DH-PTZ83840-HNF-WA

8MP 40x Starlight IR WizMind Network Positioning System

· 1/1.8" 8Megapixel STARVIS™ CMOS
· Powerful 40x optical zoom
· Starlight technology
· Max. 25/30fps@4K
· IR distance up to 400 m
· Deep-learning-based auto tracking and perimeter protection
· Auto-tracking and IVS
· IP67

| H.265 | WDR | ICR D/N | IP67 | Face Recognition | False Alarm Filter | Blacklist Alarm | Face Capture |

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 verticals.

System Overview

With CNN algorithm, Dahua WizMind speed dome supports intelligent functions like tripwire and intrusion; and supports video structuralization function that recognizes motor vehicle, non-motor vehicle, and human to analyze their detailed information (plate number, vehicle brand, age and gender, etc.). With PFA algorithm, the speed dome can get clear images all the time during zooming. In addition, silent motor driver integrated circuits enable the speed dome to make faint sounds during rotation.

Functions

Perimeter Protection
Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving 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.

Environmental
Dahua cameras 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.

Protection
The camera allows for ±25% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning.

Interoperability
The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturer.

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.

ONVIF

Technical Specification

Camera

Image Sensor	1/1.8" STARVIS™ CMOS
Pixel	8MP
Max. Resolution	3840 (H) × 2160 (V)
ROM	32GB
RAM	4GB
Electronic Shutter Speed	1/1–1/30000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005Lux@F1.4 B/W: 0.0005Lux@F1.4 0Lux (IR light on)
Illumination Distance	400 m (1312.34 ft)
Illuminator On/Off Control	Zoom Prio/Manual/SmartIR
Illuminator Number	10
Wiper	Support

Lens

Focal Length	5.6 mm–224 mm
Max. Aperture	F1.4–F4.5
Field of View	H: 2.0°–63.9° V: 1.2°–35° D: 2.4°–66.9°
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

DORI Distance	Detect	Observe	Recognize	Identify
	4400 m (14435.70 ft)	1760 m (5774.28 ft)	880 m (2887.14 ft)	440 m (1443.57 ft)

PTZ

Pan/Tilt Range	Pan: 0°–360° Tilt: -90°–45°
Manual Control Speed	Pan: 0.1°–160°/s Tilt: 0.1°–60°/s
Preset Speed	Pan: 160°/s Tilt:60°/s
Presets	300
Tour	8 (up to 32 preset 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)

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	Support
Face Recognition	Support

General Intelligence

Event Trigger	Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly.
IVS	Object abandoned/missing

Video

Compression	H.265/H.264H/H.264B/H.264/MJPEG (sub stream)
Streaming Capability	3 streams
Resolution	4K (3840 × 2160); 1080P (1920 × 1080); 1.3M (1280 × 960); 720P (1280 × 720); D1 (704 × 576); CIF (352 × 288)
Frame Rate	Main stream: 4K (1–25/30fps); 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 Bit Rate/Constant Bit Rate
Bit Rate	H.264: 4683 kbps–16384 kbps H.265: 1801 kbps–14410 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Support
WDR	120 dB
HLC	Support
White Balance	Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural light/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D/3D
Motion Detection	Support
Region of Interest (RoI)	Support
Image Stabilization	Electronic
Defog	Optical
Digital Zoom	16x
Flip	180°
Privacy Masking	Up to 24 areas

Audio

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

Port

Audio Input	1

Audio Output	1
Alarm I/O	7/2
Analog Output	1 BNC
RS-485	1

Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3 (MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE
Interoperability	ONVIF Profile S&G&T; CGI
Streaming Method	Unicast/Multicast
User/Host	20 (Total bandwidth 64M)
Storage	FTP; Micro SD card (256G)
Browser	IE7 and newer versions Chrome 42 and older versions Firefox 52 and older versions Safari
Management Software	Smart Player Smart PSS DSS Easy4ip
Mobile Phone	IOS/Android/Windows Phone

Power

Power Supply	DC 36V/2.23A ± 25%
Power Consumption	31.85W 61.35W (PTZ rotating, illuminator on, wiper on)

Environment

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

Structure

Dimensions	210.7 mm × 366.5 mm × 498.7 mm (8.30" × 14.43" × 19.63")
Net Weight	14 kg (30.86 lb)
Gross Weight	19.77 kg (43.59 lb)

Ordering Information

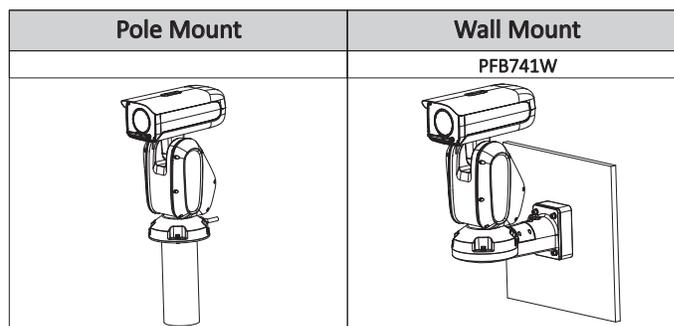| Type	Model	Description
4K WizMind Positioning System	DH-PTZ83840-HNF-WA	8MP 40x Starlight IR WizMind Network Positioning System, WDR, PAL
	DH-PTZ83840N-HNF-WA	8MP 40x Starlight IR WizMind Network Positioning System, WDR, NTSC
	PTZ83840-HNF-WA	8MP 40x Starlight IR WizMind Network Positioning System, WDR, PAL
	PTZ83840N-HNF-WA	8MP 40x Starlight IR WizMind Network Positioning System, WDR, PAL, NTSC

Accessories	DH-PFB741W	Bracket + Junction Box
	DC36V/2.23A	Power Adapter

Accessories

Included:

DC36V/2.23A
Power Adapter

Optional:

DH-PFB741W
Bracket + Junction Box

Pole Mount	Wall Mount
	PFB741W

Dimensions (mm[inch])