Installation & User Manual

Opyn - Single Button IP Intercom

The information in this document may be changed as we always strive to improve the product. Trust that the information provided is accurate at the time of document release.

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Technical Specifications

GENERAL	
Housing	Powder-coated Aluminium
Weatherproof	IP54
Impact Rating	IK07
Approvals	CE-RED, FCC, ROHS, RED_DA
Dimensions	195mm (H), 98mm (W), 53mm (D)
Operating Temp	-40 ~ +65
Power Supply	24v DC / 48v POE
Power Consumption	Peak = 300mA, 2amp
Relays	2
Relay Type	N/C & N/O
Relay Load	3A, 30v DC/250AC
Alarms	Anti-vandal/Tamper
System Requirements	Minimum 1.5MB/s Upload Speed
MEDIA (IMAGE & VIDEO)	
Camera	2 Megapixels
Lens	150° (D), 130° (H), 70° (V)
Display Resolution	Changeable within the app HD - 1080P, SD - 720P, LD - 640*360P
Night Vision	IRCUT, Infrared LED

Storage	Micro SD Card, Max Capacity 128GB. FAT32 Format
MOTION SENSOR	
Type	Software Sensor
Range	1-7 Metres
Configuration	Via App ● Range ● Schedule ● Enable/Disable Notifications
AUDIO	
Audio Components	Speaker and microphone, noise reduction and echo cancellation.
Audio Streaming	Full Duplex
Audio Codec	G.711A
NETWORK	
WiFi	IEEE 802.11 b/g/n, IEEE 802.11a/n/ac
WiFi Security	WPA/WPA2
Frequency Range	2.4GHz, 5GHz
Ethernet	IEEE 802.3
Supported Protocols	TCP/UDP/RTP/RTSP/HTTP/SIP
THIRD-PARTY INTEGRATIONS	
Home Integration	Amazon Alexa, Google Home
UNLOCKING METHODS	
QR Codes – 200 Total	Keypad Codes – 200 Total

Packing Contents

1x Opyn Intercom
1x POE Plug
1x Kettle Lead
1x Accessory Bag (Screws & Connectors)

Optional Extra Equipment

- ANDROID MONITOR

- WIFI AERIAL (2.4Ghz)

- DC PSU (24v 2amp)

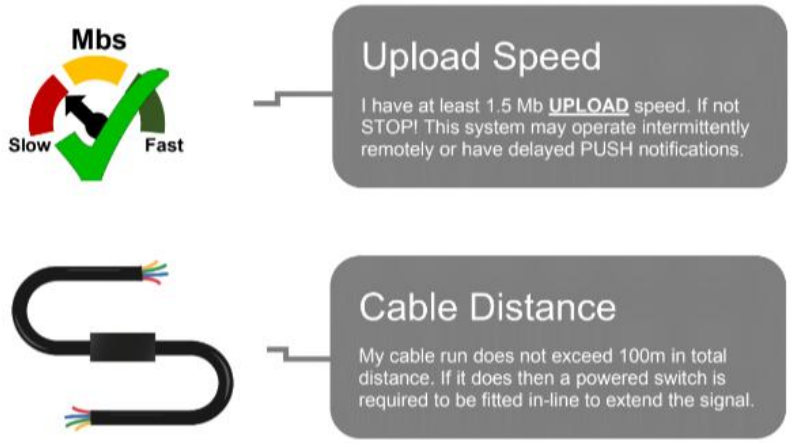
Installation Information

A good installation is key to the intercom system performing to its capabilities and giving the end-user the best experience possible. For this reason, it's important to make sure the instructions given in this section are followed thoroughly.

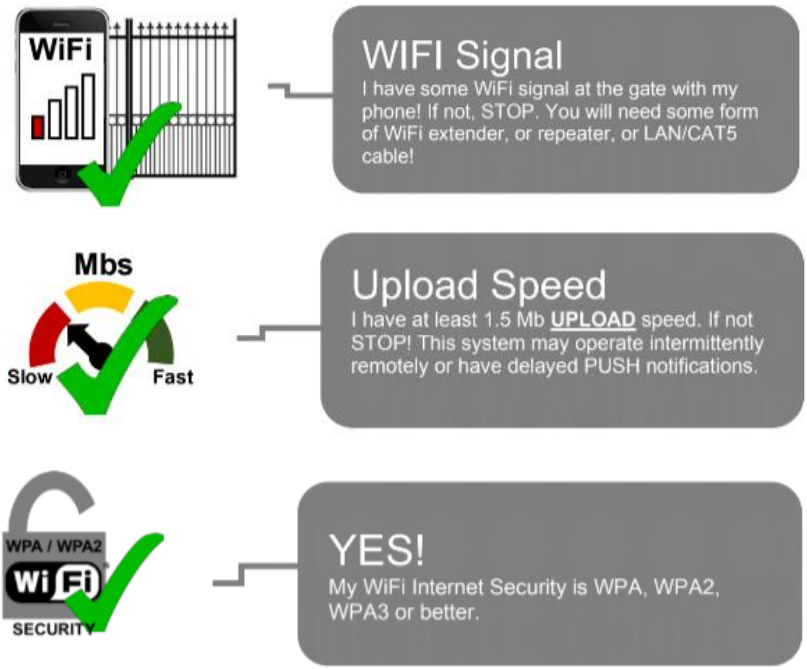
1. Site Survey & Bench Testing

It’s important to make sure the site where the system will be installed is suitable. To determine this, we need to ensure certain requirements are met like network speeds, cable distance (DC Power & POE). For more information proceed to the next section.

Survey LAN



Survey WIFI



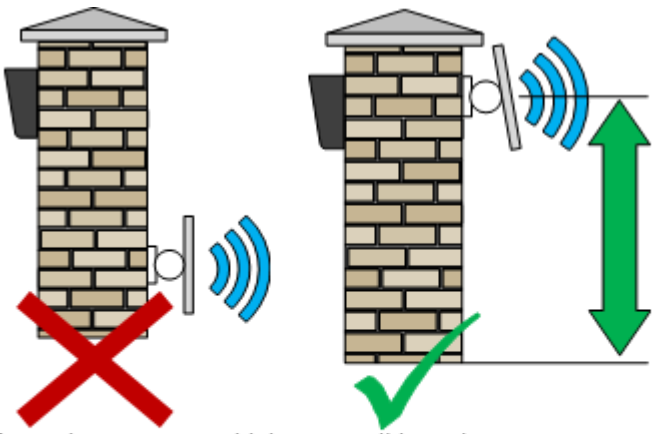
We also recommend performing a “**Bench Test**” of the system before installing. This will ensure the system is working as it should before its fully installed. Follow the setup steps below to get started and ensure to default/reset the system once you are done.

2. Install Prep & Location

Ethernet can travel up to roughly 100m/320ft on CAT5/CAT6 cable. Longer distances require a switch every 100m/320ft unless using any specialist equipment.

MAX DISTANCE 100m (320ft) (LAN)
This can be extended by using an ethernet cable extender
(purchased separately)

Maximum range with WIFI can vary depending on the strength of the aerial in use and any obstructions in the path between the intercom and the router. In most cases a range of 40-50 metres can be expected. If you need a longer distance than this 3rd party equipment may be needed.



Note: Up to 50m using 2.4GHz with an average home router and clear line of sight.

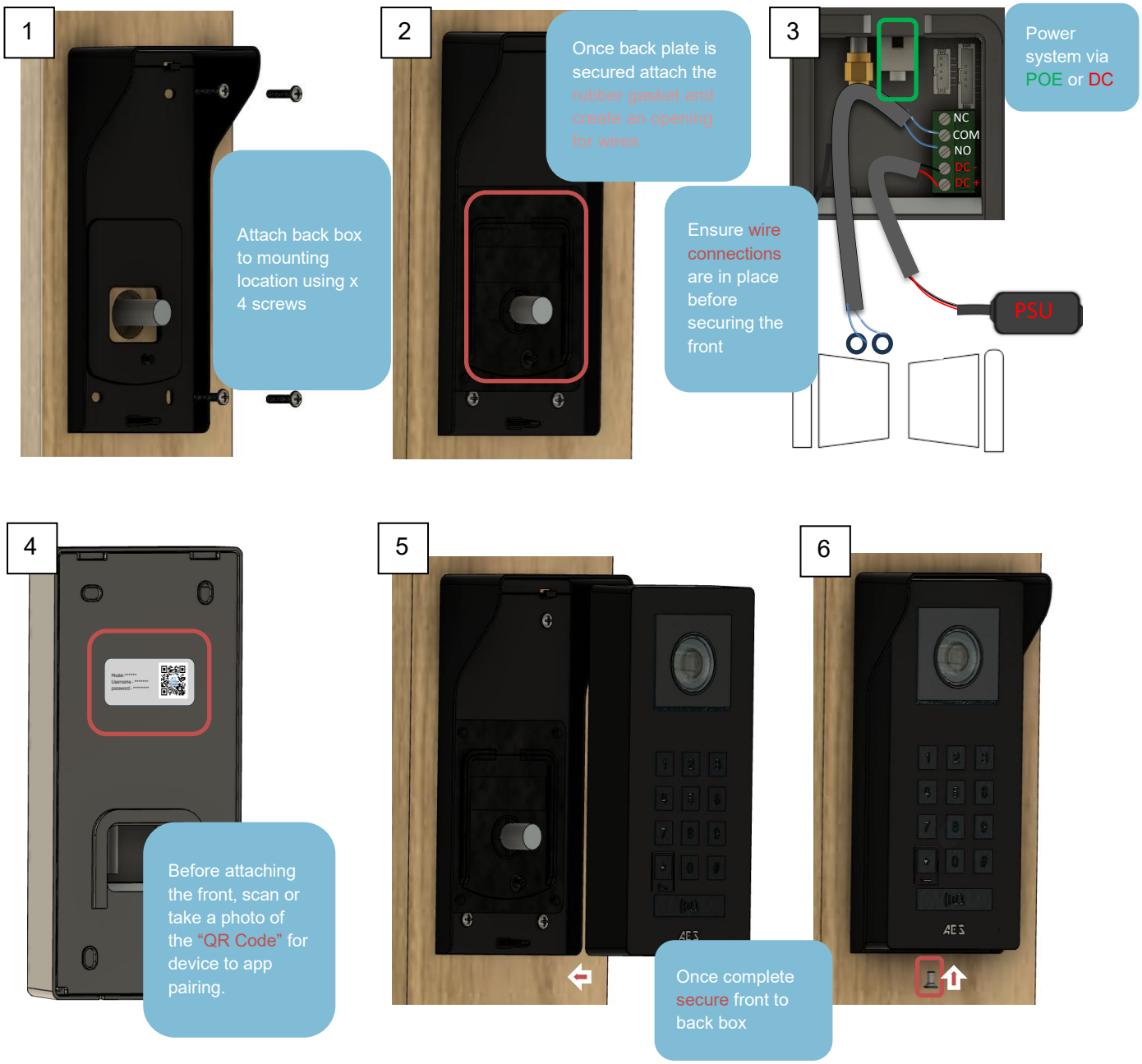
Further distances can be achieved with advanced additional equipment.

Mount the antenna as high as possible and away from obstructions such as vehicles, shrubs and trees to maximize signal strength.
Do NOT mount antenna at ground level.

Note: Do not cut or join Antenna cable.

Mounting and installation of the intercom is done simply by removing the backplate and screwing this to the desired surface and bringing the cables through the entry hole. From there connect the cables to the correct connectors, make a note of the device QR code and then close it up. See illustration below.

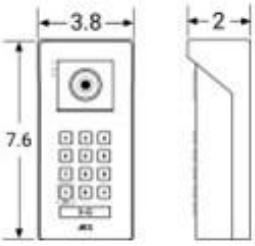
Mounting & Installation



INGRESS PROTECTION

We recommend sealing all entry holes for prevention of insects that can cause issues with a risk of shorting out components.

To maintain the IP54 rating please follow the sealing instructions included. (also available online)



Opyn Pedestal Mount Guide

Gather materials & ensure you have the following materials and tools:

- Opyn Telephone entry unit & backbox hood.
- 4x Mounting screws, 1x security screw, Screwdriver and allen key.
- Sealing gun & silicone sealant.

1. **Align the Backbox Hood**
   Position the backbox hood over the pedestal. Line up the four screw holes in the hood with the corresponding holes on the pedestal.

2. **Insert the Screws**
   Place the screws through the four holes in the backbox hood, ensuring they align securely with the pedestal's pre-drilled holes.

3. **Attach the Hood to the Pedestal***
   Using a screwdriver or power drill, tighten the screws evenly into the pedestal. Avoid over-tightening to prevent damage to the hood or pedestal.

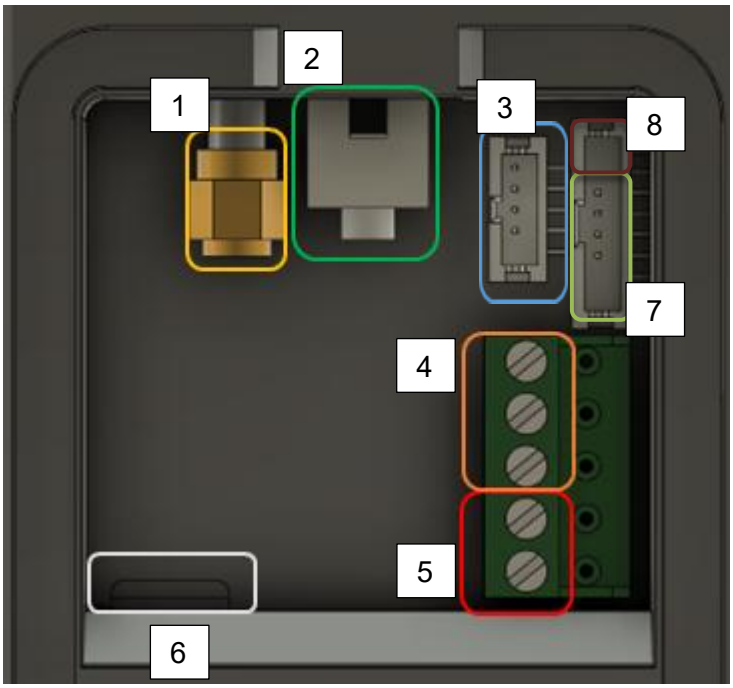
4. **Secure and Test Stability**
   Double-check that all screws are tight and the backbox hood is firmly attached. The hood should not wobble or shift.

5. **Seal Unit**
   Seal all unused holes by using a sealant such as silicone.

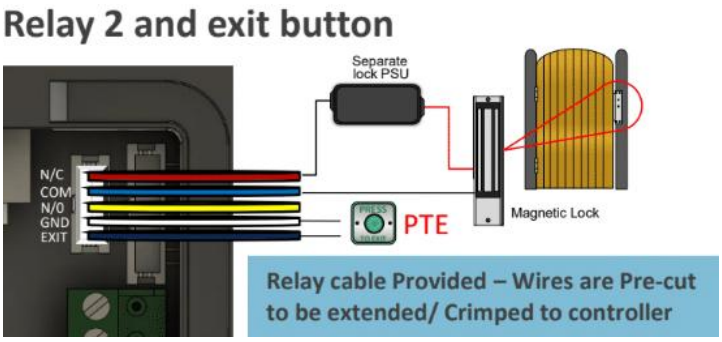
6. **Opyn Unit**
   Insert the Opyn Telephone Entry Unit into the backbox hood and secure the unit with the security screw entering from the bottom.

*Pedestals look my vary.

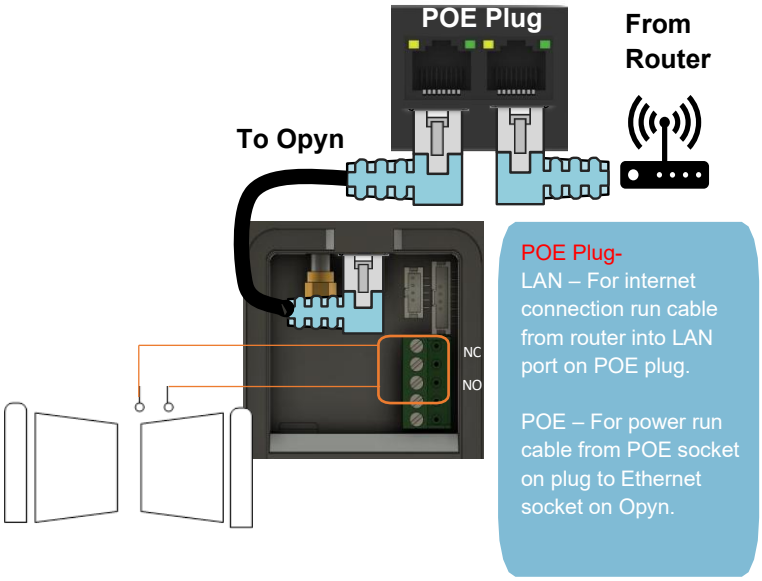
3. Wiring

4. 

1.SMA WIFI CONNECTION
2.ETHERNET/POE
3.RELAY 2/EXIT BUTTON
4.RELAY 1
5.DC POWER
6.SD CARD
7. WIEGAND (D0/1 + S1/2)
8. -/+ 485 (Not in use)



Example Setup



5. Power

Powering the intercom can be done either via 48v POE or 24v DC.

5.1. 48v POE

When using POE to power the system it's important to note that the max distance Ethernet can travel is 100m/320ft. This means the distance between the power source and the intercom cannot be greater than this.

5.2. 24v DC

When using DC power, we do recommend staying within a certain distance depending on the type or thickness of cable used. Our general recommendations are as follows:
Up to 2 metres (6 feet) - Use minimum 0.5mm²/ 22-gauge cable.
Up to 4 metres (12 feet) - Use minimum 1mm² / 20-gauge cable.
Up to 8 metres (25 feet) - Use minimum 1.5mm² / 18-gauge cable.

6. Network Connection

When it comes to connecting the intercom to the network, this can be done either via Ethernet or WIFI. For the intercom to perform the best way possible we always recommend using ethernet when possible. This is because ethernet in general will offer a more stable and reliable connection to the network, amongst other benefits.

6.1. Ethernet (LAN)

You can connect an ethernet cable directly into the RJ45 port that the intercom has. This port supports DHCP.

Note: *Ethernet can travel up to roughly 100m/320ft on CAT5/CAT6 cable. Longer distances require a switch every 100m/320ft unless using any specialist equipment.*

6.2. WIFI

To connect the intercom to the network via WIFI the aerial needs to be connected to the SMA connector of the intercom. It also needs to be within line-of-sight of the router/access point it's meant to connect to.

Maximum range can vary depending on the strength of the aerial in use and any obstructions in the path between the intercom and the router. In most cases a range of 40-50 metres can be expected. If you need a longer distance than this 3rd party equipment may be needed.

Note: *AES offers a WIFI aerial, sold as extra equipment.*

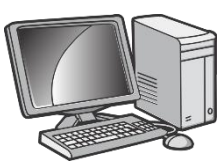
6.3. Robustel (4G Router)

IP Address: **192.168.0.1**

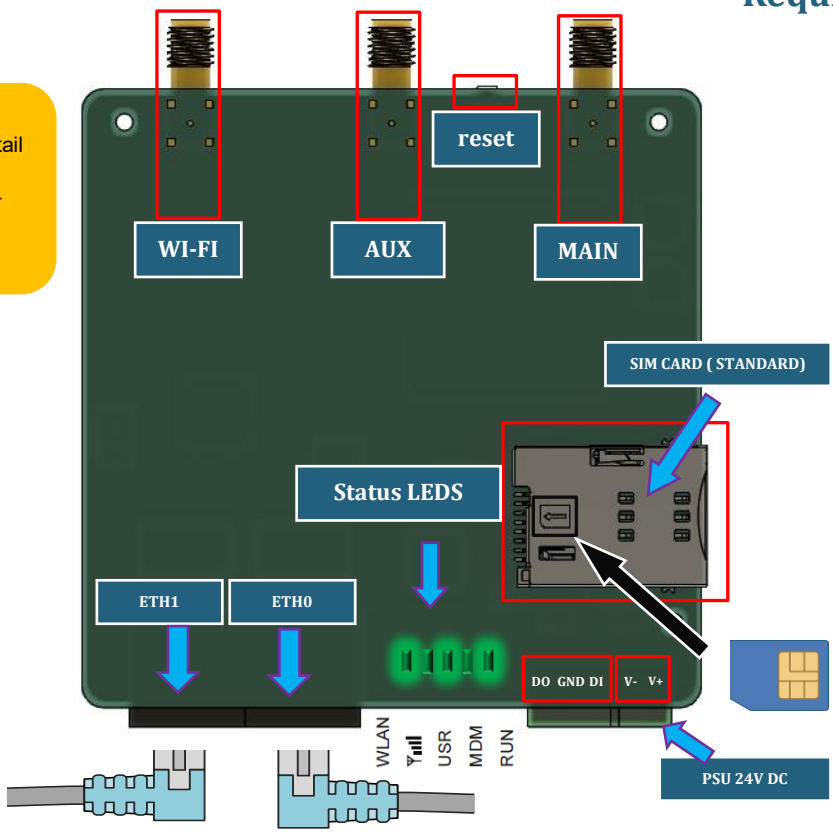
Password : Aesglobal!23

Note: If you wish to use a different network then the APN settings need changed. This will

Computer Required!



Note : More Detail on Robustal available on our Resouse page



SIM ORIENTATION

ALWAYS ensure that the system is switched **OFF** any time you are adding or removing the SIM card and also ensure that the orientation is correct before powering the router back on.

