# DH-SD59432XA-HNR

## 4MP 32x Starlight IR WizSense Network PTZ Camera

- 1/2.8" STARVIS™ CMOS
- Powerful 32x optical zoom
- Starlight technology
- Max. 25/30fps@4M
- Deep-learning-based auto tracking and perimeter protection
- Support PoE+
- IR distance up to 150 m
- SMD PLUS
- IP66

[H.265] [WDR] [ICR D/N] [IP66] [PoE+]

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

## System Overview

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight Technology, the camera is the perfect solution for dark, lowlight applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, and True WDR for applications with direct sunlight or glare.

## Functions

### Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

### Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

### PFA Technology

PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

### Perimeter Protection

Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

### Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. The camera complies with the IK10 Vandal Resistance impact rating. Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

### Protection

The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 8KV lightning rating provides effective protection for both the camera and its structure against lightning.

### Interoperability

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

### SMD PLUS

With Deep-Learning Algorithm, Dahua SMD PLUS filters the motion detection alarm triggered by non-concerned target and recognizes human and vehicle effectively , sending alarms when human and vehicle intrude.

**ONVIF**

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" STARVIS™ CMOS |
| Pixel | 4MP |
| Max. Resolution | 2560 (H) x 1440 (V) |
| ROM | 4GB |
| RAM | 1GB |
| Electronic Shutter Speed | 1/3–1/30000 s |
| Scanning System | Progressive |
| Min. Illumination | Color: 0.005Lux@F1.3<br>B/W: 0.0005Lux@F1.3<br>0Lux (IR light on) |
| Illumination Distance | 150 m (492.13 ft) |
| Illuminator On/Off Control | Zoom Prio/Manual/SmartIR |
| Illuminator Number | 4 |

### Lens

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|---|---|
| Focal Length | 4.9 mm–156 mm |
| Max. Aperture | F1.35–F4.4 |
| Field of View | H: 68.3°–2.2°; V: 38.9°–1.3°; D: 68.3°–1.4° |
| Optical Zoom | 32x |
| Focus Control | Auto/Semi-Auto/Manual |
| Close Focus Distance | 0.1 m–1.5 m (0.33 ft–4.92 ft ) |
| Iris Control | Auto/Manual |

| DORI Distance | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|
| | 3034 m<br>(9954.06 ft) | 1213 m<br>(3979.66 ft) | 606 m<br>(1988.19 ft) | 303 m<br>(994.09 ft) |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0°–360°; Tilt: -10°–+90° |
| Manual Control Speed | Pan: 0.1°/s–300°/s; Tilt: 0.1°/s–200°/s |
| Preset Speed | Pan: 400°/s; Tilt: 300°/s |
| Presets | 300 |
| Tour | 8 (up to 32 presets per tour) |
| Pattern | 5 |
| Scan | 5 |
| Speed Adjustment | Support |
| Power-off Memory | Support |
| Idle Motion | Preset/Tour/Pattern/Scanning |
| Protocol | DH-SD<br>Pelco-P/D (auto recognition) |

### General Intelligence

| | |
|---|---|
| Event Trigger | Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly |

| | |
|---|---|
| IVS | Object abandoned/missing |

### Artificial Intelligence

| | |
|---|---|
| Smart Capture | Support human, motor vehicle and non-motor vehicle image capture. |
| Perimeter Protection | Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc. |
| Face Detection | Support |
| SMD Plus | Support |
| Auto Tracking | Support |

### Video

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|---|---|
| Compression | H.265/H.265+/H.264+/H.264/MJPEG (sub stream) |
| Streaming Capability | 3 streams |
| Resolution | 4M (2560 × 1440)/3M (2048 × 1536)/1080P (1920 × 1080)/720P (1280 × 960)/D1 (704 × 576/704 × 480)/CIF (352 × 288/352 × 240) |
| Frame Rate | Main stream: 4M/3M/1080P/1.3M/720P (1–25/30 fps)<br>Sub stream 1: D1/CIF (1–25/30 fps)<br>Sub stream 2: 720P (1–25/30 fps) |
| Bit Rate Control | Variable Bit Rate/Constant Bit Rate |
| Bit Rate | H.265/H.264: 3 kbps–20480 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Support |
| WDR | 120dB |
| HLC | Support |
| White Balance | Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural light/Street lamp |
| Gain Control | Auto/Manual |
| Noise Reduction | 2D/3D |
| Motion Detection | Support |
| Region of Interest (RoI) | Support |
| Image Stabilization | Electronic |
| Defog | Support |
| Digital Zoom | 16x |
| Flip | 0°/180° |
| Privacy Masking | Up to 24 areas |

### Certification

| | |
|---|---|
| Certifications | CE: EN55032/EN55024/EN50130-4<br>FCC: Part15 subpartB, ANSI C63.4-2014 |

