# HIKVISION

# **Video Intercom Analog Bundle**

**User Manual** 

# **Legal Information**

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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 ( <a href="https://www.hikvision.com/">https://www.hikvision.com/</a>).

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

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#### **Data Protection**

During the use of device, personal data will be collected, stored and processed. To protect data, the development of Hikvision devices incorporates privacy by design principles. For example, for device with facial recognition features, biometrics data is stored in your device with encryption method; for fingerprint device, only fingerprint template will be saved, which is impossible to reconstruct a fingerprint image.

As data controller, you are advised to collect, store, process and transfer data in accordance with the applicable data protection laws and regulations, including without limitation, conducting security controls to safeguard personal data, such as, implementing reasonable administrative and physical security controls, conduct periodic reviews and assessments of the effectiveness of your security controls.

# **Symbol Conventions**

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

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

# **Safety Instruction**

# 🕂 Warning

- All the electronic operation should be strictly compliance with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.
- Please use the power adapter, which is provided by normal company. The power consumption cannot be less than the required value.
- Do not connect several devices to one power adapter as adapter overload may cause over-heat or fire hazard.
- Please make sure that the power has been disconnected before you wire, install or dismantle the device.
- When the product is installed on wall or ceiling, the device shall be firmly fixed.
- If smoke, odors or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

## Caution

- Do not drop the device or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid the equipment installation on vibrations surface or places subject to shock (ignorance can cause equipment damage).
- Do not place the device in extremely hot (refer to the specification of the device for the detailed operating temperature), cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- The device cover for indoor use shall be kept from rain and moisture.
- Exposing the equipment to direct sun light, low ventilation or heat source such as heater or radiator is forbidden (ignorance can cause fire danger).
- Do not aim the device at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.

- Please use the provided glove when open up the device cover, avoid direct contact
  with the device cover, because the acidic sweat of the fingers may erode the
  surface coating of the device cover.
- Please use a soft and dry cloth when clean inside and outside surfaces of the device cover, do not use alkaline detergents.
- Please keep all wrappers after unpack them for future use. In case of any failure
  occurred, you need to return the device to the factory with the original wrapper.
  Transportation without the original wrapper may result in damage on the device
  and lead to additional costs.
- Improper use or replacement of the battery may result in hazard of explosion.
   Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.
- Input voltage should meet both the SELV and the Limited Power Source according to 60950-1 standard.
- The power supply must conform to LPS. The recommended adaptor models and manufacturers are shown as below. Use the attached adapter, and do not change the adaptor randomly.

Model	Manufacturer	Standard
ADS-24S-12 1224GPCN	SHENZHEN HONOR ELECTRONIC CO.,LTD	CEE
G0549-240-050	SHENZHEN GOSPELL DIGITAL TECHNOLOGY CO.,LTD	CEE
TS-A018-120015Ec	SHENZHEN TRANSIN TECHNOLOGIES CO., LTD	CEE

# **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 dista

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



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

### **Industry Canada ICES-003 Compliance**

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

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- 1. this device may not cause interference, and
- this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1. l'appareil ne doit pas produire de brouillage, et
- 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.

# **Contents**

1 About this Maunal
2 Appearance Description
2.1 Appearance of Door Station
2.2 Appearance of Indoor Station
3 Terminal and Wiring Description
3.1 Terminal Description
3.2 Wiring Description
3.2.1 Door Lock Wiring
3.2.2 Door Contact Wiring
3.2.3 Exit Button Wiring
3.3 Typical Application
4 Installation
4.1 Door Station Installation
4.1.1 DIP Switch Settings
4.1.2 Accessory Introduction
4.1.3 Surface Mounting without Gang Box
4.1.4 Flush Mounting with Junction Box
4.1.5 Flush Mounting with Gang Box(Type I)
4.1.6 Flush Mounting with Gang Box(Type II)
4.2 Indoor Station Installation
4.2.1 Configure Ringtone
4.2.2 Wall Mounting

### Video Intercom Analog Bundle User Manual

5 Local Operation	24
A. Cables	26
B. Communication Matrix and Device Command	28

# 1 About this Maunal

Get the manual and related software from or the official website ( <a href="http://www.hikvision.com">http://www.hikvision.com</a> ).

