

# Video Door Phone

User Manual

## Legal Information

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This user manual is intended for users of the models below:

Product	Model
Video Door Phone	DS-KIS203T
Door Station	DS-KB2421T-IM
Indoor Station	DS-KH2220

### About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website

[\(https://www.hikvision.com/\)](https://www.hikvision.com/).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

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## Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 <b>Danger</b>	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
 <b>Caution</b>	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 <b>Note</b>	Provides additional information to emphasize or supplement important points of the main text.

## Regulatory Information

### FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

#### FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, RE Directive 2014/53/EU, the RoHS Directive 2011/65/EU



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info)



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

### Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (B)/NMB-3(B) standards requirements.

1. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: this device may not cause interference, and
  2. this device must accept any interference, including interference that may cause undesired operation of the device.
- 
1. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes : l'appareil ne doit pas produire de brouillage, et
  2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

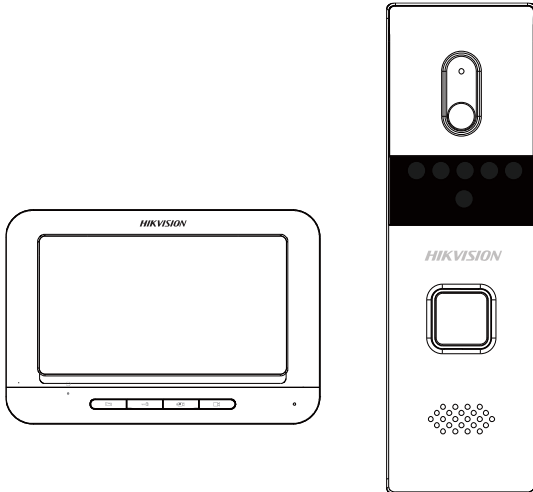
Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

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# Chapter 1 Introduction

## 1.1 Overview



The video door phone is composed of a four-wire indoor station and a four-wire door station. Featuring in the convenient installation and easy operation, it is mainly applied in the buildings for improving the living security.

## 1.2 Features

### Indoor Station Features

- Hands-free video intercom communication
- Supports three indoor stations simultaneously in the intercom system
- Supports monitoring the door station and the external analog camera
- Remote unlocking
- Convenient installation and easy operation

### Door Station Features

- Hands-free video intercom communication
- Supports two door stations simultaneously in the intercom system
- Self-adaptive IR supplement (with photoresistor)
- One-touch calling
- Pinhole camera with 1920 x 1080 @ 25 fps
- Unlock controlling
- Anti-oxidant aluminium alloy
- Convenient installation and easy operation



## Chapter 2 Appearance Description

### 2.1 Indoor Station

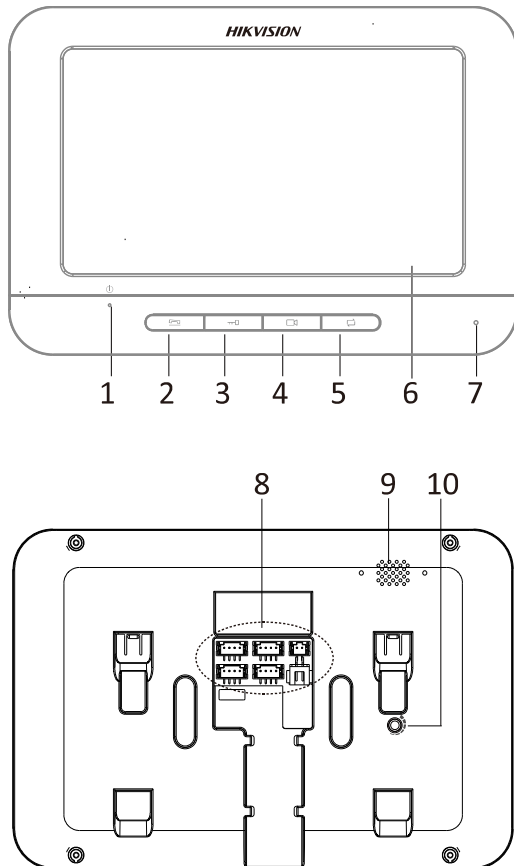
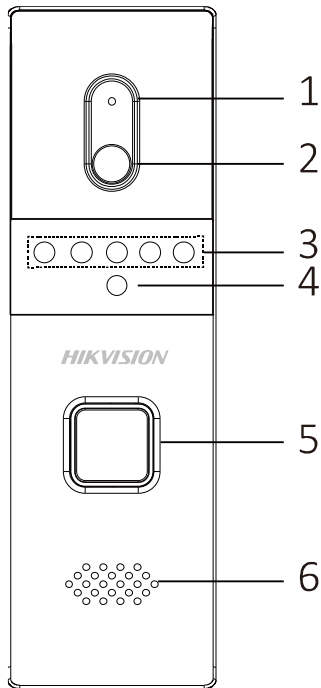


