

4K IR PTZ Network Camera with Analytics+

40x Starlight PTZ Network Camera



Wiz Mind



WizMind Series devices offer Dahua Analytics+ functions for comprehensive, human-oriented analytic solutions. WizMind Series products are ideal for complex applications with demanding requirements that need advanced analytic capabilities.

System Overview

The 4K IR PTZ Dome camera features a 1/1.8-in STARVIS™ CMOS imager with a 40x optical zoom lens, and provides an all in one solution for capturing long-distance video surveillance for outdoor applications. The camera offers Analytics+ functions at the edge – performing complex real-time perimeter protection surveillance. The Dahua Analytics+ algorithms significantly improve 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.

Face Detection+

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

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. 8 MP Progressive Scan STARVIS™ CMOS Sensor
- Powerful 40x Optical Zoom Lens
- Smart H.265+ and Smart H.264+ Dual Codecs
- 8 MP at 30 fps Maximum Resolution
- Analytics+ Functions — Perimeter Protection, Face Detection+
- Enhanced Starlight Technology for Ultra-low Light Sensitivity
- Maximum IR Distance up to 500 m (1640 ft)
- Predictive Focus Analysis (PFA) Technology
- ArcticPro Series Camera - Operational down to -40°C (-40°F)
- IP67 Ingress Protection
- Integrated Smart Wiper
- Intelligent Video System with Auto-tracking
- Supports Dahua Proprietary Hi-PoE Power Source
- Five-year Warranty*



Predictive Focus Analysis 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.

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.

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.

Cybersecurity

Dahua network cameras are equipped with a series of key cybersecurity technologies including: security authentication and authorization, access control, trusted protection, encrypted transmission, and encrypted storage. These technologies improve the camera's ability to prevent malicious access and to protect data.

Environmental

Subjected and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

Protection

The camera allows for $\pm 25\%$ input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 6KV lightning rating provides effective protection for both the camera and its structure against lightning.

Technical Specification

Camera

Image Sensor	1/1.8-in. STARVIS™ CMOS
Effective Pixels	3840(H) x 2160(V), 8 MP
RAM/ROM	2 GB / 8 GB
Scanning System	Progressive
Electronic Shutter Speed	1/1 s to 1/30,000 s
Minimum Illumination	Color: 0.005 lux at F1.4 B/W: 0.0005 lux at F1.4 0 Lux with IR on
IR Distance	Distance up to 500.0 m (1640.42 ft)
IR On/Off Control	Zoom Priority, Manual, Smart IR
IR LEDs	10

Lens

Focal Length	5.6 mm to 223 mm
Max. Aperture	F1.4 to F4.8
Angle of View	Horizontal: 63.9° to 2.0° Vertical: 37.2° to 1.1° Diagonal: 71.2° to 2.3°
Optical Zoom	40x
Focus Control	Automatic, Semi-automatic, Manual
Iris Control	Automatic, Manual
Close Focus Distance	500.0 mm to 2000.0 mm (19.69 in. to 78.74 in.)

DORI Distance¹

Detect	Observe	Recognize	Identify
4400 m (14,435 ft)	1740 m (5708 ft)	880 m (2887 ft)	440 m (1443 ft)

PTZ

Pan/Tilt Range	Pan: 0° to 360° endless Tilt: -30° to 90° Auto Flip 180°
Manual Control Speed	Pan: 0.1° to 240° /s Tilt: 0.1° to 100° /s
Preset Speed	Pan: 240° /s Tilt: 120° /s
Presets	300
PTZ Mode	5 Pattern, 8 Tour (up to 32 presets per tour), Auto Pan, Auto Scan
Speed Setup	Human-oriented focal Length/ speed adaptation
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
Protocol	DH-SD, Pelco-P/D (Auto recognition)

Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264, MJPEG (sub stream 1 only)
Streaming Capability	Three (3) Streams
Resolution	8 MP (3840 x 2160), 4 MP (2560 x 1440), 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 380), CIF (352 x 240)

