

# 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



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					
Camera		Day/Night		Auto(ICR) / Color / B/W	
Image Sensor		1/2.8" 2Megapixel progressive scan CMOS		BLC Mode	
Effective Pixels		1920(H) x 1080(V)		BLC / HLC / WDR(120dB)	
RAM/ROM		256MB/32MB		White Balance	
Scanning System		Progressive		Auto/Natural/Street Lamp/Outdoor/Manual	
Electronic Shutter Speed		Auto/Manual, 1/3(4)~1/100000s		Gain Control	
Minimum Illumination		0.006Lux/F1.4 ( Color,1/3s,30IRE) 0.05Lux/F1.4 ( Color,1/30s,30IRE) 0Lux/F1.4 (IR on)		Auto/Manual	
S/N Ratio		More than 50dB		Noise Reduction	
IR Distance		Distance up to 200m (656ft)		3D DNR	
IR On/Off Control		Auto/ Manual		Motion Detetion	
IR LEDs		4		Off / On (4 Zone, Rectangle)	
Lens		Region of Interest		Off / On (4 Zone)	
Lens Type		Motorized/ Auto Iris(HALL)		Electronic Image Stabilization (EIS)	
Mount Type		Board-in		N/A	
Focal Length		5.3mm~64mm		Smart IR	
Max. Aperture		F1.4		Support	
Angle of View		H: 59°~5°, V:34°~3°		Defog	
Optical Zoom		12x		N/A	
Focus Control		Motorized		Digital Zoom	
Close Focus Distance		1.5m(4.9ft)		16x	
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	73m(236ft)	29m(95ft)	14m(46ft)	7m(23ft)
	T	882m(2893ft)	353m(1158ft)	176m(577ft)	88m(288ft)
Pan/Tilt/Rotation		Privacy Masking		Off / On (4 Area, Rectangle)	
Pan/Tilt/Rotation Range		Pan:0°~360°; Tilt:0°~90°; Rotation:0°~360°		Audio	
Intelligence		Audio		Compression	
IVS		Tripwire, Intrusion, Object Abandoned/Missing		G.711a/ G.711Mu/ AAC/ G.726	
Advanced Intelligent Functions		Face Detection		Network	
Video		Edge Storage		Ethernet	
Compression		H.265+/H.265/H.264+/H.264		RJ-45 (10/100Base-T)	
Streaming Capability		3 Streams		Protocol	
Resolution		1080P(1920x1080)/1.3M(1280x960)/720P(1280x720)/D1(704x576/704x480)/VGA(640x480)/CIF(352x288/352x240)		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	
Frame Rate		Main Stream: 1080P(1~50/60fps) Sub Stream: D1(1~50/60fps) Third Stream: 1080P(1~25/30fps)		Interoperability	
Bit Rate Control		CBR/VBR		ONVIF, PSIA, CGI	
Bit Rate		H.264: 24~9472Kbps H.265: 14~5632Kbps		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, Easy4ip	
				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: 300mA 12VDC	
				Electrical	
				Power Supply	
				DC12V, PoE (802.3af)(Class 0)	
				Power Consumption	
				<12.95W	

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:



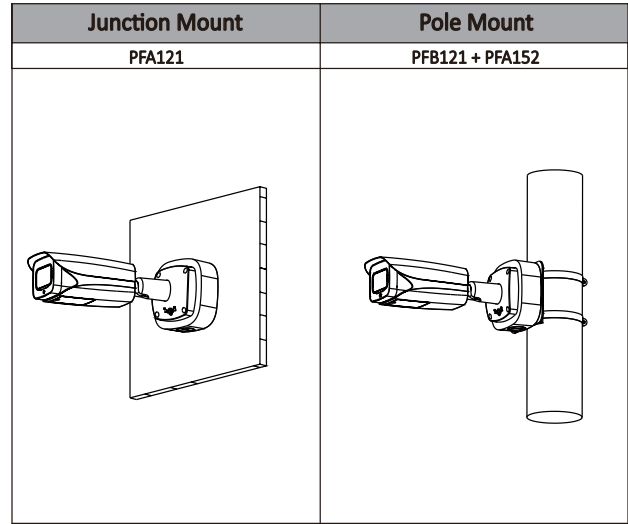
PFA121  
Junction box



PFA152-E  
Pole Mount



LR1002  
ePoE Over Coax Converter



Dimensions (mm/inch)

