

# DH-IPC-HFW1420S

4MP Network IR Mini-Bullet Camera









## **System Overview**

The IR Megapixel Fixed Mini-Bullet camera delivers 4MP resolution with a choice of 2.8mm, 3.6mm lens options. The camera's elegant blend of aesthetics combined with its compact form factor provides an excellent choice for a variety of small to mid-size, indoor/outdoor applications at an affordable price.

### **Functions**

#### True Day/Night

A day/night mechanical IR cut filter makes this camera ideal for applications with fluctuating lighting conditions, delivering color images during the day and automatically switching to monochrome as the scene darkens

#### Regions of interest

Regions of Interest (ROI) is a user defined feature that allows the operator to monitor specific areas of a scene while still maintaining overall situational awareness of less important areas

#### Smart IR

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object. Smart IR technology prevents IR LEDS from whiting out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 30m (98ft).

#### Image flip

Capturing unnecessary data such as surrounding hallway walls can increase storage requirements without any added value. The image flip feature allows the camera's image to be rotated in 90° increments for better video optimization.

- · 1/3" 4Megapixel progressive CMOS
- · H.264+ & H.264 dual-stream encoding
- · 20fps@4M(2688×1520) &25/30fps@3M(2304×1296)
- · DWDR, Day/Night(ICR), 3DNR, AWB, AGC, BLC
- · Multiple network monitoring: Web viewer, CMS(DSS/PSS) & **DMSS**
- · 2.8 mm fixed lens (3.6 mm optional)
- · Max IR LEDs Length 30m
- · IP67, PoE

#### Protection

Supporting ±10% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides protectection against the camera and its structure from the effects of lightning.

#### Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer

#### Smart H.264+

Delivering high quality video without straining the network, Smart H.264+ is the optimized implementation of H.264. The Smart H.264+ encoding platform includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing a savings of up to 70% of bandwidth and storage when compared with standard H.264.



