

## FCC Warnings

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

### NOTE:

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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

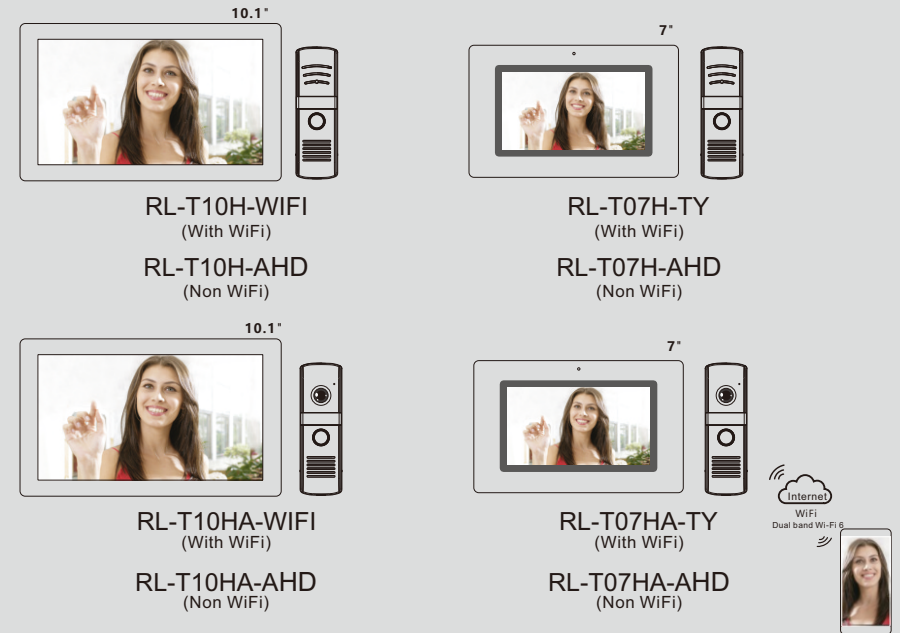


Version 2.0

### NOTICE:

This manual is for the purpose of product use and operation. Design and specifications are subject to change without notice.

# AHD Video Intercom System USER MANUAL



## Features

- 10.1" / 7" MIPI-interface display.
- Up to 2MP AHD.
- Video recording based on motion detection, visitor call and specific schedule.
- Voice message.
- Digital photo frame and background music.
- Up to 256GB TF card.
- Support human detection.
- Electric lock and gate lock release, unlock time can be set.
- Intercom call between indoor units.
- Call mute function.
- Up to 6 indoor units + 2 outdoor units + 2 surveillance cameras (connecting alarm sensor)
- Support unlocking via the indoor unit.

Additional features of WiFi models:

- Remote intercom, monitoring and unlocking with tuya app.
- Support wireless 2.4GHz & 5GHz dual band Wi-Fi 6 and wired Ethernet cable connection.

The mark ( ) presenting in the user manual means such features or functions are available for WiFi model.

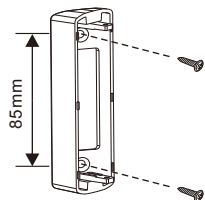


# Installation Instruction

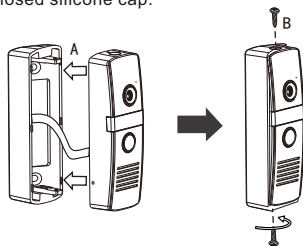
## A. Outdoor unit installation

### A1. Oblique Base Installation

1. Fasten the oblique base on the wall with screws. (1.4-1.6m high from the ground, Screw size: 4\*30BA)

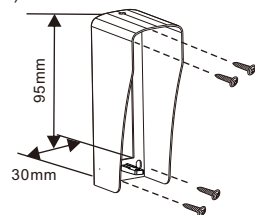


2. Connect the wires according to the wiring diagram.
3. Fix into the oblique base and fasten the bottom with screws. Finally seal the screw hole with the enclosed silicone cap.



