



# User Manual

- Imazu of Things App



---

# CONTENTS

---



- 1** General Z-Wave Information
- 2** Supported Association Group
- 3** Basic Command Handling
- 4** Interoperability
- 5** Z-Wave Configuration
- 6** Downloading & Creating Account.
- 7** INSTALLING THE HOST Device
- 8** INSTALLING THE IOT Device – Magnetic Sensor
- 9** INSTALLING THE IPC Device



# GENERAL Z-Wave INFORMATION

## ▪ Z-Wave Plus Type

- ✓ Device Type : Central Controller
- ✓ Role Type : Central Static Controller

## ▪ Supported Z-Wave Command Class

- ✓ COMMAND\_CLASS\_ZWAVEPLUS\_INFO\_V2
- ✓ COMMAND\_CLASS\_TRANSPORT\_SERVICE\_V2
- ✓ COMMAND\_CLASS\_CRC\_16\_ENCAP
- ✓ COMMAND\_CLASS\_APPLICATION\_STATUS
- ✓ COMMAND\_CLASS\_SUPERVISION
- ✓ COMMAND\_CLASS\_INCLUSION\_CONTROLLER
- ✓ COMMAND\_CLASS\_MULTI\_CMD
- ✓ COMMAND\_CLASS\_SECURITY
- ✓ COMMAND\_CLASS\_SECURITY\_2
- ✓ COMMAND\_CLASS\_FIRMWARE\_UPDATE\_MD\_V5
- ✓ COMMAND\_CLASS\_NETWORK\_MANAGEMENT\_BASIC\_V2
- ✓ COMMAND\_CLASS\_NETWORK\_MANAGEMENT\_PROXY\_V2
- ✓ COMMAND\_CLASS\_NETWORK\_MANAGEMENT\_INCLUSION\_V2
- ✓ COMMAND\_CLASS\_POWERLEVEL
- ✓ COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC\_V2
- ✓ COMMAND\_CLASS\_VERSION\_V2
- ✓ COMMAND\_CLASS\_NETWORK\_MANAGEMENT\_INSTALLATION\_MAINTENANCE
- ✓ COMMAND\_CLASS\_ASSOCIATION\_V2
- ✓ COMMAND\_CLASS\_ASSOCIATION\_GRP\_INFO\_V3
- ✓ COMMAND\_CLASS\_DEVICE\_RESET\_LOCALLY

## ▪ Control Z-Wave Command Class

- ✓ COMMAND\_CLASS\_BASIC
- ✓ COMMAND\_CLASS\_BATTERY
- ✓ COMMAND\_CLASS\_SWITCH\_BINARY
- ✓ COMMAND\_CLASS\_SWITCH\_MULTILEVEL
- ✓ COMMAND\_CLASS\_SENSOR\_MULTILEVEL\_V5
- ✓ COMMAND\_CLASS\_SECURITY
- ✓ COMMAND\_CLASS\_SECURITY\_2
- ✓ COMMAND\_CLASS\_CRC\_16\_ENCAP
- ✓ COMMAND\_CLASS\_ASSOCIATION\_V2
- ✓ COMMAND\_CLASS\_MULTI\_CHANNEL\_V4
- ✓ COMMAND\_CLASS\_MANUFACTURER\_SPECIFIC\_V2
- ✓ COMMAND\_CLASS\_NOTIFICATION\_V4
- ✓ COMMAND\_CLASS\_WAKE\_UP\_V2
- ✓ COMMAND\_CLASS\_VERSION\_V2
- ✓ COMMAND\_CLASS\_ZWAVEPLUS\_INFO

- **Supported Association Groups**

- ✓ Group ID : 1 – Lifeline MAX NODES IN GROUP : 5

- **Basic Command Handling**

- ✓ This equipment can control a device which supports Basic Command Class by sending BASIC OFF[0x00] and ON[0xFF] from the GUI.
- ✓ This equipment can receive Basic Command from a device, but **it does nothing and just return ACK.**

- **Interoperability**

- ✓ This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and /or other application's. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.
- ✓ **This product is a security enabled Z-Wave product that is able to use encrypted Z-Wave messages to communicate to other security enabled Z-Wave products.**
- ✓ S2 Security Supported Command Classes

## ▪ Z-Wave Configuration

- ✓ Association group
  1. Support 1 association group
  2. Grouping identifier : 1, lifeline
  3. Maximum number of devices that can be added to the group: 1
  4. When reset, Device Reset Locally Command Class will send to Lifeline node id.
- ✓ Device Detection

Added device will detect automatically, users can control it and watch information(alarm, battery, meter, etc) via GUI.
- ✓ Mesh Network

Added devices will show on device list. All non-battery powered nodes can act as repeaters regardless of manufacturers.
- ✓ Basic Command

Basic Command is useful in a scene.
- ✓ Replication

Controller can transmit protocol replication data automatically



# DOWNLOADING & CREATING ACCOUNT

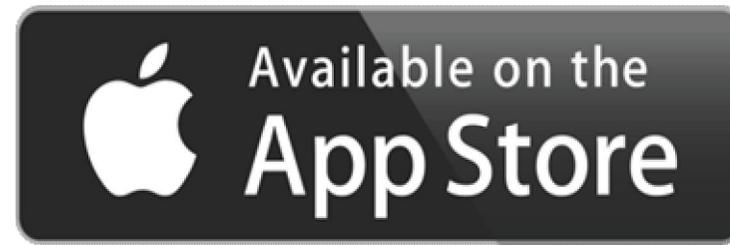
# Downloading & Creating Account (1)

---

CONFIDENTIAL

- **Installing HT IoT App**

- › Search for 'Imazu' or 'hyundaitel' at Apple App Store or Google Play. Download and install the IoT App by Hyundai Telecom.
- › However, it is currently not available for download and we are getting ready by October.

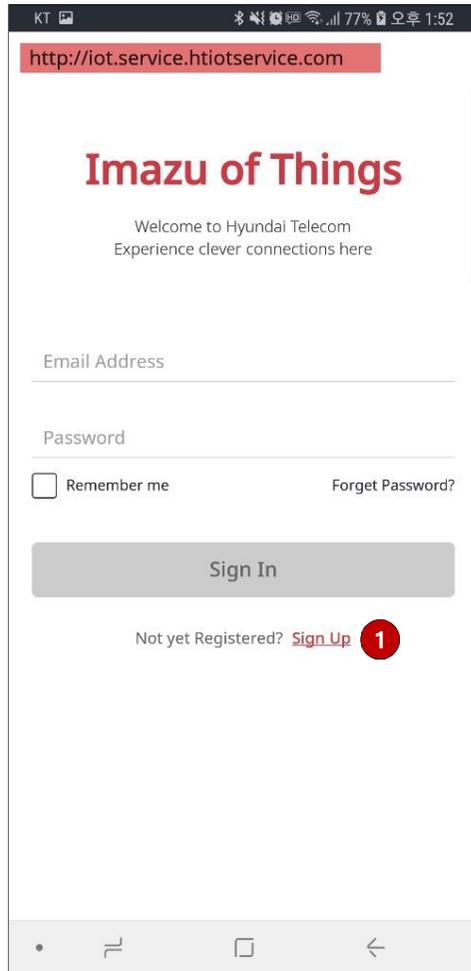


# Downloading & Creating Account (2)

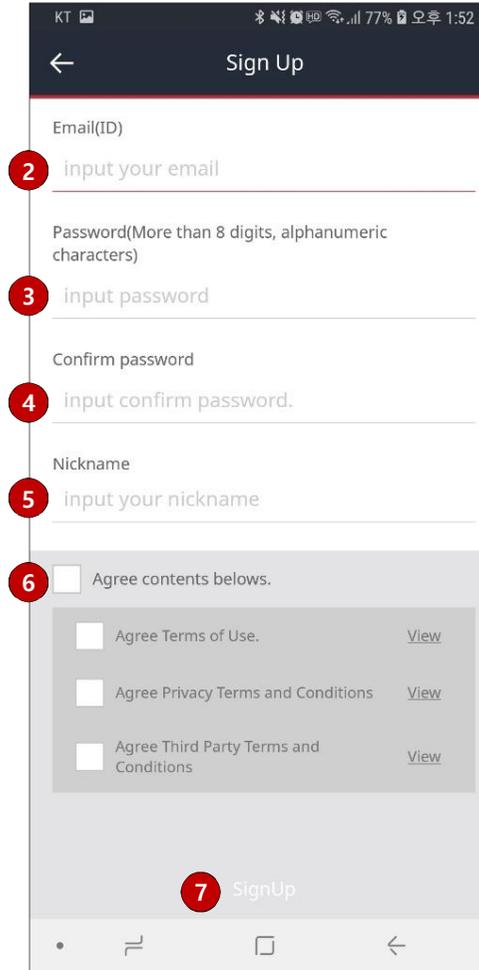
CONFIDENTIAL

## ▪ Creating Account

- › All users must create an account via IoT app to use the service.



① Click on the Sign Up.

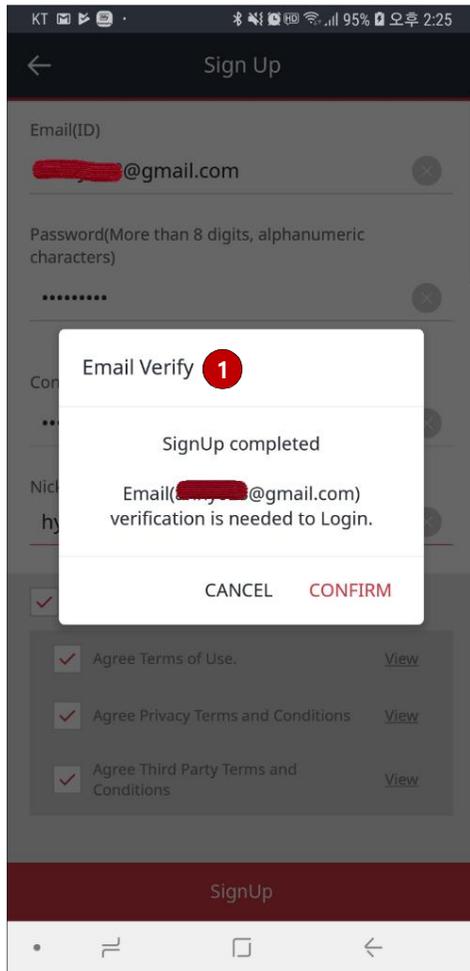


- ② Enter your email address.
- ③ Enter your password. Use a combination of at least 8 digits in English, numbers, and special characters.
- ④ Type your password again.
- ⑤ Enter your nick name.
- ⑥ Check to agree to the Conditions of Use and Privacy Notice.
- ⑦ Finally, when I click the sign up button, IoT account creation is completed.

