

DH-SDT5A405WA-4F-B

Dual 4MP Starlight Smart Capture Camera



AI series products adopt the most advanced AI technologies, including deep learning algorithms that primarily target people and vehicles, which provides higher flexibility and accuracy for end-users. This enables the Dahua AI series to offer various advanced applications such as Face Recognition etc. The complete lineup of Dahua AI includes network (PTZ) cameras, network video recorders, servers, and more devices. Beyond seeing the world, the power of AI allows devices to perceive the environment and understand the world in a better way.

System Overview

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

Functions

Smart Track

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 speed dome will track them automatically.

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 AI 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.

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

- 1/1.8" 4Megapixel CMOS
- Powerful 5x optical zoom
- Starlight technology
- Max. 25/30fps@4M
- Deep-learning-based auto tracking and perimeter protection
- Support Hi-PoE
- H.265 Encoding
- IP66



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.

Perimeter Protection

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

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.

Environmental

Dahua cameras operate in extreme temperature environments, rated for use in temperatures from -40 °C to +70 °C (-40 °F to +158 °F) with 95% humidity. Subjected to rigorous dust and water immersion tests and certified to the IP66 Ingress Protection rating makes it suitable for demanding outdoor applications.

Interoperability

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

Wide Dynamic Range

The camera achieves vivid images, even in the most intense contrast lighting conditions, using industry-leading wide dynamic range (WDR) technology. For applications with both bright and low lighting conditions that change quickly, True WDR (120 dB) optimizes both the bright and dark areas of a scene at the same time to provide usable video.

Smart H.265+

Smart H.265+ is the optimized implementation of the H.265 codec that uses a scene-adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction to deliver high-quality video without straining the network. Smart H.265+ technology reduces bit rate and storage requirements by up to 70% when compared to standard H.265 video compression.



Technical Specification				
Camera				
Image Sensor	Panoramic: 1/1.8" CMOS; PTZ: 1/1.8" CMOS			
Max. Resolution	Panoramic: 4MP; PTZ: 4MP			
Effective Pixels	Panoramic: 2688 (H)×1520 (V); PTZ: 2688 (H)×1520 (V)			
ROM	8GB			
RAM	4GB			
Electronic Shutter Speed	Panoramic: 1/3–1/100000s; PTZ: 1/1–1/100000s			
Scanning Mode	Interlaced Scanning			
Minimum Illumination	Panoramic Color: 0.001Lux@F1.0 B/W: 0.0001Lux@F1.0 PTZ Color: 0.001Lux@F1.35 B/W: 0.0001Lux@F1.35 0Lux (IR light on)			
IR Distance	Panoramic: 18 m (59.06 ft) (white light); PTZ: 100 m (328.08 ft) (IR light)			
IR On/Off Control	Panoramic: Auto/Manual; PTZ: Zoom Prio/Manual/SmartIR			
IR LED Number	4 IR lights; 2 white lights (Off by default)			
Lens				
Focal Length	Panoramic: 6 mm; PTZ: 10.0 mm–50.0 mm			
Aperture	Panoramic: F1.0; PTZ: F1.35–F1.55			
Field of View	Panoramic: H: 97.57°; V: 66.05°; D: 117.23° PTZ: H: 45.73°–9.99°; V: 26.43°–5.68°; D: 51.55°–11.48°			
Optical Zoom	5x			
Focus Control	Auto/Semi-Auto/Manual			
Close Focus Distance	Panoramic: 0.2 m; PTZ: 0.2 mm–3 mm			
Iris Control	Auto			
DORI Distance	Detect	Observe	Recognize	Identify
	Panoramic: 71.3 m (233.92 ft) PTZ: 648.3 m (2126.97 ft)	Panoramic: 28.5 m (93.50 ft) PTZ: 259.3 m (850.72 ft)	Panoramic: 14.3 m (46.92 ft) PTZ: 129.7 m (425.52 ft)	Panoramic: 7.1 m (23.29 ft) PTZ: 64.8 m (212.60 ft)
PTZ				
Pan/Tilt Range	Pan: 0°–250°; Tilt: -25°–+90°			
Manual Control Speed	Pan: 0.1°/s–335°/s; Tilt: 0.1°/s–137°/s			
Preset Speed	Pan: 335°/s; Tilt: 137°/s			
Presets	300			
Tour	8 (up to 32 preset per tour)			
Pattern Number	5			
Scanning Number	5			

