

DH-SD59232XA-HNR

2MP 32x Starlight IR PTZ AI Network Camera



- 1/2.8" STARVIS™ CMOS
- Powerful 32x optical zoom
- Starlight technology
- Max. 25/30fps@2M
- Deep-learning-based auto tracking and perimeter protection
- Support PoE+
- IR distance up to 150 m
- SMD Plus
- IP66



AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

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 0.001 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.



| Technical Specification | | | | |
|--------------------------------------|--|--------------------|-------------------|------------------|
| Camera | | | | |
| Image Sensor | 1/2.8" STARVIS™ CMOS | | | |
| Max. Resolution | 1920 (H) x 1080 (V) | | | |
| Effective Pixels | 2MP | | | |
| ROM | 4GB | | | |
| RAM | 1GB | | | |
| Electronic Shutter Speed | 1/3–1/30000 s | | | |
| Scanning System | Progressive | | | |
| Min. Illumination | Color: 0.005Lux@F1.3 B/W: 0.0005Lux@F1.3 0Lux (IR light on) | | | |
| IR Distance | 150 m (492.13 ft) | | | |
| IR On/Off Control | Zoom Prio/Manual/SmartIR | | | |
| IR LEDs Number | 4 | | | |
| Lens | | | | |
| Focal Length | 4.9 mm–156 mm | | | |
| Max. Aperture | F1.35–F4.4 | | | |
| Field of View | H: 68.28°–2.24°; V: 38.9°–1.27°; D: 68.28°–1.44° | | | |
| 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 |
| | 2092 m (6863 ft) | 836 m (2742 ft) | 418m (1371 ft) | 209m (685 ft) |
| PTZ | | | | |
| Pan/Tilt Range | Pan: 0°–360°; Tilt: -15°–+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 Number | 5 | | | |
| Scanning Number | 5 | | | |
| Speed Adjustment | Support | | | |
| Power-off Memory | Support | | | |
| Idle Motion | Preset/Tour/Pattern/Scanning | | | |
| Protocol | DH-SD Pelco-P/D (auto recognition) | | | |
| Artificial Intelligence | | | | |
| Video metadata | 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. | | | |
| SMD Plus | Support | | | |
| Auto Tracking | Support | | | |
| Face Detection | Support | | | |
| General Intelligence | | | | |
| Event Trigger | Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly | | | |
| General IVS | Object abandoned/missing | | | |
| Video | | | | |
| Compression | H.265/H.265+/H.264+/H.264/MJPEG (sub stream) | | | |
| Streaming Capability | 3 streams | | | |
| Resolution | 1080P (1920 × 1080)/1.3M (1280 × 960)/720P (1280 × 720)/D1 (704 × 576/704 × 480)/CIF (352 × 288/352 × 240) | | | |
| Frame Rate | Main stream: 1080P/1.3M/720P (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) 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 | 120 dB | | | |
| 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 | | | |
| Electronic Image Stabilization (EIS) | Support | | | |
| Defog | Support | | | |
| Digital Zoom | 16x | | | |
| Flip | 0°/180° | | | |
| Privacy Masking | Up to 24 areas | | | |
| Certification | | | | |
| Certifications | CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 | | | |
| Audio | | | | |
| Compression | G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2 | | | |

| Port | |
|-----------------------|---|
| Audio In | 1 |
| Audio Out | 1 |
| Alarm | 2/1 |
| Network | |
| 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; CGI |
| Streaming Method | Unicast/Multicast |
| User/Host | 19 (Total bandwidth 48M) |
| Edge Storage | FTP; Micro SD card (256G); P2P |
| Browser | IE7 and newer versions Chrome 42 and older versions Firefox 52 and older versions Safari |
| Management Software | Smart Player Smart PSS DSS Easy4ip |
| Smart Phone | IOS/Android |
| Power | |
| Power Supply | AC24V/3A±25% PoE+ (802.3at) |
| Power Consumption | 11W 24W (IR on) |
| Environment | |
| Operating Temperature | -40°C to +70°C (-40°F to +158°F) |
| Operating Humidity | ≤95%RH |
| Ingress Protection | IP66; TVS 6000V lightning protection; surge protection |
| Construction | |
| Dimensions | Φ186 mm x 309 mm (7.32" x 12.17") |
| Net Weight | 3.9 kg (8.60 lb) |
| Gross Weight | 7.01 kg (15.45 lb) |
| Casing | Metal |

| Ordering Information | | |
|----------------------|-------------------|---|
| Type | Part Number | Description |
| 2MP PTZ Camera | DH-SD59232XA-HNR | 2MP 32x Starlight IR PTZ AI Network Camera, WDR, PAL |
| | DH-SD59232XAN-HNR | 2MP 32x Starlight IR PTZ AI Network Camera, WDR, NTSC |
| | SD59232XA-HNR | 2MP 32x Starlight IR PTZ AI Network Camera, WDR, PAL |
| | SD59232XAN-HNR | 2MP 32x Starlight IR PTZ AI Network Camera, WDR, NTSC |

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

Accessories

Included:



PFB300S
Wall Mount



PFA110
Mount Adapter



AC24V/3A
Power Adapter

Optional:



PFA140
Power Box



PFB300C
Ceiling Mount



PFA120
Junction Box



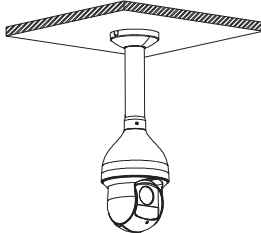
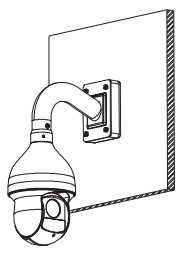
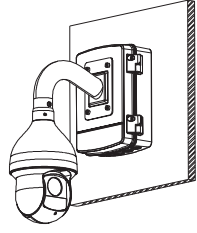
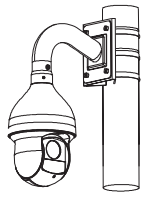
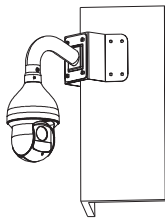
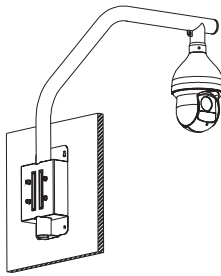
PFA150
Pole Mount



PFA151
Corner Mount



PFB303S
Parapet Mount

| 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])

