

# DH-SD4E825MB-HNR-A-PV1

8MP 25 Starlight Smart Dual Illumination 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

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

### 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.

### 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.

- 1/2.8" 8Megapixel STARVIS™ CMOS.
- 25× optical zoom.
- Starlight technology.
- Max 25/30 fps@8M.
- IR distance up to 100 m.
- WizTracking.
- Built-in dual mics and a speaker for two-way talk.
- AI-ISP.
- Perimeter protection.
- Face detection.
- SMD 4.0.
- IP67.
- Full-color illuminator; red and blue warning light.



### Xinghan Large-Scale AI Models-Vision

Xinghan Large-Scale AI Models-Vision seamlessly expands the storage and operational capacity of algorithmic models through the powerful integration of edge AI model algorithms and NPU computing power. Engineered with a lightweight transformer architecture and enhanced by model distillation and quantization techniques, it optimizes the computing power consumption of ViT operators. This enables the system to collaborate on multiple tasks simultaneously through joint inference between small and large models optimized for edge devices.

### 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.

## Technical Specification

### Camera

Image Sensor	1/2.8" CMOS
Pixel	8 MP
Max. Resolution	3840 (H) × 2160 (V)
ROM	4 GB
RAM	2 GB
Electronic Shutter Speed	1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	0.005 lux@F1.6 (Color, 30 IRE); 0.0005 lux@F1.6 (B/W, 30 IRE); 0 lux (illuminator on)
Illumination Distance	100 m (328.08 ft) (IR); 50 m (164.04 ft) (Dual Light Fusion-white light only); 50 m (164.04 ft) (Dual Light Fusion-IR light only)
Illuminator On/Off Control	Zoom Prio; Manual; Auto; Off
Illuminator Number	2 (IR) 2 (Dual light fusion) 1 (Red light) 1 (Blue light)

### Lens

Focal Length	5 mm–125 mm
Max. Aperture	F1.6-F3.6
Field of View	H: 53.1°–3.4°; V: 30.4°–1.9°; D: 59.3°–3.9°
Optical Zoom	25×
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	Lens	Detect	Observe	Recognize	Identify
	W	137.9 m (452.52 ft)	55.2 m (181.01 ft)	27.6 m (90.50 ft)	13.8 m (45.25 ft)
	T	3448.3 m (11313.10 ft)	1379.3 m (4525.24 ft)	689.7 m (2262.62 ft)	344.8 m (1131.31 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°/s–200°/s; Tilt: 0.1°/s–120°/s
Preset Speed	Pan: 0.1°/s–240°/s; Tilt: 0.1°/s–200°/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

### Intelligence

IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking. Offers Perimeter Protection Large-Scale AI Models to extend the target detection range and reduce the rate of false alarm. Supports self-learning, it filters out false alarms.
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.
Smart Tracking	WizTracking
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	After an IVS event occurs, the PTZ camera immediately initiates automatic patrol of presets to quickly cover potential risk areas and detect unknown threats in real time.

### Active Deterrence

Light Warning	Red-blue light warning Flash duration: 5 s–30 s Flash frequency: high, medium, low
Sound Warning	Offers 11 types of sound alarms, and supports importing custom sound alarms.

### 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	4K (3840 × 2160); 4M (2560 × 1440); 3M (2048 × 1536); 3M (2304 × 1296); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4K/4M/3M/1080p/1.3 M/720p@(1–25/30 fps) Sub stream 1: D1/CIF/VGA@(1–25/30 fps) Sub stream 2: 1080p/1.3 MP/720p@(1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H264: 128 Kbps–16,384 Kbps H265: 128 Kbps–11,776 Kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	DWDR

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 32 areas can be set, with up to 8 areas in the same view; multiple colors available
S/N Ratio	≥ 55 dB

### Audio

Audio Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723
Built-in MIC	Yes
Built-in Speaker	Yes

### 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;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; Safari 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
----------------	--

### Port

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
Alarm I/O	2/1
Audio I/O	1/1

### Power

Power Supply	12 VDC; 3 A (±10%); PoE+ (802.3at)
Power Consumption	12 VDC: Basic: 7 W; Max: 16 W (white light+heated glass+PTZ on+alarm+red and blue light flashing) POE: Basic: 9 W; Max: 20.5 W (white light+heated glass+PTZ on+alarm+red and blue light flashing)
Power Adapter	Optional

### Environment

Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Operating Humidity	≤ 95%
Protection	IP67;TVS 6000 V lightning proof; surge protection; voltage transient protection

### Structure

Product Dimensions	269.9 mm × Φ160.0 mm (10.63" × Φ6.30")
Net Weight	2.6 kg (5.73 lb)
Gross Weight	4 kg (8.82 lb)

### Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SD4E825MB-HNR-A- PV1	8MP 25 Starlight Smart Dual Illumination Network PTZ Camera
	PFB305W	Wall Mount Bracket
Accessories	DH-PFB301S-E	Plane Mount Bracket
	PFA111	Mount Adapter
	DH-PFB300C	Ceiling Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFA151	Corner Mount Bracket
	DH-PFB303S	Parapet Mount Bracket
	DH-PFA126	Water-proof Junction Box

**Accessories**

**Dimensions (mm[inch])**

Included:



PFB305W  
Wall Mount Bracket

Optional:



DH-PFB301S-E  
Plane Mount Bracket



PFA111  
Mount Adapter



DH-PFB300C  
Ceiling Mount Bracket



DH-PFA150  
Pole Mount Bracket



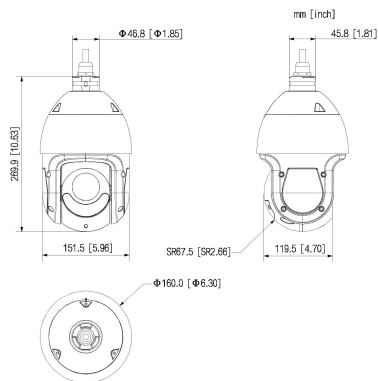
DH-PFA151  
Corner Mount Bracket



DH-PFB303S  
Parapet Mount Bracket



DH-PFA126  
Water-proof Junction Box



<p>Wall Mount PFB305W+PFA126</p>	<p>Ceiling Mount 1 PFA111+PFB300C</p>	<p>Ceiling Mount 2 PFA111+PFB301C</p>
<p>Pole Mount (Vertical) PFB305W+PFA150</p>	<p>Corner Mount PFB305W+PFA151</p>	<p>Pole Mount (Horizontal) PFA111+PFB300C+PFA150</p>
<p>Plane Mount PFB301S-E</p>	<p>Parapet Mount PFA111+PFB303S</p>	