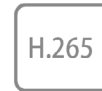# 4 MP WiFi Mini Bullet Network Camera

True Day/Night IR Camera

- 1/3-in. 4 MP Progressive-scan CMOS Sensor
- 2.4 GHz WiFi (IEEE802.11a/b/g/n/ac)
- Smart H.265+ and Smart H.264+ Dual Codec
- Dual-stream Encoding
- 4 MP at 20 fps
- 2.8 mm Fixed Lens
- True Day/Night (ICR)
- Maximum IR Distance 30 m (98 ft)
- IP67 Ingress Protection
- Five-year Warranty*

System Overview

The Dahua N41BD12-W camera 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 IR

With IR illumination, detailed images can be captured in low light or total darkness. The camera's Smart IR technology adjusts to the intensity of camera's infrared LEDs to compensate for the distance of an object. Smart IR technology prevents IR LEDs from whiting out images as they come closer to the camera. The camera's integrated infrared illumination provides high performance in extreme low-light environments up to 30 m (98 ft).

Image Flip

Capturing unnecessary data such as surrounding hallway walls can increase storage requirements without any added value. The image flip feature allows the camera's image to be rotated in 90° increments for better video optimization.

Protection

The camera allows for ±10% input voltage tolerance, suitable for the most unstable conditions for outdoor applications. Its 2KV lightning rating provides effective protection for both the camera and its structure against lightning, and its IP67 ingress protection make it the choice for installation in even the most unforgiving environments.

Environmental

The camera operate in extreme temperature environments, rated for use in temperatures from -10° C to +50° C (14° F to +122° F) with 95% humidity.

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

Technical Specification

Camera

Image Sensor	1/3-in. 4 MP Progressive-scan CMOS
Effective Pixels	2688 (H) x 1520 (V)
RAM/ROM	512 MB / 32 MB
Scanning System	Progressive
Electronic Shutter Speed	Auto, Manual; 1 s to 1/100,000 s
Minimum Illumination	Color: 0.53 lux at F2.0 (1 s, 30 IRE) 0 Lux at F2.0 (IR on)
S/N Ratio	More than 50 dB
IR Distance	Distance up to 30 m (98.04 ft)
IR On/Off Control	Auto, Manual
IR LEDs	18

Lens

Lens Type	Fixed
Mount Type	Board-in
Focal Length	2.8 mm
Maximum Aperture	F2.0
Angle of View	Horizontal: 106° Vertical: 56° Diagonal: 127°
Focus Control	Fixed

DORI[1] Distance	Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
	63 m (207 ft)	25 m (82 ft)	13 m (43 ft)	6 m (20 ft)

Installation Angle

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

Video

Compression		Smart H.265+, H.265, Smart H.264+, H.264, MJPEG
Streaming Capability		Two (2) Streams
Resolution		4 MP (2560 x 1440), 3 MP (2304 x 1296), 1080p (1920 x 1080), SXGA (1280 x 1024), 1.3 MP (1280 x 960), 720p (1280 x 720), VGA (640 x 480), QVGA (320 x 240)
Frame Rate	Main Stream	4 MP at 20 fps, 3 MP at 30 fps, 1080p at 30 fps, 1.3 MP at 30 fps, or 720p at 30 fps
	Sub Stream	VGA or QVGA at 30 fps
Bit Rate Control		CBR, VBR
Bit Rate		H.265: 9 K to 8448 Kbps
Day/Night		Auto (ICR), Color, B/W
BLC Mode		BLC, HLC, Digital WDR

White Balance	Auto, Natural, Street Lamp, Outdoor, Manual
Gain Control	Auto, Manual
Noise Reduction	3D DNR
Motion Detection	Off, On (4 Zones, Rectangular)
Region of Interest	Off, On (4 Zones)
Smart IR	Support
Digital Zoom	16x
Flip	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (4 Areas, Rectangular)

Network

Ethernet	RJ-45 (10/100 Base-T)
WiFi	2.4 GHz WiFi (IEEE802.11a/b/g/n/ac)
Protocol	HTTP, HTTPs, TCP, ARP, RTSP, RTP, UDP, SMTP, FTP, DHCP, DNS, DDNS, PPPOE, IPv4/v6, QoS, UPnP, NTP, Bonjour, 802.1x, Multicast, ICMP, IGMP
Interoperability	ONVIF, PSIA, CGI
Streaming Method	Unicast, Multicast
Maximum User Access	10 Users / 20 Users
Edge Storage	Network Attached Storage (NAS) Local PC for Instant Recording, Micro SD Card Slot, maximum 128 GB
Web Viewer	IE, Chrome, Firefox, Safari
Management Software	Smart PSS, DSS
Mobile Operating System	IOS, Android

Certifications

Safety	UL 60950
Electromagnetic Compatibility (EMC)	FCC CFR 47 Part 15 Subpart B 2AATL-8112MET

Electrical

Power Supply	12 VDC, 1 A
Power Consumption	< 6.5 W

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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	−10°C to +50°C (14° F to +122° F) Less than 95%RH
Storage Temperature	−10°C to +50°C (−14° F to +122° F) Less than 95%RH
Ingress Protection	IP67

Construction

Casing	Metal and Plastic
Dimensions	70.0 mm x 164.90 mm (2.76 in. x 6.49 in.)
Net Weight	0.38 kg (0.84 lb)
Gross Weight	0.45 kg (0.98 lb)

Ordering Information

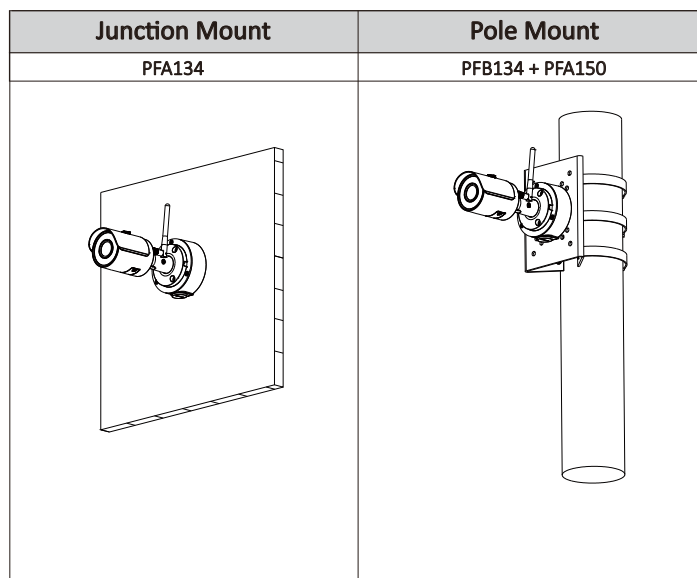| Type	Part Number	Description
4 MP Camera	N41BD12-W	4 MP WiFi IR Mini Bullet Network Camera, 2.8 mm
Accessories, optional	PFA134	Junction Box
	PFA150	Pole Mount
	PFA151	Corner Mount
	DH-PFM321D-US	12 VDC, 1 A Power Adapter

Accessories

Optional:

PFA134 Junction Box

PFA150 Pole Mount

PFA151 Corner Mount

DH-PFM321D-US Power Supply

Junction Mount	Pole Mount
PFA134	PFB134 + PFA150

Dimensions (mm/in.)

164.90 mm (6.49 in.)
92.0 mm (3.62 in.)
70.0 mm (2.76 in.)
71.0 mm (2.79 in.)
125.20 mm (4.93 in.)
ø70.0 mm (ø2.76 in.)
3 x ø4.50 mm (ø0.18 in.)