) / VGA(640x480)/ CIF(352x288/342x240)
Frame Rate	Main Stream: 2MP (1~25/30fps)
	Sub Stream 1: D1 (1 ~ 25/30fps)
	Sub Stream 2: 2MP (1~25fps/30fps)

Bit Rate Control	CBR/VBR
Bit Rate	H.264: 1792~ 9216Kbps H.265: 512~ 5632Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
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)	N/A
Smart IR	Support
Defog	N/A
Digital Zoom	16x
Flip	N/A
Mirror	N/A
Privacy Masking	Off / On (4 Area, Rectangle)

Audio

Compression	G.711a/ G.711Mu/ AAC/ G.726
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Network

Ethernet	RJ-45 (100/1000Base-T)
Protocol	HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;RTCP;SMTP; FTP;DHCP;DNS;DDNS;PPPOE;IPv4/v6;QoS;UPnP; NTP;Bonjour;IEEE 802.1x;Multicast;ICMP;IGMP;S NMP;TLS
Interoperability	ONVIF Profile G&S, API
Streaming Method	Unicast / Multicast
Max. User Access	10 Users/20 Users
Edge Storage	NAS Local PC for instant recording Mirco SD card 256GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS, DMSS
Smart Phone	IOS, Android

Certifications

Certifications	CE (EN 60950:2000) UL:UL60950-1 FCC: FCC Part 15 Subpart B
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Interface

Video Interface	1 port (For Adjustment Only)
Audio Interface	1/1 channel In/Out (RCA), Built-in Mic
RS485	1 port
Alarm	3 channel In: 5mA 5VDC 2 channel Out: 300mA 12VDC

Electrical

Power Supply	DC12V±30%, PoE (IEEE 802.3af)(Class 0)
Power Consumption	< 8.77W

Environmental

Operating Conditions	-40° C ~ +60° C (-40° F ~ +140° F) / Less than 95% RH
Storage Conditions	-40° C ~ +60° C (-40° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	N/A

Construction

Casing	Metal
Dimensions	176.9mmx230.9mmx50.4mm (6.97"x9.09"x1.99")
Net Weight	2kg (4.4lb)
Gross Weight	1.9kg (4.2lb)

Ordering Information

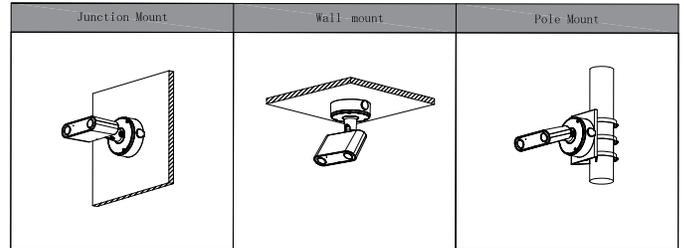
Type	Part Number	Description
2MP Camera	DH-IPC-HFW8241XP-3D-0280	2MP Dual-Lens Behavior Analysis AI Network Camera,PAL
	DH-IPC-HFW8241XN-3D-0280	2MP Dual-Lens Behavior Analysis AI Network Camera,NTSC
	IPC-HFW8241XP-3D-0280	2MP Dual-Lens Behavior Analysis AI Network Camera,PAL
	IPC-HFW8241XN-3D-0280	2MP Dual-Lens Behavior Analysis AI Network Camera,NTSC
	DH-IPC-HFW8241XP-3D-0360	2MP Dual-Lens Behavior Analysis AI Network Camera,PAL
	DH-IPC-HFW8241XN-3D-0360	2MP Dual-Lens Behavior Analysis AI Network Camera,NTSC
	IPC-HFW8241XP-3D-0360	2MP Dual-Lens Behavior Analysis AI Network Camera,PAL
	IPC-HFW8241XN-3D-0360	2MP Dual-Lens Behavior Analysis AI Network Camera,NTSC
	DH-IPC-HFW8241XP-3D-0600	2MP Dual-Lens Behavior Analysis AI Network Camera,PAL
	DH-IPC-HFW8241XN-3D-0600	2MP Dual-Lens Behavior Analysis AI Network Camera,NTSC
Accessories (optional)	Junction Box(Default)	Wall Mount
	PFA154	Pole Mount

Installation

Optional:



PFA154 Pole Mount



Dimensions (mm/inch)

