

# DH-SDT4E425-8P-GB-APV1

8MP+4MP 25x Starlight TiOC Network Panoramic & 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

Designed with more lens than the conventional PTZ camera, the X-Spans series camera captures an expansive view, producing wide, vivid images. It has the combined power of the panoramic and detail camera in its structure and is highly cost-effective, greatly reducing the installation cost of security systems. It also leverages its two cameras to perform smart tracking, and has an independent mode that allows you to separately use each camera.

## Functions

### 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.

### Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

- Panorama : Outputs 180° wide angle splicing image
- Detail: 1/2.8"4Megapixel STARVIS™ CMOS
- 25x optical zoom
- Max. 25/30 fps@8M
- IR distance up to 100 m
- Auto tracking 3.0
- Smart tracking
- Perimeter protection
- Active deterrence
- Smart dual light +



### 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.

### Protection (IP66, TVS 6000 V)

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

### 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.

### Smart Tracking

Automatically tracks moving targets, keeping them on the monitoring screen. With its flexible design, human, motor vehicle and non-motor vehicle targets can be set to be tracked. These parameters can also be combined. Targets are immediately tracked when detection rules (such as tripwire and intrusion) are triggered.

### 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. The camera is built in one voice, and supports customized voice importing.

## Technical Specification

### Camera

|                            |                                                                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor               | Panorama: 1/2.7" CMOS; Detail: 1/2.8" CMOS                                                                                                                                                                         |
| Pixel                      | Panorama: 8 MP; Detail: 4 MP                                                                                                                                                                                       |
| Max. Resolution            | Panorama: 4096 × 1860; Detail: 2560 × 1440                                                                                                                                                                         |
| ROM                        | Panorama: 4 GB; Detail: 4 GB                                                                                                                                                                                       |
| RAM                        | Panorama: 2 GB; Detail: 1 GB                                                                                                                                                                                       |
| Electronic Shutter Speed   | 1 s–1/30,000 s                                                                                                                                                                                                     |
| Scanning System            | Progressive                                                                                                                                                                                                        |
| Min. Illumination          | Panorama:<br>0.005 lux@F1.4 (Color, 30 IRE);<br>0.0005 lux@F1.4 (B/W, 30 IRE);<br>0 lux (illuminator on)<br>Detail:<br>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      | Panorama: 30 m (98.43 ft) (IR); 30 m (98.43 ft) (white light)<br>Detail:<br>100 m (328.08 ft) (IR);<br>50 m (131.23 ft) (white light)                                                                              |
| Illuminator On/Off Control | Panorama:<br>Manual; Auto; Off<br>Detail:<br>Zoom Prio; Manual; Auto; Off                                                                                                                                          |
| Illuminator Number         | Panorama: 2 (IR light); 2 (White light); Detail: 2 (IR light); 2 (Warm light)                                                                                                                                      |

### Lens

|                      |                                                                                |                              |                              |                            |                          |
|----------------------|--------------------------------------------------------------------------------|------------------------------|------------------------------|----------------------------|--------------------------|
| Focal Length         | Panorama: 2.8 mm; Detail: 5 mm–125 mm                                          |                              |                              |                            |                          |
| Max. Aperture        | Panorama: F1.4; Detail: F1.6-F3.6                                              |                              |                              |                            |                          |
| Field of View        | Panorama: H: 180°; V: 86°; Detail: H: 51.9°–3.0°; V: 39.7°–2.2°; D: 63.1°–3.7° |                              |                              |                            |                          |
| Optical Zoom         | Panorama: NA; Detail: 25 ×                                                     |                              |                              |                            |                          |
| Focus Control        | Auto; manual; semi-auto                                                        |                              |                              |                            |                          |
| Close Focus Distance | Panorama: 0.6 m (1.97 ft); Detail: 0.1 m–0.5 m (0.33"–1.64")                   |                              |                              |                            |                          |
| Iris Control         | Panorama: NA; Detail: Auto; manual; iris prio                                  |                              |                              |                            |                          |
| DORI Distance        | Lens                                                                           | Detect                       | Observe                      | Recogniz<br>e              | Identify                 |
|                      | Panoram<br>a: 2.8<br>mm;<br>Detail: 5<br>mm–125<br>mm                          | 2,500 m<br>( 8202.1<br>0 ft) | 987.5 m<br>( 3239.8<br>3 ft) | 500 m<br>( 1640.4<br>2 ft) | 250 m<br>( 820.21<br>ft) |

### PTZ

|                      |                                                               |
|----------------------|---------------------------------------------------------------|
| Pan/Tilt Range       | Pan: 0° to 360° endless<br>Tilt: –15° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0.1°/s–180°/s;<br>Tilt: 0.1°/s–90°/s                     |
| Preset Speed         | Pan: 0.1°/s–180°/s;                                           |

|                  |                               |
|------------------|-------------------------------|
|                  | Tilt: 0.1°/s–90°/s            |
| Preset           | 300                           |
| Tour             | 8 (up to 32 presets per tour) |
| Pattern          | 5                             |
| Scan             | 5                             |
| Power-off Memory | Yes                           |
| Idle Motion      | Preset;Pattern;Tour;Scan      |

