

# DH-IPC-HDBW5541R-S

5MP WDR IR Dome AI Network Camera



Dahua AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and platform management products. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

## System Overview

Pro AI series contains Face Capture, 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 and vandal resistant to IK10 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
- 20fps@2592×1944
- WDR(120dB), Day/Night(ICR), 3D DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.8mm fixed lens (3.6mm/6mm optional)
- Max. IR LEDs Length 40m
- Micro SD memory, IP67, IK10



### Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. Dahua face detection camera can extract six facial attributes and output the metadata for analysis.

### Protection(IP67, IK10, 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) and impact tests (IK10), the camera is the choice for installation in even the most unforgiving environments.

Technical Specification					
Camera					
Image Sensor		1/2.7" 5Megapixel progressive scan CMOS			
Effective Pixels		2592(H) x 1944(V)			
RAM/ROM		512MB/128MB			
Scanning System		Progressive			
Electronic Shutter Speed		Auto/Manual, 1/3~1/100000s			
Minimum Illumination		0.0048Lux/F1.6 ( Color,1/3s,30IRE) 0.043Lux/F1.6 ( Color,1/30s,30IRE) 0Lux/F1.6(IR on)			
IR Distance		Distance up to 40m (131ft)			
IR On/Off Control		Auto/ Manual			
IR LEDs		1			
Lens					
Lens Type		Fixed			
Mount Type		Board-in			
Focal Length		2.8mm,3.6mm,6.0mm			
Max. Aperture		F1.6			
Angle of View		H: 102°, V:71°/H: 84°, V:58°/H: 51°, V:37°			
Optical Zoom		N/A			
Aperture Type		Fixed			
Close Focus Distance		0.9m(2.95ft)/1.6m(5.25ft)/3.1m(10.17ft)			
DORI Distance	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)
	6.0mm	120m(394ft)	48m(157ft)	24m(79ft)	12m(39ft)
Pan/Tilt/Rotation					
Pan/Tilt/Rotation Range		Pan:0°~355°; Tilt:0°~75°; Rotation:0°~355°			
Artificial Intelligence					
Perimeter Protection		Tripwire, Intrusion(Human & Vehicle classification)			
People Counting		Line crossing people counting, Region people counting,Loitering filter			
General Intelligence					
Event Trigger		Motion detection, Video tampering , Scene changing, Network disconnection , IP address conflict, Illegal Access,Storage anomaly			
General Intelligence		Object Abandoned/Missing			
Video					
Compression		H.265+/H.265/H.264+/H.264/H.264B/H.264H/MJPEG(sub stream)			
Streaming Capability		3 Streams			
Resolution		2592×1944/2688×1520/2304×1296/1080P(1920×1080)/1.3M(1280×960)/720P(1280×720)/D1(704×576/704×480)/VGA(640×480)/CIF(352×288/352×240)			

Frame Rate	Main Stream: 2592×1944(1~20fps)
	Sub Stream: D1(1~20/30fps)
	Third Stream: 1080P(1~13fps)
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32~ 8192Kbps H.265: 19~ 8192Kbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
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 Stabilization (EIS)	N/A
Smart IR	Support
Defog	Support
Digital Zoom	N/A
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; TCP; ARP; RTSP; RTP; UDP; RTCP;SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; SNMP;QoS; UPnP;NTP
Interoperability	ONVIF(Profile S/Profile G), CGI,Milstone,Genetec,P2P
Streaming Method	Unicast / Multicast
Max. User Access	20 Users
Edge Storage	NAS FTP Mirco SD card 256GB
Web Viewer	IE(versions newer than IE8), Chrome, Firefox, Safari(versions newer than Safari 12)
Management Software	Smart PSS, DSS, P2P
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

## Interface

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

## Electrical

Power Supply	DC12V(±30%), PoE(802.3af)(Class 0)
Power Consumption	DC12V:2W 4.7W(IR on) PoE:2.6W 5.2W(IR on)

## Environmental

Operating Conditions	-30° C ~ +60° C (-22° F ~ +140° F) / 10%RH~95% RH
Storage Conditions	+5° C ~ +40° C (+41° F ~ +104° F) (daily temperature difference within 15° C/59° F) / 10%RH~95% RH
Ingress Protection	IP67
Vandal Resistance	IK10

## Construction

Casing	Metal
Dimensions	Φ122mm×88.9mm (4.80"×3.50")
Net Weight	0.43Kg (0.95lb)
Gross Weight	0.59Kg (1.30lb)

## Accessories

### Optional:



PFA137  
Junction box



PFB200C  
Inceiling Mount



PFA200W  
Rain Shade



PFA123  
Junction box



PFB203W  
Wall Mount



PFA152-E  
Pole Mount



PFA106  
Mount Adapter



PFB220C  
Ceiling Mount

Junction Mount PFA137	Inceiling Mount PFB200C	Wall Mount with Rain Shade PFA200W	Junction Mount PFA123
Wall Mount PFB203W	Pole Mount PFB203W + PFA152-E	Ceiling Mount PFA106 + PFB220C	

## Ordering Information

Type	Part Number	Description
5MP camera	DH-IPC-HDBW5541RP-S	5MP WDR IR Bullet AI Network Camera, WDR,PAL
	DH-IPC-HDBW5541RN-S	5MP WDR IR Bullet AI Network Camera, WDR,NTSC
	IPC-HDBW5541RP-S	5MP WDR IR Bullet AI Network Camera, WDR,PAL
	IPC-HDBW5541RN-S	5MP WDR IR Bullet AI Network Camera, WDR,NTSC
Accessories (optional)	PFA137	Junction box
	PFB200C	Inceiling Mount
	PFA200W	Rain Shade
	PFA123	Junction box
	PFB203W	Wall Mount
	PFA152-E	Pole Mount
	PFA106	Mount Adapter
	PFB220C	Ceiling Mount

## Dimensions (mm/inch)

