6 MP Network Fisheye Camera
360° Panoramic IR Fisheye Camera

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.

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).

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.

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.

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.

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- 1/1.8-in. 6 MP Progressive-scan STARVIS™ CMOS Sensor
- 6 MP (3072 x 2048) at 30 fps Maximum Resolution
- Panomorph 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*

*Warranty applies to products sold through an authorized Dahua Dealer.
## 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 Distance¹
- **Detect (8 ppf)**: 21 m (69 ft), 8 m (26 ft), 4 m (13 ft), 2 m (7 ft)
- **Observe (19 ppf)**: 8 m (26 ft)
- **Recognize (38 ppf)**: 4 m (13 ft)
- **Identify (76 ppf)**: 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**:
  - **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

### Bit Rate Control
- **Main Stream**
  - **Stream 1**: D1 at 30 fps
  - **Stream 2**: 1.3 MP at 30 fps

### Audio
- **Compression**: G.711a, G.711Mu, AAC, 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
- **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

### 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

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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
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 kg (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

<table>
<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 MP Fisheye</td>
<td>N68BR4V</td>
<td>6 MP Panoramic Network IR Fisheye Camera,</td>
</tr>
<tr>
<td>Accessories, optional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFA100</td>
<td></td>
<td>Mount Adapter (Required for PFB302S Wall Mount)</td>
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<tr>
<td>PFA105</td>
<td></td>
<td>Mount Adapter (Required for PFB300C Ceiling Mount)</td>
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<tr>
<td>PFA110</td>
<td></td>
<td>Mount Adapter (Required for PFB300C Ceiling Mount)</td>
</tr>
<tr>
<td>PFA152</td>
<td></td>
<td>Pole Mount (For use with PFB302S Wall Mount)</td>
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<tr>
<td>PFB300C</td>
<td></td>
<td>Ceiling Mount (Requires PFA105 and PFA110 Mount Adapters)</td>
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<tr>
<td>PFB302S</td>
<td></td>
<td>Wall Mount (Requires PFA100 Mount Adapter)</td>
</tr>
</tbody>
</table>

Accessories

Optional:

- PFA100 Mount Adapter
- PFB302S Wall Mount
- PFA152 Pole Mount
- PFA105 Mount Adapter
- PFA110 Mount Adapter
- PFB300C Ceiling Mount

Wall Mount
- PFA100+PFB302S

Pole Mount
- PFA100+PFB302S+PFA152

Ceiling Mount
- PFA105+PFA110+PFB300C

Dimensions (mm/inch)

- Ø149.80 mm (Ø5.90 in.)
- Ø90.0 mm (Ø3.54 in.)
- 3 x Ø6.20 mm (Ø0.25 in.)