DH-SDT4E425-8P-GB-APV1

8+4MP 25x TiOC Network Panoramic PTZ Camera



Xinghan X-Spans

- Overview channel: Outputs 180° wide angle splicing image
- Detail channel: 1/2.8"4Megapixel CMOS
- 25x optical zoom
- Max. 25/30 fps@8M
- IR distance up to 100 m
- Wiztracking;Relay Tracking
- Perimeter protection
- Active deterrence
- Smart dual light +

System Overview

Designed with more lens than the conventional PTZ camera, the X-Spans series camera captures an expansive view, producing wide, vivid images. It has the combined power of the panoramic and detail camera in its structure and is highly cost-effective, greatly reducing the installation cost of security systems. It also leverages its two cameras to perform smart tracking, and has an independent mode that allows you to separately use each camera.

Functions

Starlight Technology
For challenging low-light conditions, Dahua's Starlight Ultra-low Light Technology has exceptional light sensitivity, capturing images 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.

Smart Codec
With advanced scene-adaptive rate control algorithm, Dahua smart codec technology realizes the higher encoding efficiency than H.265 and H.264, provides high-quality video, and reduces the cost of storage and transmission.

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.

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.



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.

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.

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

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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)
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) (IR); 50 m (131.23 ft) (white light)
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: 2 (IR light); 2 (Warm light)

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
Iris Control Type	P-Iris

DORI Distance	Detect	Detect	Observe	Recognize	Identify
	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)
	Detail channel: 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 distances. For intelligent function distances, refer to installation and commissioning manual/ project design tool.				

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: –15° to +90°, auto flip 180°
Manual Control Speed	Pan: 0.1°/s–180°/s; Tilt: 0.1°/s–90°/s
Preset Speed	Pan: 0.1°/s–180°/s; Tilt: 0.1°/s–90°/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

IVS (Perimeter Protection)	Tripwire; intrusion; crossing fence detection; loitering detection; abandoned/missing object; fast moving; parking detection; people gathering; human alarm classification; linkage tracking
Smart Tracking	Wiztracking;Relay Tracking
SMD	SMD4.0
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 (Overview channel support)
Auto Patrol	After an IVS alarm is triggered, it can link with up to 5 presets or scan to patrol the key areas. IVS can be enabled with SMD at the same 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

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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: Electronic Image Stabilization (EIS)
Defog	Overview channel: Electronic Detail channel: Electronic
Digital Zoom	Overview channel: NA; Detail channel: 16×
Image Rotation	Overview channel: NA Detail channel: 180
S/N Ratio	Overview channel: ≥55 dB Detail channel: ≥55 dB
Privacy Masking	Up to 24 areas can be set, with up to 8 areas in the same view Multiple colors and mosaic available

Audio

Audio Compression	PCM, G.711A, G.711Mu, G.726, MPEG2-Layer2, G.722.1, G.729

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 & Profile M);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: EN 50130-4 EN 55032 EN 55035 EN 61000-3-3 EN IEC 61000-3-2 EN 62368-1

Port

Audio Input	1 channel (LINE IN, bare wire)
Audio Output	1 channel (LINE OUT,bare wire;built-in speaker (mutually exclusive))
Alarm Input	2 channels in: supports wet contact connection (max load 5 mA 3–5 VDC); supports dry contact connection
Alarm Output	1 channel out: dry contact, max load 1,000 mA 30 VDC/500 mA 50 VAC
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	12 VDC(± 10%), 3 A ;PoE+ (802.3at)
Power Consumption	Basic: 14 W; Max: 25 W (illuminator + heating glass + Siren and Light Active Deterrence + ICR + PTZ)
Power Adapter	Optional

Environment

Operating Temperature	–40 °C to +65 °C (–40 °F to +149 °F)
Operating Humidity	≤95%
Protection	IP66; TVS 6000 V lightning proof; surge protection; voltage transient protection

