dahua TECHNOLOGY

DH-SD8A840PA-HNF-SL

8MP 40× Anti-corrosion WizMind PTZ Camera

WizMind

- 1/1.8" 8Megapixel STARVIS™ CMOS.
- 40x optical zoom.
- Starlight technology.
- IR distance up to 500 m.
- Auto-tracking.
- Perimeter protection.
- Face detection.
- Face recognition.
- Metadata.
- IP67.
- Anti-corrosion coating.

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.

| 8Mp | Starlight+ | Perimeter Protection | Video Metadata | Face Recognition | IP67 |

Video Metadata
Metadata is information on the attributes of targets that is extracted during monitoring. It can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind cameras: Human face, human body, motor vehicle and non-motor vehicle. Face information includes gender, age, glasses, masks, beards, and more. Human body information includes hat, top, top color, bottom, bottom color, bag, and more. Motor vehicle information includes plate color, type, vehicle color, sun visor, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

Series 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 and IK10.

Face Recognition
Face attributes are extracted from captured faces, and stored in a database where they can be conveniently searched for and compared against other images. Once a successful match is found, the system outputs the result. The Dahua Face Recognition camera supports a built-in database that stores up to 10,000 face images, allowing the camera to capture and compare face images in real time.

Functions

Starlight Technology
For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology offers the best in light sensitivity, capturing color in vivid detail, even in lighting as low as 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, producing clear images in dark environments.

Auto-tracking
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.

Perimeter Protection
With deep learning algorithm, Dahua Perimeter Protection technology can recognize human and vehicle accurately. In restricted area (such as pedestrian area and vehicle area), the false alarms of intelligent detection based on target type (such as tripwire, intrusion) are largely reduced.

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	8 MP
Max. Resolution	3840 (H) × 2160 (V)
ROM	8 GB
RAM	2 GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 Lux@F1.4 B/W: 0.0005 Lux@F1.4 0 Lux (IR light/laser on)
Illumination Distance	500 m (1640.42 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: 63.9°–2.0° V: 37.3°–1.1° D: 71.2°–2.3°
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
	4400 m (14435.70 ft)	1740 m (5708.66 ft)	880 m (2887.14 ft)	400 m (1312.34 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −30° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°–240°/s Tilt: 0.1°–100°/s
Preset Speed	Pan: 240°/s Tilt: 120°/s
Preset	300
PTZ Protocol	DH-SD Pelco-P/D (auto recognition)

Intelligence

Video Metadata	Motor vehicle, non-motor vehicle, face, human body detection; tracking; optimization; capturing pictures; uploading high-quality face snapshots. Motor vehicle attributes: License plate, plate color, vehicle type, vehicle color, vehicle logo, vehicle model, sunshield, seatbelt, smoking, calling, ornament, and annual inspection mark. Non-motor vehicle attributes: Type, color, number of people, top type and color, helmet. Human body attributes: Top/bottom type and color, bag, hat, gender, and umbrella. Face attributes: Gender, age, expressions, glasses, mouth mask, beard.
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 Recognition	Support face detection, optimization, tracking, capturing pictures, uploading high-quality face snapshots, and face enhancement. Support attributes extraction. 6 attributes and 8 expressions: Gender, age, glasses, expressions (angry, sad, hate, scary, surprise, calm, happy and confused), mask, mustache; Support face cutout: Face, one-inch photo. Capturing strategies include real-time capturing, optimization, quality first. Support 5 face databases; register one by one or in batches; support face recognition similarity settings and face comparison on the basis of 10,000 face databases.

Video

Video Compression	H.264H; Smart H.265+; H.264; H.265; MJPEG(Sub Stream); Smart H.264+
Resolution	4K (3840 × 2160); 4M (2560 × 1440); 1080p (1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576); CIF (352 × 288)
Video Frame Rate	50 Hz: Main Stream: 3840 × 2160@25 fps/2560 × 1440@25 fps/1920 × 1080@25 fps/1280 × 960@25 fps/1280 × 720@25 fps Sub Stream 1: 704 × 576@25 fps/352 × 288@25 fps Sub Stream 2: 1920 × 1080@25 fps/1280 × 960@25 fps/1280 × 720@25 fps 60 Hz: Main Stream: 3840 × 2160@30 fps/2560 × 1440@30 fps/1920 × 1080@30 fps/1280 × 960@30 fps/1280 × 720@30 fps Sub Stream 1: 704 × 480@30 fps/352 × 240@30 fps Sub Stream 2: 1920 × 1080@30 fps/1280 × 960@30 fps/1280 × 720@ 30 fps
Video Bit Rate	Default resolution of the main stream: H264: 512–16384 Kbps H265: 256–10240 Kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	120 dB
HLC	Yes
White Balance	Auto; manual; tracking; outdoor; indoor; auto outdoors; sodium lamp (auto); sodium lamp
Gain Control	Auto; manual
Noise Reduction	2D; 3D
Defog	Optical
Digital Zoom	16×
Image Rotation	180°
Privacy Masking	Up to 24 areas, and up to 8 areas in the same view
S/N Ratio	≥ 55 dB

Audio

Audio Compression	G.711a; G.711mu; G.726; AAC; G722.1; G.729; MPEG2-Layer2; G723

Network

Network Port	RJ-45 (10/100 Base-T)
Storage	FTP; Micro SD card (256 GB)
Browser	IE7 and later versions Chrome 45 and later versions Firefox 52 and earlier versions Safari
Management Software	DSS; DMSS; Easy4ip; Smart PSS; IVSS

Certification

Certifications	CE; FCC

Port

Analog Output	1 channel (CVBS output, BNC)
RS-485	1 (baud rate range: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
Alarm Linkage	Capture; preset; tour; pattern; SD card recording; triggering on-off value output; client electric map; sending email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; encoder state detection; memory card state detection; memory space detection; power exception detection
Alarm I/O	7/2
Audio I/O	1/1

Power

Power Supply	36 VDC/2.23A ± 25% HI-PoE
Power Consumption	Basic: 30 W Max.: 48 W (IR)

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	439 mm × Φ262 mm (17.28" × Φ10.32")
Net Weight	10 kg (22.05 lb)
Gross Weight	12 kg (26.46 lb)

Ordering Information

Type	Model	Description
NETWORK PTZ CAMERA	DH-SD8A840PA-HNF-SL	8MP 40× Anti-corrosion WizMind PTZ Camera
Accessories	DC36V/2.23A	Power Adapter
	PFB306W	Wall Mount Bracket
	PFA155A	Pole Mount Bracket

Accessories

Included:

DC36V/2.23A
Power Adapter

PFB306W
Wall Mount
Bracket

Optional:

PFA155A
Pole Mount
Bracket

Wall Mount	Pole Mount(Vertical)
PFB306W	PFA155A+PFB306W

Dimensions (mm[inch])

G1 1/2–B

439.0 [17.28]

262.0 [10.32]