DH-SD8C440FD-HNF

4MP 40x Polarlight NETWORK PTZ CAMERA

· 1/1.8" 4Megapixel STARVIS™ CMOS, dual sensors

· 40× optical zoom

· Max. 25/30 fps@4M

· Dual light fusion

· Auto-tracking

· Perimeter protection

· Face recognition

· Metadata

· IP67

POLARLIGHT Polar Light | 4Mp | Face Recognition | Perimeter Protection | Video Metadata | IP67

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, 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.

Functions

Polar Light

Designed with a dual 1/1.8" sensor architecture, the two sensors respectively obtain information on chromaticity and brightness through the multispectral image and merging technology. The sensors merge this information, producing a high-quality monitoring image even in environments with low illuminance. They also provide a variety of data services 24/7 in all weather conditions for the back-end platform.

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.

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, sunshield, ornament, calling, seatbelt, smoking, annual inspection sticker, and more. Non-motor vehicle information includes type, color, top type, top color, people number, and more.

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve alarm accuracy.

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.

Environment (−40 °C to +70 °C, IP67)

Developed to operate in extreme conditions, Dahua camera can function in temperatures ranging from −40 °C to +70 °C (−40 °F to +158 °F) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP67 Ingress Protection certification, making it suitable for demanding outdoor applications.

Smart H.265+ & Smart H.264+

With advanced scene-adaptive rate control algorithm, Dahua smart encoding technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

Technical Specification

Camera

Image Sensor	1/1.8" CMOS, dual sensors
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.0002 lux@F1.4 B/W: 0.0001 lux@F1.4 0 lux (dual light fusion on)
Illumination Distance	80 m (262.47 ft) (dual light fusion–white light only) 250 m (820.21 ft) (dual light fusion–IR only)
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off
Illuminator Number	10 (dual light fusion)
Wiper	Yes

Lens

Focal Length	6 mm–240 mm
Max. Aperture	F1.4–F4.3
Field of View	H: 63.5°–1.8°; V: 38.4°–1.1°; D: 70.7°–2.0°
Optical Zoom	40×
Focus Control	Auto; semi-auto; manual
Close Focus Distance	0.5 m–5 m (1.64 ft–16.40 ft)
Iris Control	Auto; manual; fixed

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −20° to +90°
Manual Control Speed	Pan: 0.1°/s–240°/s Tilt: 0.1°/s–100°/s
Preset Speed	Pan: 240°/s; Tilt: 100°/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

Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.
IVS (Perimeter Protection)	Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.
Face Recognition	Yes
Auto Tracking	Yes

Video

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264; H.264B; H.264H; MJPEG
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 3M (2048 × 1536); 1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4M/1080p/1.3M/720p (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080p/1.3M/720p/CIF (1–25/30 fps)
Bit Rate Control	CBR; VBR
Video Bit Rate	H.264: 2816 kbps–13056 kbps H.264H: 2816 kbps–13056 kbps H.265: 1024 kbps–7936 kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	Yes
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
Defog	Electronic
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; G726; MPEG2-Layer2; G722.1; G729; PCM

Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	HTTP; HTTPS; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; QoS; FTP; UPnP; ICMP; SNMP; IGMP; RTP; PPPoE; RTMP; TCP
Interoperability	ONVIF (Profile S&G&T); CGI; PSIA
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 45 and later versions Firefox 52ESR and earlier versions Safari
Management Software	Smart PSS; DSS; DMSS
Mobile Client	Android; iPhone; iPad; Windows Phone

Port

Analog Output	1 channel (CVBS output, BNC)
RS-485	1 (baud rate: 1200 bps–115200 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
Alarm I/O	7/2
Audio I/O	1/1
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; memory card state detection; memory space detection; power exception detection

Power

Power Supply	36 VDC, 2.23 A (± 25%) Hi-PoE
Power Consumption	Basic: 18 W Max.: 33 W (illuminator + PTZ)

Environment

Operating Temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Operating Humidity	≤95%
Protection	IP67; TVS 8000 V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	442 mm × Φ262 mm (17.40" × Φ10.31")
Net Weight	9.6 kg (21.16 lb)
Gross Weight	12.5 kg (27.56 lb)

Ordering Information

Type	Model	Description
4MP Camera	DH-SD8C440FD-HNF	4MP 40 Polarlight NETWORK PTZ CAMERA
	SD8C440FD-HNF	4MP 40 Polarlight NETWORK PTZ CAMERA
Accessories	DC36V/2.23A	Power Adapter
	PFB306W-S	Bracket
	PFA150	Bracket
	PFB300C-S	Bracket

Accessories

Included:

DC36V/2.23A Power Adapter

PFB306W-S Bracket

Optional:

PFA150 Bracket

PFB300C-S Bracket

Wall Mount	Ceiling Mount	Pole Mount(Vertical)
PFB306W–S	PFB300C–S	PFA150+PFB306W–S
Pole Mount(Horizontal)		
PFA150+PFB300C–S		

Dimensions (mm[inch])