Table 2-1 Components Description

No.	Description
1	Power Supply Indicator
2	Call Accept/Decline Key
3	Unlock Key
4	Live View Key
5	Switch Key
6	LCD Screen
7	Microphone
8	Terminals and Interfaces
9	Loudspeaker
10	Volume Control Knob

Figure 2-1 Indoor Station Appearance

## 2.2 Door Station



**Table 2-2 Components Description**

No.	Description
1	Microphone
2	Built-in Camera
3	IR Supplement Lights
4	Photoresistor
5	Call Button
6	Loudspeaker

**Figure 2-2 Door Station Appearance**

## Chapter 3 Terminals and Wirings

### 3.1 Terminals and Interfaces

#### 3.1.1 Terminals of Indoor Station

On the rear panel of the indoor station, there are 4 groups of four-wire terminals for connecting indoor station or door station, 1 terminal for accessing the camera, and 1 terminal for power supply.

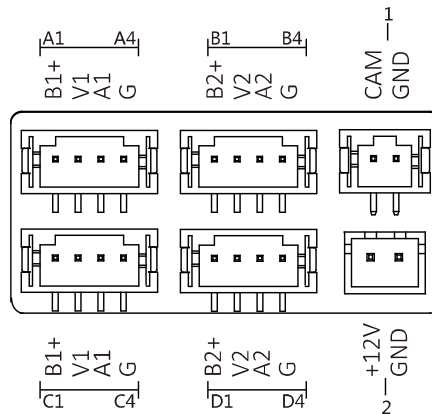


Figure 3-1 Terminals of Indoor Station

Table 3-1 Descriptions of Terminals (Indoor Station)

Name	No.	Interface	Description
Camera	1	CAM	Analog Camera Access
Power Supply	2	12 VDC	12 VDC Power Supply Input
Four-Wire Interface	A1/B1/C1/D1	B1+/B2+	Power Supply for Door Station
	A2/B2/C2/D2	V1/V2	Video Input
	A3/B3/C3/D3	A1/A2	Audio Input/Output
	A4/B4/C4/D4	G	Grounding Signal

#### 3.1.2 Terminals of Door Station

On the rear panel of the door station, there are 2 wire groups. 1 wire group is used to connect the indoor station, and another wire group is used to connect the lock.

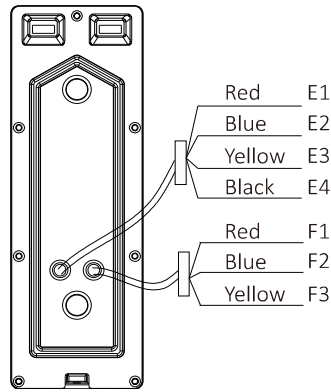


Figure 3-2 Wire of Door Station

Table 3-2 Descriptions of Terminals and Interfaces (Door Station)

Name	No.	Color	Interface	Description
Wire Group (Four-Wire)	E1	Red	5V	Power Supply (from Indoor Station)
	E2	Blue	CVBS	Video Output
	E3	Yellow	AUIDO	Audio Input/Output
	E4	Black	GND	Grounding Signal
Wire Group (Lock)	F1	Red	NO	Door Lock Relay Output/Normally Open
	F2	Blue	COM	Door Lock Relay Output/Common
	F3	Yellow	NC	Door Lock Relay Output/Normally Closed

### 3.2 Wiring Description

**Purpose:**

The four-wire indoor station and the four-wire door station are 2 basic but major components in a four-wire video intercom system. As for extended components, the analog camera and the electric bolt can be connected to the indoor station and the door station respectively in a four-wire video intercom system.

