



Wireless Panic Button(Single)

User's Manual



Foreword

General






This manual introduces the installation, functions and operations of the Wireless Panic Button (hereinafter referred to as the "Button"). Read carefully before using the device, and keep the manual safe for future reference.

Model

DHI-ARD821-W2 (868); DHI-ARD821-W2

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 TIPS	Provides methods to help you solve a problem or save time.
 NOTE	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V2.0.3	Optimized the checklist description.	December 2024
V2.0.2	Added precautions for battery use in the important safeguards and warnings.	August 2023
V2.0.1	Revised battery life.	June 2023
V2.0.0	Added battery replacing notes.	April 2022
V1.0.0	First release.	October 2021

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.
- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the button, hazard prevention, and prevention of property damage. Read carefully before using the button, and comply with the guidelines when using it.

Operation Requirements



- Make sure that the power supply of the device works properly before use.
- Do not pull out the power cable of the device while it is powered on.
- Only use the device within the rated power range.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Prevent liquids from splashing or dripping on the device. Make sure that there are no objects filled with liquid on top of the device to avoid liquids flowing into it.
- Do not disassemble the device.

Installation Requirements



WARNING

- Connect the device to the adapter before power on.
- Strictly abide by local electrical safety standards, and make sure that the voltage in the area is steady and conforms to the power requirements of the device.
- Do not connect the device to more than one power supply. Otherwise, the device might become damaged.



- Observe all safety procedures and wear required protective equipment provided for your use while working at heights.
- Do not expose the device to direct sunlight or heat sources.
- Do not install the device in humid, dusty or smoky places.
- Install the device in a well-ventilated place, and do not block the ventilator of the device.
- Use the power adapter or case power supply provided by the device manufacturer.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Note that the power supply requirements are subject to the device label.
- Connect class I electrical appliances to a power socket with protective earthing.

Table of Contents

Foreword.....	I
Important Safeguards and Warnings.....	III
1 Introduction.....	1
1.1 Overview.....	1
1.2 Technical Specifications.....	1
2 Checklist.....	3
3 Appearance.....	4
4 Adding the Button to the Hub.....	5
5 Installation.....	6
6 Configuration.....	7
6.1 Viewing Status.....	7
6.2 Configuring the Button.....	8
Appendix 1 Security Commitment and Recommendation.....	10

1 Introduction

1.1 Overview

Wireless panic button is a wireless button transmitter that sends a panic alarm signal to the hub of the alarm security system. By just the press of the button, alarm signals and events are sent to the monitoring company to ensure a prompt response, and to keep you up to date via the DMSS app. It is suitable for use with security in homes, banks and more. It is also easy to carry around.

1.2 Technical Specifications

This section contains technical specifications of the button. Please refer to the ones that correspond with your model.

Table 1-1 Technical specifications

Type	Parameter	Description	
Function	Indicator Light	1 for multiple statuses (pairing, communication, and more)	
	Button	1	
	Remote Update	Cloud update	
	Signal Strength Detection	Yes	
	Low Battery Detection	Yes	
	Battery Level Display	Displays battery level on app	
Wireless	Carrier Frequency	DHI-ARD821-W2 (868): 868.0 MHz–868.6 MHz	DHI-ARD821-W2: 433.1 MHz–434.6 MHz
	Communication Distance	DHI-ARD821-W2 (868): Up to 1,400 m (4,593.18 ft) in an open space	DHI-ARD821-W2: Up to 1,300 m (4,065.09 ft) in an open space
	Power Consumption	Limit 14 mW	
	Communication Mechanism	Two-way	
	Encryption Mode	AES128	
	Frequency Hopping	Yes	
General	Operating Temperature	−10 °C to +55 °C (+14 °F to +131 °F) (indoor)	
	Operating Humidity	10%–90% (RH)	
	Battery Life	3 years (if used twice a week)	
	Power Supply Mode	Battery (default), 3 VDC	
	Battery Model	1 × CR2032	
	Battery Voltage	3 VDC	

