

DH-SD8A440XA-HNR-F

4MP 40x Starlight IR PTZ WizMind Network Camera



Wiz Mind

- 1/1.8" 4Megapixel STARVIS™ CMOS
- Powerful 40x optical zoom
- IR distance up to 250 m
- Support metadata
- Smart wiper
- Support Hi-PoE
- 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

Dahua PTZ WizMind network camera adopts advanced CNN deep learning algorithms to support Perimeter Protection with high accuracy. This camera possesses wide monitoring range and PFA algorithm that can always present a clear, focused image while zooming. The camera has very excellent low light performance due to adopting the latest starlight technology. The camera is equipped with smooth control, high quality image and good protection, which makes it meet most of the requirements of video surveillance applications.

Functions

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improves alarm accuracy.

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.001 Lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

PFA Technology

PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms.

PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

Environment

Dahua cameras can operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

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.

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

Technical Specification

Camera

Image Sensor	1/1.8" CMOS
Pixel	4MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	4 GB
RAM	1 GB
Electronic Shutter Speed	1/1 s–1/30000 s
Scanning System	Progressive
Min. Illumination	Color: 0.001 Lux@F1.4 B/W: 0.0001 Lux@F1.4 0 Lux (IR on)
Illumination Distance	250 m (820.21 ft)
Illuminator On/Off Control	Auto/Manual/SmartIR
Illuminator Number	10

Lens

Focal Length	5.5 mm–220 mm			
Max. Aperture	F1.4–F4.5			
Field of View	H: 63.9°–2.0°; V: 36°–1.3°; D: 68.18°–2.62°			
Optical Zoom	40x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	0.5 m–2 m (1.64 ft–6.56 ft)			
Iris Control	Auto/Manual			
DORI Distance	Detect	Observe	Recognize	Identify
	3034.5 m (9955.71 ft)	1204.2 m (3950.79 ft)	606.9 m (1991.14 ft)	303.4 m (995.41 ft)

PTZ

Pan/Tilt Range	Pan: 0°–360° endless Tilt: -30°–+90°, auto flip 180°
Manual Control Speed	Pan: 0.1°–180°/s Tilt: 0.1°–75°/s
Preset Speed	Pan: 180°/s; Tilt: 75°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D (auto recognition)

General Intelligence

Event Trigger	Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly.
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IVS	Object Abandoned/Missing
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Artificial Intelligence

Smart Capture	Support human, motor vehicle and non-motor vehicle image capture.
Perimeter Protection	Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc.
Auto Tracking	Support
Face Detection	Support
SMD Plus	Support

Video

Compression	H.265/H.265+/H.264+/H.264/MJPEG (Sub Stream)
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 3M (2048 × 1536); 1080P (1920 × 1080); 1.3M (1280×960); 720P (1280×720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 4M/3M (1–25/30 fps), 1080P/1.3M/720P (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080P/1.3M/720P (1–25/30 fps), D1/CIF (1–25/30 fps)
Bit Rate Control	Variable/Constant
Bit Rate	H.264: 32 Kbps–8192 Kbps H.265: 32 Kbps–8192 Kbps
Day/Night	Support
BLC	Support
WDR	120 dB
HLC	Support
White Balance	Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D/3D
Motion Detection	Support
Region of Interest (RoI)	Support
Image Stabilization	Electronic
Defog	Electronic
Digital Zoom	16x
Flip	0°/180°
Privacy Masking	Up to 24 areas
S/N Ratio	≥ 55 dB

Audio

Compression	G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2
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Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMP v1/v2c/v3 (MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP

Interoperability	ONVIF Profile S&G&T; CGI
Streaming Method	Unicast/Multicast
User/Host	20 (Total bandwidth 48M)
Storage	FTP; Micro SD card (256G); P2P
Browser	IE7 and later versions Chrome 42 and earlier versions Firefox 52 and earlier versions Safari
Management Software	Smart Player; Smart PSS; DSS; Easy4ip
Mobile Phone	IOS; Android; Windows Phone

Certification

Certifications	CE-LVD: EN 62368-1:2014+A11:2017 CE-EMC: EN 55032:2015,Class A/EN IEC 61000-3-2:2019/EN 61000-3-3:2013+A1:2019/EN 55024:2010+A1:2015/EN 55035:2017/EN 50130-4:2011+A1:2014 FCC: 47 CFR FCC Part15, Subpart B, Class A
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Port

RS-485	1
Audio Input	1 (LINE IN; bare wire)
Audio Output	1 (LINE OUT; bare wire)
Two-way Audio	Support
Alarm I/O	7/2
Alarm Linkage	Capture; preset; tour; pattern; record; trigger digital output; audio; send email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection
Optical Fiber	Support

Power

Power Supply	DC 36V±25%/2.23A HI-PoE
Power Consumption	18W 40W (IR light on)

Environment

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

Structure

Casing	Metal
Dimensions	Φ262 mm × 415.6 mm (Φ10.31" × 16.36")
Net Weight	8.5 kg (18.74 lb)
Gross Weight	13.1 kg (28.88 lb)

Ordering Information

Type	Part Number	Description
4MP WizMind PTZ Camera	DH-SD8A440XA-HNR-F	4MP 40x Starlight IR PTZ WizMind Network Camera, PAL
Accessories	PFB306W	Wall Mount Bracket
	DC 36V/2.23A	Power Adapter
	PFA118	Mount Adapter
	PFB710C	Ceiling Mount Bracket
	PFA150	Pole Mount Bracket
	PFB301S-E	Plane Mount Bracket

Accessories

Included:



PFB306W
Wall Mount Bracket



DC 36V/2.23A
Power Adapter

Optional:



PFA118
Mount Adapter



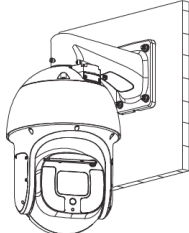
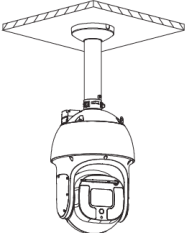
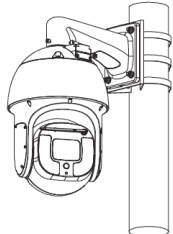
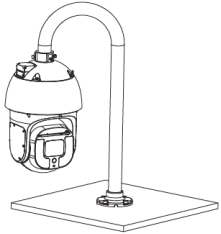
PFB710C
Ceiling Mount Bracket



PFA150
Pole Mount Bracket



PFB301S-E
Plane Mount Bracket

<p>Wall Mount</p> <p>PFB306W</p> 	<p>Ceiling Mount</p> <p>PFA118+PFB710C</p> 
<p>Pole Mount</p> <p>PFB306W+PFA150</p> 	<p>Plane Mount</p> <p>PFB301S-E</p> 

Dimensions (mm[inch])

