

# DH-SD3A205-GNP-PV

2MP Starlight IR AI WizSense Network PTZ Camera



- 1/2.8" 2Megapixel STARVIS™ CMOS
- Starlight technology
- IR distance up to 30 m
- Deep-learning-based perimeter protection
- SMD Plus
- PoE
- IP66



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

Designed with H.265 coding technology, Dahua Starlight series camera has efficient video coding capability, which can save bandwidth and storage space. The product adopts the latest starlight technology to display better color images under low-light conditions.

## Functions

### Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improves alarm accuracy.

### Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.005 Lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

### Environment

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -30 °C to +60 °C (-22 °F to +140 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

### SMD Plus

With Deep-Learning Algorithm, Dahua SMD Plus filters the motion detection alarm triggered by non-concerned target and recognizes human and vehicle effectively, sending alarms when human and vehicle intrude.

### Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.

## Technical Specification

### Camera

|                            |                                                                         |
|----------------------------|-------------------------------------------------------------------------|
| Image Sensor               | 1/2.8" CMOS                                                             |
| Pixel                      | 2MP                                                                     |
| Max. Resolution            | 1920 (H) × 1080 (V)                                                     |
| ROM                        | 256 MB                                                                  |
| RAM                        | 512 MB                                                                  |
| Electronic Shutter Speed   | 1/3 s–1/100000 s                                                        |
| Scanning System            | Progressive                                                             |
| Min. Illumination          | Color: 0.002 Lux@F1.8<br>B/W: 0.0002 Lux@F1.8<br>0 Lux (illuminator on) |
| Illumination Distance      | 30 m (98.43 ft)                                                         |
| Illuminator On/Off Control | Manual/SmartIR/Off                                                      |
| Illuminator Number         | 4 IR lights; 1 white light                                              |

### Lens

|                      |                                                |                       |                    |                      |
|----------------------|------------------------------------------------|-----------------------|--------------------|----------------------|
| Focal Length         | 2.7 mm–13.5 mm                                 |                       |                    |                      |
| Max. Aperture        | F1.8–F3.3                                      |                       |                    |                      |
| Field of View        | H: 101.6°–33.5°; V: 52°–18.7°; D: 124.7°–38.5° |                       |                    |                      |
| Optical Zoom         | 5x                                             |                       |                    |                      |
| Focus Control        | Auto/Semi-Auto/Manual                          |                       |                    |                      |
| Close Focus Distance | 1.2 m (3.94 ft)                                |                       |                    |                      |
| Iris Control         | Fixed                                          |                       |                    |                      |
| DORI Distance        | Detect                                         | Observe               | Recognize          | Identify             |
|                      | 131 m<br>(429.79 ft)                           | 52.3 m<br>(171.59 ft) | 26 m<br>(85.30 ft) | 12.8 m<br>(41.99 ft) |

### PTZ

|                      |                                         |
|----------------------|-----------------------------------------|
| Pan/Tilt Range       | Pan: 0°–355°<br>Tilt: -15°–+90°         |
| Manual Control Speed | Pan: 0.1°/s–80°/s<br>Tilt: 0.1°/s–56°/s |
| Preset Speed         | Pan: 81°/s; Tilt: 43°/s                 |
| Preset               | 300                                     |
| Power-off Memory     | Support                                 |
| Idle Motion          | Preset                                  |

### Artificial Intelligence

|                      |                                                                                                                                                                              |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Perimeter Protection | Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc. |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Video

|                      |                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------|
| Compression          | H.265; H.264B; H.264M; H.264H; MJPEG; MJPEG (Sub Stream); H.265+; H.264+                                       |
| Streaming Capability | 3 streams                                                                                                      |
| Resolution           | 1080P (1920 × 1080); 1.3M (1280 × 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240) |