Frame Rate	Main Stream	8 MP, 1080p, 1.3 MP, or 720p at 30 fps
	Sub Stream 1	D1 or CIF at 30 fps
	Sub Stream 2	1080p, 1.3 MP, or 720p at 30 fps
Bit Rate Control	CBR, VBR	
Bit Rate	H.265: 256 Kbps to 10240 Kbps H.264: 512 Kbps to 8192 Kbps	
Day/Night	Auto (ICR), Color, B/W	
Backlight Compensation	BLC, HLC, True WDR (120 dB)	
White Balance	Auto, Indoor, Outdoor, Tracking, Manual, Sodium Lamp, Natural, Street Lamp	
Gain Control	Auto, Iris Priority, Gain Priority, Shutter Priority, Manual	
Noise Reduction	2D/3D	
Advanced Features	Motion Detection, Region of Interest, Defog	
Digital Zoom	16x	
Flip	180°	
Privacy Masking	Up to 24 areas (eight areas allowed in one view)	

Audio

Compression	G.711a, G.711Mu, G.726, G722.1, G.729, MPEG2-Layer2, G.723
-------------	---

Network

Ethernet	RJ-45 (10/100 Base-T)
Protocol	IPv4; IPv6; HTTP; HTTPS; 802.1x; QoS; FTP; SMTP; UPnP; SNMP v1/v2c/v3 (MIB-2); DNS; DDNS; NTP; RTSP; RTP; TCP; UDP; IGMP; ICMP; DHCP; PPPoE; ARP; RTCP; RTMP
Interoperability	ONVIF Profile S,G,T; CGI
Streaming Method	Unicast / Multicast
Maximum User Access	20 Users (total bandwidth 64 MB)
Edge Storage	Network Attached Storage (NAS), Micro SD Card Slot, 128 GB maximum
Web Viewer	IE7 and later, Chrome, Firefox, Safari
Management Software	DSS, DMSS
Mobile Operating System	IOS, Android
Cybersecurity	Video Encryption, Firmware Encryption, Configuration Encryption, Digest, WSSE, Account Lockout, Security Logs, IP/MAC Filtering, Generating and Importing X.509 Certification, Syslog, HTTPS, 802.1x, Trusted Boot, Trusted Execution, Trusted Upgrade

Certifications

Safety	CSA C22.2 NO. 62368-1-14, 2nd Ed., Issue Date: 2014-12-01
CE	EN55032, EN55024, EN50130-4
Electromagnetic Compatibility (EMC)	47 CFR FCC Part 15 Subpart B, Class A

Interface

Video	One (1) BNC
Audio	Input: One (1) Channel Output: One (1) Channel
RS485	One (1), Baud Rate Range: 1200 bps to 9600 bps
Alarm	Input: Seven (7) Channels Output: Two (2) Channels

Electrical

Power Supply	36 VDC, 2.23 A (± 25%) or via Dahua proprietary Hi-PoE power source
Power Consumption	30 W, 48 W with IR on

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.

Environmental

Operating Conditions	-40° C to 70° C (-40° F to +158° F) Less than 95% RH
Ingress Protection	IP67
Surge Protection	TVS 6000V

Construction

Casing	Metal
Dimensions	ø415.90 mm x 262.0 mm (ø16.37 in. x 10.31 in.)
Net Weight	10.0 kg (22.05 lb)
Gross Weight	12.0 kg (26.46 lb)

Analytics+ Functions²

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.
Face Detection+	<ul style="list-style-type: none"> Detects and captures a snapshot of a human face within a scene.

Intelligent Video System Functions²

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. IP Address Conflict
Premium Features	
Motion	An object moves through any part of the scene.
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.
Advanced Features	
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
4K PTZ Camera	8A840PANF	8 MP 40x IR PTZ Starlight Network Camera with Analytics+
Accessories, Included	PFB306W	Wall Mount
	36 VDC/2.23A	Power Adapter
Accessories, Optional	PFA150	Pole Mount
Accessories, Optional Dahua Hi-PoE Power Source	PFT1200	Hi-PoE Midspan
	DH-LR2110-8ET-120	8-port ePoE Layer 2 Switch

Accessories

Included:



PFB306W
Wall Mount



36 VDC/2.23 A
Power Adapter

Optional:



PFA150
Pole Mount

Installation

Wall Mount	Pole Mount(Vertical)
PFB306W	PFA150+PFB306W

Dimensions (mm/in.)

