4K IR PTZ Network Camera

4K 30x IR PTZ Network Camera

- 1/1.7-in. 8 MP Progressive Scan STARVIS™ CMOS Sensor
- Powerful 30x Optical Zoom Lens
- Smart H.265+ and H.264 Dual Codecs
- 12 MP at 20 fps or 8 MP at 30 fps Maximum Resolution
- Intelligent Video System with Auto-tracking
- Maximum IR Distance up to 200 m (656 ft)
- Supports Hi-PoE
- IP67 Environmental Protection and IK10 Vandal Resistance
- Five-year Warranty*

System Overview

The 4K IR PTZ Dome camera features a 1/1.7-in STARVIS™ CMOS imager with a 30x optical zoom lens, and provides an all in one solution for capturing long-distance video surveillance for outdoor applications. The camera uses the Smart H.265+ video compression standard to improve encoding efficiency while preserving high-quality video. The PTZ camera is equipped with quick and accurate pan/tilt/zoom control and Digital WDR for applications with direct sunlight or glare.

Functions

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 supports face detection to quickly capture a face and upload the image to a server. The camera also offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Auto-tracking
This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically.

PFA Technology
The camera uses innovative PFA Technology to improve zoom accuracy and to decrease focus time. A series of advanced algorithms more accurately judge the direction and the distance to a subject, improving picture clarity throughout the zooming process.

Smart H.265+
Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

Interoperability
The camera conforms to the ONVIF (Open Network Video Interface Forum) and to the PSIA (Physical Security Interoperability Alliance) specifications, ensuring interoperability between network video products regardless of manufacturer.

Environmental
With a built-in heater and a temperature range of –40 °C to +70 °C (–40 °F to +158 °F), the camera is designed for extreme temperature environments. The camera complies with the IK10 Vandal Resistance 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 and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

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

### Camera
- **Image Sensor**: 1/1.7-in. STARVIS™ CMOS
- **Effective Pixels**: 3840(H) x 2160(V), 8 MP
- **RAM/ROM**: 1024 MB / 128 MB
- **Scanning System**: Progressive
- **Electronic Shutter Speed**: 1/1 s to 1/30,000 s
- **Minimum Illumination**: Color: 0.05 Lux at F1.6
  0 Lux with IR on
- **S/N Ratio**: More than 56 dB
- **IR Distance**: Distance up to 200 m (656.17 ft)
- **IR On/Off Control**: Auto, Manual
- **IR LEDs**: 10
- **Lens**
  - **Focal Length**: 6 mm to 180 mm
  - **Max. Aperture**: F1.6 to F4.8
  - **Angle of View**: Horizontal: 61.2° to 2.1°
  - **Optical Zoom**: 30x
  - **Focus Control**: Auto, Manual
  - **Close Focus Distance**: 100 mm to 1000 mm
- **DORI Distance**:
  - Detect: 3892 m (12,769 ft)
  - Observe: 1557 m (5108 ft)
  - Recognize: 778 m (2552 ft)
  - Identify: 389 m (1276 ft)
- **PTZ**
  - **Pan/Tilt Range**: Pan: 0° to 360° endless
    Tilt: 0° to 120°
  - **Manual Control Speed**: Pan: 0.1° to 200° /s
    Tilt: 0.1° to 120° /s
  - **Preset Speed**: Pan: 240° /s; Tilt: 200° /s
  - **Presets**: 300
  - **PTZ Mode**: 5 Pattern, 8 Tour, Auto Pan, Auto Scan
  - **Speed Setup**: Human-oriented focal Length/ 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)

### Audio
- **Compression**: G.711a, G.711Mu, PCM, G.726, AAC, G.722.1, G.729, MPEG2-Layer2

### Network
- **Ethernet**: RJ-45 (10 Base-T/100 Base-TX)
- **Protocol**: IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPoE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x
- **Interoperability**: ONVIF, PSIA, CGI
- **Streaming Method**: Unicast / Multicast
- **Max. User Access**: 20 users
- **Edge Storage**: NAS (Network Attached Storage)
- **Management Software**: Smart PSS, DSS
- **Mobile Operating System**: iOS, Android

### Certifications
- **CE**: EN55032
  EN55024
  EN50130-4
- **UL**: UL60950-1+CAN/CSA C22.2 No.60950-1
- **Electromagnetic Compatibility (EMC)**: FCC Part 15 Subpart B
  ANSI C63.4- 2014

### Interface
- **Video**
  - **Compression**: Smart H.265+, H.265, Smart H.264+, H.264
  - **Streaming Capability**: Three (3) Streams
  - **Resolution**: 12 MP, 8 MP (3840 x 2160), 1080p (1920 x 1080),
    1.3 MP (1280 x 960), 720p (1280 x 720),
    D1 (704 x 380), CIF (352 x 240)
  - **Frame Rate**:
    - **Main Stream**: 12 MP at 20 fps or
     8 MP, 1080p, 1.3 MP, 720p at 30 fps
    - **Sub Stream 1**: D1, CIF at 30 fps
    - **Sub Stream 2**: 1080p, 720p, D1 at 30 fps

### Electrical
- **Power Supply**: 24 VAC, 3 A (± 25%), Hi-PoE
- **Power Consumption**: 24 W, 38 W with IR on

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1. The DORI distance is a general proximity of distance helping to pinpoint the correct camera for your needs.
   The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify.
### Environmental

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<th>Operating Conditions</th>
<th>–40° C to 70° C (–40° F to +158° F)</th>
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<tbody>
<tr>
<td>Ingress Protection</td>
<td>IP67</td>
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<tr>
<td>Vandal Resistance</td>
<td>IK10</td>
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### Construction

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<th>Casing</th>
<th>Metal</th>
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<tr>
<td>Dimensions</td>
<td>ø240.0 mm x 382.0 mm (ø9.45 in. x 15.04 in.)</td>
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<tr>
<td>Net Weight</td>
<td>6.75 kg (14.88 lb)</td>
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<td>Gross Weight</td>
<td>10.10 kg (22.27 lb)</td>
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### 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.

### Accessories

**Included:**
- PFB303W Wall Mount
- PFA111 Mount Adapter
- AC24V/3A Power Adapter

**Optional:**
- PFA140 Power Box
- PFB300C Ceiling Mount
- PFA120 Junction Box
- PFA150 Pole Mount
- PFA151 Corner Mount
- PFB303S Parapet Mount

### Ordering Information

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<tr>
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<th>Part Number</th>
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<td>4K 30x IR PTZ Network Camera, IVS</td>
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