Product	Model
Two-Wire Door Station	DS-KV1101-ME2
Two-Wire Indoor Station	DS-KH1200

# **2** Appearance Description

# 2.1 Appearance of Door Station

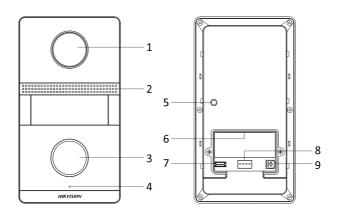


Figure 2-1 Appearance

Table 2-1 Description

No.	Description	No.	Description
1	Camera	6	Terminals
2	Loudspeaker	7	Debugging Port
3	Call Button	8	DIP Switch
4	Microphone	9	Screw for Volume Adjustment
5	TAMPER		

🔟 Note

The debugging port is used for debugging only.

# 2.2 Appearance of Indoor Station

### **Front Panel**

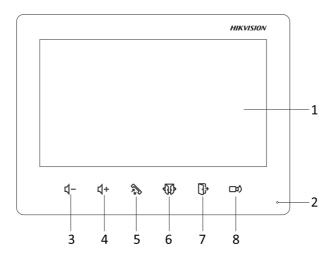


Figure 2-2 Front Panel

Table 2-2 Description

No.	Description	No.	Description
1	Screen	5	Receive/Decline
2	Microphone	6	Unlock Door 2
3	Volume-	7	Unlock Door 1
4	Volume+	8	View/Switch

#### **Rear Panel**

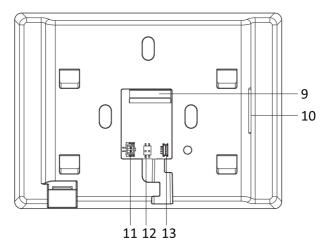


Figure 2-3 Rear Panel

**Table 2-3 Description** 

No.	Description	No.	Description
9	Terminals	12	DIP Switch
10	Loudspeaker	13	Debugging Port
11	Power Supply Terminal		

# 🔃 Note

- The appearance of the device varies according to different models. Refers to the actual device for detailed information.
- · The debugging port is used for debugging only.

# **3 Terminal and Wiring Description**

# 3.1 Terminal Description

#### **Terminal of Door Station**

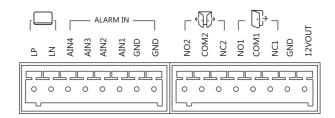


Figure 3-1 Terminal Description

**Table 3-1 Terminal of Door Station** 

Туре	Name	Description
Cascade	LP	For the access of Indoor Station
	LN	
ALARM IN	AIN1	For the access of Exit Button of Door 1.
	AIN2	For the access of Door Contact of Door 1.
	AIN3	For the access of Exit Button of Door 2.
	AIN4	For the access of Door Contact of Door 2.
	GND	Grounding
	GND	
Door Lock	NO1	For the access of Door Lock 1

Туре	Name	Description
	NC1	
	СОМ1	
	NO2	For the access of Door Lock 2
	NC2	
	СОМ2	
Power Output	12VOUT	12 VDC output
	GND	Grounding

# **Terminal of Indoor Station**

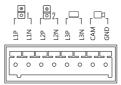


Figure 3-2 Terminal Description

**Table 3-2 Terminal of Indoor Station** 

Name	Description
L1P	For the access of Doorbell 1.
L1N	
L2P	For the access of Doorbell 2.
L2N	
L3P	For the access of Door Station (DS-KV1101-ME2)/
L3N	Indoor Station (DS-KH1200).

Name	Description	
	(i) Note	
	This terminal of the indoor station supports connecting to the main door station.	
	This terminal of the indoor station supports cascade connecting to other indoor stations.	
CAM	For the access of Camera	
GND		

# 3.2 Wiring Description

#### 3.2.1 Door Lock Wiring

Up to 2 door locks can be connected to the door station. You can unlock the door lock remotely via indoor station when you connected the door lock.

🔃 Note

Terminal NC/COM is set as default for accessing magnetic lock/electric bolt; terminal NO/COM is set as default for accessing electric strike.

# **Electric Strike Wiring**

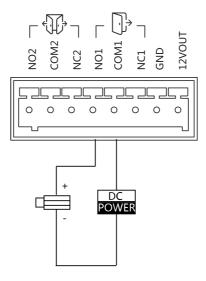


Figure 3-3 Electric Strike Wiring

## **Magnetic Lock Wiring**

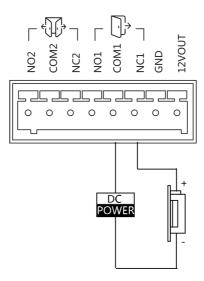


Figure 3-4 Magnetic Lock Wiring

#### 3.2.2 Door Contact Wiring

AIN2 and AIN4 are used to connect door contact. AIN2 is used to connect door contact of the door 1. AIN4 is used to connect door contact of the door 2.

