

DH-SDT4E425-4F-MB-AGQ-PV1-LA

4+4MP 25x 4G AOV TiOC Network PTZ Camera



Xinghan X-Spans

Series 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

WizColor Technology

Dahua WizColor Technology seamlessly combines with the powerful AI-ISP, large pixel size sensor and large aperture in cameras. This unique integration enables cameras to effortlessly capture high-quality images with vibrant colors during nighttime scenarios, ensuring fine details are preserved and minimizing motion blur. Unlike traditional self-illuminating cameras, Dahua WizColor Technology maximizes the utilization of weak light sources, such as moonlight and city lights reflected in the sky, delivering captivating full-color images of the entire scene. It also ensures that monitoring distances are not compromised at night due to limited illumination ranges, facilitating full-color image capture even over long distances.

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.

- Overview channel: 1/1.8" CMOS 4Megapixel F1.0 CMOS,
- Detail channel: 1/2.8" CMOS 4Megapixel CMOS
- 25x optical zoom Max.
- 25/30 fps@4M
- 100m IR & 100m warm light.
- WizColor Technology AOV Mode
- Xinghan Large-Scale AI Models
- WizTracking
- ANPR
- 4G
- Built-in dual mics and a speaker



AOV (Always-On Video) Mode

AOV (Always-On Video) technology offers a low power consumption solution that enables 24/7 video recording. Equipped with advanced AI algorithms, the camera can be woken up to perform detection even at long distances. During inactive periods, it records at a low frame rate and seamlessly escalates to a high frame rate when an event is detected, ensuring smooth and continuous video recordings.

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.

4G

With a built-in high-performance 4G mobile network module, the camera can be directly registered to cloud platforms after a 4G SIM card has been inserted into it. It can be installed anywhere without the hassle of network cables. Users can perform real-time monitoring and remote control of the camera from a mobile client through 4G network.

Technical Specification

Camera

Image Sensor	Channel 1 (Overview): 1/1.8" CMOS Channel 2 (Detail): 1/2.8" CMOS
Pixel	Channel 1 (Overview): 4 MP Channel 2 (Detail): 4 MP
Max. Resolution	Channel 1 (Overview): 2560 (H) × 1440 (V) Channel 2 (Detail): 2560 (H) × 1440 (V)
Electronic Shutter Speed	Auto/Manual 1 s–1/100,000 s
Scanning System	Progressive
Min. Illumination	Overview channel: 0.001 lux@F1.0 (Color) Detail channel: 0.005 lux@F1.6 (Color) 0.0005 lux@F1.6 (B/W) 0 lux (IR on)
Illumination Distance	Overview channel: 30 m (98.43 ft) (Warm light) Detail channel: 100 m (328.08 ft) (IR); 100 m (328.08 ft) (Warm light)
Illuminator On/Off Control	Overview channel: Manual; Auto; Off Detail channel: Zoom Priority; Manual; Auto; Off
Illuminator Number	Overview channel: 2 (Warm light) Detail channel: 2 (Warm light) 2 (IR light) 2 (Dual light fusion)

Lens

Focal Length	Overview channel: 4 mm Detail channel: 5 mm–125 mm
Max. Aperture	Overview channel: F1.0 Detail channel: F1.6
Field of View	Overview channel: H: 95°; V: 52.5°; D: 116° Detail channel: H: 51.9°–3.0°; V: 39.7°–2.2°; D: 63.1°–3.7°
Optical Zoom	Detail channel: 25×
Focus Control	Auto; Semi-auto; Manual
Close Focus Distance	Overview channel: 2.5 m (8.20 ft) Detail channel: 0.5 m–5 m (1.64 ft–16.40 ft)
Iris Control	Detail channel: Auto; Manual; Iris Priority

	Lens	Detect	Observe	Recognize	Identify
DORI Distance	Overview channel: D	181.10 ft	21.8 m (71.52 ft)	11.0 m (36.09 ft)	5.5 m (18.04 ft)
	Detail channel: W	96 m (314.96 ft)	37.9 m (124.34 ft)	19.2 m (62.99 ft)	9.6 m (31.50 ft)
	T	2400 m (7,874.02 ft)	948 m (3,110.24 ft)	480 m (1,574.80 ft)	240 m (787.40 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	Overview channel: Pan: 0°; Tilt: 12° to 24° (Manually) Detail channel: 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	Preset;Pattern;Tour;Scan

Intelligence

IVS (Perimeter Protection)	Intrusion, tripwire, fast moving (the three functions support the classification and accurate detection of vehicle, animal and human), loitering detection, people gathering, parking detection, stay detection. Offers Perimeter Protection Large-Scale AI Models to extend the target detection range and reduce the rate of false alarm.
Face Detection	Face detection; snapshot; snapshot optimization; optimal face snapshot upload; face enhancement; face exposure; face attributes extraction including 6 attributes and 8 expressions; face snapshot set as face or one-inch photo; snapshot strategies (real-time snapshot, quality priority and optimization snapshot); face angle filter; optimization time setting.
Smart Tracking	Linkage Tracking; Relay Tracking; WizTracking
SMD	SMD 4.0
Auto Patrol	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 and blue light warning Flash duration: 5 s–180 s Flash frequency: high, medium, low
Sound Warning	Offers 11 sound alarms and supports importing 10 custom sound alarms Sound: 0–100 Play times can be set from 1 to 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: 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240) Detail channel: 4M (2560 × 1440); 3M (2304 × 1296); 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576/704 × 480); VGA (640 × 480); CIF (352 × 288/352 × 240)