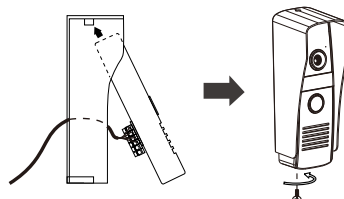
### B2. Rain Shade Installation

1. Fasten the rain shade on the wall with screws. (1.4-1.6m high from the ground, Screw size: 4\*30BA)



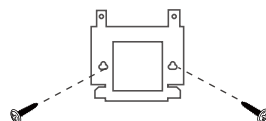
2. Connect the wires according to the wiring diagram.

3. Fix into the rain shade and fasten the bottom with screws. Finally seal the screw hole with the enclosed silicone cap.

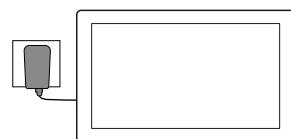


## B. Indoor unit installation

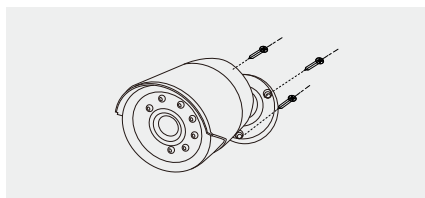
1. Fix the bracket on the wall with screws. (1.4-1.6m high from the ground)



2. Connect the wires according to the wiring diagram.
3. Hang on the bracket.
4. Connection to power source.



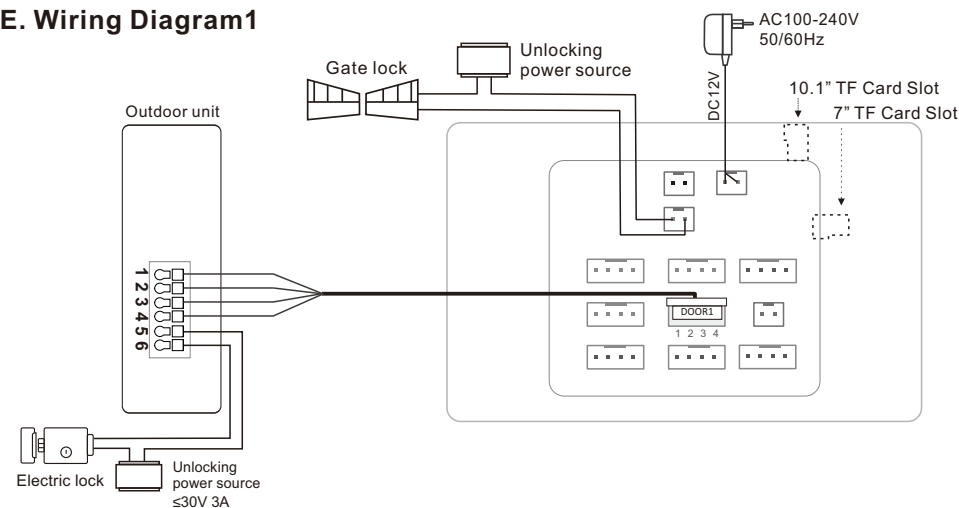
## C. Installation of Our Company's camera



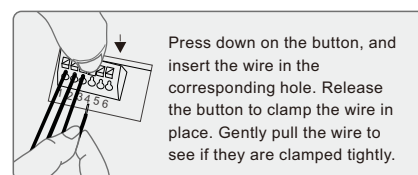
## D. Interfaces of the Indoor Unit

	1	2	3	4
Cam2	ALARM-IO	GND	VIDEO	+12V
Cam1	ALARM-IO	GND	VIDEO	+12V
Ethernet cable	RX-N	RX-P	TX-N	TX-P
DOOR2	AUDIO	GND	VIDEO	+12V
DOOR1	AUDIO	GND	VIDEO	+12V
F-O	AUDIO	GND	DATA	+12V
OUT	AUDIO	GND	DATA	VIDEO
IN	AUDIO	GND	DATA	VIDEO
TV	GND	TV		

