

# DH-SD3E205DB-GNY-A-PV1

2MP 5x TiOC WizSense 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.

## System 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. With horizontal and vertical rotation of TiOC PTZ camera, greatly improving the monitoring scope of key targets. For distributors and installers, it not only saves time, but also reduces cost.

## Functions

### 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.

### Siren And Light Active Deterrence

Dahua siren and light active deterrence network camera supports the white light alarm and voice alarm when perimeter event occurs, to realize the deterrence and effective intervention.

- 1/2.8" 2Megapixel CMOS.
- 5x optical zoom.
- Max. 25/30fps@1080P.
- IR distance up to 50 m.
- Warm light illumination distance up to 30 m.
- SMD 3.0.
- Perimeter protection.
- Face detection.
- Alarm: 1 in, 1 out; audio: 1 in, 1 out.
- Built-in Mic and Speaker for Two-way Talk.
- 12 VDC/PoE power supply.
- IP66.
- Sound and light alarm (red and blue lights).



### 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.

### Two-way Talk

With its built-in high-sensitivity microphone and high-power speaker, the camera realizes two-way talk through the mobile app.

### 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 3.0

Empowered by Deep-Learning Algorithms, Dahua SMD 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.

### 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                      | 2 MP                                                               |
| Max. Resolution            | 1920 (H) × 1080 (V)                                                |
| ROM                        | 128 MB                                                             |
| RAM                        | 512 MB                                                             |
| Electronic Shutter Speed   | 1/1 s–1/30,000 s                                                   |
| Scanning System            | Progressive                                                        |
| Min. Illumination          | Color: 0.05 lux@F1.6<br>B/W: 0.005 lux@F1.6<br>0 lux (IR light on) |
| Illumination Distance      | 50 m (164.04 ft) (IR)<br>30 m (98.43 ft) (Warm light)              |
| Illuminator On/Off Control | Zoom Prio; Manual; Auto; Off                                       |
| Illuminator Number         | 2 (IR)<br>2 (Warm light)<br>1 (Red light)<br>1 (Blue light)        |

### Lens

|                      |                                                                                                                                                                                                                                                                                                                                                                                 |                       |                       |                      |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|----------------------|
| Focal Length         | 2.7 mm–13.5 mm                                                                                                                                                                                                                                                                                                                                                                  |                       |                       |                      |
| Max. Aperture        | F1.6–F3.0                                                                                                                                                                                                                                                                                                                                                                       |                       |                       |                      |
| Field of View        | H: 99.6°–31.5°;<br>V: 53°–17.8°;<br>D: 118.8°–36.2°                                                                                                                                                                                                                                                                                                                             |                       |                       |                      |
| Optical Zoom         | 5×                                                                                                                                                                                                                                                                                                                                                                              |                       |                       |                      |
| Focus Control        | Auto; semi-auto; manual                                                                                                                                                                                                                                                                                                                                                         |                       |                       |                      |
| Close Focus Distance | 1.5 m (4.92 ft)                                                                                                                                                                                                                                                                                                                                                                 |                       |                       |                      |
| Iris Control         | Fixed                                                                                                                                                                                                                                                                                                                                                                           |                       |                       |                      |
| DORI Distance        | Detect                                                                                                                                                                                                                                                                                                                                                                          | Observe               | Recognize             | Identify             |
|                      | 186.2 m<br>(610.89 ft)                                                                                                                                                                                                                                                                                                                                                          | 73.5 m<br>(241.14 ft) | 37.2 m<br>(122.05 ft) | 18.6 m<br>(61.02 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 355°<br>Tilt: –15° to +90°                                                                                                                              |
| Manual Control Speed | Pan: 0.1°/s–36°/s<br>Tilt: 0.1°/s–25.8°/s                                                                                                                          |
| Preset Speed         | Pan: 35.7°/s; Tilt: 27.1°/s                                                                                                                                        |
| Preset               | 300                                                                                                                                                                |
| Tour                 | 8 (up to 32 presets per tour)                                                                                                                                      |
| 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. |

|                  |              |
|------------------|--------------|
| Power-off Memory | Yes          |
| Idle Motion      | Preset; Tour |
| PTZ Locked       | Yes          |

### 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             | Supports face detection, snapshot, and face enhancement;<br>Supports face cutout: Face, one-inch photo;<br>Capturing strategies include real-time capturing and quality first                        |
| Auto Tracking              | Auto tracking Lite                                                                                                                                                                                   |
| SMD                        | SMD 3.0                                                                                                                                                                                              |

### Active Deterrence

|               |                                                                                                                                        |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Light Warning | Red and blue light warning<br>Flash duration: 5 s–30 s<br>Flash frequency: high, medium, low                                           |
| Sound Warning | Offers 11 types of sound alarms, and supports importing up to 10 custom sound alarms. The sound alarm can be set to play 1 to 10 times |

