DAHUA TECHNOLOGY

12MP Network Fisheye Camera
Panoramic IR Fisheye Camera with Analytics+

- 1/1.7-in. 12MP Progressive-scan CMOS Sensor
- 12MP (4000 x 3000) at 25 fps Maximum Resolution
- Triple Stream Encoding
- Smart H.265+ and Smart H.264+ Dual Codecs
- Built-in Microphone and Speaker
- Multiple Dewarp Modes
- Analytics+ Functions — Perimeter Protection, People Counting, and Queue Management
- Maximum IR Distance 10 m (32.81 ft)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty*

Wiz Mind

WizMind Series devices offer Dahua Analytics+ functions for comprehensive, human-oriented analytic solutions. WizMind Series products are ideal for complex applications with demanding requirements that need advanced analytic capabilities.

| 12Mp | Fisheye VR | Perimeter Protection | People Counting | Heat Map | IP67&IK10 | Queue Management |

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 360° panoramic view without blind spots, making the camera the ideal solution for wide and open areas. The camera offers Analytics+ functions at the edge – performing complex real-time perimeter people counting and queue management. The IP67 environmental protection rating and the IK10 vandal resistance ensure the camera operates in the harshest environments.

Functions

People Counting
The camera uses complex real-time people counting algorithms to count the number of people in up to four (4) distinct, user-defined regions. The function can trigger an alarm when a threshold setting is exceeded or when a wait time has exceeded a minimum time. People counting is ideal for measuring the number of customers entering or exiting a location and to monitor groups of people in a distinct location.

Queue Management
This Analytics+ function monitors four (4) user-defined regions where people wait in line (or queue). Queue Management triggers an alarm when the number of people in line exceeds a minimum threshold or when the time a person waits in line is greater than the minimum queue time. The function displays each target in real-time and offers various report output formats.

Perimeter Protection
Dahua Analytics+ includes Tripwire and Intrusion functions that offer custom tripwires based on object type for automation in limited access areas. Perimeter Protection requires less pixels to detect an object to deliver improved accuracy and decreased false alarms due to lights, weather, trees, or animals.

Heat Map
The built-in IVS features heat map functionality that tracks and stores daily, weekly, monthly, and yearly people flow through a defined scene and produces a configurable report. The system uses this data to produce a Heat Map, a two-dimensional representation of data that provides an immediate visual summary of information.

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 with a Dahua NVR or via the Web interface. Each dewarping mode offers options to adjust each scene.

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.

Environmental
Dahua cameras operate in extreme temperature environments, rated for use in temperatures from −30° C to +60° C (−22° F to +140° F). 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.). Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

Technical Specification

Camera

Image Sensor	1/1.7-in. 12MP CMOS
Total Sensor Pixels	4000(H) x 3000(V)
RAM/ROM	4 GB / 2 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual, 1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.01 lux at F2.0 (1/3 s, 30 IRE) B/W: 0.001 lux at F2.0 (1/30 s, 30 IRE) 0 lux at F2.0 with IR on
S/N Ratio	> 56 dB
IR Distance	Up to 10 m (32.81 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Three (3)

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	1.85 mm
Maximum Aperture	F2.0
Angle of View	Horizontal: 185° Vertical: 180°
Iris Control	Fixed
Close Focus Distance	0.40 m (1.31 ft)

DORI Distance[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
40.0 m (131.23 ft)	16.0 m (52.49 ft)	8.0 m (26.25 ft)	4.0 m (13.12 ft)

Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264, H.264H, MJPEG (sub stream only)
Streaming Capability	Three (3) Streams
Resolution	4000 x 3000; 3280 x 2480; 2880 x 2160; 3MP (2048 x 1536); 1.3 MP (1280 x 960); D1 (704 x 480); CIF (352 x 240)

Effective Maximum Resolution, based on Dewarping Mode

Dewarping Mode	Mount Location	Resolution (H x V)
1 Original	Ceiling / Wall	4000 x 3000
1 Panoramic	Ceiling	4096 x 1024
	Wall	2432 x 1216
2 Panoramic	Ceiling	2432 x 2432
1 Region	Ceiling / Wall	1216 x 1216
2 Regions	Ceiling / Wall	2432 x 2432
4 Regions	Ceiling / Wall	2432 x 2432
1 Original + 3 Regions	Ceiling / Wall	2432 x 2432

Frame Rate	Main Stream	12MP (4000 x 3000) at 25 fps
	Sub Stream 1	D1 (704 x 480) at 30 fps
	Sub Stream 2	1280 x 960 at 17 fps
Bit Rate Control		CBR, VBR
Bit Rate		H.265: 3 Kbps to 16384 Kbps H.264: 8 Kbps to 16384 Kbps
Day/Night		Auto (ICR), B/W, Color
BLC Mode		BLC, HLC, Digital WDR
White Balance		Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom
Gain Control		Auto, Manual, Gain Priority, Shutter Priority
Noise Reduction		3D DNR
Motion Detection		Off, On (4 Regions, rectangular)
Region of Interest		Off, On (4 Zones)
Advanced Features		Defog
Privacy Masking		Off, On (4 Zones)