Up to 2 door stations are supported simultaneously in the intercom system.

Up to 3 indoor stations are supported simultaneously in the intercom system.

Here take 3 wirings as example.

**Note**

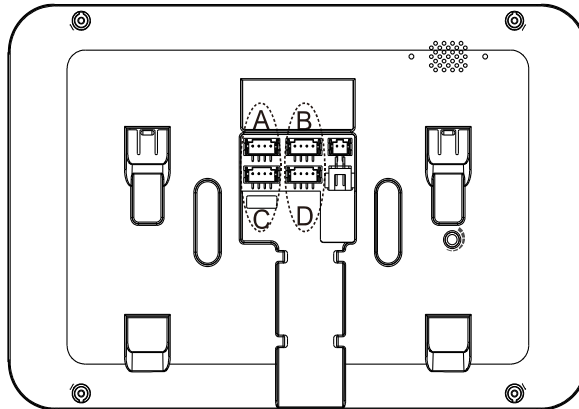
- According to different transmission distances among door stations and indoor stations, different RVV4 cable specifications are demanded.

Transmission Distance (TD)	RVV4 Cable Specification
TD ≤ 10 m	RVV4 * 0.2 mm ^2
10 m < TD ≤ 30 m	RVV4 * 0.5 mm ^2
30 m < TD ≤ 50 m	RVV4 * 0.75 mm ^2
50 m < TD ≤ 100 m	RVV4 * 1.5 mm ^2

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- On the rear panel of the indoor station, four-wire interface A and four-wire interface C compose a cascading group; and four-wire interface B and four-wire interface C compose a cascading group.



- The communication between A and B/D cannot be realized.
  - The communication between C and B/D cannot be realized.
- 

### Caution

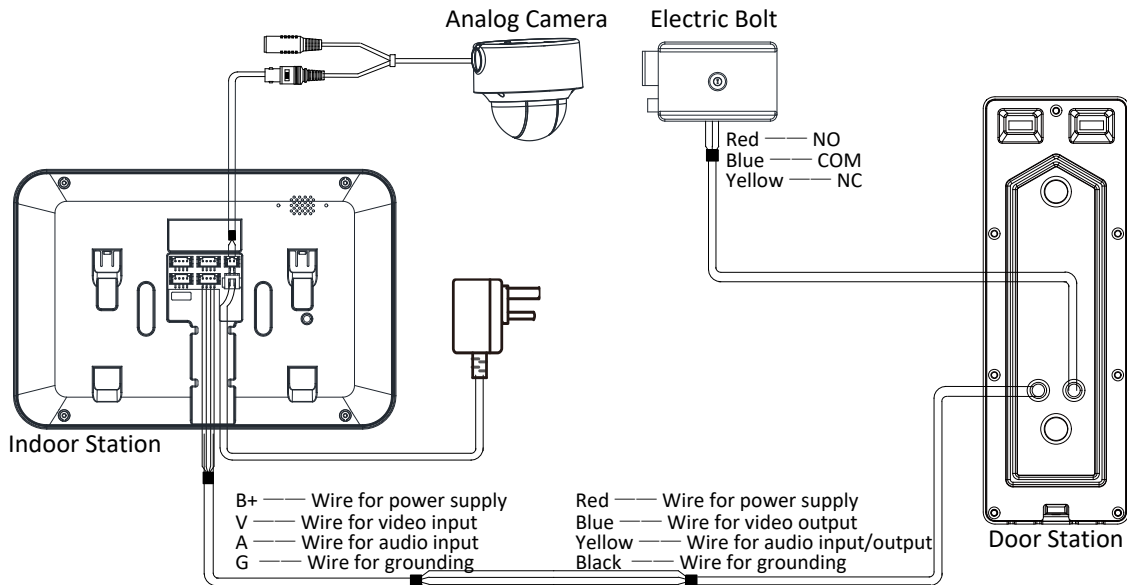
Do not connect the power wire of the four-core cable to the V pin (video wire) or A pin (audio wire) of the four-wire interface.

