

# DH-SDT8C842-8P-FA-APV-0280-C

## 8MP 42x Starlight Dual Light Network Panoramic PTZ Camera




Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

### System Overview

The multi-sensor series pushes the bar on PTZ cameras with its enhanced monitoring capabilities captured in its unique lens design. Fitted with an extra lens, it quickly tracks targets while keeping an eye on the monitored area. They also harness the strength of their embedded AI intelligent chip to perform a wide variety of intelligent functions, making them ideal for use in many scenarios.

### Functions

#### Protection (IP67, TVS 8000 V)

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

#### 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.

- Panorama: 2 × 5 MP 1/1.8" CMOS image sensor;  
Detail: 8MP 1/1.8" CMOS image sensor.
- 42 x optical zoom.
- Max. 25/30fps@4K.
- IR distance up to 300 m.
- Auto tracking.
- Perimeter protection.
- Face detection.
- Wiper.
- IP67.
- Sound and light alarm.
- PoE++(802.3bt).



#### Video Metadata

Metadata is information on the attributes of targets that is extracted during monitoring. It can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind cameras: Human face, human body, motor vehicle and non-motor vehicle. Face information includes gender, age, glasses, masks, beards, and more. Human body information includes hat, top, top color, bottom, bottom color, bag, and more. Motor vehicle information includes plate color, type, vehicle color, sun visor, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

#### 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.

#### 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.

## Technical Specification

### Camera

|                            |                                                                                                                                                                      |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Image Sensor               | Panorama: 1/1.8" CMOS<br>Detail: 1/1.8" CMOS                                                                                                                         |
| Pixel                      | Panorama: 10 MP<br>Detail: 8 MP                                                                                                                                      |
| Max. Resolution            | Panorama: 5120 (H) × 1920 (V)<br>Detail: 3840 (H) × 2160 (V)                                                                                                         |
| ROM                        | Detail: 8 GB; Panorama: 8 GB                                                                                                                                         |
| RAM                        | Detail: 4 GB; Panorama: 8 GB                                                                                                                                         |
| Electronic Shutter Speed   | Panorama: 1s–1/30000s<br>Detail: 1s–1/30000s                                                                                                                         |
| Scanning System            | Progressive                                                                                                                                                          |
| Min. Illumination          | Panorama:<br>Color: 0.001 lux@F1.0<br>B/W: 0.0001 lux@F1.0<br>0 lux (IR light on)<br>Detail:<br>Color: 0.001 lux@F1.4<br>B/W: 0.0001 lux@F1.4<br>0 lux (IR light on) |
| Illumination Distance      | Panorama: 30 m (IR light)<br>Detail: 300 m (IR)                                                                                                                      |
| Illuminator On/Off Control | Zoom Prio; Manual; Smart IR; Off                                                                                                                                     |
| Illuminator Number         | Panorama: 4 (IR light)<br>Detail: 6 (IR), 2 (white light)                                                                                                            |
| Wiper                      | Wiper                                                                                                                                                                |

### Lens

|                      |                                                                                                                                                                                                                                                                                                                                                                                 |                          |                       |                       |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|-----------------------|
| Focal Length         | Panorama: 2.8 mm<br>Detail: 5.5 mm–231 mm                                                                                                                                                                                                                                                                                                                                       |                          |                       |                       |
| Max. Aperture        | Panorama: F1.0<br>Detail: F1.4-F4.5                                                                                                                                                                                                                                                                                                                                             |                          |                       |                       |
| Field of View        | Panorama: H: 200°; V: 70°<br>Detail: H: 61.8°–2.2°; V: 36.3°–1.3°; D: 69.2°–2.4                                                                                                                                                                                                                                                                                                 |                          |                       |                       |
| Optical Zoom         | Detail: 42 ×                                                                                                                                                                                                                                                                                                                                                                    |                          |                       |                       |
| Focus Control        | Auto; semi-auto; manual                                                                                                                                                                                                                                                                                                                                                         |                          |                       |                       |
| Close Focus Distance | 0.2 m (0.66 ft)                                                                                                                                                                                                                                                                                                                                                                 |                          |                       |                       |
| Iris Control         | Detail: Auto; manual                                                                                                                                                                                                                                                                                                                                                            |                          |                       |                       |
| DORI Distance        | Detect                                                                                                                                                                                                                                                                                                                                                                          | Observe                  | Recognize             | Identify              |
|                      | 4620 m<br>(15157.48 ft)                                                                                                                                                                                                                                                                                                                                                         | 1824.9 m<br>(5987.20 ft) | 924 m<br>(3031.50 ft) | 462 m<br>(1515.75 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       | Panorama: Tilt: 5°–17°<br>Detail:<br>Pan: 0°–360° endless<br>Tilt: -30° to +90° |
| Manual Control Speed | Detail: Pan: 0.1°/s–240°/s<br>Tilt: 0.1°/s–100°/s                               |

|                  |                                        |
|------------------|----------------------------------------|
| Preset Speed     | Detail:<br>Pan: 240°/s<br>Tilt: 100°/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

