

# DH-IPC-HFW5231E-Z12E

## 2MP WDR IR Bullet Network Camera



### System Overview

With upgraded H.265 encoding technology, Eco-savvy series brings high efficient video compression capability. It can save bandwidth and storage. Meanwhile, the series features starlight, smart IR technology and intelligent image analysis techniques. This series supports reminder function, meanwhile fully protected from dust and water, certified to IP67 and vandal resistant to IK10 standard.

### 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 0.006lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

#### Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, true WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

- 1/2.8" 2Megapixel progressive scan STARVIS™ CMOS
- H.265&H.264 triple-stream encoding
- 50/60fps@1080(1920×1080)
- Smart Detection supported
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 5.3mm ~64mm 12x zoom lens
- 2/1 Alarm in/out, 1/1 audio in/out
- Max. IR LEDs Length 200m
- Micro SD memory, IP67, IK10, PoE



#### Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera supports face detection to quickly capture a face and upload the image to a server. The camera also offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

#### Protection(IP67, IK10, wide voltage)

The camera allows for ±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.

#### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec 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 H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

Technical Specification						Day/Night	Auto(ICR) / Color / B/W
Camera						BLC Mode	BLC / HLC / WDR(120dB)
Image Sensor	1/2.8" 2Megapixel progressive scan CMOS					White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Effective Pixels	1920(H) x 1080(V)					Gain Control	Auto/Manual
RAM/ROM	256MB/32MB					Noise Reduction	3D DNR
Scanning System	Progressive					Motion Detetion	Off / On (4 Zone, Rectangle)
Electronic Shutter Speed	Auto/Manual, 1/3(4)~1/100000s					Region of Interest	Off / On (4 Zone)
Minimum Illumination	0.006Lux/F1.4 ( Color,1/3s,30IRE) 0.05Lux/F1.4 ( Color,1/30s,30IRE) 0Lux/F1.4 (IR on)					Electronic Image Stabilization (EIS)	N/A
S/N Ratio	More than 50dB					Smart IR	Support
IR Distance	Distance up to 200m (656ft)					Defog	N/A
IR On/Off Control	Auto/ Manual					Digital Zoom	16x
IR LEDs	4					Flip	0°/90°/180°/270°
Lens						Mirror	Off / On
Lens Type	Motorized/ Auto Iris(HALL)					Privacy Masking	Off / On (4 Area, Rectangle)
Mount Type	Board-in					Audio	
Focal Length	5.3mm~64mm					Compression	G.711a/ G.711Mu/ AAC/ G.726
Max. Aperture	F1.4					Network	
Angle of View	H: 59°~5°, V:34°~3°					Ethernet	RJ-45 (10/100Base-T)
Optical Zoom	12x					Protocol	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; QoS; UPnP;NTP; Bonjour; 802.1x; Multicast; ICMP; IGMP; SNMP
Focus Control	Motorized					Interoperability	ONVIF, PSIA, CGI
Close Focus Distance	1.5m(4.9ft)					Streaming Method	Unicast / Multicast
DORI Distance	Lens	Detect	Observe	Recognize	Identify	Max. User Access	10 Users /20 Users
	W	73m(236ft)	29m(95ft)	14m(46ft)	7m(23ft)	Edge Storage	NAS Local PC for instant recording Mirco SD card 128GB
	T	882m(2893ft)	353m(1158ft)	176m(577ft)	88m(288ft)	Web Viewer	IE, Chrome, Firefox, Safari
Pan/Tilt/Rotation						Management Software	Smart PSS, DSS, Easy4ip
Pan/Tilt/Rotation Range	Pan:0°~360°; Tilt:0°~90°; Rotation:0°~360°					Smart Phone	IOS, Android
Intelligence						Certifications	
IVS	Tripwire, Intrusion, Object Abandoned/Missing					Certifications	CE (EN 60950:2000) UL:UL60950-1 FCC: FCC Part 15 Subpart B
Advanced Intelligent Functions	Face Detection					Interface	
Video						Video Interface	1 Port(For adjustment only)
Compression	H.265+/H.265/H.264+/H.264					Audio Interface	1/1 channel In/Out
Streaming Capability	3 Streams					RS485	N/A
Resolution	1080P(1920x1080)/1.3M(1280x960)/ 720P(1280x720)/D1(704x576/704x480)/ VGA(640x480)/CIF(352x288/352x240)					Alarm	2 channel In: 5mA 5VDC 1 channel Out: 300mA 12VDC
Frame Rate	Main Stream: 1080P(1~50/60fps)					Electrical	
	Sub Stream: D1(1~50/60fps)					Power Supply	DC12V, PoE (802.3af)(Class 0)
	Third Stream: 1080P(1~25/30fps)					Power Consumption	<12.95W
Bit Rate Control	CBR/VBR						
Bit Rate	H.264: 24~9472Kbps H.265: 14~5632Kbps						

**Environmental**

Operating Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Storage Conditions	-30° C ~ +60° C (-22° 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	1.11Kg (2.44lb)
Gross Weight	1.51Kg (3.33lb)

**Ordering Information**

Type	Part Number	Description
2MP camera	DH-IPC-HFW5231EP-Z12E	2MP IR Bullet Network Camera,WDR,PAL
	DH-IPC-HFW5231EN-Z12E	2MP IR Bullet Network Camera,WDR,NTSC
	IPC-HFW5231EP-Z12E	2MP IR Bullet Network Camera,WDR,PAL
	IPC-HFW5231EN-Z12E	2MP IR Bullet Network Camera,WDR,NTSC
Accessories (optional)	PFA121	Junction box
	PFA152-E	Pole Mount
	LR1002	ePoE Over Coax Converter

**Accessories**

**Optional:**



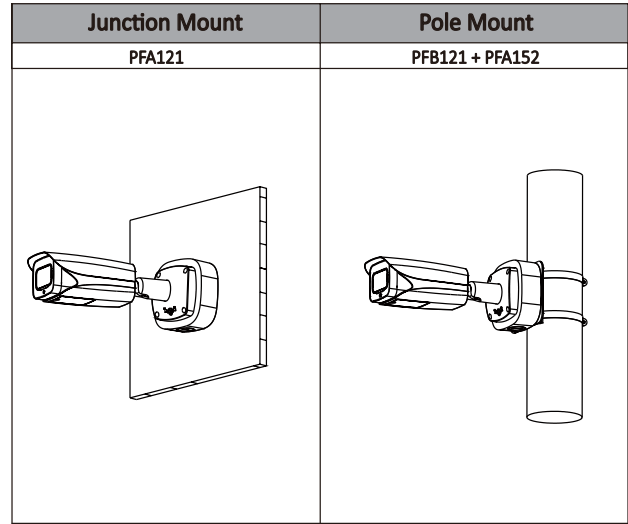
PFA121  
Junction box



PFA152-E  
Pole Mount



LR1002  
ePoE Over Coax Converter



**Dimensions (mm/inch)**

