

DH-SD5A445XA-HNR

4MP 45x Starlight IR WizSense Network PTZ Camera



Wiz Sense

- 1/2.8" 4Megapixel STARVIS™ CMOS
- Powerful 45x optical zoom
- Starlight technology
- Max. 25/30 fps@4MP
- IR distance up to 150m
- SMD Plus
- Deep-learning-based auto tracking and perimeter protection
- Auto-tracking and IVS
- PoE+
- IP67 , IK10



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

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera can provide large monitoring range and great detail. 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

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.

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.

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.

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.

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.

Smart H.265+

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

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				
Camera				
Image Sensor	1/2.8" STARVIS™ CMOS			
Pixel	4MP			
Max. Resolution	2560 (H) × 1440 (V)			
ROM	4GB			
RAM	1GB			
Electronic Shutter Speed	1/3–1/30,000s			
Scanning System	Progressive			
Min. Illumination	Color: 0.005 Lux@F1.6 B/W: 0.0005 Lux@F1.6 0Lux (IR light on)			
Illumination Distance	150 m (492.13 ft)			
Illuminator On/Off Control	Zoom Prio/Manual/SmartIR			
Illuminator Number	4			
Lens				
Focal Length	3.95 mm–177.7 mm			
Max. Aperture	F1.6–F4.95			
Field of View	H: 70.3°–1.8°; V: 37°–1°; D: 69.3°–2°			
Optical Zoom	45x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	0.01 m–3 m			
Iris Control	Auto/Manual			
DORI Distance	Detect	Observe	Recognize	Identify
	3176 m (10419.95 ft)	1270 m (4166.67 ft)	635 m (2083.33 ft)	317 m (1040.03 ft)
PTZ				
Pan/Tilt Range	Pan: 0°–360°; Tilt: -15°–+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	5			
Scan	5			
Speed Adjustment	Support			
Power-off Memory	Support			
Idle Motion	Preset/Tour/Pattern/Scanning			
Protocol	DH-SD Pelco-P/D(Auto recognition)			
General Intelligence				
Event Trigger	Motion detection, video tampering, scene changing, Network disconnection, IP address conflict, illegal access, and storage anomaly.			
IVS		Object Abandoned/Missing		
Artificial Intelligence				
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.		
SMD Plus		Support		
Auto Tracking		Support		
Face Detection		Support		
Smart Capture		Support human, motor vehicle and non-motor vehicle image capture.		
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); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)		
Frame Rate		Main stream: 4M/3M(1–25/30 fps), 1080p/1.3M/720p (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080p (1–20/11 fps), 1.3M/720p (1–25/30 fps), D1/ CIF (1–25/30 fps)		
Bit Rate Control		Variable/Constant		
Bit Rate		H.264: 32 Kbps–8192 Kbps H.265: 32 Kbps–8192 Kbps		
Day/Night		Support		
BLC		Support		
WDR		120 dB		
HLC		Support		
White Balance		Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural/Street lamp		
Gain Control		Auto/Manual		
Noise Reduction		2D/3D		
Motion Detection		Support		
Region of Interest (RoI)		Support		
Image Stabilization		Electronic		
Defog		Electronic		
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 UL: UL60950-1+CAN/CSA 22.2.No.60950-1		
Audio				
Compression		G.711A; G.711Mu; G.726; AAC; G.722.1; G.723; G.729; PCM; MPEG2-Layer2		
Port				
Audio I/O		1 (Line in; bare wire)/1 (Line out; bare wire)		

Alarm I/O	2/1
Network	
Ethernet	1 RJ-45 Port 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; RTMP
Interoperability	ONVIF Profile S&G&T; CGI
Streaming Method	Unicast/Multicast
User/Host	20 (Total bandwidth 48M)
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
Mobile Phone	IOS/Android/Windows Phone
Power	
Power Supply	DC 24 V/2.5 A ± 25% PoE+(802.3at)
Power Consumption	11W 20W (IR light on)
Environment	
Operating Conditions	-40°C to +70°C (-40°F to +158°F)
Operating Humidity	≤95%RH
Protection	IP67; IK10; TVS 6000V lightning protection; surge protection
Structure	
Dimensions	Φ190 mm × 332 mm (7.48" × 13.07")
Weight	Net Weight: 4.7 kg (10.36 lb) Gross Weight: 8 kg (17.64 lb)
Casing	Metal

Ordering Information

Type	Model	Description
4M WizSense PTZ Camera	DH-SD5A445XA-HNR	4MP 45x Starlight IR WizSense Network PTZ Camera, PAL
	DH-SD5A445XAN-HNR	4MP 45x Starlight IR WizSense Network PTZ Camera, NTSC
	SD5A445XA-HNR	4MP 45x Starlight IR WizSense Network PTZ Camera, PAL
	SD5A445XAN-HNR	4MP 45x Starlight IR WizSense Network PTZ Camera, NTSC
Accessories	PFB305W	Wall Mount Bracket
	DC 24 V/2.5 A	Power Adapter
	PFA111	Mount Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket

Accessories

Included:



PFB305W
Wall Mount Bracket



DC 24 V/2.5 A
Power Adapter

Optional:



PFA111
Mount Adapter



PFA140
Power Box



PFB300C
Ceiling Mount
Bracket



PFA120
Junction Box



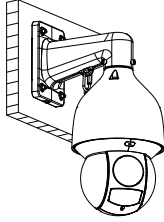
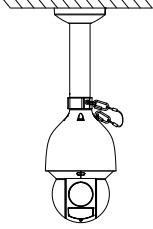
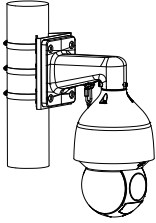
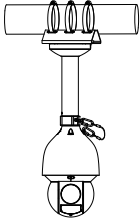
PFA150
Pole Mount Bracket



PFA151
Corner Mount
Bracket



PFB303S
Parapet Mount
Bracket

Wall Mount PFB305W	Ceiling Mount PFA111+ PFB300C
	
Pole Mount PFA150+PFB305W	Pole Mount PFA150+ PFA111+ PFB300C
	

Dimensions (mm[inch])

