

# DH-SD8C440FD-HNF

# 4MP 40 Startlight 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













#### **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 and IK10.

#### **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  $-40\,^{\circ}\text{C}$  to  $+70\,^{\circ}\text{C}$  ( $-40\,^{\circ}\text{F}$  to  $+158\,^{\circ}\text{F}$ ) 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.

### Scene

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology makes the camera highly sensitive, 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.

Focal Length 6 mm-240 mm white Balance natural light; street lamp 1  Max. Aperture F1.4-F4.3 Gain Control Auto; manual  Field of View H: 63.5-1.8°; V: 38.4°-1.1°; D: 70.7°-2.0° Noise Reduction 2D NR; 3D NR  Optical Zoom 40x Motion Detection Yes  Focus Control Auto; semi-auto; manual Region of Interest (Rol) Yes  Close Focus Distance 0.5 m-5 m (1.64 ft-16.40 ft) Defog Electronic  Iris Control Auto; manual; fixed Digital Zoom 16x  PTZ Image Potation 180°  Pan/Till Range Privacy Masking Up to 24 areas can be set, with up to 8 same view  Manual Control Speed Pan: 240°/s; Tilt: 100°/s S/N Ratio 255 d8  Preset Speed Pan: 240°/s; Tilt: 100°/s Audio Compression 67.31 A; G7.11 Mu; G7.25; MPEG2-Laye G7.29; PCM  Tour 8 (up to 32 presets per tour) Network Port RI-45 (10/100 Base-T)  Scan 5  Scan 5  Power-off Memory Yes  Intelligence Yes  Video Metadata Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  Inv Spenia Fire Protection abandone diffusion golgest; fast moving; parking detection; parking detection; parking detection	Technical Specification	1	Video	
Image Sensor	Camera		Video Compression	
Max. Resolution	Image Sensor	1/1.8" CMOS, dual sensors	Streaming Capability	
Max. Resolution	Pixel	4 MP		
	Max. Resolution	2560 (H) × 1440 (V)	Resolution	× 576/704 × 480); VGA (640 × 480); C
Scanning System   Progressive   Sub tream 2.12880p/1.3M/720p/CII   Silt Rate Control   CBR, VBR   Min. Illumination   Calon Goods Issair 1.4   AVV. DOOD 1 surfer 1.4   One (statul light fusion mo)   Video Bit Rate   M.764.2PII 6 light Fusion mo)   Day/Night   Auto (ICR); Color; B/W   Milluminator Con/Off Control   Commission Smart R.0 Off   BLC   Ves   Milluminator Number   10 (dual light fusion mo)   MDR   Ves   MCR   MCR   Ves   MCR   MCR   Ves   MCR   MCR   Ves   MCR	Electronic Shutter Speed	1/1 s-1/30,000 s	VI 5 . D.	Main stream: 4M/1080p/1.3M/720p
Millumination	Scanning System	Progressive	Video Frame Rate	
	Min. Illumination	B/W: 0.0001 lux@F1.4	Bit Rate Control	
Illuminator On/OH Control   200m Prior Monase, Smart (R. OH   200m Prior Monase)   200m Prior Monase, Smart (R. OH   200m Prior Monase)   200m Prior Monase   200m P	Illumination Distance	80 m (262.47 ft) (dual light fusion—white light only)	Video Bit Rate	H.264H: 2816 kbps-13056 kbps
Wigher   Yes   Wigher   Yes   Wigher   Yes   HLC   Yes	Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off	Day/Night	Auto (ICR); Color; B/W
HILC   Yes	Illuminator Number	10 (dual light fusion)	BLC	Yes
Focal Lens Focal Length 6 mm-240 mm White Balance Auto, Indoor, outdoor, tracking; manual natural light; street lamp Max. Aperture F1.4-F4.3 Gain Control Auto; manual Field of View H: 63.5'-1.8'; V: 38.4'-1.1'; D: 70.7'-2.0' Noise Reduction 2D NR; 3D NR Optical Zoom 40x Motion Detection Yes Focus Control Auto; semi-auto; manual Region of Interest (Rol) Yes Focus Control Auto; manual; fixed Defog Electronic First Control Auto; manual; fixed Digital Zoom 16x First Control Title 10'15-200'5 First Control Title 10'15-200'5 First Control Speed Pan: 0'15'-240'6' First Control Speed Pan: 0'15'-240'6' First Control Speed Pan: 240'/5; Titl: 100'5 Freset 300 Focus Control Speed Pan: 240'/5; Titl: 100'5 First 300 F	Wiper	Yes	WDR	Yes
