

DH-IPC-HDW5541H-AS-PV

5MP WDR IR Eyeball AI Network Camera



System Overview

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

Functions

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.

- · 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 optional)
- · 1/1 Alarm in/out, 1/1 audio in/out (Built-in MIC, Built-in Speaker)
- · Max. IR LEDs Length 50 m
- · Micro SD memory, IP67









Active Deterrence

Active deterrence is to warn off intruders actively with white light and siren even before users are aware of the incidence. Once an intursion is detected, the white light will turn on and the siren will buzzer to alert the intruder. The white light can be set to Normally on or Flash, the content of siren is configurable.

Protection(IP67, wide voltage)

The camera allows for $\pm 30\%$ 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) , the camera is the choice for installation in even the most unforgiving environments.



Page	Technical Specification						Streaming Capability	3 Streams	
Product 17.7 Subgraphic argentate son CAUTE 17.7 Subgraphic argentate son C						·			
RAM/ROM	Image Sensor		1/2.7" 5Megapixel progressive scan CMOS					Resolution	(1280 × 720)/D1 (704 × 576/704 × 480)/VGA (640 ×
Standfulle St	Effective Pixels		2592 (H) × 1944 (V)					Frame Rate	, , , , ,
	RAM/ROM		512 MB/128 MB						
Minimum illumination	Scanning System		Progressive	Progressive					· · · · /
Bit Static Control	Electronic Shutter Speed		Auto/Manua	Auto/Manual, 1/3 s–1/100000 s					Third Stream: 1080P (1 fps–17 fps)
Bit Rate H.255 12 Ktgs—8192 Ktgs	Minimum Illumination		0.005 Lux@F	0.005 Lux@F1.6				Bit Rate Control	CBR/VBR
IR LEDs	IR Distance		Distance up to 50 m (164ft)					Bit Rate	
Lens Type Fixed-focal Shick Mode Shick	IR On/Off Contro	ol .	Auto/Manual						
Lens Type Fixed-local White Balance Auto/Natural/Street Lamp/Outdoor/Manual Mount Type Board-in Salm n, 3.6 mm, 6.0 mm Salm Control Auto/Manual Mox Aparture F1.6 Motion Detection OH/On (4 Zone, Rectangle) Aparture Type Fixed Salm 1,00 mm Region of Interest OH/On (4 Zone) Aparture Type Fixed Salm 1,00 mm CH/On (4 Zone) CH/On (4 Zone) Close Focus Distance 0.9 m (2.95 ftl)/1.6 m (6.25 ftl)/3.1 m (10.17 ft) Smart IR Ves Close Focus Distance 0.9 m (2.95 ftl)/1.6 m (6.25 ftl)/3.1 m (10.17 ft) Smart IR Ves DORID Distance 2.8 mm Sem(1841) 32 m(10.91) 1 m(301) 6m(201) Flip 0*90*/180*/270* 3.6 mm 80m(2621) 32 m(10.91) 1 m(301) Privacy Masking 0ff/On (4 Area, Rectangle) Pan/Till/Rotation Pan 0*360*/ Till: 0*78; Rotations O*360* Audio Audio Perimeter Protection Protocol Protocol 2.11a, G.731Mu, G.726, AAC, G.723 Ar	IR LEDs		1 IR, 1 LED	1 IR, 1 LED					
Mount Type Board in Solin Control Auto/Manual	Lens								
Mouth Type	Lens Type		Fixed-focal	Fixed-focal					
Max. Aperture F1.6 Max. Aperture F1.6 Angle of View H1.102', V: 71'/H: 84', V: 58'/H: 51', V: 37' Aperture Type Fixed Close Focus Distance U.9 m (2.95 ft)/1.6 m (3.25 ft)/3.1 m (10.17 ft) Defect Lens Defect Sempla4ft) Sempla4f	Mount Type		Board-in	Board-in					
Angle of View H: 1027, V: 71/H: 84*, V: 58*/H: 51*, V: 37* Aperture Type Fixed Fixed Electronic Image Stabilization (EIS) Aperture Type Fixed	Focal Length		2.8 mm, 3.6 mm, 6.0 mm						
Angle of View Fixed Close Focus Distance O.9 m (2.95 ftl)/1.6 m (5.25 ftl)/3.1 m (10.17 ft) Electronic Image Stabilization (ELS) Smart IR Yes Lens Defog Yes 2.8mm S6m(184ft) 22m(/2ft) 11m(36ft) 6m(20ft) 3.6mm 80m(262ft) 32m(105ft) 16m(52ft) 8m(26ft) 6.0mm 120m(394ft) 48m(157ft) 24m(/9ft) 12m(39ft) Pan/Tilt/Rotation Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan: 0"-360"; Tilt: 0"-78"; Rotation: 0"-360" Artificial Intelligence Perimeter Protection People Counting Support Line crossing/Region/Queueing people counting/Support 4 accesses independent detection, a areas independent detection. P address conflict, liligal Access, Storage anomally General Intelligence Perimeter Motion detection, video tampering , Scene changing, Network disconnection, IP address conflict, liligal Access, Storage anomally General Intelligence Web Viewer Heat Map Ves Has Management Software Firefox, Safari (versions newer than IS8), Chrome, Firefox, Sdafari (versions newer than IS8), Chrome, Firefox, Sdafari (versions newer than IS8), Chrome, Firefox, Sdafari (versions newer than IS8), Chrome, Firefox, SDS, DMSS	Max. Aperture		F1.6					Motion Detection	Off/On (4 Zone, Rectangle)
