dahua
TECHNOLOGY

Four-channel Basic Night Color (VU-MORE Color) Video Doorbell Security System

Three (3) 4MP Eyeball Network Cameras, One (1) WiFi Video Doorbell, One (1) 4-channel 4K NVR

VU-MORE

Wiz Sense

4MP Network Cameras

- 1/3-in. 4MP Progressive-scan CMOS Sensor
- 4MP at 20 fps Maximum Resolution, 2.8 mm Fixed Lens
- Analytics+ Function: Perimeter Protection, Smart Motion Detection+
- Smart Dual Illumination — IR and White Light
- Basic Night Color Technology for Extreme Low-light Conditions

5MP WiFi Video Doorbell

- 1/2.7-in. 5MP Progressive-scan CMOS Sensor
- Dual-band WiFi, IEEE802.11a/b/g/n/ac, 2.4 GHz and 5 GHz options
- H.265 and H.264 Dual Video Compression
- 2560 x 1920 at 15 fps Maximum Resolution

4K Network Video Recorder

- 2 TB Pre-installed Hard Disk Drive
- Supports Remote Configuration and Management of Network Cameras
- Smart H.265+ and Smart H.264+ Dual Codec
- Maximum 80 Mbps Recording Bandwidth

System Overview

The Dahua Video Doorbell Network Security System provides all the components to quickly install, configure, and employ a complete video security solution. The WiFi video doorbell offers 5MP video and two-way communication, the IP cameras offer the clarity of 4MP video, and the NVR offers built-in motion detection algorithms, alarm triggers, and customized recording modes. The doorbell and network cameras connect easily to the NVR for total system recording. In addition, the Video Doorbell and the NVR are compatible with the Dahua DMSS mobile application to view live video, configure and acknowledge alarms, and share video with authorized users.

Functions

Basic Night Color (VU-MORE Color) Technology

Dahua's Basic Night Color (VU-MORE Color) cameras offer multiple features such as motion detection and Smart Dual Illumination to provide deterrence, overtness, and full-color video in low-light scenes. These cameras are designed to reduce light pollution by only turning on the white-light LEDs for full color images when human motion is detected.

Smart Dual Illumination

The camera offers both IR and white-light illuminators and intelligently employs each depending on the situation. The camera enters the IR mode as ambient light decreases. When the camera detects an object entering the monitoring area, it activates the white-light illuminator to capture full-color details. Once the object leaves the area, the camera switches back to IR illumination.

WiFi Doorbell

The 5MP WiFi Video Doorbell is a component of the Dahua LincX2PRO residential series. The doorbell offers specialized motion detection that distinguishes humans from other objects, and transmits video and audio to a mobile device for remote visual confirmation and communication with visitors.

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.

Smart Motion Detection+

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 or vehicle motion, while filtering out other motion due to trees, leaves, animals, weather, and triggers an alarm when detected.

Flexible Recording

The NVR offers a variety of configurable recording options and schedules that saves disk space and active monitoring time. The NVR monitors incoming video and can be programmed to record if motion is detected or if an alarm is triggered. The NVR can also be programmed to record on a schedule or at different intervals. The recording options and schedules can be set for each individual camera or copied to all cameras.

Smart H.265+ and Smart H.264+

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.

Delivering high quality video without straining the network, Smart H.264+ is the optimized implementation of H.264. The Smart H.264+ encoding platform includes a scene adaptive encoding strategy, dynamic GOP, dynamic ROI, flexible multi-frame reference structure and intelligent noise reduction, providing a savings of up to 70% of bandwidth and storage when compared with standard H.264.

Environmental

With a temperature range of −40° C to +60° C (−40° F to +140° F), the cameras are designed for extreme temperature environments. The cameras, subjected to rigorous dust and water immersion tests, are certified to the IP67 rating making them suitable for demanding outdoor applications.

The NVR features an operating temperature of -10° C to +55° C (+14° F to +131° F).

