dahua TECHNOLOGY

6 MP Network Fisheye Camera

360° Panoramic IR Fisheye Camera

- 1/1.8-in. 6 MP Progressive-scan STARVIS™ CMOS Sensor
- 6 MP (3072 x 2048) at 30 fps Maximum Resolution
- Panamorph Lens RPL: B4QQV
- Triple Stream Encoding
- Smart H.265+ and H.264 Dual Codecs
- Multiple Dewarp Modes
- Day/Night (ICR), 3DNR, AWB, AGC, BLC
- Intelligent Video System with Intelligent Business Analysis
- Maximum IR Distance 10 m (33 ft)
- Micro SD Memory, IP67, IK10, PoE
- Five-year Warranty*

| Fisheye | H.265 | ICR D/N | Heatmap | Vandal-proof | IP67 |

System Overview

Dahua Fisheye Cameras provide detailed panoramic views in a compact, low-profile design. The STARVIS™ 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, 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

Panamorph Technology
The fisheye camera incorporates Panamorph Technology from ImmerVision Enables®, an industry leader in 360° solutions and applications. Panomorph technology is comprised of patented panomorph optics and viewing functionality for optimal 360° image quality. The panomorph optic includes magnified zones of interest based on an innovative distortion control concept. The viewing functionality removes all added distortion and enables 360° immersive navigation within live or recorded 360° video. ImmerVision Enables® is the only universally-accepted 360° dewarping standard; all major VMS platforms and camera vendors support this technology.

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.

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.

Intelligent Business Analysis
The built-in IVS features heat map functionality, an advanced feature that adds business intelligence to your security system. Intelligent Analysis 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. Heat Maps can identify the most active areas of a retail space providing valuable data analysis for commercial applications.

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.

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).

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 ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. 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.

Fisheye Series | N68BR4V

Technical Specification

Camera

Image Sensor	1/1.8-in. 6 MP STARVIS™ CMOS
Total Sensor Pixels	3072(H) x 2048(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: 0.005 lux at F2.8 (1/3 s, 30 IRE) Color: 0.05 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	1.3 mm
Maximum Aperture	F2.8
Angle of View	Horizontal: 360°
Focus Control	Fixed

DORI Distance[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
21 m (69 ft)	8 m (26 ft)	4 m (13 ft)	2 m (7 ft)

Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264
Streaming Capability	Three (3) Streams
Resolution	6 MP (3072 x 2048), 4 MP (2048 x 2048), 3 MP (2048 x 1536), UXGA (1600 x 1200), 1.3 MP (1280 x 960), D1 (704 x 576), CIF (352×288)

Effective Maximum Resolution, based on Dewarping Mode

Dewarping Mode	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

Frame Rate	Main Stream	6 MP at 30 fps
	Stream 1	D1 at 30 fps
	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	RJ-45 (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	NAS Local PC for instant recording Micro SD Card, 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
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B

Interface

Audio	Input: One (1) Channel 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 or PoE (802.3af, Class 0)
Power Consumption	< 12 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	-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	⌀149.80 mm x 50.70 mm (⌀5.90 in. x 2.0 in.)
Net Weight	0.58 kg (1.28 lb)
Gross Weight	1.0 k g (2.20 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	
Heat Map	Generates a visual representation of data.

Ordering Information

Type	Part Number	Description
6 MP Fisheye	N68BR4V	6 MP 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 PFB302s or DH-PFA132-E)
	PFA151	Corner Mount (use with PFB302S or DH-PFA132-E)
	PFA152-E	Pole Mount (use with PFB302S or DH-PFA132-E
	PFB300C	Ceiling Mount (use with PFA105 and PFA110)
	PFB302S	Wall Mount (use with PFA100)

Accessories

Optional:

PFA100
Mount Adapter

PFA105
Mount Adapter

PFA110
Mount Adapter

PFA150
Pole Mount

PFB300C
Ceiling Mount

DH-PFA132-E
Junction Box

PFB302S
Wall Mount

Dimensions (mm/inch)

50.70 mm
(2.0 in.)

⌀149.80 mm
(⌀5.90 in.)

⌀90.0 mm
(⌀3.54 in.)

3 x ⌀6.20 mm
(⌀0.25 in.)