DH-SD50432GB-HNR

4MP 32x Starlight WizSense Network PTZ Camera

WizSense

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Dahua's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

System Overview

With its powerful optical zoom, and accurate pan and tilt capabilities, the PTZ camera provides an all-in-one solution for large-scale monitoring. It harnesses the latest starlight technology, allowing it to produce highly detailed images even in low light conditions. The camera offers smooth control and high-grade protection that enable it to meet the requirements of video surveillance in small and medium-sized scenes.

Functions

Starlight Technology

With advanced image processing technology and optical technology, Dahua Starlight technology can provide clear colorful video in the environment of low illuminance. It widely applies to various environments of low illuminance.

Wide Dynamic Range

The camera produces vivid images, even in high-contrast lighting conditions, by using industry-leading wide dynamic range (WDR) technology. For scenes that quickly alternate between bright and low lighting, WDR adjusts to fully capture both the bright and dark areas of a scene, producing superior quality videos.

· 1/2.8" 4Megapixel STARVIS™ CMOS.

· 32x optical zoom.

· Starlight technology.

· Max. 25/30 fps@4MP.

· Auto-tracking.

· Perimeter protection.

· Face detection.

· SMD4.0.

· IP67.

· IK10.

Starlight	WDR	IP67	IK10	Perimeter Protection	Quick Pick

Protection (IP67, TVS 6000 V)

IP67, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, and more, and uses secondary recognition during target detection to improve alarm accuracy.

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.

SMD 4.0

Dahua Smart Motion Detection technology works with intelligent algorithms to classify targets that trigger motion detection alarms. It filters out objects that are not targets, such as small and large animals, to avoid triggering false alarms. With an AI NVR, Quick Pick technology becomes available, allowing you to easily search for and pick out human and vehicle targets from SMD event videos, prioritizing the highest matches.

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Pixel	4 MP
Max. Resolution	2560 (H) × 1440 (V)
ROM	4 GB
RAM	1 GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6

Lens

Focal Length	4.8 mm–154 mm			
Max. Aperture	F1.6–F4.0			
Field of View	H: 55.8°–2.3° V: 31.9°–1.3° D: 63.7°–2.7°			
Optical Zoom	32×			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.1 m–1.5 m			
Iris Control	Auto; manual			
DORI Distance	Detect	Observe	Recognize	Identify
	3,080 m (10,104.99 ft)	1216.6 m (3,991.47 ft)	616 m (2,021.00 ft)	308 m (1,010.50 ft)

PTZ

Pan/Tilt Range	Tilt: 0° to +90°, auto flip 180 Pan: 0° to 360° endless
Manual Control Speed	Pan: 0.1°/s–350°/s; Tilt: 0.1°/s–250°/s
Preset Speed	Pan: 500°/s; Tilt: 500°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Pattern; Preset; Scan; Tour
PTZ Protocol	DH-SD

Intelligence

IVS (Perimeter Protection)	Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification; linkage tracking
Face Detection	Supports face detection, optimization, tracking, capturing pictures, uploading high-quality face snapshots, and face enhancement; Supports attributes extraction. 6 attributes and 8 expressions: Gender, age, glasses, expressions (angry, sad, hate, scary, surprise, calm, happy and confused), mask, mustache; Supports face cutout: Face, one-inch photo. Capturing strategies include real-time capturing, optimization, and quality first.

Auto Tracking	Yes
SMD	Yes
Quick Pick	With AI NVR, quickly pick up the human/vehicle targets that users are interested in from SMD events.

