Multi-sensor Panoramic + PTZ Network Camera
8 x 2 MP Multi-sensor 360° Panoramic + 4 MP PTZ Network Camera

- Panoramic Camera: Eight (8) 1/1.8-in. 2 MP Progressive-scan CMOS Imagers for a 360° Panoramic View
- PTZ Camera: One (1) 1/1.8-in 4 MP Progressive-scan CMOS Imager
- Trip-stream Encoding
- 8192 x 1800 at 30 fps (Panoramic) plus 2560 x 1440 at 30 fps (PTZ)
- Smart H.265+ and Smart H.264+ Dual Codecs
- Starlight Technology for Ultra-low Light Sensitivity
- ArcticPro Series Camera - Operational down to -40° C (-40° F)
- IP66 Ingress Protection
- Zoom Priority for Optimal IR Coverage at Any Zoom Level
- Intelligent Video System (IVS) with Smart Track
- Five-year Warranty*

WizMind Series devices offer the full complement of Dahua Analytics+ functions for comprehensive, human-oriented analytic solutions. WizMind Series products deliver perimeter protection, vehicle and crowd density statistics, video metadata, and advanced people counting with heat map functionality. WizMind is ideal for complex applications with demanding requirements that need advanced analytic capabilities.

System Overview
The Dahua Panoramic Multi-sensor plus PTZ camera combines eight (8) 2 MP sensors working in tandem to create a comprehensive 360° view, and a high-speed PTZ camera to focus on a specific area of the scene. With its all-in-one design, the camera provides a 360° panorama and provides region of interest details at the same time. The camera offers the Intelligent Video System (IVS), a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for tripwire violations and intrusion detection, and Smart Tracking technology that integrates the width of the panoramic scene with the tracking capability of the PTZ camera. The Multi-sensor plus PTZ camera can replace multiple single-sensor cameras providing a higher return on investment.

Functions
Smart Tracking
The Smart Tracking features integrates the 360° panoramic view with the capabilities of the PTZ camera. Smart Tracking triggers the PTZ camera to turn and to zoom in on an area that where an alarm is triggered, track an object after an intrusion or tripwire violation, and tracks movement in up to four (4) monitoring areas in the panoramic image.

Starlight Technology
For challenging low-light applications, Dahua’s Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing details in low light. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

*Warranty applies to products sold through an authorized Dahua Dealer.
## Technical Specification

### Panoramic Camera
- **Image Sensor**: Eight (8) 1/1.8-in. 2 MP CMOS Sensors
- **Effective Pixels**: 8192(H) x 1800(V)
- **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

### Panoramic Lens
- **Lens Type**: Fixed
- **Mount Type**: M12
- **Focal Length**: 5 mm
- **Maximum Aperture**: F2.0
- **Angle of View**: Horizontal: 360°, Vertical: 84°
- **Close Focus Distance**: 1.20 m (3.94 ft)

### PTZ Camera
- **Image Sensor**: One (1) 1/1.8-in. 4 MP CMOS Sensor
- **Effective Pixels**: 2560(H) x 1440(V)
- **Scanning System**: Progressive
- **Electronic Shutter Speed**: Auto, Manual: 1/3 s to 1/100,000 s
- **Minimum Illumination**: Color: 0.008 lux at F1.3 (1/3 s, 30 IRE)
- **IR Distance**: Up to 400.0 m (1312.34 ft)
- **IR On/Off Control**: Auto, Manual
- **IR LEDs**: Seven (7)

### PTZ Lens
- **Lens Type**: Electronic Zoom
- **Mount Type**: Core Interface
- **Focal Length**: 5.6 mm to 223 mm
- **Maximum Aperture**: F1.3
- **Angle of View**: Horizontal: 61° to 2°, Vertical: 36° to 1°, Diagonal: 68° to 3°
- **Optical Zoom**: 40x
- **Focus Control**: Motorized
- **Close Focus Distance**: 0.50 m (1.64 ft)

