DAHUA TECHNOLOGY

8 MP Fixed Dome Network Camera

True Wide Dynamic Range IR Network Camera

- 1/2.7-in. 8 MP Progressive-scan CMOS Sensor
- Dual Stream Encoding
- Smart H. 265+ and Smart H.264+ Dual Codecs
- 8 MP (3840 x 2160) at 15 fps Maximum Resolution
- 2.8 mm Fixed Lens
- Starlight Technology for Low Light Sensitivity
- True WDR (120 dB) and Day/Night (ICR)
- Maximum IR LED Length 30 m (98.43 ft) with Smart IR
- Intelligent Video System
- ArcticPro Series Camera - Operational down to −40° C (−40°)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty*

8Mp | H.265+ | WDR | Starlight | IVS | IP67 | Vandal-proof

System Overview

The Dahua 8 MP Lite Series cameras offer high-resolution video and cutting-edge technology in a compact and accessible package. The cameras feature Smart H.265+ video compression, reducing bandwidth and storage requirements without sacrificing video quality. The camera's elegant blend of aesthetics combined with a range of easy mounting solutions provides an excellent choice for a variety of small to mid-size applications at an affordable price.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Basic Starlight Technology offers best-in-class light sensitivity, capturing details in low light down to 0.009 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Smart H.265+

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.

Wide Dynamic Range (WDR)

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.

Intelligent Video System

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations and intrusion detection. A camera with IVS quickly and accurately responds to monitoring events in a specific area and offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Smart IR Technology

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts the intensity of the camera's infrared LEDs to compensate for the distance of an object. Smart IR technology prevents IR LEDs from whitening out images as they come closer to the camera. The camera's integrated infrared illumination provides high-performance in extreme low-light environments up to 30 m (98.43 ft).

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. Supporting a ±30% input voltage tolerance, this camera suits even the most unstable power supply conditions.

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

Technical Specification

Camera

Image Sensor	1/2.7-in. 8 MP Progressive-scan CMOS
Effective Pixels	3840(H) x 2160(V)
RAM/ROM	128 MB / 256 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual; 1/3 s to 1/100000 s
Minimum Illumination	Color: 0.009 lux at F2.0 0 lux at F2.0 with IR on
IR Distance	Distance up to 30.0 m (98.43 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Three (3)

Lens

Lens Type	Fixed-focal
Iris Type	Fixed Aperture
Mount Type	M12
Focal Length	2.8 mm
Maximum Aperture	F2.0
Field of View	Horizontal: 105° Vertical: 56° Diagonal: 125°
Close Focus Distance	1.0 m (3.30 ft)

DORI² Distance	Lens	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
	2.8 mm	74.70 m (245.10 ft)	29.90 m (98.10 ft)	14.90 m (48.90 ft)	7.50 m (24.60 ft)

Pan/Tilt/Rotation

Range	Pan: 0˚ to 355˚ Tilt: 0˚ to 65˚ Rotation: 0˚ to 355˚

Video

Compression	Smart H.265+, H.265, Smart H.264+, H.264, H.264B, MJPEG (sub-stream only)
Streaming Capability	Two (2) Streams
Resolution	3840 x 2160, 3072 x 2048, 3072 x 1728, 2592 x 1944, 2688 x 1520, 3 MP (2048 x 1536), 2304 x 1296, 1080p (1920 x 1080), 1.3 MP (1280 x 960), 720p (1280 × 720), D1 (704 x 480), VGA (640 x 480), CIF (352 x 240)
Frame Rate — Main Stream	3840 x 2160 at 15 fps or 2688 x 1520 at 30 fps
Frame Rate — Sub Stream	D1 (704 x 480) at 30 fps
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 Kbps to 8192 Kbps H.265: 12 Kbps to 8192 Kbps
Day/Night	Auto (ICR), Color, B/W
Backlight	BLC, HLC, True WDR (120 dB)

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, Rectangle)
Region of Interest	Off, On (4 Zones)
Smart IR	Support
Digital Zoom	16x
Image Rotation	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (4 Areas, Rectangle)

