

Mini Outdoor Full HD Camera

IPC2203



User Manual

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Chapter 1. Introduction

The Mini Outdoor HD Camera is a Full HD resolution camera that is designed for outdoor use. The day/night features and wide range of operating temperatures and humidity enable the camera to stay operational for 24 hours a day and 365 days a year in a normal environment. With proper installation of the kits provided in the package, users can mount the camera onto exterior walls or leave their homes without worrying about dust and rain (IP67 level).

Key features and specifications of the camera:

- Maximum video resolution and frame rate : 1920 x 1080 @ 30fps
- Viewing angle: 85°
- Automatic day/night mode switch with 20 meter IR range
- Expandable flash storage
- Operating temperature : -22°F to 140°F (-30°C to 60°C)
- Operating Humidity: 95% or less (non-condensing)
- IP67 level dust/water-proof
- PoE compatible

1.1 System Requirements

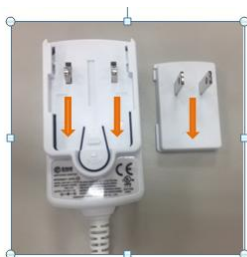
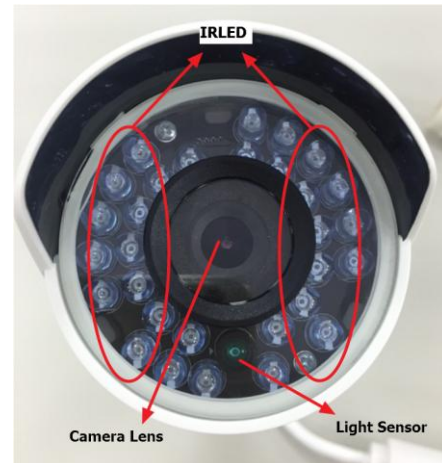
This section explains the system requirements when using the camera.

Network	When camera is connected to Security Shuttle*	Router with <ul style="list-style-type: none">- 10/100Mbps RJ45 LAN port- DHCP service
	When camera is connected directly to Wi-Fi Router	Wi-Fi Router supports <ul style="list-style-type: none">- IEEE 802.11n, 802.11g, 802.11b- WEP/WPA2-PSK Wireless Security
Mobile Device		An Apple iPhone, iPad, or Android mobile device with: <ul style="list-style-type: none">- iOS (version 8.1 above)- Android (version 4.1 above)

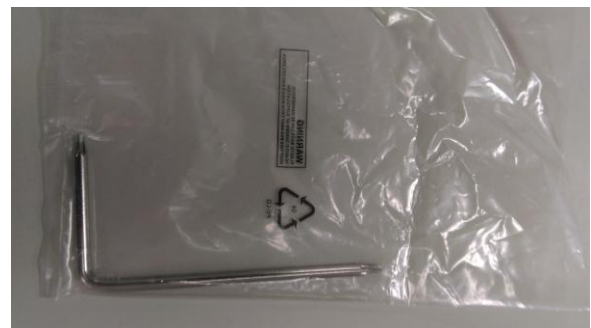
* See Appendix – Glossary of Terms.

Chapter 2. Hardware Overview

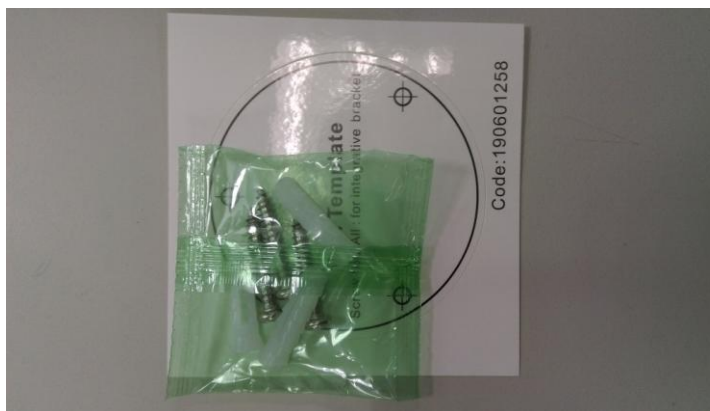
This section provides an overview of the Mini Outdoor HD camera and its accessories.



Power Adapter



Wrench



Mounting Kit



Power Cable Ingress protection Kit

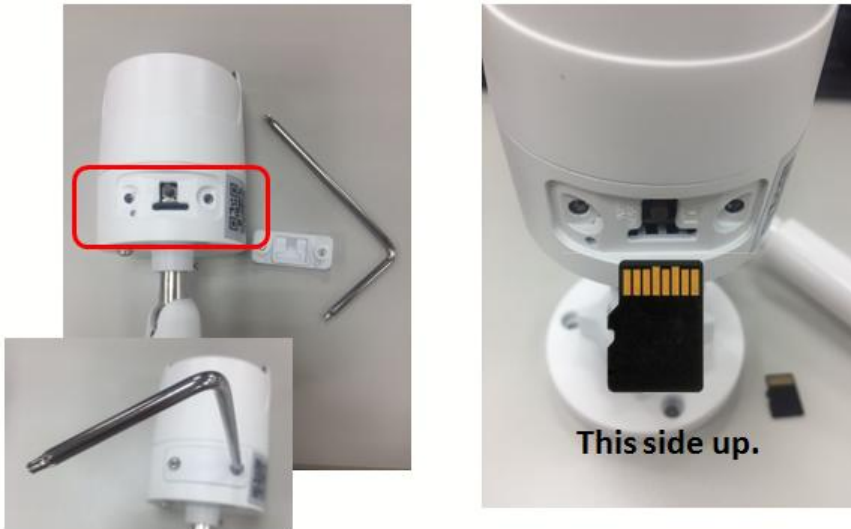


Network Cable ingress protection kits

Chapter 3. Mini Outdoor HD Camera Setup

3.1 Before powering on the camera

If you wish to save the video clips locally or turn on the continuous recording function, a MicroSD card needs to be inserted into the camera. Use the wrench to open up the lid located on the bottom of the camera, insert the MicroSD card, and then close the lid. For details on how to check the current storage size of the MicroSD card, see *Section 4.6 – Local Storage*.



Note: Before you insert the MicroSD card into the camera, make sure it has been formatted to FAT 32. Do not insert the MicroSD card into the camera when it is powered on, as this may damage the MicroSD card.

3.2 Powering on the camera

There are two ways for powering on the camera and connecting it to the system.

1. Powering the camera with power adapter (recommended to general users):

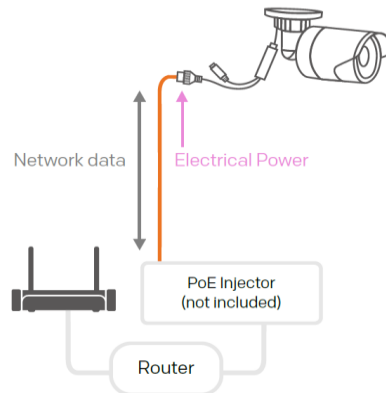
For users who would like to use Wi-Fi or general routers to provide the network connection to the camera. Please use the included power adapter. Please plug the power adapter into the power outlet.



2. Powering the camera with PoE (Power over Ethernet):

If the user prefers to power the camera over Ethernet, please verify that a PoE Injector and two RJ45 cables are available (PoE Injector and RJ45 cables are not included in the package).

Connect the PoE Injector to your router via RJ45 cable that links with the security shuttle. Meanwhile, connect the PoE Injector to the camera's Ethernet interface with another RJ45 cable that will deliver DC power as well as transfer data. Lastly, power on the PoE Injector.



3.3 Adding the Camera to the System

Before you begin using the camera, it will need to be added to the system first. For details, see the subsection below.

Important: If you are unable to add the camera to the system or the app shows a message telling you to reset the camera, see *Chapter 6 - Resetting the Mini Outdoor HD camera* for details.

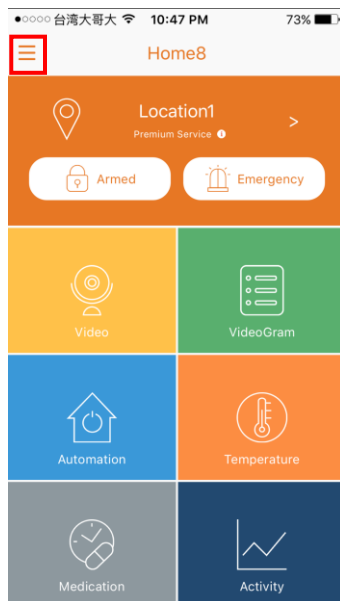
3.3.1 Adding Camera to System with Security Shuttle

To activate the camera with the security shuttle, complete the following steps.