Close Focus Distance D.9 m (2.95 ft)/1.6 m (5.25 ft)/3.1 m (10.17 ft) Smart IR Yes	Angle of View		H: 102°, V: 71°/H: 84°, V: 58°/H: 51°, V: 37°					-	Off/On (4 Zone)
Lens Detect Observe Recognize Identify Defog Yes 2.8mm 56m(184ft) 22m(72ft) 11m(36ft) 6m(20ft) 3.6mm 80m(262ft) 32m(105ft) 16m(52ft) 8m(26ft) 6.0mm 120m(394ft) 48m(157ft) 24m(79ft) 12m(39ft) Pan/Tilt/Rotation Pan/Tilt/Rotation Audio Audio Artificial Intelligence Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, lottering detection, parking detection, and people gathering Support Line crossing/Region/Quueling people counting. Support 4 accesses independent detection General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, lilegal Access, Storage anomaly Fed Wes Video Video Unicast/Multicast Web Viewer Lie (versions newer than 1E8), Chrome, Firefox, Safari (versions newer than 1E8), Chrome, Firefox, Safari (versions newer than 5afari 12) Management Software Smart PSS, DSS, DMSS	Aperture Type		Fixed					N/A	
DORI Distance 2.8mm 56m(184ft) 22m(72ft) 11m(36ft) 6m(20ft) 3.6mm 80m(26ft) 32m(105ft) 16m(52ft) 8m(26ft) 6.0mm 120m(394ft) 48m(157ft) 24m(79ft) 12m(39ft) Pan/Tilt/Rotation Pan/Tilt/Rotation Pan/Tilt/Rotation Arange Pan: 0'-360'; Tilt: 0'-78'; Rotation: 0'-360' Compression G.711a, G.711Mu, G.726, AAC, G.723 Artificial Intelligence Perimeter Protection Pro	Close Focus Dista	ance	0.9 m (2.95 ft)/1.6 m (5.25 ft)/3.1 m (10.17 ft)					Smart IR	Yes
Born		Lens	Detect	Observe	Recognize	Identify		Defog	Yes
3.6mm 80m/(262ft) 32m/(105ft) 15m/(52ft) 8m/(26ft) Mirror Off/On 6.0mm 120m/(394ft) 48m/(157ft) 24m/(79ft) 12m/(39ft) Privacy Masking Off/On (4 Area, Rectangle) Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan: 0"-360"; Tilt: 0"-78"; Rotation: 0"-360" Compression G.711a, G.711Mu, G.726, AAC, G.723 Artificial Intelligence Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, loltering detection, parking detection and people gathering Support Line crossing/Region/Queueing people counting. Support 4 accesses independent detection detection a area independent detection General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Object Abandoned/Missing Heat Map Yes Video Unicast/Multicast Web Viewer Eleversions newer than IEB), Chrome, Firefox, Safari (versions newer than Safari 12) Management Software Smart PSS, DSS, DMSS		2.8mm	56m(184ft)	22m(72ft)	11m(36ft)	6m(20ft)		Flip	0°/90°/180°/270°
Pan/Tilt/Rotation Pan/Tilt/Rotation Range Pan: 0'-360'; Tilt: 0'-78'; Rotation: 0'-360' Artificial Intelligence Perimeter Protection People Counting Support Line crossing/Region/Queueing people counting/Support accesses independent detection detection, 4 areas independent detection Wolf (Profile S/Profile G/Profile T), CGI, Milstone, General Intelligence Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Wes Video Compression Audio Compression G.711a, G.711Mu, G.726, AAC, G.723 RJ-45 (10/100 Base-T) Protocol RJ-45 (10/100 Base-T) RJ-45 (10/100 Base-T) Protocol RJ-45 (10/100 Base-T) RJ-45 (10/100 B	DORI Distance	3.6mm	80m(262ft)	32m(105ft)	16m(52ft)	8m(26ft)		Mirror	Off/On
Pan/Tilt/Rotation Range Pan: 0'-360'; Tilt: 0'-78'; Rotation: 0'-360' Artificial Intelligence Perimeter Protection Perimeter Protection 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 Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Wideo Ves Compression Compression G.711a, G.711Mu, G.726, AAC, G.723 Retwork RJ-45 (10/100 Base-T) Ethernet RJ-45 (10/100 Base-T) Protocol P		6.0mm	120m(394ft)	48m(157ft)	24m(79ft)	12m(39ft)		Privacy Masking	Off/On (4 Area, Rectangle)
Artificial Intelligence Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Object Abandoned/Missing Heat Map Yes Network Ethernet RJ-45 (10/100 Base-T) Protocol IPv4; Pv6;HTTP;HTTPS;TCP;UDP;ARP;RTSP;RTCP;RTCP;DNS;DDNS;QoS;UPPD ;NTP;Multicast;ICMP;GMP;NFS;PPPOE;802.1x;SNMP Genetec, P2P Streaming Method Unicast/Multicast Max. User Access 20 Users Edge Storage NAS;FTP;SFTP Micro SD card 256 GB Video Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Management Software Smart PSS, DSS, DMSS	Pan/Tilt/Rotat	ion						Audio	
