# DH-SD49825GB-HNR

## 8MP 25x  Starlight IR Network PTZ Camera



*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.

- 1/2.8" 8Megapixel STARVIS™ CMOS.
- 25x optical zoom.
- Starlight technology.
- Max. 25/30fps@8M.
- IR distance up to 100 m.
- Perimeter protection.
- Face detection.
- Quick Pick.
- SMD 4.0.
- IP66.



## 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

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

### Protection (IP66, TVS 6000 V)

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

### 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, a flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality videos without straining the network. Smart H.265+ technology outranks standard H.265 video compression, reducing bit rate and storage requirements by up to 70%.

### Face Detection

Dahua Face Detection technology can detect the face in the image. With deep learning algorithm, the technology supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

### SMD 4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" CMOS |
| Pixel | 8 MP |
| Max. Resolution | 3840 (H) × 2160 (V) |
| ROM | 4 GB |
| RAM | 1 GB |
| 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@F1.6 (IR light on) |
| Illumination Distance | 100 m (328.08 ft) (IR) |
| Illuminator On/Off Control | Zoom Prio; Manual; Smart IR; Off |
| Illuminator Number | 4 (IR) |

### Lens

| | |
|---|---|
| Focal Length | 5 mm–125 mm |
| Max. Aperture | F1.6–F3.6 |
| Field of View | H: 53.1°–3.4°; V: 30.4°–1.9°; D: 59.3°–3.9° |
| Optical Zoom | 25× |
| 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 |
|---|---|---|---|---|
| | 2161.4 m<br>(7091.21 ft) | 864.6 m<br>(2836.61 ft) | 432.3 m<br>(1418.30 ft) | 216.1 m<br>(708.99 ft) |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0° to 360° endless<br>Tilt: −15° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0.1°–200°/s<br>Tilt: 0.1°–120°/s |
| Preset Speed | Pan: 240°/s<br>Tilt: 200°/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 |
| PTZ Protocol | DH-SD<br>Pelco-P/D(Auto recognition) |

### 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, optimization, tracking, capturing pictures, uploading high-quality face snapshots, and face enhancement; Supports attributes extraction. 6 attributes and 8 expressions: Gender, age, glasses, expressions (angry, sad, hate, scary, surprise, calm, happy and confused), mask, mustache; Supports face cutout: Face, one-inch photo. Capturing strategies include real-time capturing, optimization, and quality first<br><br>Supports up to 5 face databases; registers person one by one or in batches; sets face similarity; compares faces with 10,000 faces. |
| SMD | Yes |
| Quick Pick | Yes |

### 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 | 4K (3840 × 2160); 4M (2560 × 1440); 3M (2048 × 1536); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA(640×480);CIF (352 × 288/352 × 240) |
| Video Frame Rate | Main stream: 4K/4M/1080p/1.3M/720p (1–25/30 fps)<br>Sub stream 1: D1/VGA/CIF (1–25/30 fps)<br>Sub stream 2: 1080p/1.3M/720p/CIF (1–25/30 fps) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H.264: 3,328 kbps–8,192 kbps<br>H.265: 1,280 kbps–8,192 kbps |
| Day/Night | Auto (ICR)/Color/B/W |
| BLC | Yes |
| WDR | Yes |
| HLC | Yes |
| White Balance | Auto; indoor; outdoor; ATW; 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 |
| 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 |
| S/N Ratio | ≥ 55 dB |

### Audio

| | |
|---|---|
| Audio Compression | PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723 |

### Network

| | |
|---|---|
| Network Port | 1 × 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; HTTP; SSL; DHCP; SMTP; Qos; RTSP; ARP |
|---|---|
| Interoperability | RTMP; CGI; SDK; ONVIF (Profile S&G&T); P2P |
| Streaming Method | Unicast/Multicast |
| User/Host | 20 (total bandwidth: 64 M) |
| Storage | Micro SD card (512 GB); FTP/SFTP; NAS |
| Browser | IE 9 and later versions<br>Chrome 41 and later versions<br>Firefox 50 and later versions<br>iOS 10 and later versions |
| Management Software | DSS; DMSS |
| Mobile Client | iOS; Android |

## Certification

| Certifications | CE-EMC: EN 55032; EN 61000-3-3; EN 61000-3-2; EN 50130-4; EN 55035<br>CE-LVD: EN 62368-1<br>FCC: 47 CFR FCC Part15, Subpart B, NSI C63.4<br>UL: UL62368-1 |
|---|---|

## Port

| Audio Input | 1 channel |
|---|---|
| Audio Output | 1 channel |
| Alarm Linkage | Capture; recording; send email; preset; tour; pattern; 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/3A±10%<br>PoE (802.3at) |
|---|---|
| Power Consumption | Basic: 9.8 W<br>Max.: 20 W (Illuminator + alarm + PTZ) |

## Environment

| Operating Temperature | −40 °C to +65 °C (−40 °F to +149 °F) |
|---|---|
| Operating Humidity | ≤ 95% |
| Storage Temperature | −40 °C to +65 °C (−40 °F to +149 °F) |
| Storage 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 | 3.9 kg (8.60 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 8MP Camera | DH-SD49825GB-HNR | 8MP 25x  Starlight IR Network PTZ Camera |
| | SD49825GB-HNR | 8MP 25x  Starlight IR Network PTZ Camera |
| Accessories | PFB305W | Wall Mount Bracket |
| | DC 12 V/3A | Power Adapter |
| | PFA120 | Junction Box |
| | PFA111 | Mount Adapter |
| | PFB300C | Ceiling Mount Bracket |
| | PFB301C | Ceiling Mount Bracket |
| | PFA151 | Corner Mount Bracket |
| | PFB303S | Parapet  Mount Bracket |
| | PFB301S-E | Plane Mount Bracket |
| | PFA150 | Pole Mount Bracket |

## Accessories

Included:



PFB305W
Wall Mount Bracket

Optional:



DC 12 V/3A
Power Adapter



PFA120
Junction Box



PFA111
Mount Adapter



PFB300C
Ceiling Mount Bracket



PFB301C
Ceiling Mount Bracket



PFA151
Corner Mount Bracket



PFB303S
Parapet  Mount Bracket



PFB301S-E
Plane Mount Bracket



PFA150
Pole Mount Bracket

## Installation

| Wall Mount | Ceiling Mount | Ceiling Mount |
|---|---|---|
| PFB305W+PFA120 | 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])

Φ160.0 [Φ6.30]

Φ46.8 [Φ1.84]

269.9 [10.62]

Φ135.0 [Φ5.31]