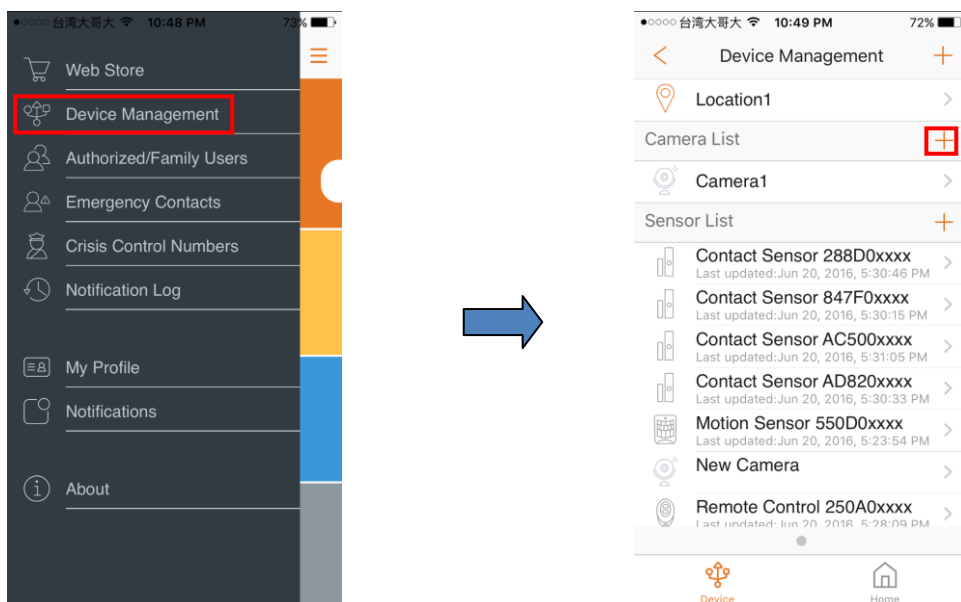
Note:

- Make sure the Security Shuttle is powered on and connected to your router.

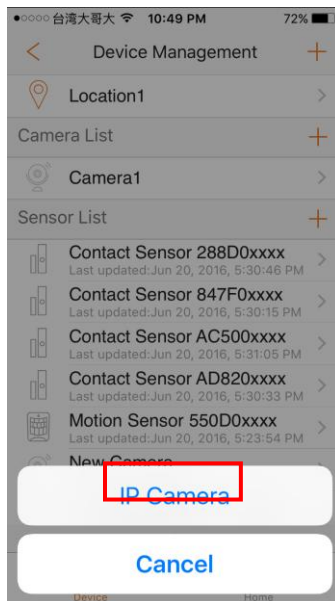
1. Tap the menu icon  to show the sidebar menu.



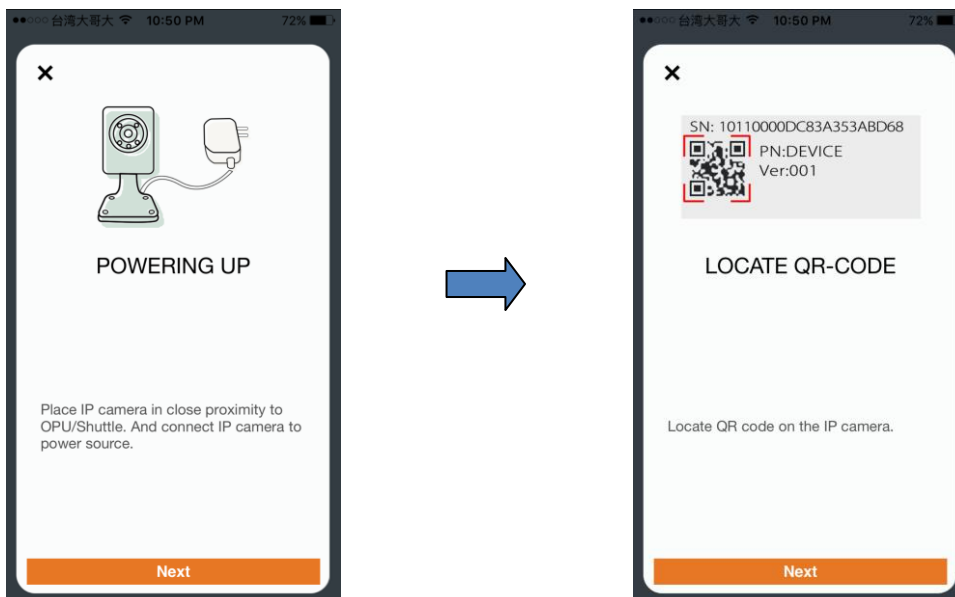
2. Tap “Device Management”. If you have more than one security shuttle, you may need to swipe left more than once to find the one you wish the camera to connect to. After selecting the security shuttle, tap the plus icon “+” located to the right of “Camera List”.



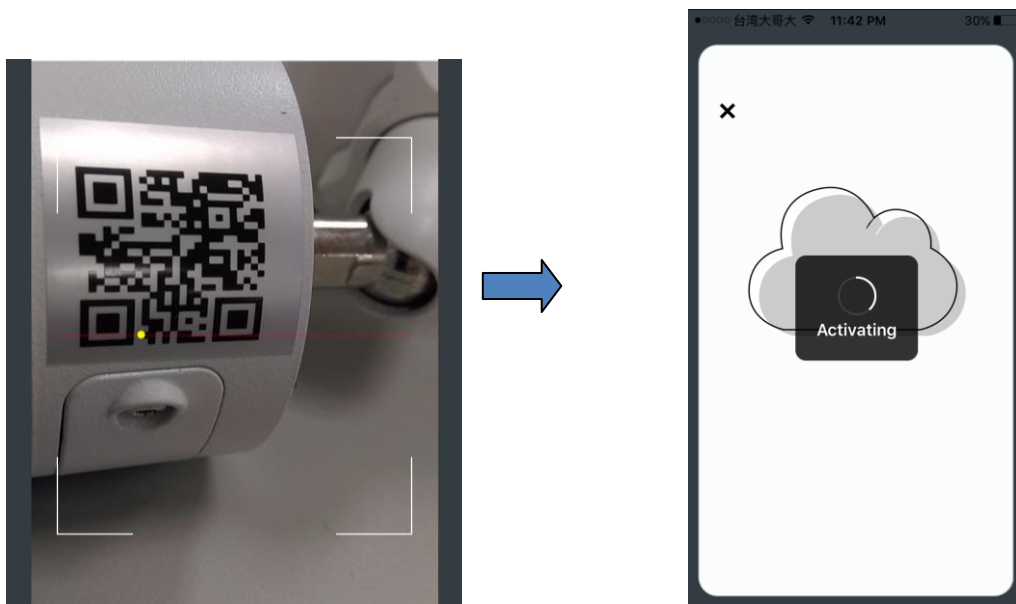
3. Select "IP Camera".



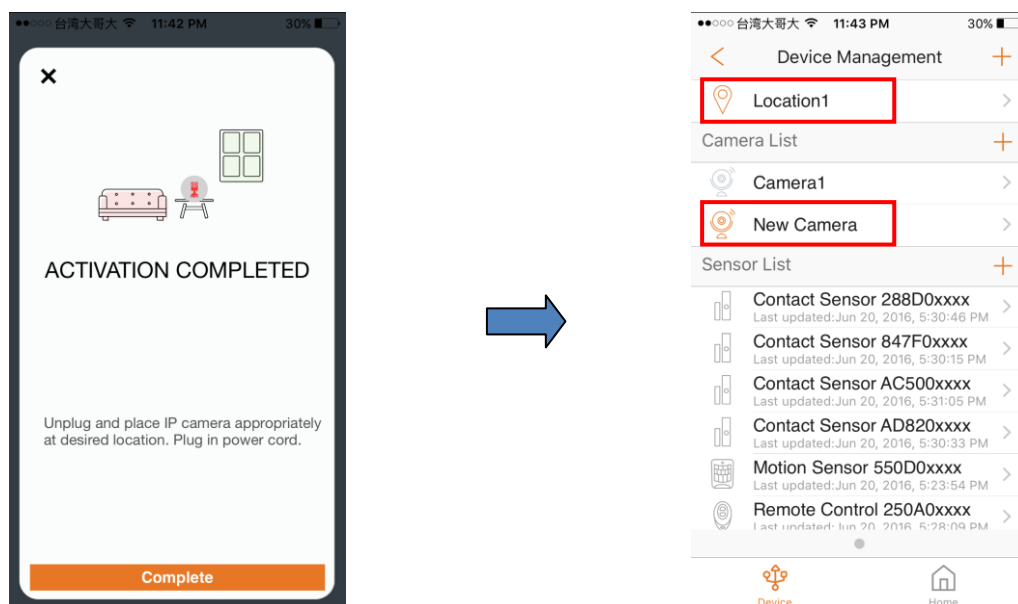
4. Follow the on-screen instructions. When finished, press "Next".



5. After scanning the QR code located on the side of the camera, the “camera adding” process will begin. The process will take approximately 1 to 2 minutes.



6. When the activation is completed, the camera will be added to the device management page. In the illustration shown below, the name of the Security Shuttle is “Location 1” and the name of the camera is “New Camera”.

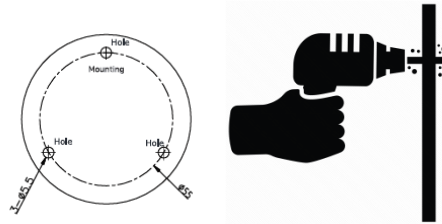


3.4 Mounting the camera

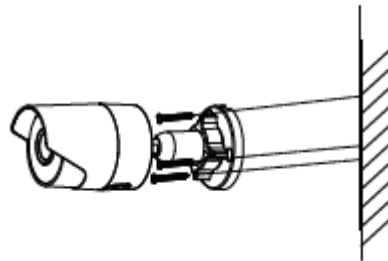
After the “camera adding” process has been completed, you can mount the device at the desired location. To make sure the connection of the camera is working, you can check the live video feed and see if you are able to view it before you mount the camera. For details about how to view the video feed, see *Section 5.2 – Viewing the Live Video Feed*.

