2MP Motorized Network Dome Camera
2MP Starlight IR Network Dome Camera

- 1/1.9-in. 2MP STARVIS™ CMOS Sensor
- Triple-stream Encoding
- Smart H.265+ and H.264 Dual Codec
- Starlight Technology for Ultra-low Light Sensitivity
- 1080p at 60 fps Maximum Resolution
- 4.1 mm to 16.4 mm Motorized Optical Zoom Lens
- True Wide Dynamic Range (120 dB) and True Day/Night (ICR)
- Maximum IR LED Distance 50 m (164 ft)
- ArcticPro Series Camera - Operational down to −40° C (−40° F)
- IP67 Ingress Protection and IK10 Vandal Resistance
- Intelligent Video System
- Five-year Warranty*

2Mp	H.265	1080P 50/60fps	Analysis	WDR	Starlight	IP67	Vandal-proof

System Overview

The Dahua 2 MP Ultra 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. For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low-light environments. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Functions

Starlight Technology

For challenging low-light applications, Dahua's Starlight Ultra-low Light Technology offers best-in-class light sensitivity, capturing color details in low light down to 0.002 lux. The camera uses a set of optical features to balance light throughout the scene, resulting in clear images in dark environments.

Wide Dynamic Range

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)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and 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 detects and captures a snapshot of human face in a defined area within a scene, and offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Intelligent Business Analysis

The built-in IVS features people counting and heat map functionality, advanced features that add business intelligence to your security system. Intelligent Analysis tracks and stores daily, weekly, monthly, and yearly people flow through a defined scene and produces a configurable report. The system uses this data to produce a Heat Map, a two-dimensional representation of data that provides an immediate visual summary of activity. People Counting and Heat Maps can identify the most active areas of a retail space providing valuable data analysis for commercial applications.

Smart Scene Adaptive (SSA) Technology

Smart Scene Adaptive (SSA) is an intelligent image technology, developed by Dahua that automatically evaluates and compensates for changes in the luminance of a scene. SSA automatically regulates the exposure parameters to improve image quality in a backlit scene, especially in scenes with traffic lights or headlights.

ArcticPro

The Dahua ArcticPro Series of extreme-environment cameras combine temperature-tolerant components, a waterproof enclosure, and an integrated heater to ensure flawless operation in temperatures as low as −40° C (−40° F). 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 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.

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

Technical Specification

Camera

Image Sensor	1/1.9-in. 2 MP STARVIS™ CMOS
Effective Pixels	1920(H) x 1080(V), 2 MP
RAM/ROM	1024 MB / 128 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual; 1/3 s to 1/100,000 s
Minimum Illumination	Color: 0.002 lux at F1.53 (1/3 s, 30 IRE) Color: 0.01 lux at F1.53 (1/30 s, 30 IRE) 0 lux at F1.53 (with IR on)
S/N Ratio	More than 50 dB
IR Distance	Distance up to 50.0 m (164.04 ft)
IR On/Off Control	Auto, Manual
IR LEDs	Four (4)

Lens

Lens Type	Motorized, Auto Iris (HALL)
Mount Type	Board-in
Focal Length	4.1 mm to 16.4 mm
Max. Aperture	F1.53
Angle of View	Horizontal: 92° to 32° Vertical: 53° to 18°
Optical Zoom	4x
Focus Control	Motorized Auto-focus
Close Focus Distance	1.0 m (3.28 ft)

DORI Distance[1]	Lens	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
	Wide	57 m (187 ft)	23 m (75 ft)	11 m (36 ft)	6 m (20 ft)
	Telephoto	137 m (449 ft)	55 m (180 ft)	27 m (89 ft)	14 m (49 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
Streaming Capability	Three (3) Streams
Resolution	1080p (1920 x 1080), SXGA (1280 x 1024), 1.3 MP (1280 x 960), 720p (1280 x 720), D1 (704 x 480), VGA (640 x 480), CIF (352 x 240)
Frame Rate	Main Stream: 1080p at 60 fps
	Sub Stream: D1 at 60 fps
	Sub Stream 2: 1080p at 60 fps
Bit Rate Control	CBR/VBR
Bit Rate	H.264: 24 Kbps to 10240 Kbps H.265: 14 Kbps to 6144 Kbps

Day/Night	Auto (ICR), Color, B/W
BLC Mode	BLC, HLC, True WDR (120 dB), SSA
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual
Gain Control	Auto, Manual
Noise Reduction	3D DNR
Motion Detection	Off, On (4 Zone, Rectangle)
Region of Interest	Off, On (4 Zone)
Advanced Features	Electronic Image Stabilization (EIS), Smart IR, Defog
Digital Zoom	16x
Flip	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (4 Area, Rectangle)

