alhua TECHNOLOGY

4MP Enhanced Starlight Network PTZ Camera (32x)

WizSense Analytics and Auto-tracking

Wiz Sense

ArcticPro

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

Featuring powerful optical zoom and accurate pan/tilt/zoom performance, this camera provides an all-in-one solution for capturing long distance video security for outdoor applications. Enhanced Starlight Technology makes the camera the perfect solution for dark, low-light applications. The camera combines a day/night mechanical IR cut filter and True WDR for the highest image quality in variable lighting conditions, direct sunlight, and glare.

Functions

Enhanced Starlight Technology
For challenging low-light applications, Dahua's Starlight Ultra-low light Technology offers best-in-class light sensitivity, capturing details in low light applications 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.

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

Face Detection
Face Detection technology captures a human face in a digital image and then selects the best image and outputs a snapshot of the face.

Upraded Smart Motion Detection+
Upgraded 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.

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.

- 1/2.8-in. 4MP STARVIS™ CMOS Sensor
- Powerful 32x Optical Zoom Lens
- AI Coding, Smart H.265+ and Smart H.264+ Dual Codec
- Enhanced Starlight Technology for Low-light Applications
- 4MP (2560 × 1440) at 30 fps
- True Wide Dynamic Range (120 dB) and True Day/Night IR Cut Filter
- Analytics+ Functions: Perimeter Protection, Face Detection, Upgraded Smart Motion Detection+, PFA Technology
- ArcticPro Series Camera — Operational down to –40° C (–40° F)
- IP67 Ingress Protection, IK10 Vandal Resistance, TVS 6000 V Surge Protection

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.

Predictive Focus Algorithm (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.

Smart H.265+ and Smart H.264+
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.

Delivering high quality video without straining the network, Smart H.264+ is the optimized implementation of H.264. The Smart H.264+ encoding platform includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing a savings of up to 70% of bandwidth and storage when compared with standard H.264.

ArcticPro (No Heater)
The Dahua ArcticPro Series of extreme-environment cameras combine temperature-tolerant components with a waterproof enclosure to ensure flawless operation in temperatures as low as –40° C (–40° F) without the need for an internal heater. The lack of a heater reduces the camera's power consumption and saves operating costs. 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.

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 dual voltage input (12 VDC or 24 VAC) and a ±25% input voltage tolerance, this camera suits even the most unstable power supply conditions. Its TVS 6000 V lightning rating protects the camera and its structure from the effects of lightning.

Onvif | **GST**

Pro Series | 50432GBNR

Technical Specification

Camera

Image Sensor		1/2.8-in. CMOS
Effective Pixels		2560 (H) × 1440 (V)
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

Lens

Focal Length		4.8 mm to 154.0 mm			
Maximum Aperature		F1.6 to F4.0			
Angle of View	Horizontal	55.8° to 2.3°			
	Vertical	31.9° to 1.3°			
	Diagonal	63.7° to 2.7°			
Optical Zoom		32x			
Focus Control		Automatic, Semi-automatic, Manual			
Iris Control		Auto, Manual			
Close Focus Distance		0.1 m to 1.5 m (0.33 ft to 4.9 ft)			
DORI[1] Distance		Detect	Observe	Recognize	Identify
		3080.0 m (10105.0 ft)	1216.6 m (3,991.5 ft)	616.0 m (2,021.0 ft)	308.0 m (1,010.5 ft)

PTZ

Pan/Tilt Range	Pan	0° to 360° endless
	Tilt	0° to 90°, Automatic Flip 180°
Manual Control Speed	Pan	0.1°/s to 350°/s
	Tilt	0.1°/s to 250°/s
Preset Speed	Pan	500°/s
	Tilt	500°/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
PTZ Protocol		DH-SD

Video

Video Compression		AI Coding, H.264H, H.264B, Smart H.265+, H.264, H.265, MJPEG (Sub Stream), Smart H.264+
Streaming Capability		Three (3) Streams
Resolution		4MP (2560 × 1440), 3MP (2048 × 1536), 2304 × 1296, 1080p (1920 × 1080), 720p (1280 × 720), D1 (704 × 576/704 × 480), VGA (640 × 480), CIF (352 × 288/352 × 240)
Frame Rate	Main Stream	4MP/3MP/1080p/1.3MP/720p at 1 to 30 fps
	Sub Stream 1	D1/VGA/CIF at 1 to 30 fps
	Sub Stream 2	1080p/1.3M/720p at 1 to 30 fps
Bit Rate Control		CBR/VBR
Bit Rate	H.264	96 to 14,848 Kbps
	H.265	38 to 8,960 Kbps
Day/Night		Auto (ICR), Color, B/W
Backlight Compensation		BLC, True WDR (120 dB), HLC
White Balance		Auto, Indoor, Outdoor, Tracking, Manual, Sodium Lamp, Natural Light, Street Lamp
Gain Control		Auto, Manual, Zoom Priority
Noise Reduction		2D, 3D
Advanced Features		Region of Interest (RoI), Electronic Image Stabilization (EIS), Electronic Defog, Motion Detection
Digital Zoom		16x
Image Rotation		180°

Privacy Masking / S/N Ratio

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

Network

Ethernet	One (1) RJ-45 Port (10/100 Base-T)
Protocol	FTP, RTMP, IPv6, Bonjour, IPv4, DNS, RTCP, PPPoE, NTP, RTP, 802.1x, HTTPS, SNMP, TCP/IP, DDNS, UPnP, NFS, ICMP, UDP, IGMP, HTTP, SSL, DHCP, SMTP, Qos, RTSP, ARP
Interoperability	CGI, SDK, ONVIF (Profile S, G, T), P2P
Streaming Method	Unicast/Multicast
Maximum User Access	20 Users (Total Bandwidth 64 Mbps)
Edge Storage	Micro SD Slot (Max. 512 GB), FTP/SFTP, NAS
Browser	Safari (iOS 10 or Later), Microsoft Edge, Google Chrome 41 or Later, Firefox 50 or Later
Management Software	DSS Pro, DMSS
Mobile Client	iOS, Android

