

# 2 MP Fixed Mini Dome Network Camera

True WDR Dome Network Camera



- 1/2.8-in. 2 MP Progressive-scan STARVIS™ CMOS Sensor
- Triple-stream Encoding
- Smart H.265+ and H.264 Dual Codec
- 2 MP (1920 x 1080) at 60 fps Resolution
- 2.8 mm Fixed Lens
- Smart Detection
- True Wide Dynamic Range (120 dB)
- Built-in Microphone
- IP66 Ingress Protection
- Five-year Warranty\*



## System Overview

Dahua's Mobile series of cameras offers high-resolution video and cutting-edge technology in a compact and accessible package. The cameras feature Dahua's Smart H.265+ video compression, reducing bandwidth and storage requirements without sacrificing video quality. 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

### Wide Dynamic Range

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.

### Intelligent Video System (IVS)

With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed, and Facial Detection, for searching or identification of individuals.

### 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.

### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec 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 H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

### Environmental

With a temperature range of -30 °C to +60 °C (-22 °F to +140 °F), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP66 rating makes it suitable for demanding outdoor applications.

### Protection

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.

### Technical Specification

#### Camera

Image Sensor	1/2.8-in. 2 MP CMOS Sensor
Effective Pixels	1920(H) x 1080(V)
RAM/ROM	256 MB / 32 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) B/W: 0.005 lux at F2.0 (1/3 s, 30 IRE) B/W: 0.03 lux at F2.0 (1/30 s, 30 IRE)
S/N Ratio	More than 50 dB

#### Lens

Lens Type	Fixed	
Mount Type	Board-in	
Focal Length	2.8 mm	
Max. Aperture	F2.0	
Angle of View	Horizontal	110°
	Vertical	58°
Focus Control	Fixed	

#### DORI Distance<sup>1</sup>

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
44 m (144 ft)	17 m (56 ft)	9 m (30 ft)	4 m (13 ft)

#### Pan/Tilt/Rotation

Range	Pan: 0° to 355° Tilt: 0° to 75° Rotation: 0° to 360°
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#### Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264, MJPEG	
Streaming Capability	Three Streams	
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	2 MP at 60 fps
	Sub Stream 1	D1 at 60 fps
	Sub Stream 2	2 MP at 60 fps
Bit Rate Control	CBR, VBR	
Bit Rate	H.264: 24 Kbps to 9472 Kbps H.265: 14 Kbps to 5632 Kbps	
Day/Night	Electronic	
BLC Mode	BLC, HLC, True WDR (120 dB)	

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)
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
Interface	Built-in Microphone

#### Network

Ethernet	M12 Models	M12 D-coded Connector (10/100 Base-T)
	M Models	RJ45 Connector (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, SNMP	
Interoperability	ONVIF, PSIA, CGI	
Streaming Method	Unicast / Multicast	
Maximum User Access	10 Users / 20 Users	
Edge Storage	Network Attached Storage (NAS) Local PC for Instant Recording Micro SD Card Slot, maximum 128 GB	
Web Viewer	IE, Firefox, Safari	
Management Software	Smart PSS, DSS	
Mobile Operating System	IOS, Android	

#### Certifications

Safety	EN 60950:2000 UL60950-1
Mobile Applications	EN 50155 E-mark (ECE-Regulation No.10)
Electromagnetic Compatibility	FCC Part 15 Subpart B

#### Electrical

Power Supply	12 VDC or PoE (802.3af, Class 0)
Power Consumption	< 3 W

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), Less than 95% RH
Ingress Protection	IP66

Construction

Casing	Metal
Dimensions	ø110.0 mm x 56.0 mm (ø4.33 in. x 2.20 in.)
Net Weight	0.38 kg (0.84 lb)
Gross Weight	0.44 kg (0.97 lb)

Intelligence

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

Standard Features	<ul style="list-style-type: none"> <li>• Tampering with the camera.</li> <li>• Error writing to an onboard Micro SD card.</li> <li>• Error sending or receiving data over the network.</li> <li>• Unauthorized access to the camera.</li> </ul>
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 human face in a defined area within a scene.

Ordering Information

Type	Part Number	Description
4 MP Camera	DH-IPC-HDB4231CN-M12	2 MP Mini Dome Network Camera, 2.8 mm, True WDR, IVS, M12 D-coded Connector
	DH-IPC-HDB4231CN-M	2 MP Mini Dome Network Camera, 2.8 mm, True WDR, IVS, RJ45 Connector
Accessories, optional	PFA152	Pole Mount
	PFB203W	Wall mount

Accessories

Optional:



PFA152 Pole Mount



PFB203 Wall Mount

Dimensions (mm/inch)

