

DH-SD59432XA-HNR

4MP 32x Starlight IR PTZ AI Network Camera



- 1/2.8" STARVIS™ CMOS
- Powerful 32x optical zoom
- Starlight technology
- Max. 25/30fps@4M
- · Deep-learning-based auto tracking and perimeter protection
- Support PoE+
- IR distance up to 150 m
- SMD Plus





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

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with infrared illumination and Starlight Technology, the camera is the perfect solution for dark, lowlight applications. The series combines a day/night mechanical IR cut filter for the highest image quality in variable lighting conditions during the day, and True WDR for applications with direct sunlight or glare.

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.

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.

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.

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. The camera complies with the IK10 Vandal Resistance impact rating. 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 $\pm 25\%$ input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 8KV 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.

SMD Plus

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



Pro Al Series | DH-SD59432XA-HNR

Technical Specification

Camera

Image Sensor1/2.8" STARVIS" CMOSIMax. Resolution2560 (H) x 144 U(V)IFdective Pixels4MPROM4GBRAM16BIRAM139Scanning System1/3-1/300US UXEPE1.3 SULVIKIPE1.3 SULVIKINGIR DistanceColor: 0.005 LUXEPE1.3 SULVIKINGIR On/Off ControlColor: 10.005 LUXEPE1.3 SULVIKINGIR Con/Off Control2000 Prio/HENTIR LEDS Number4IR LEDS Number4IMAX. Aperture15.3 FL4.2IField of View15.3 FL4.2IField of View32xICose Focus Distance31.m.1.5ING Socion Control32.xInstruction11.m.1.5IField Sourge Function11.m.1.5Intersonation32.3Intersonation11.m.1.5Intersonation30.3 m (1995.4.6 m)Intersonation12.3 m (1995.4.6 m)	Camera				
Image: Problem in the second secon	Image Sensor	1/2.8" STARVIS™ CMOS			
ROM4GBRAM1GBElectronic Shutter Speed1/3–1/3000 - sScanning SystemProgressiveMin. IlluminationColor: 0.005 Lux@F1.3 B/W: 0.0005 Lux@F1.3 DLux (IR light or)IR Distance150 m (492.13 ft)IR On/Off ControlZoom Prio/Manual/SmartIRIR On/Off Control20IR LEDS Number4Focal Length4.9 mm-15-Max. ApertureF1.35-F4.4Field of ViewH: 68.28°-2-T.7; D: 68.28'-1.44°Optical Zoom32xFocus ControlAuto/Semi-LuxU/ManualClose Focus Distance0.1 m-1.5 with Visit GalenceIris ControlAuto/ManualDORI DistanceDetectNon Distance1213 mControlAuto/ManualControlAuto/ManualAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mControlAuto/ManualAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mAuto/ManualSoa mSoa m	Max. Resolution	2560 (H) x 1440 (V)			
RAMIGBIElectronic Shutter Speed $1/3-1/3000$ - SScanning SystemProgressiveScanning SystemColor: $0.005 \cup x \otimes F1.3$ B/W: $0.0005 \cup x \otimes F1.3$ S/W: $0.005 \cup $	Effective Pixels	4MP			
Field of View 1/3–1/30000 s Scanning System Progressive Min. Illumination Color: 0.005 Lv@F1.3 B/W: 0.0005 Lv@F1.3 CLux (IR light on) IR Distance 150 m (492.13 F1) IR On/Off Control Zoom Prio/Manual/SmartIR IR LEDs Number 4 Focal Length 4.9 mm-156 - VEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	ROM	4GB	4GB		