Speed Adjustment	Support
Power-off Memory	Support
Idle Motion	Preset/Tour/Pattern/Scanning
Protocol	DH-SD Pelco-P/D(Auto recognition)
Artificial Intelligence	
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
Auto Tracking	Support
General Intelligence	
Event Trigger	Motion detection, video tampering, scene changing, Network disconnection, IP address conflict, illegal access, and storage anomaly.
General IVS	Object Abandoned/Missing
Video	
Compression	H.265; H.264BaselineProfile; H.264MainProfile; H.264HighProfile; MJPEG(Sub Stream); H.265+; H.264+
Streaming Capability	3 Streams
Resolution	Panoramic 4M (2688×1520); 1080P (1920×1080); 960P (1280×960); 720P (1280×720); D1 (704×576/704×480); CIF (352×288/352×240) PTZ 4M (2688×1520); 1080P (1920×1080); 960P (1280×960); 720P(1280×720); D1 (704×576/704×480); CIF (352×288/352×240)
Frame Rate	Main stream: 4M/3M(1–25/30fps), 1080P/1.3M/720P(1–25/30fps) Sub stream 1: D1/CIF(1–25/30fps) Sub stream 2: 1080P/1.3M/720P(1–25/30fps), D1/CIF(1–25/30fps)
Bit Rate Control	Variable Bit Rate/Constant Bit Rate
Bit Rate	H.264: 2816 Kbps–13824 Kbps H.265: 1024 Kbps–8192 Kbps
Day/Night	Panoramaic Electronic Color/B/W PTZ Auto (ICR)
BLC	Support
WDR	120dB
HLC	Support
White Balance	Panoramic: Auto/Indoor/ManualRegional custom /Natural/Street lamp PTZ: Auto/Indoor/Outdoor/Tracking/Manual/Sodium lamp/Natural/Street lamp
Gain Control	Auto/Manual
Noise Reduction	2D/3D
Motion Detection	Support
Region of Interest (RoI)	Support
Electronic Image Stabilization (EIS)	Support

Defog	Support
Digital Zoom	16x
Certification	
Certification	CE: EN55032/EN55024/EN50130-4 FCC: Part15 subpartB,ANSI C63.4- 2014
Audio	
Audio Compression	G.711a; G.711mu; G.726; AAC; MPEG2-Layer2; G.722.1; G.729
Port	
Audio In	1
Audio Out	1
Alarm Port	2 alarm input port; 1 alarm output port
Network	
Ethernet Port	1 RJ-45 Port 10/100Base-T
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; Qos; FTP; SMTP; UPnP; SNMPv1/v2c/v3(MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP
Interoperability	ONVIF Profile S&G; CGI
Streaming Method	Unicast/Multicast
Max. User Access	20 (Total bandwidth 64M)
Edge Storage	FTP; Micro SD card (256G)
Browser	IE7 and newer versions Chrome 42 and older versions Firefox 52 and older versions Safari
Electrical	
Power Supply	AC24V/3A±25% Hi-PoE
Power Consumption	18W 33W (Heater on/IR light on)
Environment	
Operating Conditions	-40°C ~ 70°C (-40°F to +158°F)
Operating Humidity	≤95%RH
Ingress Protection	IP66; TVS 8000V lightning protection; surge protection
Construction	
Dimensions	175 mm×346 mm×261 mm (6.89"×13.62"×10.28")
Weight	Net Weight: 6.4 kg (14.11 lb); Gross Weight: 13.72 kg (30.25 lb)

Ordering Information

Type	Model	Description
Smart Capture Camera	DH-SDT5A405WA-4F-B	4MP+4MP Starlight Smart Capture Camera, PAL
	DH-SDT5A405WAN-4F-B	4MP+4MP Starlight Smart Capture Camera, NTSC
	SDT5A405WA-4F-B	4MP+4MP Starlight Smart Capture Camera, PAL
	SDT5A405WAN-4F-B	4MP+4MP Starlight Smart Capture Camera, NTSC
Accessories	PFB732W	Bracket
	AC24V/3A	Power Adapter
	DH-PFA153	Bracket
	DH-PFA150	Bracket
	DH-PFB732P	Bracket

Accessories**Included:**PFB732W
BracketAC24V/3A
Power Adapter**Optional:**DH-PFA153
BracketDH-PFA150
BracketPFB732P
Bracket

Wall Mount	Pole Mount(1)	Pole Mount(2)
PFB732W	PFB732W+DH-PFA153	DH-PFA150+DH-PFB732P

Dimensions (mm[inch])