

# DH-IPC-HFW4431E-S

4MP WDR IR Mini Bullet Network Camera



- · 1/3" 4Megapixel progressive scan CMOS
- · H.265&H.264 triple-stream encoding
- · 25/30fps@4M(2688×1520)
- · Smart Detection supported
- · WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- $\cdot$  Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- · 3.6mm fixed lens (6mm optional)
- · Max. IR LEDs Length 40m
- · Micro SD memory, IP67, PoE,











## **System Overview**

Eco-savvy products by upgrading H.265 encoding technology, bringing high efficient video compression. It saves bandwidth and storage , energy-saving design to enhance the monitoring system . Meanwhile, the series offers features such as starlight , Smart IR technology , intelligent image analysis techniques. It provides excellent image quality and intelligent and efficient event reminders . This series provides IP67 weatherproof and IK10 vandal-proof protection feature. Give customers more value

## **Functions**

#### Wide Dynamic Range

Embeded with industry leading wide dynamic range (WDR) technology, vivid picutures 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.

## Intelligent Video System (IVS)

With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed, ideal for business intelligence, and Facial Detection, for searching or identification of individuals.

#### Environmental

With a temperature range of-30 °C to +60 °C (-22 °F to +140 °F), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications. For environments with rain, sleet, snow and fog, an integrated wiper provides users with clear visibility at all times.

Supporting ±30% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 4KV lightning rating provides protectection against the camera and its structure from the effects of lightning.

#### Smart H.265+

Deliver high quality video without straining the network, Smart H.265+ is the optimized implementation of H.265. The Smart H.265+ encoding technology includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing saving of up to 70% of bandwidth and storage when compared with standard H.265.

#### HEVC (H.265)

H.265 ITU-T VCEG is a new video coding standard. H.265 Following standard developed around the existing video coding standard H.264 , some retain the original technology , while some of the relevant technology to improve the new technology uses advanced technology to improve the relationship between the code stream , encoding quality , and the delay between algorithm complexity , optimize settings specific contents include : Improve compression efficiency , improve the robustness and error recovery capabilities, real-time to reduce the delay, reduce channel acquisition time and a random access delay , reduce complexity , etc



BLC Mode

BLC / HLC / WDR(120dB)