STANDARD SIM SIZE ONLY

PCB BOOT STATUS LEDS

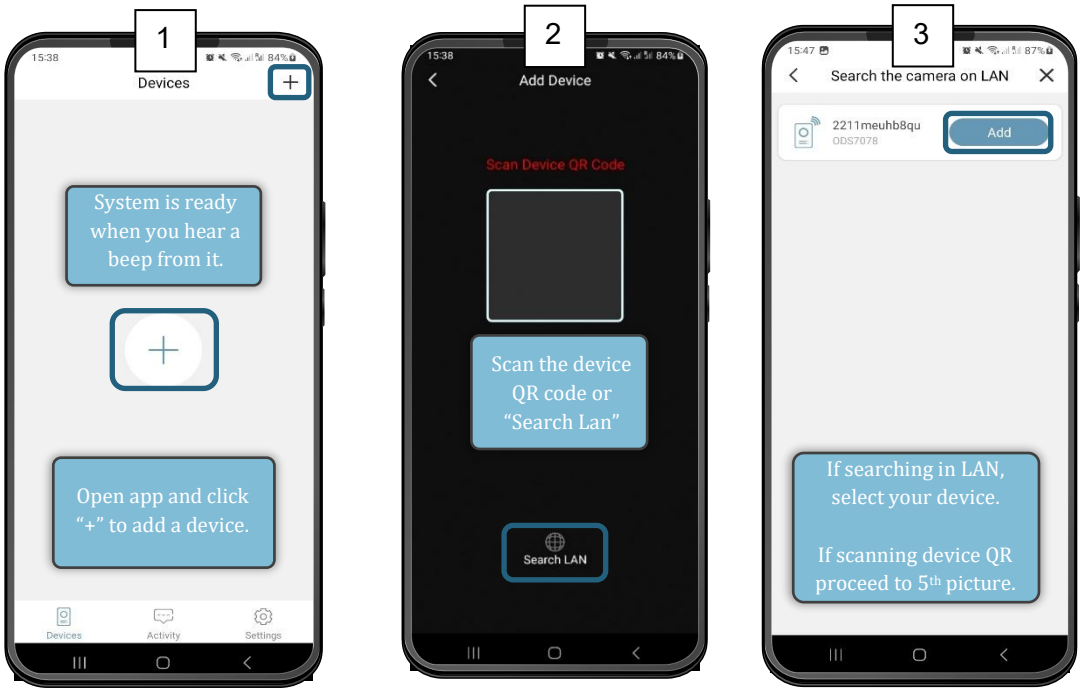
RUN: *Constant ON =* ***Initializing| Blinking - Working*** *Constant* ***OFF = PCB Powered OFF***
MDM: *Steady solid =* ***Working| Blinking = Data sent/received*** *Constant* ***OFF = Not Connected***
USR: *Steady solid =* ***Working| Blinking = Data sent/received*** *Constant* ***OFF = Not Connected***
RSSI (Represented by five bars signal.): *Steady solid =* ***Strong signal| Blinking = Medium signal*** *Constant* ***OFF = Low/no Signal***
WLAN: *Steady solid =* ***Wi-Fi is working*** *Constant* ***OFF = Not Connected***

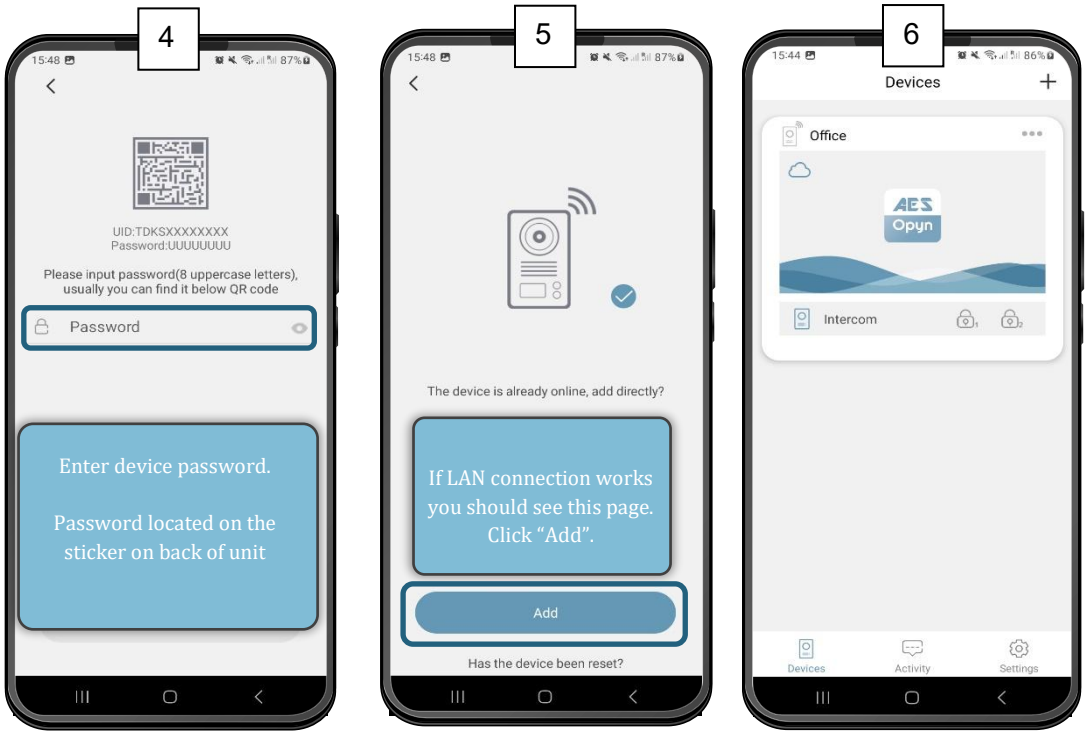
Setup

The setup process of the Opyn is very straightforward. Whether you are connecting your system via LAN or WIFI we trust that you will find the setup to be fast and seamless following the steps laid out below.

1. Add Intercom to Device (LAN)

Connecting your system to the network using LAN is as easy as it gets. Follow the simple steps below you get connected and ready to start programming in moments.





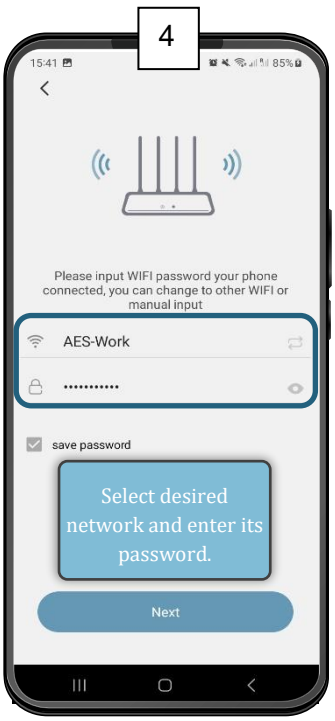
Follow the steps provided by the app, such as **naming** the device and setting the **admin password**.

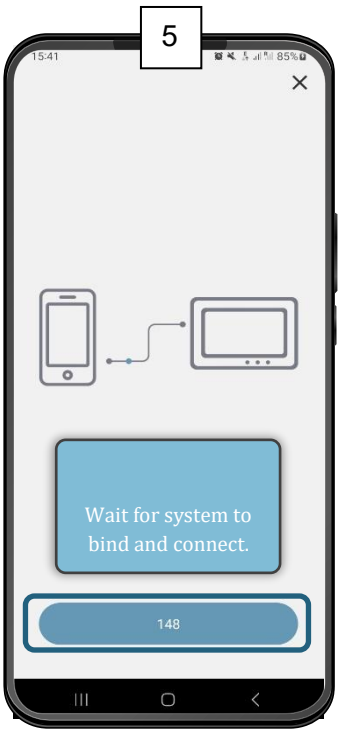
Afterwards device should appear **online** like this.

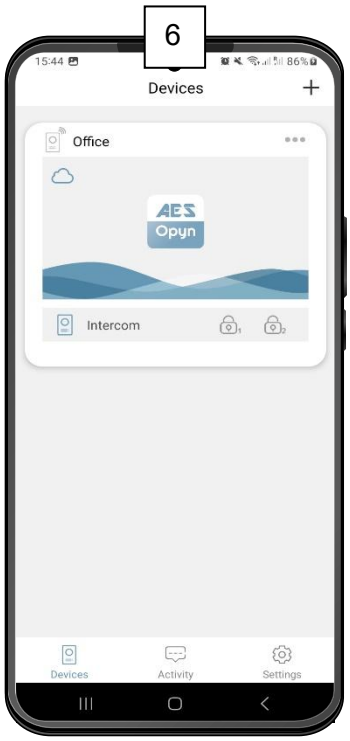
2. Add Intercom to Device (WIFI)

Connecting the system to WIFI is quite easy. By following the instructions below, you should be connected to the desired WIFI network within just a couple of minutes.

Note: *If following this method, it's recommended to first connect the intercom to the WIFI near the router before completing install if intercom will be located some distance from the router.*





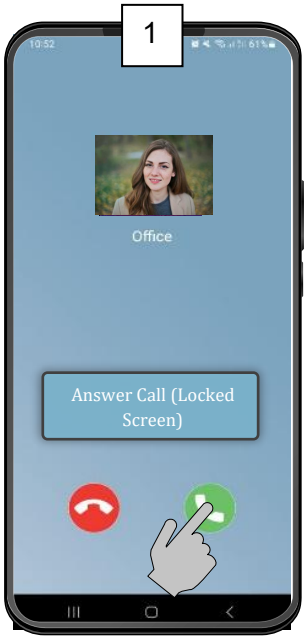


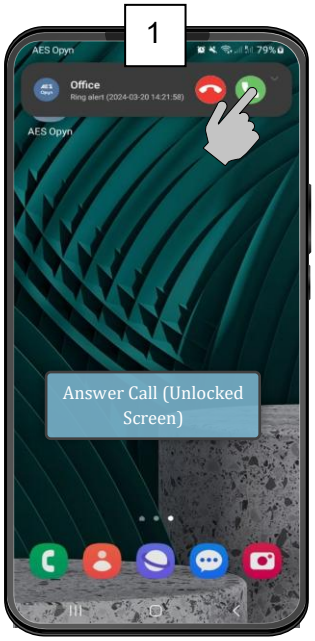
Follow the steps provided by the app, such as **naming** the device and setting the **admin password**.

Afterwards device should appear **online** like this.

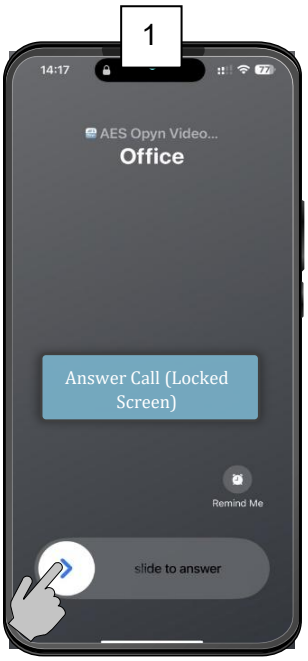
3. Basic Operation

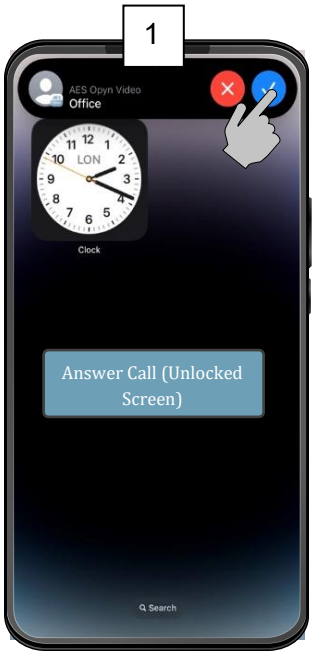
Answer Call (Android)

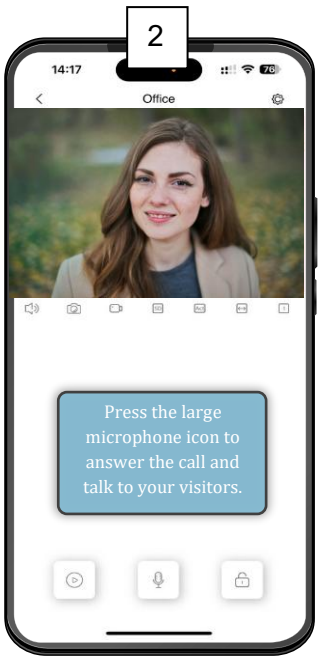




Answer Call (iOS)



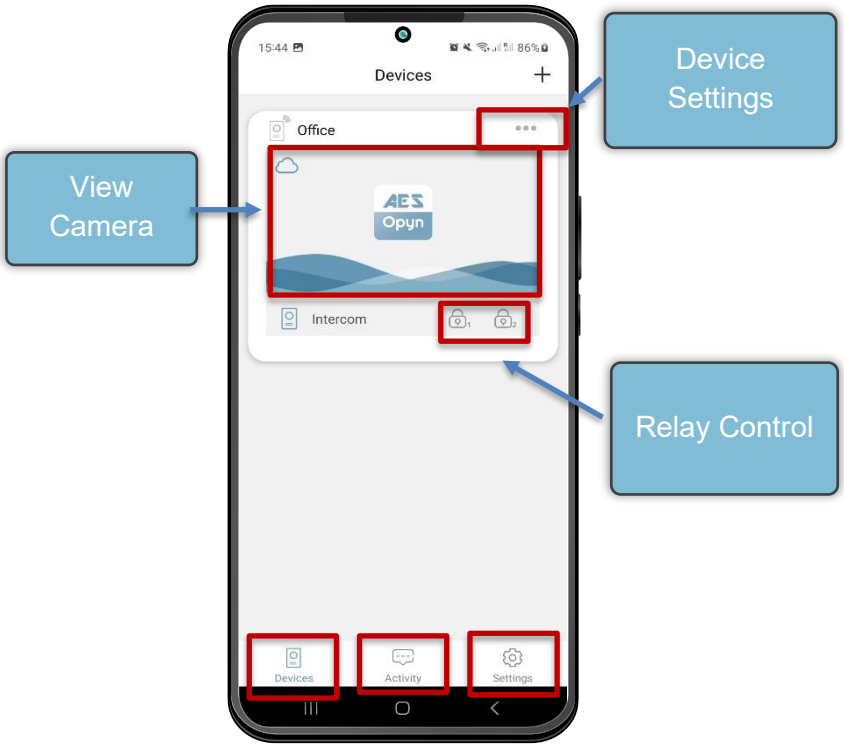




App Operation

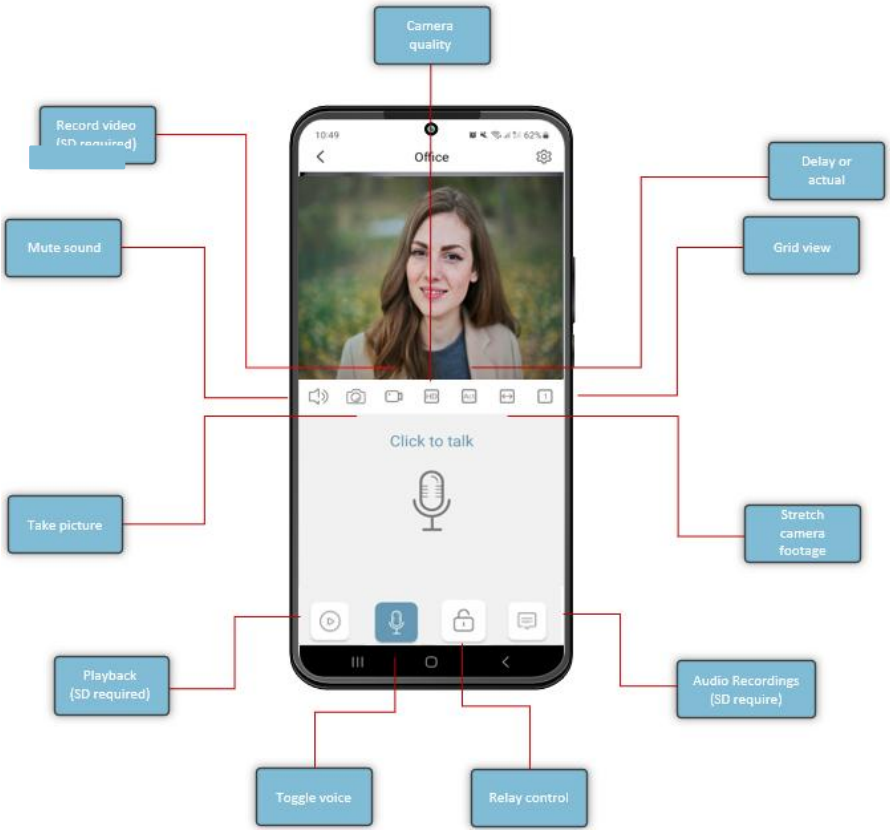
The AES Opyn app contains an impressive amount of functionality. In this section we will be covering all the app's features.

1. Devices (Home Page)

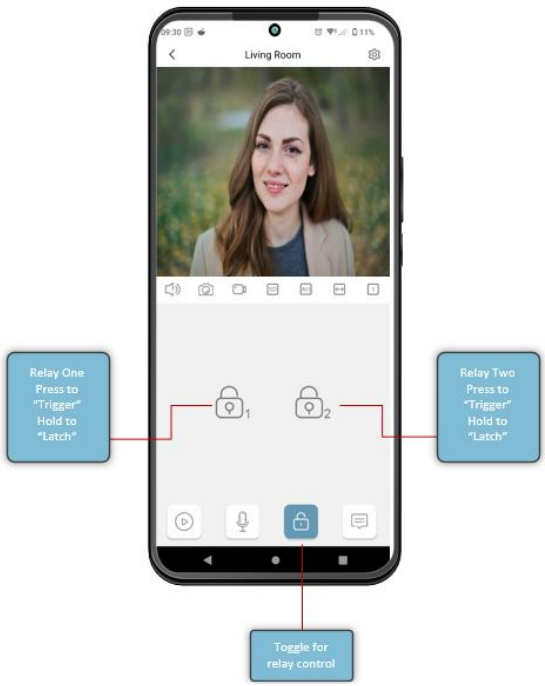


View Camera – Tab the thumbnail to enter camera view.
Device Settings – Click to enter the settings menu for the device.
Relay Control – Press desired lock icon to activate the device relay(s). Press to momentarily activate, long press to hold open.
Devices – Home screen of the app. View all devices.
Activity – View recorded events.
Settings – User and app settings

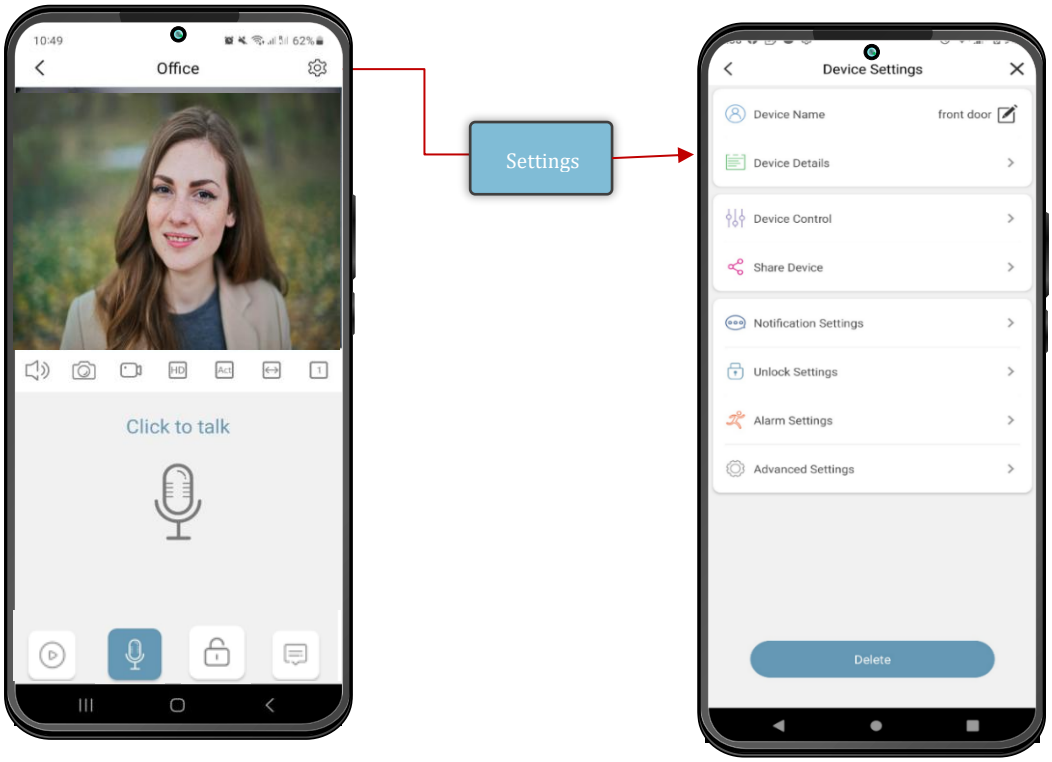
1.1. Camera View



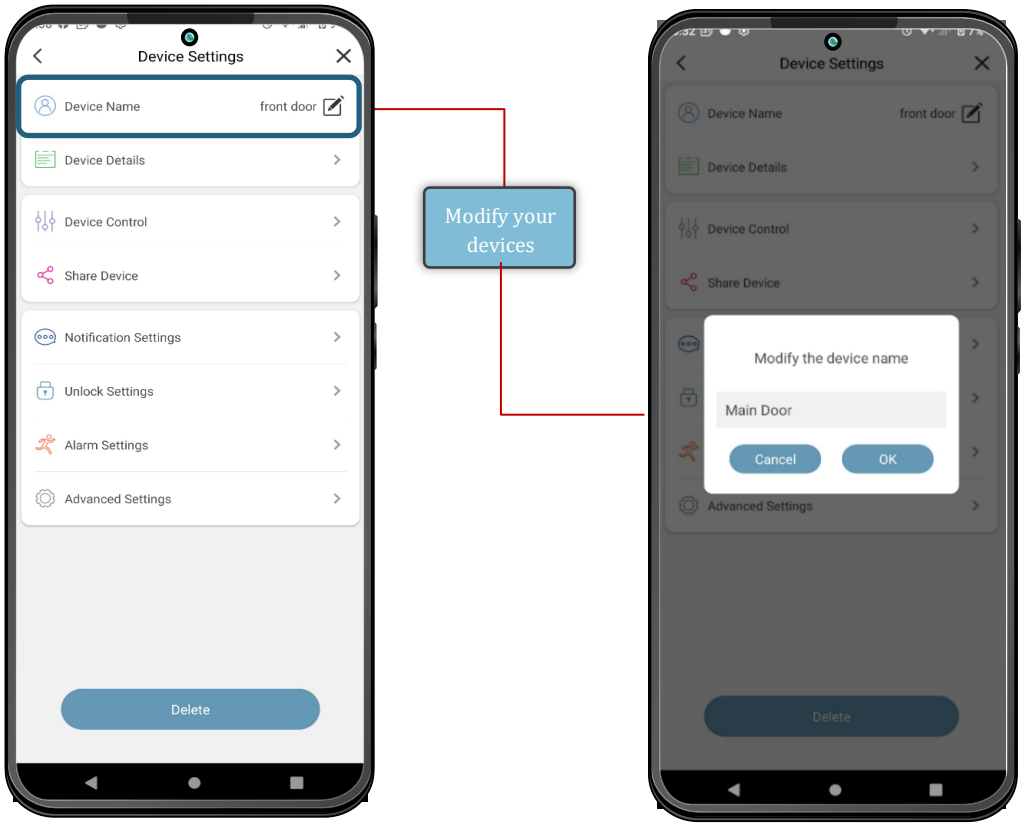
Mute Sound - Disable sound coming from the panel to the phone.
Take Picture - Take a picture via the intercom's camera.
Record Video - Record a video via the intercom's camera.
Camera Quality - Change between HD, SD or LD for video quality.
Video Mode - Change between "Actual" (Real-time stream with potential frame-drops) or "Fluent" (Slightly delayed stream with a fluent picture) video mode.
Stretch camera footage - Use the video stream's actual size or stretch to fill the preview screen.
Playback – View back pictures/videos from events such as motion detection or calls. (SD card required)
Toggle Voice - Open two-way speech to answer a call and speak to visitors.
Relay Control - Operate the system's relays/locks. Press desired lock icon to activate the device relay(s). Press to momentarily activate, long press to hold open.
Audio Recordings – Play your recorded audio messages on demand. (SD card is required)



