Dahua TECHNOLOGY

3MP StereoVision People Counting Camera

Dual-sensor Smart H.265+ IR Network Camera with Analytics+

WizMind

ArcticPro

WizMind Series devices offer the full complement of Dahua Analytics+ functions for comprehensive, human-oriented analytic solutions. WizMind Series products deliver perimeter protection, vehicle and crowd density statistics, video metadata, and advanced people counting with heat map functionality. WizMind is ideal for complex applications with demanding requirements that need advanced analytic capabilities.

System Overview

The Dahua 3MP Dual-lens People Counting Camera offers Artificial Intelligence at the edge – using complex real-time people counting algorithms to deliver accurate flow statistics. The camera uses an advanced Vision Processor Unit (VPU) that delivers high-performance machine vision and visual awareness that enables advanced vision applications that are impossible with conventional ISPs.

The dual 3 MP sensors work in combination to deliver a single video stream that captures 3D depth in the image, offering improved accuracy as compared to single-sensor cameras. The dual-sensor technology captures an object's height, letting the camera better distinguish between people and other objects.

The camera offers several distinct people counting functions: Line Crossing, Regional Count, and Queue Management. The line crossing function counts the number of people crossing a defined lines, and offers maximum/minimum height detection to help filter objects that are too tall or too small. The Regional function counts the number of people in four (4) distinct, user-defined regions. Finally, the Queue Management function keeps count of the number of people waiting in a defined area and triggers an alert if the number or the wait time exceeds a defined threshold.

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.

Active Alarm

The camera features active alarm functionality to respond automatically to a triggered alarm. The camera can broadcast a built-in message, a customized pre-recorded message, or a siren.

- Two (2) 1/2.8-in. 3 MP Progressive-scan CMOS Sensors
- Five (5) Stream Encoding
- Smart H.265+ and Smart H.264+ Dual Codecs
- 3 MP (2048 x 1536) at 30 fps; 2.8 mm Fixed Lens
- Advanced, Accurate People Counting: Supports Line Crossing, Regional People Counting, and Queue Management
- Analytics+ Functions — Perimeter Protection with Active Alarm
- ArcticPro Series Camera - Operational down to −40° C (−40° F)
- True Day/Night IR Cut Filter
- Built-in Microphone and Built-in Speaker
- Maximum IR Length 20 m (65 ft)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty*

Perimeter Protection	People counting	In Area No	Queue Management	IK10	IP67

Enhanced Power over Ethernet (ePoE) Technology

Dahua's innovative ePoE technology offers a plug-and-play solution to transmit power and data over long distances via Ethernet or coaxial cables, reducing installation time and saving money. ePoE technology is a viable, cost-effective solution for extending transmission distances and for converting existing, coax-based analog systems into IP systems. For video security and surveillance installers, ePoE technology saves time and money by reducing overall cabling requirements, allowing for existing coax cable to be used, and minimizing the number of peripheral devices needed. For new installations, ePoE offers the ability to design long-distance applications without the need for additional repeaters.

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 conditions. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

ArcticPro

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°F (−40°C) 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.

Onvif

*Warranty applies to products sold through an authorized Dahua Dealer.

Technical Specification

Camera

Image Sensor	Two (2) 1/2.8-in. 3 MP CMOS Sensors
Effective Pixels	2048 (H) x 1536 (V)
RAM/ROM	4 GB/2 GB
Scanning System	Progressive
Minimum Illumination	Color: 0.005 lux at F1.6 0 lux at F1.6 (IR on)
S/N Ratio	More than 50 dB
IR Distance	20.0 m (65.61 ft)
IR On/Off Control	Auto, Manual
IR LEDs	One (1)

Lens

Lens Type	Fixed-focal
Mount Type	M12
Focal Length	2.8 mm, each lens
Maximum Aperture	F1.6
Angle of View	Horizontal: 96°, Vertical: 70°, Diagonal: 128°
Iris Control	Fixed
Focus Control	Fixed
Close Focus Distance	0.70 m (2.30 ft)

DORI Distance[1]	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	44.80 m (146.98 ft)	17.90 m (58.73 ft)	9.0 m (29.53 ft)	4.50 m (14.67 ft)

Pan/Tilt/Rotation

Range	Tilt: 0˚ to 70˚

Video

Compression	H.265, H.264, H.264B, H.264H, MJPEG (Sub Stream only)
Smart Codec	Smart H.265+, Smart H.264+
Streaming Capability	Five (5) Streams
Resolution	3 MP (2048 x 1536), 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 x 480),CIF (342 x 240)

Frame Rate		
	Main Stream	3 MP at 30 fps
	Sub Stream 1	D1 at 30 fps
	Sub Stream 2	2 MP at 30 fps
	Sub Stream 3	2 MP at 30 fps
	Sub Stream 4	D1 at 30 fps