## E. Wiring Diagram1



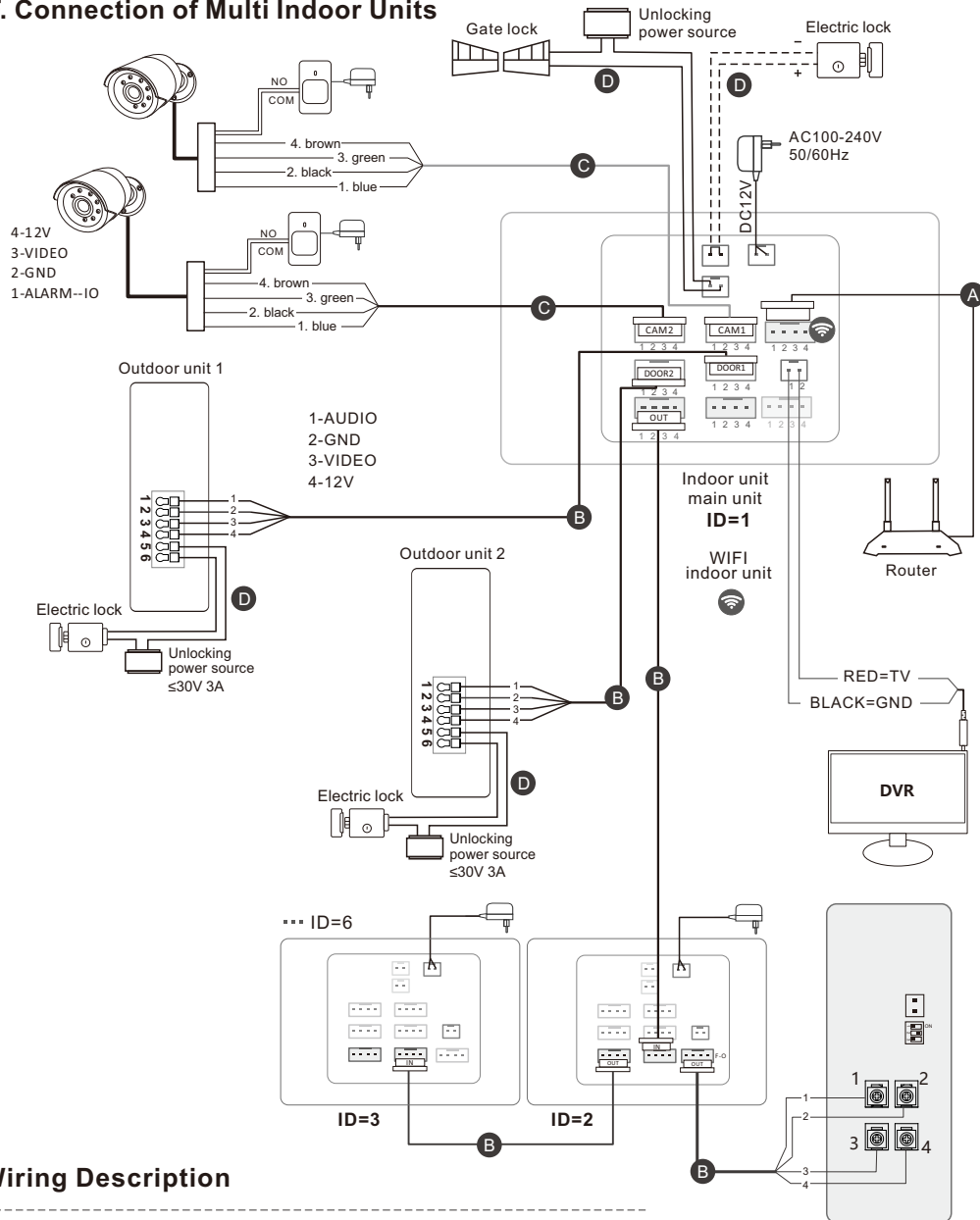
### Outdoor unit How to attach wires to terminals