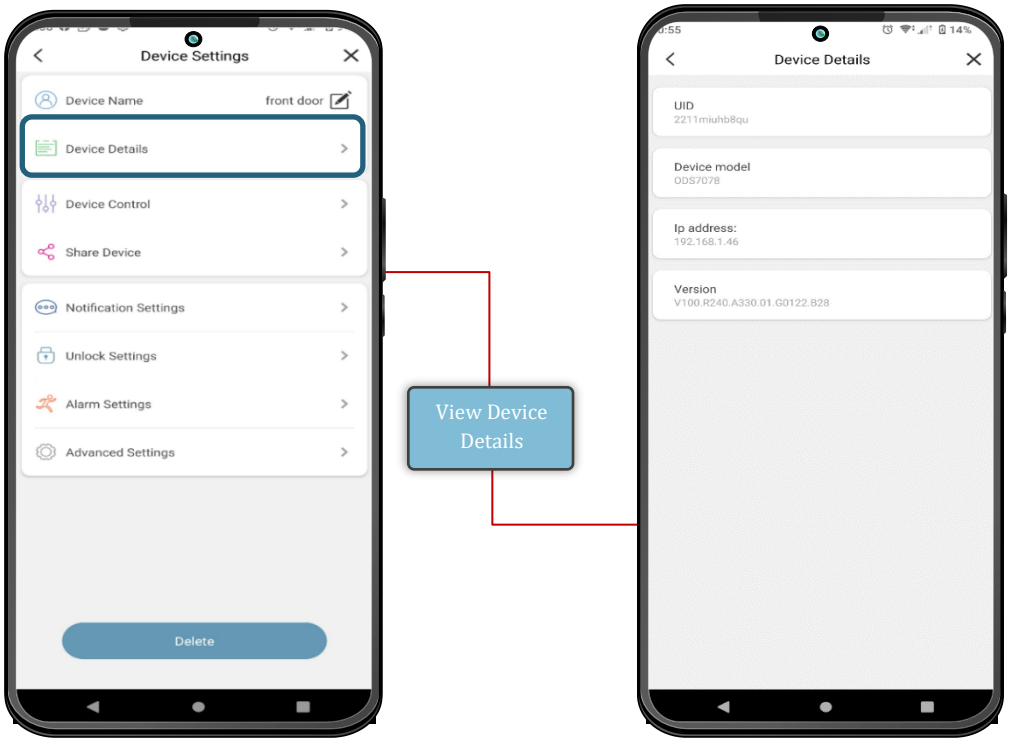
2. Device Settings



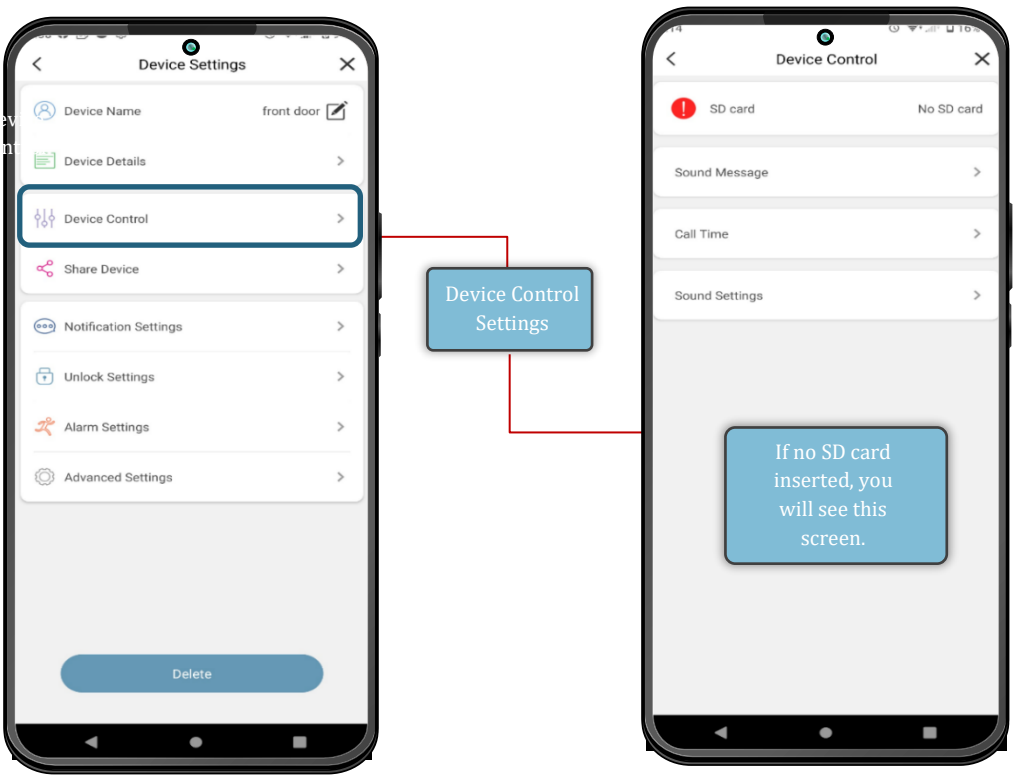
2.1. Device Name



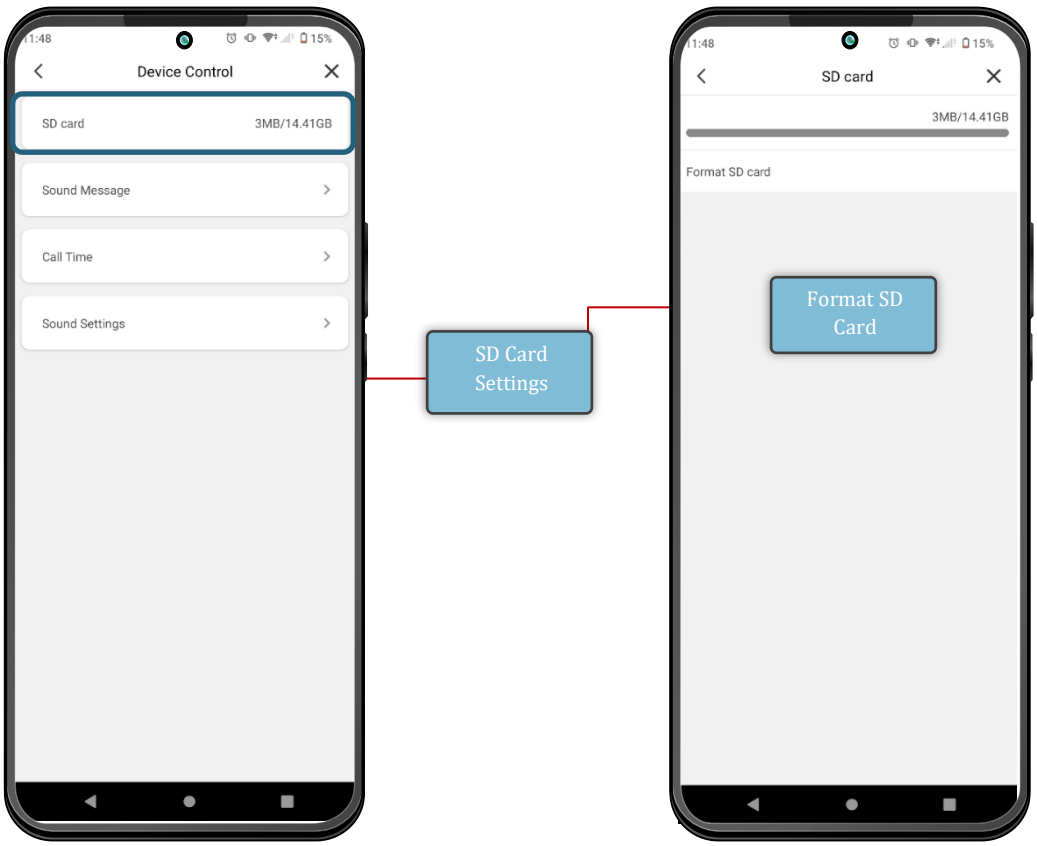
2.2. Device Details



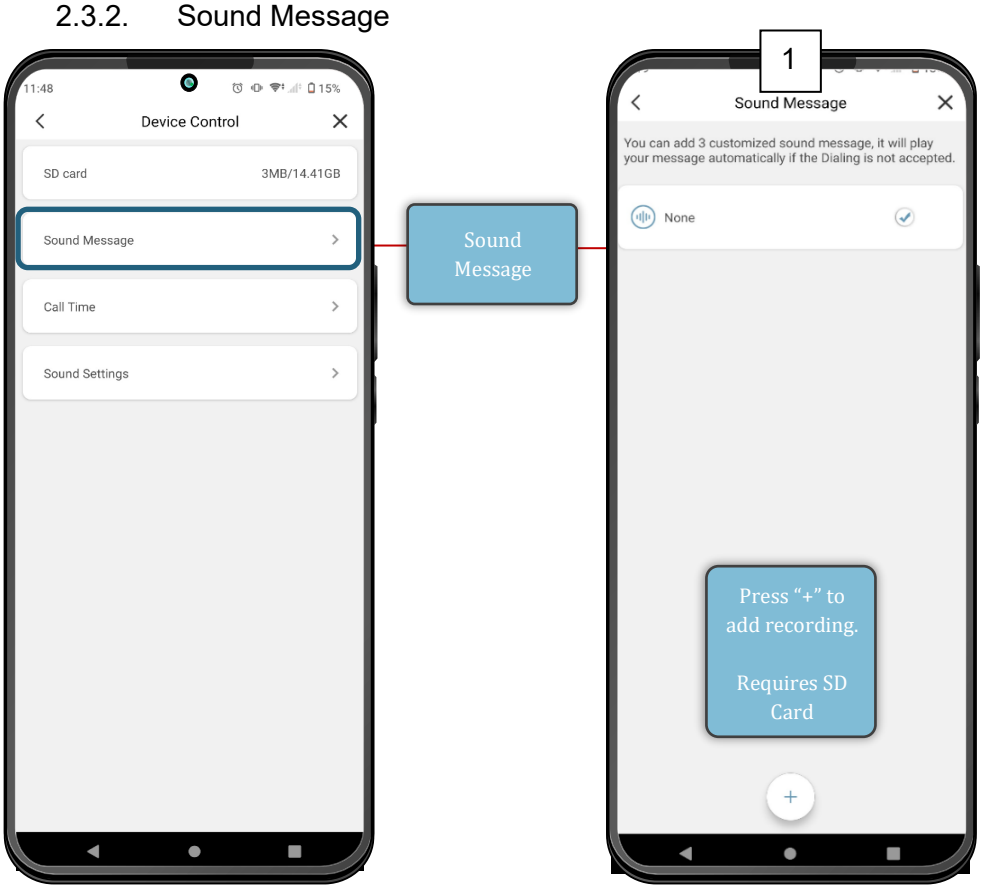
2.3. Device Control

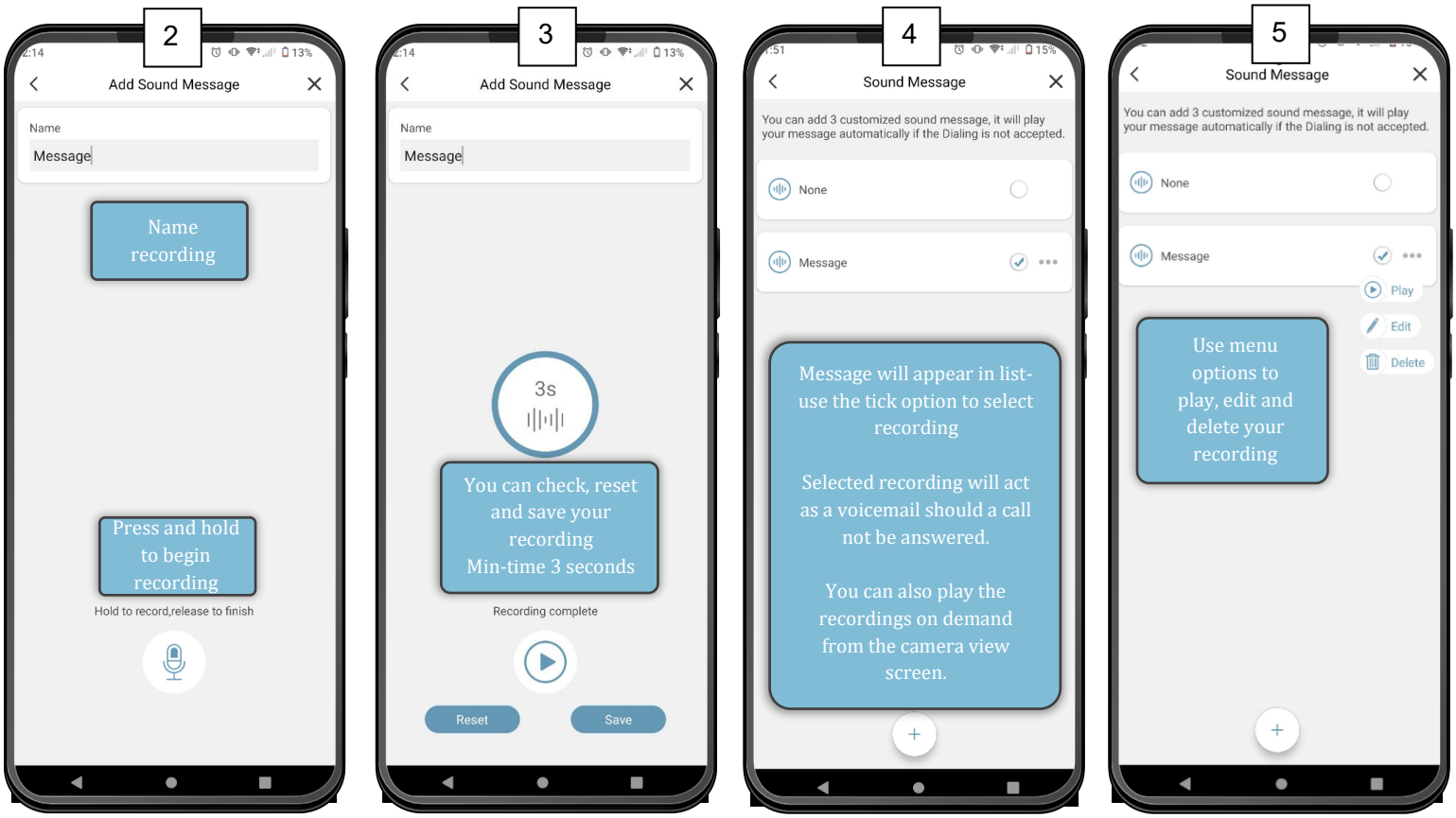


2.3.1. SD Card

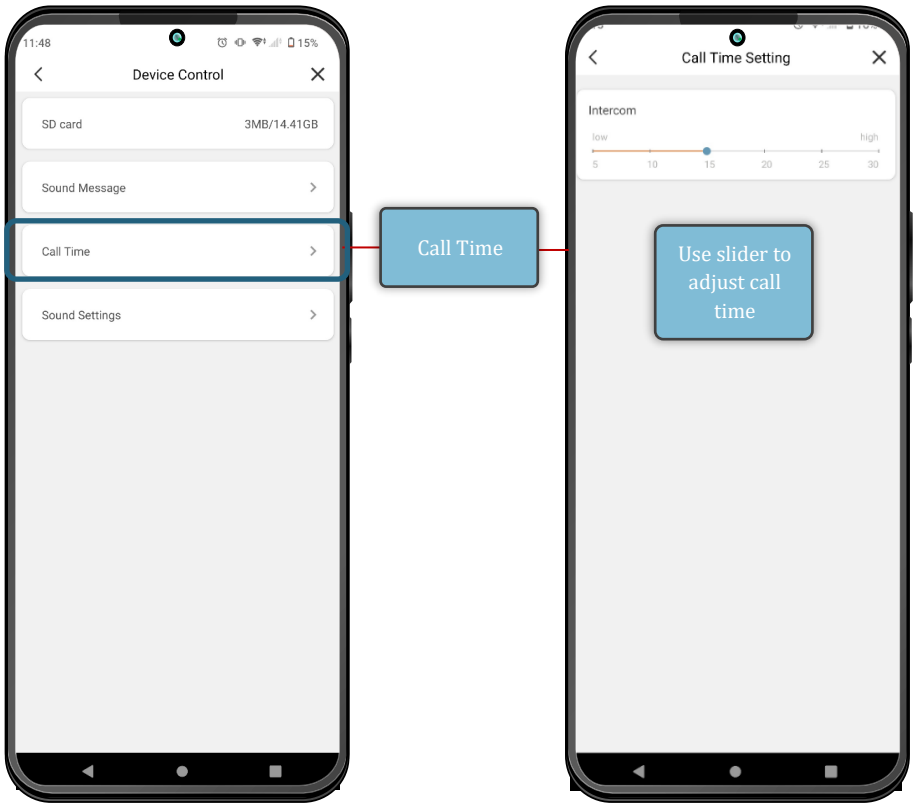


2.3.2. Sound Message

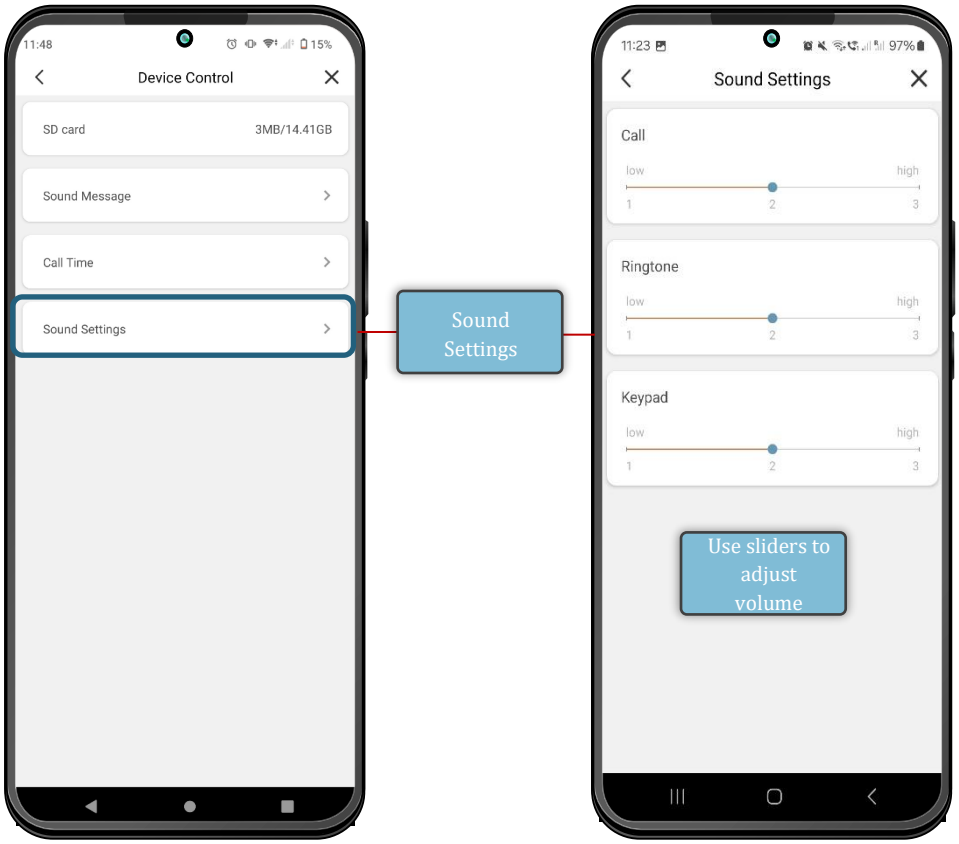




2.3.3. Call Time

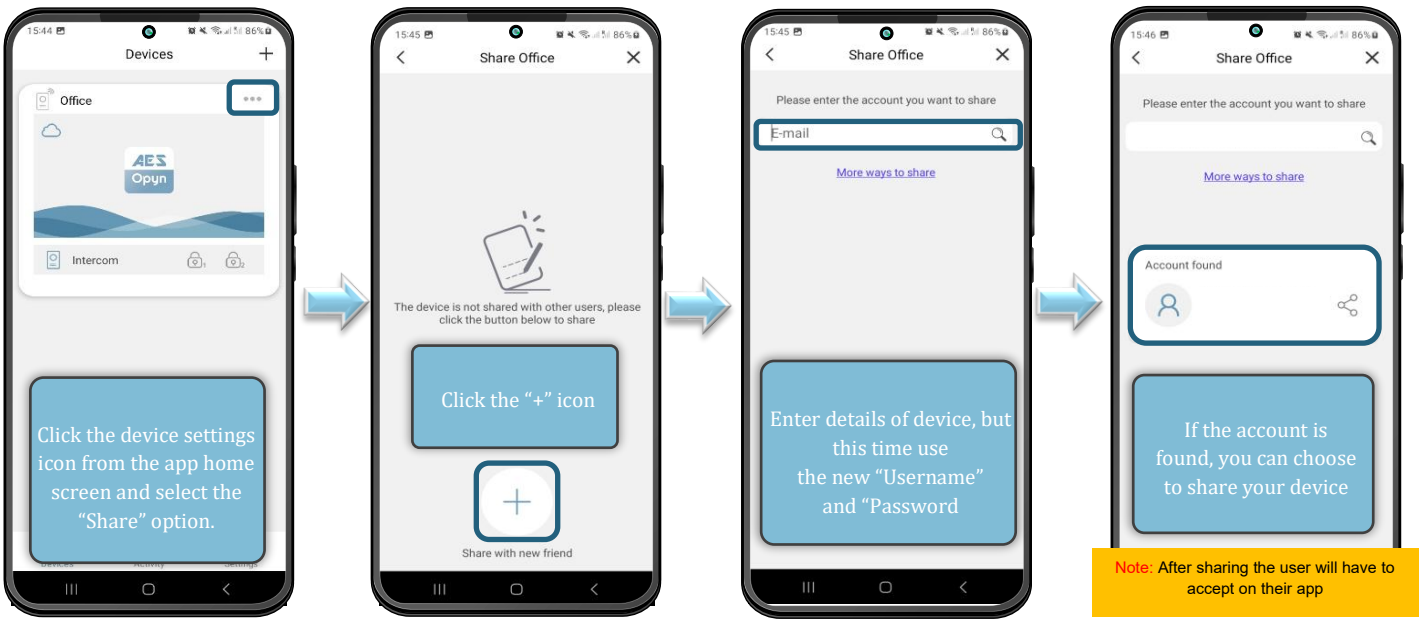


2.3.4. Sound Settings

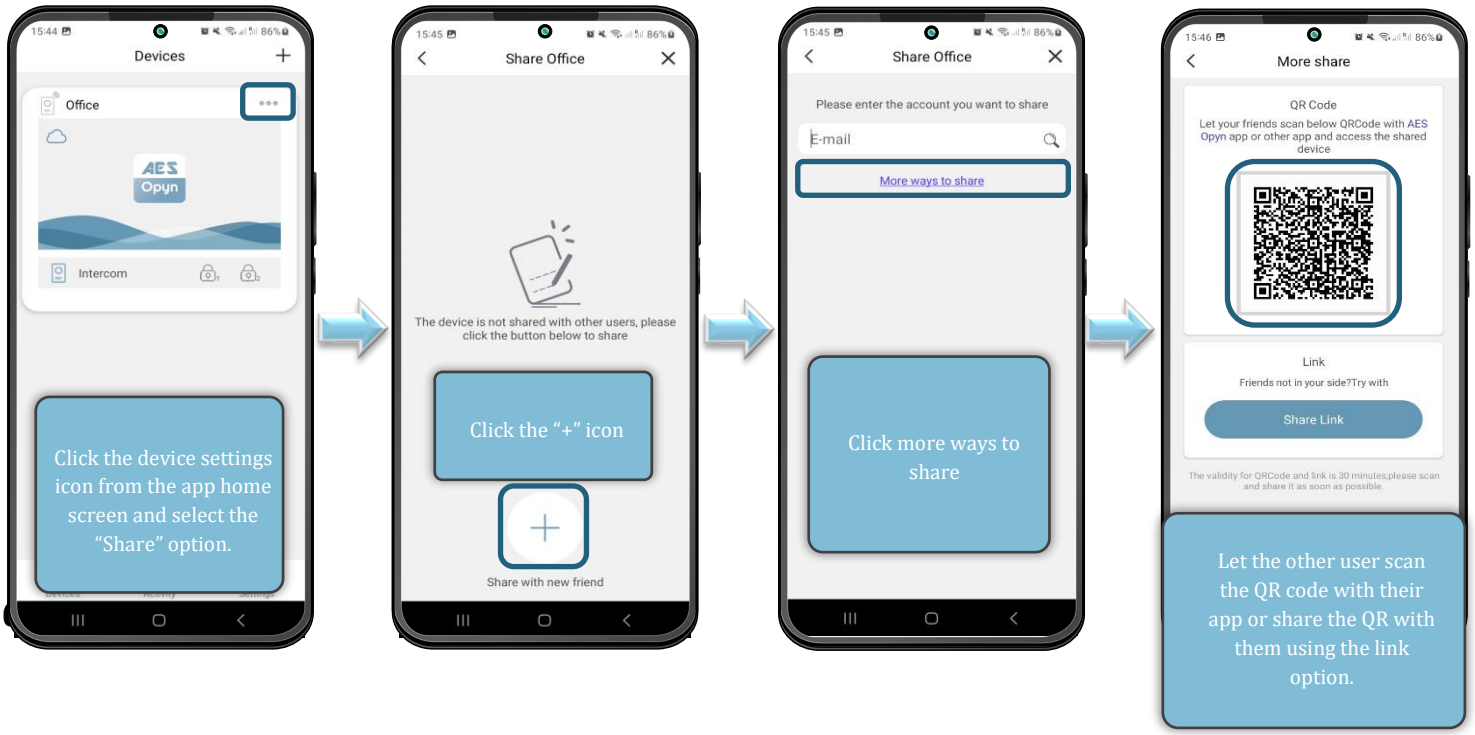


2.4. Share Device

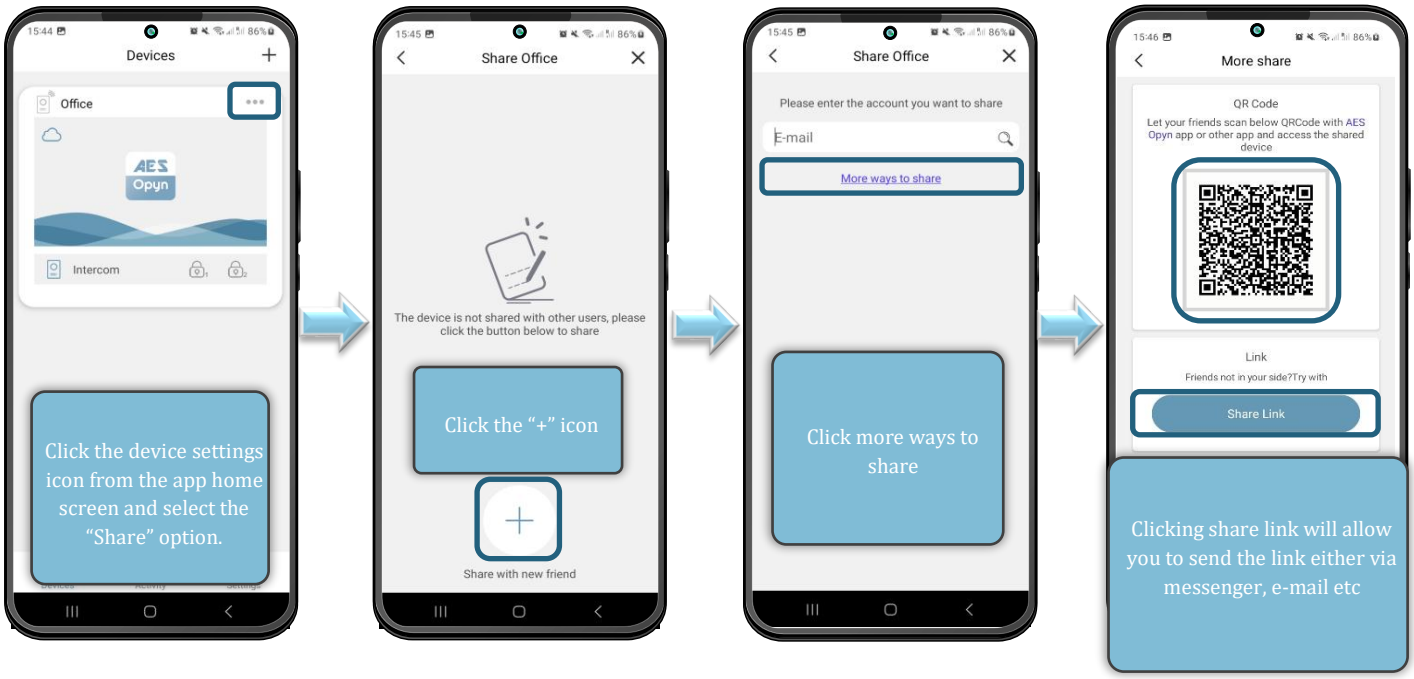
2.4.1. Search Account



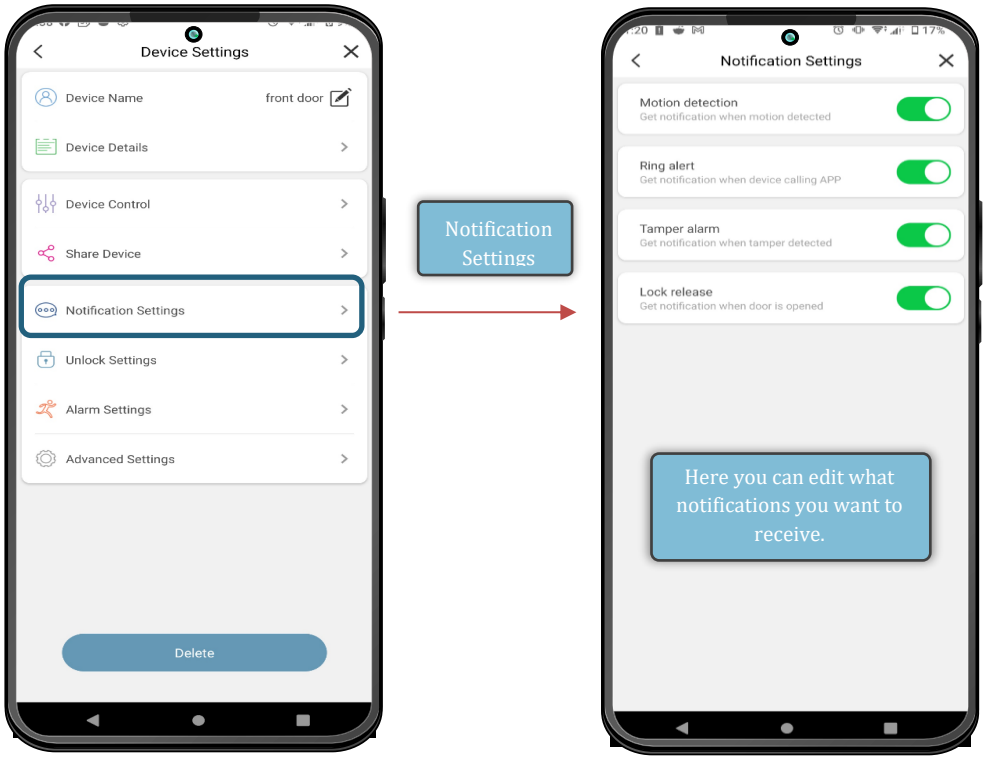
2.4.2. QR Code



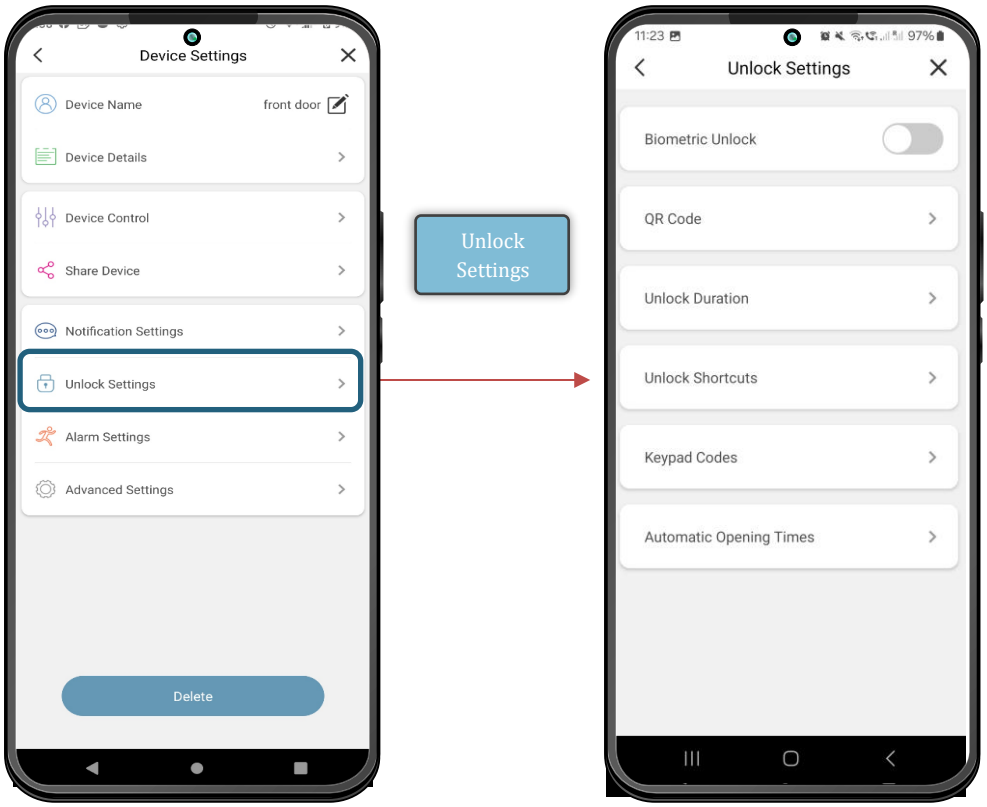
2.4.3. Share Link



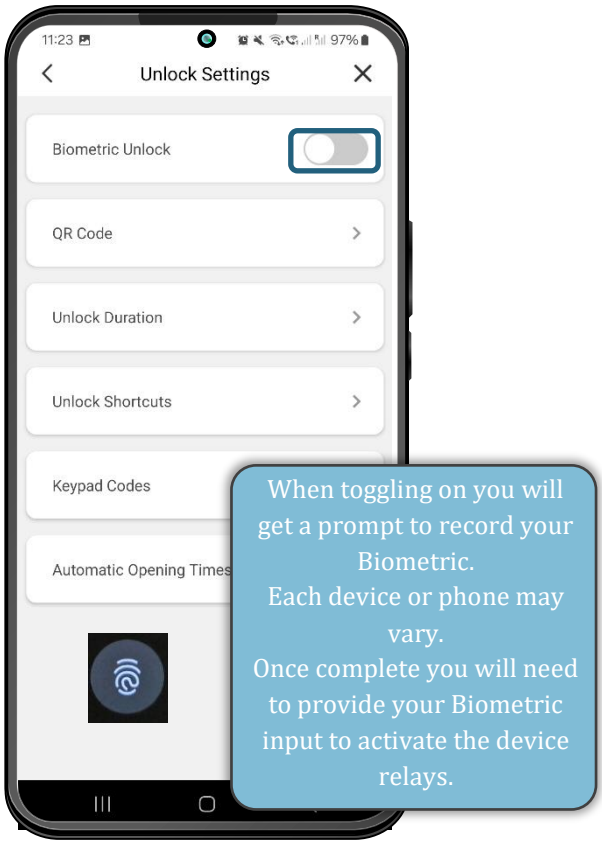
2.5. Notification Settings



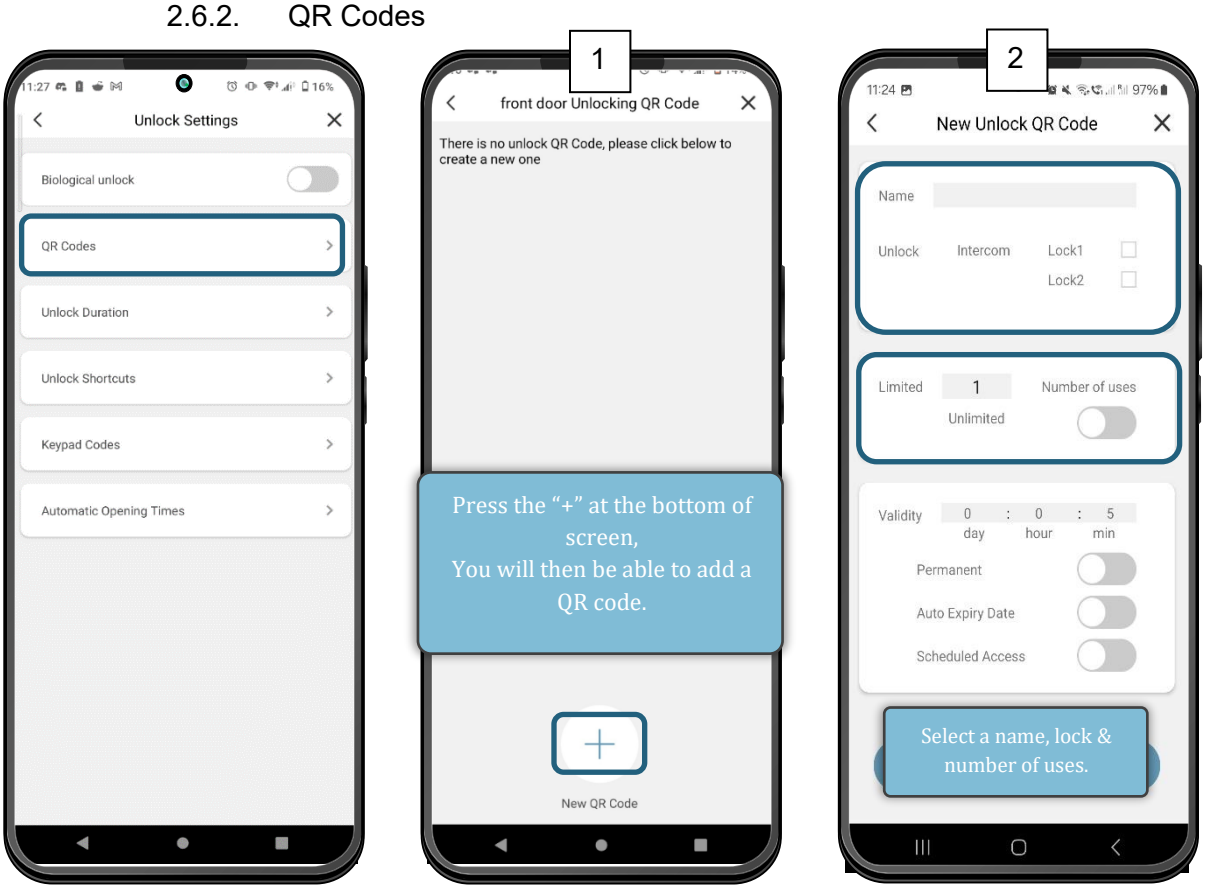
2.6. Unlock Settings