Perimeter Protection Tripwire, intrusion (Recognition of vehicle and people), fast moving, loitering detection, parking detection and people gathering Support Line crossing/Region/Queueing people counting; Support 4 accesses independent detection General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Heat Map Yes Tripwire, intrusion (Recognition of vehicle and people) good detection, parking detection, parking detection, parking detection, parking detection. Ethernet RJ-45 (10/100 Base-T) Ethernet RJ-46 (10/100 Ba	Pan/Tilt/Rotation	n Range	Pan: 0°-360°; Tilt: 0°-78°; Rotation: 0°-360°				Compression	G.711a, G.711Mu, G.726, AAC, G.723	
Perimeter Protection people), fast moving, loitering detection, parking detection and people gathering 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 Heat Map Yes Video Video Web Viewer H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Protocol IPv4;IPv6;HTTP;HTTP5;TCP;UDP;ARP;RTSP;RTCP IPv4;IPv6;HTTP;HTP;HTP5;FTP;DHCP;DNS;DDNS;IDNS;IDNS;IDNS;IDNS;IDNS IPv4;IPv6;HTTP;HTTP;HTTP;HTP;HTP;HTP;HTP5;ICP;UDP;ARP;RTP;PSFTP;DHCP;DNS;DNS;IDNS IPv4;IPv6;HTTP;HTTP;HTTP;HTP;HTP;HTP;HTP;HTP;HTP;	Artificial Intell	igence						Network	
Support Line crossing/Region/Queueing people counting;Support 4 accesses independent detection. General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Heat Map Yes Video Web Viewer H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Protocol ;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QOS;UPPP ;NTP;Multicast;ICMP;IGMP;NFS;PPPoE;802.1x;SNMP interperability ONVIF (Profile S/Profile G/Profile T), CGI, Milstone, Genetec, P2P Streaming Method Unicast/Multicast Axx. 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	Perimeter Protection		people), fast moving, loitering detection, parking				Ethernet	RJ-45 (10/100 Base-T)	
General Intelligence Event Trigger Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly General Intelligence Object Abandoned/Missing Heat Map Video Video Web Viewer H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly Max. User Access 20 Users NAS;FTP;SFTP Micro SD card 256 GB Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Management Software Smart PSS, DSS, DMSS	People Counting		Support Line crossing/Region/Queueing people counting;Support 4 accesses independent					Protocol	;RTMP;SMTP;FTP;SFTP;DHCP;DNS;DDNS;QoS;UPnP
Event Trigger changing, Network disconnection , IP address conflict, Illegal Access, Storage anomaly General Intelligence Object Abandoned/Missing Heat Map Yes Video Video LE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Compression H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Management Software Steaming Wethod Max. User Access 20 Users NAS;FTP;SFTP Micro SD card 256 GB Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12)								Interoperability	
General Intelligence Object Abandoned/Missing Heat Map Yes Edge Storage NAS;FTP;SFTP Micro SD card 256 GB Video Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Compression Minute Storage Max. User Access Max. User Access Max. User Access Max. User Access Web Viewer NAS;FTP;SFTP Micro SD card 256 GB Web Viewer Firefox, Safari (versions newer than Safari 12) Management Software Smart PSS, DSS, DMSS	Event Trigger		changing, Network disconnection, IP address				Streaming Method	Unicast/Multicast	
Heat Map Yes 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) Compression H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Management Software Smart PSS, DSS, DMSS								Max. User Access	20 Users
Video Web Viewer IE (versions newer than IE8), Chrome, Firefox, Safari (versions newer than Safari 12) Compression H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Management Software Smart PSS, DSS, DMSS								Edge Storage	
Compression H.265,H.264,H.264B,H.264H, MJPEG (sub stream) Management Software Smart PSS, DSS, DMSS	·				Web Viewer				
Smart Codec Yes Smart Phone iOS, Android	Compression							Management Software	
	Smart Codec		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	1/1 channel In/Out, Built-in MIC, Built-in Speaker
RS485	N/A
Alarm	1 channel In: 5mA 5V DC 1 channel Out: 300mA 12V DC