You can choose either wall mounting or ceiling mounting. We will delve into the procedures for wall mounting in this section. If you choose ceiling mounting you can refer to this example as a reference.

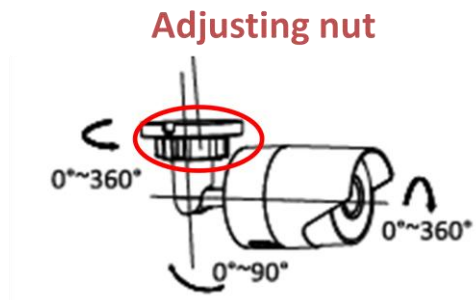
1. Drill the screw holes in the wall according to the drill template.



2. Route the corresponding cables.
3. Secure the camera to the wall with the supplied screws.



4. Loosen the adjusting nut to adjust the surveillance angle.
 - Adjust the pan direction [0° ~ 360°]
 - Adjust the tilt direction [0° ~ 90°]
 - Rotate the camera [0° ~ 360°] to adjust the lens to the surveillance angle
5. Tighten the adjusting nut to complete the installation.



3.5 Installing Ingress protection Kits

If you mount the camera in an outdoor environment, installing the ingress protection kits will be necessary to prevent the camera from damage caused by dust and water.

3.5.1 Ingress Protection on Power Cable

- 1) Find the Power Cable Ingress Protection Kit from the package.



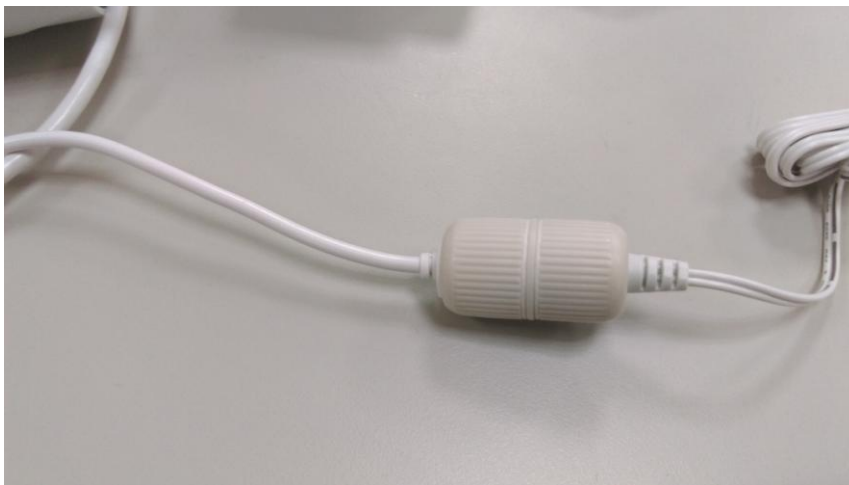
- 2) Put the water-proof rings and fix nuts on both power cables of the camera and adapter.



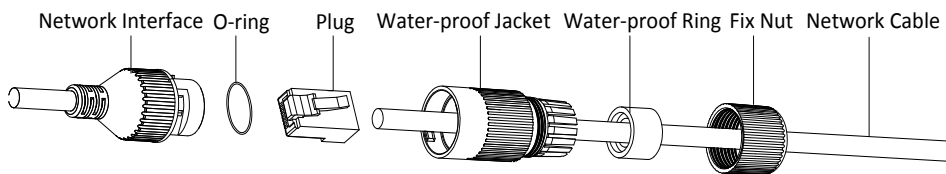
- 3) Connect the power jacks.



- 4) Insert both water-proof rings into the water-proof jacket, and then rotate both fix nuts clockwise to assemble the ingress protection kit.




3.5.2 Ingress Protection on Network Cable

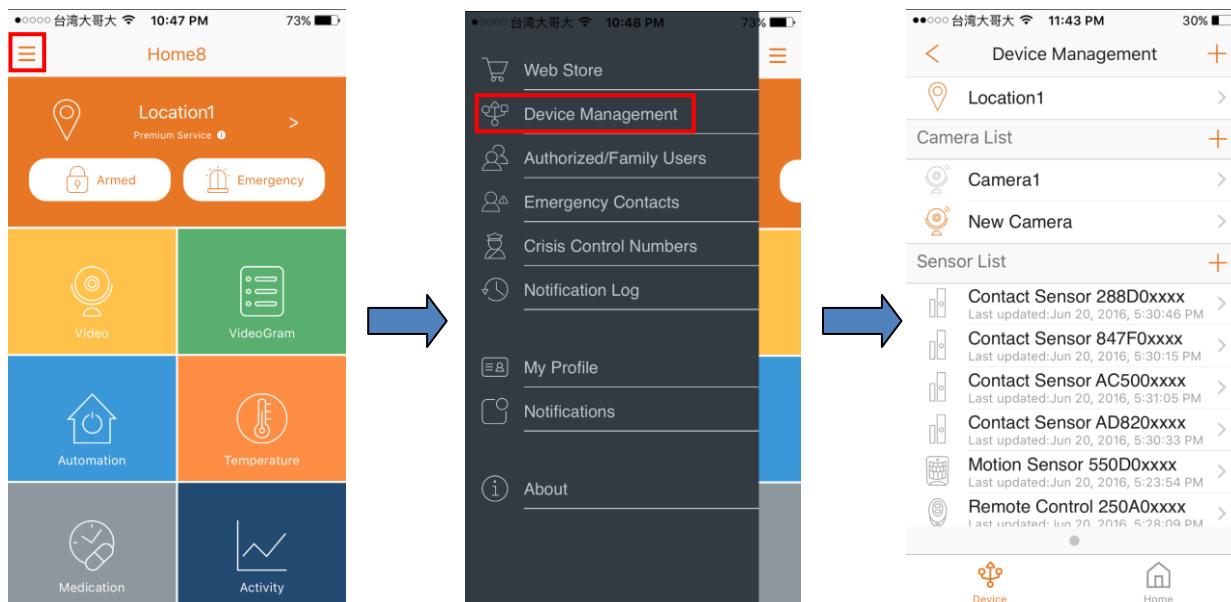


1. If the network cable has been settled down, cut off the plug of the network cable first.
2. Route the network cable through the following components in this sequence: fix nut, water-proof ring, and the main body of the water-proof jacket, as shown in the figure.
3. Insert the water-proof ring into the main body of the water-proof jacket to increase the sealing ability of the components.
4. Wire the plug and network cables together.
5. Fix the O-ring to the network interface of the camera, and then connect the network cables.
6. Wrap the network interface with the the water-proof jacket, and then rotate the fix nut clockwise to assemble it to the main body of the water-proof jacket.

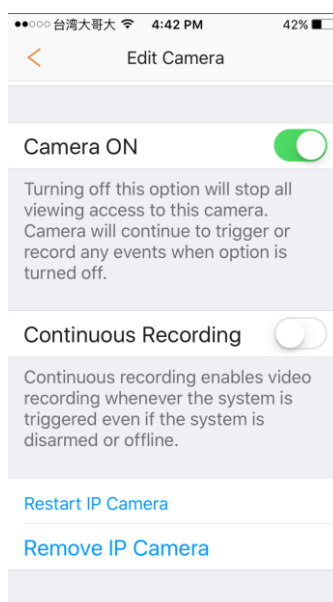
Chapter 4. Mini Outdoor Full HD Camera Settings

For relevant camera setting adjustments, follow the steps shown below.

1. Tap the menu icon  to show the sidebar menu.
2. Tap “Device Management”; then tap “New Camera” under “Camera List” to reach the “Edit Camera” page.



The following illustrations show the camera settings that can be adjusted.

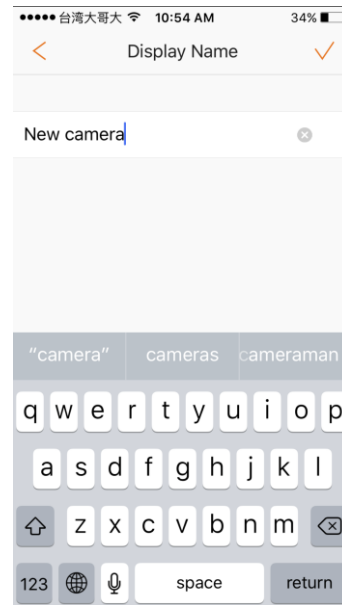


- Display Name
- Motion Detection
- Live Video Resolution
- Wi-Fi
- Local Storage
- Turn On/Off Camera
- Turn On/Off Continuous Recording
- Restart/Remove IP Camera

4.1 Display Name

This option allows you to change the display name. To do so, tap “Display Name”; then, change the name according to your preference. When finished, tap the check icon located on the upper-right corner.

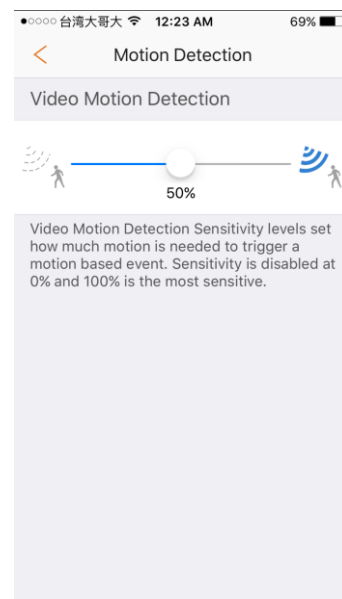
Note: The maximum length of the display name is 40 characters.