Certifications

CE	EN55032, EN55024, EN50130-4
FCC	47 CFR FCC Part15, Subpart B, ANSI C63.4
UL	UL62368-1 + CAN/CSA C22.2, No. 62368-1

Interface

Audio	Input	One (1) Channel
	Output	One (1) Channel
Alarm	Input	Two (2) Channels
	Output	One (1) Channel
Alarm Linkage		Capture, Recording, Send Email, Preset, Tour, Pattern, Alarm Digital Input
Alarm Event		Motion/Tampering Detection, Audio Detection, Network Disconnection Detection, IP Conflict Detection, Memory Card State Detection, Memory Space Detection

Electrical

Power Supply		24 VDC, 2.5 A ± 25%, PoE+ (802.3at)
Power Consumption	Basic	13 W
	Maximum	16 W

Environmental

Operating Temperature	−40 °C to +70 °C (−40 °F to +158 °F), ≤ 95% RH
Ingress Protection	IP67
Vandal Resistance	IK10
Surge Protection	TVS 6000 V

Construction

Product Dimensions	186 mm × 253 mm (7.32 in. × 9.96 in.)
Net Weight	2.5 kg (5.51 lb)
Gross Weight	4.5 kg (9.92 lb)

Analytics+ Functions

Face Detection	• Detects and captures a snapshot of a human face in a defined area within a scene.
Smart Motion Detection+	• 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.
Perimeter Protection	• Detects human violations using the following methods: **Tripwire**: a target crosses a defined line. **Intrusion**: a target enters or exits a defined perimeter. • Monitors a combination of detection methods.

Predictive Focus Algorithm (PFA) Technology	• Uses statistical analysis to stabilize the scene to preserve clarity when zooming • Performs real-time analysis and adjustment of subject distance for a rapid and stable transition from different subject distances .

Intelligent Video System (IVS) Functions

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

Standard Features	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.
Premium Features	
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.
Advanced Features	
Loitering Detection	Target is in motion inside a defined area longer than a specified amount of time.
Fast Moving	Target exceeds a set speed when exiting a defined area.
Parking Detection	Vehicle remains in a defined area without motion for a set period of time.
Crowd Gathering	Specified number of people remain inside a defined area for a set time.
Human/Vehicle Classification	Detects human or vehicle violations using Tripwire or Intrusion detection methods.
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	Part Number	Description
Network Camera	50432GBNR	4MP 32x Starlight IR Network PTZ Camera
Accessories (Included)	PFB300S	Wall Mount Bracket
	PFA110	Mount Adapter
	N/A	DC 24 V/2.5 A Power Adapter
Accessories (Optional)	PFA140	Power Box
	PFB300C	Ceiling Mount Bracket
	PFA120	Junction Box
	PFA150	Pole Mount Bracket
	PFA151	Corner Mount Bracket
	PFB303S	Parapet Mount Bracket
	DH-PFB301S-E	Plane Mount Bracket
	DH-PFB301C	Ceiling Mount Bracket
	DHI-TF-P100 Series	Micro SDXC Cards
	DH-PFM900-E	Integrated Mount Tester
	PC-H84.5-147	Polycarbonate Smoke Tinted Bubble

Accessories

Included:

PFB300S
Wall Mount Bracket

PFA110
Mount Adapter

DC 24 V/2.5 A Power Adapter

Optional:

PFA140
Power Box

PFB300C
Ceiling Mount Bracket

PFA120
Junction Box

PFA150
Pole Mount Bracket

PFA151
Corner Mount Bracket

PFB303S
Parapet Mount Bracket

DH-PFB301S-E
Plane Mount Bracket

DH-PFB301C
Ceiling Mount Bracket
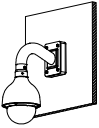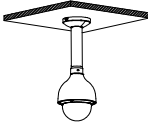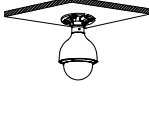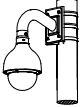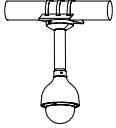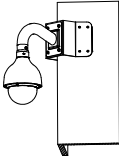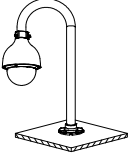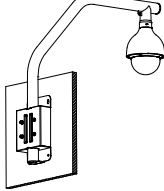

DHI-TF-P100 Series
Micro SDXC Cards

DH-PFM900-E
Integrated Mount Tester

PC-H84.5-147
Polycarbonate Smoke Tinted Bubble

For all possible accessory combinations for this camera, please scan or click the QR code below to go to our accessory selector.

Installation

Wall Mount	Ceiling Mount	Ceiling Mount
PFA110+PFB300S+PFA120	PFA110+PFB300C	PFA110+PFB301C
Pole Mount(Vertical)	**Pole Mount(Horizontal)**	**Corner Mount**
PFA110+PFB300S+PFA150	PFA110+PFB300C+PFA150	PFA110+PFB300S+PFA151
Plane Mount	**Parapet Mount**	
PFB301S-E	PFA110+PFB303S	

Dimensions

mm [in.]

Ø47.3 [Ø1.86]

165.0 [6.50]

253.0 [9.96]

Ø140.3 [Ø5.53]

Ø186.2 [Ø7.33]