

8MP Network PTZ Camera (25x Zoom)

25x Starlight Network PTZ Camera



Wiz Sense



WizSense Series devices combine Dahua's powerful Analytics+ with an intuitive and easy to use interface. WizSense devices offer Smart Motion Detection and Perimeter Protection functions that focus on human and vehicular images and ignore irrelevant images to capture important video while reducing false alarms. WizSense Series devices provide powerful general security for small to medium size businesses at a sensible price.

System Overview

The 8MP Network Starlight PTZ camera uses a 1/1.8-in. CMOS imager with a 25x optical zoom lens, and provides an all in one solution for capturing long-distance video surveillance for outdoor applications. The camera uses the Smart H.265+ video compression standard to improve encoding efficiency while preserving high-quality video. The PTZ camera offers Analytics+ functions at the edge – performing complex perimeter protection with Smart Motion Detection to distinguish human and vehicle motion, significantly improving accuracy and reliability as compared to standard intelligent features.

Functions

Perimeter Protection

Dahua Analytics+ includes Tripwire and Intrusion functions that offer custom tripwires based on object type for automation in limited access areas. Perimeter Protection requires less pixels to detect an object to deliver improved accuracy and decreased false alarms due to lights, weather, trees, or animals.

Smart Motion Detection

Smart Motion Detection, a component of Dahua's Analytics+ technology, improves alarm accuracy and decreases the number of false alarms. The advanced SMD algorithm analyzes a scene for human or vehicle motion, while filtering out other motion due to trees, leaves, animals, weather, and triggers an alarm when detected. SMD also saves time when searching recorded video by filtering false alarms and allowing quick retrieval of an alarm due to a person or vehicle.

Enhanced Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers light sensitivity that captures details in low light down to 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

- 1/1.8-in. 8MP Progressive-scan CMOS Sensor
- Powerful 25x Optical Zoom Lens
- Smart H.265+ and Smart H.264+ Dual Codecs
- Starlight Technology for Ultra-low Light Sensitivity
- 8 MP (3840 x 2160) at 30 fps
- Maximum IR distance up to 150 m (492.13 ft)
- Predictive Focus Algorithm (PFA) Technology
- Analytics+ Functions — Perimeter Protection, Face Detection, and Smart Motion Detection
- Intelligent Video System with Auto-tracking
- ArcticPro Series Camera - Operational down to -40°C (-40°F)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five Year Warranty*



Predictive Focus Analysis (PFA) Technology

The camera uses innovative PFA Technology to improve zoom accuracy and to decrease focus time. A series of advanced algorithms more accurately judge the direction and the distance to a subject, improving picture clarity throughout the zooming process.

Interoperability

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

ArcticPro

The Dahua ArcticPro Series of extreme-environment cameras combine temperature-tolerant components, a waterproof enclosure, and an integrated heater to ensure flawless operation in temperatures as low as -40°C (-40°F). For applications that demand high-resolution video with advanced features in extremely cold environments, the Dahua ArcticPro Series offers a camera to satisfy the most demanding requirements.

Auto-tracking

This feature controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene. The tracking action can be triggered manually or automatically by defined rules. Once a rule is triggered, the camera can zoom in and track the defined target automatically.

Environmental

The camera complies with the IK10 Vandal Resistance impact rating making it capable of withstanding the equivalent of 5 kg (11.02 lbs) of force dropped from a height of 40 cm (15.75 in.). Subjected to rigorous dust and water immersion tests and certified to the IP67 Ingress Protection rating makes it suitable for demanding outdoor applications.

Supporting a 24 VDC voltage input, this camera suits even the most unstable power supply conditions. Its 4KV lightning rating provides protection against the camera and its structure from the effects of lightning.

Technical Specification

Camera

Image Sensor	1/1.8-in. 8 MP Progressive-scan CMOS
Effective Pixels	3840 (H) × 2160 (V), 8MP
RAM/ROM	1 GB/ 4 GB
Scanning System	Progressive
Electronic Shutter Speed	1/1 s to 1/30,000 s
Minimum Illumination	Color: 0.005 lux at F1.6 B/W: 0.0005 lux at F1.6 0 Lux with IR on
IR Distance	Distance up to 150 m (492.13 ft)
IR On/Off Control	Zoom Priority, Manual, Auto, Off
Illuminator Number	Four (4) LEDs (IR)

Lens

Focal Length	5.4 mm to 135.0 mm			
Max. Aperture	F1.6 to F4.0			
Angle of View	Horizontal: 61.6° to 3.6° Vertical: 35.7° to 2° Diagonal: 66.6° to 4°			
Optical Zoom	25x			
Focus Control	Automatic, Semi-automatic, Manual			
Iris Control	Auto, Manual, Fixed			
Close Focus Distance	0.1 m to 2.0 m (0.33 ft to 6.56 ft)			
DORI ¹ Distance	Detect	Observe	Recognize	Identify
	2700.0 m (8858.27 ft)	1066.0 m (3497.38 ft)	540.0 m (1771.65 ft)	270.0 m (885.83 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: -15° to 90°, Auto Flip 180°
Manual Control Speed	Pan: 0.1°/s to 300°/s Tilt: 0.1°/s to 140°/s
Preset Speed	Pan: 400°/s Tilt: 300°/s
Presets	300
PTZ Mode	5 Patterns, 8 Tours (Up to 32 Presets per Tour), 5 Scans
Power Up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset/Scan/Tour/Pattern if there is no command in the specified period