Bit Rate Control	CBR, VBR
Bit Rate	H.264: 3 kbps to 17664 kbps H.265: 3 kbps to 17664 kbps
Day/Night	Auto (ICR), Color, B/W
BLC Mode	HLC, BLC, Digital WDR
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom
Gain Control	Auto, Gain Priority, Shutter Priority, Manual
Noise Reduction	3D DNR
Motion Detection	Off , On (4 Zones, Rectangular)
Region of Interest	Off , On (4 Zones)
Advanced Features	Smart IR Defog
Digital Zoom	16x
Privacy Masking	Off, On (4 Areas, Rectangular)

Audio

Compression	G.711a, G.711Mu, AAC, G.726, G.723, PCM

Network

Ethernet	RJ-45 (10/100 Base-T)
Protocol	HTTP, HTTPS, TCP, ARP, RTSP, RTP, RTCP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPoE, IPV4/V6, QoS, UPnP, NTP, Bonjour, IEEE 802.1X, Multicast, ICMP, IGMP, TLS
Interoperability	ONVIF Profile S, G, T; CGI; Milestone; Genetec; P2P; RTMP
Streaming Method	Unicast, Multicast
Maximum User Access	20 Users
Edge Storage	Network Attached Storage (NAS) FTP, SFTP Micro SD Card Slot, maximum 256 GB
Web Viewer	IE 11, Firefox, Chrome
Management Software	DSS, IVSS
Mobile Operating System	IOS, Android

Certifications

Safety	EN62368-1 UL60950-1 CAN/CSA C22.2 No.60950-1-07
Electromagnetic Compatibility (EMC)	47 CFR FCC Part 15 Subpart B EMC Compatibility Directive 2014/30/EU

Interface

Audio	Input	• Two (2) Channels, RCA • One (1) Built-in Microphone
	Output	• One (1) Channel, RCA • One (1) Built-in Speaker
Alarm	Input	Two (2) Channels (3 VDC to 5 VDC, 5 mA)
	Output	Two (2) Channels (30 VDC 1,000 mA; 50 VDC, 500 mA)
RS485		One (1) Port (baud rate range: 1200 bps to 115200) bps)

1. The DORI distance is a measure of the general proximity for a specific classification to help pinpoint the right camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 , the standard that defines the criteria for the Detect, Observe, Recognize and Identify classifications.

Electrical

Power Supply	12 VDC, PoE (IEEE802.3af, Class 0), ePoE

Power Consumption	Basic	12 VDC: 3.5 W PoE: 4.4 W
	Maximum	12 VDC: 9.1 W PoE: 10.6 W (ICR switch + IR full intensity + WDR + Analytics+)

Environmental

Operating Conditions	−40° C to +60° C (−40° F to +140° F) Less than 95% RH
Storage Conditions	−40° C to +60° C (−40° F to +140° F)
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	204.0 mm x 78.0 mm x 61.50 mm (8.03 in. x 3.07 in. x 2.44 in.)
Net Weight	0.81 kg (1.79 lb)
Gross Weight	1.19 kg (2.62 lb)

ePoE Transmission Distances

Via CAT5E/CAT6 Ethernet Cable
ePoE supply voltage 48 V
Maximum DC resistance < 10 Ω/100 m

Cable Length, m (ft)	Bandwidth, Mbps	PoE Load Capacity, W	Hi-PoE Load Capacity, W	Working Mode
100 (328)	100	25.5	53	IEEE/E100
200 (656)	100	25.5	33	E100
300 (984)	100	19	19	E100
400 (1312)	10	17	17	E10
500 (1640)	10	13	13	E10
800 (2625)	10	7	7	E10

Via CAT5E/CAT6 Ethernet Cable
ePoE supply voltage 53 V
Maximum DC resistance < 10 Ω/100 m

Cable Length, m (ft)	Bandwidth, Mbps	PoE Load Capacity, W	Hi-PoE Load Capacity, W	Working Mode
100 (328)	100	25.5	53	IEEE/E100
200 (656)	100	25.5	47	E100
300 (984)	100	25.5	32	E100
400 (1312)	10	23	26	E10
500 (1640)	10	20	20	E10
800 (2625)	10	13	13	E10

Via RG-59 Coaxial Cable
ePoE supply voltage 48 V
Maximum DC resistance < 5 Ω/100 m

Cable Length, m (ft)	Bandwidth, Mbps	PoE Load Capacity, W	Hi-PoE Load Capacity, W	Working Mode
100 (328)	100	25.5	50	IEEE/E100
200 (656)	100	25.5	30	E100
300 (984)	100	18	18	E100
400 (1312)	100	15	15	E100
500 (1640)	10	12	12	E10
800 (2625)	10	6	6	E10
1000 (3281)	10	5	5	E10

Via RG-59 Coaxial Cable
ePoE supply voltage 53 V
Maximum DC resistance < 5 Ω/100 m

