

# DH-SD6C3432GB-HNR-AGQ-PV1-EAU

4MP 32x Starlight 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. 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

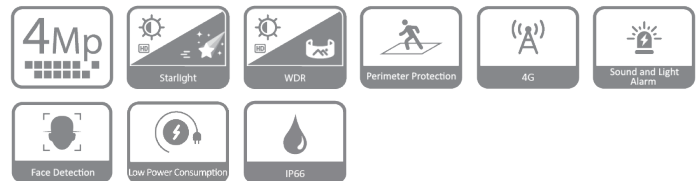
### Starlight Technology

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

### PFA Technology

PFA technology has introduced new methods of judgment that ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms that ensure image clarity when zooming and that shorten focus time. This makes the camera highly advanced in its functions, substantially improving the quality of your experience.

- 1/2.8" 4Megapixel STARVIS™ CMOS.
- 32x optical zoom.
- Starlight technology.
- Max. 25/30fps@4MP.
- IR distance up to 150 m.
- Auto-tracking 3.0.
- Perimeter protection.
- Face detection.
- 4G
- SMD 4.0.
- Smart Dual Light.
- IP66.



### 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.

### 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 (−10% to +25%, 6 kV)

Designed with −10% to +25% input voltage tolerance, the camera is suitable for even the most unstable outdoor conditions. Its 6 kV lightning rating ensures protection against lightning for both the camera and its structure.

### Siren and Light Active Deterrence

The camera supports the red-blue light alarm and voice alarm when perimeter event occurs, to realize the deterrence and effective intervention. The camera is built in the alarm voice, and supports customized voice importing.

## 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   | 1 s–1/30,000 s                                                                              |
| 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      | 150 m (492.13 ft) (IR);<br>50 m (164.04 ft) (white light)                                   |
| Illuminator On/Off Control | Zoom Prio; Manual; Auto; Off                                                                |
| Illuminator Number         | 2 (IR light); 2 (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                                                                                                                                                                                                                                                                                                                                                                    |                           |                       |                       |
| DORI Distance        | Detect                                                                                                                                                                                                                                                                                                                                                                          | Observe                   | Recognize             | Identify              |
|                      | 3,080 m<br>(10104.99 ft)                                                                                                                                                                                                                                                                                                                                                        | 1,216.6 m<br>(3991.47 ft) | 616 m<br>(2021.00 ft) | 308 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<br>Tilt: –20° to +90°, auto flip 180° |
| Manual Control Speed | Pan: 0.1°/s–160°/s;<br>Tilt: 0.1°/s–120°/s                    |
| Preset Speed         | Pan: 240°/s;<br>Tilt: 150°/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                                   |

## Intelligence

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Metadata             | Detects motor and non-motor vehicles, faces and human bodies. It also performs tracking, takes snapshots, uploads high-quality face images and optimizes images. It extracts attributes from motor vehicles, detecting up to 10 attributes for them.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Construction Detection     | Detects 6 helmet colors: Red, orange, yellow, blue, white, and black. An alarm will be triggered when a person is not wearing a helmet or when the color of the helmet that they are wearing does not match the configured color. It also supports compliance detection for work uniforms. Up to 5 work uniform sample libraries can be uploaded, which together can contain up to 1,000 images (the images must be 1080p and in the JPG format). An alarm will be triggered when the similarity between the detected work uniform and the samples in the library is below the set threshold (that is, below the minimum compliance standard for work uniforms). The system supports detecting the attributes of work uniforms such as the color of the uniform, and whether or not the person is wearing a mask and wearing shoe covers. An alarm will be triggered when the target is detected as not meeting the set requirements. It also detects and triggers alarms when only one person is in the construction site, and when no one is present in the detection area such as when a worker leaves their post or an area is left unmanned. |
| Auto Tracking              | Auto tracking 3.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SMD                        | SMD4.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Acupick                    | Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Auto Patrol                | It triggers the IVS rule when a target is detected and makes the camera link with the PTZ to rotate to the position of the target and patrol based on its presets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Active Deterrence

|               |                                                                                          |
|---------------|------------------------------------------------------------------------------------------|
| Light Warning | Red-Blue light warning<br>Flash duration: 5 s–30 s<br>Flash frequency: High, medium, low |
| Sound Warning | Sound warning alarm: Customizable<br>Volume: Volume: 0-100<br>Alarm duration: 5 s–30 s   |

## Video

|                      |                                                                                                                                                                                |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video Compression    | H.264H; H.264B; Smart H.265+; H.264; H.265; Smart H.264+; MJPEG (Sub Stream 1)                                                                                                 |
| Streaming Capability | 3 streams                                                                                                                                                                      |
| Resolution           | 4M (2560 × 1440); 3M (2048 × 1536); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); 1.3M (1280 × 960); D1 (704 × 576/704 × 480); VGA (640×480); CIF(352×288/352×240) |
| Video Frame Rate     | Main stream: 4M/3M/2304 × 1296/1080p/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/CIF @ (1–25/30 fps)                |

|                          |                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------|
| Bit Rate Control         | CBR/VBR                                                                                      |
| Video Bit Rate           | H.264: 96 Kbps–14,848 Kbps<br>H.265: 38 Kbps–8,960 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 Image Stabilization (EIS)                                                         |
| Defog                    | Electronic                                                                                   |
| Digital Zoom             | 16×                                                                                          |
| Image Rotation           | 180°                                                                                         |
| Privacy Masking          | Up to 24 areas can be set, with up to 8 areas in the same view;<br>Multiple colors available |
| S/N Ratio                | ≥55 dB                                                                                       |