4.2 Motion Detection

This option allows you to change the motion detection sensitivity. To do so, tap “Motion Detection”; then, change the sensitivity according to your preference.

Note: For more sensitive motion detection, set a higher sensitivity level. (100% is the most sensitive and sensitivity is disabled at 0%.)

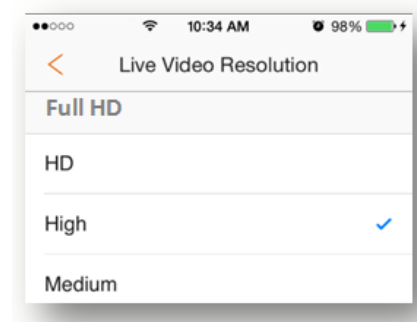


4.3 Live Video Resolution

This option allows you to change the live video resolution. To do so, tap “Live Video Resolution”; then, change the resolution according to your preference.

The video resolution for the four different levels are shown below:

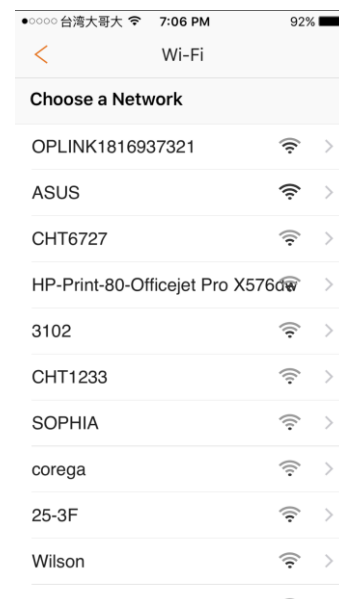
- Full HD: 1920 x 1080
- HD: 1280 x 720
- High: 640 x 480
- Medium: 320 x 240



4.4 Wi-Fi Connection

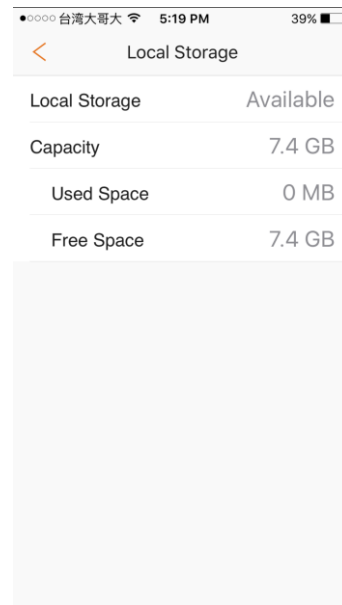
This option allows you to connect to the Security Shuttle via a nearby Wi-Fi router.

If the wireless connection between the camera and Security Shuttle is too weak, you can connect to the Security Shuttle via a nearby Wi-Fi router that has a stronger signal. The router will need to be in the same network as the Security Shuttle. To do so, tap “Wi-Fi”, and choose from the list of available WiFi networks. If necessary, enter the Wi-Fi password.



4.5 Local Storage

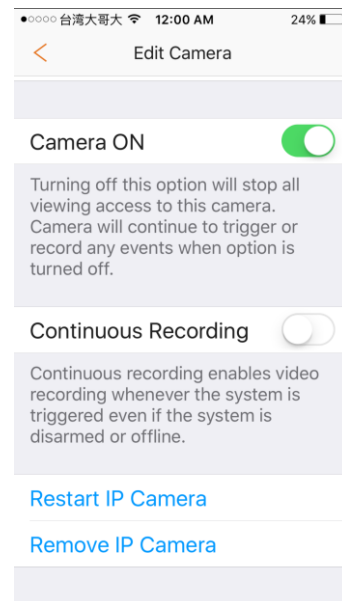
To verify that the MicroSD card in the camera is working properly and to view its current storage capacity, tap “Local Storage.”



4.6 Turn On/Off camera

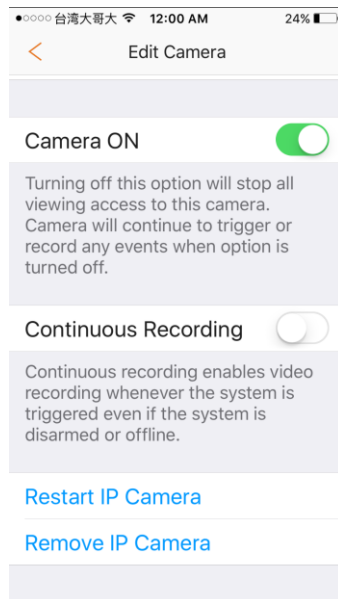
To turn on/off the camera live view function, slide the button to the right to turn on, and slide the button to the left to turn camera off.

Note: The camera is still able to record triggered events.



4.7 Turn On/Off Continuous Recording

To turn on/off continuous video recording, slide the button to the right or left. This is a recording function that continuously records everything until it is turned off.



Important:

To turn on the continuous recording function, make sure the following requirements are met:

- A MicroSD card must be inserted into the camera.
- Video Motion Detection level needs to be above 0%.

For reference, a 4G SD card can record for 4-5 hours before it will overwrite the old recordings with new recordings.

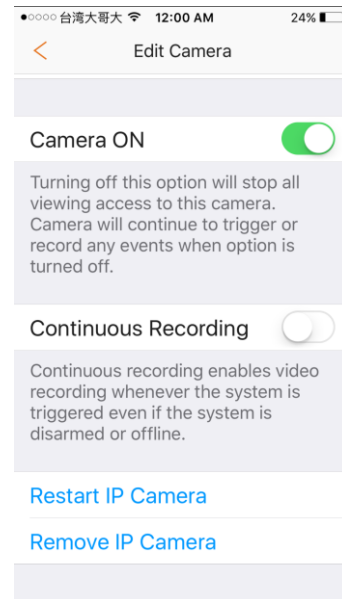
4.8 Restart/Remove IP Camera

To restart the camera, tap “Restart IP Camera”.

To remove the camera from the current Security Shuttle, tap “Remove IP Camera”.

Note:

- Do not unplug the camera until the removal process is complete. The process takes approximately three minutes.
- After the removal process is complete, the camera will be restored to original factory default settings.



Chapter 5. Starting to Use the Mini Outdoor Full HD Camera

At this stage, your camera is now ready for use. Due to the built-in camera/sensor functionalities, the device offers the following three main functions:

- **Motion detection**
- **Live video feed**
- **Video recording**

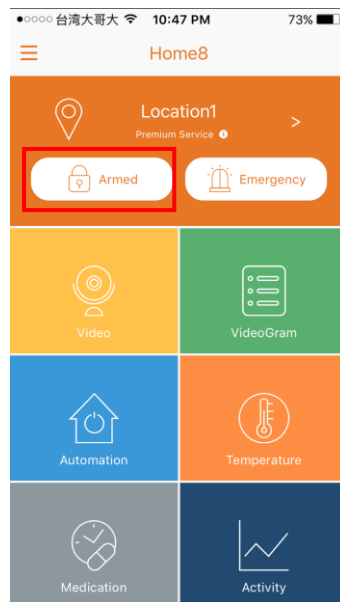
5.1 System/Sensor setting

This section explains some system/sensor settings you need to configure or check when you begin using the camera as a sensor.

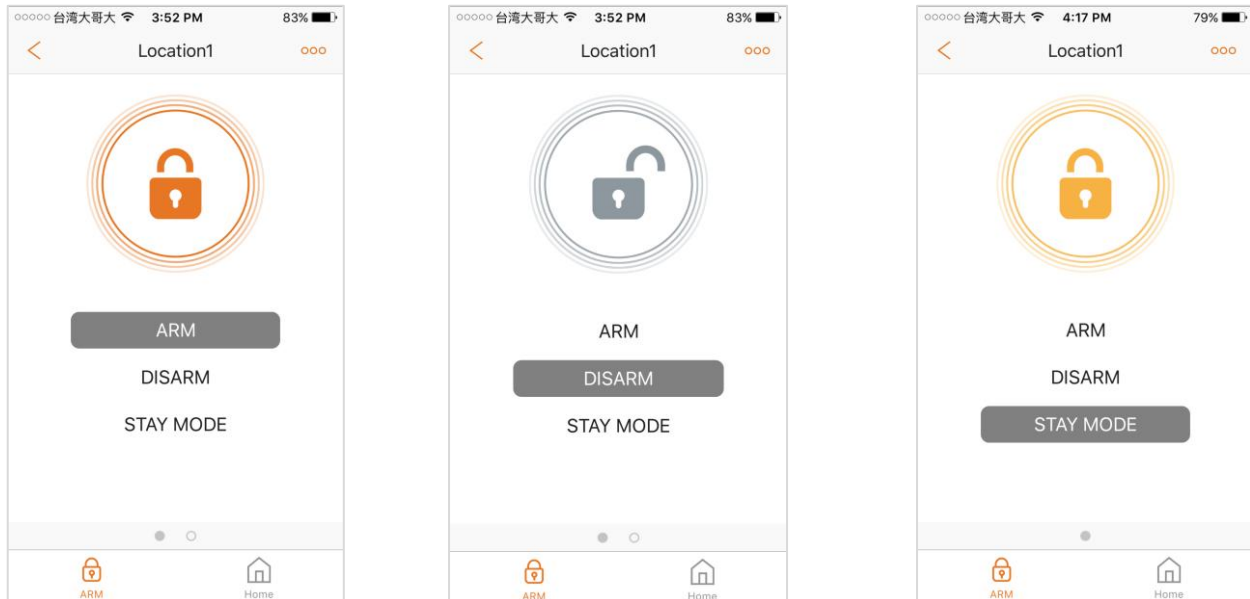
5.1.1 Arm / Disarm / Stay mode Selection

To switch between Arm, Disarm and Stay mode, follow the steps shown below. For details regarding the difference between the three modes, see *Appendix – Glossary of Terms*.