2.6.1. Biometric Unlock

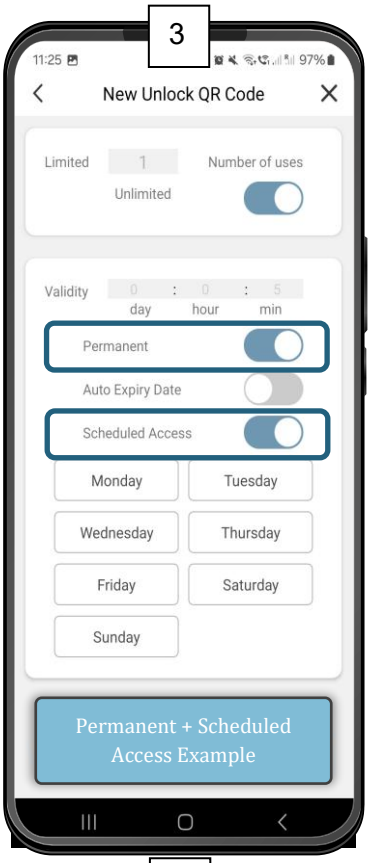


2.6.2. QR Codes

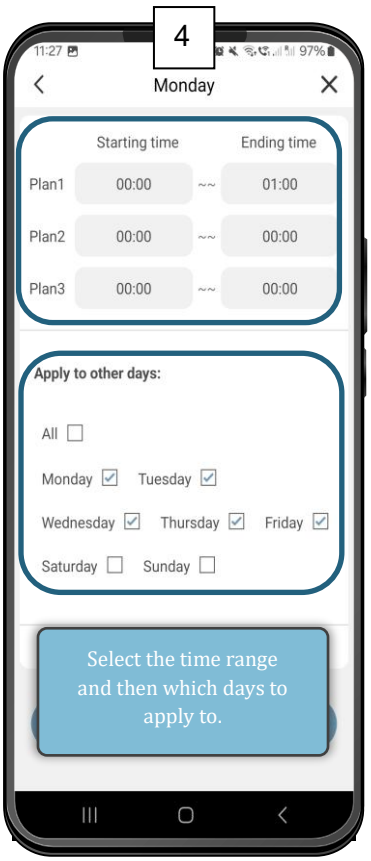


Set “Validity” time between simply “Permanent”, “Auto Expiry date” & “Scheduled Access”.

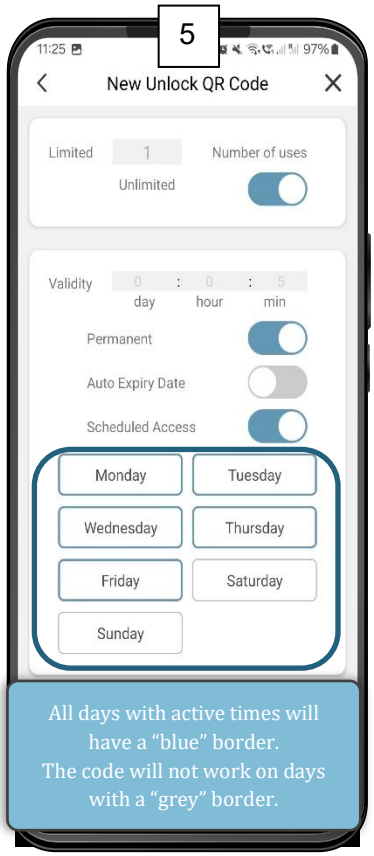
Permanent – The code will work 24/7 and never expire.
Auto Expiry – Set a start time and end time for when the code should work, then expire.
Scheduled Access – Set specific days/times in which the code should work. This option requires you to select Permanent or Auto Expiry first.



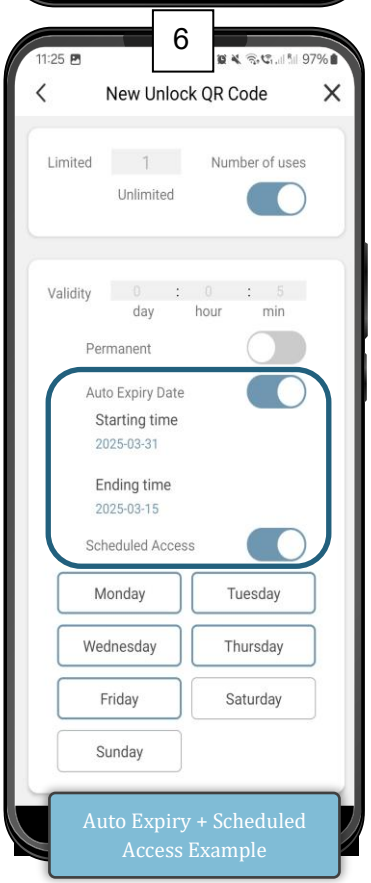
Permanent + Scheduled Access Example



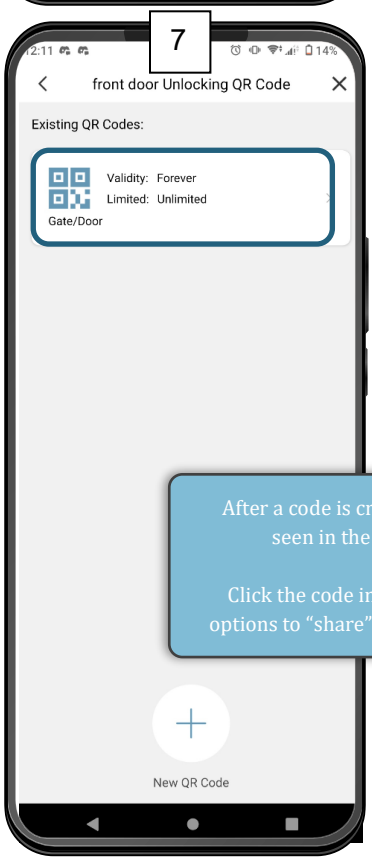
Select the time range and then which days to apply to.

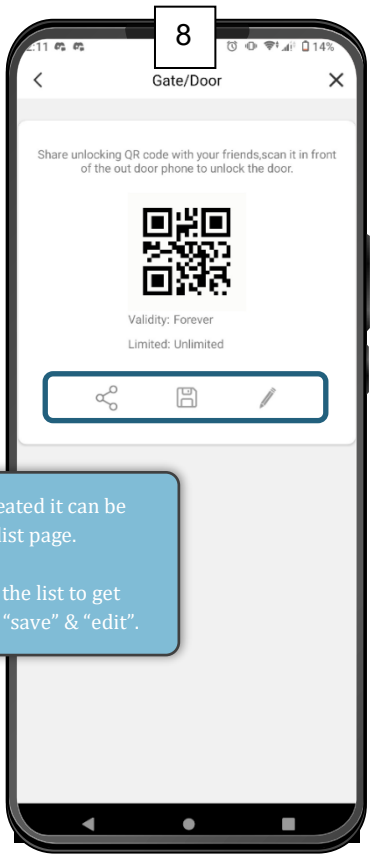


All days with active times will have a “blue” border.
The code will not work on days with a “grey” border.