---

### 3.2.1 Wiring 1 (1 Door Station and 1 Indoor Station)

**Caution**

- Do not pull power cables on the rear panel of the door station hard to avoid the disconnection of power cables.
- Use the insulated tape to tape the bare wires, so as to avoid the short circuit.



**Figure 3-3 Wiring 1 (1 Door Station and 1 Indoor Station)**

### 3.2.2 Wiring 2 (1 Door Station and 3 Indoor Stations)

**Caution**

- Do not pull power cables on the rear panel of the door station hard to avoid the disconnection of power cables.
- Use the insulated tape to tape the bare wires, so as to avoid the short circuit.

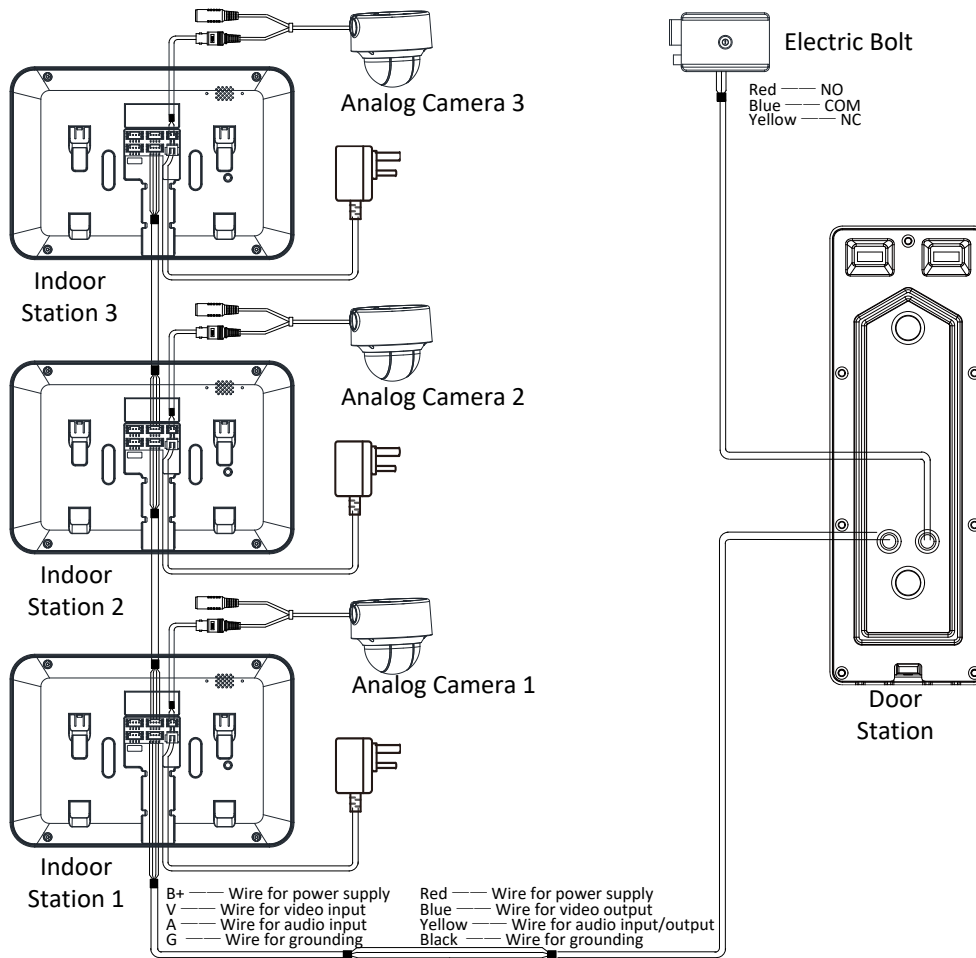
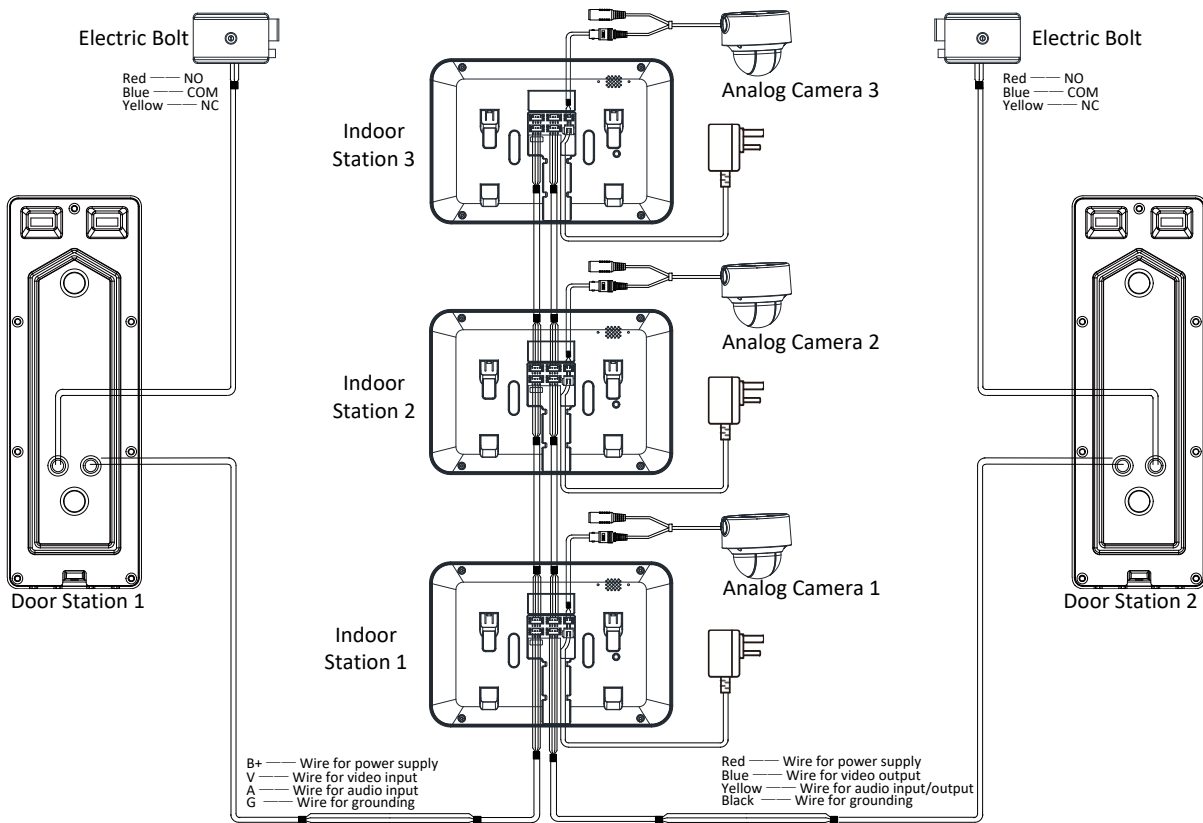