1. Tap the lock icon. The following illustration is an example that shows the system is currently “Armed”.

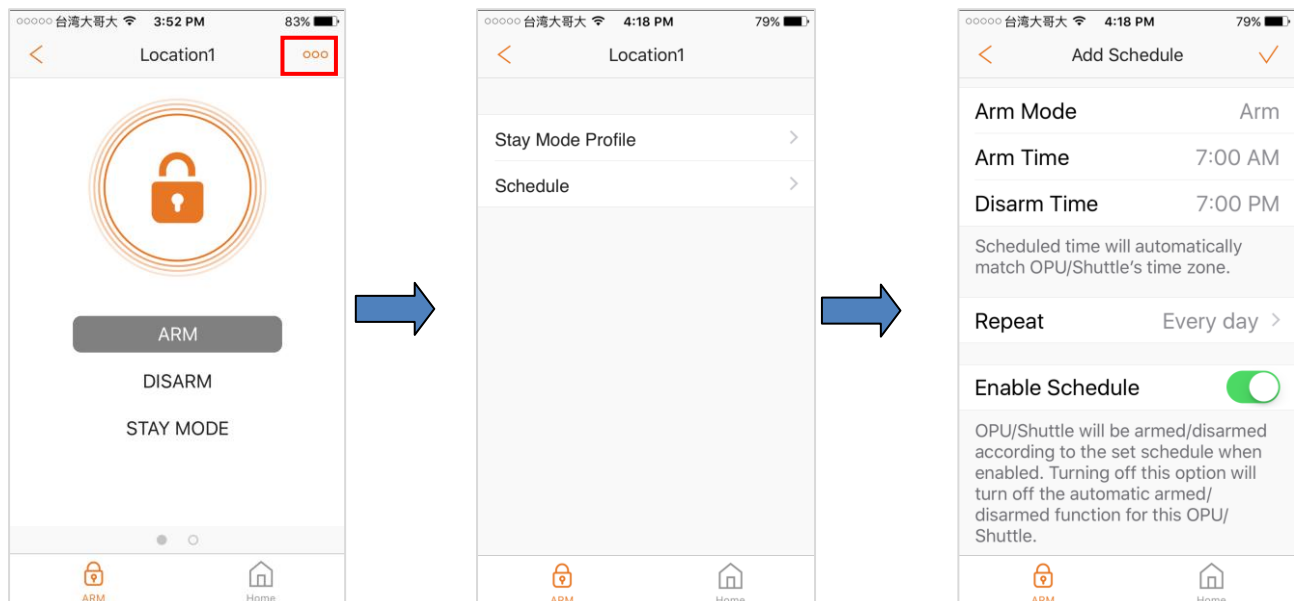



2. Tap Arm, Disarm or Stay mode.

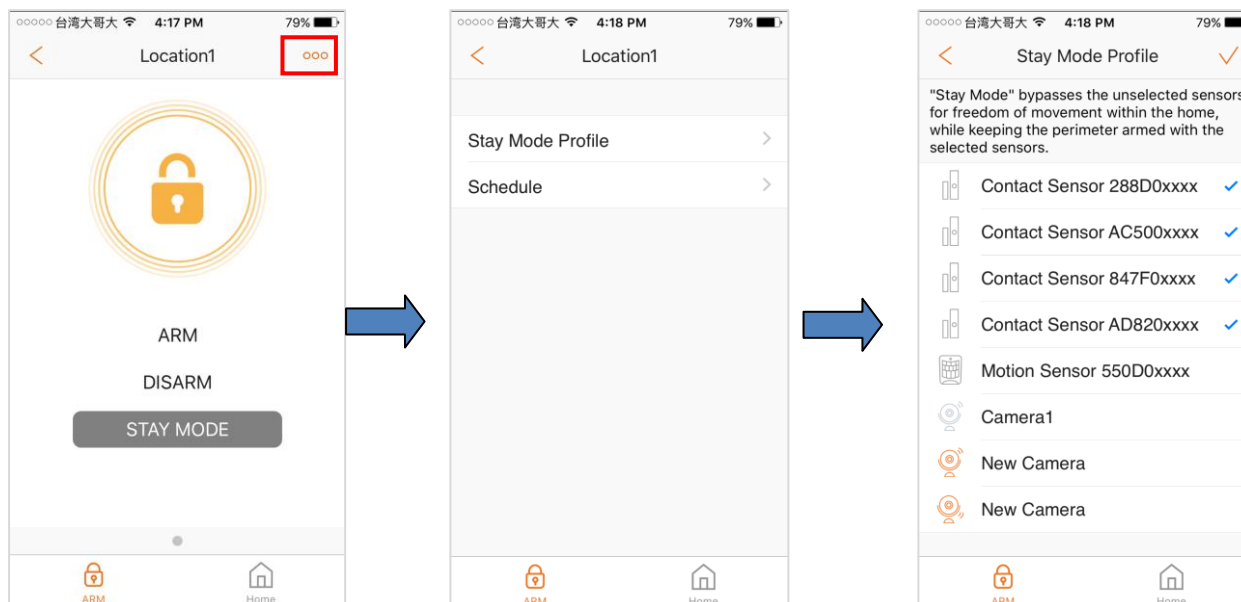


Note:

- To add a schedule on when to arm/disarm the camera/sensors, tap the  icon; then tap "Schedule" and choose your preferred time period.



- To choose which camera/sensors to arm in Stay mode, tap the  icon; then tap “Stay mode Profile” and choose your preferred devices.



5.1.2 Sensor setting

The ability of the camera to detect suspicious activity will be based on the selected sensitivity level. For details about how to set the motion detection sensitivity level, please proceed to *Section 4.2 Set Motion Detection*.

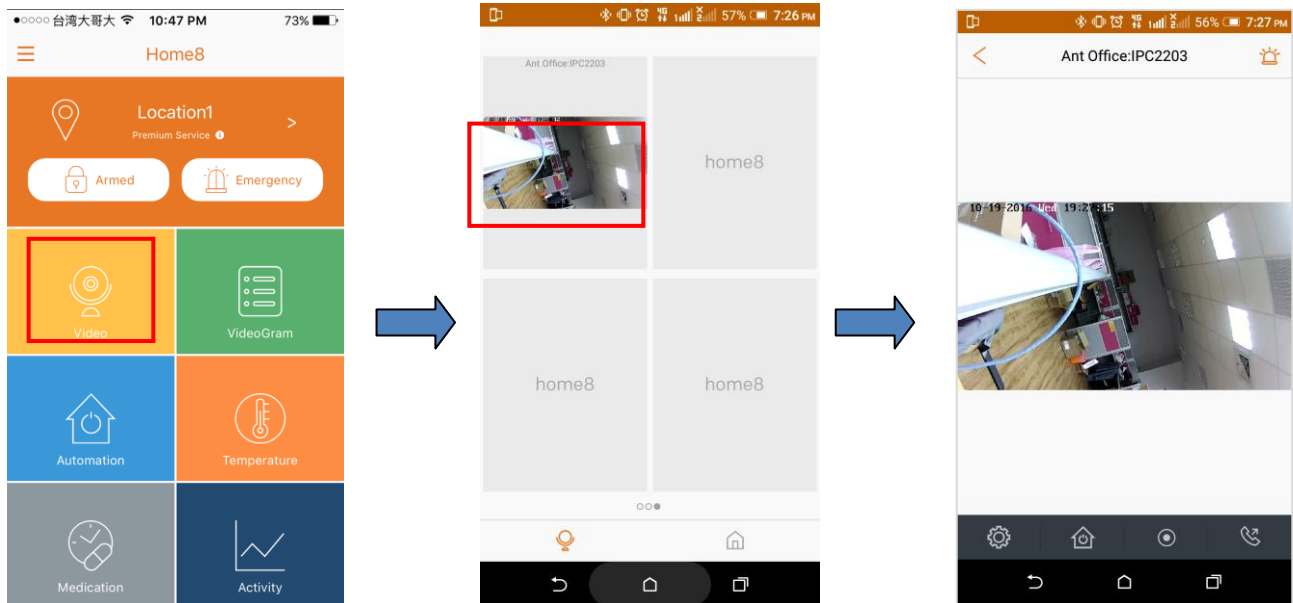
5.1.3 Event Notification and Recording

If any activity is detected, you will receive an event notification and you can use the live view function to immediately check the event and use the recorded video clip for further verification and analysis.

