4 x 5MP Multi-Flex Network Camera

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

- 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, People Counting, Queue Management, and Face Detection
- Enhanced Starlight Technology for Low Light Sensitivity

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-PDBW82041-B360-S2 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 surveillance that replaces multiple single-sensor cameras and is ideal for monitoring large areas. The camera offers 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.

Enhanced Starlight Technology

For challenging low-light applications, Dahua's Enhanced Starlight 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/8 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	> 56 dB
IR Distance	Distance up to 30.0 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
Maximum Aperture	F1.7
Field of View	Horizontal: 100° to 42° Vertical: 74° to 32° Diagonal: 133° to 53°
Focus Control	Motorized
Close Focus Distance	0.80 m (2.60 ft)

DORI[2] Distance	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)	28.80 m (94.49 ft)	14.0 m (45.90 ft)

Pan/Tilt/Rotation

Range	Pan: 0˚ to 360˚ Tilt: 0˚ to 75˚ 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 (2560 x 1440), 3MP (2048 x 1536), 2304 x 1296, 2MP (1920 x 1080), 1.3MP (1280 x 960), 720p (1280 x 720), VGA (640 x 480), D1 (704 x 480), CIF (352 x 240)
Resolution — FlexStream[1]	8MP (3296 x 2472), 5MP (2592 x 1944), 1600 x 1200, 2MP (1920 x 1080), 1.3MP (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
Frame Rate — FlexStream[1]	Main Stream: 1600 x 1200 at 30 fps Sub Stream 1: D1 at 30 fps Sub Stream 2: 8MP at 30 fps
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 32 Kbps to 17152 Kbps H.265: 12 Kbps to 10240 Kbps
Day/Night	Auto (ICR), Color, B/W
Backlight	BLC, HLC, DWDR
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom
Gain Control	Auto, Manual
Noise Reduction	3D DNR
Motion Detection	Off, On (4 Zones, 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 (8 Area, Rectangle)

Audio

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

Network

Ethernet	RJ-45 (10/100/1000 T-Base)
Protocol	IPv4, IPv6, HTTP, TCP, ARP, RTSP, RTP, RTCP, UDP, SMTP, RTMP, DHCP, DNS, DDNS, QoS, UPnP, NTP, Multicast, ICMP, IGMP, NFS, SAMBA, PPPoE, SNMP
Interoperability	ONVIF (Profile S, T, G), CGI
Streaming Method	Unicast/Multicast
Maximum User Access	20 Users
Edge Storage	MicroSD Card Slot (256 GB Maximum)
Web Viewer	IE 9 and later, Chrome 42 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	UL62368-1 & CAN/CSA C22.2 No. 62368-1-14
Electromagnetic Compatibility (EMC)	CFR 47 FCC Part 15 Subpart B Electromagnetic Compatibility Directive 2014/30/EU, EN62368-1

Interface

Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA
RS-485	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 Supply		12 VDC, PoE+ (802.3at)
Power Consumption	Basic	12 VDC: 7.4 W PoE+: 9.3 W
	Maximum	12 VDC: 21.3 W PoE+: 24.7 W

Environmental

Operating Conditions	−30° C to +60° C (−22° F to +140° F) Less than 95% RH
Storage Conditions	−30° C to +60° C (−22° F to +140° F)
Protection	IP67, 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)

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.

