# DH-SD6E432MB-HNR-A-PV1

## 4MP 32x Smart Dual Illumination Active Deterrence 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.

## Series Overview

The Three-in-One Camera (TiOC) solution combines 24/7 monitoring, active deterrence and real-time alarms with artificial intelligence into one smart, innovative solution. TiOC PTZ cameras adopt auto-tracking 3.0 technology, greatly improving the monitoring scope of key targets. For distributors and installers, it not only saves time, but also reduces cost.

## Functions

### Smart Dual Light

Dahua Smart Dual Light technology adopts smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshot and video with full-color image. When the target is out of the monitoring area, the white light is off and the IR illuminator is on, which reduces light pollution efficiently.

### 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
- · 32x optical zoom
- · Max. 25/30fps@4M
- · IR distance up to 250m
- · Warm light distance up to 100m
- · Sound and light alarm (red and blue lights)
- · Auto tracking 3.0
- · Perimeter protection
- · Face detection
- · Acupick
- · SMD 4.0
- · IP67
- · IK10

| Smart Dual Light | Face Detection | IVS | Auto Tracking | SMD 4.0 | AcuPick |
|---|---|---|---|---|---|

### IVS

With advanced video algorithm, Dahua IVS technology supports intelligent functions, such as tripwire and intrusion.

### Auto Tracking

This feature controls the pan, tilt and zoom actions of the camera to automatically track an object in motion, to keep it in view of the camera. Tracking 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.

### SMD4.0

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.

### AcuPick

This industry-leading search technology effectively utilizes both front-end and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

# Technical Specification

## Camera

| | |
|---|---|
| Image Sensor | 1/2.8" CMOS |
| Pixel | 4 MP |
| Max. Resolution | 2560 (H) × 1440 (V) |
| ROM | 4 GB |
| RAM | 1 GB |
| Electronic Shutter Speed | 1s–1/30000s |
| Scanning System | Progressive |
| Min. Illumination | 0.005 lux@F1.6 (Color, 30 IRE)<br>0.0005 lux@F1.6 (B/W, 30 IRE)<br>0 lux (Illuminator on) |
| Illumination Distance | 100 m (328.08 ft) (Warm light); 250 m (820.21 ft) (IR) |
| Illuminator On/Off Control | Zoom Prio; Manual; Auto; Off |
| Illuminator Number | 6 (Dual light fusion) |

## Lens

| | |
|---|---|
| Focal Length | 4.8 mm–154 mm |
| Max. Aperture | F1.6–F4.0 |
| Field of View | H: 55.8°–2.3°; V: 31.9°–1.3°; D: 63.7°–2.7° |
| Optical Zoom | 32× |
| 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; Iris prio |

| | Lens | Detect | Observe | Recognize | Identify |
|---|---|---|---|---|---|
| DORI Distance | W | 96.0 m<br>( 314.96 ft) | 37.9 m<br>( 124.41 ft) | 19.2 m<br>( 62.99 ft) | 9.6 m<br>( 31.50 ft) |
| | T | 3080.0 m<br>( 10104.99 ft) | 1216.6 m<br>( 3991.47 ft) | 616.0 m<br>( 2021.00 ft) | 308.0 m<br>( 1010.50 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; Tilt: −20° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0°/s–260°/s; Tilt: 0°/s–140°/s |
| Preset Speed | Pan: 300°/s; Tilt:200°/s |
| Preset | 300 |
| Tour | 8 |
| Pattern | 5 |
| Scan | 5 |
| Power-off Memory | Yes |
| Idle Motion | Preset;Pattern;Tour;Scan |

| | |
|---|---|
| PTZ Protocol | DH-SD<br>Pelco-P/D(Auto recognition) |

## Intelligence

| | |
|---|---|
| Video Metadata | Supports detection of motor vehicles, non-motor vehicles, faces and human bodies, optimization, capturing pictures, and uploading high-quality face snapshots.<br>It extracts attributes from motor vehicles and non-motors, detecting up to 10 attributes for motor vehicles and 8 for non-motor vehicles. It also extracts attributes from human faces and bodies, detecting up to 6 attributes for faces, and 8 for bodies. |
| IVS (Perimeter Protection) | Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking |
| Face Detection | Supports face detection, optimization, capturing pictures, uploading high-quality face snapshots and enhancing face images. Attribute extraction is also supported, where 6 attributes and 8 expressions can be detected. 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, quality first, and selecting a preferred image among a group of snapshots. |
| Smart Tracking | AutoTracking 3.0 |
| SMD | SMD 4.0 |
| AcuPick | Uses deep learning algorithms and works with backend devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets |
| Auto Patrol | After an IVS event occurs, the PTZ camera immediately initiates automated patrol of predefined key points to quickly cover potential risk areas and detect unknown threats in real time. |