### One single indoor unit

- Indoor unit to outdoor unit: Distance  $\leq 15m$  (RVV4 $\times$ 0.2mm<sup>2</sup>), Distance  $\leq 30m$  (RVV4 $\times$ 0.5mm<sup>2</sup>), Distance  $\leq 50m$  (RVV4 $\times$ 1mm<sup>2</sup>), Distance  $\leq 100m$  (RVV4 $\times$ 1.5mm<sup>2</sup>).
- Lock: Distance  $\leq 15m$  (RVV2 $\times$ 1mm<sup>2</sup>), Distance  $\leq 30m$  (RVV2 $\times$ 1.5mm<sup>2</sup>).

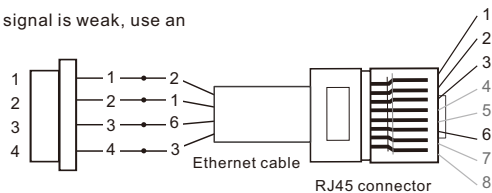
## F. Connection of Multi Indoor Units



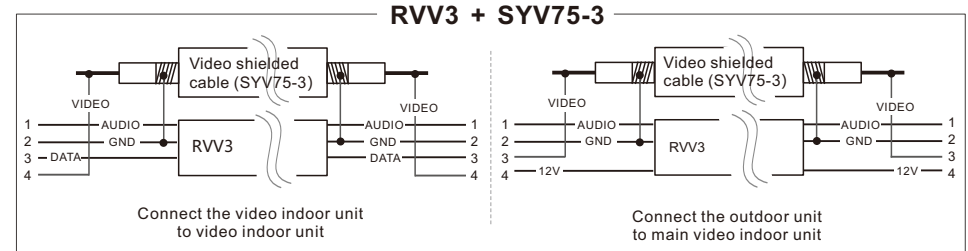
### Wiring Description

- A** Connect the router, if the WiFi signal is weak, use an Ethernet cable to connect.

- 1 (RX-N) -Pin 2 of RJ45 connector
- 2 (RX-P) -Pin 1 of RJ45 connector
- 3 (TX-N) -Pin 6 of RJ45 connector
- 4 (TX-P) -Pin 3 of RJ45 connector



- B** Multiple indoor units: RVV3 + SYV75-3 (Note that if connecting audio handsets, use RVV4 cable only.)  
Distance ≤15m (RVV3×0.5mm<sup>2</sup>), Distance ≤30m (RVV3×1mm<sup>2</sup>), Distance ≤100m (RVV3×1.5mm<sup>2</sup>).



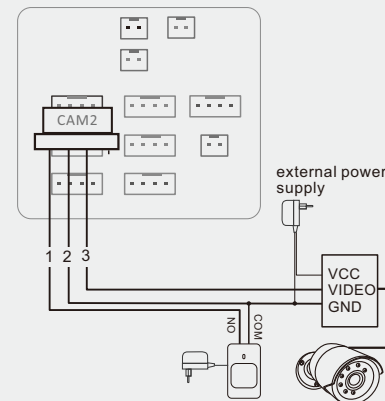
- C** Our Company's camera (power supplied by the main indoor unit): 15m Four-core cable  
Distance ≤15m (RVV3×0.5mm<sup>2</sup>), Distance ≤30m (RVV3×1mm<sup>2</sup>).

- D** Lock: Distance ≤15m (RVV2×1mm<sup>2</sup>), Distance ≤30m (RVV2×1.5mm<sup>2</sup>).

