

# DH-SD8A440WA-HNF

4MP 40x Starlight IR PTZ AI Network Camera



Al series products adopt the most advanced Al technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua Al series to offer various advanced applications such as Face Recognition, ANPR, Metadata, People Counting, traffic data statistics, etc. The complete lineup of Dahua Al includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of Al allows devices to perceive the environment and understand the world in a better way.

#### **System Overview**

Dahua PTZ AI network camera adopts advanced CNN deep learning algorithms to support face recognition with 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 0.001 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

#### **Face Recognition**

Once facial features are extracted from captured faces, they are stored in a database where they can be easily searched 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 facial images, helping the camera achieve real-time face capture and comparison.

#### **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.

- · 1/1.8" CMOS
- · Powerful 40x optical zoom
- · Starlight technology
- · IR distance up to 500m
- · Support face recognition
- Deep-learning-based auto tracking and perimeter protection
- · Support metadata
- · Support Hi-PoE
- · Smart wiper
- · IP67













#### Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ AI camera: human face, human body, motor vehicle and non-motor vehicle metadata. 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.

### **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.



Technical Specification				Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and
Camera					attributes extraction
Image Sensor		1/1.8" CMOS		General Intelligence	
Effective Pixels 2560(H) x 1440(V), 4 Megapixels		ixels	Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly	
Scanning System P		Progressive		General Intelligence	Object Abandoned/Missing
Electronic Shutter Speed 1/1s~1/30,000s		Video			
Minimum Illumination Color: 0.001Lux@F1.4; B/W: 0.0001Lux@F1.4; 0Lux@F1.4 (IR on)			11 255 /11 255 /11 254 /11 254 /24 PERSON   51		
IR Distance Distance up to 500m (1640ft)		t)	Compression	H.265+/H.265/H.264+/H.264/MJPEG(Sub Stream)	
IR On/Off Control Auto		Auto/Manual		Streaming Capability	3 Streams 4M(2592×1520)/3M(2048×1536)/1080P(192
IR LEDs 10		10		Resolution	0×1080)/ 1.3M(1280×960)/ 720P(1280×720)/ D1(704×576/ 704×480)/CIF(352×288/352×240)
Smart Wiper		Support			Main stream: 4M/3M/1080P/1.3M/720P(1~25/30fps)
Lens				Frame Rate	Sub stream1: D1/CIF(1 ~ 25/30fps)
Focal Length 5		5.6mm~223mm			Sub stream2: 1080P/1.3M/720P(1 ~ 25/30fps)
Max. Aperture		F1.4~ F4.8		Bit Rate Control	CBR/VBR
Angle of View		H: 63.9° ~ 2.0°; V: 36° ~ 1.3°;	; D: 68.18° ~ 2.62°	Bit Rate	H.265/H.264: 512K ~ 8192Kbps
Optical Zoom		40x		Day/Night	Auto(ICR) / Color / B/W
Focus Control				Backlight Compensation	BLC / HLC / WDR(120dB)
		Auto/Manual		White Balance	Auto, ATW, Indoor, Outdoor, Manual
Iris Control A		Auto/Manual		Gain Control	Auto / Manual
Close Focus Distance 100mm <sup>∼</sup> 1000mm			Noise Reduction	Ultra DNR (2D/3D)	
DORI Distance				Motion Detection	Support
pinpoint the right ca	amera for your	eral proximity" of distance wh needs. The DORI distance is ca	alculated based on	Region of Interest	Support
· ·		sult according to EN 62676-4 was nize and Identify respectively.	which defines the	Electronic Image Stabilization (EIS)	Support
Detect	Observe	Recognize	Identify	Optical Defog	Support
3030m(9941ft)	1204m(3950	0ft) 606m(1988ft)	303m(994ft)	Digital Zoom	16x
PTZ				Flip	180°
Pan/Tilt Range		Pan: 0° ~ 360° endless; Tilt: -30° ~ 90°, auto flip 180°		Privacy Masking	Up to 24 areas
Manual Control Spee	ed	Pan: 0.1° ~200° /s; Tilt: 0.1° ~100° /s		Audio	
Preset Speed		Pan: 200° /s; Tilt: 120° /s		Compression	G.711a/G.711mu/PCM/G.726/AAC/G722.1/G.729/ MPEG2-Layer2
Presets		300		Network	
PTZ Mode		5 Pattern, 8 Tour(up to 32 preset per tour), Auto Pan, 5 Auto Scan		Ethernet	RJ-45 (10Base-T/100Base-TX)
Speed Setup		Human-oriented focal Length/ speed adaptation		Protocol	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, RTCP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x
Power up Action		Auto restore to previous PTZ and lens status after power failure			
Idle Motion		Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period		Interoperability	ONVIF Profile S&G, API
Protocol		DH-SD, Pelco-P/D (Auto recognition)		Streaming Method	Unicast / Multicast
Artificial Intelligence				Max. User Access	20 users
Auto Tracking		Support		Edge Storage	NAS (Network Attached Storage), Local PC for instant recording, Micro SD card 256GB
Face Recogntion		Support		Web Viewer	IE, Chrome, Firefox, Safari
Perimeter Protection		Tripwire, Intrusion. Support alarm triggering by target types(human and vehicle) Filtering out false alarms caused by animals, rustling leaves, bright lights, etc		Management Software	Smart PSS, DSS, DMSS
				Smart Phone	IOS, Android

