

# DH-SD5A432MB-HNR

4MP 32x Starlight IR WizSense 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

Unique and elegant, the black semicircular sphere discreetly monitors from a distance without drawing undue attention to itself. It has a powerful optical zoom, and accurate pan, tilt and zoom capabilities, providing 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, and True WDR for locations with direct sunlight and glare.

## Functions

### Face Detection

Supports 6 attributes and 8 expressions: Gender, age, glasses, face mask, beard and expressions (anger, sadness, disgust, fear, surprise, calm, happiness, and confusion). It also supports face cutout settings: Face, and single inch photo. Three snapshot methods are also featured: Real-time snapshot, priority snapshot, and quality priority.

### AI-ISP

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

- 1/2.8" 4Megapixel CMOS.
- Powerful 32x optical zoom.
- Max. 25/30 fps@4M.
- IR distance up to 150 m.
- Auto Tracking 3.0.
- Perimeter Protection
- Face Detection.
- Acupick.
- SMD 4.0.
- PoE+.
- IP67, IK10.



### Auto Tracking

This feature controls the pan, tilt and zoom actions of the camera to automatically track an object in motion, to keep it in view of the camera. Tracking 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.

### SMD4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms.

### AcuPick

This industry-leading search technology effectively utilizes both front-end and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.

### 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	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux (IR light on)
Illumination Distance	150 m (492.13 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR
Illuminator Number	4 (IR)

#### Lens

Focal Length	4.8 mm–154 mm
Max. Aperture	F1.6–F4.0
Field of View	H: 55.81°–2.37° V: 31.92°–1.34° D: 63.71°–2.71°
Optical Zoom	32×
Focus Control	Auto; semi-auto; manual
Close Focus Distance	0.8 m–5.0 m (2.62 ft–16.40 ft)
Iris Control	Auto; manual

DORI Distance	Lens	Detect	Observe	Recognize	Identify
	W	96.0 m ( 314.96 ft)	38.4 m ( 125.98 ft)	19.2 m ( 62.99 ft)	9.6 m ( 31.50 ft)
	T	3080.0 m ( 10104.86 ft)	1232.0 m ( 4041.95 ft)	616.0 m ( 2020.97 ft)	308.0 m ( 1010.49 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: –15° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°–300°/s Tilt: 0.1°–140°/s
Preset Speed	Pan: 400°/s; Tilt: 240°/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 Pelco-P/D (Auto recognition)

#### 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; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification; linkage tracking
Face Detection	Supports face detection, face bounding box, capturing snapshots, uploading face snapshots, enhancing face images, and selecting a preferred image among a group of snapshots. Attribute Extraction is also supported, where 6 attributes and 8 expressions can be detected. The attributes are gender, age, glasses, mask, mustache and expressions. The expressions are angry, sad, hate, scared, surprised, calm, happy and confused. 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.
People Counting	Supports tripwire for people counting at entrances and exits, counting the number of people staying in an area and queuing in an area, and displaying and exporting reports based on the day, week and month.
Smart Tracking	AutoTracking 3.0
SMD	SMD 4.0
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.

#### 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 (2048 × 1536); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4M/1080p/960p/720p@(1–25/30 fps) Sub stream 1: D1/VGA/CIF@(1–25/30 fps) Sub stream 2: 1080p/960p/720p@(1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H264: 96 Kbps–14848 Kbps H265: 38 Kbps–8960 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	16x
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	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
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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;IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;NFS
Interoperability	ONVIF (Profile S & Profile G & Profile T);CGI;SDK
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	FTP; Micro SD card (512 GB); NAS
Browser	IE 7 and later versions Chrome 42 and earlier versions Firefox 52 and earlier versions Safari
Management Software	DSS;DMSS
Mobile Client	iOS;Android

### Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL60950-1+CAN/CSA C22.2, No.60950-1
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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; recording; triggering on-off value output; audio; sending email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory

Alarm Event	card state detection; memory space detection; power exception detection
Alarm I/O	2/1
Audio I/O	1/1

### Power

Power Supply	24 VDC; 2.5 A (±25%); PoE+ (802.3at)
Power Consumption	Basic: 13 W Max: 22 W (illuminator + PTZ working + Heater + Fan)
Power Adapter	Included

### Environment

Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating Humidity	≤95%
Protection	IP67;IK10;TVS 6000 V lightning proof; surge protection; voltage transient protection

### Structure

Product Dimensions	332 mm × Φ190 mm (13.07" × Φ7.48")
Net Weight	4.7 kg (10.36 lb)
Gross Weight	8 kg (17.64 lb)

### Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SD5A432MB-HNR	4MP 32x Starlight IR WizSense Network PTZ Camera
	PFB305W	Wall Mount Bracket
Accessories	DC24V/2.5A	Power Adapter
	DH-PFB301S-E	Plane Mount Bracket
	PFA111	Mount Adapter
	DH-PFB300C	Ceiling Mount Bracket
	DH-PFA151	Corner Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFB303S	Parapet Mount Bracket
DH-PFA126	Water-proof Junction Box	

### Accessories

Included:



PFB305W  
Wall Mount Bracket



DC24V/2.5A  
Power Adapter

Optional:



DH-PFB301S-E  
Plane Mount Bracket



PFA111  
Mount Adapter



DH-PFB300C  
Ceiling Mount Bracket



DH-PFA151  
Corner Mount Bracket



DH-PFA150  
Pole Mount Bracket

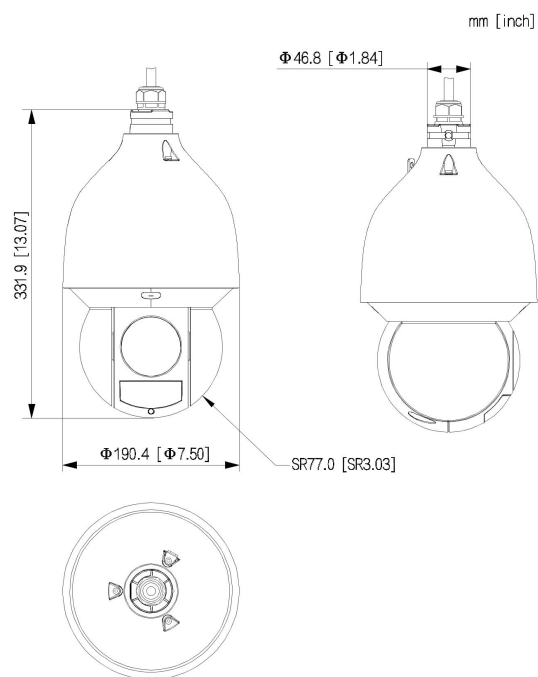


DH-PFB303S  
Parapet Mount Bracket



DH-PFA126  
Water-proof Junction Box

**Dimensions (mm[inch])**



<p>Wall Mount</p> <p>PFB305W+PFA120</p>	<p>Ceiling Mount 1</p> <p>PFA111+PFB300C</p>	<p>Ceiling Mount 2</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>	