DH-SD8A840-HNF-PA

8MP 40x Starlight IR PTZ AI Network Camera

- 1/1.8" 8Megapixel STARVIS™ CMOS
- Powerful 40x optical zoom
- Starlight technology
- Perimeter protection
- Metadata
- Face detection
- Auto-tracking
- Smart wiper
- IP67

WizMind

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 industry verticals.

System Overview

Dahua PTZ WizMind network camera adopts advanced CNN deep learning algorithms to achieve high accuracy. This camera possess wide monitor range, PFA algorithm that can always present a clear, focused image while zooming, and smart wiper technology that supported by RainSensor.

Functions

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 0.005 Lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

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.

Metadata

Metadata is attribute information extracted from a target which can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind camera: Human face, human body, motor vehicle and non-motor vehicle. Facial information includes gender, age, glasses, masks, beards, etc. Human body information includes hat, top, top color, bottom, bottom color, bag, etc. Motor vehicle information includes plate color, type, vehicle color, sunshield, ornament, calling, seatbelt, smoking, annual inspection sticker, etc. Non-motor vehicle information includes type, color, top type, top color, people number, etc.

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.

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.

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	8MP
Max. Resolution	3840 (H) x 2160 (V)
ROM	8 GB
RAM	2 GB
Electronic Shutter Speed	1/1 s–1/30000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005Lux@F1.4 B/W: 0.0005 Lux@F1.4 0 Lux@F1.4 (illuminator on)
Illumination Distance	500 m (1640.42 ft)
Illuminator On/Off Control	Zoom Prio; Manual; SmartIR
Illuminator Number	10 IR lights
Wiper	Smart wiper

Lens

Focal Length	5.6 mm–223 mm			
Max. Aperture	F1.4–F4.8			
Field of View	H: 63.9°–2.0°; V: 37.2°–1.2°; D: 71.2°–2.4°			
Optical Zoom	40x			
Focus Control	Auto; Semi-Auto; Manual			
Close Focus Distance	0.5 m–1 m (1.64 ft–3.28 ft)			
Iris Control	Auto; Manual			
DORI Distance	Detect	Observe	Recognize	Identify
	4400 m (14435.70 ft)	1740m (5708.66 ft)	880 m (2887.14 ft)	440 m (1443.57 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° Tilt: -30° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–240°/s Tilt: 0.1°/s–100°/s
Preset Speed	Pan: 240°/s; Tilt: 120°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Speed Adjustment	Yes
Power-off Memory	Yes
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.
IVS	Object Abandoned; Object Missing

Artificial Intelligence

Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.
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	Yes

Video

Compression	Smart H.265+; H.265; Smart H.264+; H.264; MJPEG (Sub Stream 1)
Streaming Capability	3 streams
Resolution	4K (3840 × 2160); 4M (2560 × 1440); 1080P (1920 × 1080); 1.3M (1280 × 960); 720P (1280 × 720); D1 (704 × 576); CIF (352 × 288)
Frame Rate	Main stream: 4K/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)
Bit Rate Control	Variable; Constant
Bit Rate	H264: 512 Kbps–16384 Kbps H265: 256 Kbps–10240 Kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	140 dB
HLC	Yes
White Balance	Auto; Indoor; Outdoor; Tracking; Manual; Sodium Lamp; Natural; Street Lamp
Gain Control	Auto; Manual
Noise Reduction	2D; 3D
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic (EIS)
Defog	Optical
Digital Zoom	16x
Flip	0°; 180°
Privacy Masking	Up to 24 areas, and up to 8 areas in the same view
S/N Ratio	≥ 55 dB

Audio

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

Network

Ethernet	1 RJ-45 Port (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; RTMP
Interoperability	ONVIF Profile S&G&T; CGI
Streaming Method	Unicast; Multicast
User/Host	20 (total bandwidth 64 MB)
Storage	FTP; Micro SD card (256 GB); P2P
Browser	IE7 and later versions Chrome 42 and earlier versions Firefox 52 and earlier versions Safari
Management Software	Smart PSS; DSS; DMSS; Easy4ip; IVSS
Mobile Phone	iOS; Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014

