

# DH-SD4A425DB-HNY-R

4MP 25x Starlight Invisible IR Network PTZ Camera



Wiz Sense

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

With its powerful optical zoom, and accurate pan and tilt capabilities, the PTZ camera provides an all-in-one solution for long distance video surveillance of outdoor scenes. Together with infrared illumination and Starlight Technology, the camera is a great solution for dark, low light conditions. The series combines a day and night mechanical IR cut filter to produce high quality images in variable lighting conditions during the day.

## Functions

### Starlight Technology

Dahua Starlight technology utilizes advanced image processing and optical technologies to deliver clear videos, even in low-lighting environments. This technology is extensively employed across a range of settings that have inadequate lighting.

### 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.

- 1/2.8" 4Megapixel STARVIS™ CMOS
- 25x optical zoom
- Starlight technology
- Max. 25/30 fps@4MP
- Invisible IR distance up to 50m
- Auto-tracking 1.0
- Low-noise motor
- Somke dome cover
- Perimeter protection
- Face detection
- SMD 3.0
- IP66



### 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.

### Auto-tracking

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically.

### 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.

### Environment (−40 °C to +65 °C, IP66)

Developed to operate in extreme conditions, the camera can function in temperatures ranging from −40 °C to +65 °C (−40 °F to +149 °F) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP66 Ingress Protection certification, making it suitable for demanding outdoor applications.

## Technical Specification

### Camera

Image Sensor	1/2.8" CMOS
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	128 MB
RAM	512 MB
Electronic Shutter Speed	1/1s~1/30000s
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux (IR on)
Illumination Distance	50 m (164.04 ft)
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off
Illuminator Number	6 (Invisible IR)

### Lens

Focal Length	5 mm–125 mm
Max. Aperture	F1.6–F3.6
Field of View	H: 51.9°–3.0°; V: 39.7°–2.2°; D: 63.1°–3.7°
Optical Zoom	25×
Focus Control	Auto; semi-auto; manual
Close Focus Distance	0.5 m–5 m (1.64 ft–16.40 ft)
Iris Control	Auto; manual

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	100.0 m ( 328.08 ft)	40.0 m ( 131.23 ft)	20.0 m ( 65.62 ft)	10.0 m ( 32.81 ft)
	T	2500.0 m ( 8202.00 ft)	1000.0 m ( 3280.80 ft)	500.0 m ( 1640.40 ft)	250.0 m ( 820.20 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 Tilt: -5° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–120°/s Tilt: 0.1°/s–90°/s
Preset Speed	Pan: 120°/s; Tilt: 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
PTZ Protocol	DH-SD

### Intelligence

IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification; linkage tracking
Face Detection	Supports face detection, face track box, capturing pictures, face enhancement; Supports face cutout: Face, one-inch photo. Capturing strategies include real-time capturing and quality first
SMD	SMD 3.0
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.

### Video

Video Compression	Smart H.265+;H.265;Smart H.264+;H.264;H.264B;H.264H;MJPEG(Sub Stream 1)
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 3M (2304 × 1296); 1080P (1920 × 1080); 1.3M (1280 × 960); 720P (1280 × 720); D1 (704 × 576); VGA (640 × 480); CIF(352 × 288)
Video Frame Rate	Main stream: 4M/3M/1080p/1.3M/720p@(1–25/30 fps) Sub stream 1: D1/VGA/CIF@(1–25/30 fps) Sub stream 2: 720p/CIF@(1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264;96Kbps - 14848Kbps H.265:38Kbps - 8960Kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
WDR	120 dB
HLC	Yes
White Balance	Auto; indoor; outdoor; ATW; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (Rol)	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
S/N Ratio	≥ 55 dB

### Audio

Audio Compression	G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; PCM; AAC
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## Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;SNMPv1/v2c/v3(MIB-2);IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;SMB;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	IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions iOS 10 and later versions
Management Software	DSS;DSS Pro
Mobile Client	iOS;Android

## Certification

Certifications	CE: EN 62368-1/EN55032/EN55035/EN50130-4/EN61000-3-2/EN61000-3-3 UL:UL62368-1
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## 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; preset; tour; pattern; recordings on SD card; alarm digital input; send email;
Alarm Event	Motion/Tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection;
Alarm I/O	2/1
Audio I/O	1/1

## Power

Power Supply	12 VDC/2 A ± 10% (included) PoE+ (802.3at)
Power Consumption	Basic: 10 W Max.: 19.5 W (illuminator on + fan on + PTZ)
Power Adapter	Included

## Environment

Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Operating Humidity	≤ 95%
Storage Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Storage Humidity	≤ 95%
Protection	IP66;TVS 6000 V lightning proof; surge protection

## Structure

Product Dimensions	170.4 mm × Φ171.1 mm (6.71" × Φ6.74")
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Net Weight	2.5 kg (5.51 lb)
Gross Weight	3.2 kg (7.05 lb)

## Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SD4A425DB-HNY-R	4MP 25x Starlight Invisible IR Network PTZ Camera
	DC12V/2A	Power Adapter
Accessories	DH-PFB300C	Ceiling Mount Bracket
	DH-PFA101	Mount Adapter
	DH-PFB303W	Wall Mount Bracket
	DH-PFA151	Corner Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFB5310C	In-ceiling Mount Bracket
	DH-PFB303S	Parapet Mount Bracket

## Accessories

### Included:



DC12V/2A  
Power Adapter

### Optional:



DH-PFA101  
Mount Adapter



DH-PFA150  
Pole Mount Bracket



DH-PFA151  
Corner Mount Bracket



DH-PFB300C  
Ceiling Mount Bracket



DH-PFB303S  
Parapet Mount Bracket



DH-PFB303W  
Wall Mount Bracket



DH-PFB5310C  
In-ceiling Mount Bracket

Ceiling Mount	Ceiling Mount PFA101+PFB300C	Wall Mount PFA101+PFB303M
		
Pole Mount (Vertical) PFA101+PFB303M+PFA150	Corner Mount PFA101+PFB303M+PFA151	Parapet Mount PFA101+PFB303S
		
In-ceiling Mount PFB5310C		
		

**Dimensions (mm[inch])**