Analytics+ Functions

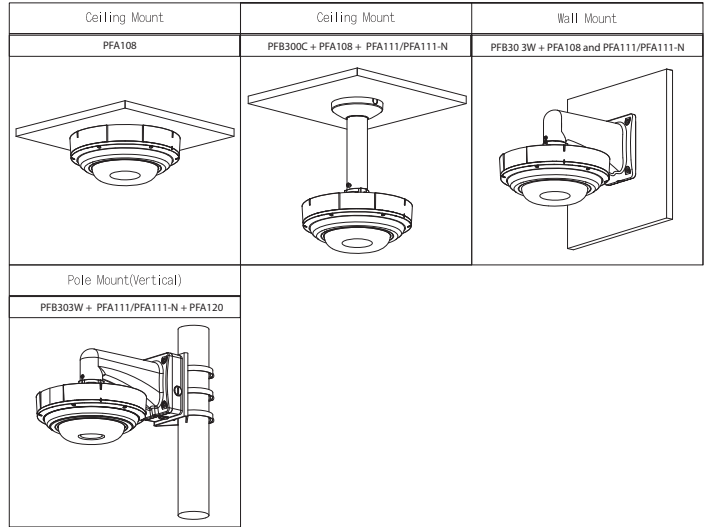| Perimeter Protection	• Detects human or vehicle violations using the following methods: **Tripwire**: a target crosses a defined line. **Intrusion**: a target enters or exits a defined perimeter. • Monitors a combination of detection methods. • Search and retrieve video based on target type
Face Detection	Detects faces from the video image. Supports detecting, tracking, capturing and selecting the best face image, and then outputs face snapshot.
Advanced People Counting	• Delivers accurate flow statistics from the following methods: **Line Crossing**: counts a person as they cross a threshold in a defined direction. **Region:** counts the number of people in a defined area. • Produces daily, monthly, and annual reports for both methods.
Queue Management	• Monitors four (4) user-defined regions where people wait in line (or queue). Issues an alarm for the following triggers: **People in Line**: the number of people in line exceeds a minimum threshold. **Wait Time**: time a person waits in line is greater than the minimum queue time.

Intelligent Video System

IVS triggers an alarm and takes a defined action for the following events:

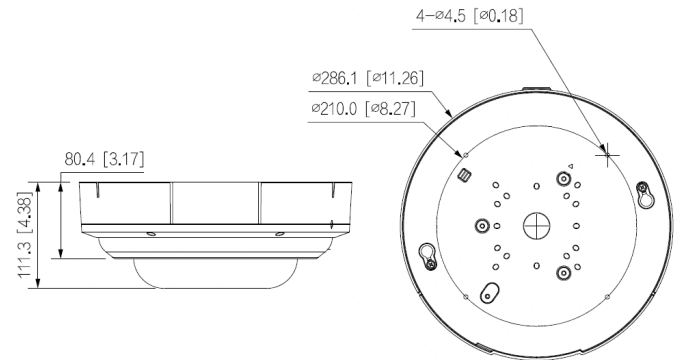| Standard Features	• Tampering with the camera. • Error writing to an onboard Micro SD card. • Error sending or receiving data over the network. • Unauthorized access to the camera
Premium Features	
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object 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-PDBW82041-B360-S2	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/PFA111-N, PFA120, and PFB303W)
	PFB300C	Ceiling Mount (Use with PFA108 and/or PFA111-N)
	PFB303S	Parapet Mount (Use with PFA108 and or PFAA111/PFA111-N)
	PFB303W	Wall Mount Bracket (Use with PFA108 and PFA111/PFA111-N)
	DH-PFM320D-US	12 VDC, 2 A Power Adapter

Accessories (Optional)

PFA108 Mount Adapter

PFA111/PFA11-N Mount Adapter

PFA120 Junction Box

PFA150 Pole Mount

PFA151 Corner Mount

PFB300C Ceiling Mount

PFB303W Wall Mount

DH-PFM320D-US Power Adapter

PFB303S Parapet Mount

Ceiling Mount	Ceiling Mount	Wall Mount
PFA108	PFB300C + PFA108 + PFA111/PFA111-N	PFB30 3W + PFA108 and PFA111/PFA111-N

Pole Mount(Vertical)
PFB303W + PFA111/PFA111-N + PFA120

Dimensions

4−ø4.5 [ø0.18]

ø286.1 [ø11.26]

ø210.0 [ø8.27]

80.4 [3.17]

111.3 [4.38]

Mounting Diagram

Camera   Adapter   Wall Mount   Ceiling Mount   Junction Box   Pole/Corner Mount

PFA108

PFA111 PFA111-N

PFB303W

PFA112 PFA113

PFB300C

PFB303S

PFA120

PFA150

PFA151