Auto Expiry + Scheduled Access Example

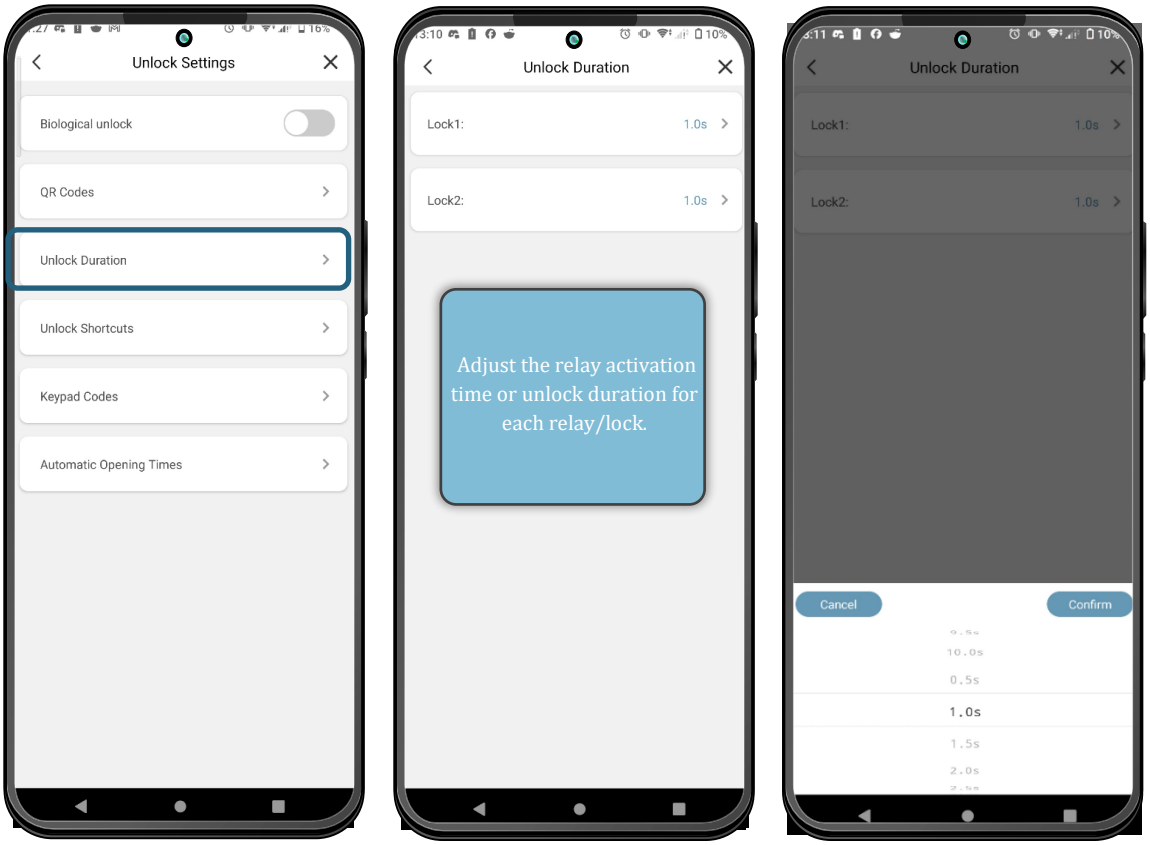




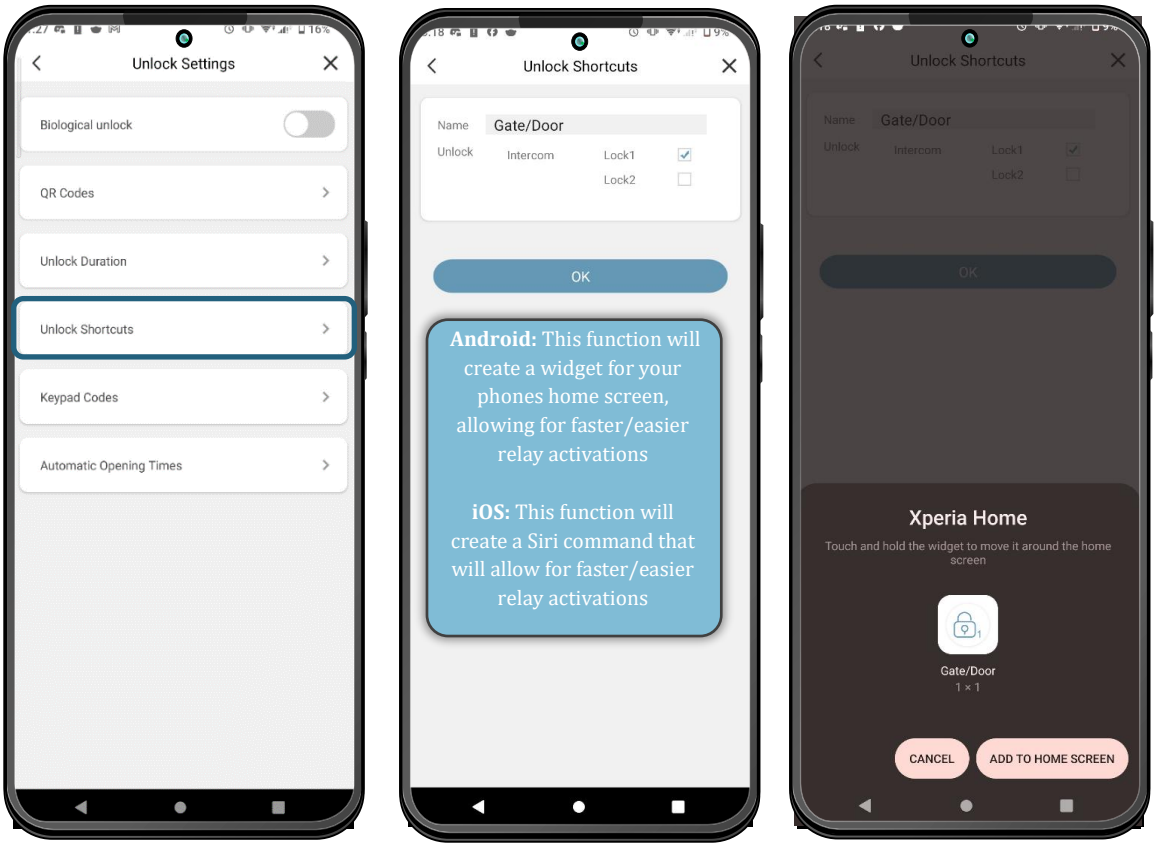
After a code is created it can be seen in the list page.

Click the code in the list to get options to “share”, “save” & “edit”.

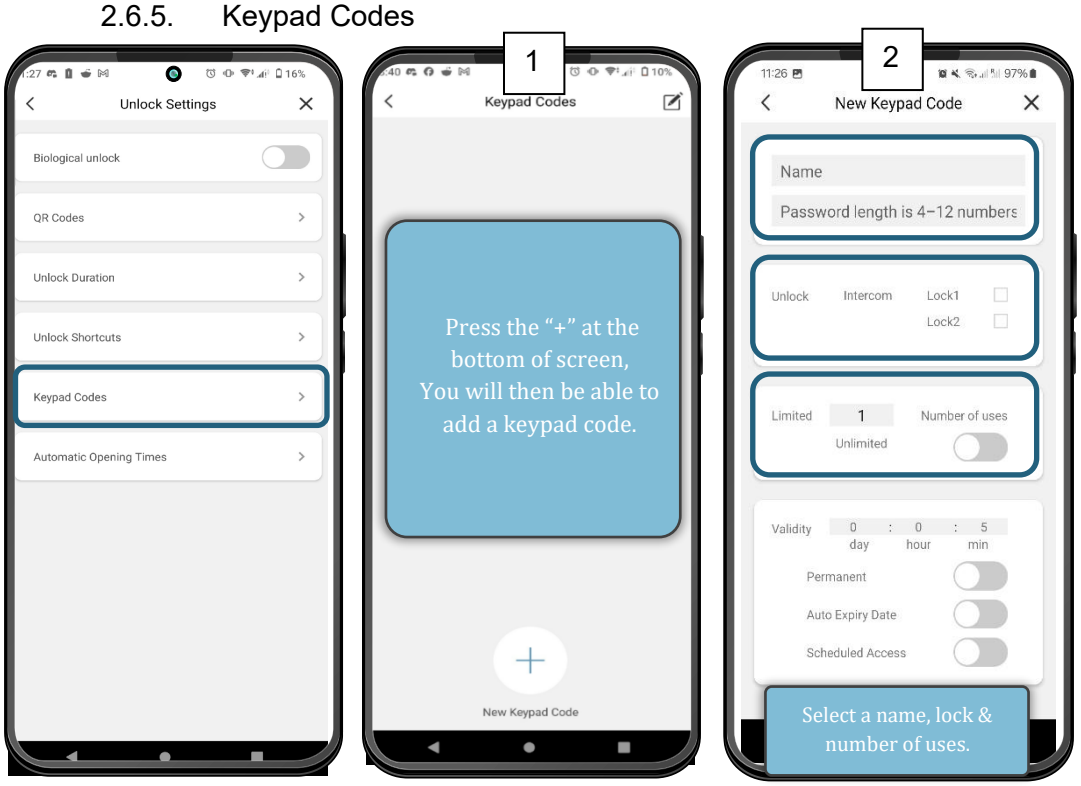
2.6.3. Unlock Duration



2.6.4. Unlock Shortcuts

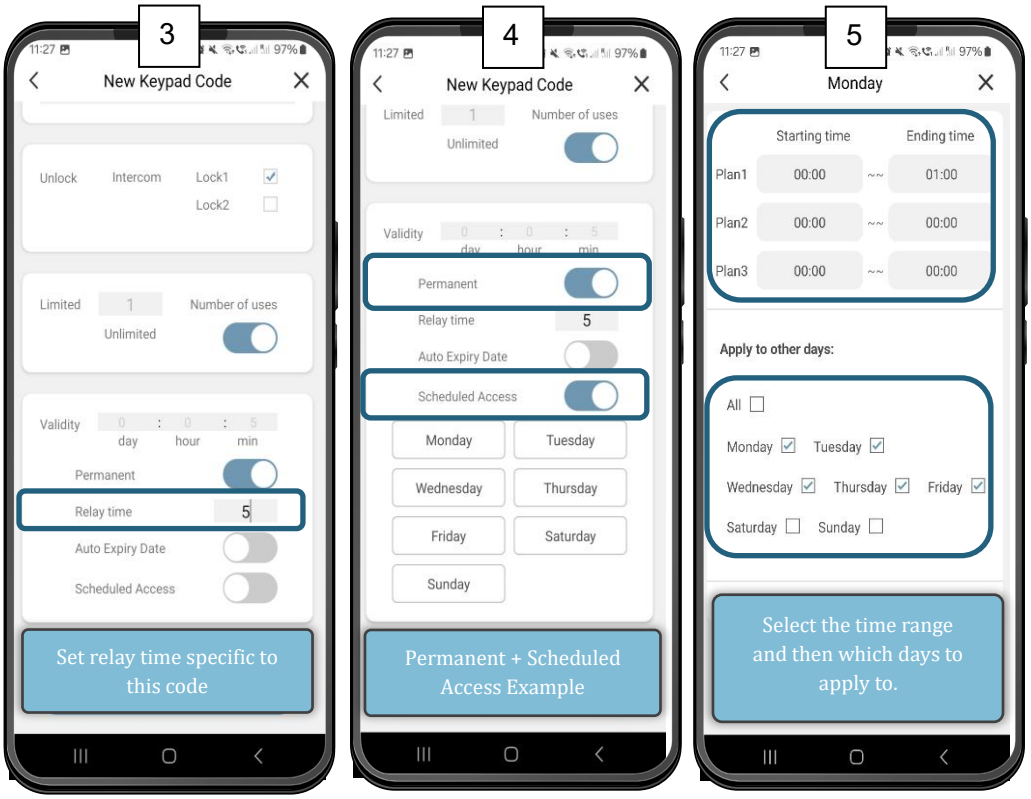


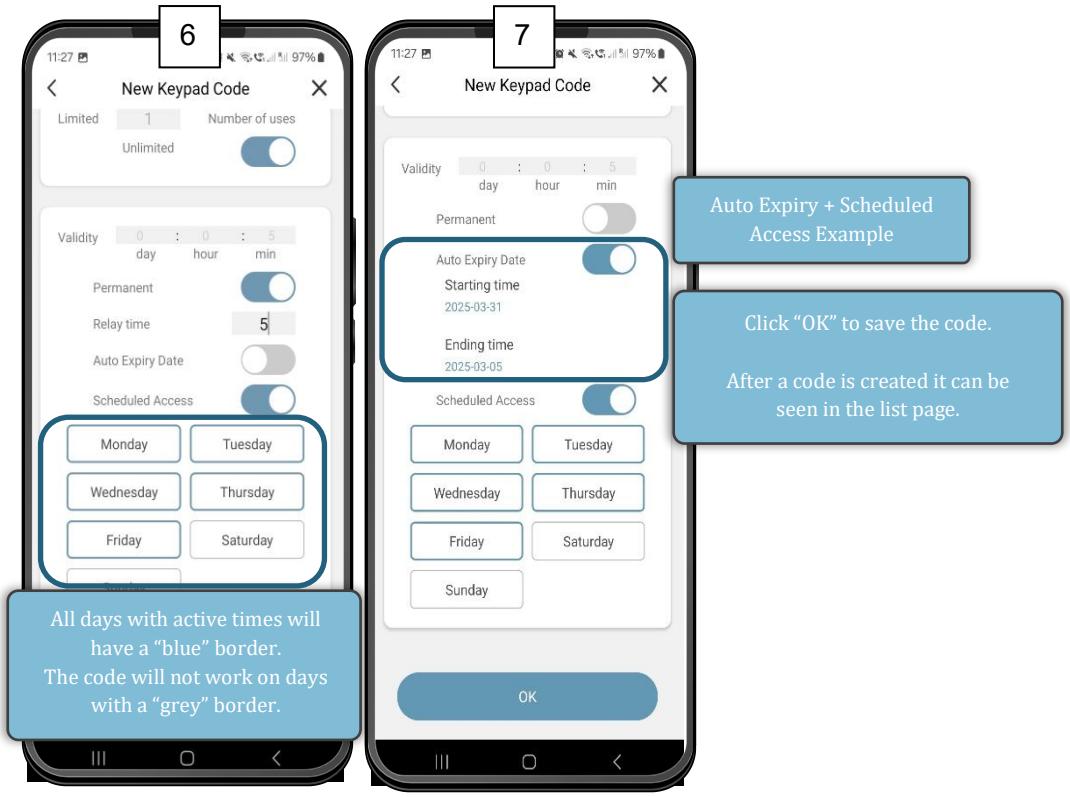
2.6.5. Keypad Codes



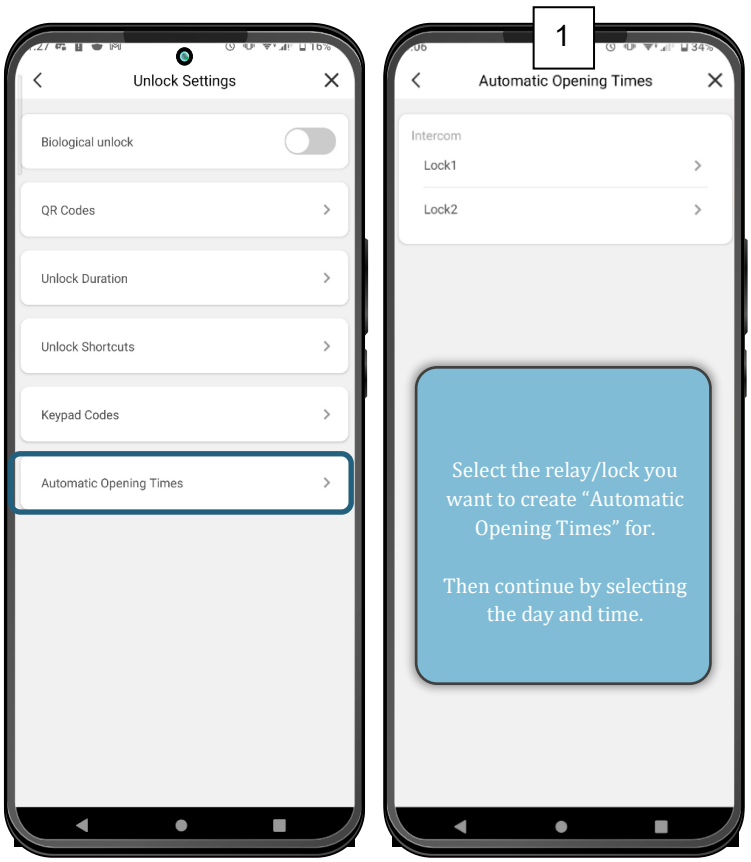
Set "Validity" time between simply "Permanent", "Auto Expiry date" & "Scheduled Access".

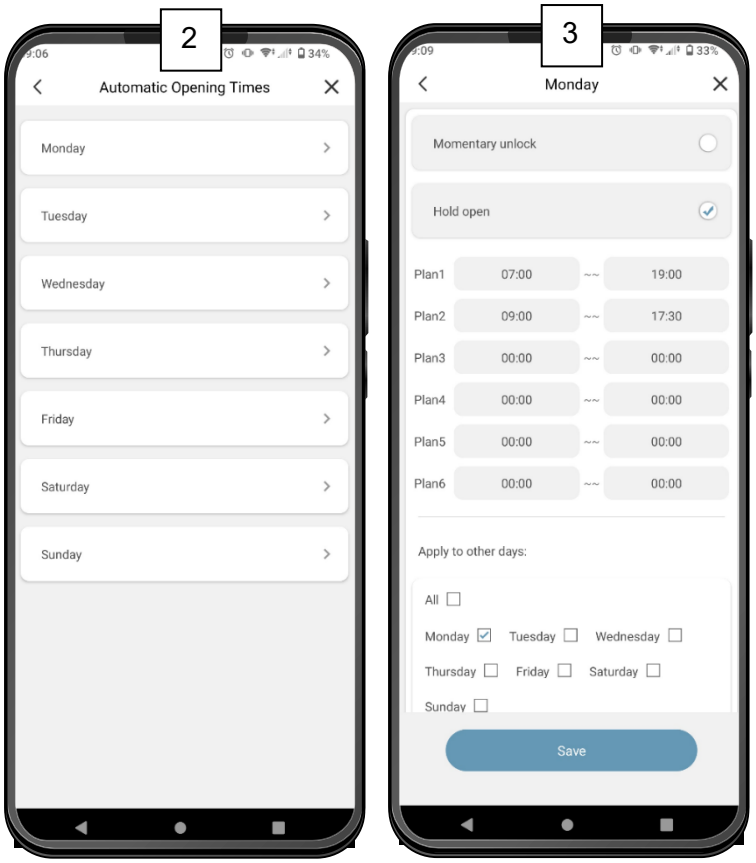
Permanent – The code will work 24/7 and never expire.
Auto Expiry – Set a start time and end time for when the code should work, then expire.
Scheduled Access – Set specific days/times in which the code should work. This option requires you to select Permanent or Auto Expiry first.





