DH-SDT6E425-8P-MB-A-PV1

8+4MP 25x Smart Dual Illumination Active Deterrence X-Spans Network PTZ Camera



X-Spans

- Overview channel:Outputs 180° wide angle splicing image Max. 25/30 fps@8M
- Detail channel: 1/2.8"4Megapixel STARVIS™ CMOS 25× optical zoom Max. 25/30 fps@4M
- IR distance up to 250m
- Warm light distance up to 100m
- Xinghan Large-Scale AI Models
- WizTracking
- Face detection
- Perimeter protection Active deterrence
- Smart dual light +
- Built-in dual mics and a speaker for two-way talk
- Sound and light alarm (red and blue lights)
- Gyroscope EIS
- Acupick
- SMD 4.0
- IP67
- IK10

Series Overview

The multi-sensor series pushes the bar on PTZ cameras with its enhanced monitoring capabilities captured in its unique lens design. Fitted with an extra lens, it quickly tracks targets while keeping an eye on the monitored area. They also harness the strength of their embedded AI intelligent chip to perform a wide variety of intelligent functions, making them ideal for use in many scenarios.

Functions

Smart Dual Light

Dahua Smart Dual Light technology adopts smart algorithm to detect targets. Usually, the IR illuminator is on at night; when the target appears in the monitoring area, the white light is on, and the camera records the full-color video and information of key events. That is, the camera links snapshot and video with full-color image. When the target is out of the monitoring area, the white light is off and the IR illuminator is on, which reduces light pollution efficiently.

AI-ISP

With AI ISP technology, the camera is able to easily adapt to scenes, producing high quality images that reveal the fine details of targets.

AcuPick

This industry-leading search technology effectively utilizes both front-end and back-end intelligence to help with searching through massive video data to quickly and conveniently locate targets with greater precision.



Smart Tracking

The panoramic camera links with the detail camera to track targets. When the target enters the panoramic area, the detail camera starts to monitor them and tracks their movement by rotating, zooming and focusing the PTZ camera lens. This allows the camera to produce highly detailed images with the movement of targets for security personnel.

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.

Xinghan Large-Scale AI Models-Vision

Xinghan Large-Scale AI Models-Vision seamlessly expands the storage and operational capacity of algorithmic models through the powerful integration of edge AI model algorithms and NPU computing power. Engineered with a lightweight transformer architecture and enhanced by model distillation and quantization techniques, it optimizes the computing power consumption of ViT operators. This enables the system to collaborate on multiple tasks simultaneously through joint inference between small and large models optimized for edge devices.

Technical Specification

Camera

Image Sensor	Overview channel: 1/2.7" CMOS; Detail channel: 1/2.8" CMOS
Pixel	Overview channel: 8 MP; Detail channel: 4 MP
Max. Resolution	Overview channel: 4096 (H) × 1860 (V); Detail channel: 2560 (H) × 1440 (V)
ROM	Overview channel: 4 GB; Detail channel: 4 GB
RAM	Overview channel: 2 GB; Detail channel: 2 GB
Electronic Shutter Speed	1 s–1/30,000 s
Scanning System	Progressive
Min. Illumination	Overview channel: 0.005 lux@F1.4 (Color, 30 IRE) 0.0005 lux@F1.4 (B/W, 30 IRE) 0 lux (illuminator on) Detail channel: 0.005 lux@F1.6 (Color, 30 IRE) 0.0005 lux@F1.6 (B/W, 30 IRE) 0 lux (illuminator on)
Illumination Distance	Overview channel: 30 m (98.43 ft) (IR); 30 m (98.43 ft) (white light) Detail channel: 100 m (328.08 ft) (warm light); 250 m (820.21 ft) (IR)
Illuminator On/Off Control	Overview channel: Manual; Auto; Off Detail channel: Zoom Prio; Manual; Auto; Off
Illuminator Number	Overview channel: 2 (IR light); 2 (White light); Detail channel: 6 (Dual light fusion)

Lens

Focal Length	Overview channel: 2.8 mm; Detail channel: 5 mm–125 mm
Max. Aperture	Overview channel: F1.4; Detail channel: F1.6-F3.6
Field of View	Overview channel: H: 180°; V: 86°; Detail channel: H: 51.9°–3.0°; V: 39.7°–2.2°; D: 63.1°–3.7°
Optical Zoom	Overview channel: NA; Detail channel: 25×
Focus Control	Auto; manual; semi-auto
Close Focus Distance	Overview channel: 0.6 m (1.97 ft); Detail channel: 0.1 m–0.5 m (0.33"–1.64")
Iris Control	Overview channel: NA; Detail channel: Auto; manual; iris prio

