

# DH-IPC-HFW8331E-Z5E

## 3MP WDR IR Bullet Network Camera



### System Overview

Ultra series adopts high performance DSP and Sony advanced image sensor technology, which can provide excellent image effects for users. With Dahua advanced software algorithm, the series is able to support people counting and heat map which brings extra business analysis value for customers. In addition, IP67, IK10 and heater compliance ensure the series can be applied in a harsher environment.

### Functions

#### 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.

#### Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

#### 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.

#### Business intelligent analysis (People counting, Heatmap)

Dahua Camera also supports more advanced intelligent features such as people counting and heat map besides basic IVS functions. These two

- 1/2.8" 3Megapixel progressive scan STARVIS™ CMOS
- H.265&H.264 triple-stream encoding
- 50/60fps@3M(2048×1536)
- WDR(140dB), Day/Night(ICR), 3DNR,AWB,AGC,BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 7mm ~35mm zoom lens
- Max. IR LEDs Length 100m
- Micro SD memory,IP67,IK10,PoE+



functions can be applied to business intelligence and bring extra values to customers. It is available to acquire daily, weekly, monthly and yearly people flow via people counting and output data report. Heat map can be based on a moving object in time of space movement for analysis, find the most active area and output the report, which is to provide valuable data support for commercial applications.

#### Smart Scene Adaptive (SSA)

Smart Scene Adaptive (SSA) is an intelligent image technology, developed by Dahua that automatically evaluates and compensates for changes in the luminance of a scene. SSA automatically regulates the exposure parameters to improve image quality in a backlit scene, especially in scenes with traffic lights or headlights.

#### 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.

#### Environmental & Protection

With a temperature range of -40 °C to +60 °C (-40 °F to +140 °F), the camera is designed for extreme temperature environments. Supporting ±25% input voltage tolerance, this camera suits even 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 complies with an IK10 impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.)

Technical Specification					
Camera					
Image Sensor	1/2.8"3Megapixel progressive scan CMOS				
Effective Pixels	2048(H)x1536(V)				
RAM/ROM	1024MB/128MB				
Scanning System	Progressive				
Electronic Shutter Speed	Auto/Manual, 1/3~1/100000s				
Minimum Illumination	0.005Lux/F1.4 (Color,1/3s,30IRE) 0.03Lux/F1.4 (Color,1/30s,30IRE) 0Lux/F1.4(IR on)				
S/N Ratio	More than 50dB				
IR Distance	Distance up to 100m(328ft)				
IR On/Off Control	Auto/ Manual				
IR LEDs	4				
Lens					
Lens Type	Motorized /Auto Iris(HALL)				
Mount Type	Board-in				
Focal Length	7~35mm motorized				
Max. Aperture	F1.4				
Angle of View	H: 32°~11°, V:24°~8.6°				
Optical Zoom	5x				
Focus Control	Motorized				
Predictive Focus Algorithm (PFA)	Support				
Close Focus Distance	0.3m(0.98ft)				
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	152m(498ft)	60m(196ft)	30m(98ft)	15m(49ft)
	T	496m(1627ft)	192m(630ft)	99m(324ft)	49m(162ft)
Pan/Tilt/Rotation					
Pan/Tilt/Rotation Range	Pan:0°~360°; Tilt:0°~90°; Rotation:0°~360°				
Intelligence					
Event Trigger	Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access,Storage anomaly				
IVS	Tripwire, Intrusion, Object Abandoned/Missing				
Advanced Intelligent Functions	Face Detection, People Counting, Heat Map				
Video					
Compression	H.265/H.264/H.264B/H.264H/MJPEG(Sub Stream)				
Smart Codec	Support H.265+/H.264+				
Streaming Capability	3 Streams				
Resolution	3M(2048x1536)/ 1080P(1920x1080)/ 1.3M(1280x960)/ 720P(1280x720)/ D1(704x576/704x480)/ VGA(640x480)/ CIF(352x288/342x240)				
Frame Rate	Main Stream: 3M(1~50/60fps)				
	Sub Stream: D1 (1 ~ 50/60fps)				
	Third Stream: 1080P(1~50/60fps)				
Bit Rate Control	CBR/VBR				
Bit Rate	H.264: 24~ 10240Kbps H.265: 14~ 9216Kbps				
Day/Night	Auto(ICR) / Color / B/W				
BLC Mode	BLC / HLC / WDR(140dB)/ SSA				
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)	Support				
Smart IR	Support				
Defog	Support				
Digital Zoom	16x				
Flip	0°/90°/180°/270°				
Mirror	Off / On				
Privacy Masking	Off / On (4 Area, Rectangle)				
Audio					
Compression	G.711a/G.711Mu/AAC/ G.726				
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 S&G, API				
Streaming Method	Unicast / Multicast				
Max. User Access	10 Users/20 Users				
Edge Storage	NAS Local PC for instant recording Mirco SD card 128GB				
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				
Interface					
Video Interface	1 Port(For adjustment only)				
Audio Interface	1/1 channel In/Out				
RS485	N/A				
Alarm	2 channel In: 5mA 5VDC 1 channel Out: 1A 30VDC / 0.5A 50VAC				

Electrical

Power Supply	DC12V, PoE+(802.3at)(Class 4)
Power Consumption	<13W

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	IK10

Construction

Casing	Metal
Dimensions	273.2mm×95.0mm×95.0mm (10.76"×3.74"×3.74")
Net Weight	1.12Kg (2.47lb)
Gross Weight	1.52Kg (3.35lb)

Ordering Information

Type	Part Number	Description
3MP camera	DH-IPC-HFW8331EP-Z5E	3MP WDR IR Bullet Network Camera,PAL
	DH-IPC-HFW8331EN-Z5E	3MP WDR IR Bullet Network Camera,NTSC
	IPC-HFW8331EP-Z5E	3MP WDR IR Bullet Network Camera,PAL
	IPC-HFW8331EN-Z5E	3MP WDR IR Bullet Network Camera,NTSC
Accessories (optional)	PFA121	Junction box
	PFA152-E	Pole Mount
	LR1002	ePoE Over Coax Converter

Accessories

Optional:



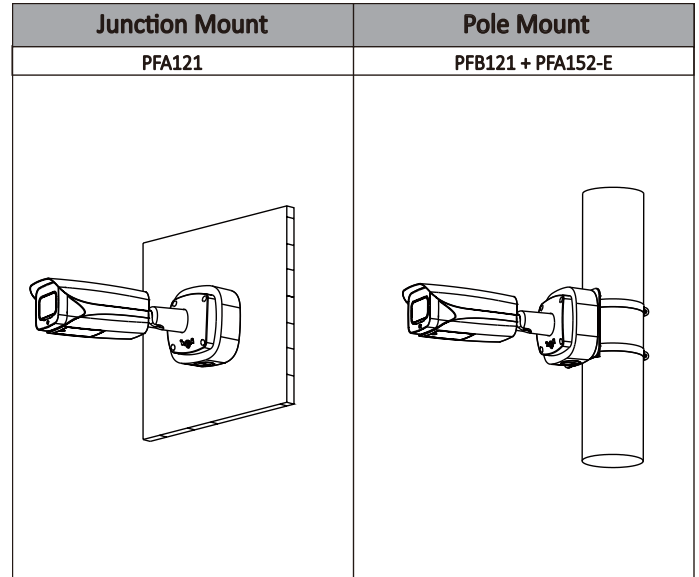
PFA121 Junction box



PFA152-E Pole Mount



LR1002 ePoE Over Coax Converter



Dimensions (mm/inch)