With te Basine   White Basine   AutoNatural/Nove tamyNoundoor/Natural Minings Emisor   \$24° delegapated programite scan CMOS   Note Reduction   AutoNatural/Nove tamyNoundoor/Natural Minings Emisor   \$226 888 Pol 1520 (V)	Technical Specification							White Balance	Auto/Natural/Street Lamp/Outdoor/Manual
Image Sensor									
### Standing System	Camera							Gain Control	Auto/Manual
Saming System	Image Sensor		1/3" 4Megapixel progressive scan CMOS					Noise Reduction	3D DNR
Region of Interest   Off 70n (4 20ne)	Effective Pixels		2688(H)x1520(V)					Motion Detetion	Off / On (4 Zone, Rectangle)
Bectronic final ter Speed	RAM/ROM							Region of Interest	Off / On (4 Zone)
Colsum			Progressive					Electronic Image Stabilization	N/4
Minimum   Illumination	Electronic Shutter Speed		Auto/Manual, 1/3(4)~1/100000s					(EIS)	N/A
Solition	Minimum Illumination		0.3Lux/2.0( Color,1/30s,30IRE)						
R Distance   Distan	S/N Ratio		More than 50	ıdB					
R On/OFF Control   Mary Manual   Mirror   Off / On	IR Distance							Digital Zoom	16x
Privacy Masking   Off / On (4 Area, Rectungle)	IR On/Off Contr	rol						Flip	0°/90°/180°/270°
Lens Type	IR LEDs							Mirror	Off / On
Mount Type	Lens							Privacy Masking	Off / On (4 Area, Rectangle)
Focal Length	Lens Type		Fixed					Audio	
Max. Aperture         F2.0(F2.0)         NetWORK           Angle of View         H: 87° (55°), V: 48° (31°)         Ethernet         R.45 (10/1008as=T)           Optical Zoom         N/A         Free of Close Focus Distance         N/A         Free of Close Focus Distance         N/A         Interoperability         ONVIF, PSIA, CGI           DORI Distance         Lens         Detect         Observe         Recognize         Identify         Streaming Method         Unicast / Multicast         Unicast / Multicast         Max. User Access         10 Users /20 Users         NAS         Local PC for instant recording Mirros Do card 1286B         Max. User Access         10 Users /20 Users         NAS         Local PC for instant recording Mirros Do card 1286B         Max. User Access         10 Users /20 Users         NAS         Local PC for instant recording Mirros Do card 1286B         Web Viewer         IE, Chrome, Firefox, Safari         NAS         Local PC for instant recording Mirros Do card 1286B         Smart Phone         10S, Android         Smart Phone         10S, Android         Certifications         Certifications         CE (EN 60950-2000)         ULU L60950-1         FCC: FCC Part 15 Subpart B         Interface         Video Interface         N/A         Audio Interface			Board-in					Compression	N/A
Angle of View	Focal Length		3.6mm (6mm optional)					Network	
Angle of View	Max. Aperture		F2.0 (F2.0)					Ethernet	RJ-45 (10/100Base-T)
Optical Zoom         N/A         FFP, DHCP, DNS, DNS, PPPOSC, IPv4/v6, QoS; UPPNTP, Bno)pur; 802.1x; Multicast; ICMP; IGMP, SNMP         FCP, DHCP, DNS, DNS, PPPOSC, IPv4/v6, QoS; UPPNTP, Bno)pur; 802.1x; Multicast; ICMP; IGMP, SNMP         FCP, DHCP, DNS, DNS, PPPOSC, IPv4/v6, QoS; UPPNTP, Bno)pur; 802.1x; Multicast; ICMP; IGMP, SNMP         Interoperability         ONVIF, PSIA, CGI           DORI Distance         3.6 mm         80m(262ft)         32m(105ft)         16m(52ft)         8m(26ft)         Streaming Method         Unicast / Multicast         UNICAST / MILTICAST / MILT	Angle of View		H: 87° (55°), V	′: 48° (31°)					
Facus Control   Facus Contro	Optical Zoom		N/A					Protocol	FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; QoS;
Lens			Fixed						
DORI Distance   3.6 mm   80m(262ft)   32m(105ft)   16m(52ft)   8m(26ft)   12m(39ft)   Max. User Access   10 Users /20 Users	Close Focus Dis							Interoperability	ONVIF, PSIA, CGI
Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan:0~360°; Tilt:0~90°; Rotation:0~360°  Intelligence IVS Tripwire, Intrusion, Object Abandoned/Missing Advanced Intelligent Functions Face Detection Video Compression H.265+/H.265/H.264+/H.264 Streaming Capability 3 Streams Resolution Main Stream: 4M(1~25/30fps) Max. User Access 10 Users / 20 Users  Max. User Access 10 Users / 20 Users  Intelligence Labardoned/Missing Maragement Software Smart Pso, DSc, Easy4ip  Web Viewer IE, Chrome, Firefox, Safari  Management Software Smart Pso, DSc, Easy4ip  Smart Phone IOS, Android  Certifications  Certifications  Certifications  Certifications  Interface  Video Interface  Video Interface  N/A  Audio Interface  N/A  Audio Interface  N/A  Alarm  N/A  Electrical	DORI Distance				_			Streaming Method	Unicast / Multicast
Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan:0~360'; Tilt:0~90'; Rotation:0~360'  Intelligence  IVS Tripwire, Intrusion, Object Abandoned/Missing Advanced Intelligent Functions Face Detection  Video  Compression H.265+/H.265/H.264+/H.264  Resolution  Advanced Intelligent Mirco SD card 128GB Management Software Smart PSs, DSs, Easy4ip Smart Phone IOS, Android  Certifications  Certifications  Certifications  Certifications  Interface  Interface  Video Interface  N/A  Audio Interface  N/A  RS485 N/A  Frame Rate  Sub Stream: D1(1~25/30fps) Third Stream: 720P(1~25/30fps) Third Stream: 720P(1~25/30fps)  Find Stream: 720P(1~25/30fps)	DOM Distance		. ,					Max. User Access	10 Users /20 Users