### Video

|                          |                                                                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression        | H.264H;H.264B;Smart H.265+;H.264;<br>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); VGA (640 × 480); CIF (352 × 288)                            |
| Video Frame Rate         | Main stream: 1080p/1.3M/720p @(1–25/30 fps)<br>Sub stream 1: D1/CIF/VGA@ (1–25/30 fps)<br>Sub stream 2: 1080p/1.3M/720p @(1–25/30 fps) |
| Bit Rate Control         | CBR/VBR                                                                                                                                |
| Video Bit Rate           | H.264: 64 kbps–8192 kbps<br>H.265: 25 kbps–6400 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°                                                                                                                                   |
| S/N Ratio                | ≥55 dB                                                                                                                                 |

|                       |                                                                                                                                                          |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Privacy Mask          | Up to 24 areas can be set, with up to 8 areas in the same view; 8 colors available                                                                       |
| Audio                 |                                                                                                                                                          |
| Audio Compression     | G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PCM                                                                                                        |
| Network               |                                                                                                                                                          |
| Network Port          | RJ-45 (10/100 Base-T)                                                                                                                                    |
| Network Protocol      | FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP;RT P;802.1x;HTTPS;SNMP;TCP/IP;DDNS;UPnP;NFS;iCMP;UDP;IGMP;SMB;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               | 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   | DMSS;DSS Pro                                                                                                                                             |
| Mobile Client         | iOS;Android                                                                                                                                              |
| Certification         |                                                                                                                                                          |
| Certifications        | CE: EN55032/EN55024/EN50130-4<br>FCC: Part15 subpartB, ANSI C63.4-2014                                                                                   |
| Port                  |                                                                                                                                                          |
| Audio Input           | 1 channel (LINE IN, bare wire,built-in mic (mutually exclusive))                                                                                         |
| Audio Output          | 1 channel (LINE OUT,bare wire;built-in speaker (mutually exclusive))                                                                                     |
| Alarm Linkage         | Capture; recording; send email; preset; alarm digital input; audio; warning light                                                                        |
| Alarm Event           | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection |
| Alarm I/O             | 1/1                                                                                                                                                      |
| Audio I/O             | 1/1                                                                                                                                                      |
| Power                 |                                                                                                                                                          |
| Power Supply          | 12 VDC, 2 A $\pm$ 10%<br>PoE+ (802.3at)                                                                                                                  |
| Power Consumption     | Basic: 4.5 W<br>Max.: 15 W (illuminator + PTZ + speaker + heating glass)                                                                                 |
| Environment           |                                                                                                                                                          |
| Operating Temperature | -30 °C to +60 °C (-22 °F to +140 °F)                                                                                                                     |
| Operating Humidity    | $\leq$ 95%                                                                                                                                               |
| Protection            | IP66, TVS 6000 V lightning proof; surge protection; voltage transient protection                                                                         |
| Structure             |                                                                                                                                                          |
| Product Dimensions    | 142.6 mm $\times$ 140 mm $\times$ 236.1 mm (5.61" $\times$ 5.51" $\times$ 9.29")                                                                         |
| Net Weight            | 1.5 kg (3.31 lb)                                                                                                                                         |
| Gross Weight          | 2.1 kg (4.63 lb)                                                                                                                                         |

\*The precision of the presets for PTZ cameras might vary depending on different series. For scenes with high requirements on the precision, contact your local sales representative for assistance with selecting the model.

## Ordering Information

| Type                    | Model                  | Description                             |
|-------------------------|------------------------|-----------------------------------------|
| 2MP WizSense PTZ Camera | DH-SD3E205DB-GNY-A-PV1 | 2MP 5x TiOC WizSense Network PTZ Camera |
|                         | SD3E205DB-GNY-A-PV1    | 2MP 5x TiOC WizSense Network PTZ Camera |
| Accessories (Optional)  | PFA121                 | Junction Box                            |
|                         | PFA152-E               | Pole Mount Bracket                      |
|                         | DC 12 V/2A             | Power Adapter                           |
|                         | PFM900-E               | Integrated Mount Tester                 |
|                         | TF-P100                | MicroSD Memory Card                     |

## Accessories

Optional:



PFA121  
Junction Box



PFA152-E  
Pole Mount Bracket



PFM320D  
12 VDC 2 A Power  
Adapter



PFM900-E  
Integrated  
Mount Tester



TF-P100  
MicroSD  
Memory Card

| Wall Mount           | Ceiling Mount |
|----------------------|---------------|
| /                    | /             |
|                      |               |
| Pole Mount(Vertical) |               |
| PFA121+PFA152-E      |               |
|                      |               |

**Dimensions (mm[inch])**