Kit | N444B42C-CAN

Technical Specification

N42DJS2 4MP VU-MORE Color Eyeball Network Camera

Camera

Image Sensor	1/3-in. CMOS
Effective Pixels	2688 (H) × 1520 (V), 4MP
Scanning System	Progressive
RAM/ROM	128 MB/128 MB
Electronic Shutter Speed	Auto, Manual, 1/3 s to 1/100,000 s
Minimum Illumination	0.008 lux at F1.6 (Color, 30 IRE) 0.0008 lux at F1.6 (B/W, 30 IRE) 0 lux (Illuminator on)
S/N Ratio	> 56 dB
IR Distance	30 m (98.43 ft) (IR), 15 m (49.21 ft) (Warm light)
IR On/Off Control	Auto, Manual
Illuminators	One (1) IR LED, One (1) Warm Light

Lens

Lens Type	Fixed-focal	
Iris Type	Fixed	
Mount Type	M12	
Focal Length	2.8 mm	
Maximum Aperture	F1.6	
Angle of View	Horizontal	95°
	Vertical	52°
	Diagonal	114°
Close Focus Distance	0.9 m (2.95 ft)	

DORI[1] Distance	Detect	Observe	Recognize	Identify
	63.6 m (208.66 ft)	25.4 m (83.33 ft)	12.7 m (41.67 ft)	6.4 m (20.99 ft)

Pan / Tilt / Rotation

Pan/Tilt/Rotation	Pan: 0° to 360° Tilt: 0° to 78° Rotation: 0° to 360°

Video

Compression	Smart H.265+, Smart H.264+, H.264H, H.265, H.264, H.264B, MJPEG (Only supported by the sub stream)
Streaming Capability	Two (2) Streams
Resolution	4MP (2688 × 1520), 3.6MP (2560 × 1440), 3MP (2304 × 1296), 1080p (1920 × 1080), 1.3MP (1280 ×960), 720p (1280 × 720), D1 (704 × 480), VGA (640 × 480), CIF (352 × 240)

Frame Rate	Main Stream	2688 × 1520 at 20 fps
	Sub Stream	704 × 480 at 20 fps

Bit Rate	H.264: 32 kbps to 6144 kbps H.265: 12 kbps to 6144 kbps
Bit Rate Control	CBR, VBR
Day/Night	Auto (ICR); Manual
BLC Mode	BLC , HLC, WDR (120 dB)
White Balance	Auto, Natural, Street Lamp, Outdoor, Manual, Regional,Custom
Gain Control	Auto, Gain Priority, Shutter Priority, Manual
Noise Reduction	3DNR
Motion Detection	Off, On (4 Zones, Rectangle)
Region of Interest	Off, On (4 Zones)
Smart IR	Supported
Image Rotation	0°, 90°, 180°, 270°
Mirror	Off, On
Privacy Masking	Off, On (4 Areas, Rectangle)

Audio

Built-in Microphone	Yes
Audio Compression	G.711a, G.711Mu, PCM, G.726

Network

Ethernet	RJ-45 (10/100 Base-T)
Protocol	IPv4, IPv6, HTTP, TCP, UDP, ARP, RTP, RTSP, RTCP, RTMP, SMTP, FTP, SFTP, DHCP, DNS, DDNS, NTP, Multcast, ICMP, IGMP
Interoperability	ONVIF (Profile S, Profile T), CGI, P2P, Milestone, SDK, API
Maximum User Access	6 (Total bandwidth: 36 M)
Edge Storage	FTP, SFTP, Micro SD Card Slot (Maximum 256 GB)
Web Viewer	Microsoft Edge, Chrome, Firefox
Management Software	DSS, DMSS
Mobile Operating System	iOS, Android
Cyber Security	Configuraton Encrypton, Trusted Executon, Digest, Security Logs, WSSE, Account Lockout, Syslog, Video Encrypton, 802.1x, IP/MAC Filtering, HTTPS, Trusted Upgrade, Trusted Boot, Firmware Encrypton, Generating and Importing X.509 Certifcaton

Certifications

Safety	EN 62368-1
Electromagnetic Compatibility (EMC)	FCC CFR 47 Part 15 Subpart B Electromagnetic Compatibility Directive 2014/30/EU

Electrical

Power Supply	12 VDC or PoE (802.3af)
Power Consumption	Basic: 1.9 W (12 VDC), 2.4 W (PoE); Maximum: 5.2 W (12 VDC), 5.9 W (PoE) (H.265 + Intelligence + WDR + Warm Light)

Environmental

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

Construction

Casing	Metal
Dimensions	100.9 mm × 109.9 mm (3.97 in. × 4.33 in.)
Net Weight	0.37 kg (0.82 lb)
Gross Weight	0.51 kg (1.12 lb)

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.
Intelligent Search	Works with a Smart NVR to perform and refine intelligent searches, event extraction and merging to event videos.
Smart Motion Detection+[2]	• Differentiates between and classifies human and vehicle objects. • Filters false alarms due to leaves, lights, animals, and other inconsequential objects. • Extracts human or vehicle objects 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. • IP Address Conflict