Cable Length, m (ft)	Bandwidth, Mbps	PoE Load Capacity, W	Hi-PoE Load Capacity, W	Working Mode
100 (328)	100	25.5	52	IEEE/E100
200 (656)	100	25.5	48	E100
300 (984)	100	25.5	30	E100
400 (1312)	100	20	23	E100
500 (1640)	10	16	16	E10
800 (2625)	10	10	10	E10
1000 (3281)	10	8	8	E10

Detection Area Dimensions

Camera Angle	Detection Area Shape	Detection Example	Dimensions	Camera Height, m (in.)			
				2.20 (86.61)	2.60 (102.36)	2.80 (110.23)	3.0 (118.11)
90°	Rectangular		Length	1.10 (43.31)	1.80 (70.87)	2.40 (94.49)	2.80 (110.24)
			Width	0.60 (23.62)	1.10 (43.31)	1.50 (59.06)	1.80 (70.87)
60°	Trapezoidal		Lower Base	1.10 (43.31)	2.0 (78.74)	2.50 (98.43)	2.90 (114.17)
			Upper Base	2.60 (102.36)	4.70 (185.04)	5.70 (224.91)	6.80 (267.17)
			Depth	1.10 (43.31)	1.90 (74.80)	2.40 (94.49)	2.80 (110.24)
			Median Width	1.85 (72.83)	3.35 (131.89)	4.0 (157.48)	4.85 (190.94)
30°	Trapezoidal		Lower Base	1.20 (47.24)	2.20 (86.61)	2.60 (102.36)	3.0 (118.11)
			Upper Base	10.0 (393.71)	10.90 (429.13)	10.90 (429.13)	10.90 (429.13)
			Depth	4.70 (185.04)	4.40 (173.22)	4.30 (169.29)	4.10 (161.42)
			Median Width	5.60 (220.47)	6.50 (225.91)	6.75 (265.75)	6.95 (273.62)

Analytics+ People Counting

People Counting	• Built-in calibration function • Dual-lens design for depth of information • Keeps accurate number for entrances, exits, and number of people in an area • Supports four (4) Line Crossing rules, four (4) Regional areas, and four (4) Queue Management areas
Line Crossing	• Maximum/Minimum height detection • Sensitivity control
Regional	• Counts Number of People in a Defined Area • Ten (10) Separate Regions
Queue Management	• Counts the number of people in line in a defined area • Keeps track of wait times • Triggers an alert when the number of people in line or the wait time exceeds a set threshold

Analytics+ Perimeter Protection

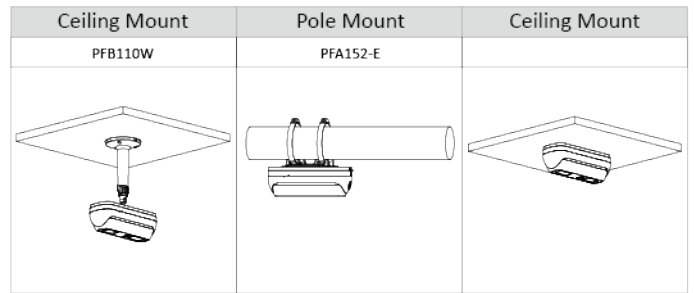| Perimeter Protection	• Detects human or vehicle violations using the following methods:
	  Tripwire: a target crosses a defined line.
	  Intrusion: a target enters or exits a defined perimeter.
	• Monitors a combination of detection methods.
	• Search and retrieve video based on target type.

Active Alarm	• Configurable automatic response when an alarm is triggered:
	  Built-in or custom pre-recorded message.
	  Siren activation.

Intelligence Video System

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	
Motion	An object moves through any part of the scene.
Scene Change	A person or object moves the camera to change the scene or covers the camera to obscure the scene.

Ordering Information

Type	Part Number	Description
People Counting Camera	DH-IPC-HDW8341XN-3D-S2	3 MP Dual-sensor StereoVision People Counting Camera with Analytics+
Accessory, optional	PFB110W	Ceiling/Wall Mount
	PFA152-E	Pole Mount
	DH-PFM321D-US	12 VDC, 1 A Power Adapter
ePoE Accessories, optional	LR1002	EoC Passive Converter
	LR1002-1EC	Single-port EoC Receiver

Ceiling Mount	Pole Mount	Ceiling Mount
PFB110W	PFA152-E	

Accessories

Optional:

PFB110W
Ceiling/Wall Mount

PFA152-E
Pole Mount

DH-PFM321D-US
12 VDC, 1 A Power Adapter

LR1002
EoC Passive
Converter

LR1002-1EC
Single-port EoC
Receiver

Dimensions (mm/inch)

78.0 [3.07"]   204.0 [8.03"]   62.0 [2.44"]

4-⌀4.5 [⌀0.18"]   65.0 [2.56"]   42.0 [1.65"]   78.0 [3.07"]   204.0 [8.03"]