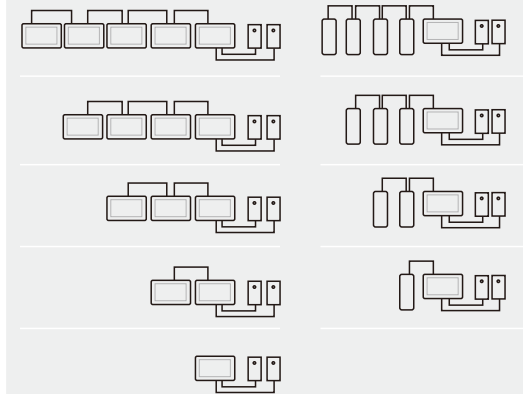
### NOTE:

- Connecting the electric lock to both the indoor and outdoor units at the same time not recommended.
- Lock for outdoor unit: Fail Secure lock, Voltage < 30V, Current < 3A
- Lock for indoor unit:
  - Electric lock: Fail Secure lock, Voltage = 12V, Current < 1A
  - Gate lock: Fail Secure lock, Voltage < 30V, Current < 3A
- Purchase the wires strictly according to the requirements.
- Lock and power supply for unlocking are not supplied.
- The audio handset can be connected to F-O interface of any indoor unit.
- Outdoor units and cameras must be connected to the main indoor unit.

### Connection of the camera from other manufacturers (external power supply required)



### Wiring References:



### Illustration

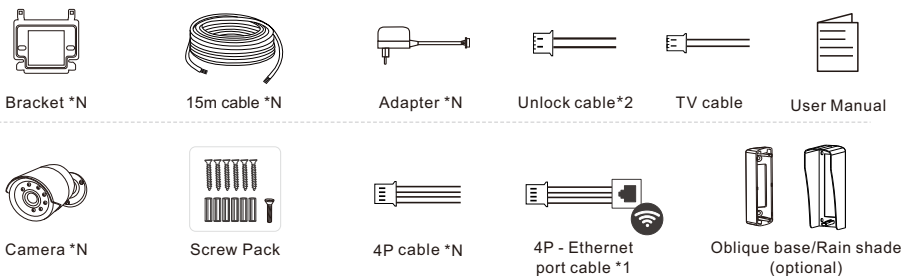


### NOTE:

- The main indoor unit must be a video indoor unit.
- When connecting only one audio handset, no power adapter to the handset is needed. However, if more than one audio handset is connected, additional power adapter to the audio handset is needed.
- Users can connect one or two outdoor units according to their actual need.