Camera   1/3" 4Megapixel progresive CMOS   Effective Pixels   2688H)x1520(V)	Technical Specification					
Effective Pixels         2688H)x1520(V)           RAM/ROM         256MB/16MB           Scanning System         Progressive           Electronic Shutter Speed         Auto/Manual, 1/3(4)~1/100000s           Minimum Illumination         0.31Lux/F2.2(Color), OLux/F2.2(IR on)           S/N Ratio         More than 40dB           IR Distance         Distance up to 30m(98ft)           IR On/Off Control         Auto/ Manual           IR LEDS         24           Lens         Lens           Mount Type         Board-in           Focal Length         2.8 mm (3.6 mm optional)           Max. Aperture         F2.0/F2.2           Angle of View         H:106'/83*, V:56'/44*           Focus Control         Fixed           Close Focus Distance         N/A           DORI Distance         2.8 mm         63m(207ft) 25m(82ft) 13m(43ft) 6m(20ft)           3.6 mm         80m(262ft) 32m(105ft) 16m(52ft) 8m(26ft)           PTZ           Pan/Tilt Range         Pan:0* ~360*; Tilt:0* ~90*; Rotation:0* ~360*           Video           Compression         H.264+/H.264           Streaming Capability         2 Streams           4M(2688x1520/2560x1440)/3M(2304×1296)/10107(704×2576/704×480)/ CIF(352×288/352×240)	Camera					
Scanning System         Progressive           Electronic Shutter Speed         Auto/Manual, 1/3(4)**1/1000000s           Minimum Illumination         0.31Lux/F2.2(Color), 0Lux/F2.2(IR on)           S/N Ratio         More than 40dB           IR Distance           Distance up to 30m(98ft)           IR On/Off Control         Auto/ Manual           IR LEDS           Lens           Lens Type           Fixed           Mount Type           Board-in           Focal Length           Max. Aperture           Fixed           H.106*/83*, V.556*/44*           Focus Control           Fixed           Close Focus Distance         N/A           Lens         Detect         Observe         Recognize         Identify           Close Focus Distance         Aminimation         80m(262ft)         32m(105ft)         13m(43ft)         6m(20ft)           PTZ           Pan/Tilt Range         Pan:0* ~360*; Tilt:0* ~90*; Rotation:0* ~360*           Video <td col<="" td=""><td colspan="2">Image Sensor</td><td colspan="3">1/3" 4Megapixel progresive CMOS</td></td>	<td colspan="2">Image Sensor</td> <td colspan="3">1/3" 4Megapixel progresive CMOS</td>	Image Sensor		1/3" 4Megapixel progresive CMOS		
Progressive	Effective Pixels					
Electronic Shutter Speed	RAM/ROM		256MB/16M	1B		
Minimum Illumination	Scanning System	l	Progressive			
More than 40dB   R Distance   Distance up to 30m(98ft)   R Distance   Distance up to 30m(98ft)   R On/Off Control   Auto/ Manual   R LEDs   24   R Distance   R Distance   Distance up to 30m(98ft)   R Distance   Distance up to 30m(98ft)   R Distance   Distance   Distance   Distance   Distance   Distance   Distance   Distance   Detect   Distance   Distance   Detect   Distance   Distance   Detect   Dete	Electronic Shutte	er Speed	Auto/Manual, 1/3(4)~1/100000s			
R Distance   Distance up to 30m(98ft)	Minimum Illumir	nation	0.31Lux/F2.2(Color), 0Lux/F2.2(IR on)			
R On/Off Control   Auto/ Manual	S/N Ratio		More than 40dB			
24         Lens Type       Fixed         Mount Type       Board-in         Focal Length       2.8 mm (3.6 mm optional)         Max. Aperture       F2.0/F2.2         Angle of View       H:106*/83*, V:56*/44*         Focus Control       Fixed         Close Focus Distance       N/A         Detect       Observe       Recognize       Identify         DORI Distance       2.8 mm       63m(207ft)       25m(82ft)       13m(43ft)       6m(20ft)         PDRI Distance       2.8 mm       63m(207ft)       25m(82ft)       13m(43ft)       6m(20ft)         PDRI Distance       Pan/Tilt Range       Pan:0° ~360° ;Tilt:0° ~90° ;Rotation:0° ~360°         Video         Compression       H.264+/H.264         Streams         AM(2688x1520/2560x1440)/3M(2304x1296)/1080/720/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/101280x720)/	IR Distance		Distance up to 30m(98ft)			
Lens         Lens Type       Fixed         Mount Type       Board-in         Focal Length       2.8 mm (3.6 mm optional)         Max. Aperture       F2.0/F2.2         Angle of View       H:106*/83*, V:56*/44*         Focus Control       Fixed         Close Focus Distance       N/A         DORI Distance       N/A         Lens       Detect       Observe       Recognize       Identify         DORI Distance       2.8 mm       63m(207ft)       25m(82ft)       13m(43ft)       6m(20ft)         9TZ       3.6 mm       80m(262ft)       32m(105ft)       16m(52ft)       8m(26ft)         PTZ       Pan/Tilt Range       Pan:0* ~360* ;Tilt:0* ~90* ;Rotation:0* ~360*         Video         Compression       H.264+/H.264         Streaming Capability       2 Streams         AM(2688x1520/2560x1440)/3M(2304*1296)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P(1920×1080)/720P(1280×720)/1080P	IR On/Off Contro	ol	Auto/ Manu	Auto/ Manual		
Lens Type	IR LEDs		24			
Mount Type         Board-in           Focal Length         2.8 mm (3.6 mm optional)           Max. Aperture         F2.0/F2.2           Angle of View         H:106°/83°, V:56°/44°           Focus Control         Fixed           Close Focus Distance         N/A           DORI Distance         N/A           DORI Distance         2.8 mm         63m(207ft)         25m(82ft)         13m(43ft)         6m(20ft)           Bom/262ft)         32m(105ft)         16m(52ft)         8m(26ft)           PTZ           Pan/Tilt Range         Pan:0° ~360°; Tilt:0° ~90°; Rotation:0° ~360°           Video           Compression         H.264+/H.264           Streaming Capability         2 Streams           AM(2688x1520/2560x1440)/3M(2304×1296)/ 1080P(1920×1080)/720P(1280×720)/ D1(704×576/704×480)/ CIF(352×288/352×240)           AM(1 ~ 20fps)/3M (1 ~ 25/30fps)/2M (1 ~ 25/30fps)           Frame Rate         D1/CIF(1 ~ 25/30fps)           Bit Rate Control         CBR/VBR           Bit Rate         H264H:80K ~ 10240Kbps	Lens					
Focal Length 2.8 mm (3.6 mm optional)  Max. Aperture F2.0/F2.2  Angle of View H:106°/83°, V:56°/44°  Focus Control Fixed  Close Focus Distance N/A  DORI Distance 2.8 mm 63m(207ft) 25m(82ft) 13m(43ft) 6m(20ft) 3.6 mm 80m(262ft) 32m(105ft) 16m(52ft) 8m(26ft)  PTZ  Pan/Tilt Range Pan:0° ~360°; Tilt:0° ~90°; Rotation:0° ~360°  Video  Compression H.264+/H.264  Streaming Capability 2 Streams  Resolution 4M(2688x1520/2560x1440)/3M(2304×1296)/1080P(1920×1080)/720P(1280×720)/D1(704×576/704×480)/ CIF(352×288/352×240)  Frame Rate D1/CIF(1~25/30fps)  Bit Rate Control CBR/VBR  Bit Rate	Lens Type		Fixed			
Max. Aperture         F2.0/F2.2           Angle of View         H:106°/83°, V:56°/44°           Focus Control         Fixed           Close Focus Distance         N/A           DORI Distance         Detect         Observe         Recognize         Identify           DORI Distance         2.8 mm         63m(207ft)         25m(82ft)         13m(43ft)         6m(20ft)           Bom         80m(262ft)         32m(105ft)         16m(52ft)         8m(26ft)           PTZ           Pan/Tilt Range         Pan:0° ~360° ;Tilt:0° ~90° ;Rotation:0° ~360°           Video           Compression         H.264+/H.264           Streams           AM(2688x1520/2560x1440)/3M(2304×1296)/1080P(1920x1080)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)           Frame Rate           D1/CIF(1 ~ 25/30fps)           Bit Rate Control         CBR/VBR           Bit Rate         H264H:80K ~ 10240Kbps	Mount Type		Board-in			
Angle of View H:106°/83°, V:56°/44°  Focus Control Fixed  Close Focus Distance N/A  Lens Detect Observe Recognize Identify  DORI Distance 2.8 mm 63m(207ft) 25m(82ft) 13m(43ft) 6m(20ft)  3.6 mm 80m(262ft) 32m(105ft) 16m(52ft) 8m(26ft)  PTZ  Pan/Tilt Range Pan:0° ~360°; Tilt:0° ~90°; Rotation:0° ~360°  Video  Compression H.264+/H.264  Streaming Capability 2 Streams  Resolution 4M(2688x1520/2560x1440)/3M(2304×1296)/1080P(1920×1080)/720P(1280×720)/D1(704×576)704×480)/ CIF(352×288/352×240)  Frame Rate D1/CIF(1~25/30fps)  Bit Rate Control CBR/VBR  Bit Rate H264H:80K~10240Kbps	Focal Length	Focal Length		2.8 mm (3.6 mm optional)		
Focus Control  Close Focus Distance  N/A  Lens  Detect  Detect  Detect  Doserve  Recognize  Identify  13m(43ft)  6m(20ft)  3.6 mm  80m(262ft)  32m(105ft)  16m(52ft)  8m(26ft)  PTZ  Pan/Tilt Range  Pan:0° ~360°; Tilt:0° ~90°; Rotation:0° ~360°  Video  Compression  H.264+/H.264  Streaming Capability  2 Streams  AM(2688x1520/2560x1440)/3M(2304×1296)/ 1080P(1920×1080)/720P(1280×720)/ D1(704×576/704×480)/ CIF(352×288/352×240)  Frame Rate  4M(1 ~ 20fps)/3M (1 ~ 25/30fps)/2M (1 ~ 25/30fps)  Bit Rate Control  CBR/VBR  Bit Rate  H264H:80K ~ 10240Kbps	Max. Aperture		F2.0/F2.2			
Close Focus Distance         N/A           Lens         Detect         Observe         Recognize         Identify           DORI Distance         2.8 mm         63m(207ft)         25m(82ft)         13m(43ft)         6m(20ft)           63m(207ft)         32m(105ft)         16m(52ft)         8m(26ft)           PTZ           Pan/Tilt Range         Pan:0° ~360° ;Tilt:0° ~90° ;Rotation:0° ~360°           Video           Compression         H.264+/H.264           Streaming Capability         2 Streams           AM(2688x1520/2560x1440)/3M(2304×1296)/1080P(1920x1080)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)           Frame Rate         4M(1~20fps)/3M (1~25/30fps)/2M (1~25/30fps)           Bit Rate Control         CBR/VBR           Bit Rate         H264H:80K~10240Kbps	Angle of View		H:106°/83°, V:56°/44°			
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3.6 mm		Lens	Detect	Observe	Recognize	Identify
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Video         Compression       H.264+/H.264         Streaming Capability       2 Streams         Resolution       4M(2688x1520/2560x1440)/3M(2304×1296)/1080P(1920×1080)/720P(1280×720)/D1(704×576/704×480)/CIF(352×288/352×240)         Frame Rate       4M(1 ~ 20fps)/3M (1 ~ 25/30fps)/2M (1 ~ 25/30fps)         D1/CIF(1 ~ 25/30fps)       D1/CIF(1 ~ 25/30fps)         Bit Rate Control       CBR/VBR         Bit Rate       H264H:80K ~ 10240Kbps	PTZ					
Compression         H.264+/H.264           Streaming Capability         2 Streams           Resolution         4M(2688x1520/2560x1440)/3M(2304×1296)/1080P(1920×1080)/720P(1280×720)/D1(704×576/704×480)/ CIF(352×288/352×240)           Frame Rate         4M(1 ~ 20fps)/3M (1 ~ 25/30fps)/2M (1 ~ 25/30fps)           Bit Rate Control         CBR/VBR           Bit Rate         H264H:80K ~ 10240Kbps	Pan/Tilt Range		Pan:0° ~360	°;Tilt:0° ~90°	;Rotation:0° ~	'360°
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Frame Rate  D1/CIF(1 ~ 25/30fps)  Bit Rate Control  CBR/VBR  Bit Rate  H264H:80K ~ 10240Kbps	Resolution		1080P(1920×1080)/720P(1280×720)/			
D1/CIF(1 ~ 25/30fps)  Bit Rate Control  CBR/VBR  Bit Rate  H264H:80K ~ 10240Kbps	Eramo Pato	Frame Rate		4M(1 ~ 20fps)/3M (1 ~ 25/30fps)/2M (1 ~ 25/30fps)		
Bit Rate H264H:80K ~ 10240Kbps	rianie Kale		D1/CIF(1 ~ 2	D1/CIF(1 ~ 25/30fps)		
	Bit Rate Control		CBR/VBR			
Day/Night Auto(ICR) / Color / B/W	Bit Rate	Bit Rate		~ 10240Kbps		
	Day/Night		Auto(ICR) / 0	Color / B/W		
BLC Mode BLC / HLC / DWDR	BLC Mode		BLC / HLC / DWDR			