Pan/Titl/Rotation Range Pan:0"~360"; Tilt:0"~90"; Rotation:0"~360"  Intelligence  IVS Tripwire, Intrusion, Object Abandoned/Missing  Advanced Intelligent Functions  Face Detection  Compression H.265+/H.265+H.264+/H.264  Streaming Capability 3 Streams  Resolution Main Stream: 4M(1°25/30fps)  Frame Rate  Main Stream: D1(1°25/30fps)  Adarna Hone IE, Chrome, Firefox, Safari  Web Viewer IE, Chrome, Firefox, Safari  Management Software Smart PSS, DSS, Easy4ip  Smart Phone IOS, Android  Certifications  Certifications  Certifications  Certifications  Certifications  Interface  Video Interface  N/A  Audio Interface  N/A  Audio Interface  N/A  Alarm  N/A  Electrical	Pan/Tilt/Rot		11/111(3841t) 4/111(1341t) 23111(731t) 12111(391t)					NAS	
Intelligence IVS Tripwire, Intrusion, Object Abandoned/Missing  Advanced Intelligent Functions Face Detection  Video  Compression H.265+/H.265/H.264+/H.264  Compression H.265+/H.265/H.264+/H.264  Streaming Capability  3 Streams  4M(2688×1520)/3M(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)  Main Stream: 4M(1°25/30fps)  Frame Rate  Audio Interface  N/A  RS485  N/A  Alarm  N/A  N/A  Florid Stream: 720P(1°25/30fps)  Electrical			Pan:0°~360°; Tilt:0°~90°; Rotation:0°~360°					Edge Storage	
NS Tripwire, Intrusion, Object Abandoned/Missing Advanced Intelligent Functions Face Detection  Video  Certifications  NIL 10460950-1 FCC: FCC Part 15 Subpart B  Interface  Video Interface  N/A  Audio Interface  N/A  Audio Interface  N/A  Alarm  N/A  Electrical	Intelligence							Web Viewer	IE, Chrome, Firefox, Safari
Smart Phone   IOS, Android	-		Tripwire, Intrusion, Object Abandoned/Missing					Management Software	Smart PSS, DSS, Easy4ip
Video         Certifications           Compression         H.265+/H.265/H.264+/H.264         Certifications         CE (EN 60950:2000) UI:UI60950-1 FCC: FCC Part 15 Subpart B           Streaming Capability         3 Streams         Interface           Resolution         4M(2688×1520)/3M(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)         Video Interface         N/A           Audio Interface         N/A           Main Stream: 4M(1~25/30fps)         RS485         N/A           Frame Rate         Sub Stream: D1(1~25/30fps)         Alarm         N/A           Third Stream: 720P(1~25/30fps)         Electrical		ligent Functions						Smart Phone	IOS, Android
Compression         H.265+/H.265/H.264+/H.264         Certifications         CE (EN 60950:2000) UI:UI:60950-1 FCC: FCC Part 15 Subpart B           Streaming Capability         3 Streams         Interface           Resolution         4M(2688×1520)/3M(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)         Video Interface         N/A           Audio Interface         N/A           Frame Rate         Sub Stream: D1(1~25/30fps)         RS485         N/A           Alarm         N/A           Electrical		ingent runctions	Tace Detection					Certifications	
Streaming Capability         3 Streams         Interface           Resolution         4M(2688×1520)/3M(2304×1296)/ 1080P(1920×1080)/1.3M(1280x960)/ 720P(1280×720)/D1(704×576/704×480)/ VGA(640×480)/CIF(352×288/352×240)         Video Interface         N/A           Audio Interface         N/A           Frame Rate         Sub Stream: D1(1~25/30fps)         RS485         N/A           Frame Rate         Sub Stream: 720P(1~25/30fps)         Alarm         N/A           Electrical			H.265+/H.265/H.264+/H.264					Certifications	UL:UL60950-1
Resolution       4M(2688×1520)/3M(2304×1296)/ 1080P(1920×1080)/1.3M(1280x960)/ 720P(1280×720)/D1(704×576/704×480)/ VGA(640×480)/CIF(352×288/352×240)       Video Interface       N/A         Audio Interface       N/A         Frame Rate       Sub Stream: D1(1~25/30fps)       RS485       N/A         Alarm       N/A         Third Stream: 720P(1~25/30fps)       Electrical	Streaming Capability		3 Streams						FCC: FCC Part 15 Subpart B
720P(1280×720)/D1(704×576/704×480)/ VGA(640×480)/CIF(352×288/352×240)	Resolution		1080P(1920×1080)/1.3M(1280×960)/ 720P(1280×720)/D1(704×576/704×480)/					Interface	
Main Stream: 4M(1~25/30fps)   RS485   N/A								Video Interface	N/A
RS485 N/A  Frame Rate Sub Stream: D1(1~25/30fps) Alarm N/A  Third Stream: 720P(1~25/30fps) Electrical	Frame Rate							Audio Interface	N/A
Alarm N/A Third Stream: 720P(1~25/30fps)  Electrical								RS485	N/A
Electrical								Alarm	N/A
Bit Rate Control CBR/VBR								Electrical	
Power Supply DC12V, PoE (802.3af)(Class 0)	Bit Rate Control							Power Supply	DC12V, PoE (802.3af)(Class 0)
Bit Rate H.264: 24~10240Kbps H.265: 14~6144Kbps Power Consumption <6W	Bit Rate								
Day/Night Auto(ICR) / Color / B/W	Day/Night		Auto(ICR) / Color / B/W						