# Ultra Al Series | DH-SD8A440WA-HNF

#### Certifications

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

#### Interface

Video Interface	1 port(BNC, 1.0V[p-p], 75Ω)
RS485	1
Audio I/O	1/1
Alarm I/O	7/2

#### Electrical

Power Supply	AC24V/3A(±25%), Hi-PoE
Power Consumption	26W, 42W (Heater on, IR on)

#### Environmental

Operating Conditions	-40°C $^{\sim}$ 70°C (-40°F $^{\sim}$ +158°F) / Less than 95% RH	
Ingress Protection	IP67	
Vandal Resistance	N/A	

#### Construction

Casing	Metal
Dimensions	Ф262(mm) x 415.6 (mm)
Net Weight	8.5kg(18.74lb)
Gross Weight	13.5kg(29.76lb)

#### **Ordering Information** Туре Part Number Description 2MP 40x Starlight IR PTZ AI DH-SD8A240WA-HNF Network Camera, WDR, PAL 2MP 40x Starlight IR PTZ AI DH-SD8A240WAN-HNF Network Camera, WDR, NTSC 2MP PTZ Camera 2MP 40x Starlight IR PTZ AI SD8A240WA-HNF Network Camera, WDR, PAL 2MP 40x Starlight IR PTZ AI SD8A240WAN-HNF Network Camera, WDR, NTSC PFB306W Wall Mount AC24V/3A Power Adapter PFA118 Mount Adapter Accessories PFB710C Ceiling Mount PFA150 Pole Mount PFB301S-E Plane Mount

# Accessories

# Included:







Power Adapter

# Optional:



PFA118 Mount Adapter



PFB710C Ceiling Mount



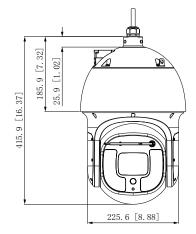
Pole Mount

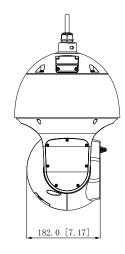


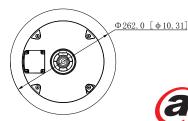
PFB301S-E Plane Mount

Wall Mount	Ceiling Mount	
PFB306W	PFA118+PFB710C	
Pole Mount	Plane Mount	
PFB306W+PFA150	PFB301S-E	

# **Dimensions (mm)**









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