White Balance	Auto/Natural/Street Lamp/Outdoor/Manual	
Gain Control	Auto/Manual	
Noise Reduction	3D DNR	
Motion Detetion	Off / On (4 Zone, Rectangle)	
Region of Interest	Off / On (4 Zone)	
Electronic Image	Support	
Smart IR	Support	
Digital Zoom	16x	
Flip	0°/90°/180°/270°	
Mirror	Off/On	
Privacy Masking	Off / On (4 Area, Rectangle)	
Audio		
Compression	N/A	
Network		
Ethernet	RJ-45 (10/100Base-T)	
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;	
Interoperability	ONVIF, PSIA, CGI	
Streaming Method	Unicast / Multicast	
Max. User Access	10 Users/20 Users	
Edge Storage	NAS(Network Attached Storage) Local PC for instant recording	
Web Viewer	IE, Chrome, Firefox, Safari	
Management Software	Smart PSS, DSS,Easy4ip	
Smart Phone	iPhone, iPad, Android Phone	
Certifications		
Certifications	CE (EN 60950:2000) UL:UL60950-1 FCC: FCC Part 15 Subpart B	
Interface		
Video Interface	N/A	
Audio Interface	N/A	
RS485	N/A	
Alarm	N/A	
Electrical		
Power Supply	DC12V PoE(802.3af)(Class 0)	
Power Consumption	<4.3W	