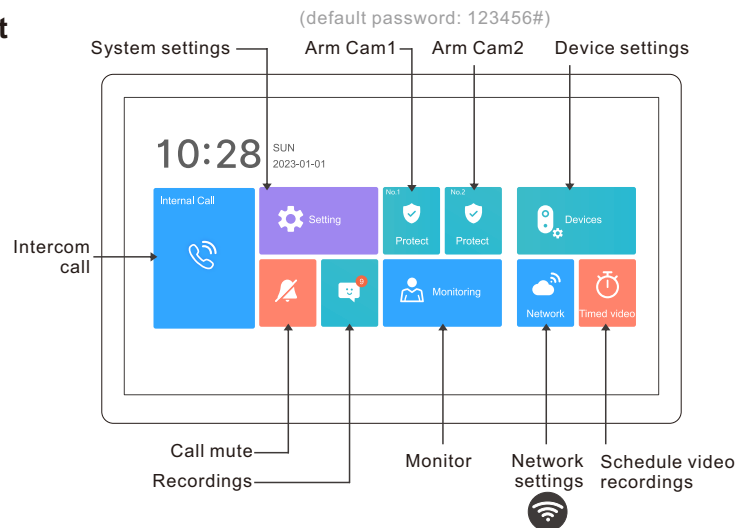
## Accessories

**NOTE:** The quantity may vary depending on the actual needs.

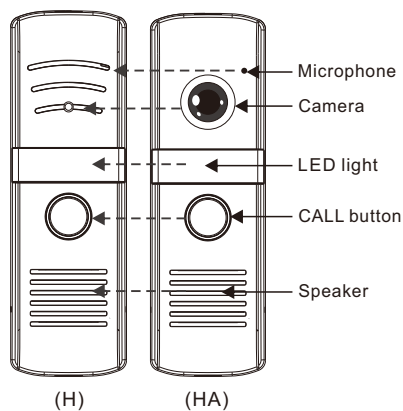


## Operation Instruction

### Indoor unit

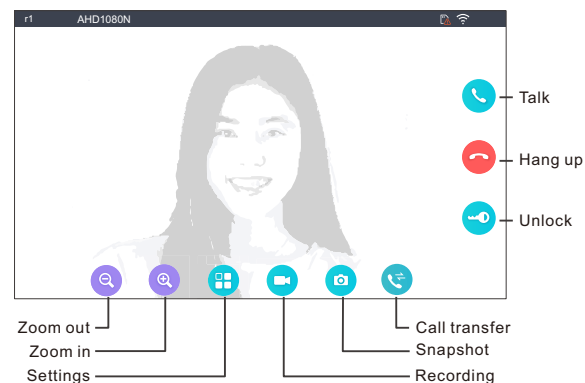


### Outdoor unit



## Operating Instructions

Calling screen of indoor unit



### Calling and video intercom:

- When the visitor presses the call button on the outdoor unit, both the indoor unit and your mobile phone will sound the ringtone and display the real-time image. Tap ( ) button on the screen to talk to the visitor. Tap ( ) button to end the communication.
- If wanting to release the lock, tap ( ) button, and then tap ( ) button to release the electric lock or tap ( ) button to release the gate lock.
- Tap ( ) or ( ) to zoom out or zoom in the image.
- Tap ( ) to adjust the volume, brightness and contrast.
- Tap ( ) to record the current intercom/monitoring image (a TF card should be inserted).
- Tap ( ) to take a picture of the current intercom/monitoring image (a TF card should be inserted).
- Tap ( ) to transfer the call to another indoor unit.

**NOTE:** If answering the call on your mobile phone, the indoor unit will stop ringing and displaying the image. If the voice message function is enabled, the visitor can leave a voice message after call timeout.

## Function Settings via the Indoor Unit

### 1. Video Signal Settings

If using the outdoor unit or surveillance camera from other manufacturers, refer to their actual video signal parameter for the settings.

The setting method is as below:

- Video mode setting: Devices ( ) -> Door1/Door2/Cam1/Cam2 -> Signal mode -> PAL/NTSC/AUTO (select the actual video mode of the device)
- Video type setting: Devices ( ) -> Door1/Door2/Cam1/Cam2 -> Signal type -> AHD1080/AHD720 (select the actual type of the device)

#### NOTE:

- If not knowing the video mode, you can set it to "AUTO". In this case, no need to set "video type".
- The default video mode of our product is PAL. If using our outdoor unit or surveillance camera, make sure it is set to PAL.
- If the settings are not correct, no image will be displayed.

## 2. If connecting alarm sensors to surveillance cameras:


( Sub indoor unit does not support this function)

Alarm settings: Devices (  ) -> Cam1/Cam2 -> Alarm input -> NO/NC/OFF (select the proper type of the sensor)

### NOTE:

- NO: Low level will trigger the alarm.
- NC: High level will trigger the alarm.
- OFF: Turn off the alarm.

## 3. Indoor Unit ID Settings

- If multi indoor units exist:  
Main indoor unit: ID=1 (The main unit must be a video indoor unit)  
Sub indoor unit: ID can be set to 2/3/4/5/6 (The sub unit can be video or audio type)
- Setting method for the video indoor unit:  
Settings (  ) -> System -> Device\_id -> 1/2/3/4/5/6
- Setting method of the audio handset  
Refer to the user manual of the audio handset
- When wanting to call the indoor unit for intercom, tap its ID.
- Duplicated ID should not occur, otherwise, some device functions may not work properly.