Technical Specification

N41C1P2 Four-channel 4K Network Video Recorder (2 TB)

System

Main Processor	Industrial-grade Embedded Processor
Operating System	Embedded Linux

Audio and Video

IP Camera Input	Four (4) Channels
Audio	Input: One (1) Channel, RCA Output: One (1) Channel, RCA

Analytics+ Recording[4]

Perimeter Protection	Channels	Four (4)
	Search	By Channel, Time, and Event Type
Smart Motion Detection+	Channels	Four (4)
	Search	By Target Classification (Human or Vehicle)

Display

Interface	One (1) HDMI, One (1) VGA
Native Output Resolution	3840 x 2160, 1920 x 1080, 1280 x 1024, 1280 x 720
Maximum Decoding	Two (2) Channel of 8MP at 30 fps Four (4) Channels of 4MP at 30 fps
Multi-screen Display	1/4
On-screen Display	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, Recording

Recording

Video Compression	Smart H.265+, H.265, Smart H.264+, H.264, MJPEG
Audio Compression	PCM, G.711A, G.711Mu, G.726
Supported IP Camera Resolution	8MP, 6MP, 5MP, 4MP, 3MP, 1080p, 720p, D1
Maximum Recording Bandwidth	80 Mbps
Record Mode	Manual Recording; Alarm Recording; SMD Recording; Smart Recording

Video Detection and Alarm

General Alarms	Motion Detection, Privacy Masking, Video Loss, Scene Changing, PIR Alarm, IPC External Alarm
Anomaly Alarms	Camera Disconnection, Storage Error, Disk Full, IP Conflict, MAC Conflict, Login Locked, Cybersecurity Exception
Analytics+ Alarms	Face Detection, Perimeter Protection (Intrusion and Tripwire), IVS, People Counting, Heat Map, SMD Alarms
Alarm Actions	Recording, Snapshot, Audio, Buzzer, Log, Preset, Email

Playback and Backup

Sync Playback	1/4
Search Mode	Time/Date, Alarm, MD and Exact Search (Accurate to One (1) Second), Smart Search
Playback Function	Play, Pause, Stop, Rewind, Fast Play, Slow Play, Reverse, By Frame, Full Screen, Backup Selection (Video Clip or File), Partial Zoom, Audio On/Off
Backup Mode	USB Device, Network

Third-party Support

Third-party Support	Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and Others

Network

Ethernet	One (1) RJ-45 Port (10/100/1000 Mbps), self-adaptive
PoE	Four (4) Ports (IEEE802.3af/at)
Network Function	HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, SNMP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, DDNS, FTP, Alarm Server, IP Search (Support Dahua IP Camera, DVR, NVS), P2P, Auto-register
Maximum User Access	128
Mobile Operating System	iOS, Android

Browser	Chrome, Edge
Interoperability	ONVIF (Profiles S, T, G), CGI, SDK

Network

Internal HDD	One (1) SATA III Port, Up to 10 TB capacity per HDD
HDD Mode	Single

Interface

USB	Two (2) USB 2.0 Ports (Rear Panel)

Electrical

Power Supply	48 VDC, 1.25 A
Power Consumption	< 10 W, without HDD
Total PoE Budget	25.5 W single port, 36 W total

Environmental

Operating Conditions	−10° C to 55° C (14° F to 131° F), 10% to 93% RH
Storage Conditions	0° C to 40° C (32° F to 104° F), 30% to 85% RH

Construction

Dimensions (W x L x H)	204.60 mm x 206.40 mm x 45.60 mm (8.06 in. x 8.12 in. x 1.80 in.)
Net Weight	0.50 kg (1.10 lb), without HDD
Gross Weight	1.43 kg (3.15 lb), without HDD

Certifications

Safety	EN 62368-1 UL 62368-1 CAN/CSA C22.2 No.62368-1-14
Electromagnetic Compatability (EMC)	CFR 47 FCC Part 15 Subpart B EN55032, EN55024, EN55035, EN61000-3-2, EN61000-3-3, EN50130-4

Technical Specification

DH-DB6I-CAN 5MP WiFi Video Doorbell

Camera

Image Sensor	1/2.7-in. 5MP CMOS
Effective Pixels	2560 x 1920
RAM/ROM	256 MB / 128 MB
Electronic Shutter Speed	Auto/Manual 1/3 s to 1/100,000 s
Scanning System	Progressive
IR Distance	5.0 m (16.50 ft)
IR Control	Automatic
IR Illuminator	Two (2) LEDs
White-light Illuminator	Built-in, programmable
Built-in Battery	200 mAh Lithium Battery