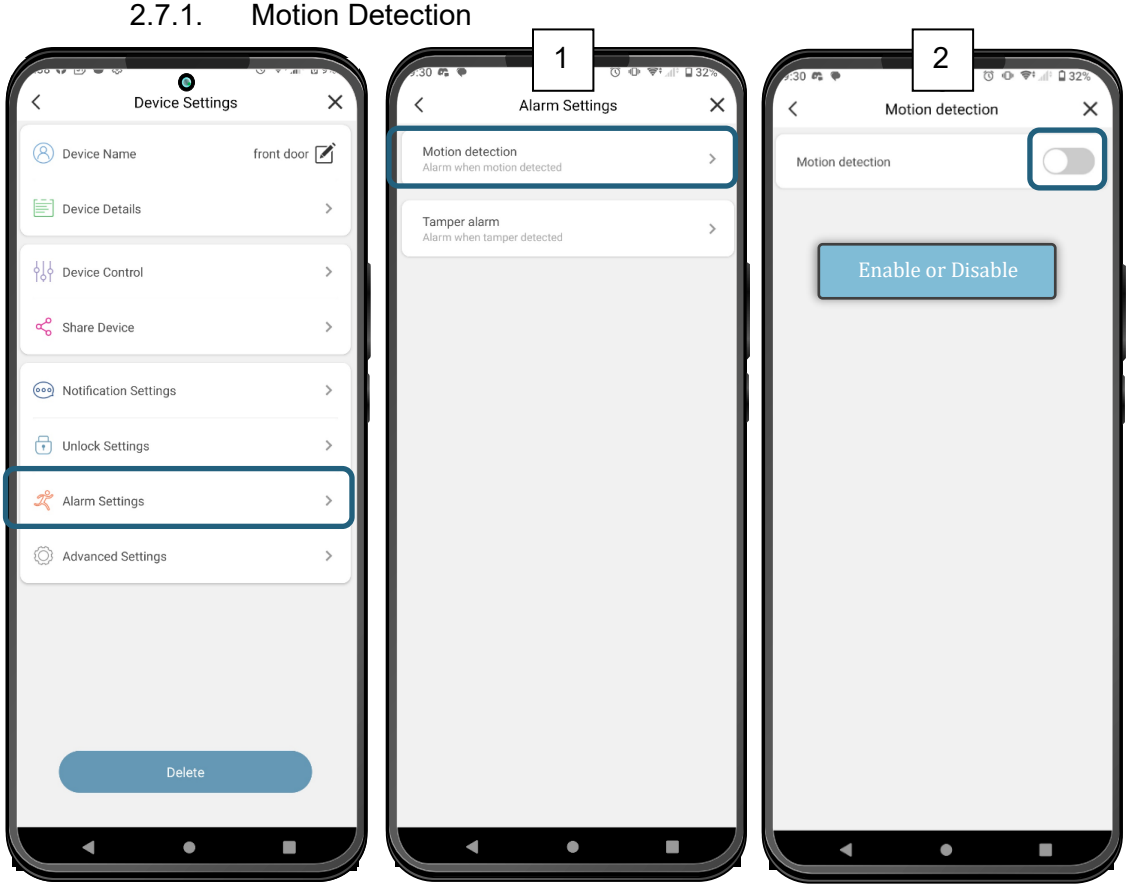
2.6.6. Automatic Opening Times

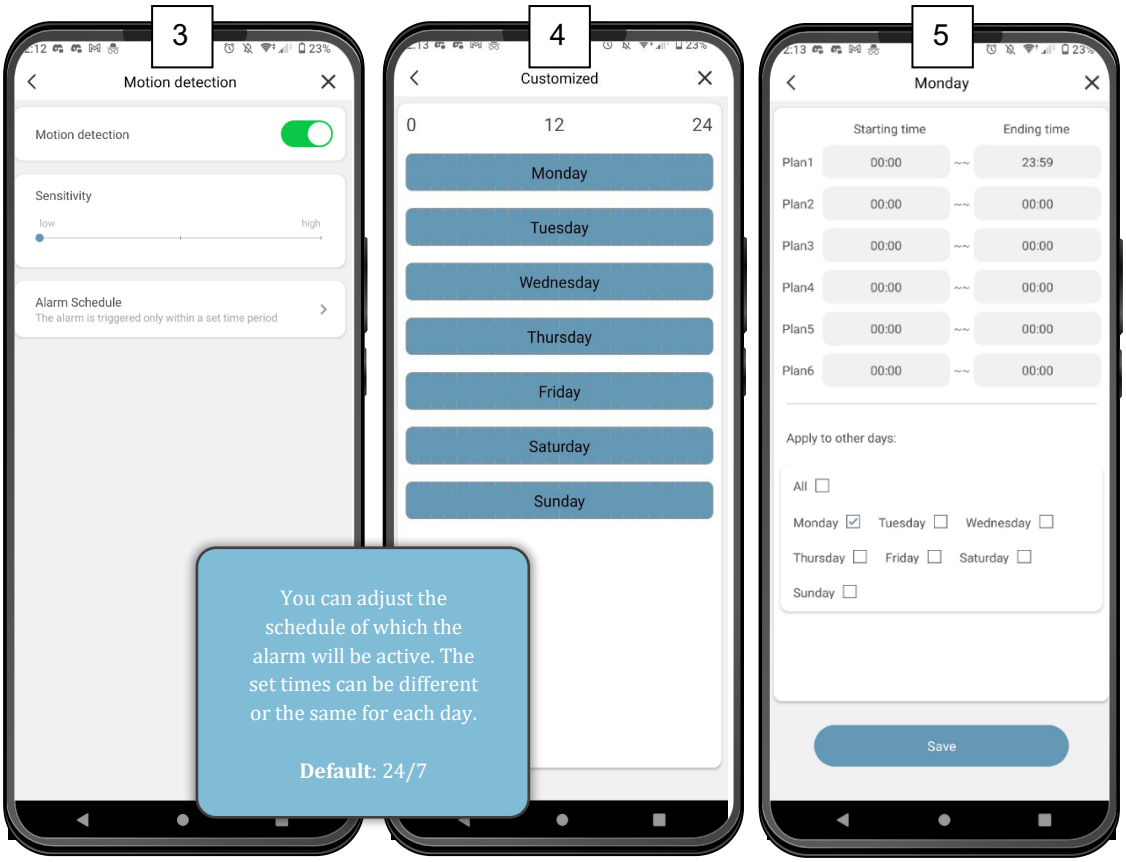




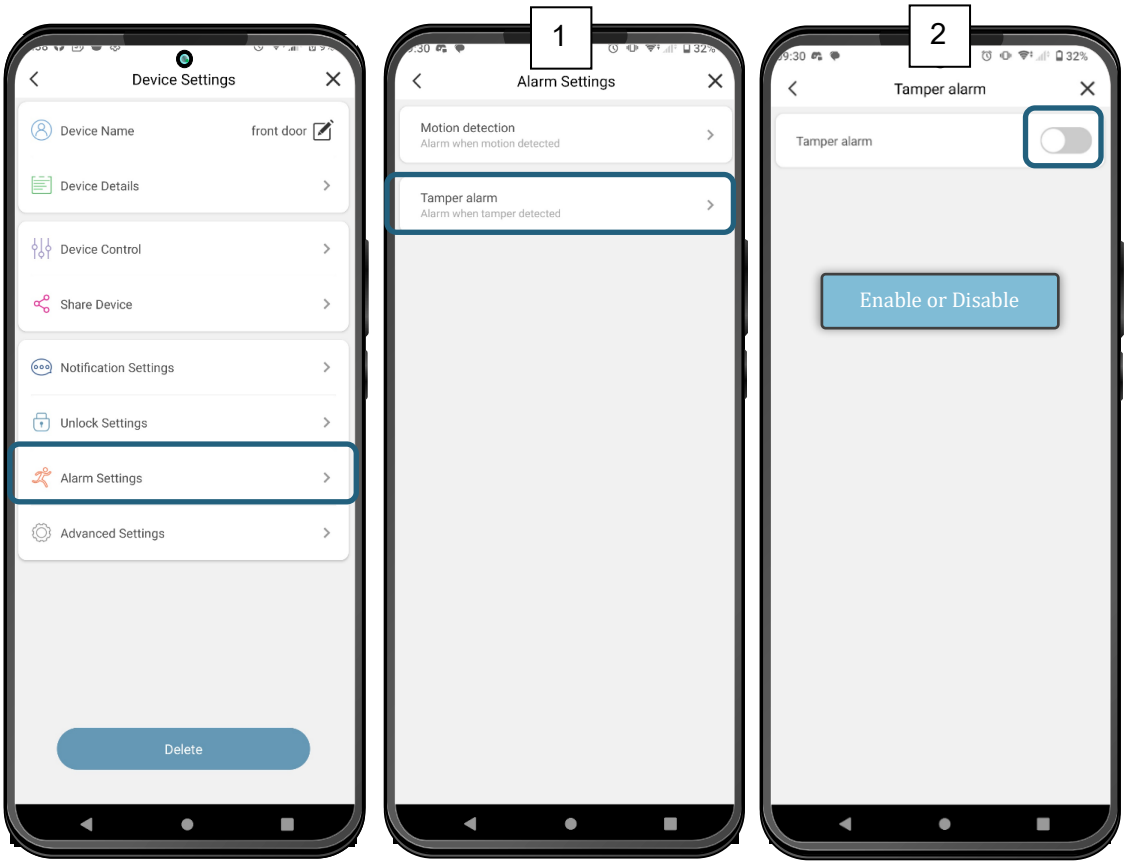
2.7. Alarm Settings

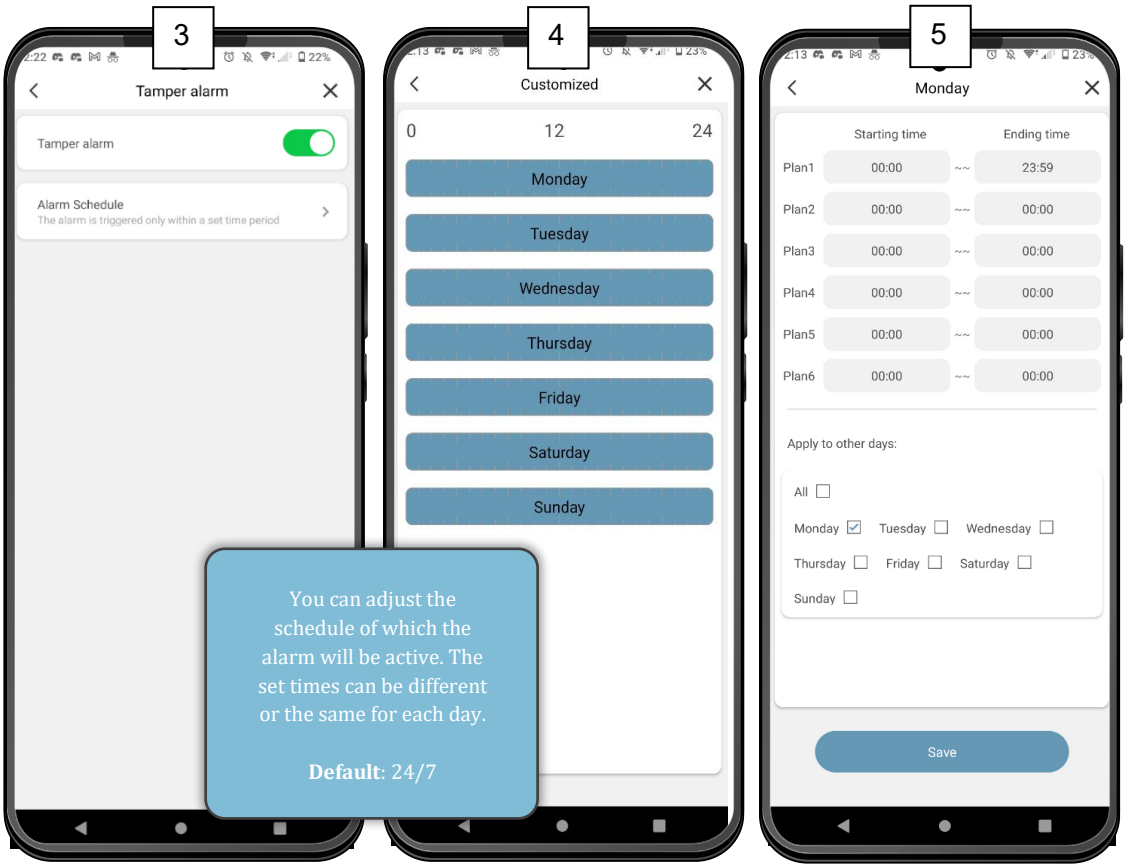
2.7.1. Motion Detection



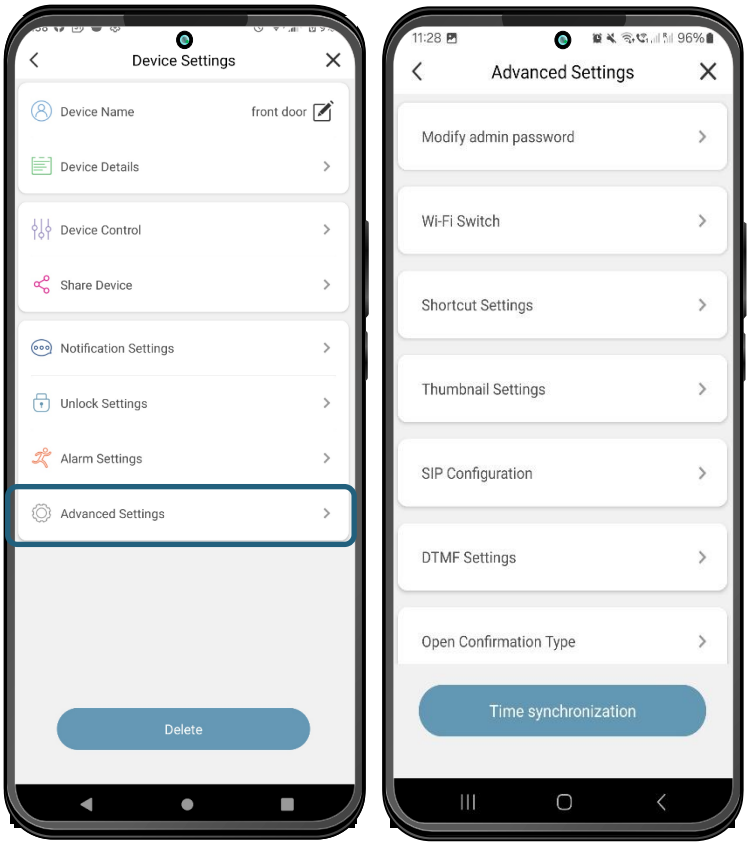


2.7.2. Tamper Alarm

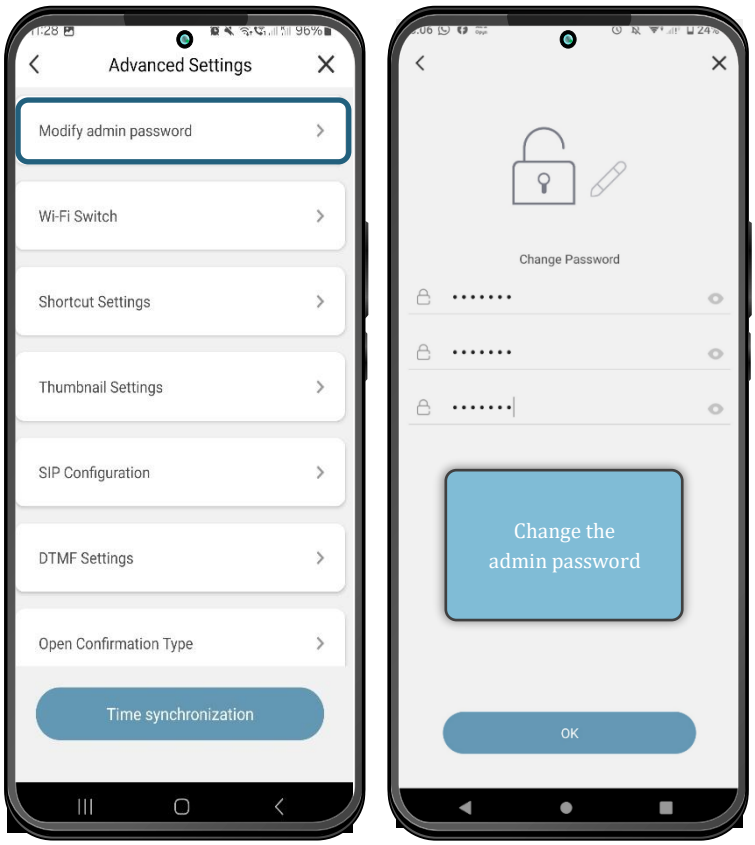




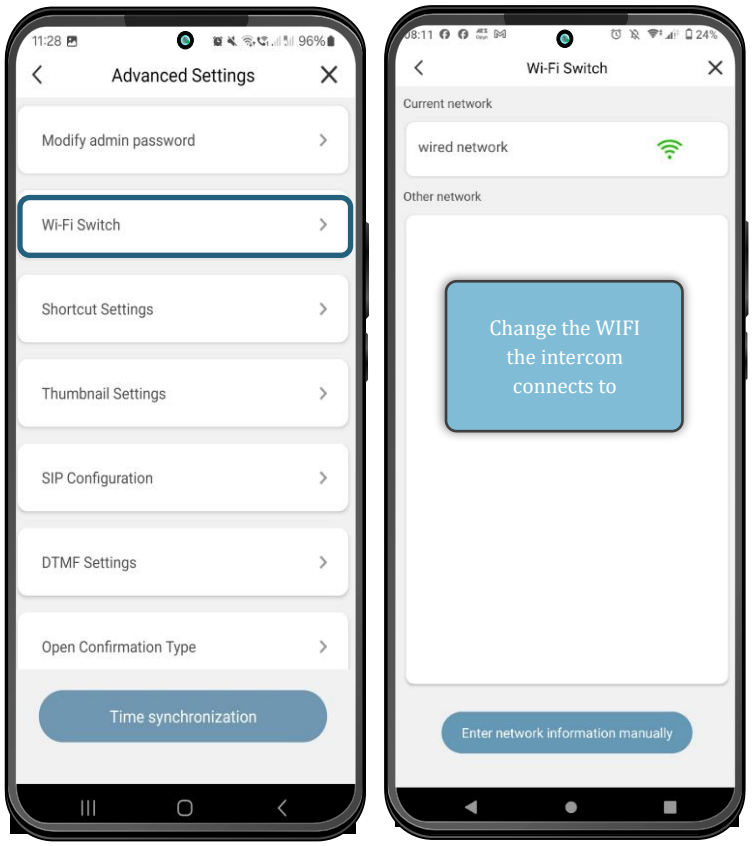
2.8. Advanced Settings



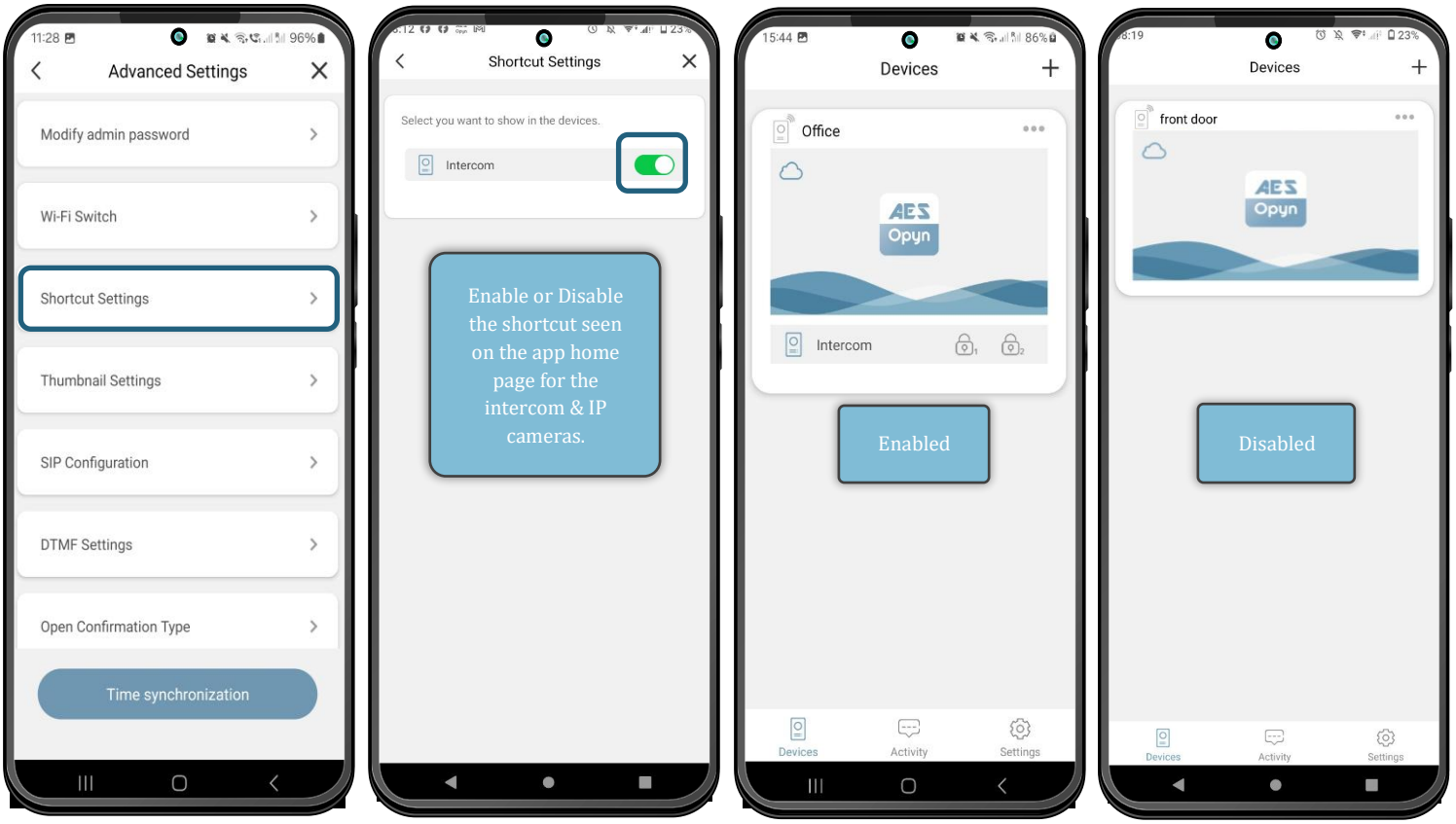
2.8.1. Modify Admin Password



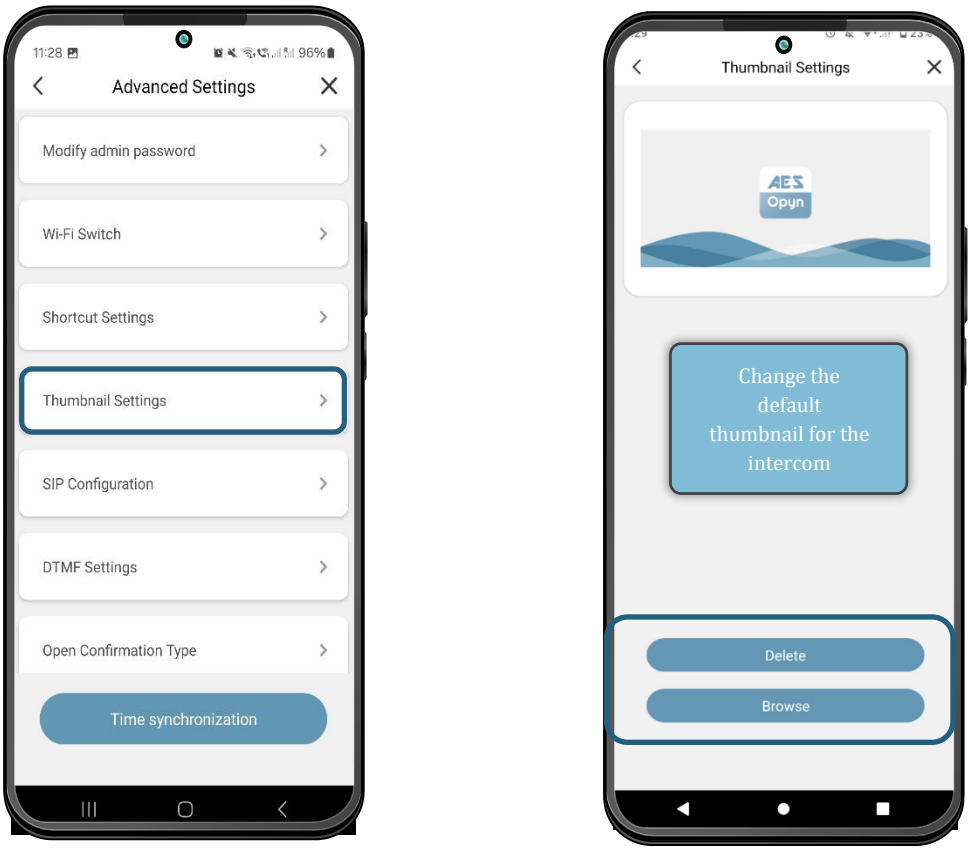
2.8.2. Wi-fi Switch



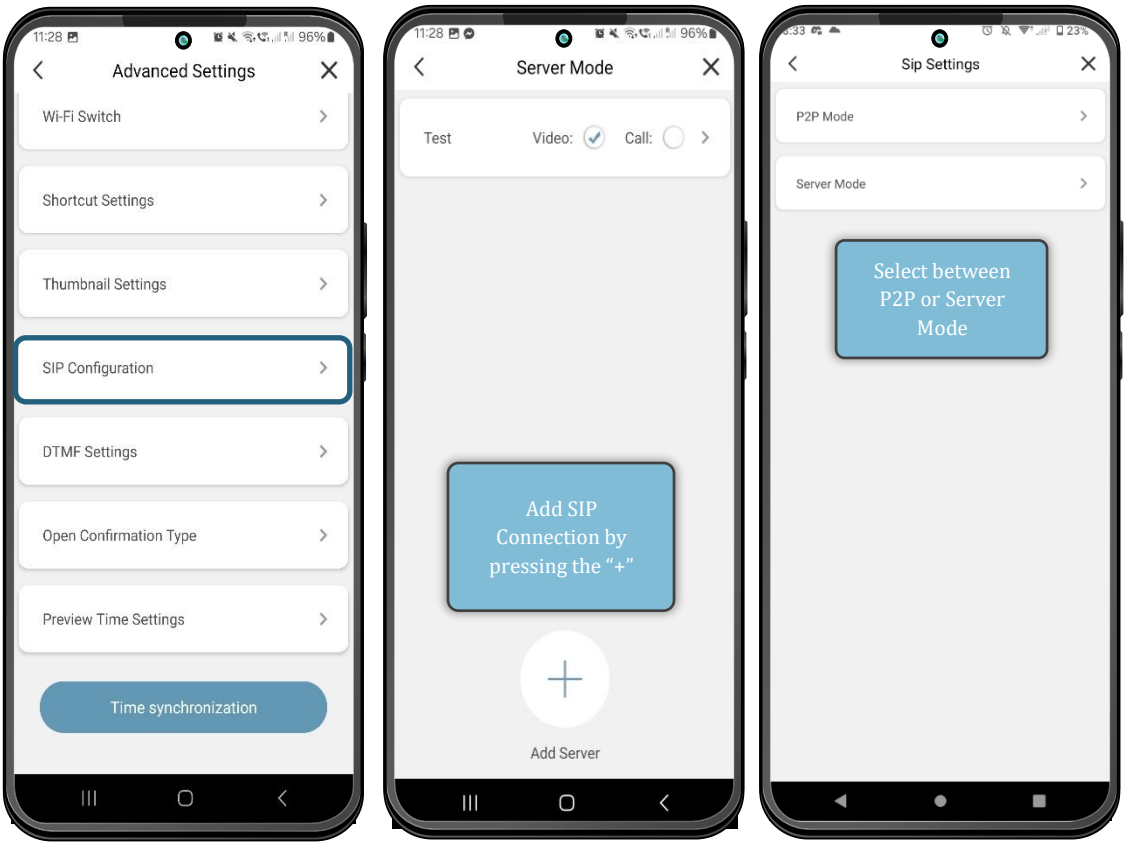
2.8.3. Shortcut Settings



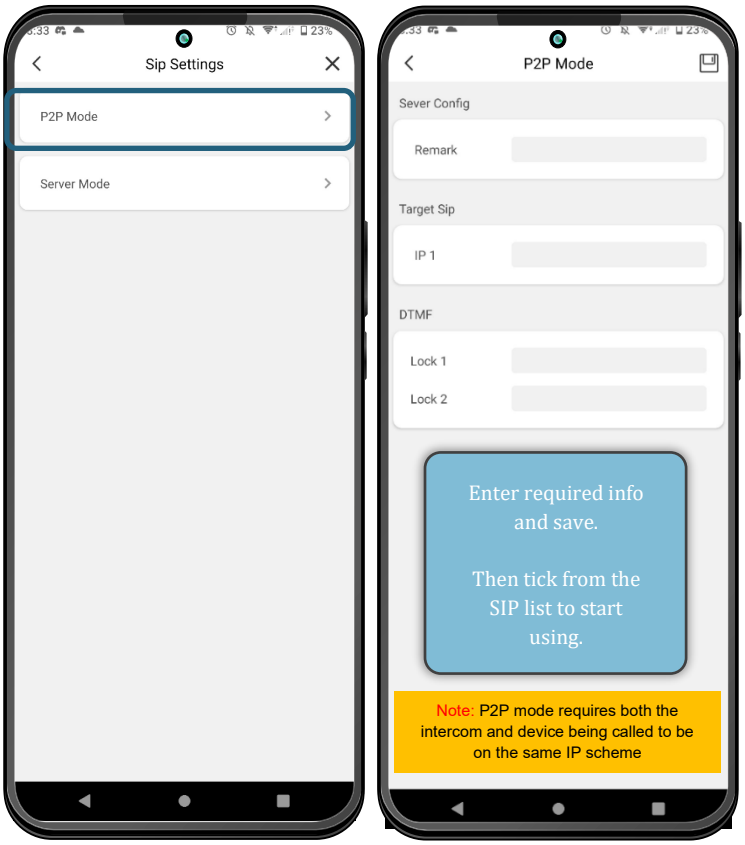
2.8.4. Thumbnail Settings



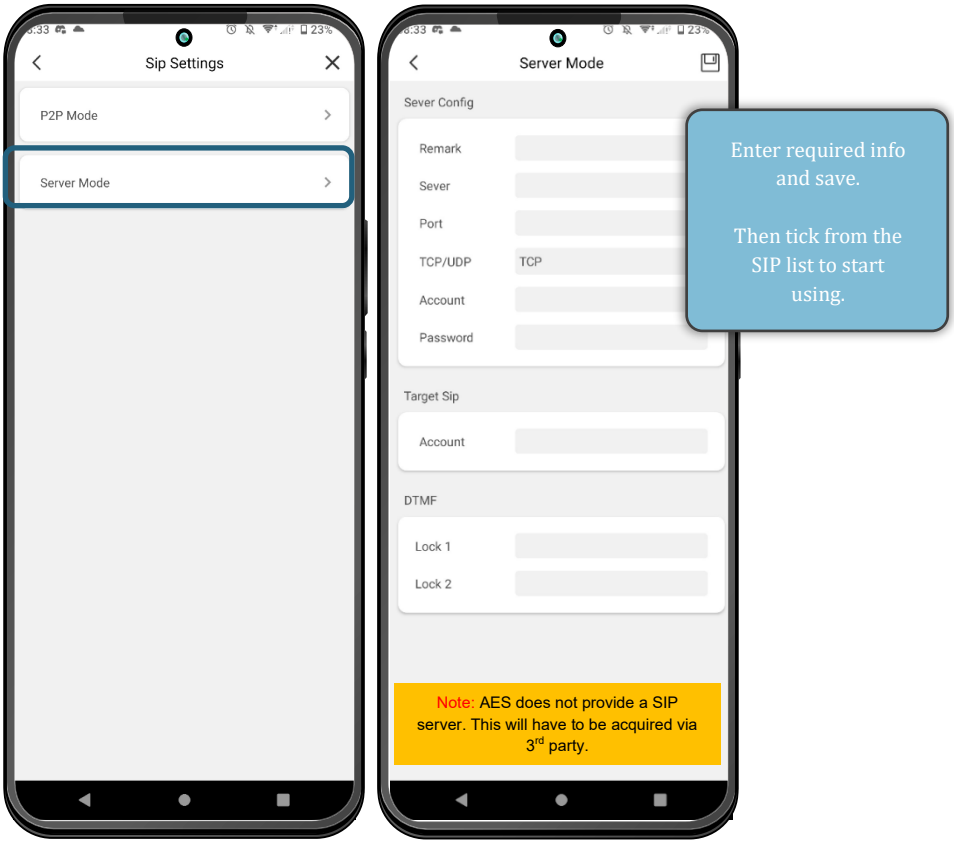
2.8.5. SIP Configuration



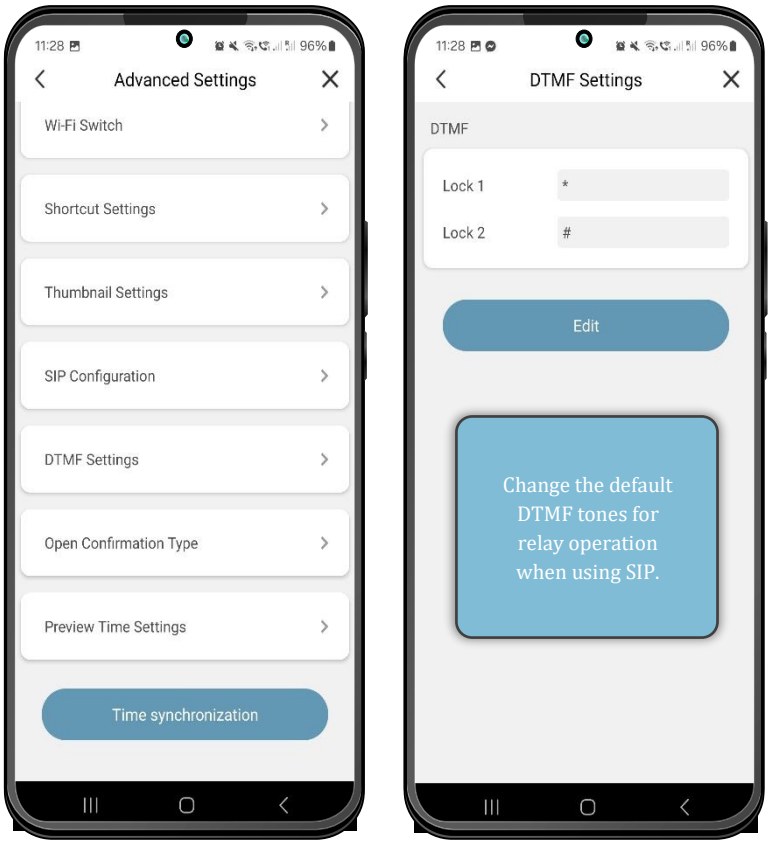
P2P Mode



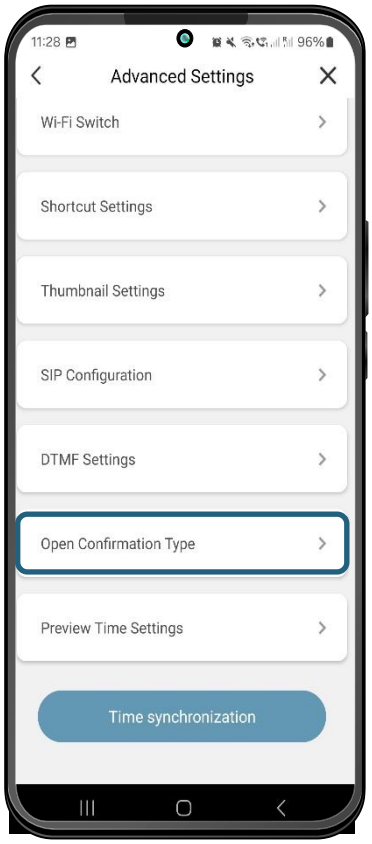