Here takes door contact wiring with AIN2 for example.

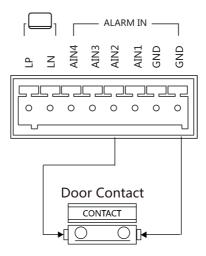


Figure 3-5 Door Contact Wiring

# 3.2.3 Exit Button Wiring

AIN1 and AIN3 are used to connect door contact. AIN1 is used to connect door contact of the door 1. AIN3 is used to connect door contact of the door 2.

Here takes door contact wiring with AIN1 for example.

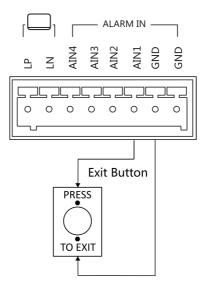


Figure 3-6 Exit Button Wiring

# 3.3 Typical Application

The typical application is shown as below.

Up to 2 door stations can be connected to the indoor station.

Support up to two-three hand in hand topology.

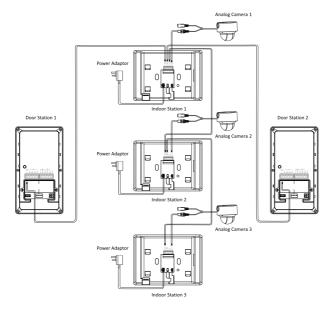


Figure 3-7 Typical Application

# 4 Installation

### 4.1 Door Station Installation

#### 4.1.1 DIP Switch Settings

DIP switch 1 is used to coding the room No. of door station. The No. should be unique.

DIP switch 2,3,4 are used to coding the unlock duration of the door station.



Figure 4-1 DIP Switch

The relationship between address of door station and DIP switches is shown as below.

Table 4-1 Door Station Address

DIP 1	Address
OFF	1
ON	2

The relationship between unlock duration and DIP switches is shown as below.

**Table 4-2 Unlock Duration** 

Unlock Durati on(s)	1	2	3	4	5	6	7	8
DIP2	OFF	ON	OFF	ON	OFF	ON	OFF	ON
DIP3	OFF	OFF	ON	ON	OFF	OFF	ON	ON
DIP4	OFF	OFF	OFF	OFF	ON	ON	ON	ON

#### 4.1.2 Accessory Introduction

The installation of door station needs accessories, including junction box, gang box (Type I & Type II), mounting plate and so on.

There are 2 size of the gang boxes adapted to the device.

- Size 1: 75 mm (width) × 75 mm (length) × 46 mm (depth).
- Size 2: 55 mm (width) × 101 mm (length) × 38.5 mm (depth).

### **Mounting Plate**

The dimension of mounting plate is 82.87 mm  $\times$  142 mm  $\times$  43.38 mm.

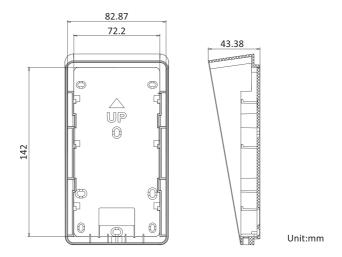


Figure 4-2 Mounting Plate

# **Junction Box**

The dimension of junction box is 86.7 mm  $\times$  159.91 mm  $\times$  53.59 mm.

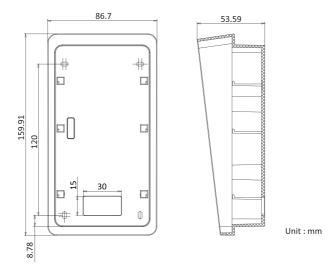


Figure 4-3 Junction Box

#### 4.1.3 Surface Mounting without Gang Box

Video intercom villa door station supports surface mounting.

#### Before You Start

- Make sure all related equipments are power-off during the installation.
- Accessories that you need to prepare for installation: Mounting plate and mounting template.
- Tools that you need to prepare for installation: Drill (\(\phi 2.846\)) and gradienter.
- Purchase the protective shield before installation.

#### Steps

- **1.** Stick the mounting template on the wall. Drill the screw holes according to the mounting template. Remove the mounting template from the wall.
- 2. Align and secure the mounting plate on the wall with 4 supplied screws according to the screw holes.
- **3.** Install the door station to the mounting plate. Fix the device on the mounting plate with the set screw.

