DH-SD6CE232GB-HNR

2MP 32x Starlight IR WizSense Network PTZ Camera

Wiz Sense

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 long distance video surveillance of outdoor scenes. Together with infrared illumination and Starlight Technology, the camera is a great solution for dark, low light conditions. The series combines a day and night mechanical IR cut filter to produce high quality images in variable lighting conditions during the day.

Functions

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, face 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.

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" 2Megapixel STARVIS™ CMOS.

· 32× optical zoom.

· Starlight technology.

· Max. 50/60 fps@1080p.

· IR distance up to 250 m.

· Auto Tracking 3.0.

· Perimeter protection.

· Face detection.

· SMD 4.0

· IP67, IK10.

Perimeter Protection	Face Detection	WDR	Starlight	Auto Tracking

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.

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.

Protection (IP67, TVS 8000 V)

IP67, TVS 8000 V lightning proof, surge protection, and voltage transient protection.

Environment (−40 °C to +70 °C, IP67)

Developed to operate in extreme conditions, Dahua camera can function in temperatures ranging from −40 °C to +70 °C (−40 °F to +158 °F) at 95% humidity. It was subjected to rigorous dust and water immersion tests, gaining its IP67 Ingress Protection certification, making it suitable for demanding outdoor applications.

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.

Technical Specification

Camera

Image Sensor	1/2.8" CMOS
Pixel	2 MP
Max. Resolution	1920 (H) × 1080 (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 0 lux@F1.6 (IR light on)
Illumination Distance	250 m (820.21 ft) (IR)
Illuminator On/Off Control	Zoom Prio; Manual; Smart IR; Off
Illuminator Number	6 (IR)

Lens

Focal Length	4.8 mm–154 mm
Max. Aperture	F1.6–F4.0
Field of View	H: 60.2°–2.7°; V: 34°–1.5°; D: 68°–3°
Optical Zoom	32×
Focus Control	Auto; semi-auto; manual
Close Focus Distance	0.8 m–5.0 m (2.62 ft–16.40 ft)
Iris Control	Auto; manual

DORI Distance	Detect	Observe	Recognize	Identify
	1,986 m (6,915.75 ft)	785 m (2,575.46 ft)	398 m (1,305.77 ft)	198 m (649.61 ft)

*DORI (Detect, Observe, Recognize, Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: −20° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–260°/s Tilt: 0.1°/s–120°/s
Preset Speed	Pan: 0°/s–300°/s Tilt: 0°/s–200°/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 Pelco-P/D(Auto recognition)

Intelligence

Video Metadata	Detects motor and non-motor vehicles, faces and human bodies. It also performs tracking, takes snapshots, uploads high-quality face images and optimizes images. It extracts attributes from motor vehicles, detecting up to 10 attributes for them
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; Vehicle/Human Alarm Classification; linkage tracking
Face Detection	Face detection; bounding box; optimization; capturing pictures; uploading high-quality face snapshots; face enhancement. Face attributes: Gender, age, facial expressions (Anger, sad, antipathy, fear, surprise, calm, happy, and confused), face mask, and mustache. Face image and 1 inch photos are supported for face cutouts. Face capture: Real-time snapshot, face priority, and quality priority
Construction Detection	Detects 6 helmet colors: Red, orange, yellow, blue, white, and black. An alarm will be triggered when a person is not wearing a helmet or when the color of the helmet that they are wearing does not match the configured color. It also supports compliance detection for work uniforms. Up to 5 work uniform sample libraries can be uploaded, which together can contain up to 1,000 images (the images must be 1080p and in the JPG format). An alarm will be triggered when the similarity between the detected work uniform and the samples in the library is below the set threshold (that is, below the minimum compliance standard for work uniforms). The system supports detecting the attributes of work uniforms such as the color of the uniform, and whether or not the person is wearing a mask and wearing shoe covers. An alarm will be triggered when the target is detected as not meeting the set requirements. It also detects and triggers alarms when only one person is in the construction site, and when no one is present in the detection area such as when a worker leaves their post or an area is left unmanned
Auto Tracking	Yes
SMD	SMD 4.0
Acupick	Uses deep learning algorithms and works with back-end devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets
Auto Patrol	It triggers the IVS rule when a target is detected and makes the camera link with the PTZ to rotate to the position of the target and patrol based on its presets