Type	Parameter	Description
	Min. Voltage	2.2 VDC
	Battery Low Threshold	2.6 VDC
	Consumption	<ul style="list-style-type: none"> • Quiescent current: 4.3 uA • Max. current: 60mA
	PS Type	Type C
	Product Dimensions	55 mm × 36 mm × 14.2 mm (2.17" × 1.42" × 0.56") (L × W × H)
	Packaging Dimensions	95 mm × 59.5 mm × 30.5 mm (3.74" × 2.34" × 1.20") (L × W × H)
	Installation	Wall mount; hand-held
	Net Weight	18 g (0.04 lb)
	Gross Weight	48 g (0.11 lb)
	Certifications	DHI-ARD821-W2 (868): <ul style="list-style-type: none"> • CE • EN 50131-1:2006+A1:2009+A2:2017+A3:2020 • EN 50131-3:2009 • EN 50131-6:2017 • EN 50131-5-3:2017 • Security Grade 2 • Environmental Class II
Casing	PC + ABS	
Technical	Operating Current	28 mA
	Test Mode	Yes

2 Checklist

Figure 2-1 Checklist

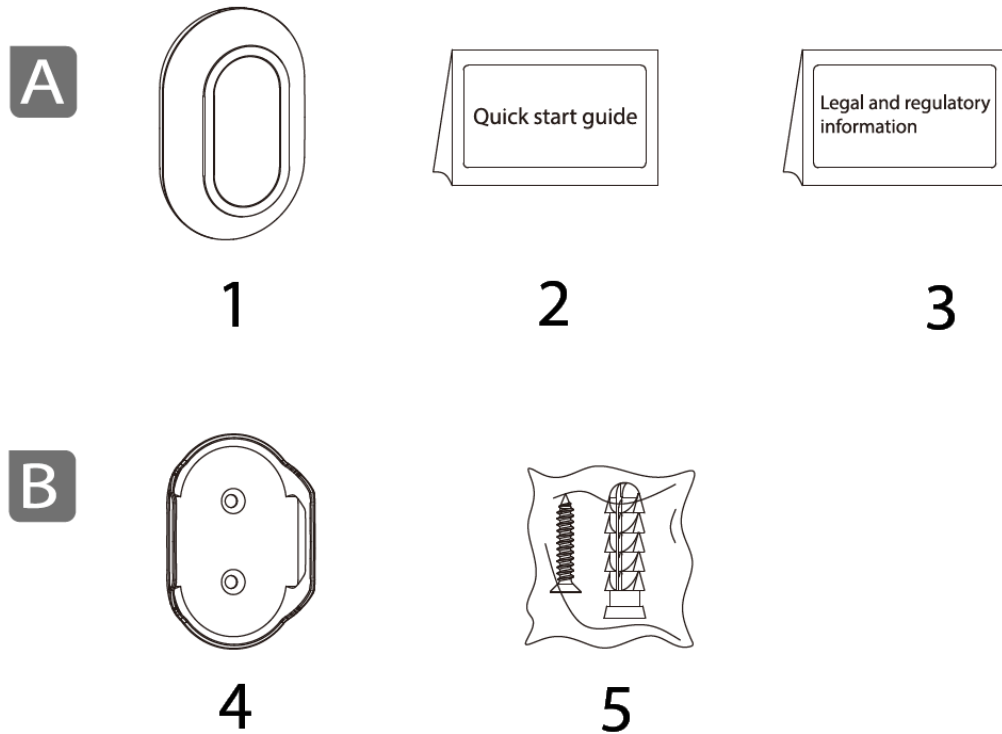


Table 2-1 Checklist

No.	Item Name	Quantity	No.	Item Name	Quantity
A: Standard			B: Optional		
1	Panic button	1	4	Bracket	1
2	Quick start guide	1	5	Screw package	1
3	Legal and regulatory information	1	—	—	—

