

DH-IPC-HDBW2231R-ZS/VFS

2MP WDR IR Dome Network Camera



- 1/2.8" 2Megapixel progressive Starvis™ CMOS
- H.265 & H.264 dual-stream encoding
- 25/30fps@1080P(1920×1080)
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- Micro SD card slot, up to 128GB
- 2.7~13.5mm varifocal lens
- Max IR LEDs Length 30m
- IP67, IK10, PoE



System Overview

The IR Megapixel Vari-focal camera delivers 2MP resolution with a 2.7mm – 13.5mm varifocal lens. The camera's elegant blend of aesthetics combined with a range of easy mounting solutions provides an excellent choice for a variety of small to mid-size applications at an affordable price.

Functions

Smart Codec (H.265+ & H.264+)

Smart Codec is the optimized implementation of standard video compression (H.265 & H.264) that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart Codec technology reduces bit rate and storage requirements by up to 70% when compared to the standard video compression.

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.006lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Intelligent Video analysis (IVS)

Dahua camera is equipped with a built-in intelligent analytic algorithm based on video, which can realize intelligent functions like Tripwire and Intrusion, to quickly and accurately respond to monitoring events in specific area. It can enhance monitoring efficiency. In addition, the camera supports intelligent tamper detection, which is to generate warning message via detecting dramatic scene change and to guarantee effective video surveillance.

Wide Dynamic Range (WDR)

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, true WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

Smart IR Technology

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of camera's infrared LEDs to compensate the distance of an object. Smart IR technology prevents IR LEDs from whitening 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 50m (164ft).

Protection (IP67, IK10, wide voltage)

The camera allows for $\pm 25\%$ input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 2KV 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 complies with an IK10 impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.)

Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -30° C to +60° C (-22° F to +140° F) with 95% humidity.

Interoperability

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



Technical Specification					
Camera					
Image Sensor		1/2.8" 2Megapixel progressive CMOS			
Effective Pixels		1920(H) x1080(V)			
RAM/ROM		256MB/32MB			
Scanning System		Progressive			
Electronic Shutter Speed		Auto/Manual, 1/3~1/100000s			
Minimum Illumination		0.006Lux/F1.4(Color,1/3s,30IRE) 0.05Lux/F1.4(Color,1/30s,30IRE) 0Lux/F1.4(IR on)			
S/N Ratio		More than 50dB			
IR Distance		Distance up to 30m(98ft)			
IR On/Off Control		Auto/ Manual			
IR LEDs		2			
Lens					
Lens Type		Motorized(-ZS),Manual(-VFS)			
Mount Type		Board-in			
Focal Length		2.7mm~13.5mm			
Max. Aperture		F1.4			
Angle of View		H:106°~29°, V:57°~17°			
Focus Control		Motorized(-ZS),Manual(-VFS)			
Close Focus Distance		0.2m			
DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	46m(151ft)	18m(59ft)	9m(30ft)	5m(16ft)
	T	153m(502ft)	61m(200ft)	30m(98ft)	15m(49ft)
PTZ					
Pan/Tilt Range		Pan:0° ~355° ;Tilt:0° ~75° ;Rotation:0° ~355°			
Intelligence					
Event Trigger		Motion detection, Video tampering,Scene changing,Network disconnection,IP address conflict,Illegal access,Storage anomaly			
IVS		Tripwire, Intrusion			
Video					
Compression		H.265/H.264/MJPEG(Sub Stream)			
Smart Codec		Support H.265+/H.264+			
Streaming Capability		2 Streams			
Resolution		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: 1080P(1 ~ 25/30fps)			
		Sub Stream: D1(1 ~ 25/30fps)			
Bit Rate Control		CBR/VBR			
Bit Rate		H.265: 12K ~ 6400Kbps H.264: 32K ~ 10240Kbps			

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 Detection	Off / On (4 Zone, Rectangle)
Region of Interest	Off / On (4 Zone)
Electronic Image Stabilization(EIS)	N/A
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;RTCP;UDP;SMTP;FTP;DHCP;DNS;DDNS;PPPoE;IPv4/v6;QoS;UPnP;NTP;Bonjour;IEEE 802.1x;Multicast;IGMP;TLS;SNMP
Interoperability	ONVIF Profile S&G, API
Streaming Method	Unicast / Multicast
Max. User Access	10 Users / 20 Users
Edge Storage	NAS Local PC for instant recording Micro SD Card 128GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS, DMSS
Smart Phone	IOS, Android

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	<9W(-ZS), <7W(-VFS)

Environmental

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

Construction

Casing	Metal
Dimensions	φ122mm×88.9mm(4.80"x3.50")
Net Weight	0.4Kg (0.88lb)
Gross Weight	0.54Kg(1.19lb)

Ordering Information

Type	Part Number	Description
2MP camera	DH-IPC-HDBW2231RP-ZS	2MP WDR IR Dome Network Camera, PAL
	DH-IPC-HDBW2231RN-ZS	2MP WDR IR Dome Network Camera, NTSC
	IPC-HDBW2231RP-ZS	2MP WDR IR Dome Network Camera, PAL
	IPC-HDBW2231RN-ZS	2MP WDR IR Dome Network Camera, NTSC
	DH-IPC-HDBW2231RP-VFS	2MP WDR IR Dome Network Camera, PAL
	DH-IPC-HDBW2231RN-VFS	2MP WDR IR Dome Network Camera, NTSC
	IPC-HDBW2231RP-VFS	2MP WDR IR Dome Network Camera, PAL
	IPC-HDBD2231RN-VFS	2MP WDR IR Dome Network Camera, NTSC
Accessories (optional)	PFA137	Junction box
	PFB203W	Wall mount
	PFA152-E	Pole mount
	PFB200C	In-ceiling Mount
	PFA200W	Rain shade

Accessories

Optional:



PFA137 Function Box PFB203W Wall mount PFA152-E Pole mount PFB200C In-ceiling Box PFA200W Rain shade

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

Dimensions (mm/inch)