A regressiveScanning SystemProgressiveMin. Illumination $Color: 0.005 Lux@F1.3$ B/W: 0.0005 Lux@F1.3 OLux (IR light on)IR Distance $150 m (492.1 str)$ IR On/Off Control $2com Prio/MarxIISmartISTIR On/Off Control4IR LEDs Number4Focal Length4.9 mm-156 ms^{-1}Max. ApertureF1.35-F4.4Field of ViewH: 68.28^{-2}.24^{+}; V: 38.9^{-1}.5^{+}; D: 68.28^{-1}.44^{+}Optical Zoom32xFocus Control0.1m-1.5 ms^{-1}Close Focus Distance0.1m-1.5 ms^{-1}Iris Control0.1m-1.5 ms^{-1}DORI Distance1213 m606 m303 m$	RAM	1GB	1GB		
Color:Color	Electronic Shutter Speed	1/3-1/30000	1/3–1/30000 s		
Min. IlluminationB/W: 0.0005Lux@F1.3 OLux (IR light on)IR Distance150 m (492.13 ft)IR Distance200m Prio/Marut/Smart/RIR Con/Off Control200m Prio/Marut/Smart/RIR LEDs Number4 Lens Focal Length4.9 mm-156 meanMax. ApertureF1.35-F4.4Field of ViewH: 68.28°-2.24°; V: 38.9°-1.27°; D: 68.28°-1.44°Optical Zoom32xFocus Control0.1 m-1.5 meanClose Focus Distance0.1 m-1.5 meanIris ControlAuto/ManualDORI DistancePetectODS Distance0.1 mean3034 m1213 m606 m303 m	Scanning System	Progressive			
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IR LEDs Number4Lens5000 Length4.9 mm-156 JengthMax. ApertureF1.35-F4.4Field of ViewH: 68.28°-2.24°; V: 38.9°-1.27°; D: 68.28°-1.44°Optical Zoom32xFocus ControlAuto/Semi-JengthClose Focus Distance0.1 m-1.5 m JengthIris ControlAuto/ManuelDorn DistanceDetectObserveRecognizeIdentify3034 m1213 mGode m303 m	IR Distance	150 m (492.13 ft)			
LensFocal Length4.9 mm-156 mmMax. ApertureF1.35-F4.4Field of ViewH: 68.28°-2.24°; V: 38.9°-1.27°; D: 68.28°-1.44°Optical Zoom32xFocus ControlAuto/Semi-Auto/ManualClose Focus Distance0.1 m-1.5 m (0.33 ft-4.92 ft):Iris ControlAuto/ManualDORI DistanceDetectObserveRecognizeIdentify3034 m1213 m606 m303 m1213 m	IR On/Off Control	Zoom Prio/Manual/SmartIR			
Focal Length4.9 mm-156 mmMax. ApertureF1.35-F4.4Field of ViewH: 68.28°-2.24°; V: 38.9°-1.27°; D: 68.28°-1.44°Optical Zoom32xFocus ControlAuto/Semi-Auto/ManualClose Focus Distance0.1 m-1.5 m (0.33 ft-4.92 ft)Iris ControlAuto/ManualDORI DistanceDetectObserveRecognizeIdentify3034 m1213 m606 m303 m	IR LEDs Number	4			
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Pocus Control Auto/Semi-Auto/Manual Close Focus Distance 0.1 m-1.5 m (0.33 ft-4.92 ft) +	Field of View	H: 68.28°–2.24°; V: 38.9°–1.27°; D: 68.28°–1.44°			-1.44°
Close Focus Distance 0.1 m-1.5 m (0.33 ft-4.92 ft) Iris Control Auto/Manual DORI Distance Detect Observe Recognize Identify 3034 m 1213 m 606 m 303 m	Optical Zoom	32x			
Iris Control Auto/Manual DORI Distance Detect Observe Recognize Identify 3034 m 1213 m 606 m 303 m	Focus Control	Auto/Semi-Auto/Manual			
Detect Observe Recognize Identify DORI Distance 3034 m 1213 m 606 m 303 m	Close Focus Distance	0.1 m–1.5 m (0.33 ft–4.92 ft)			
DORI Distance 3034 m 1213 m 606 m 303 m	Iris Control	Auto/Manual			
3034 m 1213 m 606 m 303 m		Detect	Observe	Recognize	Identify
	DORI Distance				