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	Overview channel: 2.8 mm	56.0 m (183.72 ft)	22.4 m (73.49 ft)	11.2 m (36.74 ft)	5.6 m (18.37 ft)
	Detail channel: W	100.0 m (328.08 ft)	40.0 m (131.23 ft)	20.0 m (65.62 ft)	10.0 m (32.81 ft)
	T	2500.0 m (8202.00 ft)	1000.0 m (3280.80 ft)	500.0 m (1640.40 ft)	250.0 m (820.20 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				

DORI Distance	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°/s–260°/s; Tilt: 0°/s–140°/s
Preset Speed	Pan: 300°/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;Pattern;Tour;Scan

Intelligence

Video Metadata	Overview channel: NA Detail channel: Supports detection of motor vehicles, non-motor vehicles, faces and human bodies, optimization, capturing pictures, and uploading high-quality face snapshots. It extracts attributes from motor vehicles and non-motors, detecting up to 10 attributes for motor vehicles and 8 for non-motor vehicles. It also extracts attributes from human faces and bodies, detecting up to 6 attributes for faces, and 8 for bodies.
IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking
Face Detection	Overview channel: NA Detail channel: Supports face detection, optimization, capturing pictures, uploading high-quality face snapshots and enhancing face images. Attribute extraction is also supported, where 6 attributes and 8 expressions can be detected. Face cutout is also offered, where you can cutout one face at a time and customize the size to be a one-inch photo. The supported methods for capturing snapshots are real-time capturing, quality first, and selecting a preferred image among a group of snapshots.
Vehicle Density	Overview channel:Vehicle density; parking upper limit; traffic congestion; vehicle status alarm Detail channel: NA

Construction Monitoring	Overview channel: NA Detail channel: 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.
Smart Tracking	Linkage tracking, Auto tracking
Crowd Distribution Map	Overview channel: Crowd map (Large-Scale AI Models), global crowd density; crowd density in area; people counting in area; crowd status Detail channel: NA
SMD	SMD 4.0
AcuPick	Uses deep learning algorithms and works with backend devices to accurately match targets, such as people and motor vehicles, and search through live and recorded videos to quickly locate targets
Auto Patrol	Overview channel: NA Detail channel: After an IVS event occurs, the PTZ camera immediately initiates automated patrol of predefined key points to quickly cover potential risk areas and detect unknown threats in real time.

Active Deterrence

Light Warning	Red-Blue light warning; Flash duration: 5 s–30 s; Flash frequency: high, medium, low
Sound Warning	Offers 11 sound alarm and 10 custom sound alarms can be imported. Sound can be set from 0%–100%. Play times can be set from 1-10.

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	Overview channel: 8M (4096 × 1860); 2M (2048 × 928); 1080p (1920 × 1080); 720p (1280 × 720); 1024 × 448; D1 (704 × 576/704 × 480);VGA (640 × 480);CIF (352 × 288/352 × 240); Detail channel: 4M (2560 × 1440); 3M (2304 × 1296); 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	Overview channel: Main stream: 4096 × 1860 @(1–25/30 fps) Sub stream 1: 1024 × 448/D1/VGA/CIF @(1–25/30 fps) Sub stream 2: 2048 × 928/1080p/1.3M/720p @(1–25/30 fps); Detail channel: 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	Overview channel: H264: 128 kbps–16,384 kbps H265: 51 kbps–13,312 kbps ； Detail channel: H264: 96 kbps–16,384 kbps H265: 38 kbps–10,240 kbps;
Day/Night	Overview channel: Auto; Color; B/W; Electronic Detail channel: Auto; Color; B/W; Electronic
BLC	Yes
WDR	Overview channel: DWDR; Detail channel: 120 dB
HLC	Yes
White Balance	Overview channel: Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp Detail channel: Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Overview channel: Auto; manual; gain prio Detail channel: Auto; manual; gain prio
Noise Reduction	Overview channel: 2D NR; 3D NR Detail channel: Auto: 2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Image Stabilization	Overview channel: NA Detail channel:Gyroscope EIS
Defog	Overview channel: Electronic Detail channel: Electronic
Digital Zoom	Overview channel: NA; Detail channel: 16×
Image Rotation	Overview channel: NA Detail channel: 180°
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view Multiple colors and mosaic available
S/N Ratio	≥55 dB

