

DH-SD49225XA-HNR

2MP 25x 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 Perimeter Protection with high accuracy. This camera possess wide monitor range, 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 make it can meet most of the requirements of video surveillance applications.

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.

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.

- · 1/2.8" 2Megapixel CMOS
- · Powerful 25x optical zoom
- · Starlight technology
- · Max. 50/60fps@1080P
- · Perimeter protection
- · Support PoE+
- · IR distance up to 100m
- · SMD Plus
- · IP66













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.

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 IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Protection

The camera allows for 6KV lightning rating, which 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.

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.

SMD Plus

With Deep-Learning Algorithm, Dahua SMD Plus filters the motion detection alarm triggered by non-concerned target and recognizes human and vehicle effectively, sending alarms when human and vehicle intrude.



Technical Specification	n	General Intelligence	
Camera		Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly
Image Sensor	1/2.8" STARVIS™ CMOS	General Intelligence	Object Abandoned/Missing
Effective Pixels	2MP	Artificial Intelligence	,
Max. Resolution	1920 (H) × 1080 (V)	Artificial intelligence	Tripwire and intrusion. Support alarm triggering by
ROM	4GB	Perimeter Protection	target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright
RAM	1GB		lights, etc.
Electronic Shutter Speed	1/1 s-1/30,000 s	SMD Plus	Support
Scanning System	Progressive	Face Detection	Support
Min. Illumination	Color: 0.005Lux@F1.6 B/W: 0.0005Lux@F1.6 OLux@F1.6 (IR light on)	Video Metadata Video	Support human, motor vehicle and non-motor vehicle image capture.
IR Distance	100 m (328.08 ft)	Compression	H.265+/H.265/H.264+/H.264/MJPEG (sub stream)
	Zoom Prio/Manual/SmartIR	Streaming Capability	3 streams
IR On/Off Control IR LEDs Number	6	Resolution	1080P (1920 × 1080); 1.3 M (1280 × 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Lens			Main stream: 1080P/1.3 M/720P (1–50/60fps)
Focal Length	4.8 mm-120 mm	Frame Rate	Sub stream 1: D1/CIF (1–25/30fps) Sub stream 2: 1080P/1.3M/720P/D1/CIF (1–25/30fps)
Max. Aperture	F1.6-F4.4	Bit Rate Control	Variable Bit Rate/Constant Bit Rate
Field of View	H: 62.8°-2.6°; V: 33.2°-1.7°; D: 67.3°-3.9°	Bit Rate	H.265/H.264: 3 kbps–20480 kbps
Optical Zoom	25x	Day/Night	Auto(ICR)/Color/B/W
Focus Control	Auto/Semi-Auto/Manual	BLC	Support
Close Focus Distance	0.1 m-1.5 m (0.33 ft-4.92 ft)	WDR	120 dB
Iris Control	Auto/Manual	HLC	Support
	Detect Observe Recognize Identify	White Balance	Auto/Indoor/Outdoor/Track/Manual/Sodium lamp/ Natural light/Street lamp
DORI Distance	1	Gain Control	Auto/Manual
	1613 m 646 m 323 m 161 m (5291.99 ft) (2119.42 ft) (1059.71 ft) (528.22 ft)	Noise Reduction	Ultra DNR (2D/3D)
PTZ		Motion Detection	Support
Pan/Tilt Range	Pan: 0°–360° (endless) Tilt: -15°–90° (auto flip 180°)	Region of Interest	Support
Manual Cantral Canada	Pan: 0.1°–200°/s	Electronic Image Stabilization	Support
Manual Control Speed	Tilt: 0.1°-120°/s	Electronic Defog	Support
Preset Speed	Pan: 240°/s Tilt: 200°/s	Digital Zoom	16x
Presets	300	Flip	180°
Tour	8 (up to 32 presets per tour)	Privacy Masking	Up to 24 areas, and up to 8 areas in the same view
Pattern Number	5	Audio	
Scanning Number	5	Compression	G.711a; G.711Mu; AAC; G.722.1; G.726; MPEG2-Layer2 G.729
Speed Adjustment	Support	Network	
Power-off Memory	Support	Ethernet	RJ-45 (10/100Base-T)
Idle Motion	Preset/Tour/Pattern/Scanning DH-SD	Protocol	IPv4; IPv6; HTTP; HTTPS; SSL; TCP/IP; UDP; UPnP; ICMF IGMP; SNMPv1/v2c/v3(MIB-2); ARP; RTCP; RTSP; RTP;
Protocol	DH-SD Pelco-P/D (auto recognition)	Protocol	SMTP; NTP; DHCP; DNS; PPPOE; DDNS; FTP; IP Filte QoS; Bonjour; 802.1x

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Interoperability	ONVIF Profile S&G CGI
Streaming Method	Unicast/Multicast
User/Host	19
Edge Storage	NAS; Local PC; Micro SD card (256G)
Browser	IE7 and newer versions Chrome 45 and newer versions Firefox 52 and earlier versions Safari (no version restrictions)
Management Software	Smart PSS; DSS; DMSS
Smart Phone	IOS/Android

Certification

	CE: EN55032/EN55024/EN50130-4	
Certifications	FCC: Part15 subpartB, ANSI C63.4-2014	
	UL: UL60950-1+CAN/CSA C22.2, No. 60950-1	

Port

Audio In	1
Audio Out	1
Alarm Port	2/1

Power

Power Supply	DC 12V/3A PoE+ (802.3at)
Power Consumption	13W 22W (IR on)

Environment

Operating Temperature	-40°C to +70°C (-40°F to +158°F)	
Operating Humidity	≤95%	
Ingress Protection	IP66; TVS 6000V lightning proof; Surge p	protection

Structure

Casing	Aluminium alloy ADC12
Dimensions	Φ160 mm × 295 mm (6.30" × 11.61")
Net Weight	3 kg (6.61 lb)
Gross Weight	4.8kg (10.58lb)

Ordering Information			
Туре	Model	Description	
2M PTZ Camera	DH-SD49225XA-HNR	2MP 25x Starlight IR PTZ AI Network Camera, WDR, PAL	
	DH-SD49225XAN-HNR	2MP 25x Starlight IR PTZ AI Network Camera, WDR, NTSC	
	SD49225XA-HNR	2MP 25x Starlight IR PTZ AI Network Camera, WDR, PAL	
	SD49225XAN-HNR	2MP 25x Starlight IR PTZ AI Network Camera, WDR, NTSC	

Accessories	PFB305W	Wall Mount
	PFA111	Mount Adapter
	DC12V/3A	Power Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount
	PFA120	Water-proof Junction Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	PFB303S	Parapet Mount

Accessories

Included:



PFB305W Wall Mount

Optional:



PFA111 I Mount Adapter Por



DC12V/3A Power Adapter



PFA140 Power Box



PFB300C Ceiling Mount



PFA120 Water-proof Junction Box



PFA150 Pole Mount



PFA151 Corner Mount



PFB303S Parapet Mount

Ceiling Mount	Junction Mount	Power Box Mount
PFA111+PFB300C	PFB305W + PFA120	PFB305W + PFA140
Pole Mount	Corner Mount	Parapet Mount
PFB305W+PFA150	PFB305W+PFA151	PFA111+PFB303S

Dimensions (mm[inch])