Video

Video Compression	H.264H; H.264B; Smart H.265+; H.264; H.265; MJPEG (Sub Stream); Smart H.264+
Streaming Capability	3 streams
Resolution	1080p(1920 × 1080); 1.3M (1280 × 960); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)
Video Frame Rate	Main stream: 1080p/1.3M/720p@(1–50/60 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: 64 Kbpss–10496 Kbps H265: 25 Kbps–6400 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	Yes
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	1×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	CGI; SDK; ONVIF (Profile S&G&T&M)
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	Micro SD card (Max 512 GB); FTP/SFTP; NAS
Browser	IE 9 and later versions Chrome 42 and later versions Firefox 50 and later versions Safari 10 and later versions
Management Software	DSS; DMSS; Easy4ip; Smart PSS; IVSS
Mobile Client	iOS; Android

Certification

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

Port

Analog Output	1 channel (CVBS output, BNC)
RS-485	1 (baud rate: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT, bare wire)
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
Alarm I/O	7/2
Audio I/O	1/1

Power

Power Supply	24 VDC, 2.5 A ± 25%, PoE+ (802.3at)
Power Consumption	Max.: 25.5 W (illuminator + heater + PTZ)

Environment

Operating Temperature	−40 °C to + 70 °C (−40 °F to + 158 °F)
Operating Humidity	≤ 95%
Protection	IP67; IK10; TVS 8000V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	337.4 mm × Φ209 mm (13.28" × Φ8.23")
Net Weight	5.8 kg (12.79 lb)
Gross Weight	9.4 kg (20.72 lb)

Ordering Information

Type	Model	Description
2MP WizSense Network PTZ Camera	DH-SD6CE232GB-HNR	2MP 32x Starlight IR WizSense Network PTZ Camera
	SD6CE232GB-HNR	2MP 32x Starlight IR WizSense Network PTZ Camera
Accessories	DC24V/2.5A	Power Adapter
	PFB305W	Wall Mount Bracket
	PFA111	Mount Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Juncton Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket

Accessories

Included:

DC24V/2.5A
Power Adapter

PFB305W
Wall Mount Bracket

Optional:

PFA111
Mount
Adapter

PFA140
Power
Box

PFB300C
Ceiling Mount
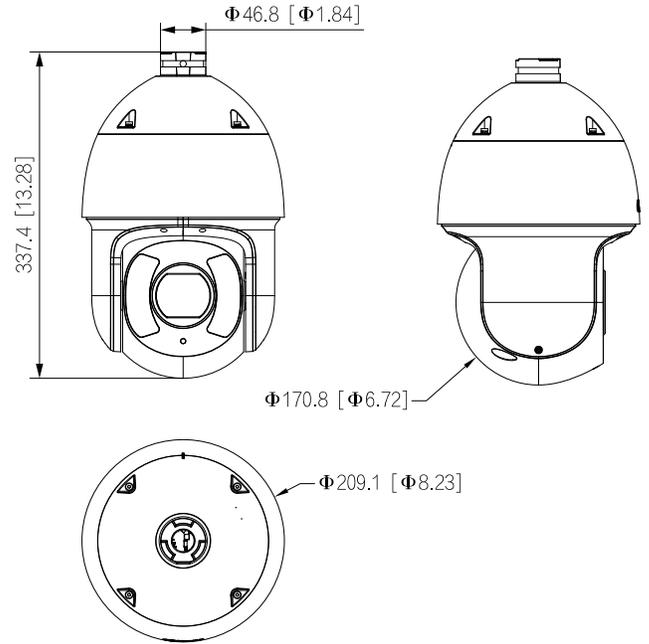Bracket

PFA120
Juncton
Box

PFA150
Pole Mount
Bracket

PFA151
Corner Mount
Bracket

PFB303S
Parapet Mount
Bracket

Dimensions (mm[inch])

Φ46.8 [Φ1.84]

337.4 [13.28]

Φ170.8 [Φ6.72]

Φ209.1 [Φ8.23]

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	