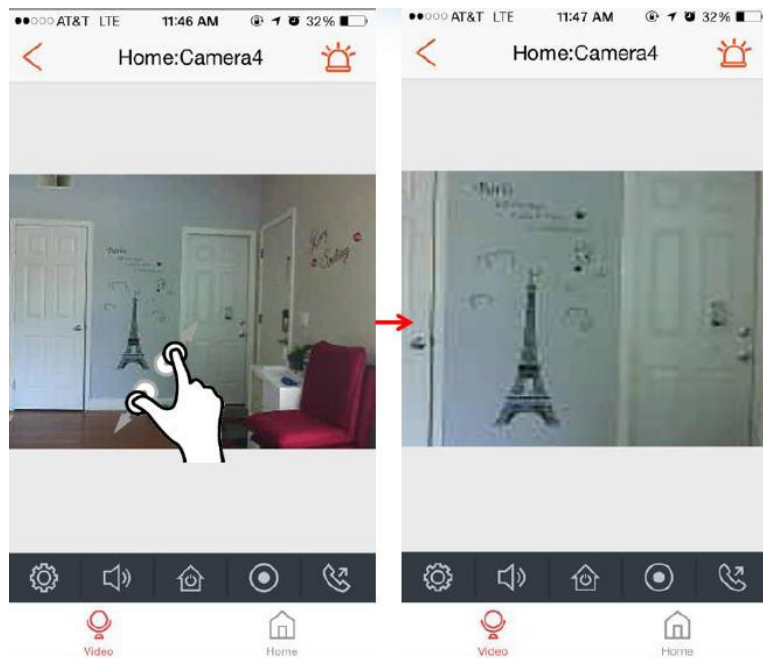
For details regarding the live view and check video recording functions, see *Section 5.2 - Viewing the Live Video Feed* and *Section 5.3 - Viewing the Video Recording*, respectively.

5.2 Viewing the Live Video Feed

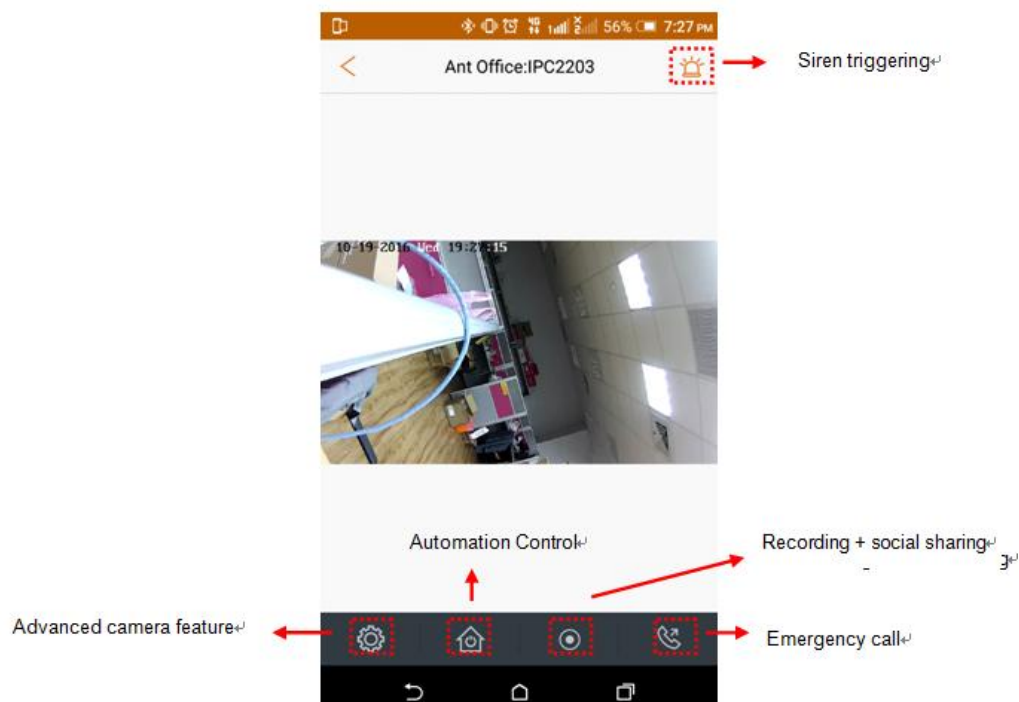
To view the live video feed, tap the “Video” icon; then, tap the video image shown by the camera. If you have more than four cameras, swipe left to see the fifth camera.



Pinch your fingers to zoom in or zoom out when viewing the video feed.



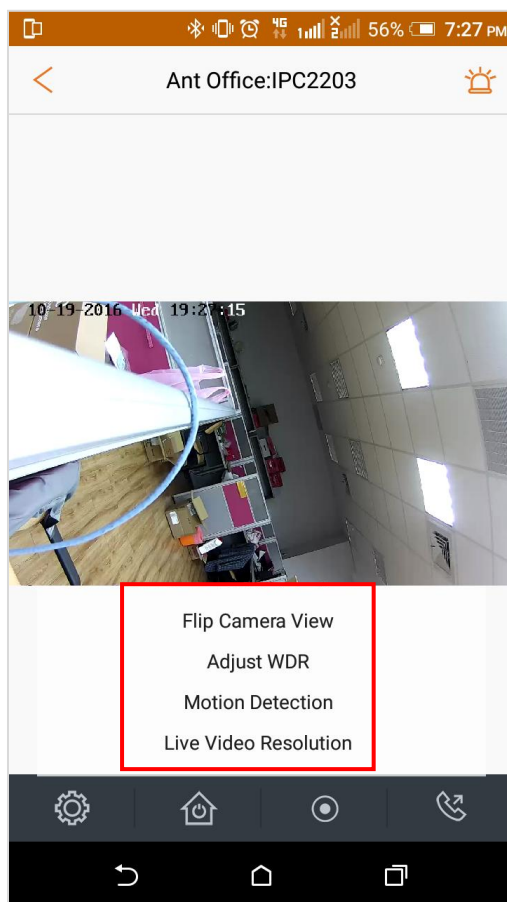
The following describes the various controls.



Advanced camera features: When you tap the camera setting icon, the settings that can be configured will

Mini Outdoor Full HD Camera

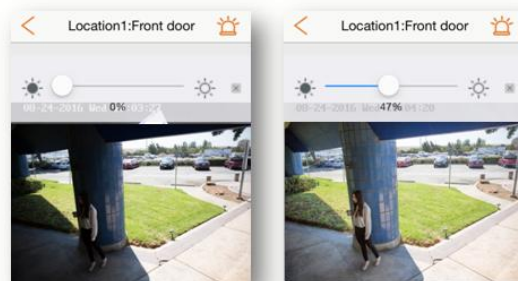
be shown, as seen in the following illustration.



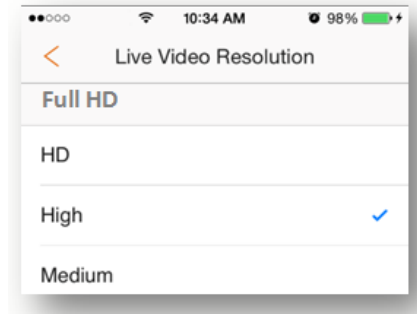
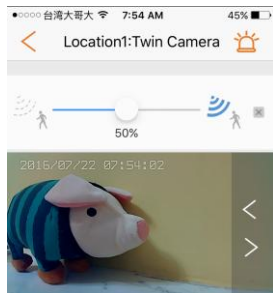
- **Flip Camera View:** Flips the video feed to an inverted view.



- **Adjust WDR:** Adjust the indoor/outdoor brightness difference by dragging the slider icon to set the WDR from 0% to 100%.

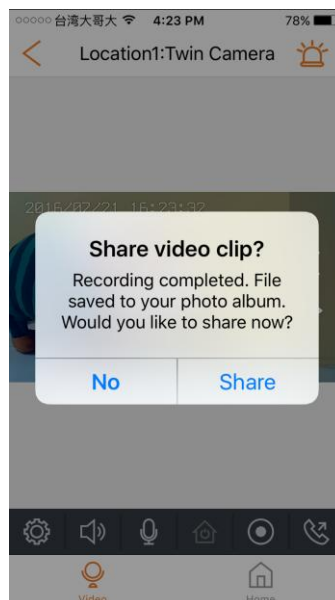


- **Motion Detection:** Adjusts the motion detection sensitivity.
- **Live Video Resolution:** Adjusts the live video resolution to Full HD, HD, High, or Medium.



Automation control: Used to control various automation devices (for example: Smart Plug) in the system.

Recording + social sharing: Begins recording the current video feed and saves the video clip to your smartphone. You can decide whether or not to share on social media outlets.



Emergency call: When you tap this icon, you can select from your list of pre-saved emergency contact numbers that you wish to call.

Note: If you have not set an emergency contact number, see the App manual.

Siren triggering: Manually triggers or dismisses an emergency event via the app.

