DAHUA
TECHNOLOGY

4MP WiFi Network Bullet Camera (2.8 mm)
WiFi IR Camera with Smart Motion Detection

ArcticPro

- 1/3-in. 4 MP Progressive-scan CMOS Sensor
- 4MP (2560 × 1440) at 20 fps Maximum Resolution
- 2.8 mm Fixed Lens
- 2.4 GHz WiFi (IEEE802.11b/g/n), up to 80 m (262.48 ft) range
- Smart H.265+ and Smart H.264+ Dual Codec
- True Day/Night (ICR)
- Smart Motion Detection
- Maximum IR Distance 30 m (98 ft)
- IP67 Ingress Protection
- Five-year Warranty*

4Mp	Human Detection	Built-in Mic	H.265		SD Card	IP67

System Overview

The N41BD42-W offers high-resolution video and WiFi connectivity in a compact and accessible package. The camera features 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

True Day/Night
A day/night mechanical IR cut filter makes this camera ideal for applications with fluctuating lighting conditions, delivering color images during the day and automatically switching to monochrome as the scene darkens.

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.

Smart Motion Detection (Human Detection Only)
Smart Motion Detection, a component of Dahua's Analytics+ technology, improves alarm accuracy and decreases the number of false alarms. The advanced SMD algorithm analyzes a scene for human motion, while filtering out other motion due to trees, leaves, animals, weather, and triggers an alarm when detected.

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.

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 allows for ±30% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. 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	1/3-in. 4 MP Progressive-scan CMOS
Max. Resolution	2560 (H) x 1440 (V)
RAM/ROM	64 MB / 16 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual, 1/3 s to 1/100,000 s
Minimum Illumination	Color (30 IRE): 0.03 lux at F2.0 B/W (30 IRE) : 0.003 lux at F2.0 0 lux (IR on)
S/N Ratio	> 56 dB
Illumination Distance	Distance up to 30 m (98.43 ft)
Illuminator On/Off Control	Auto, Manual, Off
Illuminator Number	One (1) IR Light

Lens

Lens Type	Fixed				
Lens Mount	M12				
Focal Length	2.8 mm				
Maximum Aperture	F2.0				
Angle of View	Horizontal: 90° Vertical: 50° Diagonal: 107°				
Iris Type	Fixed				
Close Focus Distance	1.0 m (3.28 ft)				
DORI[1] Distance	Lens	Detect	Observe	Recognize	Identify
	2.8 mm	68 m (223.10 ft)	27.2 m (89.24 ft)	13.6 m (44.62 ft)	6.8 m (22.31 ft)

Installation Angle

Range	Pan: 0° to 360° Tilt: 0° to 90° Rotation: 0° to 360°

Video

Video Compression	Smart H.265+, H.265, Smart H.264+, H.264, H.264B, H.264H	
Stream Capability	Two (2) Streams	
Resolution	4MP (2560 × 1440), 3MP (2304 × 1296), 1080p (1920 × 1080), 1.3M(1280 × 960), 720p (1280 × 720), VGA (640 × 480), CIF (352 × 240)	
Frame Rate	Main Stream	2560 × 1440 at 20 fps
	Sub Stream	640 × 480 at 20 fps
Bit Rate Control	CBR, VBR	
Video Bit Rate	H.264: 24 kbps to 4096 kbps H.265: 9 kbps to 4096 kbps	
Day/Night	Auto (ICR), Color, B/W	
BLC Mode	BLC, HLC, Digital WDR	
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual, Regional Custom	
Gain Control	Auto, Gain Priority, Shutter Priority, Manual	
Noise Reduction	3D NR	
Motion Detection	Off, On (4 Zones, Rectangular)	
Region of Interest (RoI)	Off, On (4 Zones)	
Smart IR	Support	
Image Rotation	0°, 180°	
Mirror	Off, On	

Audio

Built-in Microphone	Yes

Network

Network Port	RJ-45 (10/100 Base-T)
WiFi	2.4 GHz WiFi (IEEE802.11b/g/n)
Wireless Range	Up to 80 m (262.48 ft)
Network Protocol	IPv4, HTTP, TCP, UDP, ARP, RTP, RTSP, RTCP, DHCP, DNS, NTP, Multicast
Interoperability	ONVIF (Profile T, S, G), CGI, P2P, SDK, API
User/Host	6 Users (Total Bandwidth: 36 Mbps)
Edge Storage	MicroSD Card (Maximum 256 GB)
Web Viewer	IE, Chrome, Firefox
Management Software	SmartPSS Lite, DMSS
Mobile Client	iOS, Android
Cybersecurity	Video Encryption, Configuration Encryption, Digest, WSSE, Account Lockout, Security Logs, Generating/Importing X.509 Certification, HTTPS, Trusted Boot, Trusted Execution, Trusted Upgrade