Lens

Lens Type		Fixed-focal
Lens Mount		M8
Focal Length		2.2 mm
Maximum Aperture		F2.0
Angle of View	Horizontal	124°
	Vertical	92°
	Diagonal	164°
Iris Control		Fixed
Close Focus Distance		0.80 m (2.62 ft)

DORI Distances[1]

Detect (8 ppf)	Observe (19 ppf)	Recognize (38 ppf)	Identify (76 ppf)
44.0 m (144.36 ft)	17.60 m (57.74 ft)	8.80 m (28.87 ft)	4.40 m (14.44 ft)

Video

Video Compression		H.265, H.264
Resolution	High	2560 x 1920 at 15 fps
	Medium	1440 x 1080 at 15 fps
	Low	640 x 480 at 15 fps
Streaming Capability		Two (2) Streams
Frame Rate	Main Stream	2560 x 1920 at 15 fps
	Sub Stream	640 x 480 at 15 fps
Video Bit Rate		H.264: 32 kbps to 8192 kbps H.265: 32 kbps to 8192 kbps
Day/Night		Auto (ICR), Color, B/W
WDR		Digital WDR
Optical Features		White Balance, Smart Illumination
Noise Reduction		3D NR
Motion Detection		On, Off

Audio

Interface	Input	One (1) Built-in Microphone
	Output	One (1) Built-in Speaker
Two-way Talk		Three (3) built-in pre-recorded messages plus three (3) customized recorded messages
Compression		G.711A, G.711Mu, PCM
Audio Sampling		8 KHz, 16 KHz, 32 KHz

WiFi

2.4 GHz IEEE802.11b/g/n	• 2400 to 2483.5 MHz, RF POWER ≤30 dBm
5 GHz IEEE802.11a/n/ac	• 5250 to 5350 MHz, 5470 to 5600 MHz, 5650 to 5725 MHz RF POWER ≤24 dBm • 5725 to 5850 MHz RF POWER ≤30 dBm

Network

Network Protocol	IPv4; IPv6; HTTP;TCP; UDP; ARP; RTP; RTSP; RTCP; DHCP; DNS; DDNS; QoS; NTP; Multicast; ICMP; IGMP
Edge Storage	Micro SD Card Slot, maximum 256 GB
Interoperability	CGI, P2P, SDK, API
Mobile Operating System	IOS, Android
Management Software	DMSS
Compatibility	• Any Dahua NVR • Dahua X5, X7, X82 Series HDCVI DVRs • Dahua DMSS Mobile Application

Certifications

Electromagnetic Compatibility (EMC)	47 CFR FCC Part 15, Subpart B; FCC ID: FCC PART 15C; FCC PART 15E

Electrical

Power Supply[5]		12 VDC to 24 VDC or 16 VAC to 24 VAC, 0.8 A USB (5 VDC±5%, 2 A)[2]
Power Consumption	5 VDC	Basic: 2.3 W Maximum: 3.3 W
	12-24 VDC	Basic: 2.9 W Maximum: 4.8 W
	16-24 VAC	Basic: 2.9 W Maximum: 4.9 W

Environmental

Operating Temperature	−20° C to +50° C (−4° F to 122° F), Less than 95% RH
Ingress Protection	IP65

Construction

Casing	Plastic
Dimensions (L x W x H)	130.0 mm x 45.0 mm x 22.50 mm (5.12 in. x 1.77 in. x 0.88 in.)
Net Weight	0.11 kg (0.24 lb)
Gross Weight	0.51 kg (1.12 lb)
Installation	Surface-mount

Kit | N444B42C-CAN

Ordering Information

Type	Part Number	Description
Security System	N444B42C-CAN	• 3 x N42DJS2 4MP VU-MORE COLOR Fixed-focal Eyeball WizSense Network Camera • 1 x DH-DB6I-CAN 5MP WiFi Video Doorbell, 2.4 GHz and 5 GHz Wi-Fi connectivity, two-way talk, Available in Canada only • 1 x N41C1P2 4-channel 4K Network Video Recorder with 2 TB HDD (Smart 1U Casing, 4 PoE Ports)
Camera Accessories (Optional)	PFA106	Mount Adapter
	PFA130-E	Waterproof Junction Box
	PFA151	Corner Mount
	PFA152-E	Pole Mount
	PFB220C	Ceiling Mount
	PFB305W	Wall Mount
	DH-PFB205W-E	Wall Mount Bracket
	DH-PFA200G	Gang Box Adapter
	DH-PFM321D-US	12 VDC, 1 A Power Adapter
	DHI-TF-P100 Series	Micro SDXC Cards (64 GB, 128 GB, or 256 GB)
	DH-PFM920I-5EU-U	305 m (1000 ft) CAT5e UTP Cable
	DH-PFM900-E	Integrated Mount Tester