Audio

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

Network

Ethernet	RJ-45 (100/1000 Base-T)
Protocol	IPv4/IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x
Interoperability	ONVIF, PSIA, CGI
Streaming Method	Unicast, Multicast
Max. User Access	10 Users / 20 Users
Edge Storage	NAS (Network Attached Storage) Local PC for Instant Recording Micro SD Card, maximum 128 GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS
Mobile Operating System	IOS, Android

Certifications

Safety	UL60950-1
Electromagnetic Compatibility (EMC)	FCC Part 15 Subpart B

Interface

Video	One (1) CVBS Output Port (for installation adjustment only)
Audio	Input: One (1) Channel Output: One (1) Channel
Alarm	Input: Two (2) Channels (5 mA, 5 VDC) Output: One (1) Channel (1 A, 30 VDC; 0.5 A, 50 VAC)

Electrical

Power Supply	12 VDC, 24 VAC or PoE+ (802.3at, Class 4)
Power Consumption	<18 W

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.

Environmental

Operating Temperature	−40° C to +60° C (−40° F to +140° F), Less than 95% RH
Storage Temperature	−40° C to +60° C (−40° F to +140° F), Less than 95% RH
Ingress Protection	IP67
Vandal Resistance	IK10

Construction

Casing	Metal
Dimensions	ø159.10 mm x 117.90 mm (ø6.26 in. x 4.64 in.)
Net Weight	0.96 kg (2.12 lb)
Gross Weight	1.75 kg (3.56 lb)

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	
Motion	An object moves through any part of the scene.
Tripwire	A target crosses a user-defined line.
Intrusion	A target enters or exits a defined perimeter.
Scene Change	A person or object moves the camera to change the scene or covers the camera to obscure the scene.
Abandoned/Missing Object	A target leaves an object in designated area, or a target removes an object from the same designated area.
Advanced Features	
Facial Detection	Detects and captures a snapshot of a human face in a defined area within a scene.
People Counting	Measure the number of customers, visitors or passengers in a surveillance scene.
Heat Map	Generates a visual representation of activity.

Ordering Information

Type	Part Number	Description
2 MP Camera	N28BL7Z	2 MP Starlight IR Dome Network Camera, Built-in Heater, IVS
Accessories, included	PFA138	Junction Box
Accessories, optional	PFA101	Mount Adapter
	PFA152-E	Pole Mount
	PFB201C	In-ceiling Mount
	PFB300C	Ceiling Mount
	PFB302S	Wall Mount
	PFM320	12 VDC, 2 A Power Adapter
	PC-H59-D113.6	Polycarbonate Smoke Tinted Bubble (for Vari-focal Domes)

Accessories

Included:

PFA138
Junction Box

Optional:

PFA101
Mount Adapter
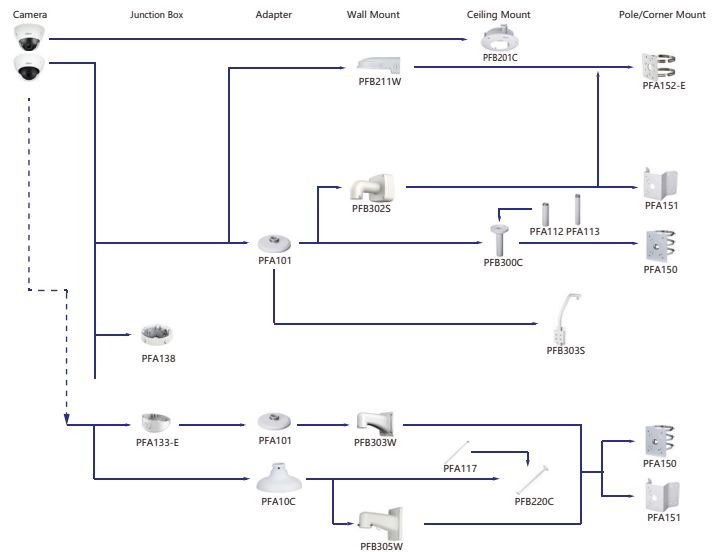
PFA152-E
Pole Mount

PFB302S
Wall Mount

PFB201C
In-ceiling Mount

PFB300C
Ceiling Mount

PFM320
Power Adapter

Camera   Junction Box   Adapter   Wall Mount   Ceiling Mount   Pole/Corner Mount
PFB201C
PFB211W
PFA152-E
PFB302S
PFA112 PFA113
PFA151
PFA101
PFB300C
PFA150
PFB303S
PFA138
PFA133-E   PFA101   PFB303W
PFA117
PFA150
PFA10C
PFB220C
PFA151
PFB305W

Dimensions (mm/in.)

159.10 mm
(6.26 in.)

117.90 mm
(4.64 in.)

ø159.10 mm
(ø6.26 in.)

ø140.0 mm
(ø5.51 in.)

3 x ø4.70 mm
(ø0.19 in.)