# DH-SD49425DB-HNY

## 4MP 25x Starlight IR Network PTZ Camera

- 1/2.8" 4Megapixel STARVIS™ CMOS.
- 25x optical zoom.
- Starlight technology.
- Max. 25/30fps@4M.
- IR distance up to 100 m.
- Perimeter protection.
- Face detection.
- SMD 3.0.
- IP66.

WizSense

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.

## Functions

### Starlight Technology

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology offers the best in light sensitivity, capturing color in vivid detail, even in lighting as low as 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, producing clear images in dark environments.

### Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve alarm accuracy.

### SMD

Empowered by Deep-Learning Algorithms, Dahua SMD Plus filters out motion detection alarms triggered by targets that are not a concern. It quickly recognizes humans and vehicles, triggering alarms when an intrusion occurs.

### Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

### Face Detection

Supports 6 attributes and 8 expressions: Gender, age, glasses, face mask, beard and expressions (anger, sadness, disgust, fear, surprise, calm, happiness, and confusion). It also supports face cutout settings: Face, and single inch photo. Three snapshot methods are also featured: Real-time snapshot, priority snapshot, and quality priority.

### Protection (IP66, TVS 6000 V)

IP66, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" CMOS |
| Pixel | 4 MP |
| Max. Resolution | 2560 (H) × 1440 (V) |
| ROM | 128 MB |
| RAM | 512 MB |
| Electronic Shutter Speed | 1/1 s–1/30,000 s |
| Scanning System | Progressive |
| Min. Illumination | Color: 0.005 lux@F1.6<br>B/W: 0.0005 lux@F1.6<br>0 lux (illuminator on) |
| Illumination Distance | 100 m (328.08 ft) (IR) |
| Illuminator On/Off Control | Zoom Prio; Manual; Auto; Off |
| Illuminator Number | 3 (IR) |

### Lens

| | |
|---|---|
| Focal Length | 5 mm–125 mm |
| Max. Aperture | F1.6–F3.6 |
| Field of View | H: 51.9°–3.0°;<br>V: 39.7°–2.2°;<br>D: 63.1°–3.7° |
| Optical Zoom | 25× |
| Focus Control | Auto; semi-auto; manual |
| Close Focus Distance | 0.1 m–0.5 m (0.33 ft–1.64 ft) |
| Iris Control | Auto; manual |

| DORI Distance | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|
| | 2500 m (8208.10 ft) | 987.5 m (3239.83 ft) | 500 m (1640.42 ft) | 250 m (820.21 ft) |

*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/ project design tool.

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0° to 360° endless<br>Tilt: –15° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0.1°/s–80°/s<br>Tilt: 0.1°/s–80°/s |
| Preset Speed | Pan: 80°/s; Tilt: 80°/s |
| Preset | 300 |
| Tour | 8 (up to 32 presets per tour) |
| Pattern | 5 |
| Scan | 5 |
| Power-off Memory | Yes |
| Idle Motion | Pattern; Preset; Scan; Tour |

### Intelligence

| | |
|---|---|
| IVS (Perimeter Protection) | Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification |
| Face Detection | Supports face detection, capturing snapshots, and enhancing face images. Face cutout is also offered, where you can cutout one face at a time and customize the size to be a one-inch photo. The supported methods for capturing snapshots are real-time capturing and quality first |
| SMD | SMD 3.0 |
| Auto Patrol | It triggers the IVS rule when a target is detected and makes the camera link with the PTZ to rotate to the position of the target and patrol based on its presets |

### Video

| | |
|---|---|
| Video Compression | H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG (Sub Stream); Smart H.264+ |
| Streaming Capability | 3 streams |
| Resolution | 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576); VGA (640 × 480)/CIF (352 × 288/352 × 240) |
| Video Frame Rate | Main stream: 4M/3M/1080p/1.3M/720p@(1–25/30 fps)<br>Sub stream 1: D1/CIF/VGA@(1–25/30 fps)<br>Sub stream 2: 720p@(1–25/30 fps) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H.264: 96 kbps–14848 kbps<br>H.265: 38 kbps–8960 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| WDR | 120 dB |
| HLC | Yes |
| White Balance | Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp |
| Gain Control | Auto; manual |
| Noise Reduction | 2D NR; 3D NR |
| Motion Detection | Yes |
| Region of Interest (RoI) | Yes |
| Image Stabilization | Electronic (EIS) |
| Defog | Electronic |
| Digital Zoom | 16× |
| Image Rotation | 180° |
| Privacy Masking | Up to 24 areas can be set, with up to 8 areas in the same view;<br>multiple colors available |
| S/N Ratio | ≥55 dB |

### Audio

| | |
|---|---|
| Audio Compression | PCM; G.711A; G.711MU; G.726; AAC; MPEG2-Layer2; G.722.1 |

## Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 Base-T) |
| Network Protocol | FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE; NTP;RTP;802.1x;HTTPS;SNMP;TCP/IP;DDNS;UPnP; NFS;ICMP;UDP;IGMP;SMB;HTTP;SSL;DHCP;SMTP; Qos;RTSP;ARP |
| Interoperability | ONVIF(Profile S&G&T);CGI;SDK |
| Streaming Method | Unicast/Multicast |
| User/Host | 20 (total bandwidth: 64 M) |
| Storage | FTP/SFTP; Micro SD card (512 GB); NAS |
| Browser | IE 9 and later versions<br>Chrome 41 and later versions<br>Firefox 50 and later versions<br>Safari 10 and later versions |
| Management Software | DSS; NVR; Smart PSS;IVSS |
| Mobile Client | iOS; Android |