Structure

Product Dimensions	194.2 mm × 160 mm × 311 mm (7.65" × 6.30" × 12.24") (L × W × H)
Net Weight	3.1 kg (6.83 lb)
Gross Weight	4.6 kg (10.14 lb)

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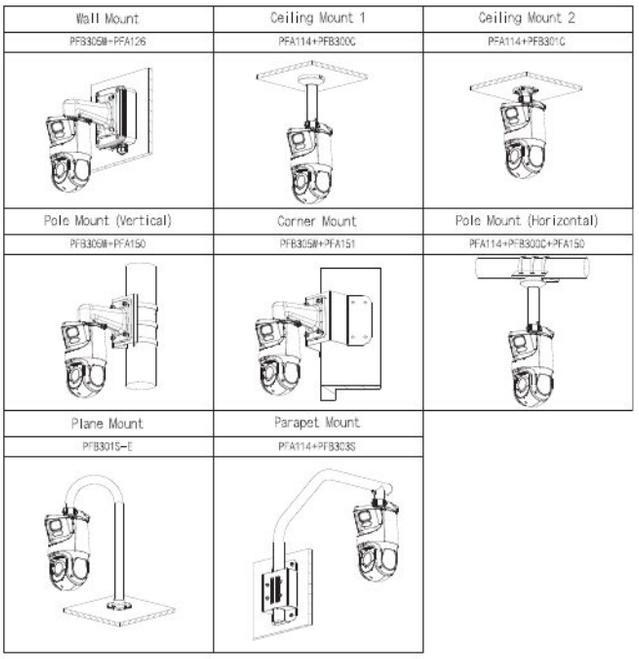
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Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SDT4E425-8P-GB-APV1	8+4MP 25x TiOC Network Panoramic PTZ Camera
Accessories	PFB305W	Wall Mount Bracket
	DC12V/3A	Power Adapter
	PFA126	Mount Adapter
	PFA114	Mount Adapter
	PFB300C	Ceiling Mount Bracket
	PFB301C	Ceiling Mount Bracket
	PFA151	Corner Mount Bracket
	PFA150	Pole Mount Bracket
	PFB303S	Parapet Mount Bracket
	PFB301S-E	Plane Mount Bracket



Accessories

Included:



PFB305W
Wall Mount Bracket

Optional:



DC12V/3A
Power Adapter



PFA126
Mount Adapter



PFA114
Mount Adapter



PFB300C
Ceiling Mount
Bracket



PFB301C
Ceiling Mount
Bracket



PFA151
Corner Mount
Bracket



PFA150
Pole Mount
Bracket

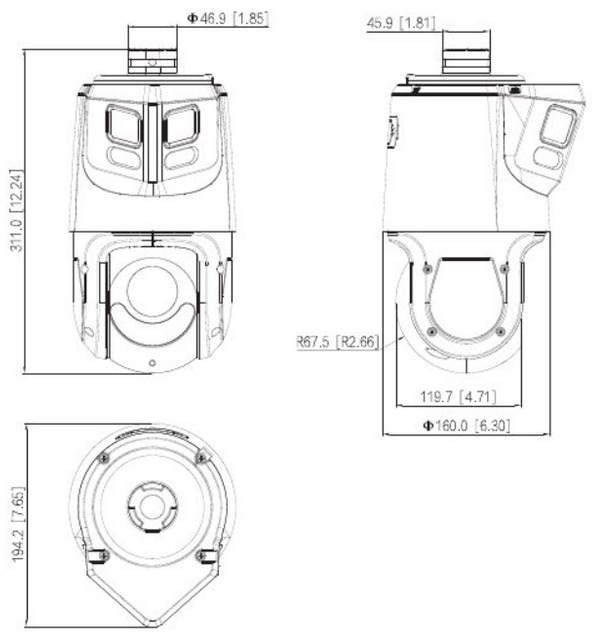


PFB303S
Parapet Mount
Bracket



PFB301S-E
Plane Mount
Bracket

Dimensions (mm[inch])



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