alhua
TECHNOLOGY

DH-SD49825XB-HNR

8MP 25x Starlight IR WizSense Network PTZ Camera

· 1/2.8" 8Megapixel STARVIS™ CMOS
· Powerful 25x optical zoom
· Starlight technology
· IR distance up to 100 m
· Perimeter protection
· Face detection
· IP66

WizSense

Launched by Dahua Technology, WizSense is a series of AI products and solutions that adopts 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

Dahua PTZ WizSense network camera adopts advanced CNN deep learning algorithms to support Perimeter Protection with high accuracy. This camera possesses 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 makes it meet most of the requirements of video surveillance applications.

Functions

Starlight Technology

For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology offers the best in light sensitivity, capturing color in vivid detail, even in lighting as low as 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, producing clear images in dark environments.

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.

Face Detection

Supports 6 attributes and 8 expressions: Gender, age, glasses, mask, beard and expressions (anger, sadness, disgust, fear, surprise, calm, happiness, and confusion). It also supports face cutout settings: Face, and single inch photo. Three snapshot methods are also featured: Real-time snapshot, priority snapshot, and quality priority.

PFA Technology

PFA technology has introduced new methods of judgment that ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms that ensure image clarity when zooming and that shorten focus time. This makes the camera highly advanced in its functions, substantially improving the quality of your experience.

Protection

The camera allows for 6 kV lightning rating, which provides effective protection for both the camera and its structure against lightning.

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Pixel	8 MP
Max. Resolution	3840 (H) × 2160 (V)
ROM	4 GB
RAM	1 GB
Electronic Shutter Speed	1/1 s–1/30,000 s
Min. Illumination	Color: 0.005 lux@F1.6 B/W: 0.0005 lux@F1.6 0 lux (IR light on)
Illumination Distance	100 m (328.08 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off
Illuminator Number	4 (IR)

Lens

Focal Length	5 mm–125 mm
Max. Aperture	F1.6–F3.6
Field of View	H: 53.1°–3.4°; V: 30.4°–1.9°; D: 59.3°–3.9°
Optical Zoom	25×
Focus Control	Auto; Semi-auto; Manual
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
	2,161.4 m (7,091.21 ft)	864.6 m (2,836.61 ft)	432.3 m (1,418.31 ft)	216.1 m (708.99 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −15° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°–200°/s Tilt: 0.1°–120°/s
Preset Speed	Pan: 240°/s; Tilt: 200°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Preset; Tour; Pattern; Scan
PTZ Protocol	DH-SD Pelco-P/D (auto recognition)

Intelligence

IVS (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	Yes

SMD	Yes

Video

Video Compression	Smart H.265+; H.265; Smart H.264+; H.264B; H.264M; H.264H; MJPEG (Sub Stream 1)
Streaming Capability	3 streams
Resolution	4K (3840 × 2160); 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 960p (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 4K/4MP/1080p/1.3M/720p (1–25/30 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080p/1.3M/720p/CIF (1–25/30 fps)
Bit Rate Control	CBR; VBR
Video Bit Rate	H.264: 3328 kbps–8192 kbps H.265: 1280 kbps–8192 kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	Yes
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	EIS
Defog	Electronic defog
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	G.711a; G.711Mu; G.726; MPEG2-Layer2; G722.1; G.729; G.723

Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	HTTP; HTTPS; IPv4; RTSP; UDP; SMTP; NTP; DHCP; DNS; DDNS; IPv6; 802.1x; QoS; FTP; UPnP; ICMP; SNMP v1/v2c/v3 (MIB-2); IGMP; ARP; RTCP; RTP; PPPoE; TCP; RTMP
Interoperability	ONVIF Profile S&G&T; CGI
User/Host	20 (total bandwidth: 64 MB)
Storage	FTP; Micro SD card (256 GB)
Browser	IE 7 and later versions Chrome 42 and earlier versions Firefox 52 and earlier versions Safari
Management Software	Smart PSS; DSS; DMSS; Easy4ip; IVSS; Player; Configtool; NVR; Smart Player

Mobile Client	iOS; Android; iPhone; iPad

Certification

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

Port

Audio Input	1 channel
Audio Output	1 channel
Two-way Audio	Yes
Alarm Input	2 channel, digital input (0–5 VDC)
Alarm Output	1 channel
Alarm Linkage	Capture; preset; tour; pattern; recordings on SD card; alarm digital input; send email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection

Power

Power Supply	12 VDC, 3 A (± 10%) PoE+ (802.3at)
Power Consumption	Basic: 9.8 W Max.: 20 W (illuminator)

Environment

Operating Temperature	−40 °C to +70 °C (−40 °F to +158 °F)
Operating Humidity	≤ 95%
Protection	IP66; TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	269.9 mm × Φ160 mm (10.62" × Φ6.30")
Net Weight	3.0 kg (6.61 lb)
Gross Weight	4.3 kg (9.48 lb)

Ordering Information

Type	Model	Description
8M Wizsense PTZ Camera	DH-SD49825XB-HNR	8MP 25x Starlight IR PTZ AI Network Camera
	SD49825XB-HNR	8MP 25x Starlight IR PTZ AI Network Camera
Accessories	PFB305W	Wall Mount Bracket
	DC12V/3A	Power Adapter
	PFA111	Mount Adapter
	PFB300C	Ceiling Mount Bracket
	PFB301C	Ceiling Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket
	PFB301S-E	Plane Mount Bracket
	PFA150	Pole Mount Bracket
	PFA120	Junction Box
	PFA140	Water-proof Power Box

Accessories

Included:

PFB305W
Wall Mount Bracket

Optional:

DC12V/3A
Power Adapter

PFA111
Mount Adapter

PFB300C
Ceiling Mount Bracket

PFB301C
Ceiling Mount Bracket

PFA151
Corner Mount Bracket

PFB303S
Parapet Mount Bracket
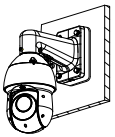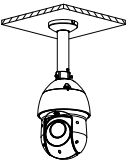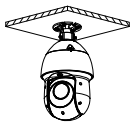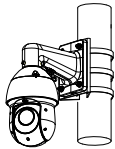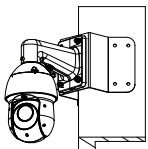
PFB301S-E
Plane Mount Bracket
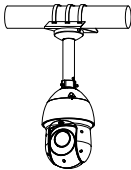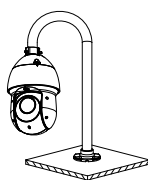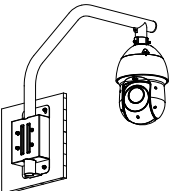
PFA150
Pole Mount Bracket

PFA120
Junction Box

PFA140
Water-proof Power Box

Wall Mount	Ceiling Mount	Ceiling Mount
PFB305W+PFA120	PFA111+PFB300C	PFA111+PFB301C

Pole Mount(Vertical)	Corner Mount	Pole Mount(Horizontal)
PFB305W+PFA150	PFB305W+PFA151	PFA111+PFB300C+PFA150

Plane Mount	Parapet Mount
PFB301S-E	PFA111+PFB303S

Dimensions (mm[inch])

Φ160.0 [Φ6.30]

Φ46.8 [Φ1.84]

269.9 [10.62]

Φ135.0 [Φ5.31]