

DH-IPC-HFW5541T-S

5MP Pro Al IR Bullet Network Camera



- · 1/2.7" 5Megapixel progressive scan CMOS
- · H.265 & H.264 triple-stream encoding
- · 20 fps@2592 × 1944, 50/60 fps@1080P (1920 × 1080)
- · WDR (120 dB), Day/Night (ICR), 3D DNR, AWB, AGC, BLC
- · Multiple network monitoring: Web viewer, CMS (DSS/PSS) & DMSS
- · 2.8 mm fixed lens (3.6 mm, 6.0 mm, 8.0 mm, 12.0 mm optional)
- · Max. IR LEDs Length 80 m
- · Micro SD memory, IP67,IK10











System Overview

Pro Al series contains Face Detection, Perimeter Protection and People Counting functions. Powered by deep-learning Artificial Intelligence algorithms, significantly improved accuracy. Active Deterrence and Full Color camera are also in this series. Meanwhile, the series features starlight and smart IR technology. This series fully protected from dust and water, certified to IP67 standard.

Functions

Face Detection

Face Detection is a software application that automatically captures faces from within a digital image or a video frame from a video source. Dahua cameras use advanced deep learning algorithms and are trained by a large number of face data sources, enabling the camera to locate faces quickly and accurately from the video source and capture facial images.

Perimeter Protection

Dahua's Perimeter Protection functions significantly improved accuracy. Perimeter Protection reduces false alarms and decreases pixel count requirements for object detection. Perimeter Protection features custom tripwires based on object type for automation in limited access areas such as pedestrian or vehicle-only zones. This combination of advanced AI analytics and real-time alerts to a desktop or to a mobile client reduces system requirements and resources resulting in greater surveillance system efficiency.

People Counting

People Counting function uses advanced image processing technology to capture depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals' entrance and exit with up to 95% counting accuracy.

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.