**NOTE:** If resetting to factory default, the above steps 1, 2, and 3 are needed to perform again.

## 4. Outdoor Unit/Surveillance Camera Settings

- Devices (  ) -> Door1/Door2/Cam1/Cam2

### • Enable switch

- Power supply switch, tap to enable so that the outdoor unit or the surveillance camera can work properly.

### • Motion detection ( Sub indoor unit does not support this function )

- If enabled, the indoor unit will sound the ringtone and take a video recording once a motion is detected

### • Motion detection duration ( Sub indoor unit does not support this function )

- Set the duration of the video that is taken due to motion detection (10s - 300s).

### • Motion display ( Sub indoor unit does not support this function )


- If enabled, the indoor unit will display the image once a motion is detected.

### • Motion ringtone ( Sub indoor unit does not support this function )

- If enabled, the indoor unit will sound the ringtone once a motion is detected.

### • Ring setting

- Ring 1/Ring 2/Ring 3: Ringtone set for 3 different time periods.
- Ring mode:
  - Standard: Built-in ringtones, 10 ringtones in total.
  - Custom: Only support MP3 ringtone format. To customize ringtones, copy the ringtones to the TF card "User >>Ring" folder by PC.
- Ring set: Ringtone selection.

- Devices (  ) -> Door1/Door2

### • Unlock delay ( Sub indoor unit does not support this function )

- This setting only takes effect on the lock that is connected to the outdoor unit (1s - 10s).

### • Ringback ( Sub indoor unit does not support this function )

- If enabled, the outdoor unit will give out the ringback tone when pressing the call button. Low(default), High and Off options can be selected.

### • Message ( Sub indoor unit does not support this function )

- If enabled, a prompt will ask the visitor to leave a message if his/her call is not answered.

- Devices (  ) -> Cam1/Cam2

### • Record mode

- Set to take a video or pictures for recording once the alarm sensor is triggered.



### • Alarm ring

- If enabled, the indoor unit will sound the alarm once the sensor is triggered. 2 alarm rings can be set.

### NOTE:

- The motion detection function can only be applied onto one outdoor unit or one camera. For example, if there are 2 outdoor units and you enable the motion detection for #1 outdoor unit, in this case, if you still enable motion detection for the #2 outdoor unit, motion detection for the #1 outdoor unit will automatically turn off.
- Only after the TF card is inserted, the indoor unit can take video/picture recording.

## 5. Other Settings

- Settings (  ) -> System (  )

### • Humanoid detection frame

- If enabled and if a human is displayed on the screen, a green frame will appear on the screen and it will move together with the human on the screen.

### • Administrator mode

- main indoor unit (ID=1): If enabled, only the main indoor unit can start the intercom call. No sub indoor unit can start the intercom call.
- sub indoor unit (ID=2, 3, 4, 5, or 6): If enabled, this sub indoor unit can start the intercom call.

### • Password ( Sub indoor unit does not support this function )

- Set the password that will be used for disarming. The default password is 123456. When inputting the password, a " # " symbol must be input after it to confirm.



- Settings (  ) -> Time (  )

### • YY-MM-DD

- The date format can be set as: Year-Month-Day, Month-Day-Year and Day-Month-Year.

### • Idle mode



- The standby-mode screen can be set: clock, or black screen.

- Settings (  ) -> Network (  )



### • Net pairing mode ( Sub indoor unit does not support this function )

- Can set to QR code or cable mode.

- Settings (  ) -> Digital Frame (  )

### • Photo frame

- Remove the TF card from the indoor unit and then plug it to your computer.
- Place the photos in the "DigitalFrame" folder. Only jpg, png and gif files are supported and the size should be not greater than 2M.


- Enable Photo Frame function.

### • Background music

- Remove the TF card from the indoor unit and then plug it to your computer.
- Place the musics in the "BgMusic" folder. Only mp3 file is supported and the size should be not greater than 5M.
- Enable Background Music function.

- Call Mute (  )

- If enabled and if the call button on the outdoor unit is pressed, the indoor unit and the outdoor unit will not ring.