### DORI¹ Distance

<table>
<thead>
<tr>
<th>Description</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panoramic Camera</td>
<td>53.30 m (174.87 ft)</td>
</tr>
<tr>
<td>PTZ Camera, Telephoto</td>
<td>2873.10 m (9426.18 ft)</td>
</tr>
</tbody>
</table>

### PTZ
- **Pan/Tilt Range**: Pan: 0° to 360°, endless; Tilt: -20° to 90°; Auto flip: 180°
- **Manual Speed Control**: Pan: 0.1° /s to 240° /s; Tilt: 0.1° /s to 120° /s
- **Presets**: 300
- **PTZ Mode**: 5 Pattern, 8 Tour, Auto Pan, Auto Scan
- **Speed Setup**: Human-oriented Focal Length and Speed Adaptation
- **Power-up Action**: Auto restore to previous PTZ and lens status after power failure
- **Idle Motion**: Activate Preset, Scan, Tour, Pattern if there is no command in the specified period
- **Protocol**: DH-SD, Pelco-P/D (Auto recognition)

### Video
- **Compression**: Smart H.265+, H.265, Smart H.264+, H.264, H.264H, H.264B, MJPEG
- **Streaming Capability**: Three (3) Streams
- **Output Channels²**: Two (2) Channels:
  - One (1) Channel for Stitched Panoramic Video
  - One (1) Channel for PTZ Video
- **Resolution**:
  - **Panoramic Camera**: 8192 x 1800, 7680 x 1680, 5760 x 1264, 4800 x 3840, 4096 x 900, 3840 x 832, 3200 x 2560, 2560 x 560, 2048 x 452, 1600 x 1280
  - **PTZ Camera**: 4 MP (2560 x 1440), 1080p (1280 x 720), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), CIF (352 x 240)
- **Frame Rate**:
  - **Panoramic Camera**: Main Stream: 8192 x 1800 at 30 fps; Sub Stream 1: 3840 x 832 at 30 fps; Sub Stream 2: 4800 x 3480 at 30 fps
  - **PTZ Camera**: Main Stream: 4 MP at 30 fps; Sub Stream 1: 1080p at 30 fps; Sub Stream 2: 1080p at 30 fps
- **Bit Rate Control**: CBR, VBR
- **Bit Rate**:
  - **Panoramic Camera**: H.265: 256 Kbps to 26216 Kbps, H.264: 512 Kbps to 42995 Kbps
  - **PTZ Camera**: H.265: 110 Kbps to 9216 Kbps, H.264: 184 Kbps to 15104 Kbps
- **Day/Night**: Auto (ICR, B/W, Color)
- **BLC Mode**: BLC, HLC, WDR
- **Dynamic Range**: Panoramic True WDR (120 dB), PTZ Digital WDR
- **White Balance**: Panoramic Auto, Natural, Street Lamp, Outdoor, Manual, Regional, PTZ Auto, Indoor, Outdoor, Manual, Sodium Lamp, Natural, Street Lamp
- **Gain Control**: Auto, Manual, Aperture Priority, Gain Priority, Shutter Priority
- **Noise Reduction**: 3D DNR
- **Motion Detection**: Off, On
- **Region of Interest**: Off, On (4 Zones)
- **Defog**: Support, PTZ camera only
- **Digital Zoom**: 16x, PTZ camera only
- **Privacy Masking**: Panoramic Off, On (4 Areas, Rectangle), PTZ Off, On (8 Areas, Rectangle)

---

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.