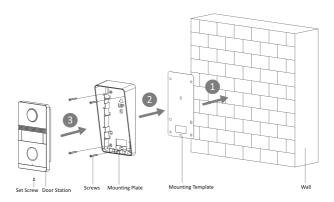


Figure 4-4 Surface Mounting without Gang Box

#### 4.1.4 Flush Mounting with Junction Box

The device supports flush mounting with junction box.

#### **Before You Start**

- Make sure all related equipments are power-off during the installation.
- Accessories that you need to prepare for installation: Junction box and mounting template.
- Tools that you need to prepare for installation: Drill (ø2.846) and gradienter.
- Purchase the protective shield before installation.

#### Steps

1. Cave the installation hole and pull the cable out.

🔃 Note

The dimension of the installation hole should be larger than the junction box.

- 2. Stick the mounting template into the installation hole.
- **3.** Insert the junction box into the hole and fix it with 4 screws according to the screw holes.
- **4.** Insert the door station into the junction box, and fix it with set screw.

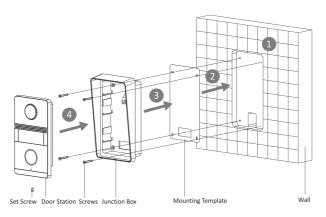


Figure 4-5 Flush Mounting with Junction Box

#### 4.1.5 Flush Mounting with Gang Box(Type I)

The device supports flush mounting with gang box.

#### **Before You Start**

- Make sure all related equipments are power-off during the installation.
- Accessories that you need to prepare for installation: Gang box and mounting plate.
- Tools that you need to prepare for installation: Drill (\( \phi 2.846 \)) and gradienter.
- Purchase the protective shield before installation.

#### Steps

1. Cave the installation hole in the wall.

i Note

The dimension of the installation hole should be larger than the gang box.

- 2. Insert the gang box to the hole chiseled on the wall.
- 3. Fix the mounting plate to the gang box with 2 screws.

🔃 Note

The dimension of the gang box is  $75mm(width) \times 75mm(length) \times 46mm(depth)$ , the left and right holes will be applies.

**4.** Secure the door station to the mounting plate with the set screw.

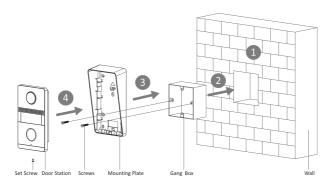


Figure 4-6 Flush Mounting with Gang Box (Type I)

#### 4.1.6 Flush Mounting with Gang Box(Type II)

The device supports flush mounting with gang box.

#### **Before You Start**

- Make sure all related equipments are power-off during the installation.
- Accessories that you need to prepare for installation: Gang box and mounting plate.
- Tools that you need to prepare for installation: Drill (ø2.846) and gradienter.
- Purchase the protective shield before installation.

#### Steps

1. Cave the installation hole in the wall.

i Note

The dimension of the installation hole should be larger than the gang box.

- 2. Insert the gang box to the hole chiseled on the wall.
- 3. Fix the mounting plate to the gang box with 2 screws.

🔃 Note

The dimension of the gang box is  $55mm(width) \times 101 mm(length) \times 38.5 mm(depth)$ , the upper and lower holes will be applies.

**4.** Secure the door station to the mounting plate with the set screw.

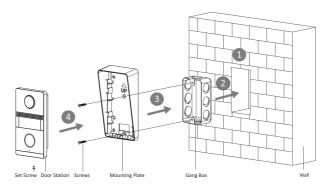


Figure 4-7 Flush Mounting with Gang Box (Type II)

# **4.2 Indoor Station Installation**

### 4.2.1 Configure Ringtone

DIP switch 1 and 2 are used to coding the ringtone of the indoor station.



Figure 4-8 DIP Switch

The relationship between the ringtone and DIP switches is shown as below.

**Table 4-3 Ringtone** 

Ringtone	DIP 1	DIP 2
Ringtone 1	OFF	OFF
Ringtone 2	ON	OFF
Ringtone 3	OFF	ON
Mute	ON	ON

#### 4.2.2 Wall Mounting

It supports wall mounting. There are two installation modes.

#### **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 48 VDC. Please make sure your power supply matches your indoor station.
- Make sure all related equipments are power-off during the installation.
- Check the product specification for the installation environment.

There are 2 size of the gang boxes adapted to the device.

- Size 1: 75 mm (width) × 75 mm (length) × 50 mm (depth).
- Size 2: 55 mm (width) × 101 mm (length) × 38.5 mm (depth).

The dimension of mounting plate is shown as below.