Certification

CE	EN62368-1
Radio Equipment Directive (RED)	Radio Equipment Directive 2014/53/EU
Electromagnetic Compatability (EMC)	Electromagnetic Compatibility Directive 2014/30/EU
FCC	47 CFR FCC Part 15, Subpart B FCC PART 15C

Power

Power Supply	12 VDC ±30%
Power Consumption	Basic: 2 W Maximum (H.265 + IR Light): 4.1 W

Environment

Operating Temperature	-40 °C to 60 °C (-40 °F to 140 °F) Less than or equal to 95% RH
Storage Temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Protection	IP67

Structure

Casing	Metal
Product Dimensions	166.2 mm × 70.0 mm × 128.6 mm (6.54 in. × 2.76 in. × 5.06 in.)
Net Weight	477.9 g (1.05 lb)
Gross Weight	696.5 g (1.54 lb)

Analytics+ Functions

Smart Motion Detection[2]	• Differentiates between and classifies humans • Filters false alarms due to leaves, lights, animals, and • other inconsequential objects. • Extracts humans from recorded video for quick target search and retrieval.

Intelligent Video System 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 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.

Ordering Information

Type	Model	Description
4MP Camera	N41BD42-W	4MP IR Fixed-focal Wi-Fi Bullet Network Camera
Accessories	NBS05C120050VE	12V DC/0.5A Power Adapter
	PFA134	Junction Box
	PFA152-E	Pole Mount
	DH-PFM900-E	Integrated Mount Tester
	DHI-TF-P100 Series	Micro SDCX Card

Accessories

Included

NBS05C120050VE
12V DC/0.5A
Power Adapter

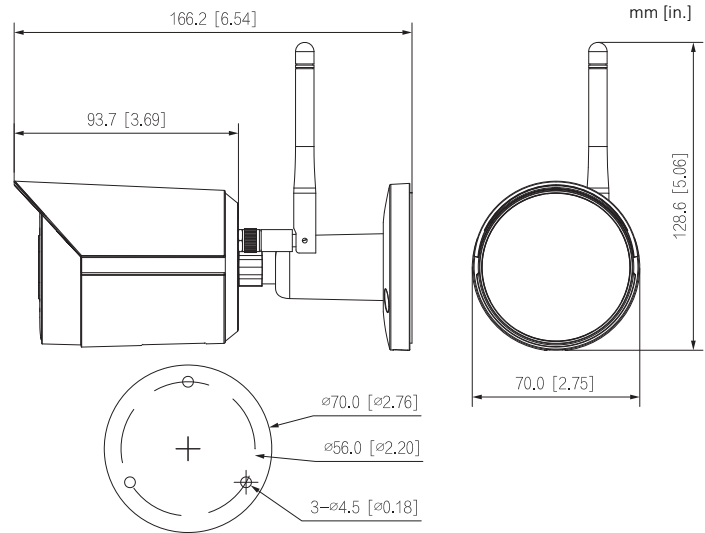### Optional

PFA134
Junction Box

PFA152-E
Pole Mount

DH-PFM900-E
Integrated
Mount Tester

DHI-TF-P100 Series
Micro SDCX Card

Ceiling Mount	Junction Mount	Pole Mount(Vertical)
No Accessory	PFA134	PFA134 + PFA152-E

Dimensions

mm [in.]

166.2 [6.54]

93.7 [3.69]

128.6 [5.06]

70.0 [2.75]

⌀70.0 [⌀2.76]

⌀56.0 [⌀2.20]

3−⌀4.5 [⌀0.18]

1. The DORI distance is a general proximity of distance helping to pinpoint the correct camera for your needs. The DORI distance is calculated based on sensor specifications and lab test results according to EN 62676-4 which defines the criteria for Detect, Observe, Recognize and Identify.
2. Pair a Smart Motion Detection camera with a Dahua recording device that also offers SMD functionality to take advantage of SMD alarm filtering and object classification when searching and playing back recorded video.