Package Contents

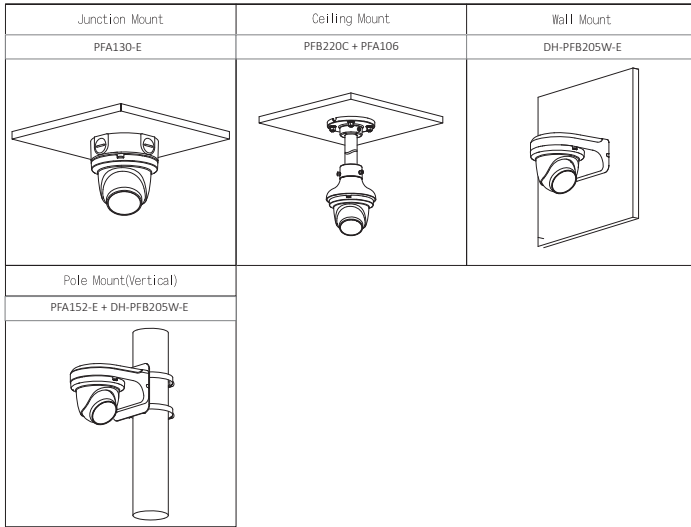| Type	Material
Network Cameras	• Printed Manual • Printed Regulatory Guide • Plastic Wall Anchors with Screws (x3) • Mounting Template • Waterproof Ethernet Connector
Doorbell	• Quick Start Guide (QSG) • Video Doorbell • Power Kit for Chime (referred to as a Chime Kit in QSG) • 32 GB Pre-installed MicroSD Card • Wiring Package • 15° Horizontal Bracket • 5° Vertical Bracket • Mounting Kit
4K NVR	• Quick Network Guide • Printed Manual • Printed Regulatory Guide • Mouse • Power Adapter with Power Cord • Ethernet Cable, RJ-45 • Rubber Feet (x4)

Camera Accessories

Optional:

PFA106
Mount Adapter

PFA130-E
Waterproof Junction Box

PFA151
Corner Mount

PFA152-E
Pole Mount

PFB220C
Ceiling Mount

PFB305W
Wall Mount

DH-PFB205W-E
Wall Mount Bracket

DH-PFA200G
Gang Box Adapter

DH-PFM321D-US
12 VDC, 1 A Power Adapter

DHI-TF-P100 Series
Micro SDXC Cards (64 GB, 128 GB, or 256 GB)

DH-PFM920I-5EU-U
305 m (1000 ft) CAT5e UTP Cable

DH-PFM900-E
Integrated Mount Tester

For all possible accessory combinations for this camera, please scan or click the QR code below to go to our accessory selector.
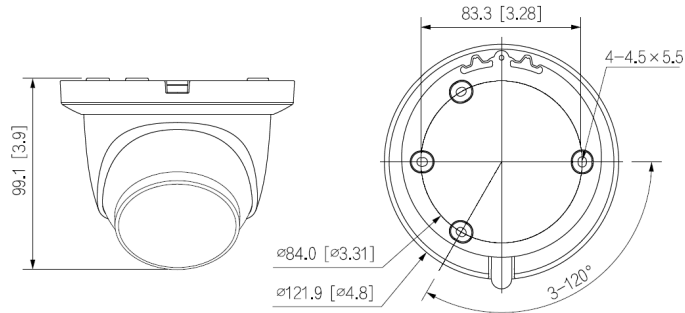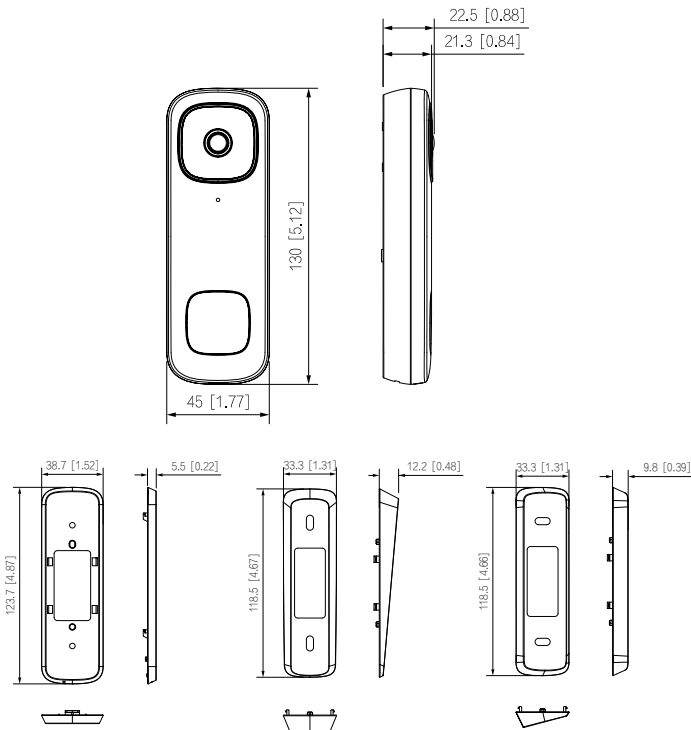
Camera Installation