Figure 3-4 Wiring 2 (1 Door Station and 3 Indoor Stations)

### 3.2.3 Wiring 3 (2 Door Stations and 3 Indoor Stations)

**Caution**

- Do not pull power cables on the rear panel of the door station hard to avoid the disconnection of power cables.
- Use the insulated tape to tape the bare wires, so as to avoid the short circuit.



**Figure 3-5 Wiring 3 (2 Door Stations and 3 Indoor Stations)**



## Chapter 4 Installation

### Before you start:

- Make sure the device in the package is in good condition and all the assembly parts are included.
- The power supply the indoor station supports is 12 VDC. Please make sure your power supply matches your indoor station.
- Make sure all the related equipment is power-off during the installation.
- Check the specification of the product for the installation environment.

### 4.1 Indoor Station Installation

The indoor station supports the wall mounting, including the wall mounting with the junction box, and the wall mounting without the junction box.

For the wall mounting with junction box, the wall mounting plate and the junction box are required. And for the wall mounting without junction box, only the wall mounting plate is required.

(Optional) The dimension of the junction box is 75 mm (width) x 75 mm (length) x 50 mm (depth). The dimension of the wall mounting plate is shown below.

#### Wall Mounting Plate (Indoor Station)

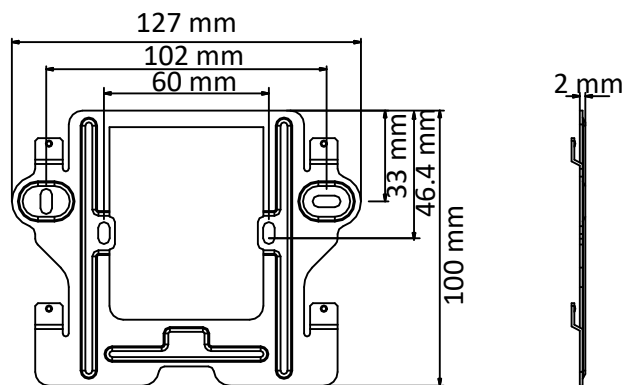


Figure 4-1 Wall Mounting Plate

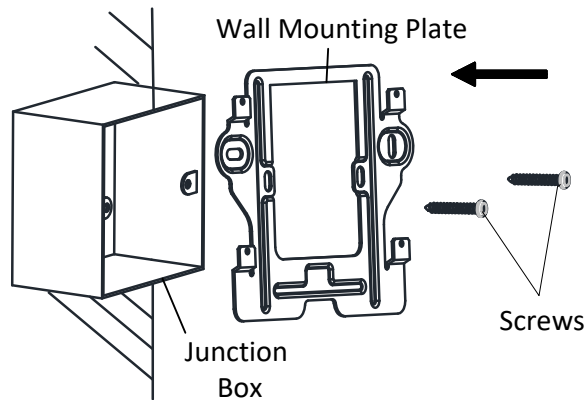
#### Wall Mounting (Indoor Station)

You can follow the following steps to install the indoor station. Here we take the wall mounting with the junction box as example.

#### Steps:

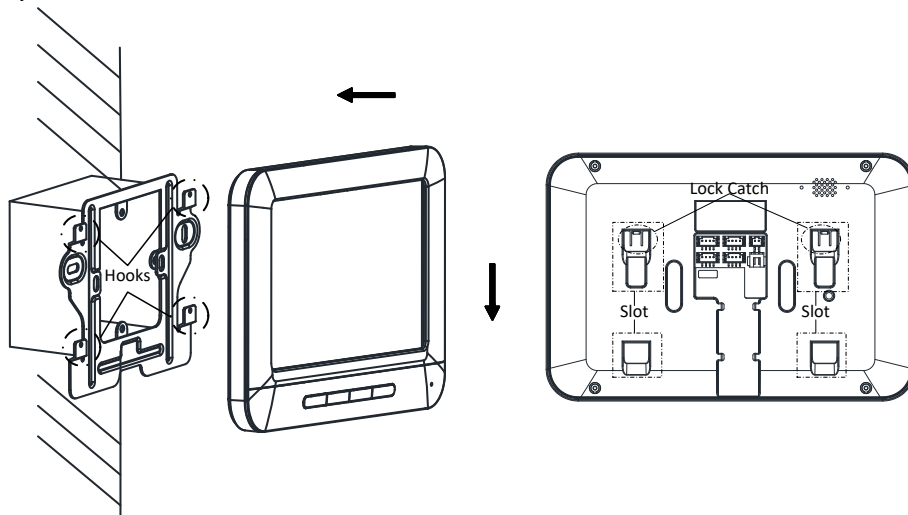
1. Insert the junction box to the hole chiseled on the wall.

2. Fix the wall mounting plate to the junction box with 2 screws.



**Figure 4-2 Installing the Plate**

3. Hook the indoor station to the wall mounting plate tightly by inserting the plate hooks into the slots on the rear panel of the indoor station, during which the lock catch will be locked automatically.



**Figure 4-3 Hooking the Indoor Station to the Plate**

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### Note

For the installation without the junction box, you should fix the wall mounting plate to the wall with 2 expansion screws first, and then hook the indoor station.