Audio

Audio Compression	PCM, G.711A, G.711Mu, G.726, MPEG2-Layer2, G.722.1, G.729
Built-in MIC	Yes
Built-in Speaker	Yes

Network

Network Port	RJ-45 (100/1,000 Base-T)
Network Protocol	HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;NFS
Interoperability	ONVIF (Profile S & Profile G & Profile T);CGI;SDK;P2P
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	Micro SD card (512 GB); FTP/SFTP; NAS
Browser	web5.0: IE 9 and later versions; Chrome 41 and later versions; Firefox 52 and later versions; Safari 10 and later versions
Management Software	DMSS;DSS Pro
Mobile Client	iOS;Android

Certification

Certifications	CE:EN55035;EN IEC61000-3-2;EN55032;EN60950;EN62368-1

Port

RS-485	1 (Bit range: 1200 bps–9600 bps)
Audio Input	1 channel (LINE IN, bare wire,built-in mic (mutually exclusive))
Audio Output	1 channel (LINE OUT,bare wire;built-in speaker (mutually exclusive))
Alarm Input	2 (on-off value input: 0–5 VDC)
Alarm Output	1 channel
Alarm Linkage	Capture; recording; send email; preset; tour; pattern; alarm digital output; audio; warning light
Alarm Event	Motion/tampering detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection

Power

Power Supply	36 VDC/2.23 A ± 25%; PoE++(802.3bt)
Power Consumption	Basic power consumption: 19 W Max. power consumption: 40 W (IR + intelligent functions + PTZ + Siren and Light Active Deterrence)
Power Adapter	Included

Environment

Operating Temperature	–40 °C to +70 °C (–40 °F to +158 °F)
Operating Humidity	≤95%
Protection	IP67;IK10;TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Casing Material	Plastic, aluminum alloy
Product Dimensions	247 mm × 202 mm × 359.8 mm (9.72" × 7.95" × 14.17") (L × W × H)
Net Weight	5.3 kg (11.68 lb)
Gross Weight	7.12 kg (15.70 lb)

Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SDT6E425-8P-MB-A-PV1	8+4MP 25x Smart Dual Illumination Active Deterrence X-Spans Network PTZ Camera
Accessories	PFB303W	Wall Mount Bracket
	DC36V/2.23A	Power Adapter
	PFA114	Mount Adapter
	DH-PFB301S-E	Plane Mount Bracket
	DH-PFB300C	Ceiling Mount Bracket
	DH-PFA151	Corner Mount Bracket
	DH-PFA126	Water-proof Junction Box
	DH-PFA150	Pole Mount Bracket
	DH-PFB303S	Parapet Mount Bracket

Accessories

Included:



PFB303W
Wall Mount Bracket



DC36V/2.23A
Power Adapter



PFA114
Mount Adapter

Optional:



DH-PFA126
Water-proof Junction Box



DH-PFA150
Pole Mount Bracket



DH-PFA151
Corner Mount Bracket



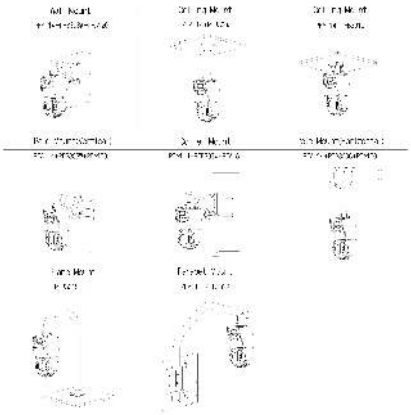
DH-PFB300C
Ceiling Mount Bracket



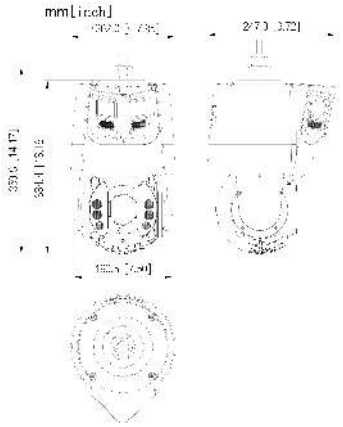
DH-PFB301S-E
Plane Mount Bracket



DH-PFB303S
Parapet Mount Bracket



Dimensions (mm[inch])



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