2. Dahua recommends using an NVR that supports 4K decoding and ONVIF compatibility in conjunction with the DH-PSDW81642M-A360 Multi-sensor Panoramic + PTZ Network Camera. The camera requires two (2) free channels on the NVR.
### Audio
- **Compression**: G.711a, G.711Mu, AAC, G.726

### Network
- **Ethernet**: One (1) RJ-45 Port (10/100/1000 Base-T)
- **Protocol**:
  - HTTP, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/IPv6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP
- **Interoperability**: ONVIF Profile G, CGI
- **Streaming Method**: Unicast/Multicast
- **Maximum User Access**: 20 Users
- **Edge Storage**:
  - Network Attached Storage (NAS)
  - FTP
  - One (1) Micro SD Card slot, maximum 512 GB (for panoramic camera only)
- **Web Viewer**: IE
- **Management Software**: Smart PSS, DSS Express, DSS Express S, DSS Pro

### Certifications
- **Safety**:
  - UL 60950-1
  - CAN/CSA C22.2 No. 60950-1-07
- **Electromagnetic Compatibility (EMC)**:
  - 47 CFR FCC Part 15 Subpart B, Class A
  - ANSI C63.4:2014

### Interface
- **Video**: One (1) Port, CVBS BNC for PTZ camera only
- **Audio**:
  - Input: Two (2) Channels
  - Output: Two (2) Channels
- **RS485**: One (1) Port (Bit Rate: 1200 bps to 115200 bps), for PTZ control
- **Alarm**:
  - **Input**: Seven (7) Channels (3 VDC to 5 VDC, 5 mA)
  - **Output**: Three (3) Channels (30 VDC, 1 A; 50 VAC, 0.5 A)

### Electrical
- **Power Supply**: 36 VDC
- **Power Consumption**: < 84.4 W

### Environmental
- **Operating Conditions**: 
  - –40°C to +70°C (–40°F to +158°F), ≤ 95% RH
- **Storage Conditions**: 
  - –40°C to +60°C (–40°F to +140°F), ≤ 95% RH
- **Ingress Protection**: IP66

### Construction
- **Casing**: Metal and Plastic
- **Dimensions**: ø383.0 mm x 389.80 mm (ø15.08 in. x 15.35 in.)
- **Net Weight**: 14.70 kg (32.41 lb)
- **Gross Weight**: 19.80 kg (43.65 lb)

### Intelligent Video System Functions

<table>
<thead>
<tr>
<th>IVS Triggered Events</th>
<th>Standard Features</th>
<th>Premium Features</th>
<th>Smart Tracking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triggers an alarm and takes a defined action</td>
<td>• Tampering with the camera.</td>
<td>• An object moves through any part of the scene.</td>
<td>• A target in a defined area of the panoramic channel triggers an alarm and the PTZ camera moves to that location to begin tracking.</td>
</tr>
<tr>
<td>for the following events:</td>
<td>• Error writing to an onboard Micro SD card.</td>
<td>• A target crosses a user-defined line.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Error sending or receiving data over the network.</td>
<td>• A target enters or exits a defined perimeter.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Unauthorized access to the camera.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• IP Address Conflict</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Standard 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.

**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.

**Smart Tracking**: A target in a defined area of the panoramic channel triggers an alarm and the PTZ camera moves to that location to begin tracking.
### Ordering Information

<table>
<thead>
<tr>
<th>Type</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panoramic + PTZ Camera</td>
<td>DH-PSDW81642M-A360</td>
<td>Eight (8) x 4 MP Multi-sensor Panoramic + 4 MP PTZ Network Camera, WDR</td>
</tr>
<tr>
<td>Accessory, Included</td>
<td>Power Adapter</td>
<td>36 VDC, 0 - 4, 17 A</td>
</tr>
<tr>
<td>Accessories, Optional</td>
<td>DH-PFA153</td>
<td>Heavy-duty Pole Mount (use with PFB710W)</td>
</tr>
<tr>
<td></td>
<td>PFB710C</td>
<td>Ceiling Mount Bracket</td>
</tr>
<tr>
<td></td>
<td>PFB710W</td>
<td>Wall Mount Bracket</td>
</tr>
</tbody>
</table>

### Dimensions (mm/in.)

<table>
<thead>
<tr>
<th>Pole Mount</th>
<th>Ceiling-mounted</th>
<th>Wall Mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFB710W x DH-PFA153</td>
<td>PFB710C</td>
<td>PFB710W</td>
</tr>
</tbody>
</table>