Electrical

Power Supply	DC 12V (±30%), PoE (802.3af) (Class 0)
Power Consumption	<7.2W

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

Construction

Casing	Metal, plastic
Dimensions	Φ122 mm × 113.5 mm (4.80" × 4.47")
Net Weight	0.49 kg (1.08 lb)
Gross Weight	0.65 kg (1.43 lb)

Ordering Information			
Туре	Part Number	Description	
	DH-IPC- HDW5541HP- AS-PV	5MP WDR IR Eyeball AI Network Camera, WDR, PAL	
5MP camera	DH-IPC- HDW5541HN- AS-PV	5MP WDR IR Eyeball AI Network Camera, WDR, NTSC	
	IPC-HDW5541HP- AS-PV	5MP WDR IR Eyeball AI Network Camera, WDR, PAL	
	IPC-HDW5541HN- AS-PV	5MP WDR IR Eyeball AI Network Camera, WDR, NTSC	
	PFA130-E	Junction box	
	PFA151	Corner Mount	
Accessories (optional)	PFB203W	Wall Mount	
	PFA106	Mount Adapter	
	PFB220C	Ceiling Mount	
	PFA152-E	Pole Mount	

Accessories

Optional:











PFA130-E Junction box

PFA151 Corner Mount

PFB203W Wall Mount

PFA106 Mount Adapter





Ceiling Mount Pole Mo	unt
Junction Mount	Corner Mount
PFA130-E	PFA151+PFB203W
Wall Mount	Ceiling Mount
PFB203W	PFA106+PFB220C
Ceiling Mount	Pole Mount
	PFB203W + PFA152-E

Dimensions (mm[inch])





