2 x 2MP Multi-sensor Network Dome Camera

H.265 IR Network Camera

- Two (2) Independent 1/2.8-in. 2 MP STARVIS™ CMOS Sensors
- Dual-stream Encoding per each Channel
- H.265 and H.264 Dual Codecs
- 2 MP at 30 fps Maximum Resolution per Sensor
- Two (2) 2.8 mm Fixed Lenses
- Basic Starlight Technology for Low Light Sensitivity
- ArcticPro Series Camera - Operational down to –40° C (–40° F)
- IP67 Ingress Protection and IK10 Vandal Resistance
- True Wide Dynamic Range (Channel 1) and True Day/Night (ICR)
- Built-in Microphone
- Intelligent Video System
- Maximum IR LED Distance 20 m (66 ft)
- Five-year Warranty*

1080p FULL HD | H.265 | Starlight | WDR | Temperature | IP67 | Vandal-proof

ArcticPro

System Overview

The Dahua DH-IPC-HDBW4231FN-E2-M Dual-sensor Dome Camera features two (2) 1/2.8-in. 2 MP Progressive Scan STARVIS™ CMOS Sensors each with a 2.8 mm fixed lens. Each sensor can be positioned and configured independently of the other allowing flexible, multi-directional video surveillance that is ideal for monitoring an entire corridor or a street. The camera offers True Wide Dynamic Range, a True Day/Night IR Cut filter, IP67 Ingress protection and operation in extreme temperatures to deliver superior images in all lighting and environmental conditions.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Basic Starlight Technology offers best-in-class light sensitivity, capturing details in low light down to 0.009 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

True Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology (channel 1 only). 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.

Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera detects and captures a snapshot of human face in a defined area within a scene, and offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

High Efficiency Video Coding (H.265)

The H.265 (ITU-T VCEG) video compression standard offers double the data compression ratio at the same level of video quality, or substantially improved video quality at the same bit rate, as compared to older video compression technologies. H.265 offers such impressive compression by expanding the pattern comparison and difference-coding, improving motion vector prediction and motion region merging, and incorporating an additional filtering step called sample-adaptive offset filtering.

ArcticPro

The Dahua ArcticPro Series of extreme-environment cameras combine temperature-tolerant components with a waterproof enclosure to ensure flawless operation in temperatures as low as –40°F (–40°C) without the need for an internal heater. The lack of a heater reduces the camera's power consumption and saves operating costs. For applications that demand high-resolution video with advanced features in extremely cold environments, the Dahua ArcticPro Series offers a camera to satisfy the most demanding requirements.

Environmental

The camera complies with the 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.). Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

Protection

Supporting ±30% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

*Warranty applies to products sold through an authorized Dahua Dealer.

Technical Specification

Camera

Image Sensor	Two (2) 1/2.8-in. 2 MP STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V)
RAM/ROM	512 MB / 256 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual; 1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.009 lux at F2.0 (1/3 s, 30 IRE) Color: 0.07 lux at F2.0 (1/30 s, 30 IRE) 0 lux at F2.0 with IR on
S/N Ratio	More than 50 dB
IR Distance	Distance up to 20.0 m (65.62 ft)
IR On/Off Control	Auto, Manual
IR LEDs	10 per each Sensor

Lens

Lens Type	Fixed
Mount Type	Board-in
Focal Length	2.8 mm
Max. Aperture	F2.0
Angle of View	Horizontal: 110° Vertical: 60°
Focus Control	Fixed

DORI[1] Distance	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
	41 m (134 ft)	16 m (52 ft)	8 m (26 ft)	4 m (13 ft)

Installation Angle

Range	Pan: ±90° Tilt: 0° to 65° Rotation: 0°to 360°

Video

Compression		H.265, H.264H, MJPEG (Sub Stream)
Streaming Capability		Two (2) Streams per Sensor
Resolution		1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 x 480), CIF (352 x 240)
Frame Rate	Main Stream	Channel 1: 1080p at 30 fps Channel 2: 1080p at 30 fps
	Sub Stream	Channel 1: D1 at 30 fps Channel 2: D1 at 30 fps

Bit Rate Control	CBR, VBR
Bit Rate	H.264: 32 to 10240 Kbps H.265: 12 to 7168 Kbps
Day/Night	Auto (ICR), Color, B/W
BLC Mode	BLC, HLC, True WDR (120 dB, channel 1 only)
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)
Smart IR	Support
Digital Zoom	16x
Flip	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (4 Area, Rectangle)

Audio

Compression	G.711a, G.711Mu, AAC, G.726

Network

Ethernet	RJ-45 (10/100 Base-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 Profile S&G, API
Streaming Method	Unicast. Multicast
Maximum User Access	10 Users / 20 Users
Edge Storage	Network Attached Storage (NAS) Local PC for Instant Recording Micro Card Slot, 128 GB maximum
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	SmartPSS, DSS, DMSS
Mobile Operating System	IOS, Android

Certifications

Safety	EN60950:2000 UL 60950-1
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B E-mark (ECE-Regulation No.10) EN50155

Interface

Audio	Built-in Microphone

1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 , the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

Electrical

Power Supply	12 VDC or PoE (IEEE 802.3af, Class 0)
Power Consumption	< 6.5 W

Environmental

Operating Temperature	–40° C to +60° C (–40° F to +140° F) Less than 95% RH
Storage Temperature	–40° C to +60° C (–40° F to +140° F) Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	ø122.0 mm x 66.20 mm (4.79 in. x 2.61 in.)
Net Weight	0.51 kg (1.11 lb)
Gross Weight	0.53 kg (1.16 lb)

Intelligence

IVS triggers an alarm and takes a defined action for the following events:

Standard Features	• Tampering with the camera. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera.
Premium Features	
Motion	An object moves through any part of the scene.
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.
Scene Change	A person or object moves the camera to change the scene or covers the camera to obscure the scene.
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.
Advanced Features	
Facial Detection	Detects and captures a snapshot of a human face in a defined area within a scene.

Ordering Information

Type	Part Number	Description
	DH-IPC-HDBW4231FN-E2-M	2 x 2 MP IR Multi-sensor Dome Network Camera, WDR, IVS
Accessories, optional	PFA137	Junction Box
	PFA152-E	Pole Mount
	PFB203W	Wall Mount

Accessories

Optional:

PFA137
Junction Box

PFA152-E
Pole Mount

PFB203W
Wall Mount

Dimensions (mm/inch)