DH-SDT5X425-4Z4-WA-2812

4MP Starlight IR WizMind Network Dual-PTZ Camera

WizMind

Launched by Dahua Technology, Dahua WizMind is a full portfolio of solutions composed of project-oriented products including IPC, NVR, PTZ, XVR, Thermal and software platform which adopts industry-leading deep learning algorithms. Focusing on customer's requirements, WizMind provides precise, reliable and comprehensive AI solutions for verticals.

System Overview

Dahua WizMind network PTZ camera adopts advanced CNN deep learning algorithms to support face recogniton with high accuracy. The 4MP Starlight IR WizMind Network Dual-PTZ Camera consists of a panorama camera and a detail camera. Panorama camera captures panoramas, and then detail camera takes detailed snapshots of objects and keeps tracking objects after rule violations occur. This camera possesses wide monitor range, and adopts PFA algorithm that can always present a clear, focused image while zooming.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.001 Lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

PFA Technology

PFA technology has innovatively introduced new methods of judgment to ensure the accuracy and predictability of the direction of subject distance adjustment. The result is a set of advanced focusing algorithms. PFA ensures clarity of the image throughout the process of zooming and shortens focus time. The realization of PFA technology substantially improves user experience and increases product value.

Dual PTZ System

The Panorama camera and Detail camera of the dual PTZ system can be adjusted horizontally and vertically.

- Dual PTZ system, dual vari-focal lens
- 1/1.8" 4Megapixel CMOS
- Powerful 25x optical zoom
- Starlight technology
- Max. 50/60 fps@4M
- Deep-learning-based auto tracking and perimeter protection
- Support Hi-PoE
- H.265 Encoding
- IP67
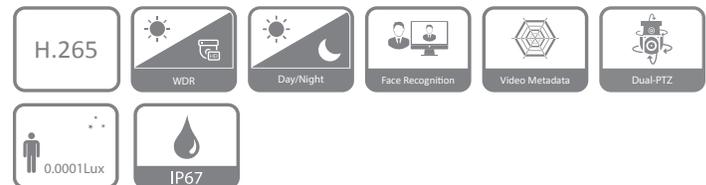
Face Recognition

Once facial features are extracted from captured faces, they are stored in a database where they can be easily searched and compared against other images. Once a successful match is found, the system outputs the result. The Dahua Face Recognition camera supports a built-in database that stores up to 10,000 facial images, helping the camera achieve real-time face capture and comparison.

Metadata

Metadata is feature attribute information extracted from a target object which can be used for data retrieval. There are four kinds of metadata supported by Dahua PTZ WizMind camera: Human face, human body, motor vehicle and non-motor vehicle metadata. Facial information includes gender, age, glasses, masks, beards, etc. Human body information includes hat, top, top color, bottom, bottom color, bag, etc. Motor vehicle information includes plate color, type, vehicle color, sunshield, ornament, calling, seatbelt, smoking, annual inspection sticker, etc. Non-motor vehicle information includes type, color, top type, top color, people number, etc.

Smart Tracking

Human, motor vehicle, and non-motor vehicle, or their combinations can be set as objects. Once the objects selected trigger detection rules (like tripwire and intrusion), the detail camera will track them automatically.

Perimeter Protection

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

Interoperability

The camera conforms to the ONVIF (Open Network Video Interface Forum) specifications, ensuring interoperability between network video products regardless of manufacturers.

ONVIF

Technical Specification

Camera

Image Sensor	Panorama: 1/1.8" CMOS Detail: 1/1.8" CMOS
Pixel	Panorama: 4MP Detail: 4MP
Max. Resolution	2688 (H) x 1520 (V)
ROM	8 GB
RAM	4 GB
Electronic Shutter Speed	Panorama: 1/3 s–1/100000 s Detail: 1/1 s–1/100000 s
Scanning System	Progressive
Min. Illumination	Panorama: Color: 0.001 Lux@F1.6 B/W: 0.0001 Lux@F1.6 Detail: Color: 0.001 Lux@F1.6 B/W: 0.0001 Lux@F1.6 0 Lux (IR light on)
Illumination Distance	Panorama (white light): 20 m (65.62 ft)—face recognition 30 m (98.43 ft)—video metadata Detail (IR light): 100 m (328.08 ft)
Illuminator On/Off Control	Panorama: SmartIR/Manual/Off Detail: Zoom Prio/Manual/SmartIR/Off
Illuminator Number	4 IR lights; 4 white lights

Lens

Focal Length	Panorama: 2.8 mm–12 mm Detail: 5.4 mm–135 mm			
Aperture	Panorama: F1.6 Detail: F1.6-F4.0			
Field of View	Panorama: H: 99.2°–45.8°; V: 59.7°–27°; D: 110.4°–51.7° Detail: H: 58°–3.5°; V: 35°–2°; D: 64°–4°			
Optical Zoom	Panorama: 4x Detail: 25x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	Panorama: 1 m–2.5 m (3.28 ft–8.20 ft) Detail: 0.5 m–7 m (1.64 ft–22.97 ft)			
Iris Control	Panorama: Auto Detail: Auto			
DORI Distance	Detect	Observe	Recognize	Identify
	Panorama: 128 m (419.95 ft) Detail: 1688 m (5538.06 ft)	Panorama: 51 m (167.32 ft) Detail: 675 m (2214.57 ft)	Panorama: 25 m (82.02 ft) Detail: 337 m (1105.64 ft)	Panorama: 12 m (39.37 ft) Detail: 168 m (551.18 ft)