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Metadata             | Motor vehicle, non-motor vehicle, face, and human body detection; tracking; optimization; capturing pictures; uploading high-quality face snapshots; motor vehicle attributes; non-motor vehicle attributes; human body attributes; face attributes                                                                                                                                                                                                                                                                  |
| 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 Recognition           | Supports face detection, face bounding box, optimization, capturing snapshots, uploading high-quality face snapshots, enhancing face images and face exposure. 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. Supports up to 5 face databases; registers person one by one or in batches; sets face similarity; compares faces with 10,000 faces. |
| Auto Tracking              | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### Active Deterrence

|               |                                                                                       |
|---------------|---------------------------------------------------------------------------------------|
| Light Warning | White light warning<br>Flash duration: 5 s–30 s<br>Flash frequency: high, medium, low |
| Sound Warning | Offers 22 sound alarms and supports importing custom sound alarms.                    |

### Video

|                      |                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression    | H.264H; H.264B; Smart H.265+; H.265; MJPEG (Sub Stream); Smart H.264+; H.264M                                                                                                                                                                                                                                                                                                               |
| Streaming Capability | 3 streams                                                                                                                                                                                                                                                                                                                                                                                   |
| Resolution           | Panorama:<br>10M (5120 × 1920); 2688 × 752; 1344 × 368; 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)<br>Detail:<br>8M (3840 × 2160); 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: (5120 × 1920) @ (1–25/30 fps)<br>Sub stream 1: (2560 × 1440)/D1/VGA/CIF @ (1–25/30 fps)<br>Sub stream 2: (2688 × 752)/1080p/1.3M/720p @ (1–25/30 fps)<br>Detail:<br>Main stream: 8M (3840 × 2160)/4M(2560 × 1440)/3M(2304 × 1296)/1080 P/1.3M/720p @ (1–25/30 fps)<br>Sub stream 1: (2560 × 1440)/D1/VGA/CIF @ (1–25/30 fps)<br>Sub stream 2: (2688 × 752)/1080p/1.3M/720p @ (1–25/30 fps) |
| Bit Rate Control         | CBR; VBR                                                                                                                                                                                                                                                                                                                                                                                                             |
| Video Bit Rate           | Panorama:<br>H264: 8 Kbps–16384 Kbps<br>H265: 3 Kbps–13568 Kbps<br>Detail:<br>H264: 8 Kbps–16384 Kbps<br>H265: 3 Kbps–13568 Kbps                                                                                                                                                                                                                                                                                     |
| Day/Night                | Panorama: Color; B/W<br>Detail: Auto (ICR)                                                                                                                                                                                                                                                                                                                                                                           |
| BLC                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                  |
| WDR                      | Panorama: WDR<br>Detail: 130 dB                                                                                                                                                                                                                                                                                                                                                                                      |
| HLC                      | Yes                                                                                                                                                                                                                                                                                                                                                                                                                  |
| White Balance            | Panorama and Detail:<br>Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp                                                                                                                                                                                                                                                                                                             |
| Gain Control             | Panorama: Auto; manual<br>Detail: Auto; manual                                                                                                                                                                                                                                                                                                                                                                       |
| Noise Reduction          | Panorama: 2D NR; 3D NR<br>Detail: 2D NR; 3D NR                                                                                                                                                                                                                                                                                                                                                                       |
| Motion Detection         | Yes                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Region of Interest (RoI) | Yes                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Image Stabilization      | EIS                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Defog                    | Panorama: Electronic<br>Detail: Optical                                                                                                                                                                                                                                                                                                                                                                              |
| Digital Zoom             | 16x                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Image Rotation           | 180°                                                                                                                                                                                                                                                                                                                                                                                                                 |
| S/N Ratio                | Panorama: ≥ 55 dB<br>Detail: ≥ 55 dB                                                                                                                                                                                                                                                                                                                                                                                 |

## Audio

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

## Network

|                  |                                                                                                                                                                  |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network Port     | RJ-45 (100/1000 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; GA/T 1400; GB/T28181; SDK; ONVIF (Profile S&G&T)                                                                                                            |
| Streaming Method | Unicast; Multicast                                                                                                                                               |
| User/Host        | 20 (total bandwidth: 64 M)                                                                                                                                       |
| Storage          | FTP; 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 | C9100; 5 Series NVR; ICC-B8900; SmartPSS Plus; IVSS                                                                      |
| Mobile Client       | IOS; Android                                                                                                             |

## Certification

|                |                                                                           |
|----------------|---------------------------------------------------------------------------|
| Certifications | CE: EN55032 EN55035 EN61000-3-2 EN61000-3-3;EN50130-4<br>FCC: FCC part15B |
|----------------|---------------------------------------------------------------------------|

## Port

|               |                                                                                                                                                                                      |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 Input   | 7 (on-off value input: 0–5 VDC)                                                                                                                                                      |
| Alarm Output  | 2                                                                                                                                                                                    |
| Alarm Linkage | Capture; recording; send email; preset; tour; pattern; alarm digital input                                                                                                           |
| 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      | 36 VDC, 2.25 A ± 25%<br>PoE++(802.3bt)                                                                                                            |
| Power Consumption | Basic: 32 W<br>Max: 58 W (panoramic camera illuminator, detail camera IR illuminator, light warning, speaker, heated glass, intelligence and PTZ) |

