

4 x 8MP Enhanced Starlight Multi-sensor Network Panoramic Bullet Camera

180° Stitched Panoramic Camera with WizMind Analytics+





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 Dahua 4 x 8MP Enhanced Starlight Multi-sensor Network Panoramic Bullet Camera provides added flexibility for capturing wide area video security. With four (4) 8MP sensors working in tandem to create a comprehensive 180° overview, the camera can replace multiple singlesensor cameras. The multi-sensor camera features contrast, backlight compensation, white balance, and resolution control to create clear images even in the most challenging lighting conditions. The camera is ready for any application with IP67 and IK10 ratings.

Functions

Enhanced Starlight Technology

For challenging low-light applications, Dahua's Enhanced Starlight Technology offers best-in-class light sensitivity, capturing color details in conditions as low as 0.005 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Electronic Pan/Tilt/Zoom (EPTZ) Functionality

With advanced target detection and tracking algorithms, Dahua EPTZ technology can zoom in and track multiple humans and vehicles. It provides rich details and a panoramic view at the same time. The EPTZ feature has five modes including a wide-angle view that can hold one (1), three (3), or five (5) different sub-images for a more versatile security system.

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.

- Four (4) 1/1.8-in. 8MP Progressive Scan CMOS Imagers
- Triple-stream Encoding
- Al Coding, Smart H.265+ and Smart H.264+ Dual Codec
- Maximum Resolution: 32MP (8192 x 3840) at 30 fps
- Enhanced Starlight Technology for Low-light Sensitivity
- Analytics+ Features: Perimeter Protection, Crowd and Vehicle Density
- Maximum IR LED Distance 30 m (98 ft)
- EPTZ: Enlarge and Track the Targets of Intelligent Alarms
- ArcticPro Series Camera Operational down to -40° C (-40° F)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty*



Distortion Correction

With advanced distortion correction algorithm, Dahua Distortion Correction corrects the image distortion in both horizontal and vertical directions to be consistent with the actual situation.

Panoramic Splicing

Dahua Panoramic Splicing uses a multi-band blending algorithm to create a seamless panoramic image from multi-sensor cameras. The technology effectively solves the problems of brightness, chromatic aberration and ghosting in the stitching area to create a non-distorted, clear 180° view.

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° 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.

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

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.



Ultra Series | DH-IPC-PFW83242-A180-S2

Technical Specification

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Camera					
Image Sensor		Four (4) 1/1.	.8-in. 8MP CM	OS Sensor	
Effective Pixels		8192 (H) x 3840 (V)			
RAM/ROM		4 GB/8 GB			
Scanning System		Progressive			
Electronic Shutt	ter Speed	1/3 s to 1/10	00,000 s		
	Color	0.005 lux at	F1.6		
Minimum Illumination	B/W	0.0005 lux at F1.6			
	IR On	0 lux at F1.6			
S/N Ratio		> 56 dB			
IR Distance		Up to 30.0 n	n (98.43 ft)		
IR Control		Auto, Manua	al		
IR LEDs		Eight (8)			
Lens					
Lens Type		Fixed-focal			
Mount Type		M16			
Focal Length		2.8 mm			
Maximum Aper	ature	F1.6			
A 1 617	Horizontal	180°			
Angle of View	Vertical	100°			
Focus Control		Fixed			
Close Focus dist	ance	1.80 m (5.90) ft)		
		Detect	Observe	Recognize	Identify
DORI Distance ¹		84.0 m (275.59 ft)	33.60 m (110.24 ft)	16.80 m (55.12 ft)	8.40 m (27.56 ft)
Pan/Tilt/Rot	ation				
	Pan	0° to 355°			
Range	Tilt	0° to 90°			
A (* 1	Rotation	0° to 360°			
Video			11265	1265 6 11	1004
Compression		Al Coding, Smart H.265+, H.265, Smart H.264+, H.264, H.264H, H.264B, MJPEG (Sub Stream Only)			
Streaming Capa	bilities	Three (3) Streams			
Resolution		8192 x 3840, 7168 x 3360, 5760 x 2700, 4096 x 1920, 2880 x 1360, 2304 x 1080, 2048 x 960, 1280 x 600			
	Main Stream	8192 x 3840 at 30 fps			
Frame Rate	Sub Stream 1	1280 x 600 at 30 fps			
	Sub Stream 2	2304 x 1080 at 30 fps			
Bit Rate Control	l	CBR, VBR			
Bit Rate		H.265: 38 to 32768 kbps H.264: 96 to 32768 kbps			
Day/Night		Auto (ICR), Color, B/W			
BLC Mode		BLC, HLC, DWDR			
White Balance		Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom			
Gain Control		Gain Priority, Shutter Priority, Manual			
Noise Reduction		3D DNR			
Motion Detection		Off, On (4 Zone, Rectangle)			
Region of Interest		Off, On (4 Zone)			
Privacy Mask		Off, On (4 Zone)			
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Audio			
Compression		PCM, G.711a, G.711Mu, G.726, G.723, AAC	
Input		One (1) Channel, RCA	
Output		One (1) Channel, RCA	
Network			
Ethernet		RJ-45 (10/100/1000 Base-T)	
Protocol		HTTP, HTTPs, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4, IPv6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP	
Interoperabilit	Ξ¥	ONVIF (Profile, S, G, T), CGI, P2P	
Maximum Use	r Access	20 Users	
Edge Storage		NAS, FTP, SFTP, MicroSD Card (Maximum 256 GB)	
Web Viewer		Edge, Chrome (Version 86 or later)	
Management S	Software	DSS, DMSS	
Mobile Operat	ting System	iOS, Android	
Cybersecurity		Video Encryption, Firmware Encryption, Configuration, Encryption, Digest, WSSE, Account Lockout, Security Logs, IP/MAC Filtering Generating and Importng X.509 Certification, Syslog, HTTPS, 802.1x, Trusted Boot/Execution/Upgrade	
Certificatio	ns		
Safety		EN62368-1 UL 62368-1 CAN/CSA C22.2 No. 62368-1-14	
Electromagnet (EMC)	tic Compatibility	47 CFR FCC Part 15 Subpart B Electromagnetic Compatability Directive	
Interface			
Video		One (1) Port, BNC (Adjustment Only)	
	Input	Two (2) Channels (3 VDC to 5 VDC, 5 mA)	
Alarm	Output	Two (2) Channels (30 VDC, 1 A, 50 VAC, 0.5 mA)	
RS-485		One (1) Port (Baud Rate Range: 1200 bps to 115200 bps)	
Electrical			
Power Supply		12 VDC, 24 VAC, or PoE+ (802.3at Class 4)	
Power Consum	nption	Basic: 10.6 W (12 VDC), 11.9 W (24 VAC), 11.9 (PoE) Maximum: 22.2 W (12 VDC), 25 W (24 VAC), 25 W (PoE)	
Environme	ntal		
Operation Con	ditions	–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) Less than 95% RH	
Ingress Protection		IP67	
Vandal Resistance		IK10	
Constructio	on		
Casing		Metal and Plastic	
Dimensions		298.30 mm x 172.50 mm x 120.50 mm (11.74 in. x 6.79 in. x 4.74 in.)	
Net Weight		3.16 kg (6.97 lb)	
Gross Weight		4.06 kg (8.95 lb)	
Analytics+	Functions		
Crowd Density		Detects crowd density and displays data on a bar or line chart. Triggers an alarm when the crowd quantity or density exceeds a set threshold in selected area. • Detects up to 1024 people	
		Applies to eight (8) regions	

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Analytics+ Functions (Cont.)

	Analyses the scene for the number of vehicles and vehicle congestion selected lanes.	
Vehicle Density	 Offers traffic congestion and upper parking limit functions Detects vehicle density and displays data on a bar or line chart Minimum pixel requirement: ≥ 80 pixels Applies to 16 regions Detection radius up to 80 m (262.47 ft) 	

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 MicroSD card. Error sending or receiving data over the network. Unauthorized access to camera. IP address conflict.
Premium Features	
Tripwire	A target crosses a user-defined line.

Intrusion A target enters or exits a defined perimeter.

Installation Recommendations - Crowd Density

Height	Detection Angle	Blind Spot	Maximum Detection Length
6.0 m	30°	1.6 m (5.25 ft)	17.0 m (55.77 ft)
(19.68 ft)	45°	0 m (0 ft)	17.0 m (55.77 ft)
10.0 m	30°	2.7 m (8.86 ft)	32.0 m (104.99 ft)
(32.80 ft)	45°	0 m (0 ft)	32.0 m (104.99 ft)
15.0 m (49.21 ft)	30°	4.0 m (13.12 ft)	30.0 m (98.43 ft)
	45°	0 m (0 ft)	30.0 m (98.43 ft)

Installation Recommendations- Vehicle Density

Height	Detection Angle	Blind Spot	Maximum Detection Length
30.0 m (98.43 ft)	30°	8.0 m (26.25 ft)	73.0 m (239.50 ft)
	45°	0 m (0 ft)	73.0 m (239.50 ft)
45.0 m (147.64 ft)	30°	11.0 m (36.09 ft)	68.0 m (223.10 ft)
	45°	0 m (0 ft)	68.0 m (223.10 ft)
60.0 m (196.85 ft)	30°	16.0 m (52.49 ft)	51.0 m (167.32 ft)
	45°	0 m (0 ft)	51.0 m (167.32 ft)

Ordering Information Part Number Туре Description 4 x 8MP Enhanced Starlight Multi-Camera DH-IPC-PFW83242-A180-S2 sensor Network Panoramic Bullet Camera DH-PFA120-SG Junction Box DH-PFA150-SG Pole Mount, Silver PFA151 Corner Mount Accessories (Optional) DHI-TF-P100 Series Micro SDXC Cards DH-PFM920I-5EU-U CAT5e UTP Cable DH-PFM320D-US 12 VDC, 2 A Power Adapter

Accessories





DH-PFA150-SG

Pole Mount



Corner Mount



DH-PFM320D-US Power Adapter

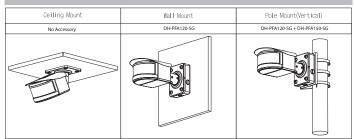
DHI-TF-P100 Series

DH-PFA120-SG

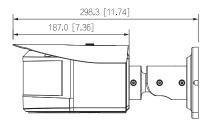
Junction Box

DHI-TF-P100 Series DH-PFM920I-5EU-U Micro SDXC Cards CAT5e UTP Cable

Installation



Dimensions





mm [inch]

120.5 [4