### Intelligence

|                            |                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IVS (Perimeter Protection) | Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking |
| Auto Tracking              | Auto tracking 3.0                                                                                                                                                                            |
| SMD                        | SMD 4.0                                                                                                                                                                                      |

### Active Deterrence

|               |                                                                                                                                         |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Light Warning | Red-Blue light warning;<br>Flash duration: 5 s–30 s;<br>Flash frequency: high, medium, low                                              |
| Sound Warning | Offers 11 sound alarm and 10 custom sound alarms can be imported.<br>Sound can be set from 0%–100%.<br>Play times can be set from 1-10. |

### Video

|                      |                                                                                                                                                                                                                                                                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression    | Smart H.265+;H.265;Smart H.264+;H.264B;H.264M;H.264H;MJPEG(Sub Stream 1)                                                                                                                                                                                                                                                                        |
| Streaming Capability | 3 streams                                                                                                                                                                                                                                                                                                                                       |
| Resolution           | Panorama: 8M (4096 × 1860); 2M (2048 × 928); 1080p (1920 × 1080); 720p (1280 × 720); 1024 × 448; D1 (704 × 576/704 × 480);VGA (640 × 480);CIF (352 × 288/352 × 240); Detail: 4M (2560 × 1440); 3M (2304 × 1296); 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     | Panorama:<br>Main stream: 4096 × 1860 @(1–25/30 fps)<br>Sub stream 1: 1024 × 448/D1/VGA/CIF@ (1–25/30 fps)<br>Sub stream 2: 2048 × 928/1080p/1.3M/720p @(1–25/30 fps);<br>Detail:<br>Main stream: 4M/3M/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       | Panorama:<br>H264: 128 kbps–16,384 kbps<br>H265: 51 kbps–13,312 kbps ;<br>Detail:<br>H264: 96 kbps–16,384 kbps<br>H265: 38 kbps–10,240 kbps;                                                                                                                                                                                                    |
| Day/Night            | Panorama: Auto; Color; B/W; Electronic<br>Detail: Auto; Color; B/W; Electronic                                                                                                                                                                                                                                                                  |
| BLC                  | Yes                                                                                                                                                                                                                                                                                                                                             |
| WDR                  | Panorama: DWDR; Detail: 120 dB                                                                                                                                                                                                                                                                                                                  |

|                          |                                                                                                                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HLC                      | Yes                                                                                                                                                                                          |
| White Balance            | Panorama: Auto; indoor; outdoor; tracking; manual;<br>sodium lamp; natural light; street lamp<br>Detail: Auto; indoor; outdoor; tracking; manual; sodium<br>lamp; natural light; street lamp |
| Gain Control             | Panorama: Auto; manual; gain prio<br>Detail: Auto; manual; gain prio                                                                                                                         |
| Noise Reduction          | Panorama: 2D NR; 3D NR<br>Detail: Auto: 2D NR; 3D NR                                                                                                                                         |
| Motion Detection         | Yes                                                                                                                                                                                          |
| Region of Interest (RoI) | Yes                                                                                                                                                                                          |
| Image Stabilization      | Panorama: NA<br>Detail: Optical Image Stabilization (OIS)                                                                                                                                    |
| Defog                    | Panorama: Electronic<br>Detail: Electronic                                                                                                                                                   |
| Digital Zoom             | Panorama: NA<br>Detail: 16 ×                                                                                                                                                                 |
| Image Rotation           | Panorama: NA<br>Detail: 180°                                                                                                                                                                 |
| S/N Ratio                | Panorama: ≥55 dB<br>Detail: ≥55 dB                                                                                                                                                           |

## Audio

|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| Audio Compression | PCM, G.711A, G.711Mu, G.726, MPEG2-Layer2,<br>G.722.1, G.729 |
|-------------------|--------------------------------------------------------------|

## Network

|                     |                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Network Port        | RJ-45 (100/1,000 Base-T)                                                                                                                           |
| Network Protocol    | HTTP;HTTPS;TCP/<br>IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.<br>1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;IGMP;ARP;RTCP;RTP;<br>PPPoE;RTMP;Bonjour;NFS |
| Interoperability    | ONVIF (Profile S & Profile G & Profile T);CGI;SDK;P2P                                                                                              |
| Streaming Method    | Unicast/Multicast                                                                                                                                  |
| User/Host           | 20 (total bandwidth: 64 M)                                                                                                                         |
| Storage             | Micro SD card (512 GB); FTP/SFTP; NAS                                                                                                              |
| Browser             | web5.0:<br>IE 9 and later versions;<br>Chrome 41 and later versions;<br>Firefox 52 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 |
|----------------|-------------------------------|