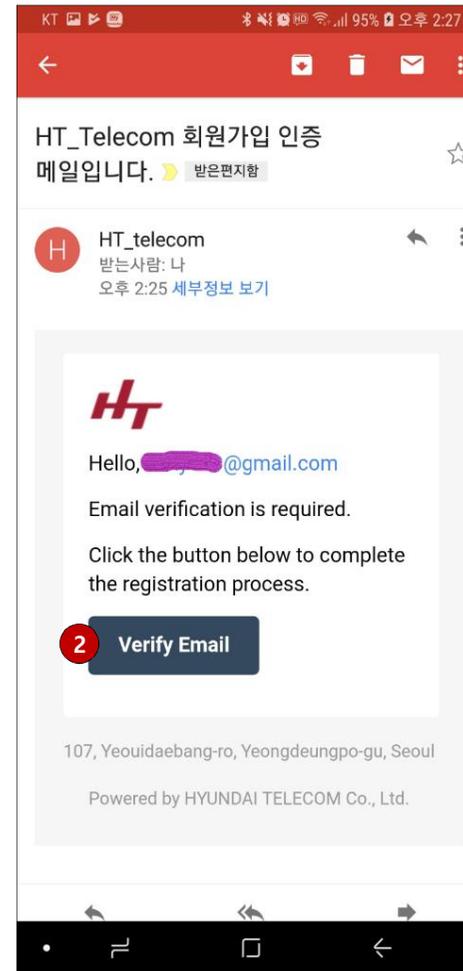
# Downloading & Creating Account (3)

CONFIDENTIAL

- **Sending an authentication mail**
  - › To use the our IOT service, you must complete the email verification.
- **Completing authentication from the mail sent**
  - › Please check to your registered email and verify email.



① A verification email is sent to your account.



② Click on the Verify Email Button provided with the email and complete the process.



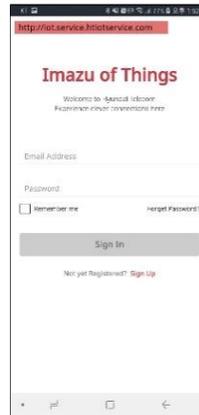
# INSTALLING THE HOST DEVICE

# Installing The Host Device(1)

- **The first registration of your host device.**
  - › The Host device, wireless router, and IoT app of the smartphone must be all connected in the following order.
    - ① Check the Wi-Fi name and password of the router subjected for connection. To use the Host device, it is necessary to have a wired/wireless router connected with internet.
    - ② Selected the IoT(Imazu of Things) App in the smart phone and run it.
    - ③ Place Host device on a preferred location. Connect power to Host device and wait until the blue lamp turns on.



Wireless Router



IoT App



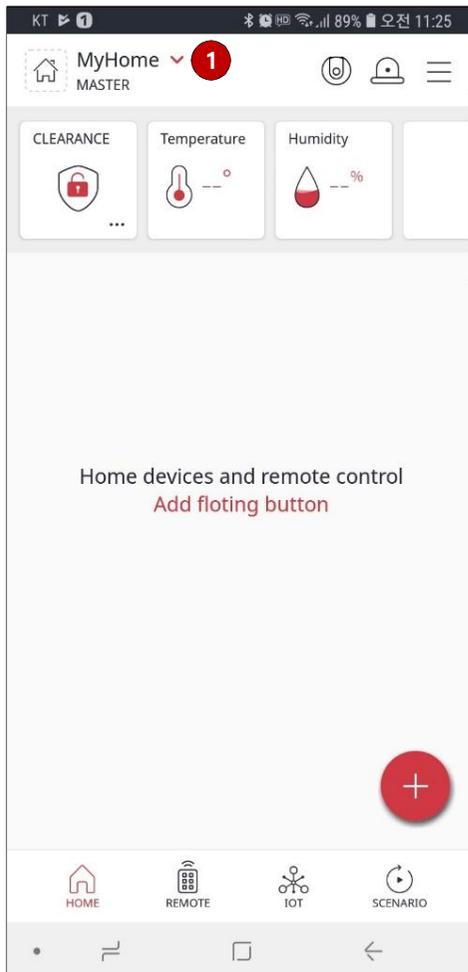
Host Device

# Installing The Host Device(2)

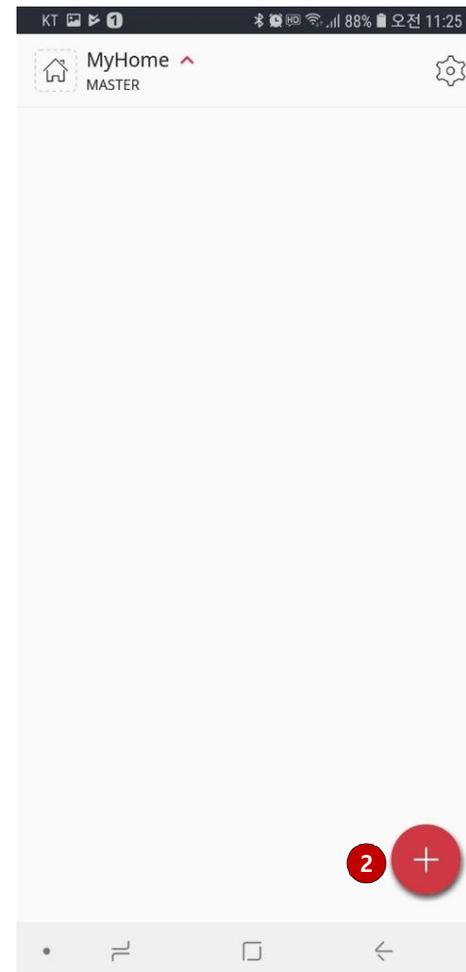
CONFIDENTIAL

## ▪ Registering a Host device.

- › To use the host device, you must register through the IoT app
- › After running the app and sign in, please follow the instruction below for the first registration of your Host device by IoT app.
- › When you log in, you will see the main screen in my home.
- › Shows the list of registered Homeway devices on the My Home screen.



① Touch the  button on the upper left of the main screen.

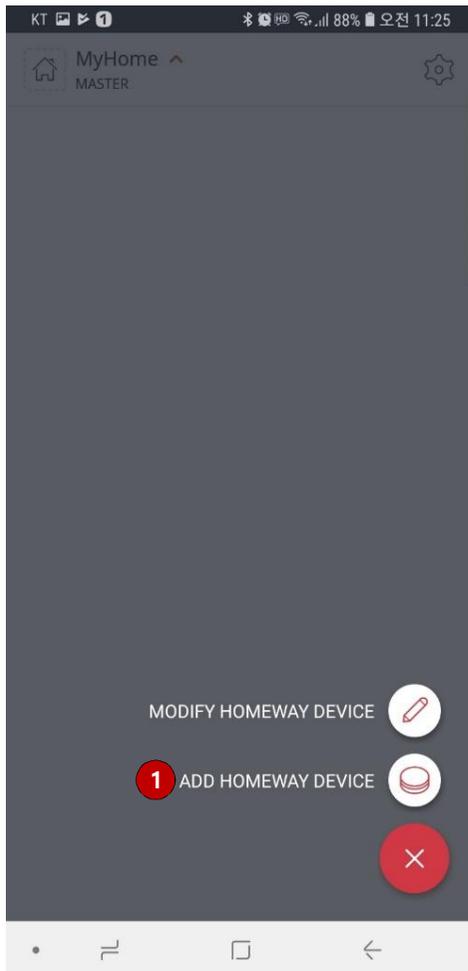


② Touch the  floating button on the My Home screen.

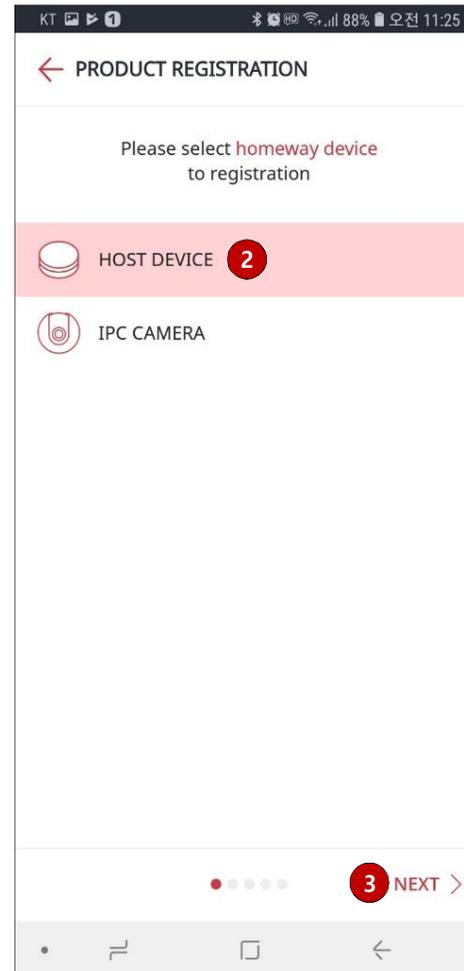
# Installing The Host Device(3)

CONFIDENTIAL

- **Selecting the Host device installation.**
  - › Currently provide HOST, IPC as Homeway devices. Homeway devices will be added in the future.



- ① Touch the **ADD HOMEWAY DEVICE** button on the the floating button.