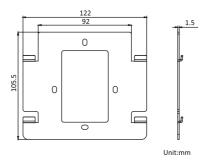


Figure 4-9 Mounting Plate

#### Steps

1. Cave a hole in the wall.



The suggested dimension fo the installation hole should be larger than the gang box.

- 2. Insert a gang box to the hole chiseled on the wall.
- 3. Fix the wall mounting plate to the gang box with 2 screws.

#### 🔃 Note

- If you install the device with a gang box (75 mm(width) × 75 mm(length) × 46 mm(depth)), the left and right holes will be applied.
- If you install the device with a gang box (55 mm(width) × 101 mm(length) × 48.5 mm(depth)), the upper and lower holes will be applied.
- 4. 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.

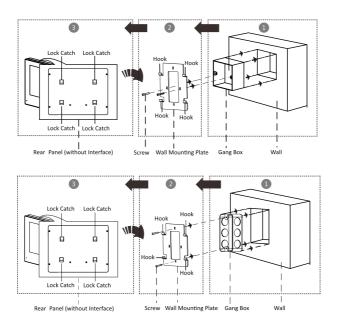


Figure 4-10 Wall Mounting

# **5 Local Operation**

#### Communication

You can call the resident by pressing the call button on the door station. Press the call button of the door station, all linked indoor station start ringing.

i Note

While one of linked indoor stations receive the call, the others will stop ringing.

When indoor station receive the call from door station, tap Receive/Decline button on the indoor station to accept the call and tap Receive/Decline button again to hang up the call.

#### Unlock

You can tap Unlock Door 1 button on the indoor station to unlock the door 1 when communicating with the door station or outer door station.

You can tap Unlock Door 2 button on the indoor station to unlock the door 2 when communicating with the door station or outer door station.

#### **Live View**

Tap View/Switch button on the indoor station to start live viewing the door station. And tap View/Switch button to exit.

🔃 Note

Indoor station only supports view the main door station.

### **Volume Adjustment**

Tap Volume+ button on the indoor station to turn up the volume of indoor station.

Tap Volume- button on the indoor station to turn down the volume of indoor station.

# A. Cables

#### **Cables and Wiring**

- When there are multiple cores in one parallel line, only one pair of closed cores are allowed to transmit signal. It is not allowed to use multiple pair of cores in one cable to transmit signal.
- When using parallel lines, it is suggested to use those with shielding layer.
  If dual core or multiple core parallel lines without shielding layer are
  routed, stability of signal transmission can be effected. You need to run a
  test before installation.
- Impedance of cable should not be over suggested value, or distributor cannot transmit enough power to indoor station or door station.
- Strong electricity and weak electricity cannot be wired in the same route, they need to be wired separately and the distance should be more than 0.5 meter.
- All the cables used need to follow the restriction in the following table.

Table A-1 Wiring Cables A

Routing Path	Twisted Pair				
24AWG (0.2 mm <sup>2</sup> )	20AWG (0.5 mm <sup>2</sup> )	18AWG (0.8 mm <sup>2</sup> )	16AWG (1 mm <sup>2</sup> )		
Door Station- Indoor Station	Transmission Distance ≤ 70 m	Transmission Distance ≤ 100 m	Transmission Distance ≤ 100 m	Transmission Distance ≤ 100 m	

Table A-2 Wiring Cables B

Routing Path	Parallel lines				
24AWG (0.2 mm <sup>2</sup> )	20AWG (0.5 mm <sup>2</sup> )	18AWG (0.8 mm <sup>2</sup> )	16AWG (1 mm <sup>2</sup> )		
Door Station- Indoor Station	Transmission Distance ≤ 50 m	Transmission Distance ≤ 100 m	Transmission Distance ≤ 100 m	Transmission Distance ≤ 100 m	

### **Device Installation**

- Installation environment (temperature, moisture etc.) need to follow requirements in specification or power output can be effected.
- Power consumption of modular door station (main module and sub modules) should be less than 12W. Please reach local technical support if you are not sure about power consumption of each module. Door station should be connected to CH1 of the video/audio distributor.
- · Power supply must be certified by Hikvision.

# B. Communication Matrix and Device Command

#### **Communication Matrix**

Scan the following QR code to get the device communication matrix.

Note that the matrix contains all communication ports of Hikvision access control and video intercom devices.



Figure B-1 QR Code of Communication Matrix

#### **Device Command**

Scan the following QR code to get the device common serial port commands.

Note that the command list contains all commonly used serial ports commands for all Hikvision access control and video intercom devices.



**Figure B-2 Device Command** 

