dahua TECHNOLOGY

4 x 5MP Flexible Multi-sensor Network Camera

Multi-directional IR Dome with Four (4) 2.8 mm to 12 mm Motorized Zoom Lenses

WizMind

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 DH-IPC-PDBW82041N-B360 Flexible Multi-sensor Dome Camera features four (4) 1/2.7-in. 5MP Progressive-scan CMOS sensors each with a 2.8 to 12 mm motorized lens. Each sensor can be positioned and configured independently of the others allowing flexible, multi-directional video ssecurity that replaces multiple single-sensor cameras and is ideal for monitoring large areas. The camera offers True Wide Dynamic Range, a True Day/Night IR Cut filter, IP67 Ingress protection and operation in extreme temperatures to deliver superior images in all lighting and environmental conditions.

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.

FlexStream Technology[1]

The camera offers FlexStream technology that displays simultaneous video from each sensor in a single channel, streams viewed in the first channel simultaneously. That is, the multiple images can be displayed in one channel.

Face Detection

The camera detects and captures a snapshot of human face in a defined area within a scene. This technology supports detecting, tracking, capturing and selecting the best face image, and then outputs a face snapshot.

- Four (4) Independent 1/2.7-in 5MP CMOS Sensors
- Flexible Multi-directional IR Dome with four (4) 2.8 mm to 12 mm Motorized Zoom Lenses
- Triple-stream Encoding per Channel
- Smart H.265+ and Smart H.264+ Dual Codec
- 5MP at 30 fps Maximum Resolution per Sensor
- FlexStream Consolidates Video from All Channels into a Single Stream
- Analytics+ Functions — Perimeter Protection and Face Detection
- Starlight Technology for Low Light Sensitivity
- True Wide Dynamic Range and True Day/Night (ICR) on all Channels
- Maximum IR LED Distance 30 m (98 ft)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Five-year Warranty*

5Mp	Perimeter Protection	FlexStream	WDR	Face Detection	IP67&IK10

Starlight Technology

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

Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for abandoned or missing objects. A camera with IVS quickly and accurately responds to monitoring events in a specific area. In addition to scene analytics, the camera offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

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.

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

With a temperature range of −30 °C to +60 °C (−22 °F to +140 °F), the camera is designed for extreme temperature environments. The camera complies with an IK10 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 and certified to rigorous dust and water immersion tests, the IP67 rating makes it suitable for demanding outdoor applications.

Technical Specification

Camera

Image Sensor	Four (4) 1/2.7-in. 5MP CMOS
Effective Pixels	2592(H) x 1944(V), per sensor
RAM/ROM	4 GB/32 GB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual, 1/3 s to 1/100000 s
Minimum Illumination	Color: 0.005 lux at F1.7 0 lux at F1.7 (IR on)
S/N Ratio	More than 56 dB
IR Distance	Distance up to 30 m (98.43 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Eight (8) total LEDs; Two (2) LEDs per sensor

Lens

Lens Type	Motorized
Mount Type	φ 14
Focal Length	2.8 mm to 12 mm
Max. Aperture	F1.7
Angle of View	Horizontal: 100° to 36° Vertical: 74° to 27° Diagonal: 133° to 45°
Focus Control	Motorized
Close Focus Distance	0.80 m (2.60 ft)

DORI Distance[2]	Lens	Detect	Observe	Recognize	Identify
	Wide	66.0 m (216.50 ft)	26.40 m (86.60 ft)	13.20 m (43.30 ft)	6.60 m (21.70 ft)
	Tele	140.40 m (460.60 ft)	56.10 m (184.10 ft)	28.0 m (91.90 ft)	14.0 m (45.90 ft)

Installation Angle

Range	Pan: 0˚ to 360˚ Tilt: 0˚ to 80˚ Rotation: 0˚ to 355˚

Video

Compression		Smart H.265+, H.265, Smart H.264+, H.264, H.264B, H.264H, MJPEG (sub stream)
Streaming Capability		Three (3) Streams per sensor
Resolution	Individual Streams	5MP (2592 x 1944), 4MP (2688 x 1520), 3MP (2048 x 1536), 2304 x 1296, 2 MP (1920 x 1080), 1.3MP (1280 x 960), 720p (1280 x 720), VGA (640 x 480), D1 (704 x 480), CIF (352 x 240)
	FlexStream[1]	8MP (3296 x 2472), 5MP (2592 x 1944), 1600 x 1200, 1.3 MP (1280 x 960), D1 (704 x 480), CIF (352 x 240)
Frame Rate	Individual Streams	Main Stream: 5MP at 30 fps Sub Stream 1: D1 at 30 fps Sub Stream 2: 2MP at 30 fps
	FlexStream[1]	Main Stream: 1600 x 1200 at 30 fps Sub Stream 1: D1 at 30 fps Sub Stream 2: 8 MP at 30 fps
Bit Rate Control		CBR, VBR
Bit Rate		H.264: 3 Kbps to 19456 Kbps H.265: 3 Kbps to 19456 Kbps
Day/Night		Auto (ICR), Color, B/W
BLC Mode		BLC, HLC, True WDR (120 dB, all channels), SSA
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 Zone, Rectangle)
Region of Interest	Off, On (4 Zone)
Flip	0°, 90°, 180°, 270° (Supports 90°/270° with 1080p resolution or lower)
Mirror	Off, On
Privacy Masking	Off, On (4 Area, Rectangle)