## Active Deterrence

| | |
|---|---|
| Light Warning | Red and blue warning light<br>Flash duration: 5 s–30 s<br>Flash frequency: high, medium, low |
| Sound Warning | Built in 11 voice alarm contents, supporting custom import of 10 voice contents; Sound: 0-100 adjustable; The playback frequency can be adjusted from 1 to 10 times; (requires external speaker for use) |

## Video

| | |
|---|---|
| Video Compression | Smart H.265+;H.265;Smart H.264+;H.264;H.264B;H.264H;MJPEG(Sub Stream 1) |
| Streaming Capability | 3 streams |
| Resolution | 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA ( 640 × 480); CIF (352 × 288/352 × 240) |
| Video Frame Rate | Main stream: 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/@(1–25/30 fps) |
| Bit Rate Control | CBR/VBR |
| Video Bit Rate | H264: 96 kbps–15104 kbps<br>H265: 38 kbps–9216 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; gain prio |
| Noise Reduction | 2D NR; 3D NR |
| Motion Detection | Yes |
| Region of Interest (RoI) | Yes |
| Image Stabilization | Electronic Image Stabilization (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<br>Multiple colors and mosaic available |
| S/N Ratio | ≥55 dB |

## Audio

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

## Network

| | |
|---|---|
| Network Port | RJ-45 (10/100 Base-T) |
| Network Protocol | HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;SMB;NFS |
| Interoperability | ONVIF (Profile S & Profile G & Profile T);CGI;SDK |
| 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>Safari 10 and later versions |
| Management Software | DMSS;DSS Pro |
| Mobile Client | iOS;Android |

## Certification

| | |
|---|---|
| Certifications | CE:EN55035;EN IEC61000-3-2;EN55032;EN60950;EN62368-1 |

## Port

| | |
|---|---|
| RS-485 | 1 (Bit range: 1200 bps–9600 bps) |
| Audio Input | 1 channel (LINE IN, bare wire) |
| Audio Output | 1 channel (LINE OUT,bare wire;built-in speaker (mutually exclusive) ) |

| | |
|---|---|
| Alarm Input | 2 (on-off value input: 0–5 VDC) |
| Alarm Output | 1 channel |
| Alarm Linkage | Capture; recording; send email; preset; tour; pattern; alarm digital output; audio |
| Alarm Event | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection |

## Power

| | |
|---|---|
| Power Supply | 24 VDC, 2.5 A ± 25%<br>PoE+ (802.3at) |
| Power Consumption | Basic: 12 W<br>Max. (WDR + IR on + PTZ operation + Alarm): 20 W (24 VDC) |
| Power Adapter | Included |

## Environment

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

## Structure

| | |
|---|---|
| Product Dimensions | 208 mm × 202 mm × 325 mm (8.19" × 7.95" × 12.8") (L × W × H) |
| Net Weight | 4.45 kg (9.81 lb) |
| Gross Weight | 6.62 kg (14.59 lb) |

## Ordering Information

| Type | Model | Description |
|---|---|---|
| Network PTZ Camera | DH-SD6E432MB-HNR-A-PV1 | 4MP 32x Smart Dual Illumination Active Deterrence Network PTZ Camera |
| Accessories | PFB305W | Wall Mount Bracket |
| | DC24V/2.5A | Power Adapter |
| | DH-PFB301S-E | Plane Mount Bracket |
| | PFA111 | Mount Adapter |
| | DH-PFB300C | Ceiling Mount Bracket |
| | DH-PFA126 | Water-proof Junction Box |
| | DH-PFA151 | Corner Mount Bracket |
| | DH-PFA150 | Pole Mount Bracket |
| | DH-PFB303S | Parapet Mount Bracket |

## Accessories

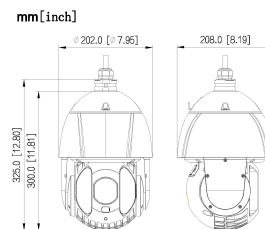### Dimensions (mm[inch])

Included:



PFB305W
Wall Mount Bracket
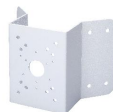


DC24V/2.5A
Power Adapter

Optional:



DH-PFA126
Water-proof Junction Box



DH-PFA150
Pole Mount Bracket



DH-PFA151
Corner Mount Bracket



DH-PFB300C
Ceiling Mount Bracket



DH-PFB301S-E
Plane Mount Bracket



DH-PFB303S
Parapet Mount Bracket



PFA111
Mount Adapter