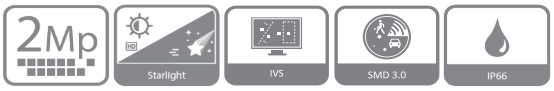
DH-SD49216DB-HNY

2MP 16x Starlight IR Network PTZ Camera

- 1/2.8" 2Megapixel STARVIS™ CMOS.
- 16× optical zoom.
- Starlight technology.
- Max. 25/30 fps@1080p.
- IR distance up to 100 m.
- H.265 encoding.
- Perimeter protection.
- Face Detection. Up to 8 faces captured at the same time.



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 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.

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.

Protection (IP66, TVS 6000 V)

IP66, TVS 6000 V lightning proof, surge protection, and voltage transient protection.

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, a flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality videos without straining the network. Smart H.265+ technology outranks standard H.265 video compression, reducing bit rate and storage requirements by up to 70%.

Perimeter Protection

Automatically filters out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets to improve alarm accuracy.

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.

SMD

Empowered by Deep-Learning Algorithms, Dahua SMD filters out motion detection alarms triggered by targets that are not a concern. It quickly recognizes humans and vehicles, triggering alarms when an intrusion occurs.

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Pixel	2 MP
Max. Resolution	1920 (H) × 1080 (V)
ROM	128 MB
RAM	256 MB
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 0 lux (IR light on)
Illumination Distance	100 m (328.08 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR
Illuminator Number	3 (IR)

Lens

Focal Length	5.0 mm–80.0 mm			
Max. Aperture	F1.6			
Field of View	H: 53.9°–4.6°; V: 30.3°–2.6°; D: 60°–5.3°			
Optical Zoom	16×			
Focus Control	Auto; semi-auto; manual			
Close Focus Distance	0.1 m–2 m (0.33 ft–6.56 ft)			
Iris Control	Fixed			
DORI Distance	Detect	Observe	Recognize	Identify
	1,131 m (3,710.63 ft)	452 m (1,482.94 ft)	226 m (741.47 ft)	113 m (370.73 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –15° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–80°/s Tilt: 0.1°/s–80°/s
Preset Speed	Pan: 80°/s; Tilt: 80°/s
Preset	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Power-off Memory	Yes
Idle Motion	Pattern; Preset; Tour
PTZ Protocol	DH-SD Pelco-P/D (auto recognition)

Intelligence

IVS (Perimeter Protection)	Tripwire; intrusion; climbing fences; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; vehicle/human alarm classification
Face Detection	Support face detection; capturing pictures; face enhancement
SMD	Yes

Video

Video Compression	H.264H; H.264B; Smart H.265+; H.265; MJPEG (Sub Stream); Smart H.264+; H.264M
Streaming Capability	3 streams
Resolution	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: 1080p/960p/720p (1–25/30 fps) Sub stream 1: D1/VGA/CIF (1–25/30 fps) Sub stream 2: 1080p/960p/720p (1–25/30 fps)
Bit Rate Control	CBR; VBR
Video Bit Rate	H.264: 1792 kbps–8192 kbps H.265: 512 kbps–5632 kbps
Day/Night	Auto (ICR); Color; B/W
BLC	Yes
WDR	120 dB
HLC	Yes
White Balance	Auto; indoor; outdoor; ATW; 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	G.711a; G.711Mu; G.722.1; G.726; MPEG2-Layer2; G.729

Network

Network Port	RJ-45 (10/100 Base-T)
Network Protocol	TCP; FTP; RTMP; IPv6; Bonjour; IPv4; DNS; RTCP; PPPoE; NTP; RTP; 802.1x; HTTPS; SNMP; TCP/IP; DDNS; UPnP; NFS; ICMP; UDP; IGMP; IP Filter; SMB; HTTP; SSL; DHCP; SMTP; SNMP v1/v2c/v3 (MIB-2); QoS; RTSP; ARP
Interoperability	CGI; Dahua SDK; API; SDK; ONVIF (Profile S&G&T)
Streaming Method	Unicast; Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	FTP; Micro SD card (512 GB); NAS
Browser	IE 7 and later versions Chrome Firefox Safari