Audio

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

Network

Ethernet	RJ-45 (10/100/1000 Base-T)
Protocol	HTTP, HTTPS, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP
Interoperability	ONVIF(Profile S/Profile G/Profile T), CGI, Milestone, Genetec, RTMP, P2P
Streaming Method	Unicast/Multicast
Maximum User Access	20 Users
Edge Storage	Network Attached Storage (NAS) Micro SD Card Slot, 256 GB maximum
Web Viewer	IE 9 and later, Chrome 41.0 and later
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	UL 60950-1 CAN/CSA C22.2 No.60950-1-07 EN62368-1
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B Electromagnetic Compatibility Directive 2014/30/EU

Interface

Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA
RS485	One (1) Port (baud rate range: 1200 bps–115200 bps)
Alarm	Input: Three (3) Channels (5 mA, 3 VDC to 5 VDC) Output: Two (2) Channels (300 mA, 12 V)

Electrical

Power Input		12 VDC, 1.65 A or PoE (IEEE802.3af Class 0)
Power Output		12 VDC
Power Consumption	Basic	12 VDC: 8.1 W PoE: 9 W
	Maximum	12 VDC: 21.5 W PoE: 22.2 W

Environmental

Operating Temperature	−30° C to +60° C (−22° F to +140° F) Less than 95% RH
Storage Temperature	−30° C to +60° C (−22° F to +140° F)
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal and Plastic
Dimensions	ø286.10 mm x 111.30 mm (ø11.26 in. x 4.38 in.)
Net Weight	2.75 kg (6.06 lb)
Gross Weight	4.50 kg (9.92 lb)

Analytics+ Functions

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.

Face Detection	Detects faces from the video image. Supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.

Intelligence

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

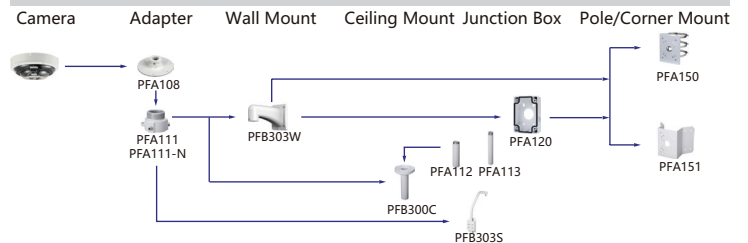|	
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.
Fast Moving	Target exceeds a set speed when exiting a defined area
Parking Detection	Vehicle remains in a defined area without motion for a set period of time.
Crowd Gathering	Specified number of people remain inside a defined area for a set time.
Loitering Detection	Target is in motion inside a defined area longer than a specified amount of time.

Ordering Information

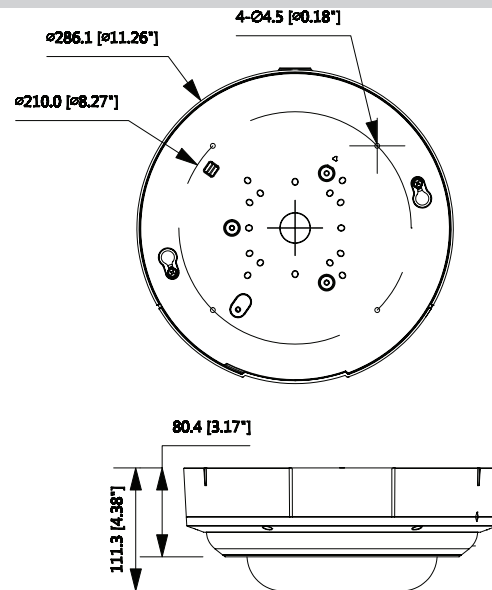| Type	Part Number	Description
Panoramic Camera	DH-IPC-PDBW82041N-B360	4 x 5MP Multi-sensor IR Dome Network Camera
Accessories, optional	PFA108	Mount Adapter
	PFA111	Mount Adapter
	PFA111-N	Mount Adapter (NPT 1-1/2 in.)
	PFA120	Junction Box (use with PFB303W)
	PFA150	Pole Mount (use with PFA108, PFA111 or PFA111-N, PFA120, and PFB303W)
	PFA151	Corner Mount (use with PFA108, PFA111 or PFA111-N, PFA120, and PFB303W)
	PFB300C	Ceiling Mount (use with PFA108 and or PFA111-N)
	PFB303S	Parapet Mount (use with PFA108 and or PFA111-N)
	PFB303W	Wall Mount Bracket (use with PFA108 and PFA111 or PFA111-N)
	DH-PFM320D-US	12 VDC, 2 A Power Adapter

Accessories

Optional:

PFA108 Mount Adapter	PFA111 Mount Adapter	PFA120 Junction Box	PFA150 Pole Mount
PFA151 Corner Mount	PFB300C Ceiling Mount	PFB303W Wall Mount	DH-PFM320D-US Power Adapter

Mounting Diagram

Dimensions (mm/inch)

ø286.1 [ø11.26"]
ø210.0 [ø8.27"]
4-Ø4.5 [ø0.18"]

80.4 [3.17"]
111.3 [4.38"]

1. The FlexStream channel connects to a Dahua NVR via an RTSP string. If the FlexStream feed is the only channel added only the live video feed will be transmitted and will not include alerts.

2. 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.