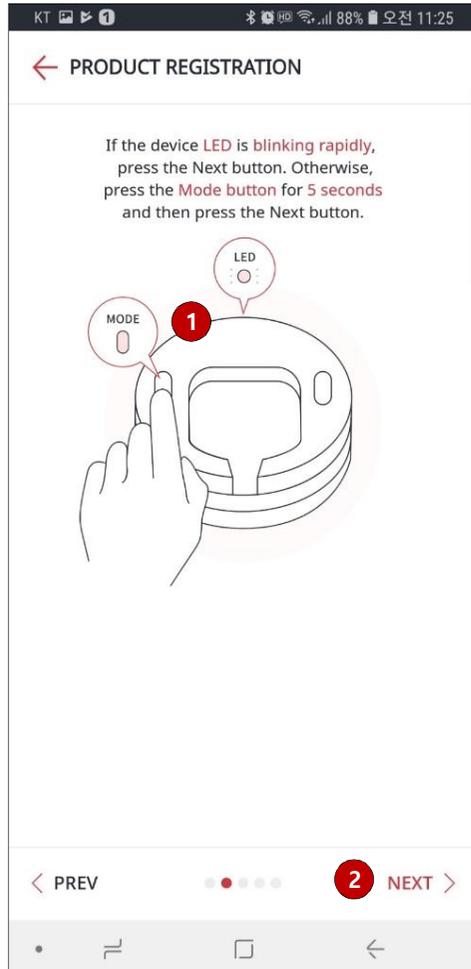
- ② Touch the **'HOST DEVICE'** button on the IoT App screen.
- ③ Then, touch the **'NEXT'** button.

# Installing The Host Device(4)

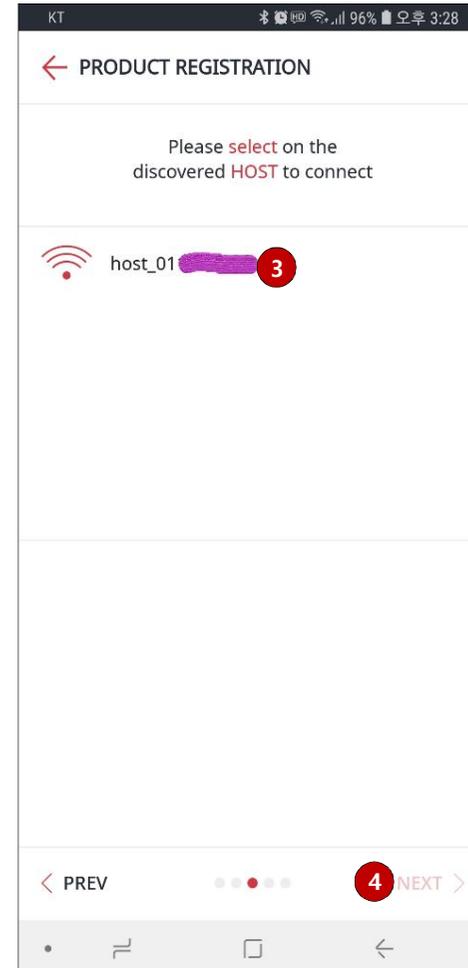
CONFIDENTIAL

## ▪ Selecting Host device.

- › Show the list of your HOST device based on the serial id on the IoT screen.



- ① Check if the LED of the Host device is green blinking rapidly.
- ② Then, touch the 'NEXT' button. (If the lamp is not green blinking, press the Mode button and Reset button simultaneously during 5 seconds.)



- ③ Check the search result for the HOST device. Touch the 'host\_serial id' item on the IoT App screen.
- ④ Then, touch the 'NEXT' button.

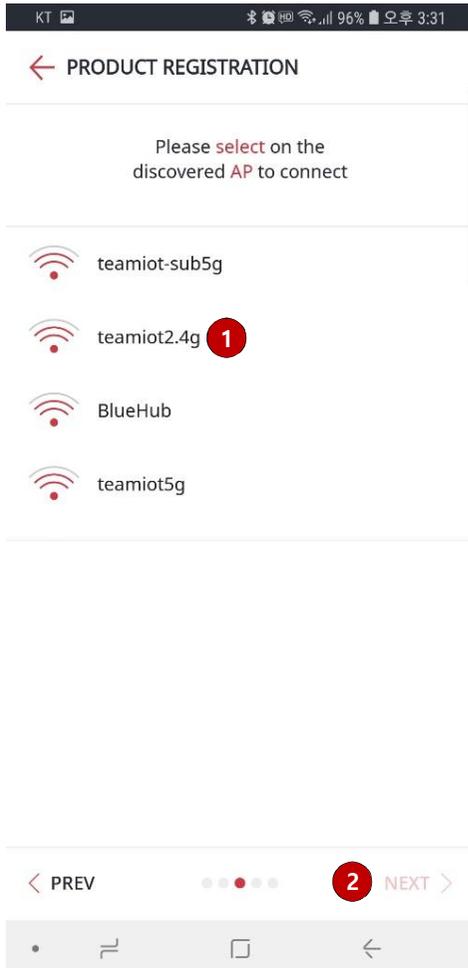
✓ You can refer to the Serial ID the name under the lower cap of HOST device.

# Installing The Host Device(5)

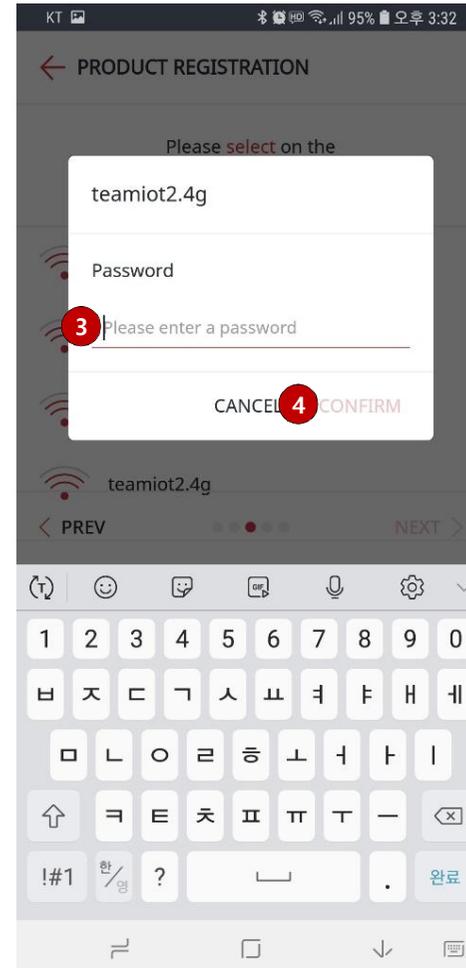
CONFIDENTIAL

## ▪ Wi-Fi connection.

- › Currently can only use 2.4Ghz for the HOST device.



- ① Search for a wireless router (AP) connected with the smart phone is made automatically. Select the name of Wi-Fi to be connected.
- ② Then, touch the 'NEXT' button.



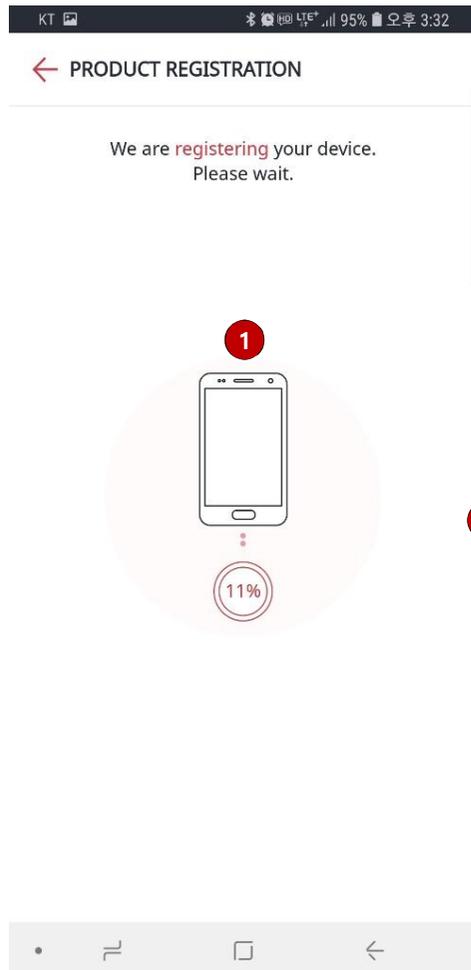
- ③ Enter the WiFi password.
- ④ Then, touch the 'CONFIRM' button.

# Installing The Host Device(6)

CONFIDENTIAL

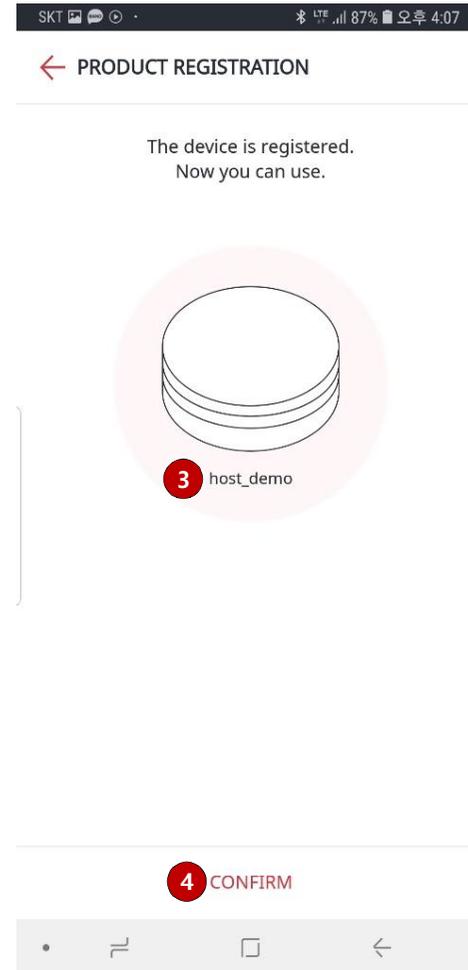
## Installing Host device

- › Registers to the server through selected WiFi.



- ① About 60 seconds after the green blinking is turned on, the color of lamp changes to blue to complete installation.
  - ② Type the nick name of host device.
- ✓ You can refer to the Serial ID the name under the lower cap of HOST device.

The screenshot shows a 'MODIFY NAME' dialog box. It has a text input field containing 'host\_012222222'. Below it, there is another text input field with 'host\_demo' and a red '2' above it. To the right of the second field is a close button (X). At the bottom right of the dialog is a red 'CONFIRM' button.