Server Mode

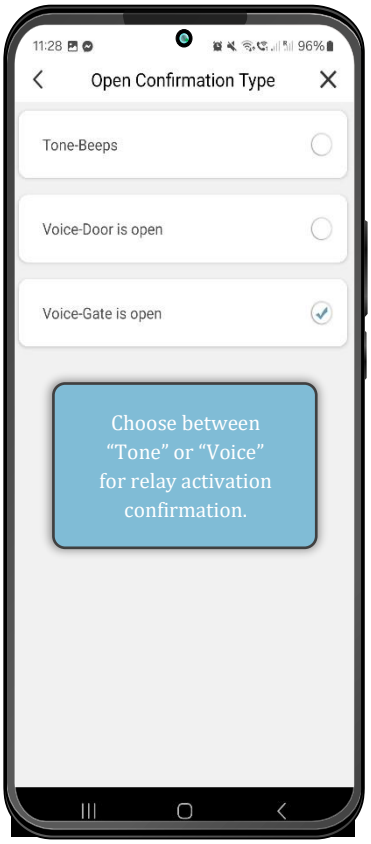


2.8.6. DTMF Settings

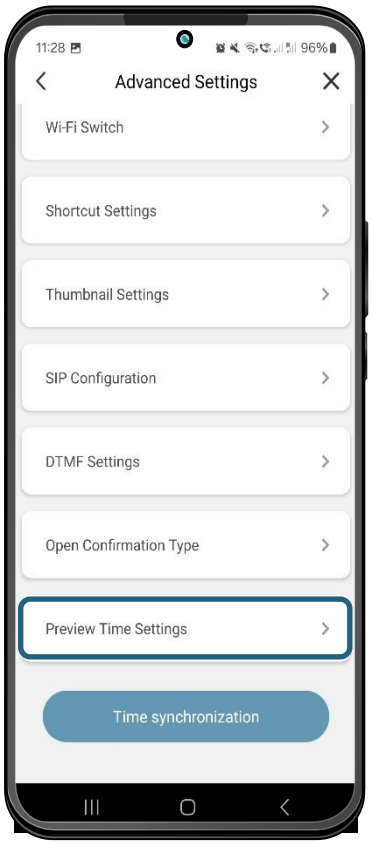


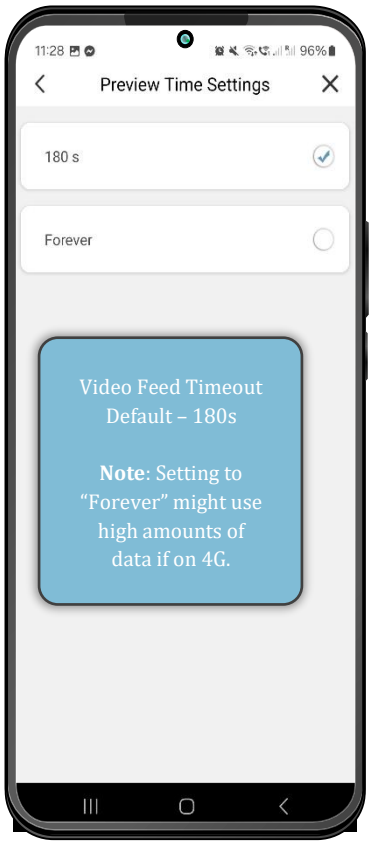
2.8.7. Open Confirmation Type





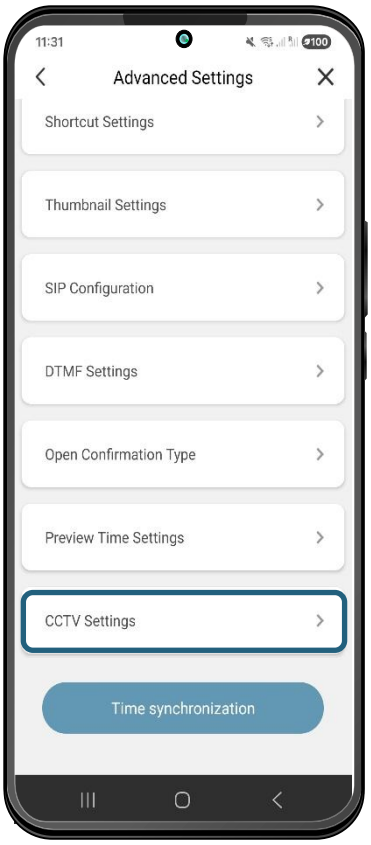
2.8.8. Preview Time Settings

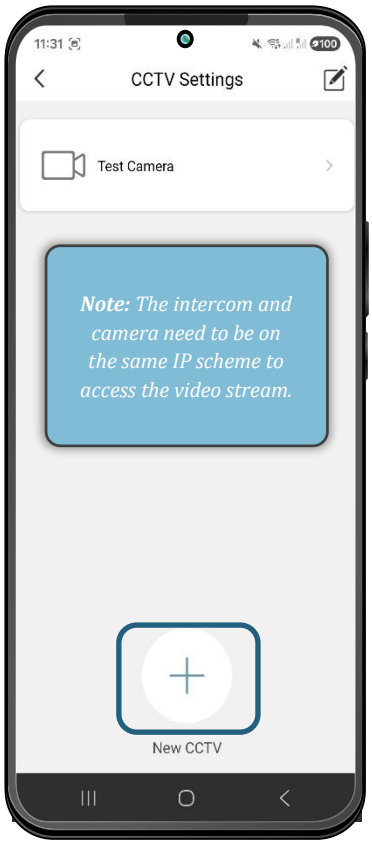


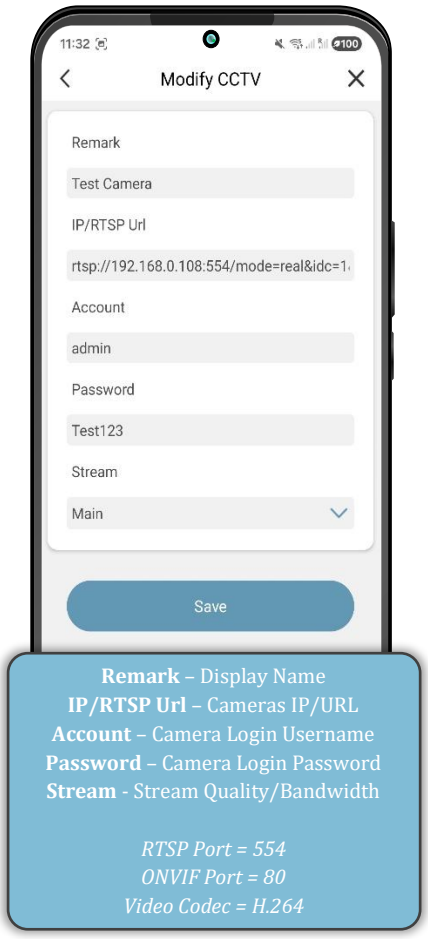


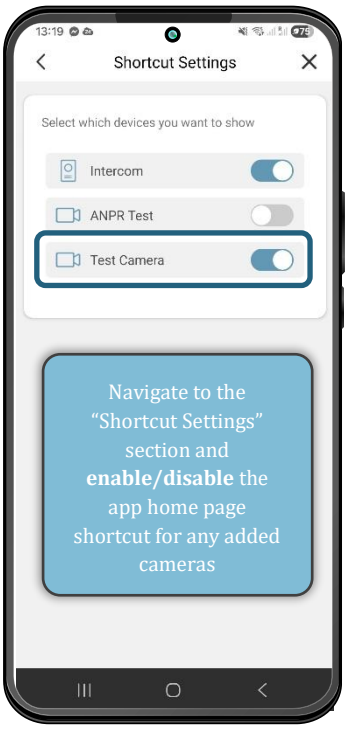
2.8.9. CCTV Settings

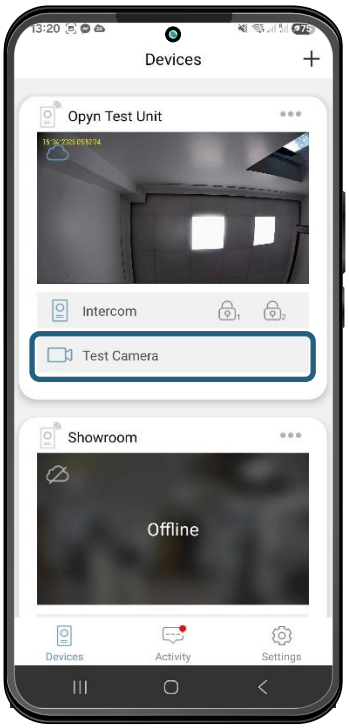
Add CCTV cameras to your Opyn device via ONVIF/RTSP.



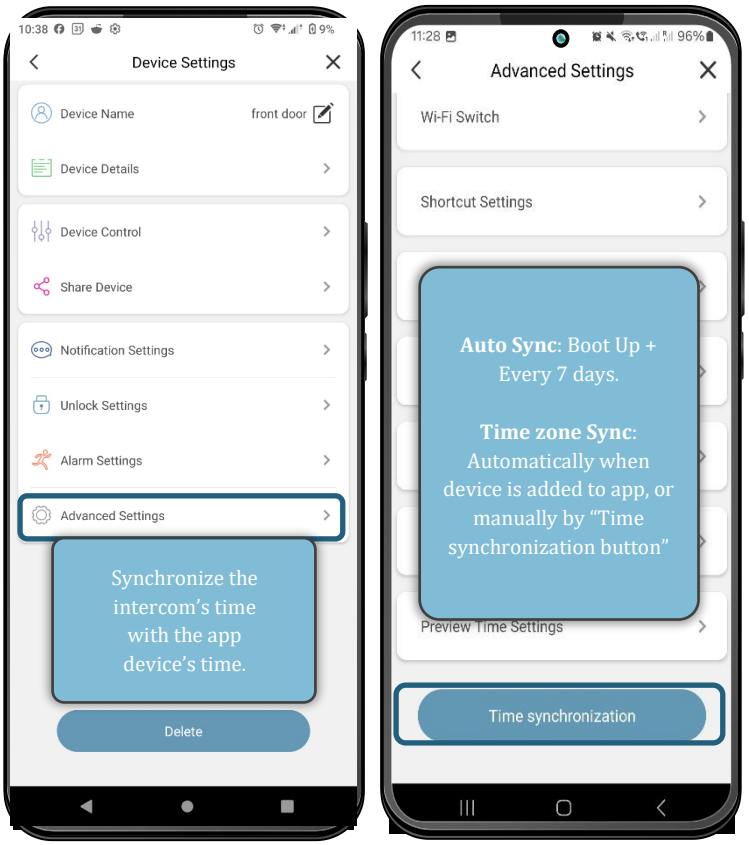




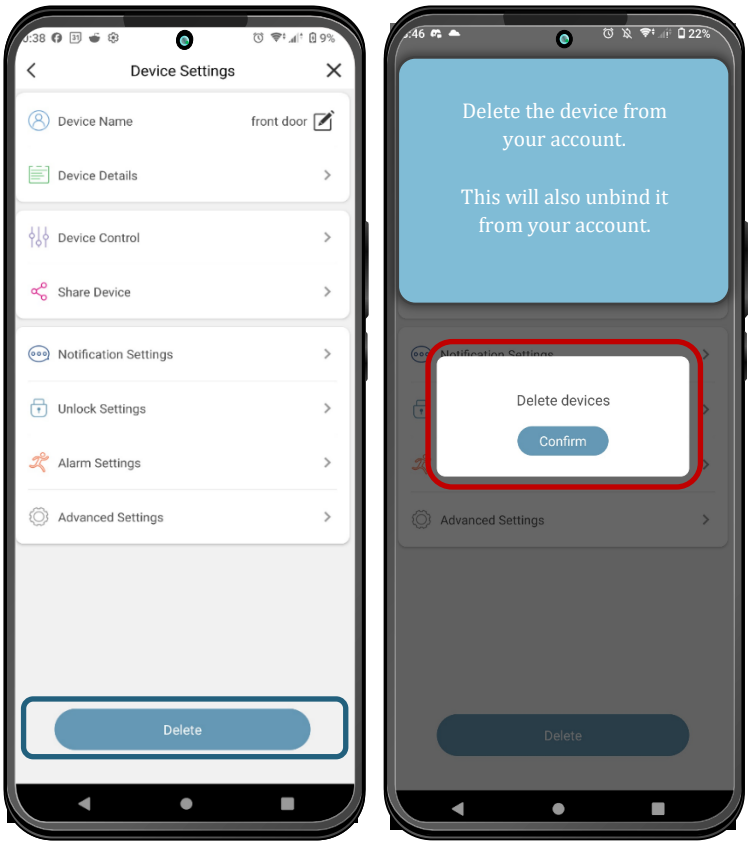




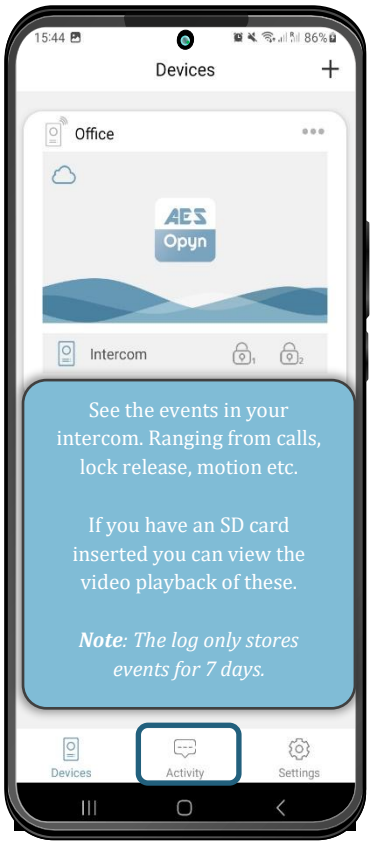
2.8.10. Time Synchronization



2.9. Delete



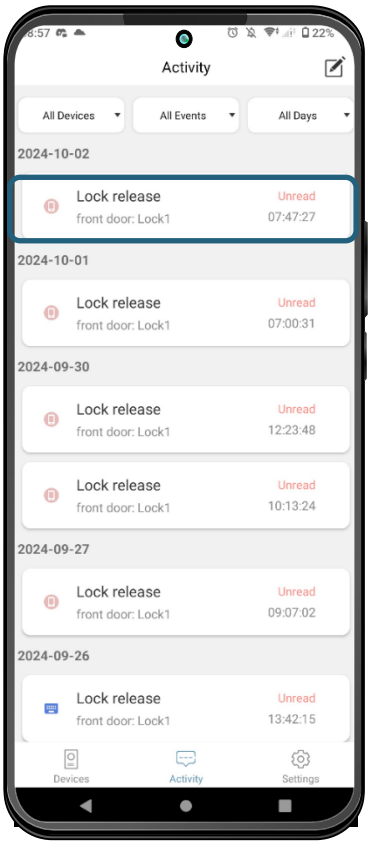
3. Activity Log

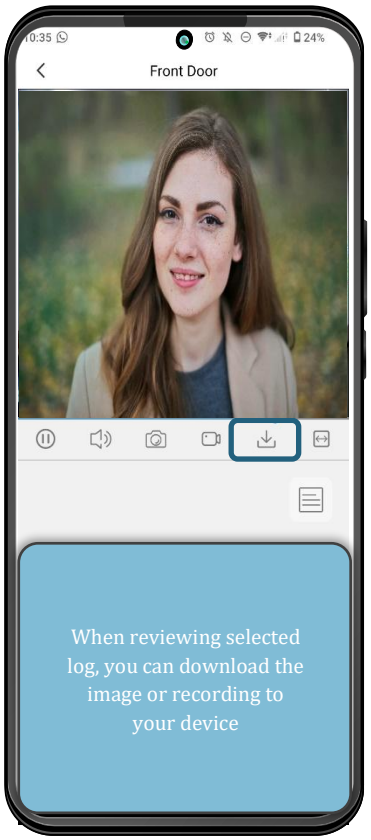


See the events in your intercom. Ranging from calls, lock release, motion etc.