## Certification

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

## Port

| | |
|---|---|
| Audio Input | 1 channel |
| Audio Output | 1 channel |
| Alarm Linkage | Capture; recording; send email; preset; pattern; tour; alarm digital input |
| Alarm Event | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection |
| Alarm I/O | 2/1 |
| Audio I/O | 1/1 |

## Power

| | |
|---|---|
| Power Supply | 12 VDC, 3 A ± 10%<br>POE+ (802.3at) |
| Power Consumption | Basic: 8 W<br>Max: 21 W (illuminator + heater + PTZ) |

## Environment

| | |
|---|---|
| Operating Temperature | –40 °C to +65 °C (–40 °F to +149 °F) |
| Operating Humidity | ≤95% |
| Protection | IP66, TVS 6000 V lightning proof; surge protection; voltage transient protection |

## Structure

| | |
|---|---|
| Product Dimensions | 270.4 mm × Φ160 mm (10.65" × Φ6.30") |
| Net Weight | 2.4 kg (5.29 lb) |
| Gross Weight | 3.3 kg (7.28 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 4MP WizSense PTZ Camera | DH-SD49425DB-HNY | 4MP 25x Starlight IR WizSense Network PTZ Camera |
| | SD49425DB-HNY | 4MP 25x Starlight IR WizSense Network PTZ Camera |
| Accessories | PFB305W | Wall Mount Bracket |
| | DC12V/3A | Power Adapter |
| | PFA126 | Mount Adapter |
| | PFA111 | Mount Adapter |
| | PFB300C | Ceiling Mount Bracket |
| | PFB301C | Ceiling Mount Bracket |
| | PFA151 | Corner Mount Bracket |
| | PFA150 | Pole Mount Bracket |
| | PFB303S | Parapet Mount Bracket |
| | PFB301S-E | Plane Mount Bracket |

## Accessories

### Included:

PFB305W
Wall Mount Bracket

### Optional:

DC 12 V/3A
Power Adapter

PFA126
Junction Box

PFA111
Mount Adapter

PFB300C
Ceiling Mount
Bracket

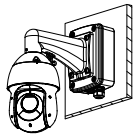
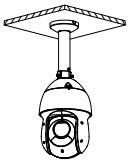
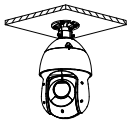
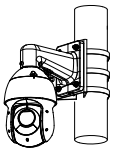
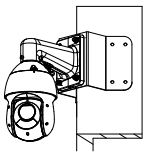
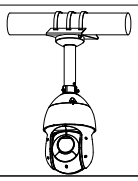
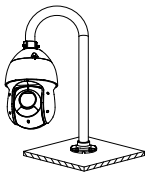
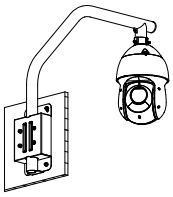
PFB301C
Ceiling Mount
Bracket

PFA151
Corner Mount
Bracket

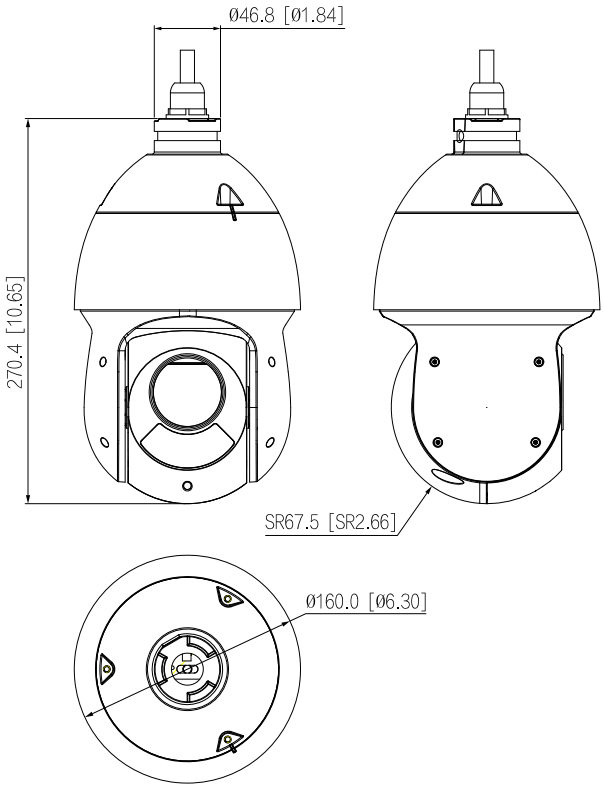
PFA150
Pole Mount
Bracket

PFB303S
Parapet Mount
Bracket

PFB301S-E
Plane Mount
Bracket

| Wall Mount | Ceiling Mount | Ceiling Mount |
|---|---|---|
| PFB305W+PFA126 | PFA111+PFB300C | PFA111+PFB301C |
|  |  |  |
| Pole Mount(Vertical) | Corner Mount | Pole Mount(Horizontal) |
| PFB305W+PFA150 | PFB305W+PFA151 | PFA111+PFB300C+PFA150 |
|  |  |  |
| Plane Mount | Parapet Mount | |
| PFB301S-E | PFA111+PFB303S | |
|  |  | |

## Dimensions (mm [inch])





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