|                          |                                                                                                                                                                                             |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frame Rate               | Main stream: 1080P (1–25/30 fps); 1.3M (1–25/30 fps); 720P (1–25/30 fps)<br>Sub stream 1: D1/CIF (1–25/30 fps)<br>Sub stream 2: 1080P (1–25/30 fps); 1.3M (1–25/30 fps); 720P (1–25/30 fps) |
| Bit Rate Control         | Variable/Constant                                                                                                                                                                           |
| Bit Rate                 | H.264: 3 Kbps–20480 Kbps<br>H.265: 3 Kbps–20480 Kbps                                                                                                                                        |
| Day/Night                | Auto (ICR)                                                                                                                                                                                  |
| BLC                      | Support                                                                                                                                                                                     |
| WDR                      | DWDR                                                                                                                                                                                        |
| HLC                      | Support                                                                                                                                                                                     |
| White Balance            | Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural light/Street lamp                                                                                                                   |
| Gain Control             | Auto/Manual                                                                                                                                                                                 |
| Noise Reduction          | 2D/3D                                                                                                                                                                                       |
| Motion Detection         | Support                                                                                                                                                                                     |
| Region of Interest (RoI) | Support                                                                                                                                                                                     |
| Defog                    | Electronic                                                                                                                                                                                  |
| Flip                     | 180°                                                                                                                                                                                        |
| S/N Ratio                | ≥ 55 dB                                                                                                                                                                                     |

### Audio

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

### Network

|                     |                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet            | RJ-45 (10/100Base-T)                                                                                                                                               |
| Protocol            | IPv4; IPv6; HTTP; HTTPS; 802.1x; QoS; FTP; SMTP; UPnP; SNMP; DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; SNMP v1/v2c/v3 (MIB-2); RTCP; RTMP |
| Interoperability    | ONVIF Profile S&G&T; CGI                                                                                                                                           |
| Streaming Method    | Unicast/Multicast                                                                                                                                                  |
| User/Host           | 20 (total bandwidth: 64 M)                                                                                                                                         |
| Storage             | FTP; Micro SD card (256 G); NAS                                                                                                                                    |
| Browser             | IE7 and later versions<br>Chrome 42 and earlier versions<br>Firefox 52 and earlier versions<br>Safari                                                              |
| Management Software | DMSS                                                                                                                                                               |
| Mobile Phone        | iOS, Android                                                                                                                                                       |

### Certification

|                |                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------|
| Certifications | CE: EN55032/EN55024/EN50130-4/EN 55035/EN 61000-3-2/EN 61000-3-3/EN 62368-1<br>FCC: Part15 subpartB, ANSI C63.4- 2014 |
|----------------|-----------------------------------------------------------------------------------------------------------------------|

### Port

|               |                      |
|---------------|----------------------|
| Audio Input   | 1 (Built-in Mic)     |
| Audio Output  | 1 (Built-in Speaker) |
| Two-way Audio | Support              |

|               |                                                                                                                                                                                   |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alarm Linkage | Capture; preset; SD card record; send email                                                                                                                                       |
| Alarm Event   | Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; encoder state detection; memory card state detection; memory space detection |

#### Power

|                   |                                        |
|-------------------|----------------------------------------|
| Power Supply      | 12V DC/2A $\pm$ 10% (supports PoE)     |
| Power Consumption | Basic: 5W<br>Max: 12W (illuminator on) |
| Power Adapter     | Included                               |

#### Environment

|                       |                                                                                 |
|-----------------------|---------------------------------------------------------------------------------|
| Operating Temperature | -30°C to +60°C (-22°F to 140°F)                                                 |
| Operating Humidity    | $\leq$ 95%                                                                      |
| Protection            | IP66; TVS 2000V lightning proof; surge protection; voltage transient protection |

#### Structure

|              |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|
| Dimensions   | 271.7 mm $\times$ 142.5 mm $\times$ 124.1 mm (10.70" $\times$ 5.61" $\times$ 4.89") |
| Net Weight   | 1.1 kg (2.43 lb)                                                                    |
| Gross Weight | 1.51 kg (3.33 lb)                                                                   |

#### Ordering Information

| Type        | Model              | Description                                            |
|-------------|--------------------|--------------------------------------------------------|
| 2M Camera   | DH-SD3A205-GNP-PV  | 2MP Starlight IR AI Wisesense Network PTZ Camera, PAL  |
|             | DH-SD3A205N-GNP-PV | 2MP Starlight IR AI Wisesense Network PTZ Camera, NTSC |
|             | SD3A205-GNP-PV     | 2MP Starlight IR AI Wisesense Network PTZ Camera, PAL  |
|             | SD3A205N-GNP-PV    | 2MP Starlight IR AI Wisesense Network PTZ Camera, NTSC |
| Accessories | PoE/DC12V 2A       | Power Adapter                                          |

#### Accessories

##### Included :



DC12V/2A  
Power Adapter

| Wall Mount | Ceiling Mount | Pole Mount(Vertical) |
|------------|---------------|----------------------|
| /          | /             | /                    |
|            |               |                      |

#### Dimensions (mm)