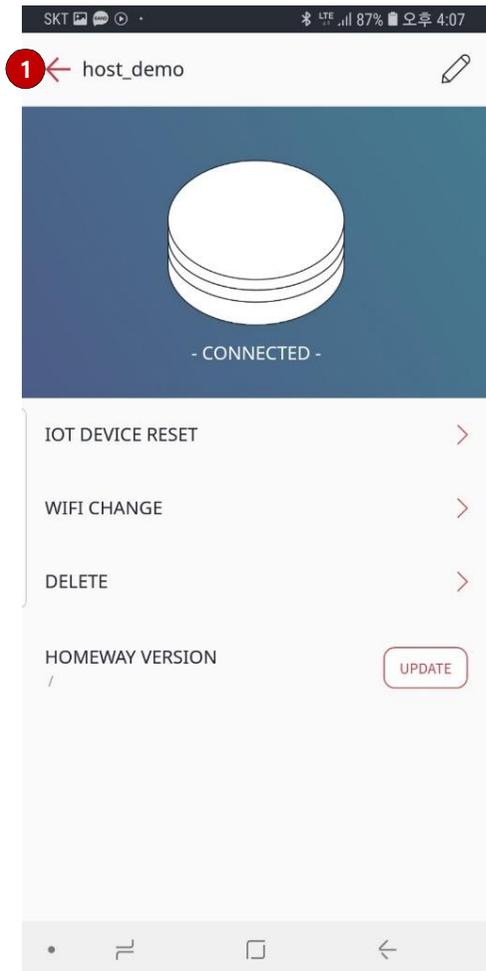
- ③ Show the host nick name.
- ④ Then, touch the 'CONFIRM' button.

# Installing The Host Device(6)

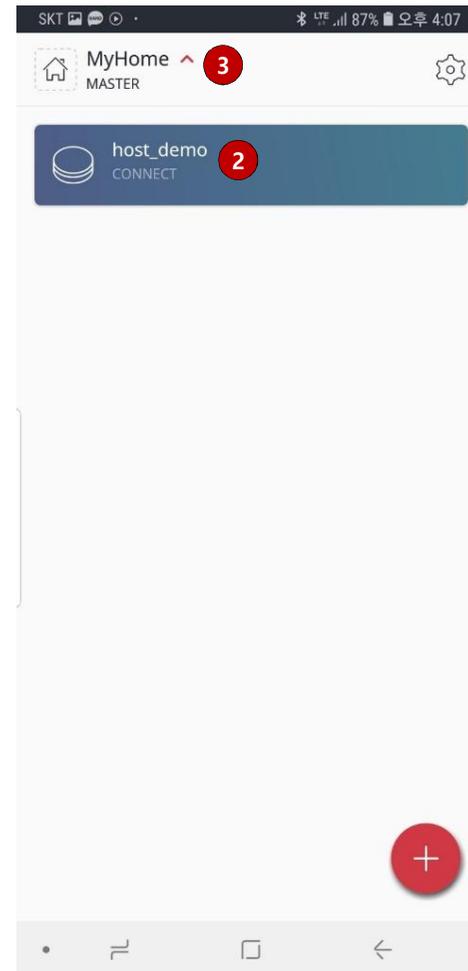
CONFIDENTIAL

## Registered Host list

- › if success the registration and modify, display the Host device on the list of My Home.



- ① if the registration if successful, display detail page for the Host device. Touch the  button on the upper left of the main screen.



- ② Display the Host device on the list of My Home.
- ③ Touch the  button on the upper of the main screen. Go to the main screen to IoT App.



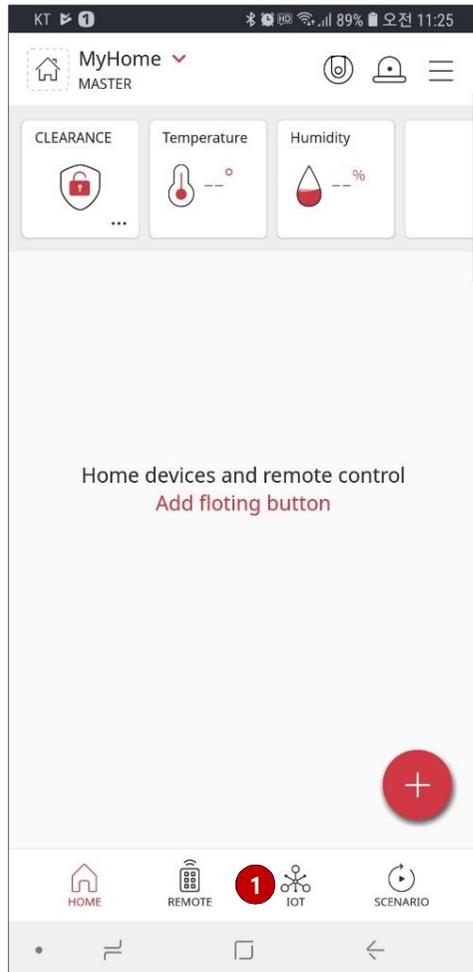
# INSTALLING THE IOT DEVICE - INCLUSION

# Installing The IOT Device

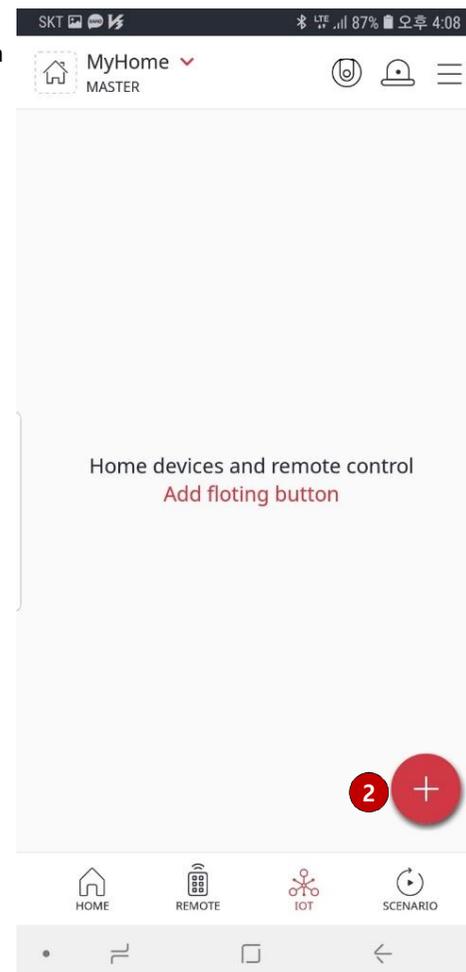
CONFIDENTIAL

## ▪ Registering a IoT device – Inclusion.

- › Follow the image, you will let into inclusion mode.
- › User can now trigger the device's node information frame to add to the ht-host Z-Wave network.
- › With Z-Wave security2, user needs to accept or modify the security class setting.
- › It is recommended that the user not change the security class settings.
- › Additionally for security2 class 1 and 2 devices, the user needs to key in the 1'st 5digits of the DSK.



① Touch the  button on the lower of the main screen.

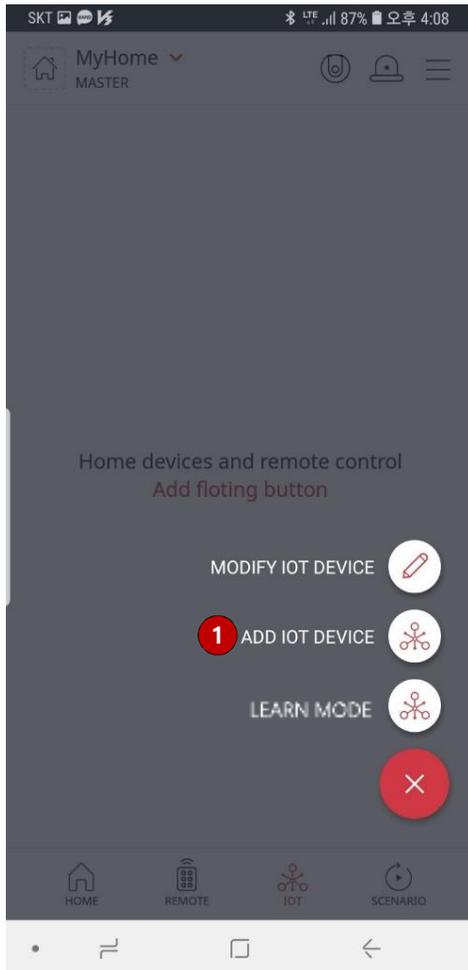


② Touch the  floating button on the IoT main screen.

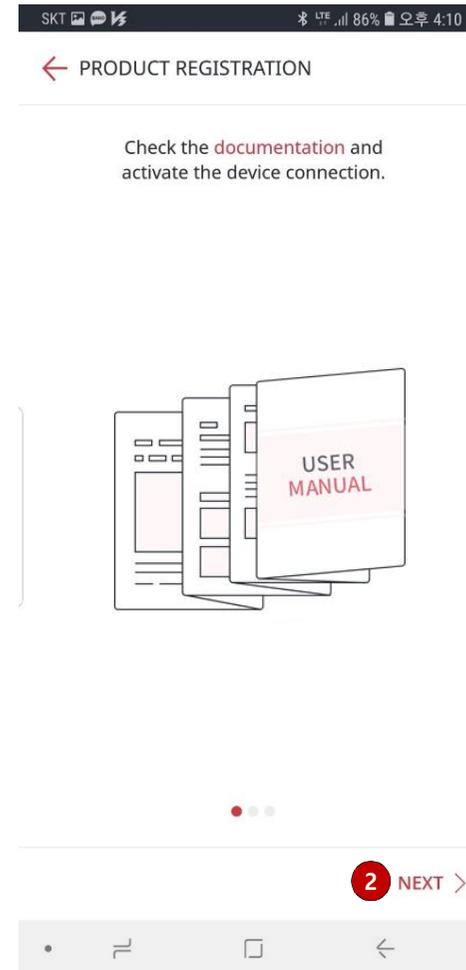
# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Inclusion.



- ① Touch the “ADD IOT DEVICE” button the IoT device screen.



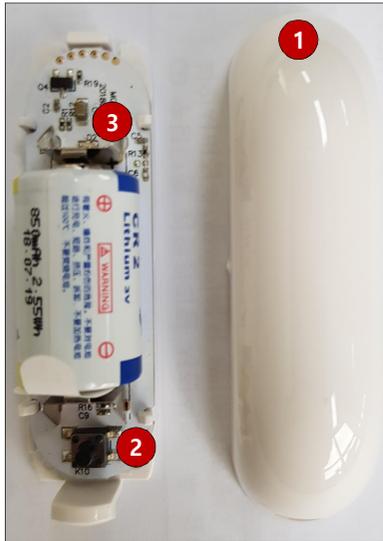
- ② Then, touch the 'NEXT' button.