## Audio

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

## Network

|                                 |                                                                                                                                                                              |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network Port                    | RJ-45 (10/100 Base-T)                                                                                                                                                        |
| Wireless Carrier Frequency Band | LTE-FDD: Seven-Band B1/3/5/7/8/20/28<br>LTE-TDD: Tri-Band 38/40/41<br>WCDMA: Tri-Band 1/5/8<br>GSM: Band3/5/8                                                                |
| Wake-up Type                    | SMS;2G/3G;<br>Streaming;4G(DMSS);<br>Alarm:Local alarm input;<br>Schedule                                                                                                    |
| Power Transmission              | CE:<br>4G: Power class3: 23 dBm ± 2.7 dB<br>3G: Power class3: 24 dBm ± 1/-3 dB<br>2G: Power class0: 30 dBm ± 2 dB (GSM1800/1900)<br>Power class5: 33 dBm ± 2 dB (GSM850/900) |
| Network Protocol                | FTP;RTMP;IPv6;Bonjour;IPv4;DNS;RTCP;PPPoE;NTP;RT P;802.1x;QoS;HTTPS;SNMP;TCP/IP;DDNS;UPnP;NFS;IC MP;UDP;IGMP;HTTP;SSL;DHCP;SMTP;RTSP;ARP                                     |
| 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  |

## 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; 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; warning light                                                        |
| Alarm Event   | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection |

## Power

|                   |                                                                                                                                                                                                                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply      | 12 VDC, 4 A (–10% to +25%)                                                                                                                                                                                                                                                                    |
| Power Consumption | Deep sleep: 0.12 W<br>Light sleep: 2.64W<br>Basic: 7 W (not pulling stream in 4G); 8 W (pulling stream in 4G);<br>Basic: 11 W (illuminator + not pulling stream in 4G), 12 W (illuminator + pulling stream in 4G)<br>Max: 18 W (illuminator + red and blue alarm lights + speaker + 4G + PTZ) |

## Environment

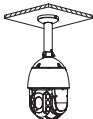
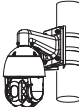
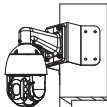
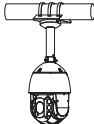
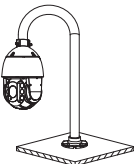
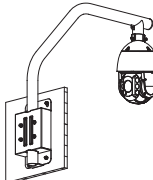
|                       |                                                                                  |
|-----------------------|----------------------------------------------------------------------------------|
| Operating Temperature | –40 °C to +70 °C (–40 °F to +158 °F)                                             |
| Operating Humidity    | ≤ 95%                                                                            |
| Protection            | IP66; TVS 6000 V lightning proof; surge protection; voltage transient protection |

## Structure

|                    |                                        |
|--------------------|----------------------------------------|
| Product Dimensions | 325.0 mm × Φ211.0 mm (12.80" × Φ8.31") |
| Net Weight         | 4.2 kg (9.26 lb)                       |
| Gross Weight       | 6.7 kg (14.77 lb)                      |

## Ordering Information

| Type        | Model                         | Description                                         |
|-------------|-------------------------------|-----------------------------------------------------|
| PTZ Camera  | DH-SD6C3432GB-HNR-AGQ-PV1-EAU | 4MP 32x Startlight TiOC WizSense Network PTZ Camera |
|             | SD6C3432GB-HNR-AGQ-PV1-EAU    | 4MP 32x Startlight TiOC WizSense Network PTZ Camera |
| Accessories | PFB305W                       | Wall Mount Bracket                                  |
|             | DC12V/4A                      | Power Adapter                                       |
|             | PFA111                        | Mount Adapter                                       |
|             | PFB301C                       | Ceiling Mount Bracket                               |
|             | PFB300C                       | Ceiling Mount Bracket                               |
|             | PFA126                        | Junction Box                                        |
|             | PFA150                        | Pole Mount Bracket                                  |
|             | PFA151                        | Corner Mount Bracket                                |
|             | PFB301S-E                     | Plane Mount Bracket                                 |
|             | PFB303S                       | Parapet Mount Bracket                               |

|                                                                                                                                     |                                                                                                                                |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Wall Mount</p> <p>PFB305W+PFA126</p>            | <p>Ceiling Mount</p> <p>PFA111+PFB300C</p>  | <p>Ceiling Mount</p> <p>PFA111+PFB301C</p>                  |
| <p>Pole Mount(Vertical)</p> <p>PFB305W+PFA150</p>  | <p>Corner Mount</p> <p>PFB305W+PFA151</p>   | <p>Pole Mount(Horizontal)</p> <p>PFA111+PFB300C+PFA150</p>  |
| <p>Plane Mount</p> <p>PFB301S-E</p>               | <p>Parapet Mount</p> <p>PFA111+PFB303S</p>  |                                                                                                                                                |

## Accessories

Included:



PFB305W  
Wall Mount Bracket



DC12V/4A  
Power Adapter

Optional:



PFA111  
Mount Adapter



PFB301C  
Ceiling Mount  
Bracket



PFB300C  
Ceiling Mount  
Bracket



PFA126  
Junction Box



PFA150  
Pole Mount  
Bracket



PFA151  
Corner Mount  
Bracket



PFB301S-E  
Plane Mount  
Bracket



PFB303S  
Parapet Mount  
Bracket

### Dimensions (mm[inch])