Management Software	DSS Pro
Mobile Client	iPhone; iPad; iOS; Android

Certification

Certifications	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB, ANSI C63.4-2014

Port

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

Power

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

Environment

Operating Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Operating Humidity	≤95%
Protection	IP66; TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	270.4 mm × Φ160.0 mm (10.65" × Φ6.30")
Net Weight	2.4 kg (5.29 lb)
Gross Weight	3.9 kg (8.60 lb)

Ordering Information

Type	Part Number	Description
2M Camera	DH-SD49216DB-HNY	2MP 16x Starlight IR Network PTZ Camera
	SD49216DB-HNY	2MP 16x Starlight IR Network PTZ Camera
Accessories	PFB305W	Wall Mount Bracket
	DC12V/3A	Power Adapter
	PFA120	Mount 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

Accessories

Included:

PFB305W
Wall Mount Bracket

Optional:

DC12V/3A
Power Adapter

PFA120
Mount Adapter

PFA111
Mount Adapter

PFB300C
Ceiling Mount Bracket

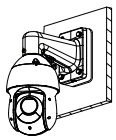
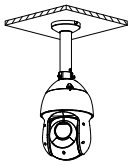
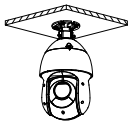
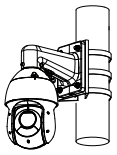
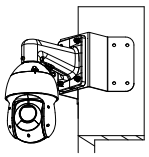
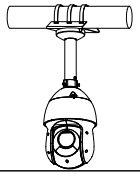
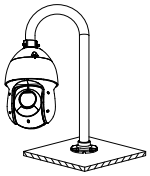
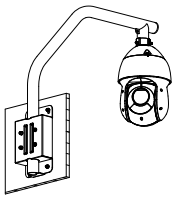
PFB301C
Ceiling Mount Bracket

PFA151
Corner mount Bracket

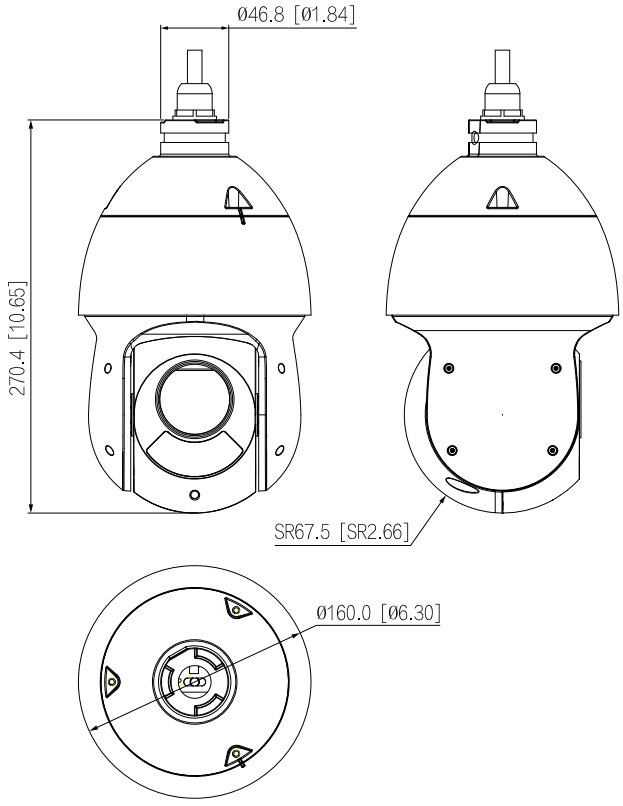
PFB303S
Parapet Mount Bracket

PFB301S-E
Plane Mount Bracket

PFA150
Pole Mount Bracket

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])



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