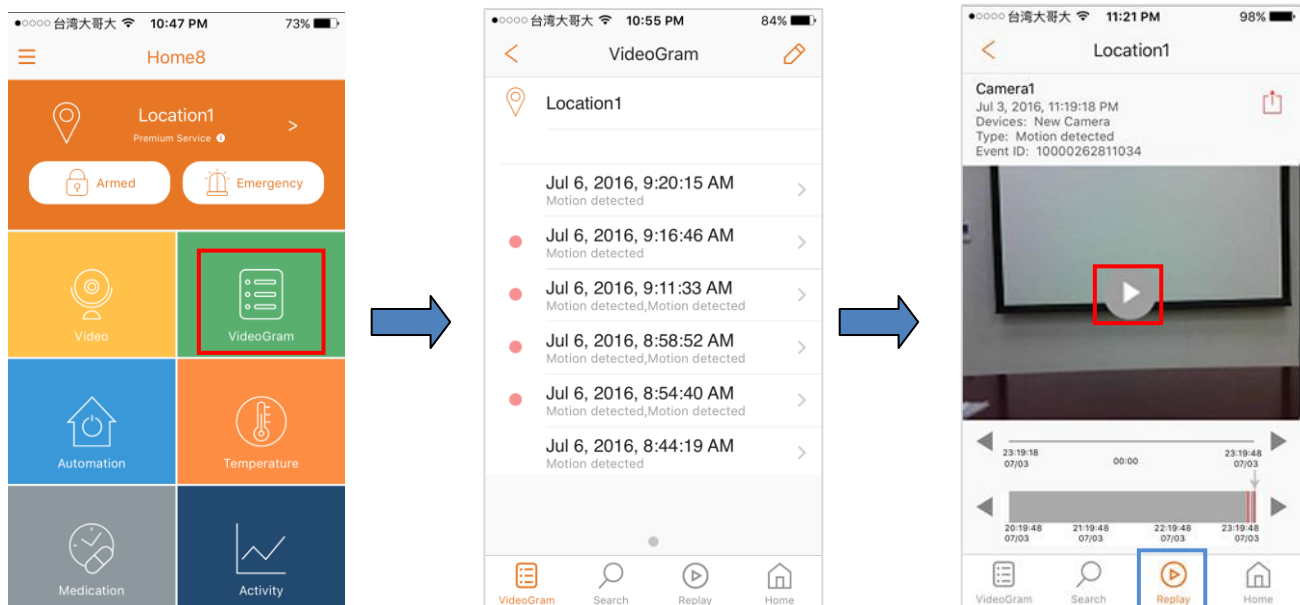
5.3 Viewing the Video Recording

If a video has been recorded, you can replay the video clip by following the steps shown below. For details about how the system records a video, see *Section 5.1 – System / sensor setting*.

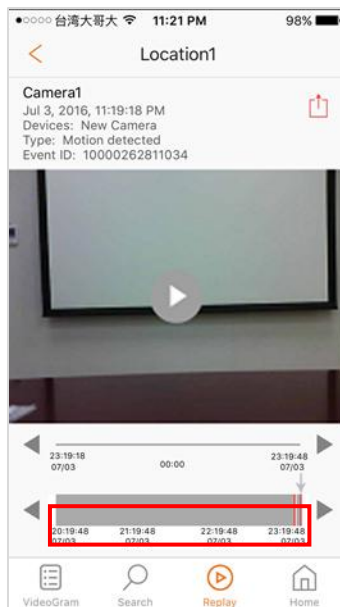
5.3.1 Viewing Recorded Events

To view recorded events, complete the following steps:

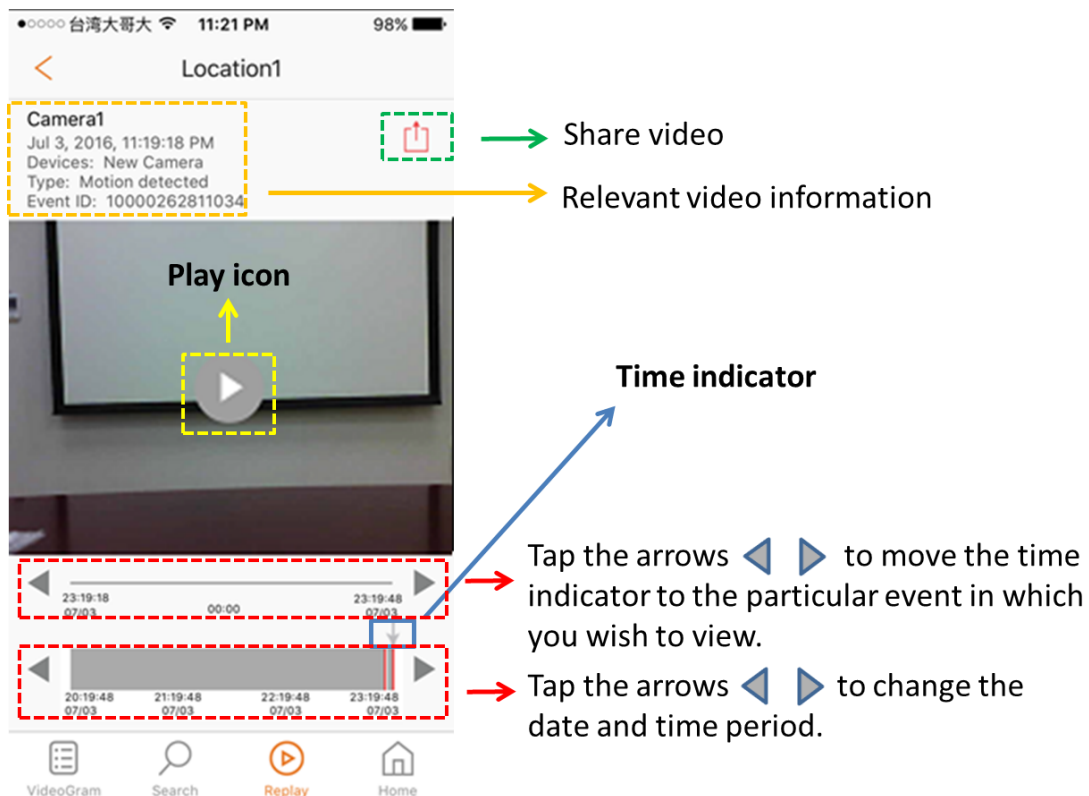
1. Tap the “VideoGram” icon and select the event you wish to view. Events marked with a red dot indicate you have not viewed the event yet.
2. Tap the play icon located in the middle of the screen to watch the recording.



Video recording events from the past three hours can be viewed from the video recording main screen. The grey bar shows the time and date of the recording within a three hour interval, all the way up to the most current time. All recorded events within the three hour period are shown here.

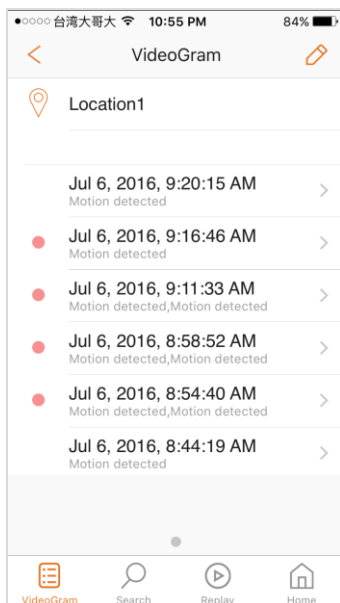


The following illustration shows you how to navigate the video recording main screen.

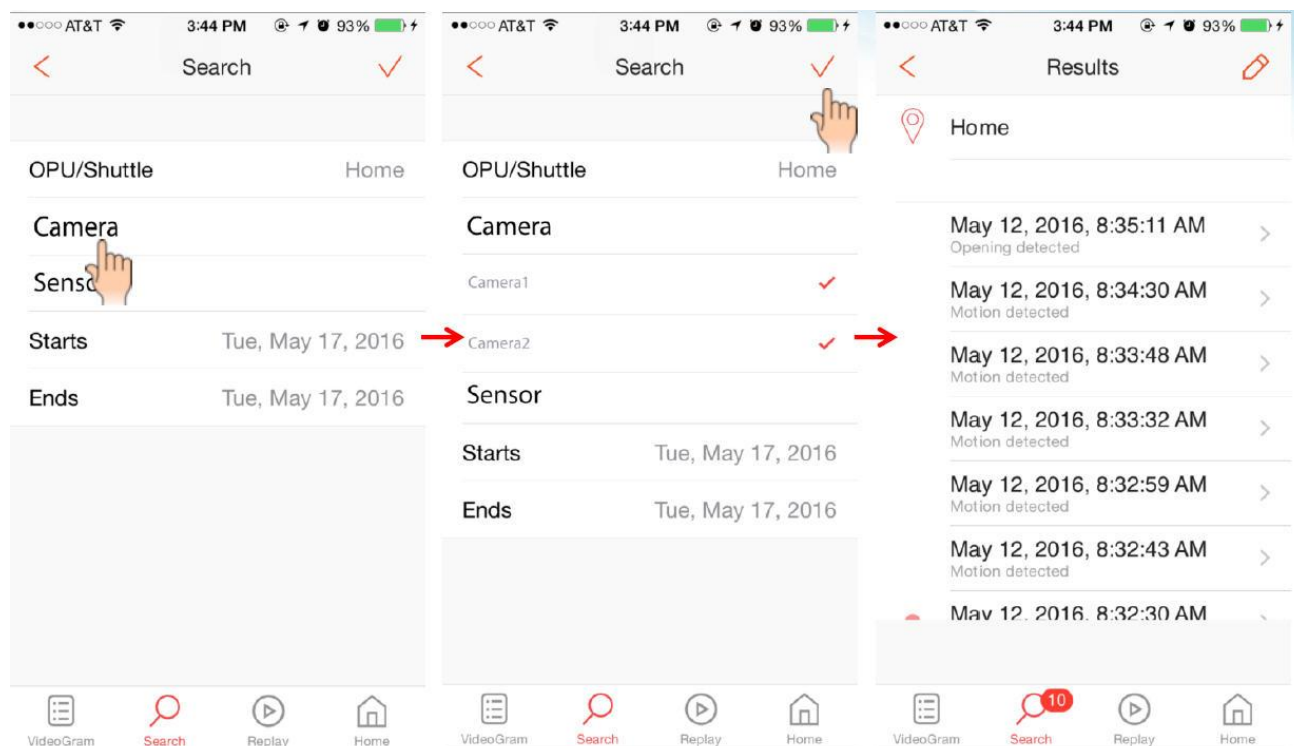


For details regarding the four icons located on the bottom of the screen, see the descriptions below.