Compression A many many many many many many many many	Technical Sp	ecification					Video	
	Camera					Compression		
Second	Image Sensor		1/2.7" 5Megapixel progressive scan CMOS			OS	Smart Codec	Yes
Production Progressive Production Progressive Production Production (Promise (Production	Effective Pixels		2592 (H) × 1944 (V)			Streaming Capability	3 Streams	
Persistance Statutes Speed Auto-Manical, 1/3 + 3 + 10000000000000000000000000000000							Resolution	1296/1080P (1920 × 1080)/1.3M (1280 × 960)/720P (1280 × 720)/D1 (704 × 576/704 × 480)/VGA (640 ×
Minimum liminmum l	Electronic Shutter Speed		Auto/Manual, 1/3 s-1/100000 s					
R On/Off Control Auto/Manual	Minimum Illumination		0.005 Lux@F1.6					
Min	IR Distance	IR Distance		Distance up to 80 m (262 ft)			Frame Rate	
Lens	IR On/Off Contro	ol	Auto/Manua	Auto/Manual				
Mount Type	IR LEDs		4				Bit Rate Control	CBR/VBR
Day/Night	Lens					Bit Rate		
Focal Length	Lens Type		Fixed-focal				Day/Night	·
Max. Aperture FL6 (2.8 mm −8.0 mm), F2.0 (12.0 mm) Gain Control Auto/Manual Angle of View H= 102*, Y=71/H= 84*, Y=58*/H= 51*, Y=37*/ H= 38*, Y=28*/H= 25*, Y=38* Seminor of Motion Detection Auto/Manual Aperture Type Fixed Seminor of Motion Detection Off(0) (4 Zone, Rectangle) Close Focus Distance Detect	Mount Type		Board-in			BLC Mode	BLC/HLC/WDR (120 dB)	
Angle of View	Focal Length		2.8 mm, 3.6 mm, 6.0 mm, 8.0 mm, 12.0 mm			White Balance	Auto/Natural/Street Lamp/Outdoor/Manual	
Aperture Type Fixed Aperture Type Fixed Aperture Type Fixed O.9 m (2.9 StylS m (5.25 til).3.1 m (10.17 til)/4.5 m (14.73 fil)/10.3 m (33.79 til) Close Focus Distance O.9 m (2.9 StylS m (5.25 til).3.3 m (10.17 til)/4.5 m (14.73 fil)/10.3 m (33.79 til) DORI Distance Aperture Type I Lens Detect Observe Recognize Identify 2.8 mm Semi(2.2til) 32m (10.5til) 6 m(2.0til) 3.6 mm 80m(2.2til) 32m (10.5til) 15m(5.2til) 8 m(2.5til) 3.6 mm 80m(2.2til) 32m (10.5til) 15m(5.2til) 12m(3.9til)	Max. Aperture		F1.6 (2.8 mm-8.0 mm), F2.0 (12.0 mm)			Gain Control	Auto/Manual	
Motion Detection Off/on (4 Zone, Rectangle) Motion Detection Off/on (4 Zone, Rectangle) Region of Interest Off/on (4 Zone) Off/on (4 Zone) Region of Interest Off/on (4 Zone) Off/on (4 Zone) Off/on (4 Zone) Region of Interest Off/on (4 Zone) Off/on (2 Zo	Angle of View					Noise Reduction	3D DNR	
Close Focus Distance O. 9 m (2.95 ft)/1.6 m (5.25 ft)/3.1 m (10.17 ft)/4.5 m (14.73 tt)/10.3 m (33.79 ft) Lens Detect Observe Recognize 1dentify 2.8 mm S6m(184ft) 3.8 mm S6m(184ft) 3. mm S6m(184	Aperture Type					Motion Detection	Off/On (4 Zone, Rectangle)	
Lens Detect Observe Recognize Identify				Region of Interest	Off/On (4 Zone)			
Lens Detect Observe Recognize Identify 2.8mm 56m(184ft) 22m(72ft) 11m(36ft) 6m(20ft) 3.6mm 80m(262ft) 32m(105ft) 16m(52ft) 8m(26ft) 120m(394ft) 48m(157ft) 24m(79ft) 12m(39ft) 8mm 160m(525ft) 64m(210ft) 32m(105ft) 16m(52ft) 12mm 240m(787ft) 96m(315ft) 48m(157ft) 24m(79ft) Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan: 0"-360", Tilt: 0"-90", Rotation: 0"-360" Partificial Intelligence Face Detection Support face image capture Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people, fast moving, loitering detection, parking detection, and people gathering People Counting Support 1 accesses independent detection General Intelligence Wotion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Object Abandoned/Missing Pand 120m(394ft) 11m(36ft) 6m(20ft) 12m(36ft) 8m(26ft) 12m(30ft) 12m(30	Close Focus Dista	ance	(14.73 ft)/10.	.3 m (33.79 ft)				N/A
Defog Yes							` ´	Yes
DORI Distance							Defog	Yes
Mirror Off/On	DORI Distance		, ,				Flip	0°/90°/180°/270°
Pan/Tilt/Rotation Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan: 0'-360'; Tilt: 0'-90'; Rotation: 0'-360' Artificial Intelligence Face Detection Support face image capture Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering People Counting Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection, 4 areas independent detection, 1P address conflict, Illegal Access, Storage anomaly Pentager Object Abandoned/Missing Perivacy Masking Off/on (4 Area, Rectangle) Audio Compression N/A Network Ethernet RJ-45 (10/100 Base-T) Protocol ;PV4;IPV6;HTTP;HTPS;TCP;DUDP;ARP;RTSP;RTCP;RTSP;RTCP;RTSP;RTCP;RTSP;RTCP;PTF;PTP;PDHCP;DNS;DDMS;QoS;UPnP ;NTP;Multicast;ICMP;IGMP;HTS;PPPoc;B02.1x;SMMP ONNIF (Profile S/Profile G/Profile T), CGI, Milistone, Genetec, P2P Streaming Method Unicast/Multicast Max. User Access 20 Users Edge Storage NAS;FTP;SFTP Micro SD card 256 GB Web Viewer Eferox, Safari (Versions newer than IEB), Chrome, Firefox, Safari (Versions newer than Safari 12) General Intelligence Object Abandoned/Missing Management Software Smart PSS, DSS, DMSS			, ,	, ,	` '		Mirror	Off/On
Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan: 0"-360"; Tilt: 0"-90"; Rotation: 0"-360" Artificial Intelligence Face Detection Support face image capture Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering Counting: Support Line crossing/Region/Queueing people counting: Support 4 accesses independent detection, 4 areas independent detection Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Audio Compression N/A Network Ethernet R.J-45 (10/100 Base-T) Protocol ;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP ;RTMP;SMTP;FTP;SFTP,DHCP;DNS;DDNS;QoS;UPnP ;RTMP;SMTP;FTP;SFTP,Multicast;CMP;IGMP;IGMP;NFS;PPPoE;802.1x;SMMP Genetec, P2P Streaming Method Unicast/Multicast Max. User Access 20 Users General Intelligence Edge Storage Mas;FTP;SFTP Micro SD card 256 GB Mas;GTP;SFTP Micro SD card 256 GB LE (versions newer than LEB), Chrome, Firefox, Safari (versions newer than Safari 12) General Intelligence Object Abandoned/Missing Management Software Smart PSS, DSS, DMSS							Privacy Masking	Off/On (4 Area, Rectangle)
Pan/Tilt/Rotation Range Pan: 0*-360*; Tilt: 0*-90*; Rotation: 0*-360* Artificial Intelligence Face Detection Support face image capture Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering People Counting Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection, 4 areas independent detection, 1 Paddress conflict, Illegal Access, Storage anomaly Motion detection, Video tampering, Scene changing, Network disconnection, 1 Paddress conflict, Illegal Access, Storage anomaly Compression N/A Network Ethernet RJ-45 (10/100 Base-T) Protocol ;PM-yiPy-6;HTTP;HTTPS;TCP;UDP;ARP;RTP;RTSP;RTCP ;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QOS;UPNP ;NTP;Multicast;CMP;IGMP;NFS;PPPoE;802.1x;SMMP ONVIF (Profile S/Profile G/Profile T), CGI, Milstone, Genetec, P2P Streaming Method Unicast/Multicast Max. User Access 20 Users Edge Storage NAS;FTP;SFTP Micro SD card 256 GB Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) General Intelligence Object Abandoned/Missing Management Software Smart PSS, DSS, DMSS	D /T!l+ /D-+		240m(787ft)	96m(315ft)	48m(15/ft)	24m(/9ft)	Audio	
Artificial Intelligence Face Detection Support face image capture Ethernet Ethernet RJ-45 (10/100 Base-T) Ethernet RJ-45 (10/100 Base-T) Protocol P			0.000	Til. 08 008 1			Compression	N/A
Ethernet RJ-45 (10/100 Base-T) Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering People Counting Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection 4 areas independent detection 4 areas independent detection and people gathering Support 5 accesses independent detection 4 areas independent detection 5 areas independent detection 6 areas independent 6 areas		-	Pan: 0 –360	; Tilt: 0 –90 ; F	Rotation: 0 –3	860	Network	
Perimeter Protection Perimeter Protection Perimeter Protection Perimeter Protection Perimeter Protection Perimeter Protection Protocol Prot		igence	6				Ethernet	RJ-45 (10/100 Base-T)
People Counting Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection, 4 areas independent detection General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Max. User Access Edge Storage NAS;FTP;SFTP Micro SD card 256 GB IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) General Intelligence Object Abandoned/Missing Management Software Smart PSS, DSS, DMSS			Tripwire, intrusion (Recognition of vehicle and			Protocol	;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP	
People Counting counting; Support 4 accesses independent detection Max. User Access 20 Users General Intelligence Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Object Abandoned/Missing Streaming Method Max. User Access 20 Users Edge Storage NAS;FTP;SFTP Micro SD card 256 GB IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Management Software Smart PSS, DSS, DMSS						Interoperability		
General Intelligence Wotion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Max. User Access 20 Users NAS;FTP;SFTP Micro SD card 256 GB IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Management Software Smart PSS, DSS, DMSS	People Counting		counting; Support 4 accesses independent			Streaming Method	Unicast/Multicast	
Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) General Intelligence Object Abandoned/Missing Management Software Smart PSS, DSS, DMSS				ווע	Max. User Access	20 Users		
Event Trigger changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) General Intelligence Object Abandoned/Missing Management Software Smart PSS, DSS, DMSS	General Intelli				ene	Edge Storage		
	Event Trigger		changing, Network disconnection , IP address			Web Viewer	,	
Heat Map Yes Smart Phone iOS, Android	General Intelligence		Object Abandoned/Missing				Management Software	Smart PSS, DSS, DMSS
	Heat Map	Yes				Smart Phone	iOS, Android	