- Timed video (  ) -> Door1/Door2/Cam1/Cam2

- Schedule video recordings ( Sub indoor unit does not support this function )  
Schedule different period for video recording.

## Audio Handset Settings

Refer to the user manual of the audio handset for details.

## Operation Instruction

1. Make sure the indoor unit has connected to the WiFi network or the wired local network.
2. Scan the QR code below to download and then install it.



TuyaSmart

Android 5.0 / iOS 8.0 or higher

3. Register your Tuya account and log in.
4. Open the app, tap "+" at the upper corner, select "Scan".
5. Scan the device QR code displaying on the network page of the indoor unit.

Scan the QR code below for the detailed app operation.




## Troubleshooting

1. **No response after pressing the call button on the outdoor unit**
  - a. Check the wire connection between the outdoor unit and indoor unit to see if the line sequence is correct.
  - b. Check if wire plugs are plugged into the proper connectors.
  - c. Check if "Devices" settings are correct.
  - d. Check if the indoor unit ID is set to 1.
  - f. Check if the enable switch of the outdoor unit is turned on or not.
2. **Video is found to be displayed abnormally when monitoring the outdoor unit or the camera.**
  - a. Check if the wires are connected properly.
  - b. Check if the "Signal mode" and "Signal type" settings are correct.
3. **Unable to pair the device due to WiFi connection failure.**
  - a. Check if your router is too far from the device.
4. **Unable to unlock.**
  - a. Check if the lock wiring is correct.
5. **Abnormality happens during the use.**
  - a. Reset to factory default: Setting -> System -> Factory Settings.
6. **Unable to record.**
  - a. Check if the TF card is inserted properly.
  - b. Check if the TF card is damage and if it meets the requirements (Class 10, Max. capacity: 256GB, format: FAT (≤64GB), exFAT (≥128GB)).

## Technical Specifications

### Indoor unit

Adapter	*	Input: AC100-240V 50/60Hz Output: DC12V 2A
Power Consumption		Static State <2W, Working State <9W
Network		Frequency: 2.4GHz&5GHz protocol: 802.11a/b/g/n/ac/ax  Network cable connection
TF card		16GB/32GB/64GB (FAT format) 128GB/256GB (exFAT format) >=CLASS 10
Video	Video input	AHD
	Pixels	2.0MP (default) 1.3MP, 1.0MP
Motion detection	1 of 4 channels can be detected	
LCD dimension	10.1" / 7" MIPI interface	
Resolution	1024*600	
Ring/talk volume	75~85dB (30cm)	
Video Recording	MOV format	
Recording Type	Circulation	
Outline Size	10.1": 260(W)*162(H)*25(D)mm	
	7": 210(W)*150(H)*19(D)mm	
Operating environment	Temperature -10°C ~ 50°C	
	Humidity 10%~90% (RH)	


### Outdoor Unit

Camera	2 million pixels/1080P
Viewing Angle	Horizontal ≈80°
Night vision LED	940 nm (Infrared)
Ringback Tone	< 65 dB
Outline Size	122.6(H)*43(W)*45(D) mm
Operating Temperature	-20°C~50°C
Relative Humidity	10%~90% (RH)

#### \* NOTE:

Actual specification may vary, please refer to the label on the power adapter supplied.

## NOTICES

- Turn off the power before wiring. Strictly follow the instructions when wiring.
- After installation, if the product doesn't work/mobile phone is unable to connect, check if wires are connected properly and securely.
- Use a slightly damp soft cloth to clean the camera or screen.
- The outdoor unit must not be directly exposed to sunlight.
- If it is unable to unlock, check if wires are connected properly and securely. Also, make sure the voltage for unlocking is sufficient.
- The image quality may be interfered by strong electromagnetic signals, therefore, when using the product, avoid the electromagnetic sources such as motor and transformer and make sure the circumstance is barrier-free and no interference.
-  Place the main indoor unit close to the wireless router for the best WiFi signal.