3 Appearance

Figure 3-1 Appearance

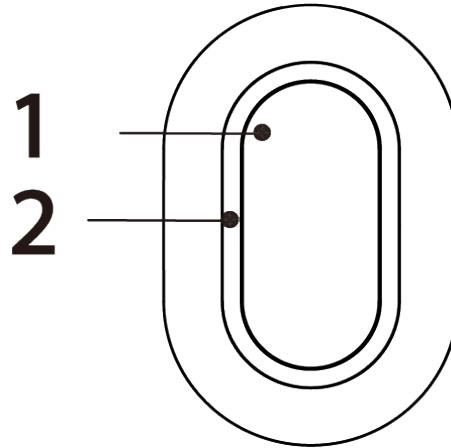



Table 3-1 Structure

No.	Name	Description
1	Button	<ul style="list-style-type: none"> ● Press and hold the button for 8 seconds, and then the system enters pairing mode. <ul style="list-style-type: none"> ◇ Flashes green quickly: Pairing. ◇ Solid green for 2 seconds: Pairing successful. ◇ Slowly flashes green for 3 seconds: Pairing failed. ● On the normal status, press the button once, and then the button sends alarm messages to the hub. <ul style="list-style-type: none"> ◇ Flashes green once: Sending messages to the hub. ◇ Flashes green for 0.5 seconds: Successfully sent messages to the hub. ◇ Flashes red for 0.5 seconds: Failed to send messages to the hub. ● In accidental press protection mode, press and hold the button for 2 seconds, or double-press it, and then alarm messages will be sent to the hub. <p>The indicator status in accidental press protection mode is the same as that of the normal status.</p>
2	Indicator	<p></p> <p>Make sure that you have enabled the accidental press protection function on the DMSS app.</p>

4 Adding the Button to the Hub

Before you connect it to the hub, install the DMSS app to your phone. This manual uses iOS as an example.

Prerequisites



- Make sure that the version of the DMSS app is 1.97 or later, and the hub is V1.001.0000000.7.R.220106 or later.
- Make sure that the hub has a stable internet connection.
- Make sure that the hub is disarmed.

Procedure

- Step 1 Go to the hub screen, and then tap **Peripheral** to add the button
- Step 2 Tap + to scan the QR code at the bottom of the button, and then tap **Next**.
- Step 3 Tap **Next** after the button has been found.
- Step 4 Follow the on-screen instructions and switch the button to on, and then tap **Next**.
- Step 5 Wait for the pairing.
- Step 6 Customize the name of the button, and select the area, and then tap **Completed**.

5 Installation

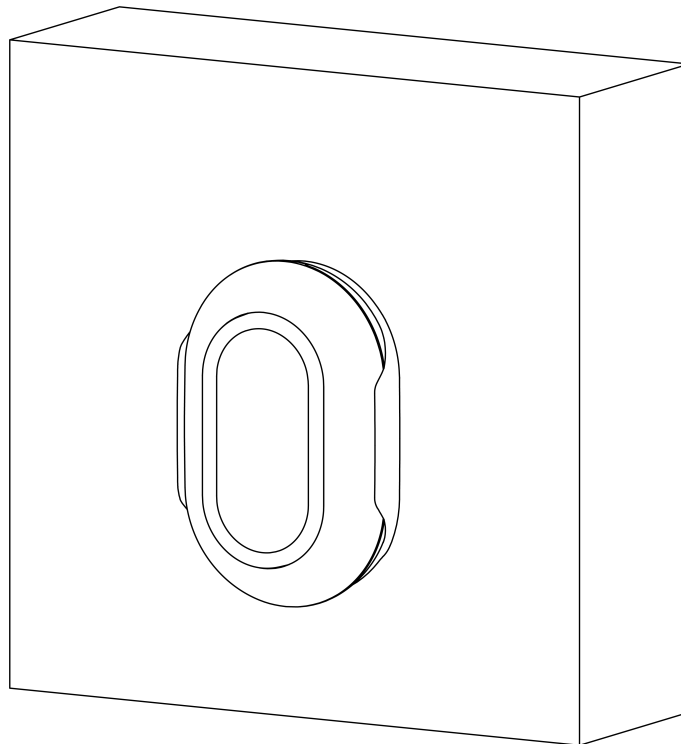
Prior to installation, add the button to the hub and check the signal strength of the installation location. We recommend installing the button in a place with a signal strength of at least 2 bars. The button supports wall mount and can be hand-held. This section uses wall mount as an example.

Background Information



You need to buy a bracket to install the button. Installation height should be less than 2 m.

Figure 5-1 Installation



Procedure

- Step 1 Drill 2 holes in the wall according to the hole positions of the bracket.
- Step 2 Put the expansion bolts into the holes.
- Step 3 Align the screw holes on the bracket with the expansion bolts, and then secure the bracket with screws.
- Step 4 Fix the button to the bracket.



