

DH-SD1A404XB-GNR-W

4M 4x 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 primeter protection with high accuracy. The camera is equipped with smooth control, high quality image, and good protection, meeting compact size demands of video surveillance applications.

Functions

People Counting

People Counting function uses advanced image processing technology to capture depth information from within images. The camera pairs this information with deep learning algorithms to analyze and detect human bodies and track target objects in real time. The camera provides statistics for separate individuals' entrance and exit with up to 95% counting 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 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -30 °C to +60 °C (-22 °F to +140 °F) with

- · 1/2.8" 4Megapixel STARVIS™ CMOS
- · Starlight technology
- · Max. 25/30fps@4MP
- · 4x optical zoom
- · Face Detection, People Counting, Perimeter Protection
- · IR distance up to 15m
- · WIFI (support 2.4G & 5G)
- IP66, IK08



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 $\pm 15\%$ 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.

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 optimizes both the bright and dark areas of a scene at the same time to provide usable video.

H.265+

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. H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.



Pro Al Series | DH-SD1A404XB-GNR-W

Technical Specification	Tec	hnical	Specific	ation
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Camera

Camera				
Image Sensor	1/2.8" STARVIS™ CMOS			
Effective Pixels	4MP			
Max. Resolution	2560 (H) × 1440 (V)			
ROM	4GB			
RAM	1GB			
Electronic Shutter Speed	1/1 s-1/30000 s			
Scanning System	Progressive			
Min. Illumination	Color: 0.005Lux@F1.8 B/W: 0.0005Lux@F1.8 0Lux (IR light on)			
IR Distance	15 m (49.21 ft)			
IR On/Off Control	Zoom Prio/Manual/SmartIR			
IR LEDs Number	3			
Lens				
Focal Length	2.8 mm–12 r	nm		
Max. Aperture	F1.8-F2.7			
Field of View H: 31. Field of View V: 17.8 D: 36.4		1°		
Optical Zoom	4x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	0.2 m–0.5 m (0.66 ft– 1.64 ft)			
Iris Control	Auto			
	Detect	Observe	Recognize	Identify
DORI Distance	147 m (482.28 ft)	58.8 m (192.91 ft)	29.4 m (96.46 ft)	14.7 m (48.23 ft)

PTZ

Pan/Tilt Range	Pan: 0°–355° Tilt: 5°–90°			
Manual Control Speed	Pan: 0.1°/s–70°/s Tilt: 0.1°/s–30°/s			
Preset Speed	Pan: 80°/s Tilt: 40°/s			
Presets	300			
Tour	8 (up to 32 presets per tour)			
Speed Adjustment	Support			
Power-off Memory	Support			
Idle Motion	Preset/Tour			
General Intelligence				
Event Trigger	Motion detection, Video tampering, Scene changing, Network disconnection, IP address conflict, Illegal Access, Storage anomaly			
General Intelligence	Object Abandoned/Missing			

Artificial Intelligence People Counting Count people in the area; generate report Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering Perimeter Protection false alarms caused by animals, rustling leaves, bright lights, etc. Face Detection Support Video H.265; H.264BaselineProfile; H.264MainProfile; Compression H.264HighProfile; MJPEG(Sub Stream); H.265+; H.264+ Streaming Capability 3 streams 4M (2560 x 1440); 3M (2048 x 1536); 1080P (1920 x Resolution 1080); 1.3M (1280 x 960); 720P (1280 x 720); D1 (704 x 576/704 × 480); CIF (352 x 288/352 × 240) Main stream: 4M/3M (1-25/30fps), 1080P/1.3M/720P (1-25/30fps) Frame Rate Sub stream 1: D1/CIF (1-25/30fps) Sub stream 2: 720P (1-25/30fps), D1/CIF (1-25/30fps) Bit Rate Control Variable Bit Rate/Constant Bit Rate H.264/H.265/MJPEG: 3 kbps-20480 kbps Bit Rate Day/Night Auto (ICR)/Color/B/W BLC Support WDR 120 dB HLC Support Auto/Indoor/Outdoor/Track/Manual/Sodium lamp/ White Balance Natural light/Street lamp Gain Control Auto/Manual Noise Reduction 2D/3D Motion Detection Support Region of Interest (Rol) Support Electronic Image Stabilization Support Support Electronic Defog 16x Digital Zoom 0°/180° Flip Privacy Masking Up to 24 areas, and up to 8 areas in the same view Audio G.711a; G.711Mu; G.726; AAC; MPEG2-Layer2; G.722.1; Compression G.729; G.723 Network Ethernet RJ-45 (10/100Base-T) Wi-Fi Support IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3(MIB-2); DNS; DDNS; NTP; RTSP; Protocol RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP ONVIF; CGI Interoperability Streaming Method Unicast/Multicast User/Host 20

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Edge Storage	FTP; Micro SD card (256G); P2P
Browser	IE; Chrome; Firefox; Safari (no version restriction)
Management Software	SmartPSS DSS
Smart Phone	iOS/Android
Certification	
Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014
Port	
Audio In	1
Audio Out	1
Power	
Power Supply	DC12V/1.5A±15%
Power Consumption	3W 8.5W (IR on)
Environment	
Operating Temperature	-30°C to +60°C (-22°F to 140°F)
Operating Humidity	≤95%
Ingress Protection	IK08; IP66; TVS 6000V lightning proof; surge protection
Structure	
Casing	Metal
Dimensions	Φ128.0 mm × 65.4 mm (5.04" × 2.57")
Net Weight	0.485 kg (1.06 lb)
Gross Weight	0.7 kg (1.54 lb)

Description

WIFI, PAL

WIFI, NTSC

WIFI, PAL

WIFI, NTSC

Mount Adapter

Junction Box

Power Box

Wall Mounting Bracket

Corner Mounting Bracket

Ceiling Mounting Bracket

Pole Mounting Clamp

4M 4x Starlight IR PTZ AI Network Camera,

Ceiling Mount (1) Wall Mount Ceiling Mount (2) PFA107+PFB305W PFA107+PFB320C Print Print Pole Mount (1) Pole Mount (2) Pole Mount (1) Pole Mount (2) PFA107+PFB305W+PFA150 PFA107+PFB305W+PFA151 PFA107+PFB305W+PFA150 PFA107+PFB305W+PFA151

PFB305W

Wall Mounting Bracket

DH-PFA150

Pole Mounting Clamp

DH-PFA120

Junction Box

DH-PFA151

Corner Mounting Bracket

Dimensions (mm[inch])

Accessories Optional:

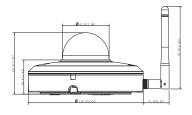
PFA107

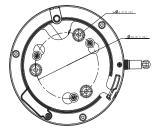
Mount Adapter

DH-PFA140

Power Box

PFB220C Ceiling Mounting Bracket







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Ordering Information

Туре

4M Camera

Accessories

Model

GNR-W

GNR-W

PFA107

PFB305W

DH-PFA120

DH-PFA140

DH-PFA151

PFB220C

DH-PFA150

DH-SD1A404XB-

DH-SD1A404XBN-

SD1A404XB-GNR-W

SD1A404XBN-GNR-W

Regulatory Information

The regulatory information herein might vary according to the model you purchased. Some information is only applicable for the country or region where the product is sold.

FCC Information

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC conditions:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

FCC compliance:

This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication.

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

For class B device, these limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Battery Replacement and Disposal

Applicable to products with battery.

A CAUTION

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others such as face, fingerprints, car plate number, Email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures include but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.