Max. Aperture   F1.4—F4.3   Gain Control   Auto; indoors; outdoor; tracking; maninatural light; street lamp	Lens		HLC	Yes
Field of View H: 63.5"-1.8", V: 38.4"-1.1", D: 70.7"-2.0" Noise Reduction 2D NR; 3D NR  Optical Zoom 40x Motion Detection Yes  Focus Control Auto; semi-auto; manual Region of Interest (Rol) Yes  Close Focus Distance 0.5 m-5 m (1.64 ft-16.40 ft) Defog Electronic  Iris Control Auto; manual; fixed Digital Zoom 16x  PTZ Image Rotation 180°  Pan: 0" to 360" endiess Tilt: -20" to 190" Privacy Masking Up to 24 areas can be set, with up to 8 asme view same view asme view asme view asme view of the vie	Focal Length	6 mm-240 mm	White Balance	Auto; indoor; outdoor; tracking; manu natural light; street lamp
Optical Zoom 40×  Focus Control Auto; semi-auto; manual Region of Interest (Rol) Yes  Close Focus Distance 0,5 m-5 m (1,64 ft-16,40 ft) Defog Electronic  Iris Control Auto; manual; fixed Digital Zoom 16×  Iris Control Auto; manual; fixed Digital Zoom 16×  PTZ Image Rotation 180°  Pan: 0° to 360° endiess Tilt: -0° to 490° Silt: -0° to	Max. Aperture	F1.4-F4.3	Gain Control	Auto; manual
Focus Control Auto; semi-auto; manual Region of Interest (Rol) Yes  Close Focus Distance 0.5 m-5 m (1.64 ft-16.40 ft) Defog Electronic  Iris Control Auto; manual; fixed Digital Zoom 16×  Iris Control Auto; manual; fixed Digital Zoom 16×  Image Rotation 180°  Pan: 0° to 360° endless Tilt: -20° to 490°  Pan: 0° to 360° endless Tilt: -20° to 490°  Manual Control Speed Pan: 0.1½-2401½  Tilt: 0.1½-100½  Preset Speed Pan: 240½; Tilt: 100½  Audio Preset 300  Audio Compression G711A; G711Mu; G726; MPEG2-Laye G729; PCM  Network Protocol Ru-45 (10/100 Base-T)  Scan 5  Network Port Ru-45 (10/100 Base-T)  Network Protocol DINF; HTP; IPV4; RTSP; UDP; SMTP; DDNS; IPV; URPP; III GMP; RTP; PPPoG; RTMP; TCP  Interoperability ONVIF (Profile S&GRT); CGI; PSIA  Intelligence Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  IVS (Perimeter Protection) September 10 September 10 September 11 Storage FTP; Micro SD card (512 GB); NAS  Face Recognition Yes Management Software Smart PSS; DSS; DMSS	Field of View	H: 63.5°–1.8°; V: 38.4°–1.1°; D: 70.7°–2.0°	Noise Reduction	2D NR; 3D NR
Close Focus Distance  0.5 m - 5 m (1.64 ft - 16.40 ft)  Defog  Electronic  Digital Zoom  16×  Image Rotation  180°  Pant: 0 't 0 360° endiess 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  Audio  Audio  Audio Compression  67.71 A; G.711Mu; G.726; MPEG2-Laye G.729; PCM  Tour  8 (up to 32 presets per tour)  Network  Pattern  5  Scan  5  Network Port  RJ-45 (10/100 Base-T)  Network Port  RJ-45 (10/100 Base-T)  Network Protocol  DoNs; (PvG, 802.1v, QoS, FTP; UPnP; hi (GMP, RTP; PPOG; RTMP; TCP)  Interoperability  ONVIF (Profile S&G&T); CGI, PSIA  Intelligence  Video Metadata  Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Wanagement Software  Management Software  Smart PSS, DSS; DMSS	Optical Zoom	40×	Motion Detection	Yes