Network

Ethernet	RJ-45 (10/100 Base-T)
Protocol	HTTP, HTTPs, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP, SNMP
Interoperability	ONVIF (Profile S, G, T), CGI, P2P, Milestone, Genetec
Auto Register	Support
Maximum User Access	20
Streaming Method	Unicast, Multicast
Edge Storage	Network Attached Storage (NAS) FTP, SFTP Micro SD Card slot (maximum 256 GB)
Web Viewer	IE, Chrome, Firefox
Management Software	Smart PSS, DSS, DMSS
Mobile Operating System	IOS, Android

Certifications

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

Electrical

Power Supply	12 VDC ± 30% or PoE (IEEE802.3af Class 0)
Power Consumption	< 6.2 W

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	∅109.90 mm x 81.0 mm (∅4.33 in. x 3.19 in.)
Net Weight	0.35 kg (0.77 lb)
Gross Weight	0.49 kg (1.08 lb)

Core Analytics

IVS triggers an alarm and takes a defined action for the following events:
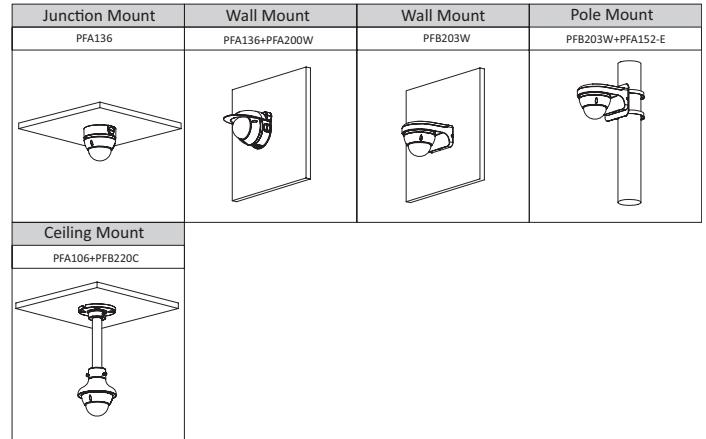
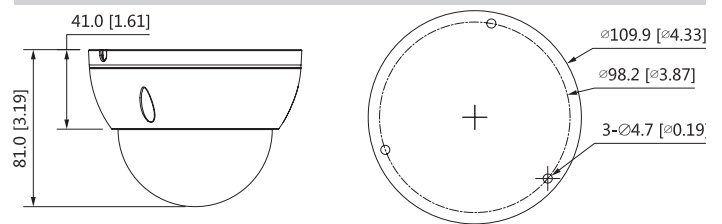|	
Standard Features	• Tampering with the camera. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera.
Premium Features	
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.

Ordering Information

Type	Part Number	Description
8 MP Camera	N82AL32	8 MP IR Eyeball Network Camera, True WDR, 2.8 mm
Accessories, optional	PFA106	Mount Adapter
	PFA136	Junction Box
	PFA152-E	Pole Mount (use with PFB203W Wall Mount)
	PFA200W	Sun/Rain Shield (use with PFA136 Junction Box)
	PFB203W	Wall Mount
	PFB220C	Ceiling Mount (use with PFA106 Mount Adapter)
	DH-PFM321D-US	12 VDC, 1 A Power Adapter

Accessories

Optional:

PFA106
Mount Adapter

PFA136
Junction Box

PFA152-E
Pole Mount

PFA200W
Rain Shade

PFB203W
Wall Mount

PFB220C
Ceiling Mount

DH-PFM321D-US
Power Adapter

Junction Mount	Wall Mount	Wall Mount	Pole Mount
PFA136	PFA136+PFA200W	PFB203W	PFB203W+PFA152-E

Ceiling Mount			
PFA106+PFB220C			

Dimensions (mm/inch)

41.0 [1.61]
81.0 [3.19]
∅109.9 [∅4.33]
∅98.2 [∅3.87]
3-∅4.7 [∅0.19]

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.

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