Port

Analog Output	1 BNC
RS-485	1 (baud rate range:1200 bps–9600 bps)
Audio I/O	1/1
Alarm I/O	7/2

Power

Power Supply	DC 36V/2.23A±25% Hi-PoE
Power Consumption	30W 48W (IR light on)

Environment

Operating Temperature	–40°C to +70°C (–40°F to +158°F)
Operating Humidity	≤ 95%RH
Protection	IP67; TVS 6000V lightning protection; surge protection; voltage transient protection

Structure

Casing	Metal
Dimensions	415.6 mm × Φ26 2 mm (16.36" × Φ10.31")
Net Weight	8.5 kg (18.74 lb)
Gross Weight	13.5 kg (29.76 lb)

Ordering Information

Type	Model	Description
8M WizMind PTZ Camera	DH-SD8A840-HNF-PA	8MP 40x Startlight WizMind Network PTZ Camera, PAL
	DH-SD8A840N-HNF-PA	8MP 40x Startlight WizMind Network PTZ Camera, NTSC
	SD8A840-HNF-PA	8MP 40x Startlight WizMind Network PTZ Camera, PAL
	SD8A840N-HNF-PA	8MP 40x Startlight WizMind Network PTZ Camera, NTSC
Accessories	DC 36V/2.23A	Power Adapter
	PFB306W	Wall Mount Bracket
	PFA118	Mount Adapter
	PFB710C	Ceiling Mount Bracket
	PFA150	Pole Mount Bracket
	PFB301S-E	Plane Mount Bracket
	PFA120	Junction Box
	PFB301C	Ceiling Mount Bracket
	PFA151	Corner Mount Bracket

Accessories

Included:

DC 36V/2.23A
Power Adapter

PFB306W
Wall Mount
Bracket

Optional:

PFA118
Mount Adapter

PFB710C
Ceiling Mount
Bracket

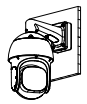
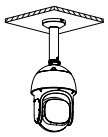
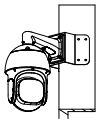
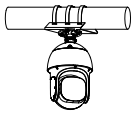
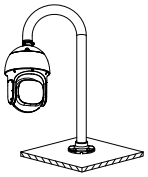
PFA150
Pole Mount
Bracket

PFB301S-E
Plane Mount Bracket

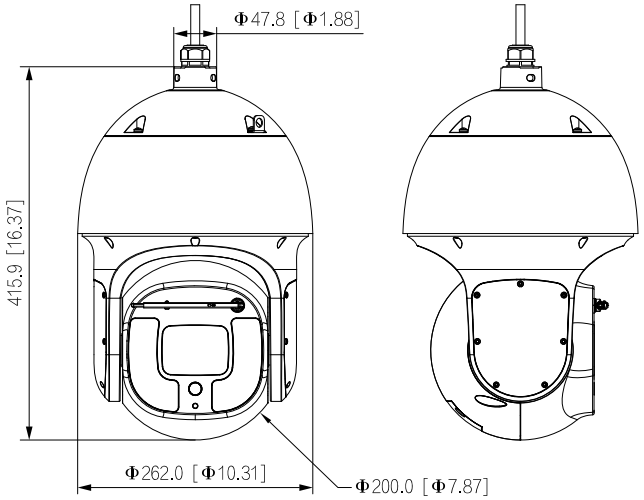
PFA120
Junction Box

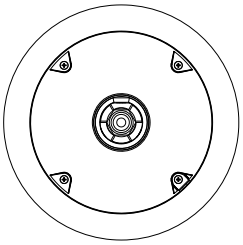
PFB301C
Ceiling Mount
Bracket

PFA151
Corner Mount
Bracket

Wall Mount	Ceiling Mount	Ceiling Mount
PFB306W+PFA120	PFA118+PFB710C	PFA118+PFB301C
		
Pole Mount(Vertical)	**Corner Mount**	**Pole Mount(Horizontal)**
PFB306W+PFA150	PFB306W+PFA151	PFA118+PFB301C+PFA150
		
Plane Mount		
PFA118+PFB301S-E		
		

Dimensions (mm[inch])





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