- If the battery is dead, you need to replace the battery.
- Please manually use downward and outward force to open the shell at the buckle position to avoid using tools to open and cause damage to the shell.
- Before you insert the new battery, make sure to press the buttons first, or wait 30 seconds after you take out the old one.









6 Configuration

You can view and edit general information of the button.

6.1 Viewing Status

On the hub screen, select a button from the peripheral list, and then you can view the status of the button.

Table 6-1 Status

Parameter	Value
Permanent Deactivation	<p>The status for whether the permanent deactivation of the button is enabled or turned off.</p> <ul style="list-style-type: none">  : Yes. The permanent deactivation is enabled. Alarm information will not be sent to the alarm hub.  : Lid only. All information, except for tamper alarms will be sent to the alarm hub. No icon appears when the function is configured as No. No means the permanent deactivation is turned off. All information will be sent to the alarm hub.
Battery Level	<p>The battery level of the button.</p> <ul style="list-style-type: none">  : Fully charged.  : Sufficient.  : Moderate.  : Insufficient.  : Low.
Operation Mode	The working mode of the button.
LED Brightness	The brightness of LED lights.
Accidental Press Protection	The status for whether the accidental press protection function is enabled or disabled.
Transmit through Repeater	<p>The status of whether the button forwards peripheral messages to the hub through the repeater.</p>  <p>The function is only available when the version of the DMSS app is 1.96 or later, the hub is V1.001.0000000.6.R.211215 or later, and the button is V1.000.0000001.0.R.20211203 or later.</p>

Parameter	Value
Program Version	The program version of the button.

6.2 Configuring the Button




On the hub screen, select a button from the peripheral list, and then tap  to configure the parameters of the button.

Table 6-2 Button parameter description

Parameter	Description
Device Configuration	<ul style="list-style-type: none"> View device name, type, SN and device model. Edit device name, and then tap Save to save configuration.
Area	Select the area to which the button is assigned.
Permanent Deactivation	<p>The status for whether the permanent deactivation of the button are enabled or turned off.</p> <ul style="list-style-type: none"> Yes: The permanent deactivation is enabled. Alarm information will not be sent to the alarm hub. Lid only: All information, except for tamper alarms will be sent to the alarm hub. No icon appears when the function is configured as No. No means the permanent deactivation is turned off. All information will be sent to the alarm hub.
Siren Linkage	When an alarm is triggered, the peripherals will report the alarm events to the hub and alert with siren.
Alarm-video Linkage	When an alarm is triggered, the peripherals will report the alarm events to the hub and then will be linked with videos.
Video Channel	Select the video channel as needed.
Alarm Type	<p>Select an alarm event type, and then tap OK.</p> <ul style="list-style-type: none"> Intrusion: Intrusion alarm. Fire Alarm: Fire alarm. Medical Help: Medical alarm. Panic Button: Panic alarm. Set by default. Gas Alarm: Gas leak alarm. <p></p> <p>If you select an alarm type as Intrusion, the button will send intrusion event messages to the hub.</p>
LED Brightness	Configure the brightness of LED lights. You can select from Off , Low and High .

Parameter	Description
Accidental Press Protection	<p>Enable Accidental Press protection to avoid triggering unintended operations by accidentally pressing the button.</p> <ul style="list-style-type: none"> ● Off : Disable the accidental press protection function. ● Press and Hold : Select Press and Hold to enable the accidental press protection function. Once enabled, you have to press and hold the button to send alarm messages to the hub. ● Double-press : Select Double-press to enable the accidental press protection function. Once enabled, you have to double-press the button to send alarm messages to the hub.
Signal Strength Detection	Test the current signal strength.
Button Test	Detect whether the button works.
Cloud Update	Update online.
Delete	<p>Delete the button.</p>  <p>Go to the hub screen, select the peripheral from the list, and then swipe left to delete it.</p>

Appendix 1 Security Commitment and Recommendation

Dahua Vision Technology Co., Ltd. (hereinafter referred to as "Dahua") attaches great importance to cybersecurity and privacy protection, and continues to invest special funds to comprehensively improve the security awareness and capabilities of Dahua employees and provide adequate security for products. Dahua has established a professional security team to provide full life cycle security empowerment and control for product design, development, testing, production, delivery and maintenance. While adhering to the principle of minimizing data collection, minimizing services, prohibiting backdoor implantation, and removing unnecessary and insecure services (such as Telnet), Dahua products continue to introduce innovative security technologies, and strive to improve the product security assurance capabilities, providing global users with security alarm and 24/7 security incident response services to better protect users' security rights and interests. At the same time, Dahua encourages users, partners, suppliers, government agencies, industry organizations and independent researchers to report any potential risks or vulnerabilities discovered on Dahua devices to Dahua PSIRT, for specific reporting methods, please refer to the cyber security section of Dahua official website.