## 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+Plastic
Dimensions	Φ70mm×164.7mm(2.76''x6.49'')
Net Weight	0.38Kg(0.84lb)
Gross Weight	0.44Kg(0.97lb)

Ordering Information				
Туре	Part Number	Description		
4MP camera	DH-IPC-HFW1420SP -0280B	4MP IR Mini-Bullet Network Camera, 2.8mm,PAL		
	DH-IPC-HFW1420SN -0280B	4MP IR Mini-Bullet Network Camera, 2.8mm,NTSC		
	IPC-HFW1420SP -280B	4MP IR Mini-Bullet Network Camera, 2.8mm,PAL		
	IPC-HFW1420SN -0280B	4MP IR Mini-Bullet Network Camera, 2.8mm,NTSC		
	DH-IPC-HFW1420SP -0360B	4MP IR Mini-Bullet Network Camera, 3.6mm,PAL		
	DH-IPC-HFW1420SN -0360B	4MP IR Mini-Bullet Network Camera, 3.6mm,NTSC		
	IPC-HFW1420SP -0360B	4MP IR Mini-Bullet Network Camera, 3.6mm,PAL		
	IPC-HFW1420SN -0360B	4MP IR Mini-Bullet Network Camera, 3.6mm,NTSC		
Accessories (optional)	PFA134	Junction box		
	PFA150	Pole mount		
	PFA151	Corner mount		

# Accessories

## Optional:







PFA134 Junction Box

134 PFA1: in Box Pole M

PFA151 Corner Mou

Corner Mount	Pole Mount
PFA134 + PFA151	PFA134 + PFA150
Junction Mount	
PFA134	

## Dimensions (mm/inch)



