

4MP WiFi Network Bullet Camera (2.8 mm)

WiFi IR Camera with Smart Motion Detection



- 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*

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	<table border="1"> <thead> <tr> <th>Lens</th> <th>Detect</th> <th>Observe</th> <th>Recognize</th> <th>Identify</th> </tr> </thead> <tbody> <tr> <td>2.8 mm</td> <td>68 m (223.10 ft)</td> <td>27.2 m (89.24 ft)</td> <td>13.6 m (44.62 ft)</td> <td>6.8 m (22.31 ft)</td> </tr> </tbody> </table>	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)
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Installation Angle

Range	Pan: 0° to 360° Tilt: 0° to 90° Rotation: 0° to 360°
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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 x 1440), 3MP (2304 x 1296), 1080p (1920 x 1080), 1.3M(1280 x 960), 720p (1280 x 720), VGA (640 x 480), CIF (352 x 240)				
Frame Rate	<table border="1"> <tr> <th>Main Stream</th> <td>2560 x 1440 at 20 fps</td> </tr> <tr> <th>Sub Stream</th> <td>640 x 480 at 20 fps</td> </tr> </table>	Main Stream	2560 x 1440 at 20 fps	Sub Stream	640 x 480 at 20 fps
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Sub Stream	640 x 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 Compatibility (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 x 70.0 mm x 128.6 mm (6.54 in. x 2.76 in. x 5.06 in.)
Net Weight	477.9 g (1.05 lb)
Gross Weight	696.5 g (1.54 lb)

Analytics+ Functions

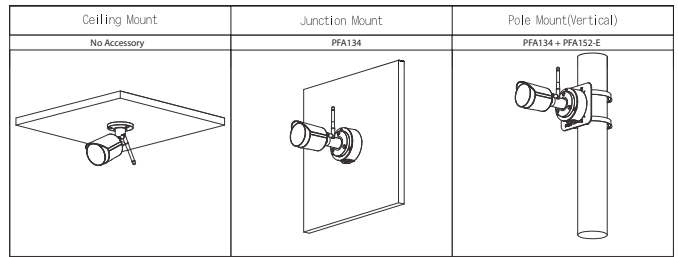
Smart Motion Detection ²	<ul style="list-style-type: none"> Differentiates between and classifies humans Filters false alarms due to leaves, lights, animals, and other inconsequential objects. Extracts humans from recorded video for quick target search and retrieval.
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Intelligent Video System Functions

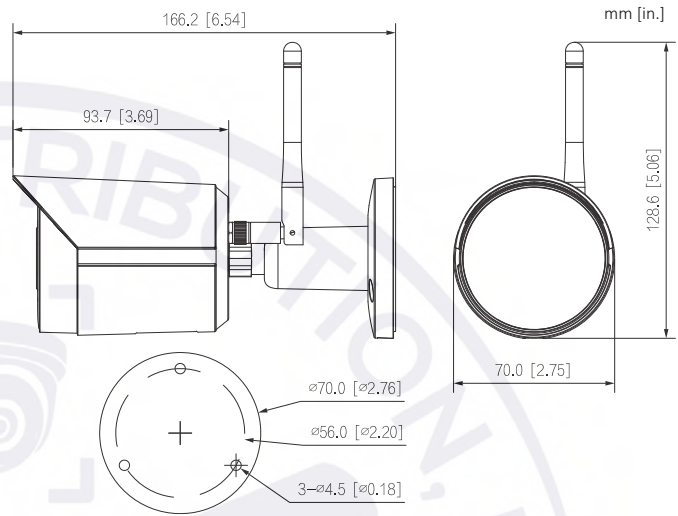
IVS triggers an alarm and takes a defined action for the following events:	
Standard Features	<ul style="list-style-type: none"> Tampering with the camera. Error writing to an onboard Micro SD card. Error sending or receiving data over the network. Unauthorized access to the camera.
Premium Features	
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



Dimensions



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

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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.