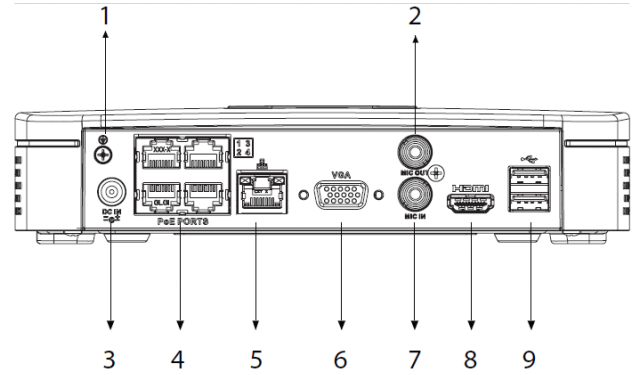| Junction Mount	Ceiling Mount	Wall Mount
PFA130-E	PFB220C + PFA106	DH-PFB205W-E

Pole Mount(Vertical)
PFA152-E + DH-PFB205W-E

Camera Dimensions

mm [in.]

99.1 [3.9]

83.3 [3.28]

4-4.5 × 5.5

⌀84.0 [⌀3.31]

⌀121.9 [⌀4.8]

3-120°

Doorbell Dimensions

mm [in.]

22.5 [0.88]
21.3 [0.84]

130 [5.12]

45 [1.77]

38.7 [1.52]   5.5 [0.22]   33.3 [1.31]   12.2 [0.48]   33.3 [1.31]   9.8 [0.39]

123.7 [4.87]   118.5 [4.67]   118.5 [4.66]

NVR Rear Panel

1	Ground	6	VGA Output
2	Audio Output, RCA (x1)	7	Audio Input, RCA (x1)
3	Power Input	8	HDMI Output
4	PoE Ports, RJ-45 (x4)	9	USB 2.0 Ports (x2)
5	Network Port, RJ-45		

NVR Dimensions

mm [in.]

204.60 mm
(8.10 in.)

45.60 mm
(1.80 in.)

204.60 mm
(8.10 in.)
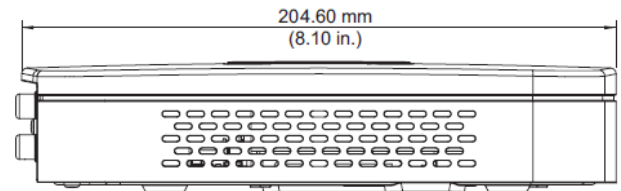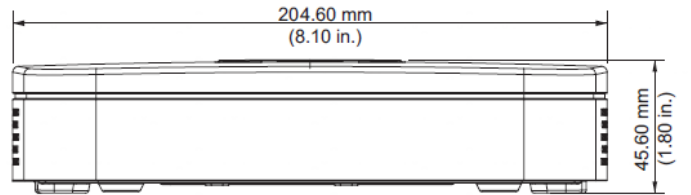
I am approving the version of the document as shown here for public release by signing below.

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
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.
3. Do not supply power to the DH-DB6I via the USB port. Use only the Power Input Ports, as detailed in the Quick Installation Guide, to supply power to the device.
4. The recorder's Analytics+ functions are available only when connected to a Dahua network camera with Analytics+ functionality.
5. Do not supply power to the DH-DB6I via the USB port. Use only the Power Input Ports, as detailed in the Quick Installation Guide, to supply power to the device.