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## 4.2 Door Station Installation

### Accessories (Door Station)

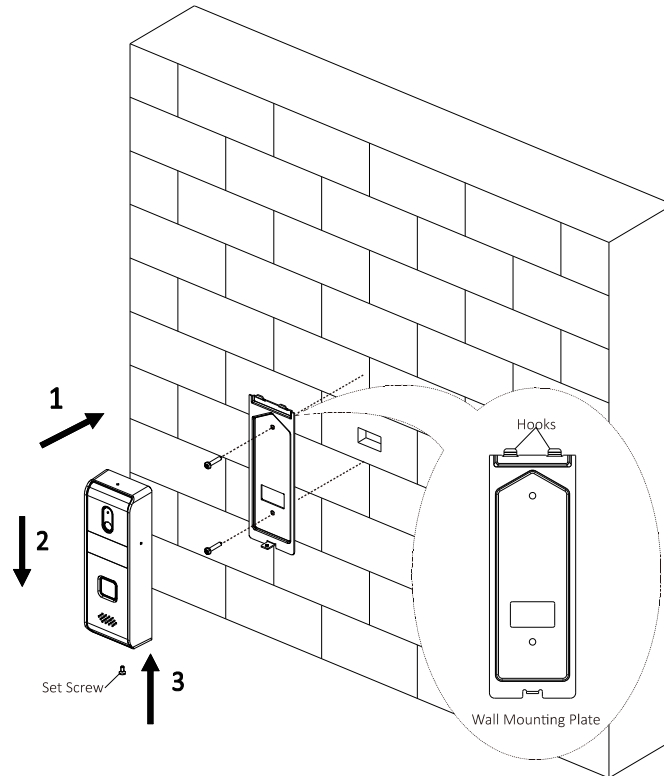
To install the door station, the wall mounting shield and the wall mounting plate are required.

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## Wall Mounting (Door Station)

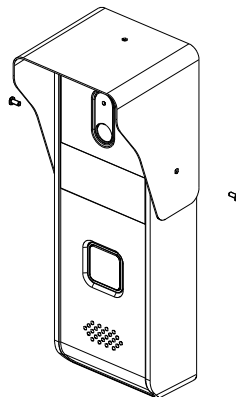
You can follow the following steps to install the door station.

### Steps:



**Figure 4-4 Install the Door Station**

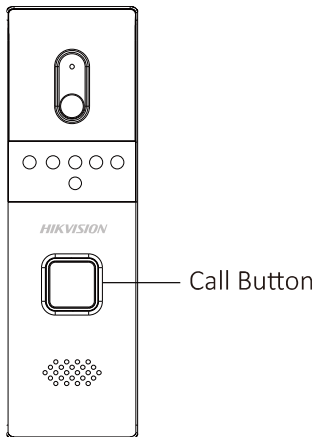
1. Fix the wall mounting plate to the wall with 2 screws.
2. Hook the door station to the shield tightly by inserting the hooks of shield panel into the slots on the rear panel of the door station.
3. Secure the door station with the mounting shield with the set screw.
4. Use 3 screws to secure the wall mounting shield with the door station.



**Figure 4-5 Secure Wall Mounting Shield**

## Chapter 5 Local Operation

### 5.1 Door Station Local Operation



**Steps:**

Press the call button to call the resident.

**Note**

When press the call button to call the resident, the maximum ring duration of the indoor station is 30s.

Figure 5-1 Call Button of Door Station

### 5.2 Indoor Station Local Operation

Table 5-1 Indoor Station Local Operation Description

Keys	Description	
	Accept or decline the incoming call.	
	Unlock the door.	
	Open or close the live view.	
	Switch the live view among the first door station, the second door station, and the analog camera.	
	Counterclockwise rotation	Increase the volume.
	Clockwise rotation	Decrease the volume.

**Note**

- The maximum live view duration is 60s; and the maximum speaking duration is 60s.
- During the ring duration, speaking duration, or live view duration, the resident can unlock the door. The unlocking status can maintain 5 seconds after pressing the Unlock key.
- To achieve the optimal pickup effect, the recommended distance range between the speaker and the microphone of the indoor station or the door station is 30 to 40 cm.

## A. Appendix

### Installation Notice

While installing the indoor station, make sure that the distance between any two devices is far enough to avoid the howling and echo. The distance between two devices is recommended to be longer than 10 meters.

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 **Note**

Here devices refer to indoor stations, and door stations.

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See Far, Go Further