Iris Control Auto; manual; fixed Digital Zoom 16× PTZ Image Rotation 180* Pan: O' to 360° endless Tilt: -20° to +90° Tilt: -20° to +90° 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 Audio Preset 300 Audio Compression G.711A; G.711Mu; G726; MPEG2-Laye G729; PCM  Network Pattern 5 Network Pattern 5 Scan 5 Network Port RI-45 (10/100 Base-T) DNS; IPv6, 802.1x; QoS; FTP; UPnP; MI GNP, RTP; PPPDe; RTMP; TCP DNS; IPv6, 802.1x; QoS; FTP; UPnP; MI GNP, RTP; PPPDe; RTMP; TCP Intelligence Video Metadata Video Metadata Tilty Intrusion, climing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Was a made Rotation  180° Privacy Masking  Up to 24 areas can be set, with up to 8 same view  S/N Ratio  255 dB  Audio  6.711A; G.711Mu; G726; MPEG2-Laye G729; PCM  Network Port  RI-45 (10/100 Base-T)  Network Port  RI-45 (10/100 Base-T)  Network Protocol  DNS; IPv6, 802.1x; QoS; FTP; UDP; SMTP; DNS; ISMP; UDP; SMTP;	Focus Control	Auto; semi-auto; manual	Region of Interest (RoI)	Yes
PTZ  Pan/Tilt Range  Pan: 0° to 360° endless Tilt: -20° to +90°  Privacy Masking  Privacy M	Close Focus Distance	0.5 m-5 m (1.64 ft-16.40 ft)	Defog	Electronic
Pan/Tilt Range Pan: 0° to 360° endless Tilt: -20° to 490° Tilt: -20° to 490° Pan: 0.1°/s-240°/s Tilt: 0.1°/s-240°/s Tilt: 0.1°/s-100°/s Preset Speed Pan: 240°/s; Tilt: 100°/s Preset 300 Audio Compression Social Sequence of Audio Pattern Social Sequence of Se	Iris Control	Auto; manual; fixed	Digital Zoom	16×
Pan/Tilt Range 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  Audio  Audio  Audio Compression G.711A; G.711Mu; G726; MPEG2-Laye G729, PCM  Network  Pattern S Scan S Network Port RJ-45 (10/100 Base-T)  Network Protocol DNS; PPo, 8 20.2 1x; Qos; FTP; UDP; SMTP; DDNS; PPo, 8 20.2 1x; Qos; FTP; UDP, SMTP; TCP  Interoperability ONVIF (Profile S&G&T); CGI; PSIA  Intelligence  Support human body, human face, motor vehicle and non-motor vehicle inage capture and attributes extraction Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Yes  Management Software S/N Ratio	PTZ		Image Rotation	180°
Tilt: 0.1*/s-100*/s  Preset Speed  Pan: 240*/s; Tilt: 100*/s  Audio  Audio Compression  Audio Compression  Audio Compression  G.711A; G.711Mu; G726; MPEG2-Laye G729; PCM  Network  Network  Pattern  5  Scan  5  Network Port  Network Protocol  Netw	Pan/Tilt Range		Privacy Masking	Up to 24 areas can be set, with up to 8 same view
Preset 300 Audio Compression G.711A; G.711Mu; G726; MPEG2-Laye G729; PCM  Tour 8 (up to 32 presets per tour) Network  Pattern 5 Network Port RJ-45 (10/100 Base-T)  Scan 5 Network Protocol DNS; IPv6; 802.1x; QoS; FTF; UPnP; II IGMP; RTP; PPPoE; RTMP; TCP  Idle Motion Preset; Pattern; Tour; Scan Interoperability ONVIF (Profile S&G&T); CGI; PSIA  Intelligence  Video Metadata Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Browser Smart PSS; DSS; DMSS	Manual Control Speed		S/N Ratio	≥55 dB
Tour 8 (up to 32 presets per tour)  Network  Pattern 5  Scan 5  Network Protocol DNS; IPv4; RTSP; UDP; SMTP; DDNS; IPv6; 802.1x; QoS; FTP; UPnP; I IGMP; RTP; PPPoE; RTMP; TCP  Idle Motion Preset; Pattern; Tour; Scan Interoperability ONVIF (Profle S&G&T); CGI; PSIA  Intelligence  Video Metadata Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  IVS (Perimeter Protection) Support human body, climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Yes Management Software Smart PSS; DSS; DMSS	Preset Speed	Pan: 240°/s; Tilt: 100°/s	Audio	
Pattern 5  Scan 5  Network Port RJ-45 (10/100 Base-T)  Scan 5  Network Protocol DNS; IPvG; 802.1x; QOS; FTP; UPnP; III IGMP; RTP; PPPoE; RTMP; TCP  Idle Motion Preset; Pattern; Tour; Scan Interoperability ONVIF (Profile S&G&T); CGI; PSIA  Intelligence Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  Video Metadata Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  IVS (Perimeter Protection) Proping intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Management Software Smart PSS; DSS; DMSS	Preset	300	Audio Compression	G.711A; G.711Mu; G726; MPEG2-Laye G729; PCM
