

# 12 MP Network Fisheye Camera

180° Panoramic IR Fisheye Camera



## System Overview

Dahua Fisheye Cameras provide detailed panoramic views in a compact, low-profile design. The progressive-scan sensor combined with a fisheye lens provide a high-quality 180° panoramic view without blind spots, making the camera the ideal solution for wide and open areas, such as airports, shopping malls and banks. The camera offers multiple dewarp modes for different installations and configurations that enhance the video for a specific scene. The IP67 environmental protection rating and the IK10 vandal resistance ensure the camera operates in the harshest environments.

## Functions

### True Day/Night

A day/night mechanical IR cut filter makes this camera ideal for applications with fluctuating lighting conditions, delivering color images during the day and automatically switching to monochrome as the scene darkens.

### Dewarping Mode

Fisheye dewarping solves the problem of distortion in the circular panoramic view. The camera offers multiple dewarping modes for different installations and configurations, either with a Dahua XVR, NVR, via the Web interface. Each dewarping mode offers options to adjust each scene.

- 1/1.7-in. 12 MP Progressive-scan CMOS Sensor
- 12 MP (4000 x 3000) at 25 fps Maximum Resolution
- Triple-stream Encoding
- H.265 and H.264 Dual Codecs
- Multiple Dewarp Modes
- Day/Night (ICR), 3DNR, AWB, AGC, BLC
- Maximum IR Distance 10 m (33 ft)
- IP67 Ingress Protection, IK10 Vandal Resistance
- Five-year Warranty\*



### Smart IR

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 10 m (33 ft).

### 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.

### Cybersecurity

Dahua network cameras are equipped with a series of key cybersecurity technologies including: security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage. These technologies improve the camera's ability to prevent malicious access and to protect data.

### Protection

The camera allows for  $\pm 25\%$  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	1/1.7-in. 6 MP CMOS
Total Sensor Pixels	4000(H) x 3000(V)
RAM/ROM	1024 MB / 128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual, 1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.001 lux at F2.8 (1/3 s, 30 IRE) Color: 0.01 lux at F2.8 (1/30 s, 30 IRE) 0 lux at F2.8 with IR on
S/N Ratio	More than 50 dB
IR Distance	Up to 10 m (32.81 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Three (3)

Lens	
Lens Type	Fixed
Mount Type	Board-in
Focal Length	1.98 mm
Maximum Aperture	F2.8
Angle of View	Horizontal: 180° Vertical: 180°
Focus Control	Fixed

DORI Distance <sup>1</sup>			
Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
42 m (138 ft)	17 m (56 ft)	8 m (27 ft)	4 m (14 ft)

Video		
Compression	H.265, H.264	
Streaming Capability	Three (3) Streams	
Resolution	12 MP (4000 x 3000), 8 MP (2880 x 2880), 6 MP (3072 x 2048), 3 MP (2048 x 1536), 1.3 MP (1280 x 960), D1 (704 x 576), CIF (352x288)	
Effective Maximum Resolution, based on Dewarping Mode		
Dewarping Method	Mount Location	Resolution (H x V)
1 Panoramic	Ceiling/Ground	4096 x 1024
	Wall	2048 x 1024
2 Panoramic	Ceiling/Ground	2048 x 2048
1 Original + 3 Regions	All Locations	2048 x 2048
4 Regions	All Locations	2048 x 2048
1 Region	All Locations	1280 x 1024

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.

Frame Rate	Main Stream	12 MP at 25 fps or 8 MP at 30 fps
	Sub Stream 1	D1 at 30 fps
	Sub Stream 2	1.3 MP at 30 fps
Bit Rate Control		CBR, VBR
Bit Rate		H.265: 3 Kbps to 9984 Kbps H.264: 8 Kbps to 16384 Kbps
Day/Night		Auto (ICR), Color, B/W
BLC Mode		BLC, HLC, DWDR
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)
Advanced Features		Smart IR, Defog
Digital Zoom		16x
Privacy Masking		Off, On (4 Area, Rectangle)

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

Network	
Ethernet	M12 D-coded Connector (100/1000 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
Cybersecurity	Video Encryption, Firmware Encryption, Configuration Encryption, Digest, WSSE, Account Lockout, Security Logs, IP/MAC Filtering, Generating and Importing X.509 Certification, Syslog, HTTPS, 802.1x, Trusted Boot, Trusted Execution, Trusted Upgrade

Certifications	
Safety	UL60950-1 EN 60950:2000
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B

Interface	
Audio Interface	Input: One (1) Channel, Built-in Microphone Output: One (1) Channel
Alarm	Input: Two (2) Channels (5 VDC, 5 mA) Output: Two (2) Channels (30 VDC, 1 A; 50 VAC, 0.5 A)

Electrical	
Power Supply	12 VDC ±25% or PoE (802.3af, Class 0)
Power Consumption	< 12 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	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	ø149.80 mm x 50.70 mm (ø5.90 in. x 2.0 in.)
Net Weight	0.58 kg (1.28 lb)
Gross Weight	1.0 k g (2.20 lb)

Ordering Information

Type	Part Number	Description
6 MP Fisheye	DH-IPC-EBW81230 M12	12 MP Panoramic Network IR Fisheye Camera,
Accessories, optional	PFA100	Mount Adapter (Required for PFB302S Wall Mount)
	PFA105	Mount Adapter (Required for PFB300C Ceiling Mount)
	PFA110	Mount Adapter (Required for PFB300C Ceiling Mount)
	PFA152	Pole Mount (For use with PFB302S Wall Mount)
	PFB300C	Ceiling Mount (Requires PFA105 and PFA110 Mount Adapters)
	PFB302S	Wall Mount (Requires PFA100 Mount Adapter)

Accessories

Optional:



Wall Mount	Pole Mount
PFA100+PFB302S	PFA100+PFB302S+PFA152
Ceiling Mount	
PFA105+PFA110+PFB300C	

Dimensions (mm/inch)

