

DH-SD8A440FA-HNT_BR

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



WizMind

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.

AID Events

- Wrong-Way Driving
- Traffic Congestion
- Animal Detection
- Pedestrian Detection
- Parking Detection
- Littering

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



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)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –30° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–180°/s Tilt: 0.1°/s–75°/s
Preset Speed	Pan: 180°/s; Tilt: 75°/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	Supports detecting two-lane events. Detects and takes snapshots of various events, including ANPR, crossing the solid white line, crossing the solid yellow line, wrong-way driving, illegal lane change, vehicle queue jumping, vehicle in lane, disobeying the lane direction sign, speeding, trucks parked in prohibited area, driving slow, driver not wearing seatbelt and traffic congestion. Recognizes motor vehicle attributes, including license plates, plate color, vehicle color, vehicle type, vehicle speed, annual inspection stickers, tissue boxes, perfume boxes, pendants, seatbelt status, sun visor status, ornaments, vehicle logos, vehicle model and year, smoking and calling, sun visors, face cutouts, and seatbelts.
E-police	Supports detecting two-lane events. Detects and takes snapshots of various events, including ANPR, crossing the solid white line, crossing the solid yellow line, wrong-way driving, illegal lane change, disobeying the lane direction sign, speeding, trucks parked in prohibited area, illegal U-turn, illegal backing, not giving way to pedestrians, and disobeying the direction arrow. Recognizes motor vehicle attributes, including license plates, plate color, vehicle color, vehicle type, and vehicle speed.
Traffic Information Acquisition	Collects traffic data through ANPR and E-police such as start time, lane number, period (s), vehicle flow rate, average speed (km/h), time occupancy (%), space occupancy (%), time headway (s/veh), space headway (m), queue length (m), road status (smooth, mildly congested, heavily congested) and vehicle type (vehicle numbers are counted based on their type).
Traffic Event	Detects road events, such as accidents, littering, fog and pedestrians, in locations such as highways, elevated highways and express roads. Colors can be set for the 4 alarm levels of fog detection: Blue, yellow, orange and red. Littering detection cannot be enabled with other functions at the same time.

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	Yes

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	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	G.711a; G.711mu; G.726; G722.1; G.729; MPEG2-Layer2; G723; PCM
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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; NTCIP
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: 31 W Max.: 50 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

Ordering Information

Type	Model	Description
4MP WizMind PTZ Camera	DH-SD8A440FA-HNT_BR	4MP 40x Starlight IR WizMind Network PTZ Camera for Traffic
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])

