DH-SD4A425DB-HNY

4MP 25x Starlight IR WizSense Network PTZ Camera



- 1/2.8" 4Megapixel STARVIS™ CMOS.
- 25x optical zoom.
- Starlight technology.
- Max. 25/30fps@4MP.
- IR distance up to 100 m.
- Auto-tracking 1.0.
- Perimeter protection.
- Face detection.
- SMD 3.0.
- 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

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
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.

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.

Auto-tracking 1.0
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.

SMD
Empowered by deep-learning algorithms, Dahua SMD filters out motion detection alarms triggered by targets that are not a concern. It quickly recognizes humans and vehicles, triggering alarms when an intrusion occurs.

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.

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Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Pixel	4 MP
Max. Resolution	2560 × 1440
Electronic Shutter Speed	1/1s–1/30000s
Scanning System	Progressive
Min. Illumination	Color: 0.005lux@F1.6 B/W: 0.0005lux@F1.6 0Lux (IR on)
Illumination Distance	100 m (328.08 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off
Illuminator Number	6 (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–16.40ft)
Iris Control	Auto; manual
Iris Control Type	P-Iris

DORI Distance	Detect	Observe	Recognize	Identify
	2500 m (8202.10 ft)	987.5 m (3239.83 ft)	500 m (1640.42 ft)	250 m (820.21 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–240°/s Tilt: 0.1°/s–160°/s
Preset Speed	Pan: 240°/s; Tilt: 160°/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

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
Smart Tracking	Auto Tracking 1.0
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	H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG(Sub Stream); Smart H.264+
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 (RoI)	Yes
Image Stabilization	Electronic (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

Network

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Network Port	RJ-45 (10/100 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; ;SAMBA
Interoperability	CGI; SDK; ONVIF (Profile S & Profile G & Profile T & Profile M); 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	DMSS; DSS PRO
Mobile Client	iOS; Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL62368-1

Port

Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
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 Input	2 channels in: supports wet contact connection (max load 5 mA 3–5 VDC); supports dry contact connection
Alarm Output	1 channel out: dry contact, max load 1,000 mA 30 VDC/500 mA 50 VAC
Audio I/O	1/1

Power

Power Supply	12 VDC (± 10%) ,2 A (included);PoE+ (802.3at)
Power Consumption	Basic: 9.5 W Max(illuminator on + fan on + PTZ): 21.5 W

Environment

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

Structure

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

Ordering Information

Type	Model	Description
4MP PTZ Camera	DH-SD4A425DB-HNY	4MP 25x Starlight IR WizSense Network PTZ Camera
	SD4A425DB-HNY	4MP 25x Starlight IR WizSense Network PTZ Camera
Accessories	DC 12 V/2 A	Power Adapter
	PFA101	Mount Adapter
	PFB303W	Wall Mount Bracket
	PFB300C	Ceiling Mount Bracket
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket
	PFM900-E	Integrated Mount Tester
	TF-P100	MicroSD Memory Card
	PFB5310C	In-ceiling Mount

Accessories

Included:



DC 12 V/2A
Power Adapter

Optional:



PFA101
Mount Adapter



PFB303W
Wall Mount Bracket



PFB300C
Ceiling Mount Bracket



PFA150
Pole Mount Bracket



PFA151
Corner Mount Bracket



PFB303S
Parapet Mount Bracket



PFM900-E
Integrated Mount Tester



TF-P100
MicroSD Memory Card



PFB5310C
In-ceiling Mount

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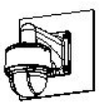
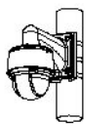
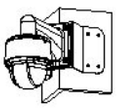
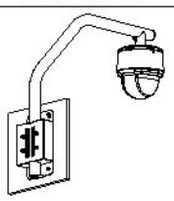
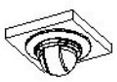
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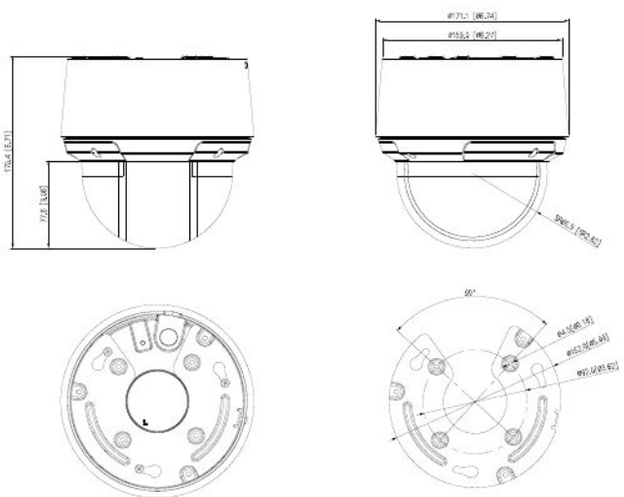
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Installation

Ceiling Mount	Ceiling Mount	Wall Mount
	PFA101+PFB300C	PFA101+PFB303W
		
Pole Mount (Vertical)	Corner Mount	Parapet Mount
PFA101+PFB303W+PFA150	PFA101+PFB303W+PFA151	PFA101+PFB303S
		
In-ceiling Mount		
PFB5310C		
		

Dimensions (mm [inch])



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