## Environmental

Operating Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Strorage Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	N/A

## Construction

Casing	Metal
Dimensions	180mm×70mm×70mm (7.09"×2.76"×2.76")
Net Weight	0.41kg (0.91lb)
Gross Weight	0.53 kg (1.17lb)

Ordering Information							
Туре	Part Number	Description					
	DH-IPC- HFW4431EP-S- 0360B	4MP IR Mini Bullet Network Camera, WDR, PAL					
	DH-IPC- HFW4431EN-S- 0360B	4MP IR Mini Bullet Network Camera, WDR, NTSC					
	IPC-HFW4431EP-S- 0360B	4MP IR Mini Bullet Network Camera, WDR, PAL					
4MP camera	IPC-HFW4431EN-S- 0360B	4MP IR Mini Bullet Network Camera, WDR, NTSC					
4IVIP Calliera	DH-IPC- HFW4431EP-S- 0600B	4MP IR Mini Bullet Network Camera, WDR, PAL					
	DH-IPC- HFW4431EN-S- 0600B	4MP IR Mini Bullet Network Camera, WDR, NTSC					
	IPC-HFW4431EP-S- 0600B	4MP IR Mini Bullet Network Camera, WDR, PAL					
	IPC-HFW4431EN-S- 0600B	4MP IR Mini Bullet Network Camera, WDR, NTSC					
Accessories	PFA121	Junction box					
(optional)	PFA152	Pole Mount					

## Accessories

## **Optional:**





PFA121 Junction box

PFA152 Pole Mount

Junction Mount	Pole Mount
PFA121	PFB121 + PFA152

Dimensions (mm/inch)