VideoGram: Takes you to the videogram menu.




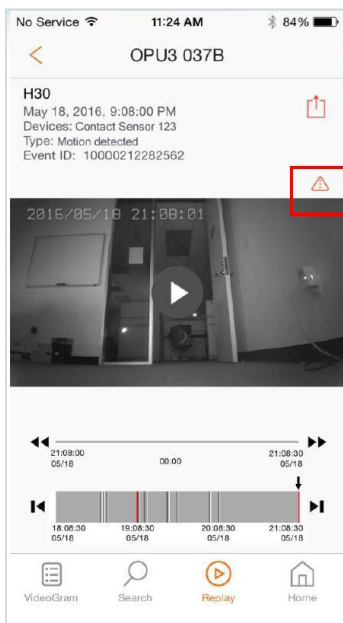
Search: Searches a particular video event detected by the camera(s) or sensor(s).




Replay: Takes you to the replay page to view continuous recorded events.

Note:

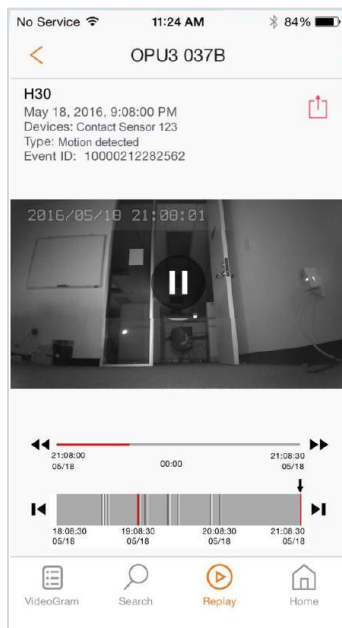
- If network problems are encountered while replaying a recording, this icon  will appear on the screen.



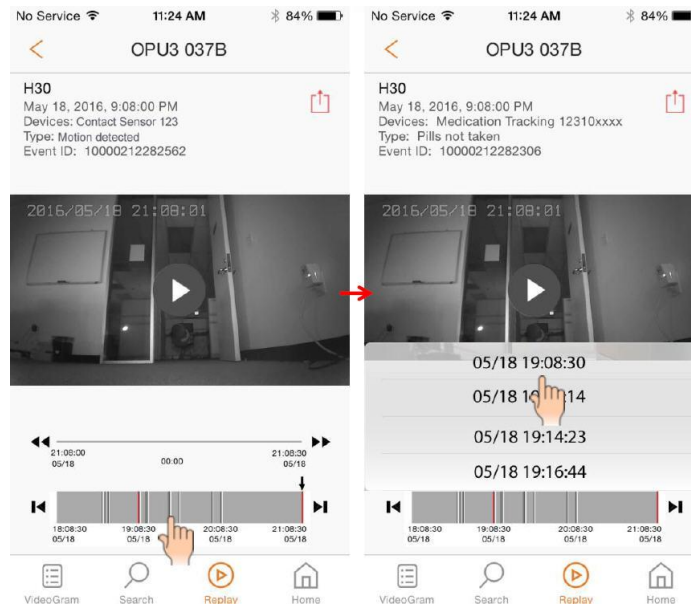
- For iOS devices, this animation icon  allows you to swipe up to view more camera clips. The animation icon fades after 10 seconds. Both landscape and portrait views are supported.



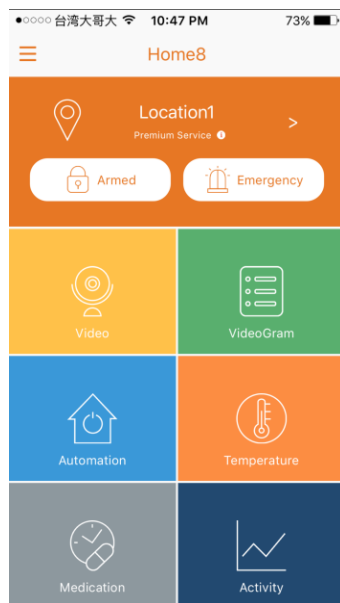
- The play icon toggles between playing and pausing the video recording.



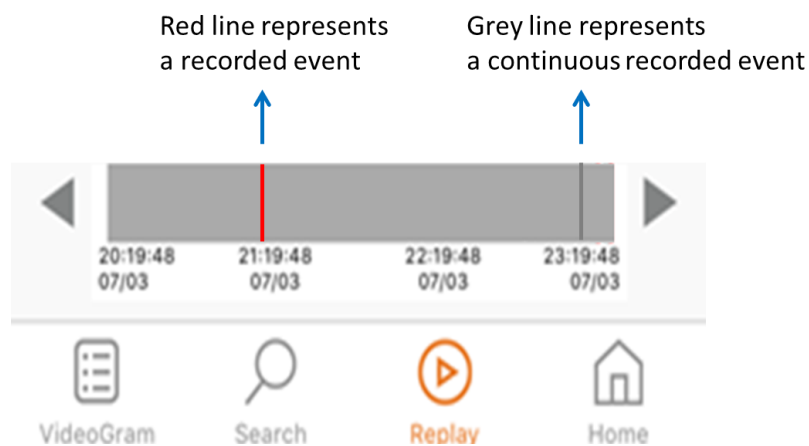
- When several video clips are recorded at approximately the same time point, making it difficult to select the one you wish to view, tap the time point to show a list of the video clips. A maximum of six clips are listed, with three clips before and three clips after the selected time point.



Home: Takes you to the app's homepage.

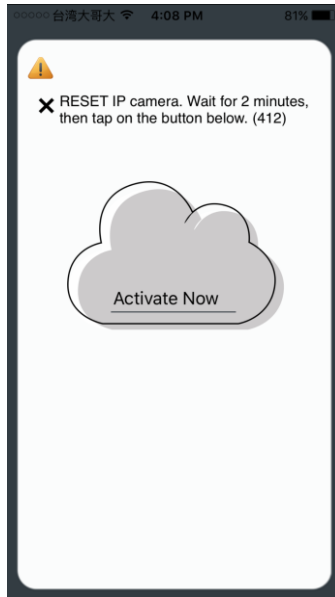


Recorded events are represented by a red line and change to “continuously” recorded events are depicted by a grey line.



Chapter 6. Resetting the Mini Outdoor Full HD camera

When you are unable to add the camera to the system, or the camera is not working properly, you can try to reset the device. The app may also display a message telling you to do so.



- **Resetting the camera when your camera is not working properly.**

Method 1: Remove the camera from the system. Please see *Section 4.9 – Restart/Remove IP Camera* for details.

Method 2: Use the wrench to open up the lid located on the bottom of the camera. Make sure the camera is powered off first, press and hold the RESET button, and then power on the camera. Continue holding down the RESET button for around 10 seconds until the IR LED goes off.

- **Resetting the camera when you are unable to add the camera to the system.**

Use the wrench to open up the lid located on the bottom of the camera. Make sure the camera is powered off first, press and hold the RESET button, and then power on the camera. Continue holding down the RESET button for around 10 seconds until the IR LED goes off.



Note: Resetting the camera will restore your device to factory default settings.

Appendix – Glossary of Terms

- **IP67:** Ingress protection level of “dust tight” and “protection against immersion up to 1m depth.”
- **Arm:** The cameras and other security related sensors in the system are actively monitoring the surroundings. Any suspicious activity that has been detected by the camera or sensor will prompt the app to immediately send a notification. The camera(s) that witnessed the event will also start recording.
- **Disarm:** The cameras and other security related sensors in the system are no longer actively monitoring the surroundings. The system will not react to any suspicious activity detected by these devices. No notification will be sent.

Note: If the continuous recording function is turned on, video recording will always work regardless if the system is armed or disarmed. For more details regarding the continuous recording function, see *Section 4.8 Turn On/Off Continuous Recording*.

- **Event:** An event is created when any camera or sensor detects an activity, or is manually triggered by the user.
- **Internet mode:** The Mini Outdoor HD camera is connected to the Internet.
- **Local mode:** The smart device is connected to the Mini Outdoor HD camera for further configuration.
- **Security Shuttle:** Functions as a secure and intelligent hub to manage the devices and communicate with the cloud server. Currently, there are three types – **OPU1120**, **OPU2120**, and **OPU3120**.
- **Stay Mode:** The system is armed, but only the pre-selected camera and sensors will be actively monitoring the surroundings, and send a notification when any suspicious activity is detected.