Video Frame Rate	Overview channel: Main stream: 4M (2560 × 1440)/3M (2304 × 1296)/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) Detail channel: Main stream: 4M (2560 × 1440)/3M (2304 × 1296)/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	H264: 64 kbps–10496 kbps H265: 25 kbps–6400 kbps
Day/Night	Overview channel: Color/B/W Detail channel: Auto (ICR)/Color/B/W
BLC	Yes
WDR	Overview channel: 150 dB Detail channel: 120 dB
HLC	Yes
White Balance	Overview channel:Auto; outdoor; manual; regional custom; natural light; street lamp Detail channel:Auto; indoor; outdoor; tracking; manual; sodium lamp; natural light; street lamp
Gain Control	Auto; manual; gain priority
Noise Reduction	2D NR; 3D NR
Motion Detection	Yes
Region of Interest (RoI)	Yes
Defog	Overview channel: Electronic Detail channel: Electronic
Digital Zoom	16×
Image Rotation	180°
Privacy Masking	Up to 32 areas can be set, with up to 8 areas in the same view; multiple colors and mosaics are available
S/N Ratio	≥55 dB

Audio

Audio Compression	PCM; G.711A; G.711Mu; G.726; MPEG2-Layer2; G.722.1; G.729; G.723
Built-in MIC	Yes, built-in dual Mic
Built-in Speaker	Yes, built-in speaker

Network

Network Port	RJ-45 (10/100 Base-T)
Carrier Network System	LA: 4G: FDD-LTE: B1/B2/B3/B4/B7/B8/B12/B17/B28/B66; TDD-LTE:B38/B40
Wireless Carrier Frequency Band	4G: FDD-LTE: B1/B3/B7/B8/B20/B28; TDD-LTE:B38/B40/B41; 3G: WCDMA: B1/B8 (2100/900MHz); 2G: CDMA: BC0 (800MHz); GSM: B3/B8 (1800/900MHz)
Max. Transmission Power	≤20 dBm@2400–2483.5 MHz; ≤23 dBm@5150–5250 MHz ≤23 dBm@5250–5350 MHz; ≤33 dBm@5725–5850 MHz
Network Protocol	HTTP;HTTPS;TCP/IP;IPv4;RTSP;UDP;SMTP;NTP;DHCP;DNS;DDNS;IPv6;802.

Network Protocol	1x;SSL;QoS;FTP;UPnP;ICMP;SNMP;IGMP;ARP;RTCP;RTP;PPPoE;RTMP;Bonjour;SMB;NFS
Interoperability	CGI;SDK;P2P
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth: 64 M)
Storage	Micro SD card (up to 1 TB); FTP/SFTP; NAS
Browser	Web5.0: IE9 and later versions Chrome 41 and later versions Firefox 50 and later versions Safari 10 and later versions
Management Software	DMSS;DSS Pro
Mobile Client	iOS;Android

Certification

Certifications	CE-LVD: EN62368-1 CE-EMC: Electromagnetic Compatibility Directive 2014/30/EU CE-RED: Radio Equipment Directive 2014/53/EU
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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 (digital input: 0–5 VDC)
Alarm Output	1 channel
Alarm Linkage	Capture; recording; send email; preset; tour; pattern; warning light; alarm digital output; audio; wake
Alarm Event	No SD card; SD card full; SD card error; network disconnection; IP conflict; illegal access; motion detection; video tampering; audio detection; external alarm; crossing fence; tripwire; intrusion; fast moving; abandoned object; missing object; loitering detection; crowd detection; parking detection; face detection; face recognition; ANPR; SMD

Power

Power Supply	12 VDC; 4 A (–10% to +25%)
Power Consumption	AOV mode (AI ISP off): 1.0 W AOV mode (AI ISP on, light off): 1.3 W AOV mode (AI ISP on, light on): 2.0 W Power saving mode: 0.6 W Performance mode (without 4G streaming; AI ISP off): 7.9 W Performance mode (without 4G streaming; AI ISP on): 10.5 W Performance mode (4G streaming; 1080p; AI ISP off): 8.5 W Performance mode (4G streaming; 1080p; AI ISP on): 11.0 W Max (AI ISP + illuminator + heating + PTZ + 4G streaming on): 32 W
Power Adapter	Optional

Environment

Operating Temperature	–40 °C to +65 °C (–40 °F to +149 °F)
Operating Humidity	≤95%
Protection	IP67

Anti-corrosion Level	Basic Protection *The products are designed for general use and are applicable even in areas with no specific requirements for anti-corrosion protection.
Structure	
Product Dimensions	181.42 mm × 159.93 mm × 301.60 mm (7.14" × 6.30" × 11.87") (L × W × H)
Net Weight	3.4 kg (7.50 lb)
Gross Weight	4.88 kg (10.76 lb)

Ordering Information

Type	Model	Description
Network PTZ Camera	DH-SDT4E425-4F-MB-AGQ-PV1-LA	4+4MP 25x 4G AOV TiOC Network PTZ Camera
Accessories	PFB305W	Wall Mount Bracket
	DH-PFB301S-E	Plane Mount Bracket
	PFA114	Mount Adapter
	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
	PFM900-E	Integrated Mount Tester

Accessories

Included:



PFB305W
Wall Mount Bracket

Optional:



DH-PFB301S-E
Plane Mount Bracket



PFA114
Mount Adapter



DH-PFB300C
Ceiling Mount Bracket



DH-PFA151
Corner Mount Bracket



DH-PFA126
Water-proof Junction Box



DH-PFA150
Pole Mount Bracket

Optional:



DH-PFB303S
Parapet Mount Bracket



PFM900-E
Integrated Mount Tester

Wall Mount PFB305W	Ceiling Mount PFA114+PFB300C	Pole Mount (Vertical) PFB305W+PFA150
Corner Mount PFB305W+PFA151	Pole Mount (Horizontal) PFA114+PFB300C+PFA150	

Dimensions (mm[inch])