PTZ

Pan/Tilt Range	Pan: 0°–360°; Tilt: -10°–+90°
Manual Control Speed	Pan: 0.1°/s-300°/s; Tilt: 0.1°/s-200°/s
Preset Speed	Pan: 400°/s; Tilt: 300°/s
Presets	300
Tour	8 (up to 32 presets per tour)
Pattern Number	5
Scanning Number	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D (auto recognition)
Artifical Intelligence	
Video metadata	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.
Face Detection	Support
SMD Plus	Support
Auto Tracking	Support
Face Detection	Support
General Intelligence	
Event Trigger	Motion detection, video tampering, scene changing, network disconnection, IP address conflict, illegal access, and storage anomaly
General IVS	Object abandoned/missing
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)/720P (1280 × 960)/D1 (704 × 576/704 × 480)/ CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 4M/3M/1080P/1.3M/720P (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 720P (1–25/30 fps)
Bit Rate Control	Variable Bit Rate/Constant Bit Rate
Bit Rate	H.265/H.264: 3 kbps–20480 kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Support
WDR	120dB
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 (Rol)	Support
Electronic Image Stabilization (EIS)	Support
Defog	Support
Digital Zoom	16x
Flip	0°/180°
Privacy Masking	Up to 24 areas
Certification	
Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014
Audio	
Compression	G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2

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Port	
Audio In	1
Audio Out	1
Alarm	2/1
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; ARP; RTCP
Interoperability	ONVIF Profile S&G CGI
Streaming Method	Unicast/Multicast
User/Host	19 (Total bandwidth 48M)
Edge Storage	FTP; Micro SD card (256G); P2P
Browser	IE7 and newer versions Chrome 42 and older versions Firefox 52 and older versions Safari
Management Software	Smart Player Smart PSS DSS Easy4ip
Smart Phone	IOS/Android
Power	
Power Supply	AC24V/3A±25% PoE+ (802.3at)
Power Consumption	11W 24W (IR on)
Environment	
Operating Temperature	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	≤95%RH
Ingress Protection	IP66; TVS 6000V lightning protection; surge protection
Construction	
Dimensions	Φ186 mm x 309 mm (7.32" × 12.17")
Net Weight	3.9 kg (8.60 lb)
Gross Weight	7.01 kg (15.45 lb)
Casing	Metal

	PFB300S	Wall Mount
	PFA110	Mount Adapter
	AC24V/3A	Power Adapter
	PFA140	Power Box
Accessories	PFB300C	Ceiling Mount
	PFA120	Junction Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	PFB303S	Parapet Mount

Accessories

Included:



PFB300S

Wall Mount

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PFA140

Power Box

PFA150

Pole Mount

Optional:



PFA110

Mount Adapter



AC24V/3A Power Adapter



PFA120 Junction Box



PFB303S Parapet Mount



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PFB300C Ceiling Mount



PFA151 Corner Mount

Ordering Information

Туре	Part Number	Description
	DH-SD59432XA-HNR	4MP 32x Starlight IR PTZ AI Network Camera, WDR, PAL
4MP PTZ	DH-SD59432XAN-HNR	4MP 32x Starlight IR PTZ AI Network Camera, WDR, NTSC
Camera	SD59432XA-HNR	4MP 32x Starlight IR PTZ AI Network Camera, WDR, PAL
	SD59432XAN-HNR	4MP 32x Starlight IR PTZ AI Network Camera, WDR, NTSC

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Pro Al Series DH-SD59432XA-HINK			
Ceiling Mount PFA110+PFB300C	Junction Mount PFA110+PFB300S+PFA120	Dimensions (mm[inch])	
		Ø47.0[1.85]	
Power Box Mount	Pole Mount		
PFA110+PFB300S+PFA140	PFA110+PFB300S+PFA150	2.18]	
		309.4[12.18]	
Corner Mount	Parapet Mount	154.0[6.06]	
PFA110+PFB300S+PFA151	PFA110+PFB303S		
		⊘186.0[7.32]	