## Environment

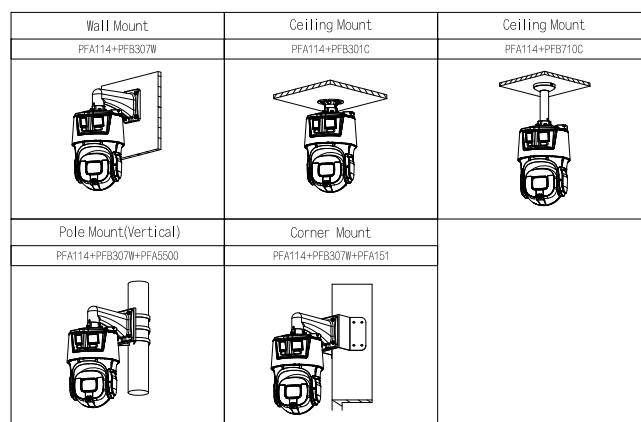
|                       |                                      |
|-----------------------|--------------------------------------|
| Operating Temperature | –40 °C to +70 °C (–40 °F to +158 °F) |
| Operating Humidity    | ≤ 95%                                |
| Protection            | IP67                                 |

## Structure

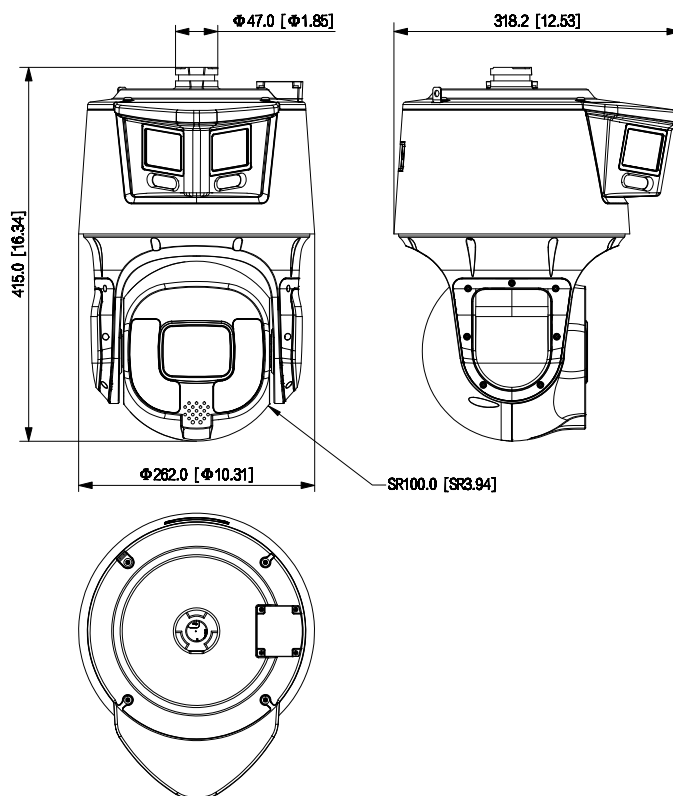
|                    |                                                                       |
|--------------------|-----------------------------------------------------------------------|
| Product Dimensions | 318.2 mm × 262.0 mm × 415.0 mm (12.53" × 10.31" × 16.34") (L × W × H) |
| Net Weight         | 8.8 kg (19.40 ft)                                                     |
| Gross Weight       | 11.12 kg (24.52 ft)                                                   |

## Ordering Information

| Type                         | Model                        | Description                                               |
|------------------------------|------------------------------|-----------------------------------------------------------|
| 8MP<br>WizMind PTZ<br>Camera | DH-SDT8C842-8P-FA-APV-0280-C | 8MP 42x Starlight Dual Light Network Panoramic PTZ Camera |
|                              | SDT8C842-8P-FA-APV-0280-C    | 8MP 42x Starlight Dual Light Network Panoramic PTZ Camera |
| Accessories                  | PFB307W                      | Wall Mount Bracket                                        |
|                              | DC 36 V/2.23 A               | Power Adapter                                             |
|                              | PFA114                       | Mount Adapter                                             |
|                              | PFB301C                      | Ceiling Mount Bracket                                     |
|                              | PFB710C                      | Ceiling Mount Bracket                                     |
|                              | PFA5500                      | Pole Mount Bracket                                        |
|                              | PFA151                       | Corner Mount Bracket                                      |



## Dimensions (mm[inch])



## Accessories

Included:



PFB307W  
Wall Mount Bracket



DC 36 V/2.23 A  
Power Adapter



PFA114  
Mount Adapter

Optional:



PFB301C  
Ceiling Mount Bracket



PFB710C  
Ceiling Mount Bracket



PFA5500  
Pole Mount Bracket



PFA151  
Corner Mount Bracket