### Audio

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|---|---|
| Compression | G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2 |

### Port

| | |
|---|---|
| Audio Input | 1 |
| Audio Output | 1 |

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| | |
|---|---|
| Alarm I/O | 2/1 |

## Network

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|---|---|
| Ethernet | RJ-45 (10/100Base-T) |
| Protocol | IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3 (MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP |
| Interoperability | ONVIF Profile S&G&T; CGI |
| Streaming Method | Unicast/Multicast |
| User/Host | 19 (Total bandwidth 48M) |
| Storage | FTP; Micro SD card (256G); P2P |
| Browser | IE7 and newer versions<br>Chrome 42 and older versions<br>Firefox 52 and older versions<br>Safari |
| Management Software | Smart Player<br>Smart PSS<br>DSS<br>Easy4ip |
| Mobile Phone | IOS/Android |

## Power

| | |
|---|---|
| Power Supply | AC24V/3A±25%<br>PoE+ (802.3at) |
| Power Consumption | 11W<br>24W (IR on) |

## Environment

| | |
|---|---|
| Operating Temperature | -40°C to +70°C (-40°F to +158°F) |
| Operating Humidity | ≤95%RH |
| Protection | IP66; TVS 6000V lightning protection; surge protection |

## Structure

| | |
|---|---|
| Dimensions | Φ186 mm x 309 mm (7.32" × 12.17") |
| Net Weight | 3.9 kg (8.60 lb) |
| Gross Weight | 7.01 kg (15.45 lb) |
| Casing | Metal |

| | | |
|---|---|---|
| Accessories | PFB300S | Wall Mount Bracket |
| | PFA110 | Mount Adapter |
| | AC24V/3A | Power Adapter |
| | PFA140 | Power Box |
| | PFB300C | Ceiling Mount Bracket |
| | PFA120 | Junction Box |
| | PFA150 | Pole Mount Bracket |
| | PFA151 | Corner Mount Bracket |
| | PFB303S | Parapet Mount Bracket |

## Accessories

### Included:

PFB300S Wall Mount Bracket

PFA110 Mount Adapter

AC24V/3A Power Adapter

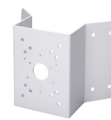### Optional:

PFA140 Power Box

PFB300C Ceiling Mount Bracket
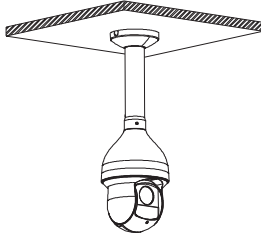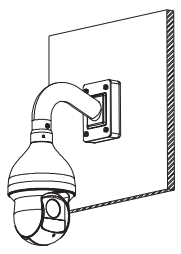
PFA120 Junction Box
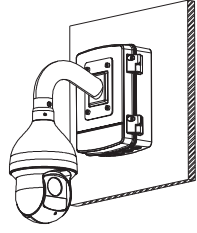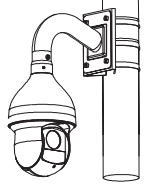
PFA150 Pole Mount Bracket
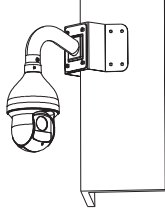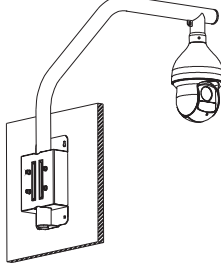
PFA151 Corner Mount Bracket

PFB303S Parapet Mount Bracket

## Ordering Information

| Type | Part Number | Description |
|---|---|---|
| 4M WizSense PTZ Camera | DH-SD59432XA-HNR | 4MP 32x Starlight IR WizSense Network PTZ Camera, WDR, PAL |
| | DH-SD59432XAN-HNR | 4MP 32x Starlight IR WizSense Network PTZ Camera, WDR, NTSC |
| | SD59432XA-HNR | 4MP 32x Starlight IR WizSense Network PTZ Camera, WDR, PAL |
| | SD59432XAN-HNR | 4MP 32x Starlight IRWizSense Network PTZ Camera, WDR, NTSC |

| Ceiling Mount | Junction Mount |
|---|---|
| PFA110+PFB300C | PFA110+PFB300S+PFA120 |
| | |

| Power Box Mount | Pole Mount |
|---|---|
| PFA110+PFB300S+PFA140 | PFA110+PFB300S+PFA150 |
| | |

| Corner Mount | Parapet Mount |
|---|---|
| PFA110+PFB300S+PFA151 | PFA110+PFB303S |
| | |

**Dimensions (mm[inch])**

∅47.0[1.85]

26.4[1.04]

143.5[5.65]

309.4[12.18]

154.0[6.06]

∅186.0[7.32]