# Installing The IOT Device

## ▪ Registering a IoT device – Inclusion.

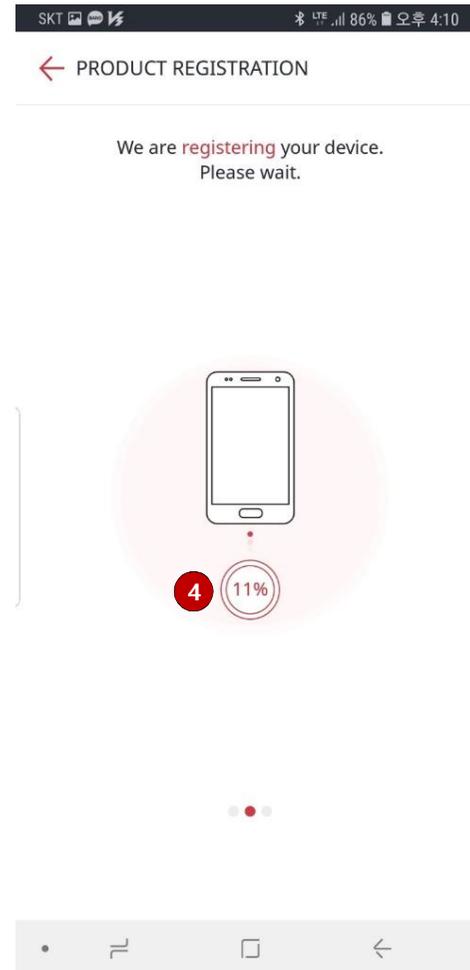
- ▶ The On Behalf button is specifically to control the flow for IOB, such that Z-Ware will know which client will receive the following notifications when the process is started with the Inclusion Controller and the device to be included or replaced.

## ▪ example – Magnetic Sensor



Magnetic Sensor

- ① Open the lid on the magnetic sensor.
- ② Quickly click the black button three times.
- ③ Check if the LED of the magnetic sensor is the red blinking rapidly five times.



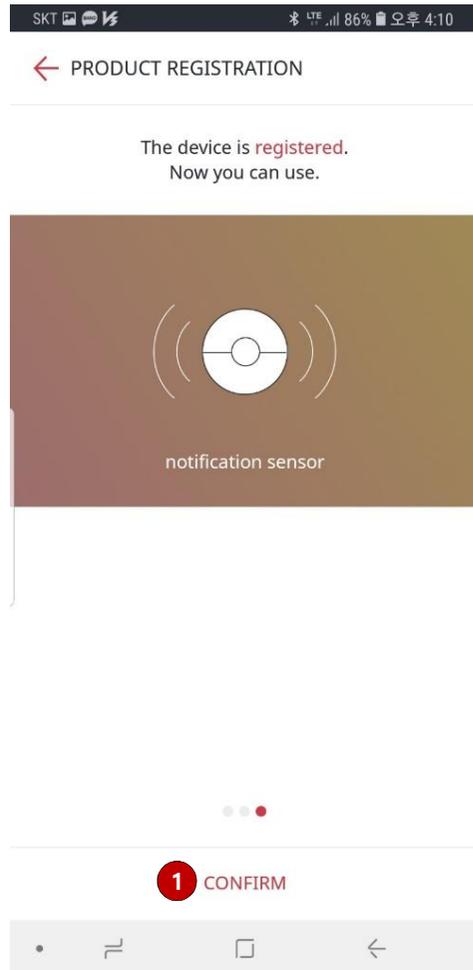
- ④ To register the magnetic sensor, take about 100 seconds.

# Installing The IOT Device

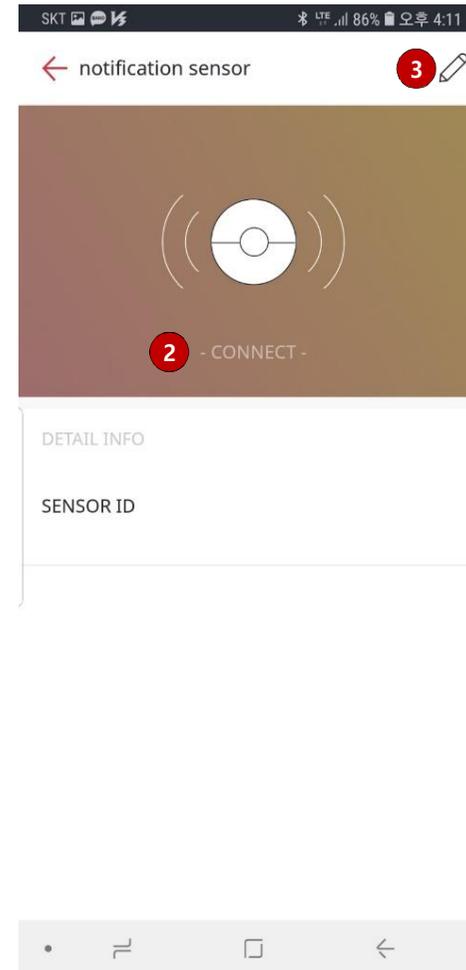
CONFIDENTIAL

## Installing IoT device

- › Registers to the server through registered Host device.
- › if the registration is successful, display the magnetic sensor on the list of IoT device.



- ① if the registration is successful, Now you can use. Then, touch the 'CONFIRM' button.



- ② Display detail page for the magnetic sensor. you can check if it is in normal condition with "CONNECT". We are going to update to show more information in the future.
- ③ Then, touch the  button. You can modify the sensor name.

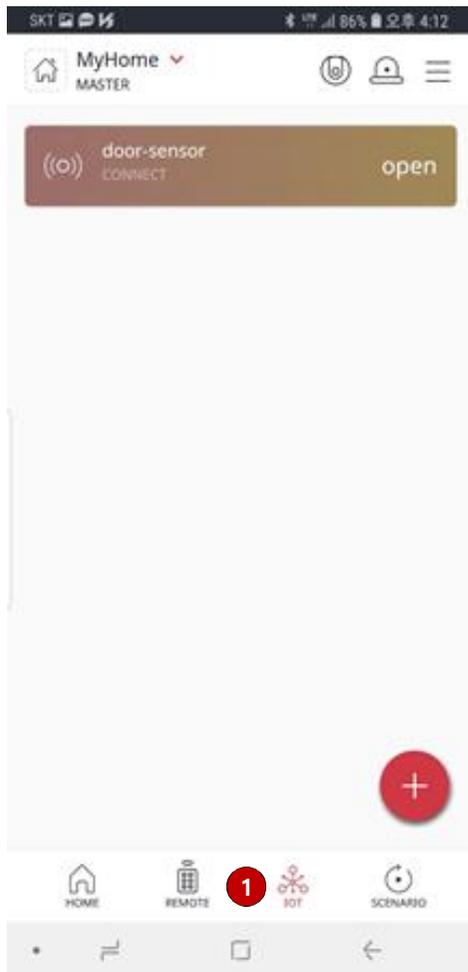


# INSTALLING THE IOT DEVICE – EXCLUSION

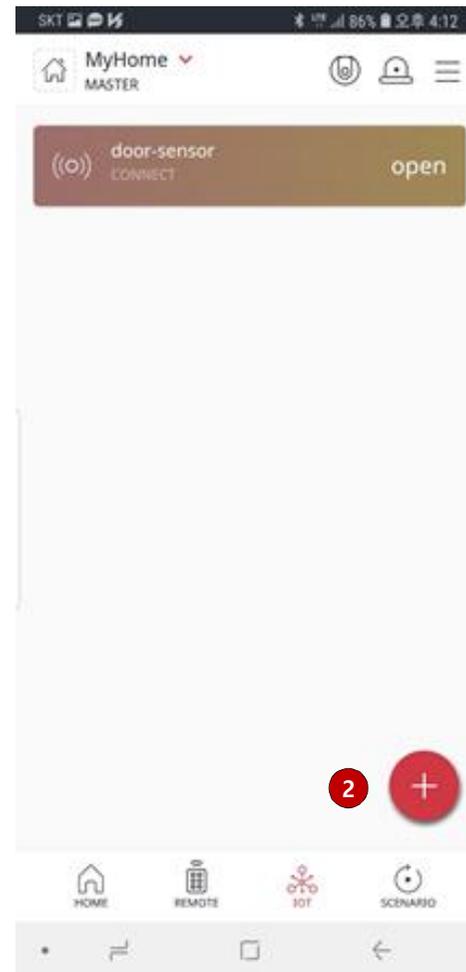
# Installing The IOT Device

CONFIDENTIAL

- **Remove the IoT device – Exclusion.**
  - › To remove the IoT device, it must be removed through the IoT app.



① Touch the  button on the lower of the main screen.



② Touch the  floating button on the IoT main screen.

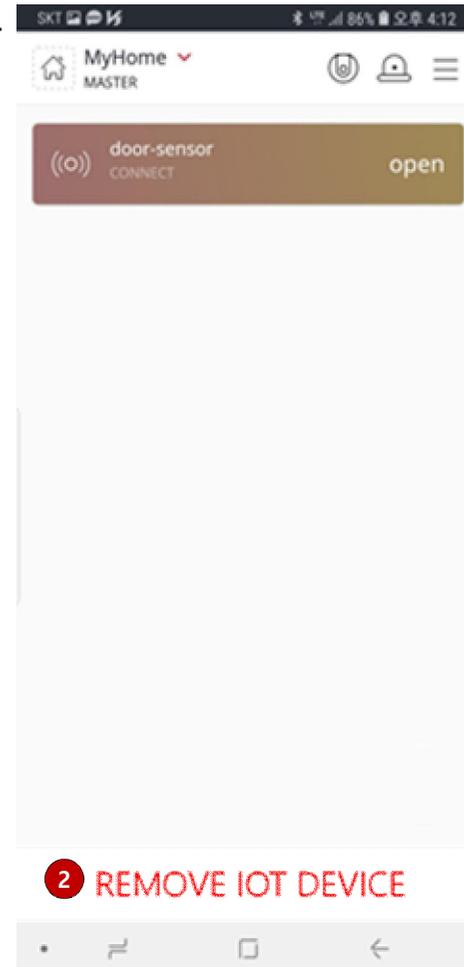
# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Exclusion.



