

DH-SD6CE445GB-HNR

4MP 45x Starlight IR 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

Unique and elegant, the black semicircular sphere discreetly monitors from a distance without drawing undue attention to itself. It has a powerful optical zoom, and accurate pan, tilt and zoom capabilities, providing 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, and True WDR for locations with direct sunlight and glare.

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.

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.

- 1/2.8" 4Megapixel STARVIS™ CMOS.
- 45x optical zoom.
- Starlight technology.
- Max. 25/30fps@4M.
- IR distance up to 250 m.
- Auto-tracking 3.0.
- Perimeter protection.
- Face detection.
- SMD 4.0.
- IP67, IK10.



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.

Protection (IP67, TVS 6000 V)

IP67, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

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

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|----------------------------|---|
| Image Sensor | 1/2.8" CMOS |
| Pixel | 4 MP |
| Max. Resolution | 2560 (H) × 1440 (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; B/W: 0.0005 Lux@F1.6; 0 Lux@F1.6 (IR on) |
| Illumination Distance | 250 m (820.21 ft) |
| Illuminator On/Off Control | Zoom Prio; Manual; Smart IR; Off |
| Illuminator Number | 6 (IR) |

Lens

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|----------------------|---------------------------------------|----------------------------|------------------------|--------------------------|
| Focal Length | 3.95 mm–177.75 mm | | | |
| Max. Aperture | F1.6–F4.95 | | | |
| Field of View | H: 70.3°–1.8°; V: 37°–1°; D: 69.3°–2° | | | |
| Optical Zoom | 45× | | | |
| Focus Control | Auto/Semi-Auto/Manual | | | |
| Close Focus Distance | 0.1 m–1 m (0.33 ft–3.28 ft) | | | |
| Iris Control | Auto/Manual | | | |
| DORI Distance | Detect | Observe | Recognize | Identify |
| | 3,555 m (11,663.39 ft) | 1,404.2 m (4,606.96 ft) | 711 m (2,332.68 ft) | 355.5 m (1,166.34 ft) |

PTZ

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|----------------------|--|
| Pan/Tilt Range | Pan: 0° to 360° endless Tilt: –20° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0.1°/s–300°/s; Tilt: 0.1°/s–200°/s |
| Preset Speed | Pan: 400°/s; Tilt: 300°/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 Pelco-P/D (auto recognition) |

Intelligence

| | |
|----------------|--|
| Video Metadata | Detects motor and non-motor vehicles, faces and human bodies. It also performs tracking, takes snapshots, uploads high-quality face images and optimizes images. It extracts attributes from motor vehicles, detecting up to 10 attributes for them. |
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|----------------------------|---|
| IVS (Perimeter Protection) | Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification; linkage tracking |
| 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. |
| Construction Detection | Detects 6 helmet colors: Red, orange, yellow, blue, white, and black. An alarm will be triggered when a person is not wearing a helmet or when the color of the helmet that they are wearing does not match the configured color. It also supports compliance detection for work uniforms. Up to 5 work uniform sample libraries can be uploaded, which together can contain up to 1,000 images (the images must be 1080p and in the JPG format). An alarm will be triggered when the similarity between the detected work uniform and the samples in the library is below the set threshold (that is, below the minimum compliance standard for work uniforms). The system supports detecting the attributes of work uniforms such as the color of the uniform, and whether or not the person is wearing a mask and wearing shoe covers. An alarm will be triggered when the target is detected as not meeting the set requirements. It also detects and triggers alarms when only one person is in the construction site, and when no one is present in the detection area such as when a worker leaves their post or an area is left unmanned. |
| Auto Tracking | Yes |
| SMD | SMD 4.0 |
| Acupick | Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets. |
| 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 (2048 × 1536); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576); VGA (640 × 480); CIF (352 × 288) |
| Video Frame Rate | Main stream: 4M/3M/1080p/1.3M/720p (1–25/30 fps) Sub stream 1: D1/VGA/CIF (1–25/30 fps) Sub stream 2: 1080p/1.3M/720p (1–25/30 fps) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H264: 96 kbps–14848 kbps 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 |

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|--------------------------|--|
| Gain Control | Auto/Manual |
| Noise Reduction | 2D/3D |
| Motion Detection | Yes |
| Region of Interest (RoI) | Yes |
| Image Stabilization | Electronic (EIS) |
| Defog | Electronic |
| Digital Zoom | 16x |
| 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

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

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|---------------------|---|
| Network Port | 1 × RJ-45 (10/100 Base-T) |
| Network Protocol | FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTP; 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); P2P |
| Streaming Method | Unicast/Multicast |
| User/Host | 20 (total bandwidth: 64 M) |
| Storage | Micro SD card (Up to 512 GB);FTP;NAS |
| Browser | IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions iOS 10 and later versions |
| Management Software | DSS; DMSS |
| Mobile Client | iOS; Android |

Certification

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

Port

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|---------------|--|
| Analog Output | 1 channel (CVBS output, BNC) |
| RS-485 | 1(Bit range: 1200 bps–9600 bps) |
| Audio Input | 1 channel |
| Audio Output | 1 channel |
| Alarm Linkage | Capture; recording; send email; preset; tour; pattern; alarm digital output |
| Alarm Event | Motion/Tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection |
| Alarm I/O | 7/2 |
| Audio I/O | 1/1 |

Power

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|-------------------|---------------------------------------|
| Power Supply | 24 VDC, 2.5 A ± 25% PoE+ (802.3at) |
| Power Consumption | Basic: 13 W Max: 25 W |

Environment

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|-----------------------|---|
| Operating Temperature | –40 °C to +70 °C (–40 °F to +158 °F) |
| Operating Humidity | ≤ 95% (RH) |
| Protection | IP67; IK10; TVS 6000V lightning proof; surge protection; voltage transient protection |

Structure

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|--------------------|--------------------------------------|
| Product Dimensions | 337.4 mm × Φ209 mm (13.28" × Φ8.23") |
| Net Weight | 5.9 kg (13.00 lb) |
| Gross Weight | 9.6 kg (21.16 lb) |

Ordering Information

| Type | Model | Description |
|-------------------------------|-------------------|--|
| 4MP WizSense PTZ Camera | DH-SD6CE445GB-HNR | 4MP 45x Starlight IR WizSense Network PTZ Camera |
| | SD6CE445GB-HNR | 4MP 45x Starlight IR WizSense Network PTZ Camera |
| Accessories | PFB305W | Wall Mount Bracket |
| | DC 24 V/2.5 A | Power Adapter |
| | PFA111 | Mount Adapter |
| | PFA120 | Mount Adapter |
| | PFB300C | Ceiling Mount Bracket |
| | PFA150 | Pole Mount Bracket |
| | PFA151 | Corner Mount Bracket |
| | PFB301C | Ceiling Mount Bracket |
| | PFB301S-E | Plane Mount Bracket |
| | PFB303S | Parapet Mount Bracket |

Accessories

Included:



PFB305W
Wall Mount Bracket



DC 24 V/2.5 A
Power Adapter

Optional:



PFA111
Mount Adapter



PFA120
Water-proof
Junction Box



PFB300C
Ceiling Mount
Bracket



PFA150
Pole Mount
Bracket



PFA151
Corner Mount
Bracket



PFB301C
Ceiling Mount
Bracket



PFB301S-E
Plane Mount
Bracket



PFB303S
Parapet 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])