PTZ

Pan/Tilt Range	Panorama: Pan: 0°–360° endless; Tilt: 0°–30° Detail: Pan: 0°–305° (the angle between two cameras: -125° to +180°); Tilt: -3°–90°
Manual Control Speed	Panorama: Pan: 0.1°/s–100°/s; Tilt: 0.1°/s–25°/s Detail: Pan: 0.1°/s–400°/s; Tilt: 0.1°/s–200°/s
Preset Speed	Panorama: Pan: 100°/s; Tilt: 50°/s Detail: Pan: 360°/s; Tilt: 200°/s
Presets	300
Tour	8 (up to 32 presets per tour)
Pattern	5
Scan	5
Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D (auto recognition)

Artificial Intelligence

Video Metadata	Support human body, human face, motor vehicle and non-motor vehicle image capture and attributes extraction.
Perimeter Protection	Tripwire and intrusion. Support alarm triggering by target types (human and vehicle). Support filtering false alarms caused by animals, rustling leaves, bright lights, etc.
Face Recognition	Support

Video

Compression	H.265; H.264 Baseline Profile; H.264 Main Profile; H.264 High Profile; M-JPEG; Smart H.265; Smart H.264
Streaming Capability	3 streams
Resolution	Panorama: 4M (2688 × 1520); 4M (2560 × 1440); 1080P (1920 × 1080); 960P (1280 × 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240) Detail: 4M (2688 × 1520); 4M (2560 × 1440); 1080P (1920 × 1080); 960P (1280 × 960); 720P (1280 × 720); D1 (704 × 576/704 × 480); CIF (352 × 288/352 × 240)
Frame Rate	Main stream: 4M/1080P/1.3M/720P (1–50/60 fps) Sub stream 1: D1/CIF (1–25/30 fps) Sub stream 2: 1080P/1.3M/720P/CIF (1–25/30 fps)
Bit Rate Control	Variable/Constant
Bit Rate	H.264: 2816 Kbps–13056 Kbps H.265: 1024 Kbps–7936 Kbps
Day/Night	Panorama: Auto (ICR) Detail: Auto (ICR)
BLC	Support
WDR	Support
HLC	Support
White Balance	Panorama: Auto/Indoor/Outdoor/Tracking/Manual/ Sodium lamp/Natural light/Street lamp Detail: Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural light/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D/3D
Motion Detection	Support
Region of Interest (RoI)	Support
Image Stabilization	Electronic
Defog	Electronic
Digital Zoom	16x

Flip	0°/180°
S/N Ratio	Panorama: ≥ 55 dB Detail: ≥ 55 dB

Audio

Compression	G.711a; G.711mu; G.726; AAC; MPEG2-Layer2; G.722.1; G.729

Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMP; DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; SNMPv1/v2c/v3 (MIB-2); RTCP
Interoperability	ONVIF; CGI
Streaming Method	Unicast/Multicast
User/Host	20 (total bandwidth 64 MB)
Storage	Imou Cloud; FTP; Micro SD card (256 GB)
Browser	IE7 and later versions Chrome 45 and earlier versions Firefox 52 and earlier versions Safari 12 and earlier versions
Management Software	SmartPSS; DSS; NVR

Certification

Certifications	FCC: 47 CFR FCC Part15, Subpart B, Class A LVD: EN 62368-1: 2014+A11: 2017 EMC: EN 55032: 2015, Class A 　　　EN 61000-3-2: 2014 　　　EN 61000-3-3: 2013 　　　EN 55024:2010+A1: 2015 　　　EN 55035: 2017 　　　EN 50130-4: 2011+A1: 2014

Port

Audio Input	1 (LINE IN; bare wire)
Audio Output	1 (LINE OUT; bare wire)
Two-way Audio	Support
Alarm I/O	2/1 Digital input: 0–5V DC
Alarm Linkage	Capture; preset; tour; pattern; SD card record; trigger digital output; send email
Alarm Event	Motion/tampering detection; audio detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection; vandalization detection; illegal access detection

Power

Power Supply	DC 36V/2.23A ± 25% Hi-PoE
Power Consumption	Basic: 21W Max.: 40W (PTZ, zoom, focus, IR light, white light, and smart plan enabled)

Environment

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

Structure

Dimensions	385 mm × Φ277 mm (15.16" × Φ10.91")
Net Weight	9 kg (19.84 lb)
Gross Weight	13.8 kg (30.42 lb)

Ordering Information

Type	Model	Description
Dual-PTZ Camera	DH-SDT5X425-4Z4-WA-2812	4MP Starlight IR WizMind Network Dual-PTZ Camera, PAL
	DH-SDT5X425N-4Z4-WA-2812	4MP Starlight IR WizMind Network Dual-PTZ Camera, NTSC
	SDT5X425-4Z4-WA-2812	4MP Starlight IR WizMind Network Dual-PTZ Camera, PAL
	SDT5X425N-4Z4-WA-2812	4MP Starlight IR WizMind Network Dual-PTZ Camera, NTSC
Accessories	E080-1A360223B3	Power Adapter
	DH-PFB306W-S	Wall Mount Bracket
	DH-PFA150	Pole Mount Bracket
	DH-PFB300C-S	Ceiling Mount Bracket

Accessories

Included:

E080-1A360223B3
Power Adapter

DH-PFB306W-S
Wall Mount Bracket

Optional:

DH-PFA150
Pole Mount Bracket

DH-PFB300C-S
Ceiling Mount Bracket

Wall Mount	Pole Mount	Ceiling Mount
PFB306W-S	PFA150+PFB306W-S	PFB300C-S

Dimensions(mm[inch])

G1 1/2 B

385.0 [15.16]
357.0 [14.06]
277.0 [10.91]
160.0 [⌀6.30]