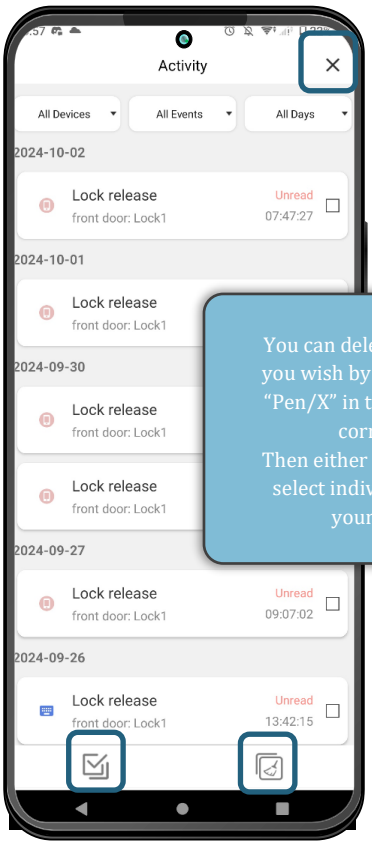
If you have an SD card inserted you can view the video playback of these.

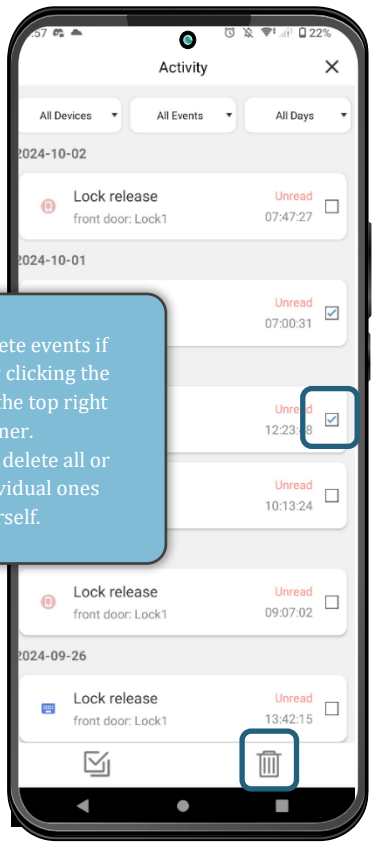
***Note**: The log only stores events for 7 days.*





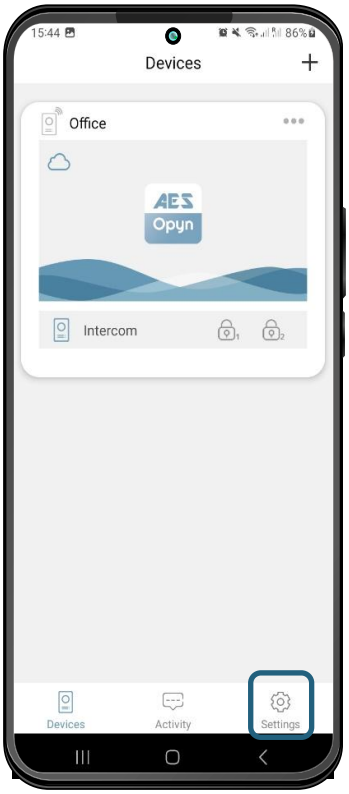
When reviewing selected log, you can download the image or recording to your device

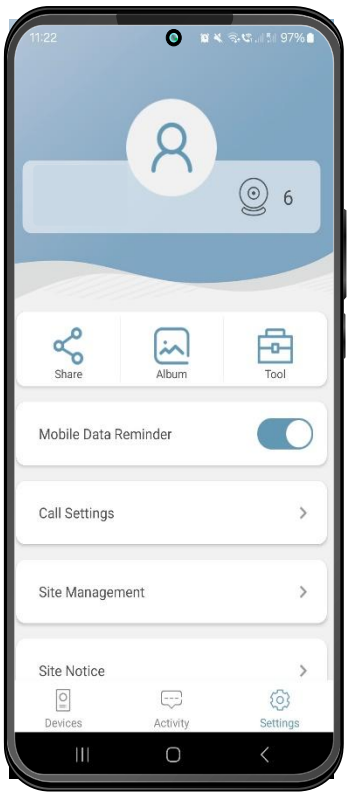


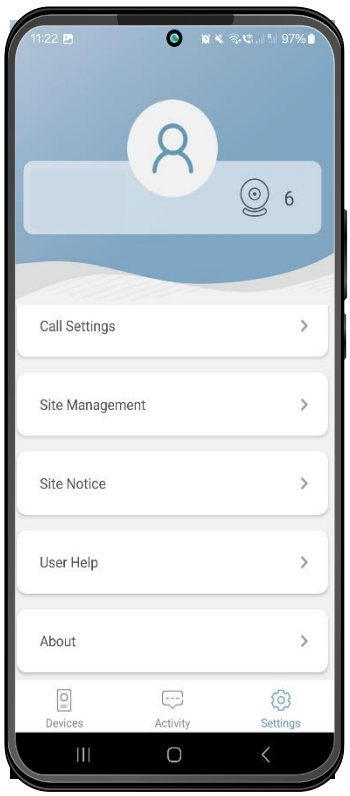


You can delete events if you wish by clicking the "Pen/X" in the top right corner.
Then either delete all or select individual ones yourself.

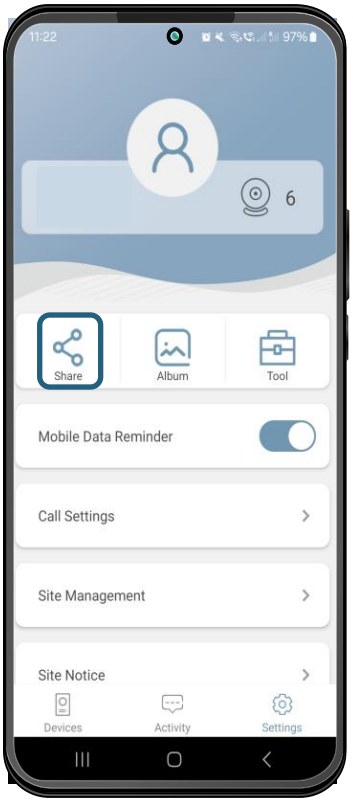
4. Settings (App)

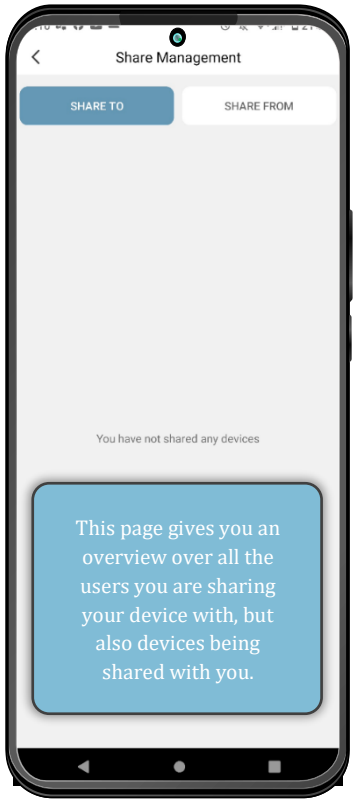




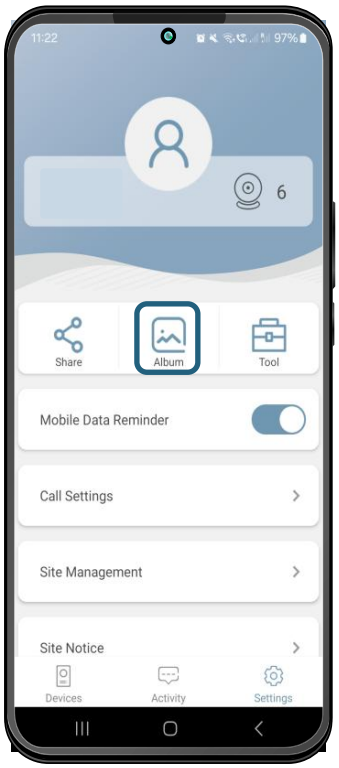


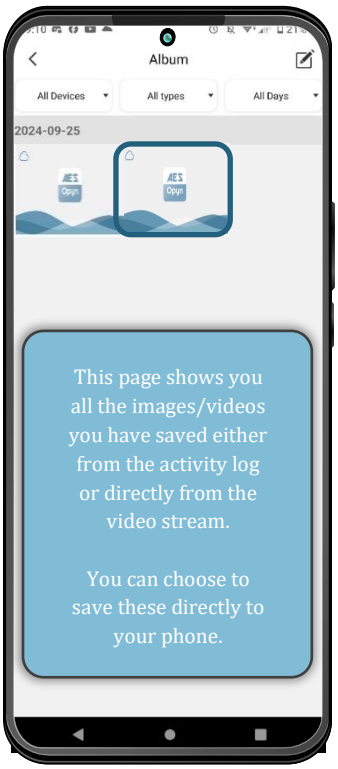
4.1. Share

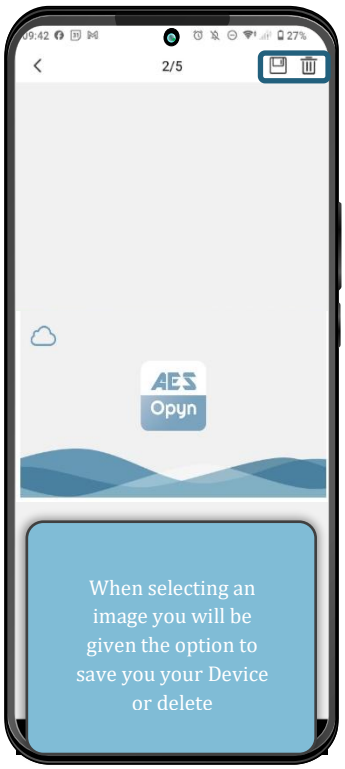




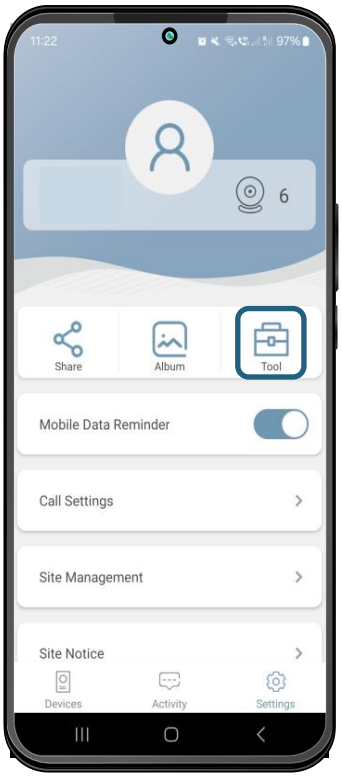
4.2. Album



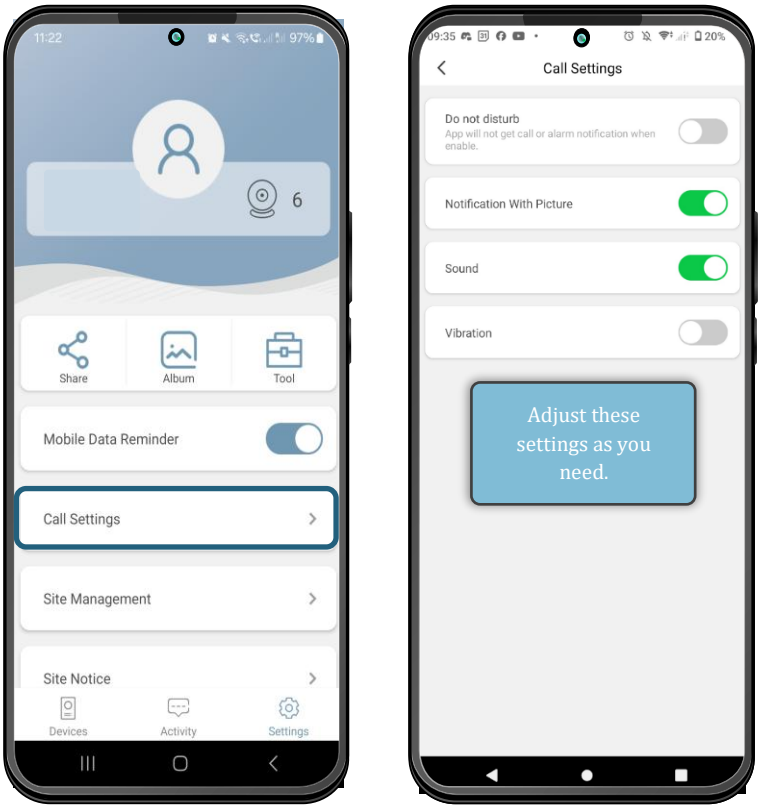




4.3. Tool



4.4. Call Settings



Do not disturb - Which will disable all notifications from the app when enabled.
Notification with picture - Relates to calls, motion, alarm notifications. Enabling this allows you to see a snapshot in the notification banner taken by the camera at the time of the event.
Ringtone Selection" - Change the ringtone for incoming calls.
Sound - Enabling or disabling this will determine if incoming calls have a ringtone or be silent.
Vibration - Enabling or disabling this will determine if incoming calls have vibration or not.

4.5. Site Management & Site Notice

These sections are reserved for users who have an "Opyn-Multi" system added to their account.

4.6. User Help

We have added a built-in "User Help" section into the app which will answer several frequently asked questions around your account, device setup, playback features and more. We hope that users will find this helpful and prevent them from having to go look for the answer elsewhere.

4.7. About

This page will give you information about the app version and the date it was released along with access to our T&C's and Privacy Policy.

Integration

Connect your Opyn intercom(s) to either your Amazon Alexa or Google Home devices.

1. Amazon Alexa

1.1. Download the “AES Opyn” app via Google Play or App Store.
1.2. Launch the app and register an account (or login if you have already registered)
1.3. Connect and set up your AES Opyn device(s) via the app.
1.4. Search for the “AES Opyn” skill in the “Amazon Alexa” app skill directory.
1.5. Click “Enable” and proceed to link your AES Opyn and Amazon account.
1.6. Once successfully linked your devices should get automatically added to your Alexa app.
1.7. You can add your more device(s) using the “discover devices” option on the Alexa app.
1.8. After adding the device(s) you can rename them to your liking and start using the voice control commands.

<u>Example Commands:</u>

- Unlock Relay – “Alexa, unlock “X”
- View Camera – “Alexa, show me “X”
  (X = Device/Lock Name in Google Home App)

Note: To use the lock/relay control voice commands you will need to setup a 4-digit PIN via the Alexa app.

2. Google Home

2.1. Download the “AES Opyn” app via Google Play or App Store.
2.2. Launch the app and register an account (or login if you have already registered)
2.3. Connect and set up your AES Opyn device(s) via the app.
2.4. Search for the AES Opyn service in the “Google Home”, home control service directory.
2.5. Connect/Link your AES Opyn and Google Home accounts.
2.6. The Opyn devices you had connected to your “Opyn” app then automatically appear in your Google Home app.
2.7. You can rename your device(s) to your liking and start operating the system.

<u>Example Commands:</u>

- Unlock Relay – “Ok Google, unlock “X”
- View Camera – “Ok Google, show me “X”
  (X = Device Name in Google Home App)

Note: When using the lock/relay activation voice command you will be prompted to provide a PIN. This will be the intercoms “admin” password.

Intercom Operation

1. Factory Reset

If you need to default the system back to its factory settings this can be done by entering the reset code sequence into the keypad.
Default Sequence: *1590#
(Note: This can be changed)

2. Unbind Device

If you wish to clear the device of all users and do not have access to their app you can delete them manually by entering the following sequence into the keypad.
Default Sequence: *1910#
(Note: This will remove admin and all shared users)

3. Change "Reset Code"

If you wish to change the reset code from its default value this can be done by entering the following sequence into the keypad.
Sequence: XXXX#CODE# (XXXX # Current Code, CODE = New Code)
(Note: If you lose or forget this code a master reset on the system will be needed)

4. Create Local Network

If you need to configure the WIFI again due to changing router or network password, but the device is already "offline". Use this sequence to create a temporary local network used in the setup.
Default Sequence: *1920#
(Note: This will not remove any other programming)

5. Change PTE Relay

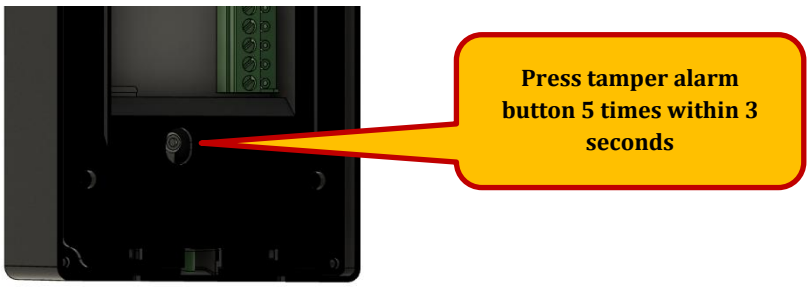
If you wish to change which relay the PTE or "Exit Button" activates you can do this with one of these two keypad sequences
Lock 1 Sequence: *1110#
Lock 2 Sequence: *1111#
(Note: The default lock used is Lock 1)

6. Change Call Mode

To change the system's call mode, use on of the following keypad sequences:
1. Call answered when microphone on receiving device is activated (Default):
Sequence: *1310#
2. Call answered only when "Green Phone" on receiving device is pressed:
Sequence: *1311#

7. Master Reset

If you need to default the system and no longer know the reset code due to it being changed or lost, you can use this process to completely reset the system.

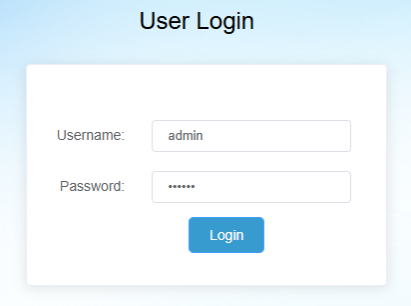


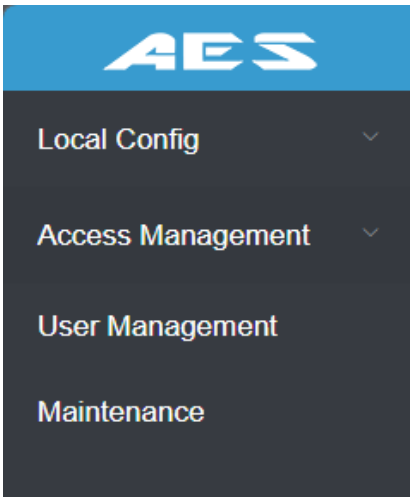
Local Web Interface Operation

There are also some additional features that can only be accessed by connecting to the device via the local area network. This means that both the device and the computer accessing this page need to be on the same network (IP scheme).

To access this page, you will need to enter the IP address of your device into your browser. The IP can be found via the device itself in the “Device Details” page in the AES Opyn mobile application.

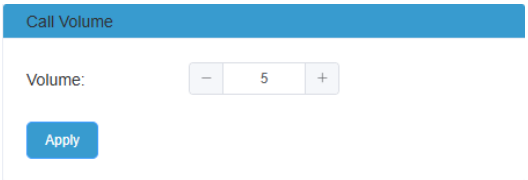
The default login credentials are:
Username: ***admin***
Password: ***888999***





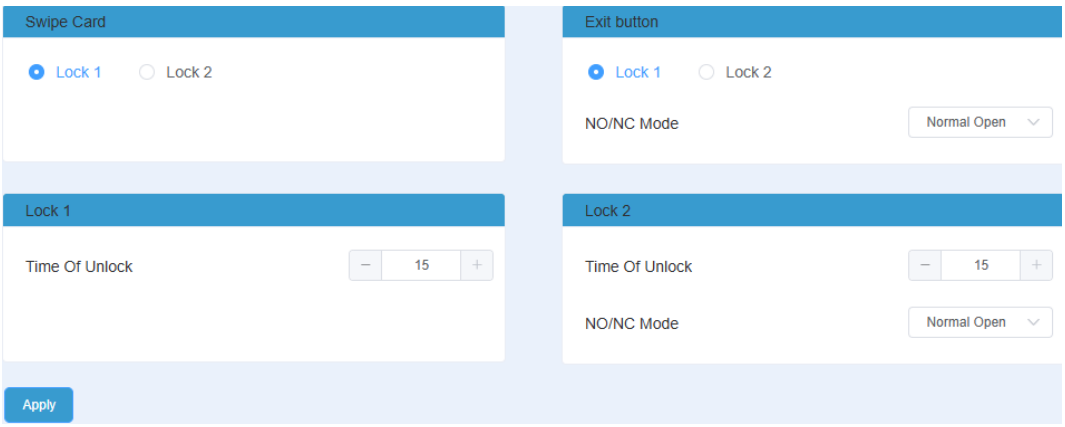
Local Config

Adjust the call volume of your intercom



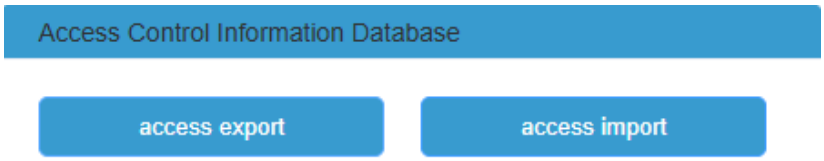
Access Management

Lock – Adjust different settings relating to the intercom’s locks/relays. Such as relay activation time, exit button relay etc.



Access – Export and import the programming of access/unlocking methods (QR Codes & Keypad Codes)

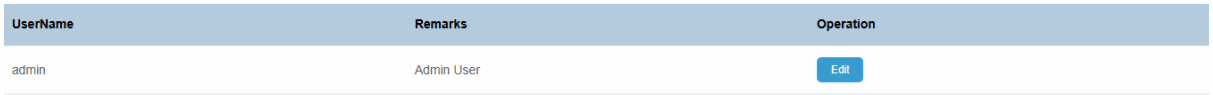
Export – Download a copy of all the stored QR/Keypad codes in the intercom.
Import – Upload copied QR/Keypad codes to the intercom.



Tamper Alarm – Enable or disable the intercoms tamper alarm.

User Management

Edit the default username and password user for accessing the local web interface.



Maintenance

Check software & hardware versions, and update or reboot intercom.

Certifications

CE-RED

Manufacturer: Advanced Electronic Solutions Global Ltd
Address: Unit 4C, Kilcronagh Business Park, Cookstown, Co Tyrone, BT809HJ, United Kingdom
Complies with the following essential requirements for:
EN 301 489-1 V2.2.0 (2017-03) (Electro-Magnetic compliance)
EN 301-489-17 V3.2.0 (2017-03) (Electro-Magnetic compliance)
EN 62479:2010 (Maximum output power)
EN60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013(Electrical Safety)
EN 18031 (Cybersecurity requirements for radio equipment – protection of network integrity, personal data and privacy, and prevention of fraud in accordance with Article 3(3) of the Radio Equipment Directive)

Notified body: Shenzhen HUAK Testing Technology Co., Ltd.
CNAS Number: L9589

This declaration is issued under the sole responsibility of the manufacturer.

Signed by:

Paul Creighton, Managing Director. Date: 18thJuly 2024

FCC

FCC ID: 2ALPX-OPYNIPIBK
Grantee: Advanced Electronic Solutions Global Ltd

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Output power listed is conducted. This device must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

RF Exposure Statement
To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm from all persons. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter