

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

Technical S	pecification					
Camera						
Image Sensor		Four (4) 1/1.8-in. 8MP CMOS Sensor				
Effective Pixels		8192 (H) x 3840 (V)				
RAM/ROM		4 GB/8 GB				
Scanning System	n	Progressive				
Electronic Shut	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 m	Up to 30.0 m (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				
	Horizontal	180°				
Angle of View	Vertical	100°				
Focus Control		Fixed				
Close Focus dis	tance	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°				
	Rotation	0° to 360°				
Video						
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 Contro	I	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)				
THRUCY WIGH						

Audio			
		PCM, G.711a, G.711Mu, G.726, G.723, AAC	
Compression			
Input Output		One (1) Channel, RCA	
		One (1) Channel, RCA	
Network		DL 45 (10/100/1000 Base T)	
Ethernet		RJ-45 (10/100/1000 Base-T) HTTP, HTTPs, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP,	
Protocol		DHCP, DNS, DDNS, PPPOE, IPv4, IPv6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP	
Interoperabilit	ý	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	ing 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)	ic Compatibility	47 CFR FCC Part 15 Subpart B Electromagnetic Compatability Directive	
Interface			
Video		One (1) Port, BNC (Adjustment Only)	
Alarm	Input	Two (2) Channels (3 VDC to 5 VDC, 5 mA)	
Aldini	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 Condit	tions	-40 °C to 60 °C (-40 °F to 140 °F) Less than 95% RH	
Ingress Protect	tion	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+ I	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 (32.80 ft)	30°	2.7 m (8.86 ft)	32.0 m (104.99 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 Description Туре 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

Accessories

Optional:



DH-PFM920I-5EU-U

DH-PFM320D-US



Pole Mount



PFA151

Corner Mount

12 VDC, 2 A Power Adapter

CAT5e UTP Cable



DH-PFM320D-US Power Adapter

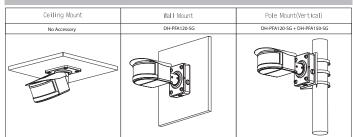
DHI-TF-P100 Series

DH-PFA120-SG

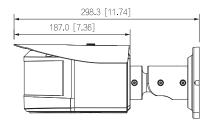
Junction Box

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

Installation



Dimensions



mm [inch]