Scan  Interperability  Scan  Scan  Scan  Scan  Scan  Scan  Scan  Scan  Scan  Interperability  Scan  Sc	Tour	8 (up to 32 presets per tour)	Network	
Power-off Memory  Yes  Network Protocol  DDNS; IPv6; 802.1x; QoS; FTP; UPnP; II IGMP; RTP; PPPDE; RTMP; TCP  Intelligence  Streaming Method  Unicast; Multicast  User/Host  20 (total bandwidth: 64 M)  Storage  FTP; Micro SD card (512 GB); NAS  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  Network Protocol  DDNS; IPv6; 802.1x; QoS; FTP; UPnP; II IGMP; RTP; PPPDE; RTMP; TCP  User/Host  20 (total bandwidth: 64 M)  Storage  FTP; Micro SD card (512 GB); NAS  IE 7 and later versions Chrome 45 and later versions Firefox 52ESR and earlier versions Firefox 52ESR and earlier versions Safari  Management Software  Smart PSS; DSS; DMSS	Pattern	5	Network Port	RJ-45 (10/100 Base-T)
Interoperability   Preset; Pattern; Tour; Scan   Interoperability   ONVIF (Profle S&G&T); CGI; PSIA	Scan	5		HTTP; HTTPS; IPv4; RTSP; UDP; SMTP;
Streaming Method   Unicast; Multicast	Power-off Memory	Yes	Network Protocol	
Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.  Storage  Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Face Recognition  Support human body, human face, motor vehicle and non-motor vehicle and non-motor vehicle image capture and attributes  Storage  FTP; Micro SD card (512 GB); NAS  IE 7 and later versions Chrome 45 and later versions Firefox 52ESR and earlier versions Safari  Management Software  Smart PSS; DSS; DMSS	Idle Motion	Preset; Pattern; Tour; Scan	Interoperability	ONVIF (Profle S&G&T); CGI; PSIA
Video Metadata  and non-motor vehicle image capture and attributes extraction.  Storage  FTP; Micro SD card (512 GB); NAS  Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Browser  Browser  Browser  Browser  Safari  Face Recognition  Yes  Management Software  Storage  FTP; Micro SD card (512 GB); NAS  ME 7 and later versions Chrome 45 and later versions Safari  Safari  Management Software	Intelligence		Streaming Method	Unicast; Multicast
extraction.  Storage  FTP; Micro SD card (512 GB); NAS  IVS (Perimeter Protection)  Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Browser  Browser  Browser  Browser  Management Software  Smart PSS; DSS; DMSS	Vide - Metade		User/Host	20 (total bandwidth: 64 M)
abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification.  Browser  Chrome 45 and later versions Firefox 52ESR and earlier versions Safari  Face Recognition  Yes  Management Software  Smart PSS; DSS; DMSS	video Metadata	- ·	Storage	FTP; Micro SD card (512 GB); NAS
	IVS (Perimeter Protection)	abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm	Browser	Chrome 45 and later versions Firefox 52ESR and earlier versions
Auto Tracking Yes Mobile Client Android; iPhone; iPad; Windows Phon	Face Recognition	Yes	Management Software	Smart PSS; DSS; DMSS
	Auto Tracking	Yes	Mobile Client	Android; iPhone; iPad; Windows Phon

# SD8C Series | DH-SD8C440FD-HNF

### 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			
Туре	Model	Description	
4MP	DH-SD8C440FD-HNF	4MP 40 Startlight Polarlight NETWORK PTZ CAMERA	
Camera	SD8C440FD-HNF	4MP 40 Startlight Polarlight NETWORK PTZ CAMERA	
	DC36V/2.23A	Power Adapter	
Accessories	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])