- ① Touch the “MODIFY IOT DEVICE” button the IoT device screen.

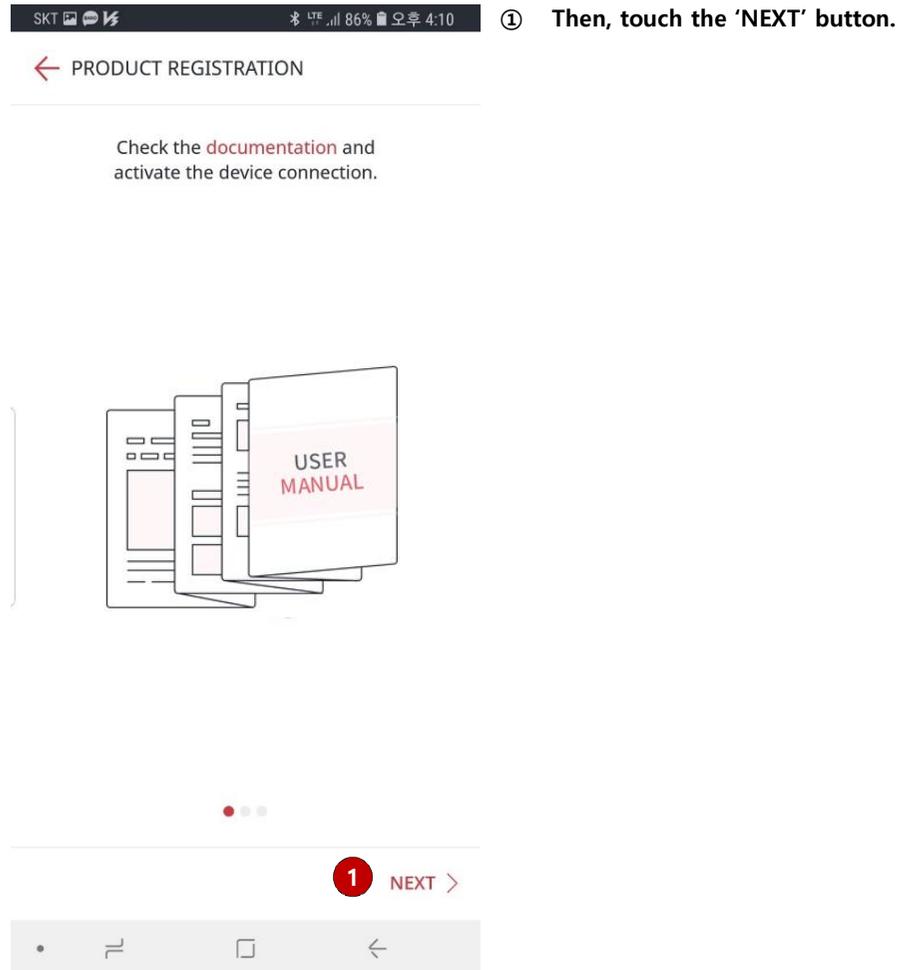


- ② Touch the “REMOVE IOT DEVICE” button the IoT device screen.

# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Exclusion.



- example – Magnetic Sensor



- ① Open the lid on the magnetic sensor.
- ② Quickly click the black button three times.
- ③ Check if the LED of the magnetic sensor is the red blinking rapidly five times.

Magnetic Sensor



# INSTALLING THE IOT DEVICE – REMOVE FAIL NODE

# Installing The IOT Device

CONFIDENTIAL

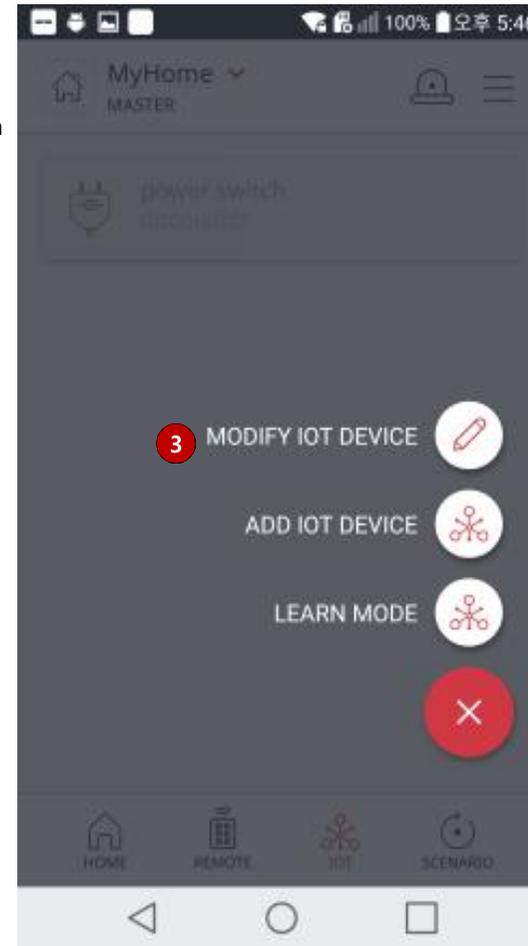
## ▪ Registering a IoT device – Remove Fail Node

- › When an added node is judged as inactive node(one time operation fail or 24 hours got no response) GUI will show Remove node.



① If the node becomes a fail node, it is marked As "DISCONNECT".

② Touch the **+** floating button on the IoT main screen.



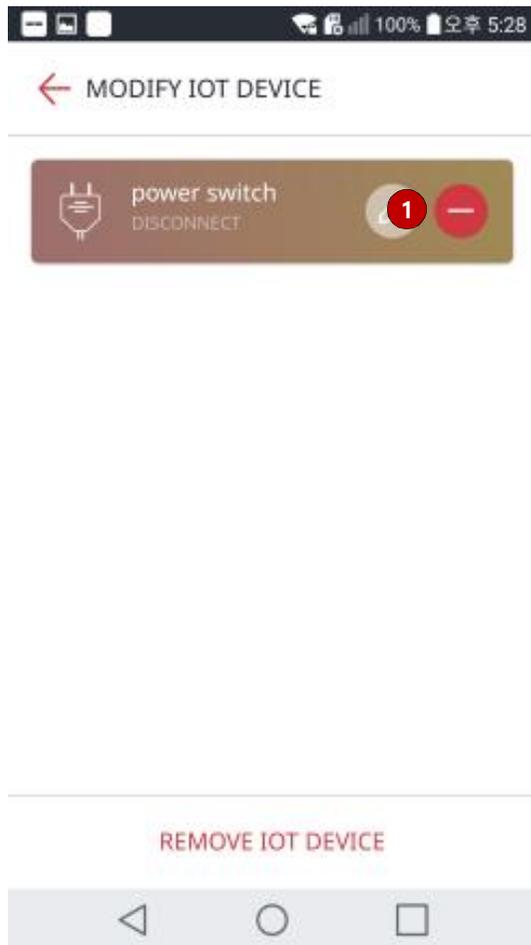
③ Touch the "MODIFY IOT DEVICE" button the IoT device screen.

# Installing The IOT Device

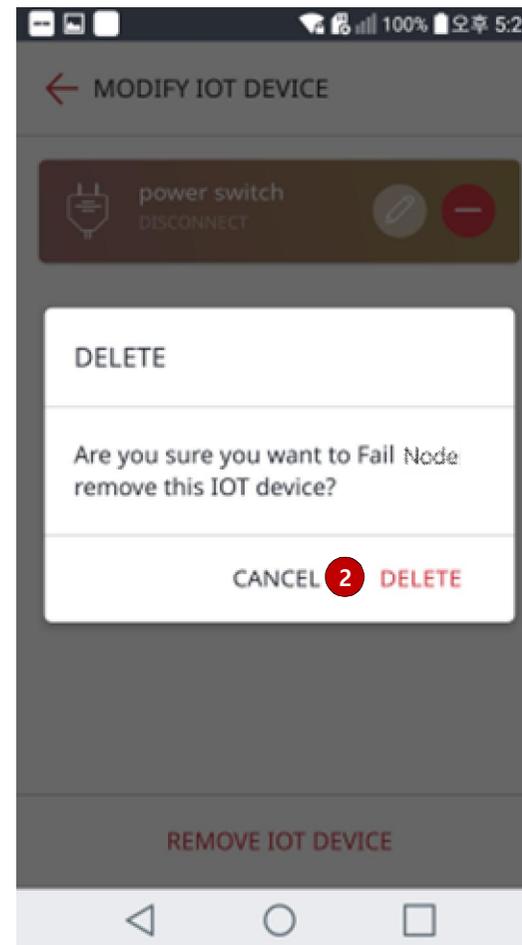
CONFIDENTIAL

## ▪ Registering a IoT device – Remove Fail Node

- › When an added node is judged as inactive node(one time operation fail or 24 hours got no response) GUI will show Remove node.



① Touch the  button for remove fail node.