Certifications

Certifications	CE-LVD: EN60950-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU FCC: 47 CFR FCC Part 15, Subpart B UL/CUL: UL60950-1 CAN/CSA C22.2 No.60950-1-07
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Interface

Audio Interface	N/A
RS485	N/A
Alarm	N/A

Electrical

Power Supply	DC 12V (±30%), PoE (802.3af) (Class 0)
Power Consumption	<8.4W

Environmental

Operating Conditions	-30° C to +60° C (-22° F to +140° F)/Less than 95% RH
Storage Conditions	-30° C to +60° C (-22° F to +140° F)
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	244.1 mm × 79.0 mm × 75.9 mm (9.61" × 3.11" × 2.99")
Net Weight	0.815 kg (1.80 lb)
Gross Weight	1.08 kg (2.38 lb)

Ordering Information				
Type	Part Number	Description		
5MP camera Accessories (optional)	DH-IPC- HFW5541TP-S	5MP Pro Al IR Bullet Network Camera, WDR, PAL		
	DH-IPC- HFW5541TN-S	5MP Pro Al IR Bullet Network Camera, WDR, NTSC		
	IPC-HFW5541TP-S	5MP Pro Al IR Bullet Network Camera, WDR, PAL		
	IPC-HFW5541TN-S	5MP Pro Al IR Bullet Network Camera, WDR, NTSC		
	PFA130-E	Junction box		
	PFA152-E	Pole Mount		
, ,	PFA151	Corner Mount		

Accessories

Optional:







PFA130-E Junction box

PFA152-E Pole Mount

PFA151 Corner Mount

Junction Mount	Pole Mount	Corner Mount
PFA130-E	PFA130-E+ PFA152-E	PFA130-E + PFA151

Dimensions (mm[inch])