Audio

Compression	PCM, G.711A, G.711Mu, G.726, G.723

Network

Ethernet	RJ-45 (10/100/1000 Base-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/Profile T); CGI; P2P (Only supported by general version)
Streaming Method	Unicast, Multicast
Maximum User Access	20 Users (total bandwidth:)
Edge Storage	Network Attached Storage (NAS), FTP, SFTP Micro SD Card, maximum 256 GB
Web Viewer	IE version 10 or higher Firefox version 48.0.2 or higher Chrome version 48.0.2564.116 or higher
Management Software	DSS, DMSS
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	UL 62368-1 CAN/CSA C22.2 No. 62368-1-14 EN 62368-1
Electromagnetic Compatibility (EMC)	47 CFR FCC Part 15 Subpart B, FCC Part 15C Electromagnetic Compatibility Directive 2014/30/EU Radio Equipment Directive 2014/53/EU

Interface

Audio	Input: One (1) Channel, RCA plus a Built-in Microphone Output: One (1) Channel, RCA, plus a built-in speaker
Alarm	Input: Two (2) Channels (Wet Contact, 3 V to 5 V) Output: Two (2) Channels (Dry Contact, 30 V)

Electrical

Power Supply		12 VDC or PoE+ (IEEE802.3at, Class 4)
Power Consumption	12 VDC	Standard: 6.5 W with IR ON: 13 W
	PoE	Standard: 6.1 W with IR ON: 13.9 W

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.

Environmental

Operating Conditions	−40 °C to +60 °C (−40 °F to +140 °F), Less than 95% RH
Storage Conditions	−30 °C to +70 °C (−22 °F to +158 °F), Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	ø149.80 mm x 59.80 mm (ø5.90 in. x 2.35 in.)
Net Weight	0.79 kg (1.74 lb)
Gross Weight	1.21 kg (2.67 lb)

Analytics+ Function[2]

Perimeter Protection	• Detects human or vehicle violations using the following methods: **Tripwire**: a target crosses a defined line. **Intrusion:** a target enters or exits a defined perimeter. • Monitors a combination of detection methods. • Search and retrieve video based on target type.
People Counting	Delivers accurate flow statistics from four (4) distinct, user-defined region. Issues alarms for the following triggers: **Population:** keeps a count of the number of people in each region and issues an alarm if a minimum threshold is exceeded. **Wait Time**: tracks the time each target has stayed within a region and issues an alarm once a target exceeds the minimum wait time.
Queue Management	Monitors four (4) user-defined regions where people wait in line (or queue). Issues an alarm for the following triggers: **People in Line**: the number of people in line exceeds a minimum threshold. **Wait Time:** time a person waits in line is greater than the minimum queue time.

Intelligent Video System Functions[2]

	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. • IP Address Conflict
Premium Features	
Scene Change	A person or object moves the camera to change the scene or covers the camera to obscure the scene.
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.
Advanced Feature	
Heat Map	Generates a visual representation of data.

2. People Counting, Queue Management and Heat Map can be used concurrently but the IVS functions cannot be used together with People Counting, Queue Management or Heat Map.

Ordering Information

Type	Part Number	Description
12MP Fisheye	DH-IPC-EBW81242N-AS-S2	Panoramic Network IR Fisheye Camera
Accessories, optional	PFA100	Mount Adapter
	PFA105	Mount Adapter
	PFA110	Mount Adapter
	DH-PFA132-E	Junction Box
	PFA150	Pole Mount (use with PFB300C or DH-PFA132-E)
	PFA151	Corner Mount (use with DH-PFA132-E)
	PFB300C	Ceiling Mount (use with PFA100)
	PFB302S	Wall Mount(use with PFA100)

Accessories

Optional:

PFA100
Mount Adapter

PFA105
Mount Adapter

PFA110
Mount Adapter

PFA150
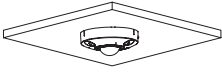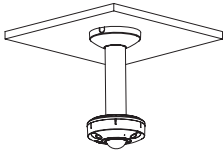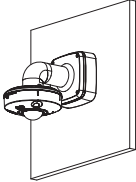Pole Mount

PFA151
Corner Mount

PFB300C
Ceiling Mount

DH-PFA132-E
Junction Box

PFB302S
Wall Mount

	Junction Mount DH-PFA132-E	Ceiling Mount PFA100+PFB300C
Wall Mount PFA100+PFB302S	Pole Mount PFA100+PFB302S+PFA150	

Dimensions (mm/inch)

60.1 [2.37]

41.6 [1.64]

⌀149.8 [⌀5.90]

⌀130.9 [⌀5.15]

3-⌀5.0 [⌀0.20]

alhua
TECHNOLOGY