② Touch the "DELETE" button to delete the fail node in a few seconds



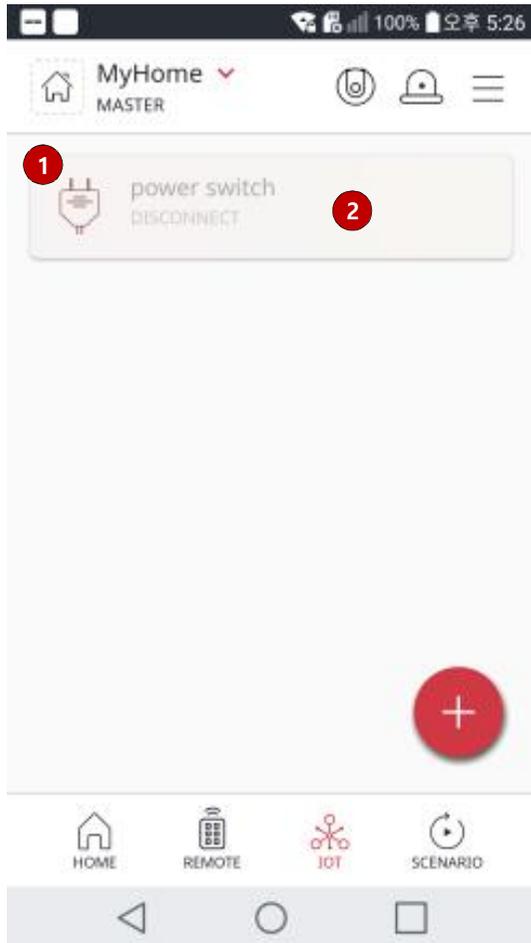
# INSTALLING THE IOT DEVICE – REPLACE FAIL NODE

# Installing The IOT Device

CONFIDENTIAL

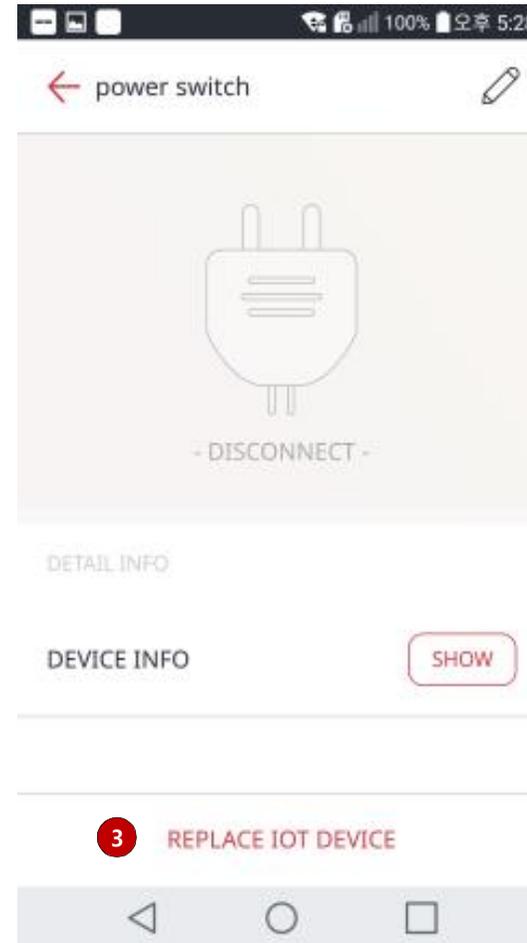
## ▪ Registering a IoT device – Replace Fail Node

- › When an added node is judged as inactive node(one time operation fail or 24 hours got no response) GUI will show Replace node.



① If the node becomes a fail node, it is marked as “DISCONNECT”.

② Touch the “ Disconnect Node”



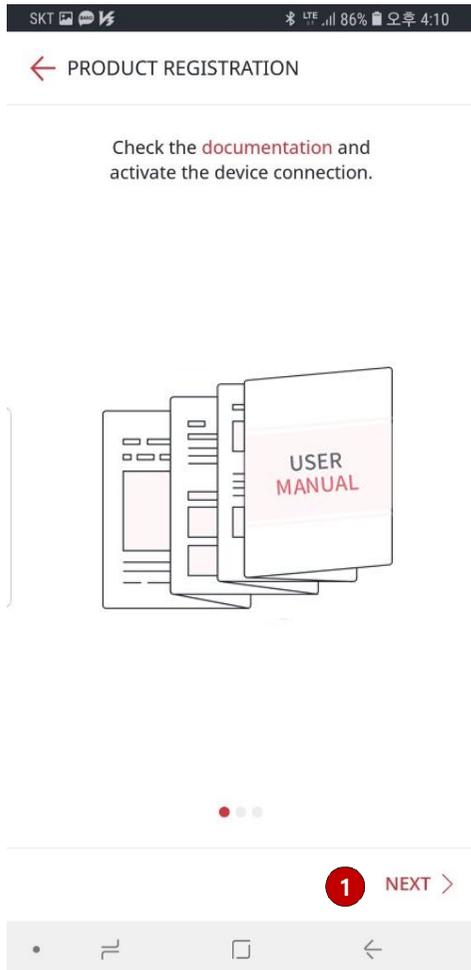
③ Touch the “REPLACE IOT DEVICE” button the IoT device screen.

# Installing The IOT Device

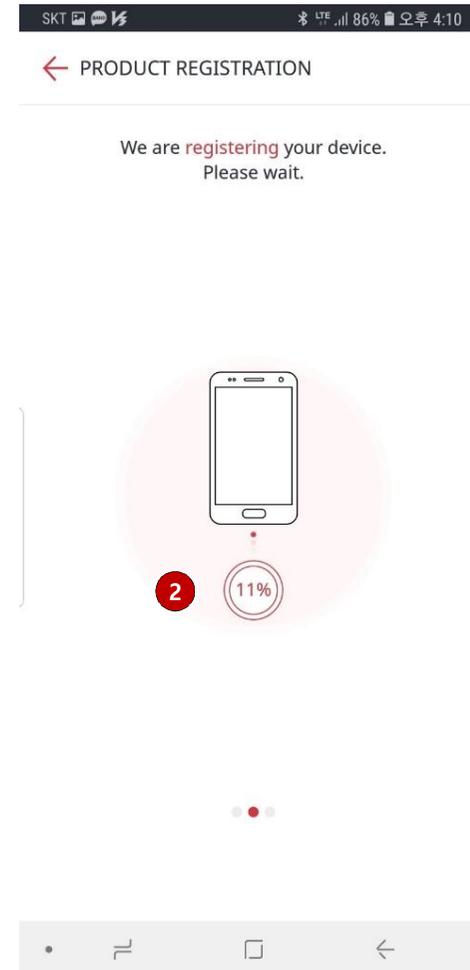
CONFIDENTIAL

## ▪ Registering a IoT device – Replace Fail Node

- › When an added node is judged as inactive node(one time operation fail or 24 hours got no response) GUI will show Replace node.



① Press the “NEXT” button for replace node.



② Press the registration button of the node to be replaced and wait approximately 100 seconds.

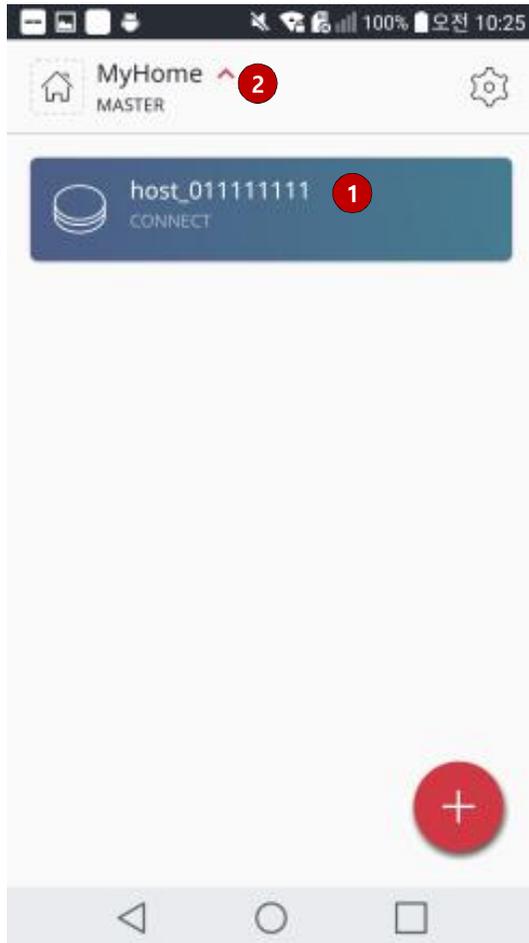


# INSTALLING THE IOT DEVICE – NETWORK UPDATE

# Installing The IOT Device

CONFIDENTIAL

- **Registering a IoT device – Network Update**
  - › This rediscovers and updates the devices in the network.



- ① Press the selected host on the current screen.
- ② If it's not the current screen, Press  to find the current screen.

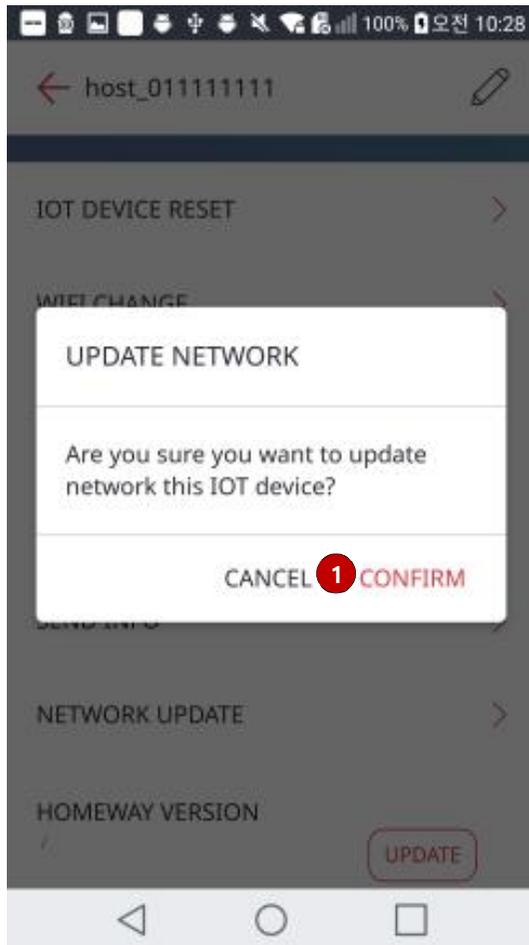


- ③ If you press the “NETWORK UPDATE” button, the network update will begin.

# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Network Update
  - › This rediscovers and updates the devices in the network.



① Press the “CONFIRM” button.



② When a network update is started, it takes approximately 100 seconds..