Video

Video Compression	Smart H.265+, H.265, Smart H.264+, H.264H, H.264B, MJPEG (Substream Only)		
Streaming Capability	Three (3) Streams		
Resolution	4K (3840 × 2160), 4M (2560 × 1440), 3M (2048 × 1536), 1080p (1920 × 1080), 960p (1920 × 960), 720p (1280 × 720), D1 (704 × 576/704 × 480), CIF (352 × 288/352 × 240), VGA (640 × 480)		
Frame Rate	Main Stream	8 MP, 4 MP, 3 MP, 1080p, 1.3 MP, or 720p at 30 fps	
	Substream 1	D1, CIF or VGA at 30 fps	
	Substream 2	1080p, 1.3 MP, or 720p at 30 fps	
Bit Rate Control	CBR, VBR		
Bit Rate	H.264: 128 kbps to 16,384 kbps H.265: 51 kbps to 12,288 kbps		
Day/Night	Auto (ICR), Color, B/W		
Backlight Compensation	BLC, HLC, True DWR (120 dB)		

White Balance	Auto, Indoor, Outdoor, Tracking, Manual, Sodium Lamp, Natural Light, Street Lamp
Gain Control	Auto, Manual
Noise Reduction	2D/3D
Advanced Features	Motion Detection, Region of Interest (RoI), Electronic Image Stabilization (EIS), Defog
Digital Zoom	16x
Image Rotation	180°
Privacy Masking	Up to 24 areas (8 areas allowed per view)
S/N Ratio	≥ 55 dB

Audio

Compression	PCM, G.711a, G.711Mu, G.726, MPEG2-Layer2, G722.1, G729, G723, AAC
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Network

Ethernet	One (1) RJ-45 Port (10/100 Base-T)
Protocol	IPv4, IPv6, HTTP, HTTPS, 802.1x, QoS, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTP, TCP/IP, UDP, IGMP, ICMP, DHCP, PPPoE, ARP, RTCP, RTMP, Bonjour, NFS, SSL
Interoperability	ONVIF (Profile S, Profile G, Profile T); CGI; SDK; P2P
Streaming Method	Unicast / Multicast
Maximum User Access	20 Users (Total Bandwidth 64 Mbps)
Edge Storage	Micro SD Slot, maximum 512 GB
Browser	IE, Chrome
Management Software	DSS, DMSS
Mobile Client	iOS, Android

Certification

CE	EN55032, EN55024, EN50130-4
Electromagnetic Compatibility (EMC)	FCC: Part15 Subpart B ANSI C63.4-2014
UL	UL 60950-1 CAN/CSA C22.2 No. 60950-1

Interface

Audio	Input: One (1) Channel Output: One (1) Channel
Alarm	Input: Two (2) Channels Output: One (1) Channel

Electrical

Power Supply	24 VDC/2.5 A ± 25% or PoE+ (802.3at)
Power Consumption	Basic: 12 W Maximum (with IR light on): 21 W

Environmental

Operating Temperature	-40 °C to 70 °C (-40 °F to 158 °F) Less than or equal to 95% RH
Storage Temperature	-40 °C to +70 °C (-40 °F to +158 °F) Less than or equal to 95% RH
Protection	IP67, IK10
Surge Protection	TVSS 6000 V

Construction

Product Dimensions	Φ190 mm × 332 mm (Φ7.48 in. × 13.07 in.)
Net Weight	4.7 kg (10.36 lb)
Gross Weight	8.0 kg (17.64 lb)

Analytics+ Functions

Perimeter Protection	<ul style="list-style-type: none"> Detects human or vehicle violations using the following methods: Tripwire: a target crosses a defined line. Intrusion: a target enters or exits a defined perimeter. Filters actions that may produce a false alarm due to animals, leaves, and bright lights.
Smart Motion Detection ²	<ul style="list-style-type: none"> Differentiates between and classifies human and vehicle objects. Filters false alarms due to leaves, lights, animals, and other inconsequential objects. Extracts human or vehicle objects from recorded video for quick target search and retrieval.

Intelligent Video System Functions

IVS triggers an alarm and takes a defined action for the following events:

Standard Features	<ul style="list-style-type: none"> Tampering with the camera. Error writing to an onboard Micro SD card. Error sending or receiving data over the network. Unauthorized access to the camera.
Advanced Features	
Facial Detection	Detects and captures a snapshot of a human face in a defined area within a scene.
Auto-tracking	Controls the pan/tilt/zoom actions of the camera to automatically track an object in motion and to keep it in the scene.

Ordering Information

Type	Model	Description
8MP WizSense PTZ Camera	5A825GANR	8MP 25x Starlight IR WizSense Network PTZ Camera
Accessories	PFB305W	Wall Mount Bracket
	DC 24 V/2.5 A	Power Adapter
	PFA111	Mount Adapter
	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket

Accessories

Included:



PFB305W
Wall Mount



DC 24 V/2.5 A
Power Adapter

Optional:



PFA111
Mount Adapter



PFA140
Power Box



PFB300C
Ceiling Mount



PFA120
Junction Box



PFA150
Pole Mount



PFA151
Corner Mount



PFB303S
Parapet Mount

1. The DORI distance is a general proximity of distance helping to pinpoint the correct camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify.
 2. Pair a Smart Motion Detection camera with a Dahua recording device that also offers SMD functionality to take advantage of SMD alarm filtering and object classification when searching and playing back recorded video.

Wall Mount PFB305W+PFA120	Ceiling Mount 1 PFA111+PFB300C	Pole Mount (Horizontal) PFA111+PFB300C+PFA150
Pole Mount (Vertical) PFB305W+PFA150	Corner Mount PFB305W+PFA151	

Dimensions

mm [in.]