## Port

|              |                                 |
|--------------|---------------------------------|
| Audio Input  | 1 channel (LINE IN, bare wire)  |
| Audio Output | 1 channel (LINE OUT, bare wire) |
| Alarm Input  | 2 (on-off value input: 0–5 VDC) |
| Alarm Output | 1 channel                       |

|               |                                                                                                                                               |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Alarm Linkage | Capture; recording; send email; preset; tour; pattern;<br>alarm digital output; audio; warning light                                          |
| Alarm Event   | Motion/tampering detection; network disconnection<br>detection; IP conflict detection; memory card state<br>detection; memory space detection |

## Power

|                   |                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------------|
| Power Supply      | 12 VDC, 3 A ± 10%;PoE (802.3at)                                                                            |
| Power Consumption | Basic: 14 W;<br>Max: 25 W (illuminator + heating glass + Siren and Light<br>Active Deterrence + ICR + PTZ) |

## Environment

|                       |                                                                                    |
|-----------------------|------------------------------------------------------------------------------------|
| Operating Temperature | –40 °C to +65 °C (–40 °F to +149 °F)                                               |
| Operating Humidity    | ≤95%                                                                               |
| Protection            | IP66;TVS 6000 V lightning proof; surge protection;<br>voltage transient protection |

## Structure

|                    |                                                                    |
|--------------------|--------------------------------------------------------------------|
| Product Dimensions | 194.2 mm × 160 mm × 311 mm (7.65" × 6.30" × 12.24")<br>(L × W × H) |
| Net Weight         | 3.1 kg (6.83 lb)                                                   |
| Gross Weight       | 3.1 kg (6.83 lb)                                                   |

## Ordering Information

| Type                   | Model                  | Description                                                     |
|------------------------|------------------------|-----------------------------------------------------------------|
| Network PTZ Camera     | DH-SDT4E425-8P-GB-APV1 | 8MP+4MP 25x Starlight<br>TiOC Network Panoramic &<br>PTZ Camera |
|                        | DH-PFB301S-E           | DH-PFB301S-E                                                    |
| Accessories (Optional) | DH-PFB300C             | Ceiling Mount Bracket                                           |
|                        | DH-PFA150              | Pole Mount Bracket                                              |
|                        | DH-PFA151              | Corner mount bracket                                            |
|                        | PFA111                 | Mount Adapter Component                                         |
|                        | DH-PFB303S             | DH-PFB303S                                                      |
|                        | DH-PFA126              | Water-proof Junction Box                                        |

## Accessories

Optional:



DH-PFB301S-E  
DH-PFB301S-E



DH-PFB300C  
Ceiling Mount Bracket



DH-PFA150  
Pole Mount Bracket



DH-PFA151  
Corner mount bracket



PFA111  
Mount Adapter  
Component

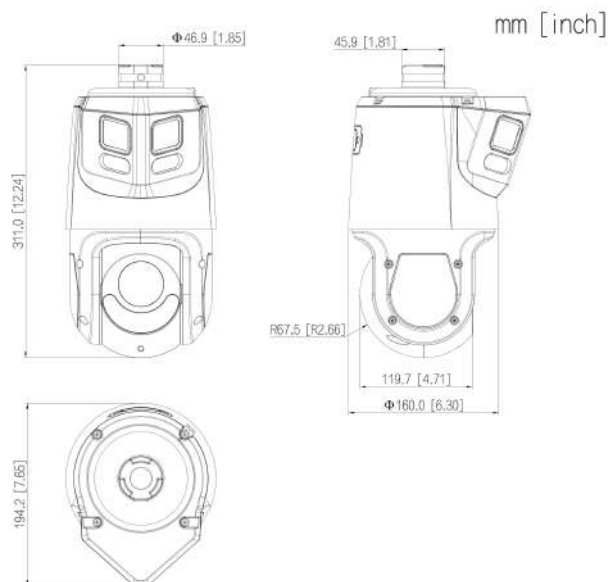


DH-PFB303S  
DH-PFB303S



DH-PFA126  
Water-proof Junction Box

## Dimensions (mm[inch])



| Wall Mount<br>PFB300W+PFA126            | Ceiling Mount 1<br>PFA111+PFB300C | Ceiling Mount 2<br>PFA111+PFB301C                |
|-----------------------------------------|-----------------------------------|--------------------------------------------------|
|                                         |                                   |                                                  |
| Pole Mount (Vertical)<br>PFB300W+PFA150 | Corner Mount<br>PFB300W+PFA151    | Pole Mount (Horizontal)<br>PFA111+PFB300C+PFA150 |
|                                         |                                   |                                                  |
| Plane Mount<br>PFB301S-E                | Parapet Mount<br>PFA111+PFB303S   |                                                  |
|                                         |                                   |                                                  |