# INSTALLING THE IOT DEVICE – SET LEARN MODE(INITIATE)

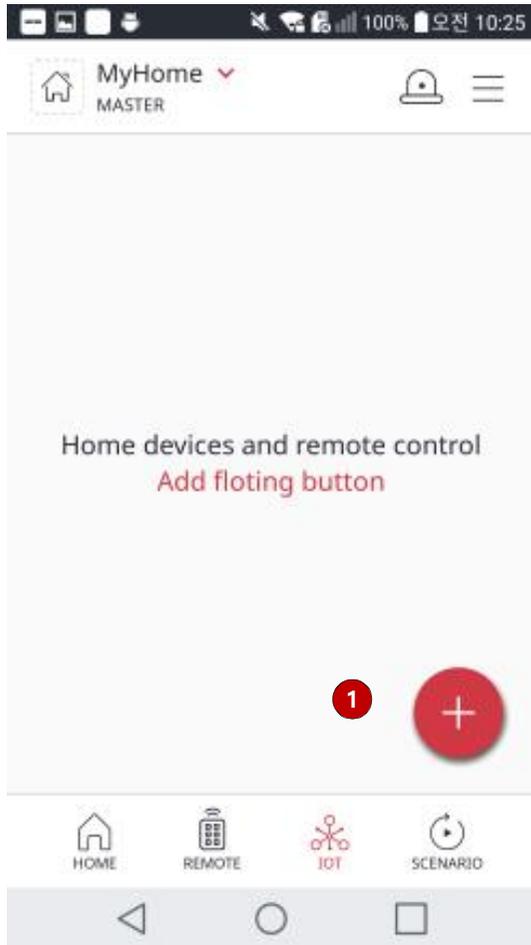
- **Registering a IoT device – Set Learn Mode**

- › This performs the Z-Wave set learn mode network operation. This can only be performed when Z-Wave is not in a network and will typically make Z-Wave an inclusion or Secondary Controller, in which case, some of its facilities will not be available.
- › To complete an S2 inclusion, the DSK may need to be entered on the including Controller.
- › Note that this function may let ht-host as "secondary controller" or "inclusion controller" in another existing network, just start inclusion mode or controller shift on another controller, then start ht-host learn mode, after inclusion, ht-host will replicate node information from another controller.
- › Since our design is based on "primary controller", we recommend that you just use our ht-host as "primary controller"

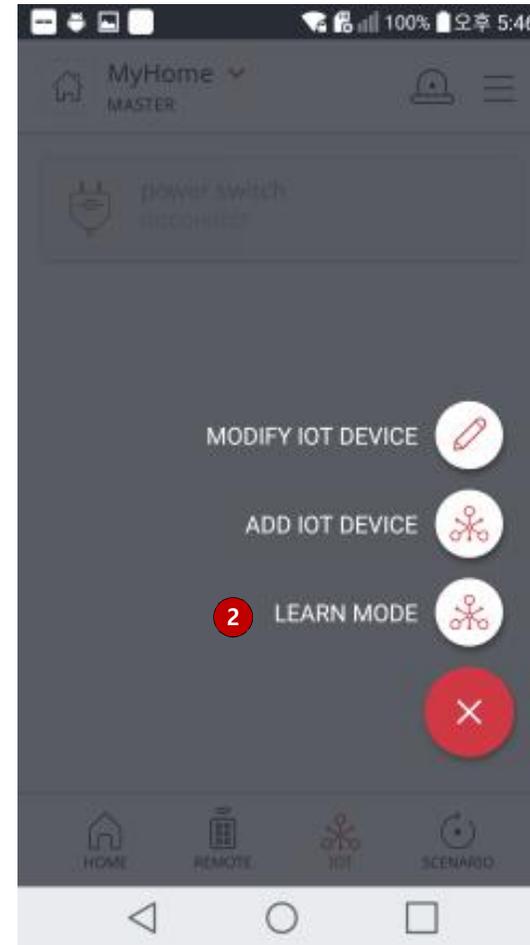
# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Set Learn Mode



① Press the  button.

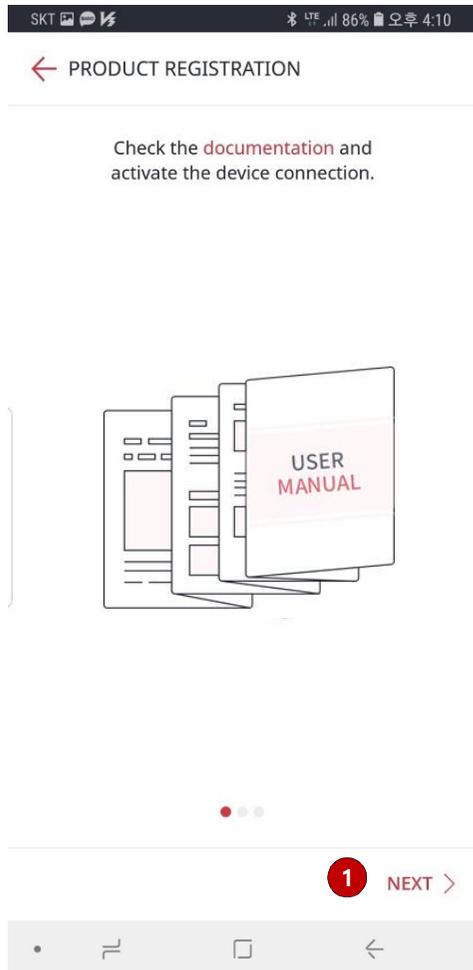


② Press the “LEARN MODE” button to start the learn mode.

# Installing The IOT Device

CONFIDENTIAL

## ▪ Registering a IoT device – Set Learn Mode



① Press the “NEXT” button.



② Wait for another controller enter the “Inclusion mode”, about 100 seconds.



# INSTALLING THE IOT DEVICE – RESET

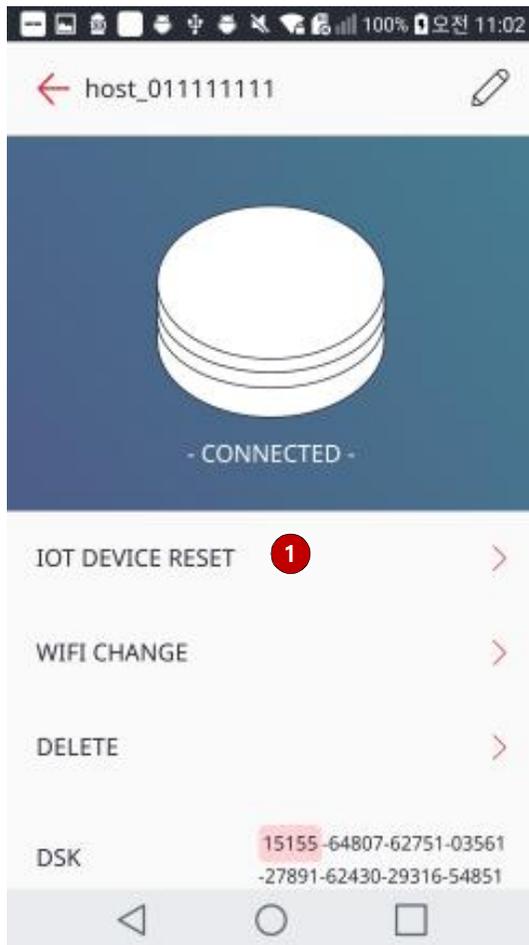
- **Registering a IoT device – Reset**

- › This is the Z-Wave Set default network operation and it pops up a confirmation prompt.
- › If this controller is the primary controller for your network, resetting it will result in the nodes in your network being orphaned and it will be necessary after the reset to exclude and re-include all of the nodes in the network.
- › If this controller is being used as a secondary controller in the network, use this procedure to reset this controller only in the event that the network primary controller is missing or otherwise inoperable.

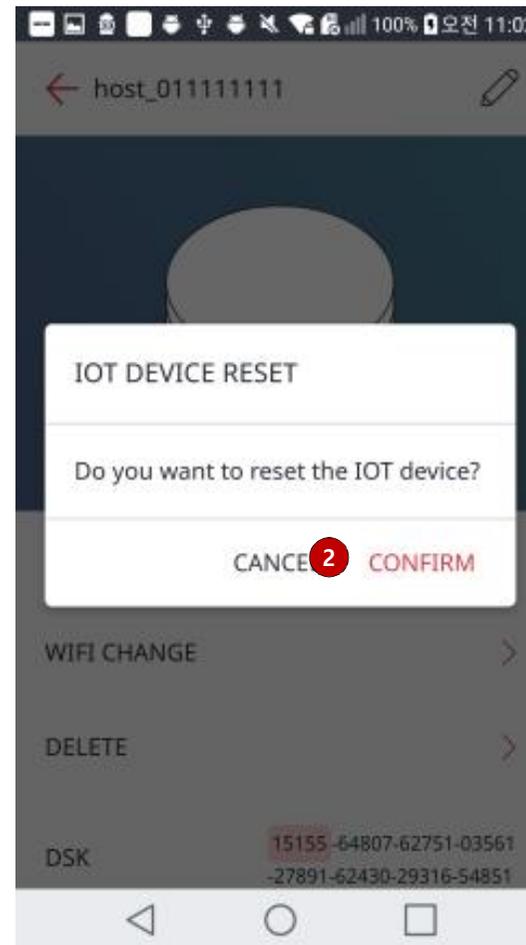
# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Reset



- ① Press the “IOT DEVICE RESET” button

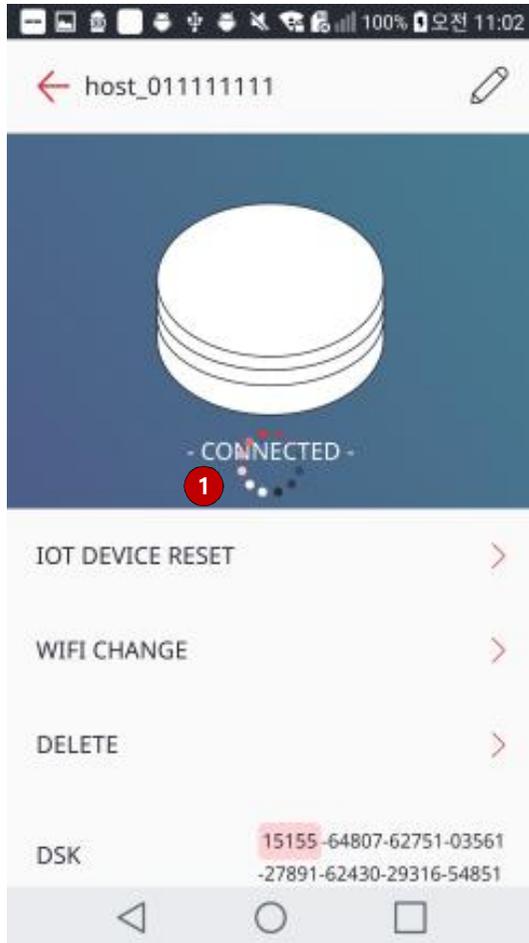


- ② Press “CONFIRM” when there is a pop-up for RESET.

# Installing The IOT Device

CONFIDENTIAL

- Registering a IoT device – Reset



② When a Reset is started, it takes approximately 100 seconds.

**END**