Video

Video Compression	H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG (Sub Stream1); Smart H.264+
Streaming Capability	3 streams
Resolution	4M (2560 × 1440); 3M (2048 × 1536); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4M/3M/1080p/1.3M/720p (1–25/30 fps) Sub stream 1: D1/VGA/CIF (1–25/30 fps) Sub stream 2: 1080p/1.3M/720p (1–25/30 fps)
Bit Rate Control	CBR/VBR
Video Bit Rate	H264: 96–14848 Kbps H265: 38–8960 Kbps
Day/Night	Auto (ICR)/Color/B/W
BLC	Yes
WDR	120 dB
HLC	Yes
White Balance	Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Electronic(EIS)
Defog	Electronic
Digital Zoom	16×
Image Rotation	180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view
S/N Ratio	≥55 dB

Audio

Audio Compression	PCM; G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G729; G723

Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTCP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; TCP/IP; DDNS; UPnP; NFS; ICMP; UDP; IGMP; HTTP; SSL; DHCP; SMTP; Qos; RTSP; ARP
Interoperability	ONVIF(Profile S&G&T);CGI;SDK
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	Micro SD card (512 GB); FTP/SFTP; NAS

Browser	IE 9 and later versions Chrome 41 and later versions Firefox 50 and later versions iOS 10 and later versions
Management Software	DSS Pro; DMSS
Mobile Client	iOS; Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014 UL: UL62368-1 + CAN/CSA C22.2, No. 62368-1

Port

Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT,bare wire)
Alarm Linkage	Capture; recoding; send email; preset; tour; pattern; alarm digital output; audio
Alarm Event	Motion/Tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection
Alarm I/O	2/1
Audio I/O	1/1

Power

Power Supply	24 VDC/2.5 A ± 25% (Included) PoE+ (802.3at)
Power Consumption	Basic: 13 W Max.: 16 W (PTZ)

Environment

Operating Temperature	−40°C to +60°C (−40°F to +140°F)
Operating Humidity	≤ 95%
Protection	IP67; IK10; 6000V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	Φ186 mm × 253 mm (Φ7.32" × 9.96")
Net Weight	2.5 kg (5.51 lb)
Gross Weight	4.5 kg (9.92 lb)

When the vertical field of view is between 0° and 10°, the image might present different degrees of ghosting.

Ordering Information

Type	Model	Description
4MP WizSense PTZ Camera	DH-SD50432GB-HNR	4MP 32x Starlight WizSense Network PTZ Camera
	SD50432GB-HNR	4MP 32x Starlight WizSense Network PTZ Camera
Accessories	PFB300S	Wall Mount Bracket
	PFA110	Mount Adapter
	DC 24 V/2.5 A	Power Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket
	PFB301S-E	Plane Mount Bracket
	TF-P100	MicroSD Memory Card
	PFM900-E	Integrated Mount Tester

Accessories

Included:

PFB300S
Wall Mount Bracket

PFA110
Mount Adapter

DC24V/2.5A
Power Adapter

Optional:

PFA140
Power Box

PFB300C
Ceiling Mount Bracket

PFA120
Junction Box

PFA150
Pole Mount Bracket

PFA151
Corner Mount Bracket
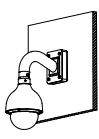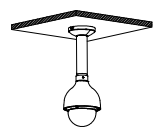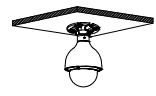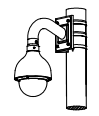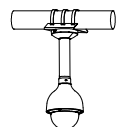

PFB303S
Parapet Mount Bracket
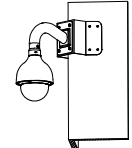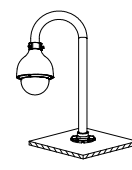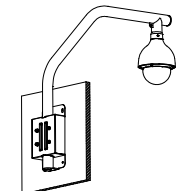

PFB301S-E
Plane Mount Bracket

TF-P100
MicroSD Memory Card

PFM900-E
Integrated Mount Tester

Wall Mount	Ceiling Mount	Ceiling Mount
PFA110+PFB300S+PFA120	PFA110+PFB300C	PFA110+PFB301C

Pole Mount(Vertical)	Pole Mount(Horizontal)	Corner Mount
PFA110+PFB300S+PFA150	PFA110+PFB300C+PFA150	PFA110+PFB300S+PFA151

Plane Mount	Parapet Mount
PFB301S–E	PFA110+PFB303S

Dimensions (mm[inch])

Ø47.3 [Ø1.86]

185.0 [6.50]

253.0 [9.96]

Ø140.3 [Ø5.53]

Ø186.2 [Ø7.33]