Product security requires not only the continuous attention and efforts of manufacturers in R&D, production, and delivery, but also the active participation of users that can help improve the environment and methods of product usage, so as to better ensure the security of products after they are put into use. For this reason, we recommend that users safely use the device, including but not limited to:

Account Management

1. Use complex passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters;
- Include at least two types of characters: upper and lower case letters, numbers and symbols;
- Do not contain the account name or the account name in reverse order;
- Do not use continuous characters, such as 123, abc, etc.;
- Do not use repeating characters, such as 111, aaa, etc.

2. Change passwords periodically

It is recommended to periodically change the device password to reduce the risk of being guessed or cracked.

3. Allocate accounts and permissions appropriately

Appropriately add users based on service and management requirements and assign minimum permission sets to users.

4. Enable account lockout function

The account lockout function is enabled by default. You are advised to keep it enabled to protect account security. After multiple failed password attempts, the corresponding account and source IP address will be locked.

5. Set and update password reset information in a timely manner

Dahua device supports password reset function. To reduce the risk of this function being used by threat actors, if there is any change in the information, please modify it in time. When setting security questions, it is recommended not to use easily guessed answers.

Service Configuration

1. **Enable HTTPS**

It is recommended that you enable HTTPS to access Web services through secure channels.

2. **Encrypted transmission of audio and video**

If your audio and video data contents are very important or sensitive, we recommend you to use encrypted transmission function in order to reduce the risk of your audio and video data being eavesdropped during transmission.

3. **Turn off non-essential services and use safe mode**

If not needed, it is recommended to turn off some services such as SSH, SNMP, SMTP, UPnP, AP hotspot etc., to reduce the attack surfaces.

If necessary, it is highly recommended to choose safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up complex passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up complex passwords.

4. **Change HTTP and other default service ports**

It is recommended that you change the default port of HTTP and other services to any port between 1024 and 65535 to reduce the risk of being guessed by threat actors.

Network Configuration

1. **Enable Allow list**

It is recommended that you turn on the allow list function, and only allow IP in the allow list to access the device. Therefore, please be sure to add your computer IP address and supporting device IP address to the allow list.

2. **MAC address binding**

It is recommended that you bind the IP address of the gateway to the MAC address on the device to reduce the risk of ARP spoofing.

3. **Build a secure network environment**

In order to better ensure the security of devices and reduce potential cyber risks, the following are recommended:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network;
- According to the actual network needs, partition the network: if there is no communication demand between the two subnets, it is recommended to use VLAN, gateway and other methods to partition the network to achieve network isolation;
- Establish 802.1x access authentication system to reduce the risk of illegal terminal access to the private network.

Security Auditing

1. **Check online users**

It is recommended to check online users regularly to identify illegal users.

2. **Check device log**

By viewing logs, you can learn about the IP addresses that attempt to log in to the device and key operations of the logged users.

3. **Configure network log**

Due to the limited storage capacity of devices, the stored log is limited. If you need to save the log for a long time, it is recommended to enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

Software Security

1. **Update firmware in time**

According to the industry standard operating specifications, the firmware of devices needs to be updated to the latest version in time in order to ensure that the device has the latest functions and security. If the device is connected to the public network, it is recommended to enable the online upgrade automatic detection function, so as to obtain the firmware update information released by the manufacturer in a timely manner.

2. **Update client software in time**

We recommend you to download and use the latest client software.

Physical Protection

It is recommended that you carry out physical protection for devices (especially storage devices), such as placing the device in a dedicated machine room and cabinet, and having access control and key management in place to prevent unauthorized personnel from damaging hardware and other peripheral equipment (e.g. USB flash disk, serial port).

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