# DH-SD6CE232GB-HNR

## 2MP 32x Starlight IR WizSense Network PTZ Camera

**Wiz Sense**

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

With its powerful optical zoom, and accurate pan and tilt capabilities, the PTZ camera provides an all-in-one solution for long distance video surveillance of outdoor scenes. Together with infrared illumination and Starlight Technology, the camera is a great solution for dark, low light conditions. The series combines a day and night mechanical IR cut filter to produce high quality images in variable lighting conditions during the day.

## Functions

### 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.

### 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.

### Wide Dynamic Range

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

- 1/2.8" 2Megapixel STARVIS™ CMOS.
- 32× optical zoom.
- Starlight technology.
- Max. 25/30 fps@1080p.
- IR distance up to 250 m.
- Auto Tracking 3.0.
- Perimeter protection.
- Face detection.
- SMD 4.0.
- Quick Pick.
- IP67, IK10.

| Perimeter Protection | Face Detection | WDR | Starlight | Quick Pick | Auto Tracking |
|---|---|---|---|---|---|

### 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.

### 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.

### Protection (IP67, TVS 8000 V)

IP67, TVS 8000 V lightning proof, surge protection, and voltage transient protection.

### Environment (–40 °C to +70 °C, IP67)

Developed to operate in extreme conditions, Dahua camera can function in temperatures ranging from –40 °C to +70 °C (–40 °F to +158 °F) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP67 Ingress Protection certification, making it suitable for demanding outdoor applications.

### 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.

## Technical Specification

### Camera

| | |
|---|---|
| Image Sensor | 1/2.8" CMOS |
| Pixel | 2 MP |
| Max. Resolution | 1920 (H) × 1080 (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 | 250 m (820.21 ft) (IR) |
| Illuminator On/Off Control | Zoom Prio; Manual; Smart IR; Off |
| Illuminator Number | 6 (IR) |

### Lens

| | | | | |
|---|---|---|---|---|
| Focal Length | 4.8 mm–154 mm | | | |
| Max. Aperture | F1.6–F4.0 | | | |
| Field of View | H: 60.2°–2.7°; V: 34°–1.5°; D: 68°–3° | | | |
| Optical Zoom | 32× | | | |
| Focus Control | Auto; semi-auto; manual | | | |
| Close Focus Distance | 0.8 m–5.0 m ( 2.62 ft–16.40 ft) | | | |
| Iris Control | Auto; manual | | | |
| DORI Distance | Detect | Observe | Recognize | Identify |
| | 1,986 m (6,915.75 ft) | 785 m (2,575.46 ft) | 398 m (1,305.77 ft) | 198 m (649.61 ft) |

### PTZ

| | |
|---|---|
| Pan/Tilt Range | Pan: 0° to 360° endless<br>Tilt: −20° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0.1°/s–260°/s<br>Tilt: 0.1°/s–120°/s |
| Preset Speed | Pan: 0°/s–300°/s<br>Tilt: 0°/s–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; linkage tracking |
| Face Detection | Face detection; bounding box; optimization; capturing pictures; uploading high-quality face snapshots; face enhancement.<br>Face attributes: Gender, age, facial expressions (Anger, sad, antipathy, fear, surprise, calm, happy, and confused), face mask, and mustache.<br>Face image and 1 inch photos are supported for face cutouts.<br>Face capture: Real-time snapshot, face priority, and quality priority. |
| Auto Tracking | Yes |
| SMD | Yes |
| Quick Pick | With AI NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events. |

### 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 | 1080p(1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240) |
| Video Frame Rate | Main stream: 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 @(1–25/30 fps) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H264: 96 kbps–14848 kbps<br>H265: 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 | 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 | CGI; SDK; ONVIF (Profile S&G&T) |
| 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 42 and later versions<br>Firefox 50 and later versions<br>Safari 10 and later versions |
| Management Software | DSS; DMSS; Easy4ip; Smart PSS; IVSS |
| Mobile Client | iOS; Android |

## Port

| | |
|---|---|
| Analog Output | 1 channel (CVBS output, BNC) |
| RS-485 | 1 (baud rate: 1200 bps–9600 bps) |
| Audio Input | 1 channel (LINE IN, bare wire) |
| Audio Output | 1 channel (LINE OUT, bare wire) |
| Alarm Linkage | Capture; preset; tour; pattern; recording; alarm digital input; audio; send email |
| Alarm Event | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection; power exception detection |
| Alarm I/O | 7/2 |
| Audio I/O | 1/1 |

## Power

| | |
|---|---|
| Power Supply | 24 VDC, 2.5 A ± 25%, PoE+ (802.3at) |
| Power Consumption | Basic: 15 W<br>Max.: 29.5 W (illuminator + heater + PTZ) |

## Environment

| | |
|---|---|
| Operating Temperature | −40 °C to + 70 °C (−40 °F to + 158 °F) |
| Operating Humidity | ≤ 95% |
| Protection | IP67; IK10; TVS 8000V lightning proof; surge protection; voltage transient protection |

## Structure

| | |
|---|---|
| Product Dimensions | 337.4 mm × Φ209 mm (13.28" × Φ8.23") |
| Net Weight | 5.8 kg (12.79 lb) |
| Gross Weight | 9.4 kg (20.72 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| 2MP WizSense Network PTZ Camera | DH-SD6CE232GB-HNR | 2MP 32x Starlight IR WizSense Network PTZ Camera |
| | SD6CE232GB-HNR | 2MP 32x Starlight IR WizSense Network PTZ Camera |
| Accessories | DC24V/2.5A | Power Adapter |
| | PFB305W | Wall Mount Bracket |
| | PFA111 | Mount Adapter |
| | PFA140 | Power Box |
| | PFB300C | Ceiling Mount Bracket |
| | PFA120 | Juncton Box |
| | PFA150 | Pole Mount Bracket |
| | PFA151 | Corner Mount Bracket |
| | PFB303S | Parapet Mount Bracket |

## Accessories

Included:

DC24V/2.5A
Power Adapter

PFB305W
Wall Mount Bracket

Optional:

PFA111
Mount
Adapter

PFA140
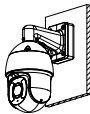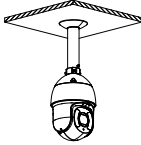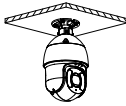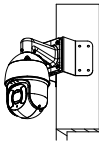Power
Box

PFB300C
Ceiling Mount
Bracket

PFA120
Juncton
Box

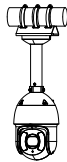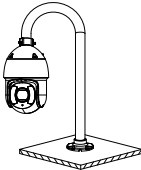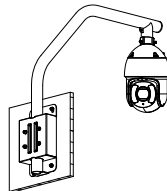PFA150
Pole Mount
Bracket

PFA151
Corner Mount
Bracket

PFB303S
Parapet Mount
Bracket

| 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])



Φ46.8 [Φ1.84]

337.4 [13.28]

Φ170.8 [Φ6.72]

Φ209.1 [Φ8.23]