

# DH-SD8A440FA-HNT

4MP 40× Starlight IR WizMind Network PTZ Camera for Traffic



WizMind

- 1/1.8" 4Megapixel STARVIS™ CMOS.
- 40 × optical zoom.
- Starlight technology.
- Max. 25/30 fps@4MP.
- H.265 encoding.
- ANPR.
- Illegal parking detection.
- Traffic Event.



Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, IVSS, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

## System Overview

Embedded with an advanced AI chip, this series of cameras provides an all-in-one solution for video surveillance of large areas. Outranking conventional cameras with its extended monitoring range, it automatically tracks targets. It also produces vivid images whether day or night, using infrared technology. It is suitable for a wide variety of scenarios, such as advanced defense areas that require high levels of control. You can also have the camera custom-made with an anti-corrosion structure.

## Functions

### Illegal Parking Capture

Empowered by deep learning algorithms, the device automatically detects and triggers alarms for illegal parking targets, and identifies vehicle attributes in designated areas. The camera supports zooming, capturing, and recognizing license plate numbers, vehicle types, vehicle colors, license plate colors and other motor vehicle attributes. The combination of long shots, close shots and detailed license plate snapshots form a complete chain of evidence on illegal behavior.

### Multi-scenario Tour

Configure tour plan and set up two intelligent modes to activate multi-scenario tour for greater control of your camera.

### Protection (IP67, TVS 6000 V)

IP67, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

### 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.

### 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, a flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality videos without straining the network. Smart H.265+ technology outranks standard H.265 video compression, reducing bit rate and storage requirements by up to 70%.

**Technical Specification**
**Camera**

Image Sensor	1/1.8" CMOS
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	8 GB
RAM	4 GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.001 lux@F1.4 B/W: 0.0001 lux@F1.4 0 lux (IR light on)
Illumination Distance	500 m (1,640.42 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off
Illuminator Number	10 (IR)
Wiper	Smart wiper

**Lens**

Focal Length	5.6 mm–223 mm			
Max. Aperture	F1.4–F4.5			
Field of View	H: 61.8°–2.2°; V: 36.3°–1.3°; D: 69.2°–2.4°			
Optical Zoom	40×			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.5 m–2 m (1.64 ft–6.56 ft)			
Iris Control	Auto			
DORI Distance	Detect	Observe	Recognize	Identify
	3,030 m (9,940.94 ft)	1,204 m (3,950.13 ft)	606 m (1,988.18 ft)	303 m (994.09 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: –30° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–240°/s Tilt: 0.1°/s–100°/s
Preset Speed	Pan: 240°/s; Tilt: 120°/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 Pelco-P/D (Auto recognition)

**Intelligence**

Illegal Parking Capture	Radius of capturing area: 150 m (492.13 ft) (multi-scene), 60 m (196.85 ft) (single-scene) Supports configuring and monitoring up to 8 illegal parking areas under the same scene; adaptive multi-scene tour is available to expand the monitoring area; supports recognizing motor vehicle attributes such as vehicle type, vehicle color, plate number and plate color
Checkpoint Capture	Detects events for up to 2 lanes. Detects wrong-way driving and traffic congestion. Recognizes motor vehicle attributes, including license plates, plate color, vehicle color, and vehicle type.
E-police	Detects events for up to 2 lanes. Detects wrong-way driving. Recognizes motor vehicle attributes, including license plates, plate color, vehicle color, and vehicle type.
Traffic Information Acquisition	Detects pedestrian events on highways, elevated highways, express roads and more.

**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 (2048 × 1536); 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: 1080p/1.3M/720p (1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H.264: 512 kbps–13,056 kbps H.265: 204 kbps–7,936 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
WDR	140 dB
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; auto sodium lamp; sodium lamp; auto outdoor
Gain Control	Auto; manual
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic image stabilization
Defog	Optical
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; G722.1; G.729; MPEG2-Layer2; G723; PCM
Network	
Network Port	RJ-45 (10/100 Base-T)
Network Protocol	UDP; TCP; FTP; IGMP; RTMP; IPv6; IPv4; DNS; HTTP; PPPoE; NTP; DHCP; RTP; SMTP; 802.1x; Qos; HTTPS; SNMP; RTSP; DDNS; UPnP; ICMP
Interoperability	CGI; ONVIF (Profile S&G&T)
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	FTP; Micro SD card (512 GB)
Browser	IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions Safari 10 and later versions
Management Software	Cyber City
Port	
Analog Output	1 channel (CVBS output, BNC)
RS-485	1 (baud rate: 1200 bps–9600 bps)
Two-way Audio	Yes
Alarm Linkage	Capture; preset; tour; pattern; recordings on SD card; alarm digital input; send email; client E-map
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; encoder state detection; memory card state detection; memory space detection; power fault detection
Alarm I/O	7/2
Audio I/O	1/1
Power	
Power Supply	36 VDC/2.23 A±25% HI-PoE
Power Consumption	Basic: 20 W Max.: 33 W (IR light on)
Environment	
Operating Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Operating Humidity	≤ 95%
Protection	IP67, TVS 6000V lightning proof; surge protection; voltage transient protection
Structure	
Product Dimensions	415.9 mm × Φ262.0 mm (16.37" × Φ10.31")
Net Weight	8.5 kg (18.74 lb)
Gross Weight	12.5 kg (27.56 lb)

Accessory	Included: Wall mount bracket: PFB306W Power adapter: PFM311B-030-EN-HKA Optional: Mount adapter: PFA118 Wall mount: PFB306W Ceiling mount: PFB306W+PFA150	
Accessories	DC36V/2.23A	Power Adapter
	PFB306W	Wall Mount Bracket
	PFA118	Mount Adapter
	PFB710C	Ceiling Mount Bracket
	PFA150	Pole Mount Bracket
	PFB301S-E	Plane Mount Bracket

## Accessories

Included:



DC36V/2.23A  
Power Adapter



PFB306W  
Wall Mount Bracket

Optional:



PFA118  
Mount Adapter



PFB710C  
Ceiling Mount Bracket



PFA150  
Pole Mount Bracket



PFB301S-E  
Plane Mount Bracket

Wall Mount PFB306W+PFA120	Ceiling Mount PFA118+PFB710C	Ceiling Mount PFA118+PFB301C
Pole Mount(Vertical) PFB306W+PFA150	Corner Mount PFB306W+PFA151	Pole Mount(Horizontal) PFA118+PFB301C+PFA150
Plane Mount PFA118+PFB301S-E		

**Dimensions (mm[inch])**

