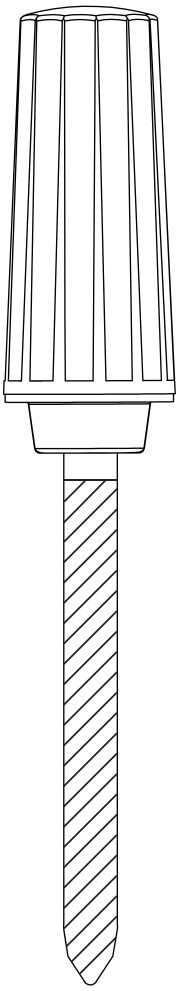
Smart Soil Moisture Sensor

User Manual



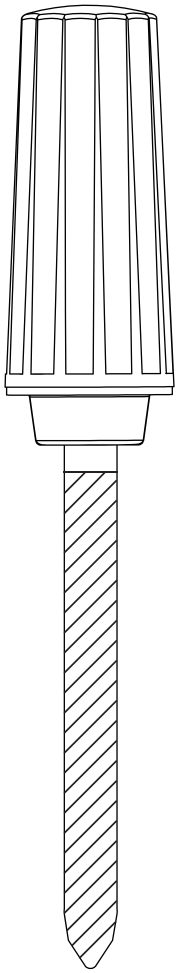
THIRDREALITY

Contents

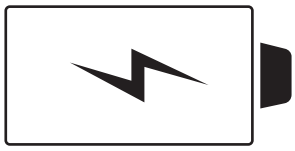
Introduction

Smart Soil Moisture Sensor is able to detect the environmental conditions of the soil in real time and transmit the data to your smart system through wireless communication capabilities.

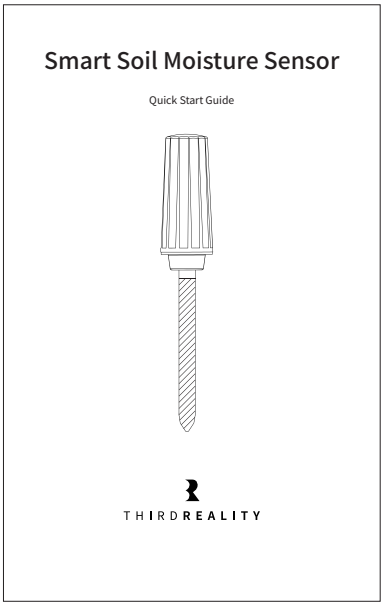
What's in the Box



Smart Soil Moisture Sensor



AA Battery

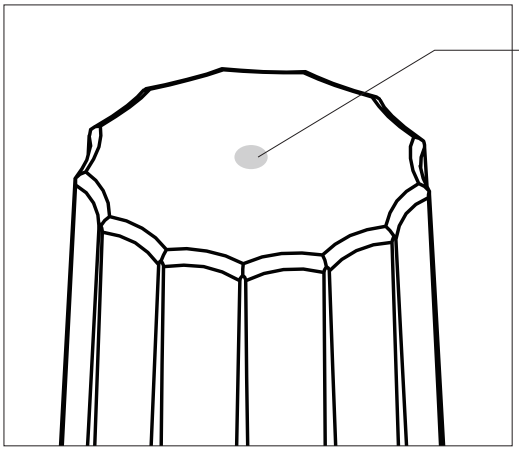


Quick Start Guide

Specifications

Name	Smart Soil Moisture Sensor
Model	3RSM0147Z
Operating Voltage	DC 1.5V
Battery Type	1 x AA Alkaline Battery (included)
Wireless Connectivity	Zigbee 3.0
Working condition	-10°C~50°C(14°F~122°F) RH 0～100%
Temperature Range	-10°C~50°C(14°F~122°F)
Temperature Accuracy	±1.5°C
Humidity Range	0～100%
Humidity Accuracy	±3%
Frequency	2.4 GHz
Max Transmission Power	10 dBm

LED Status

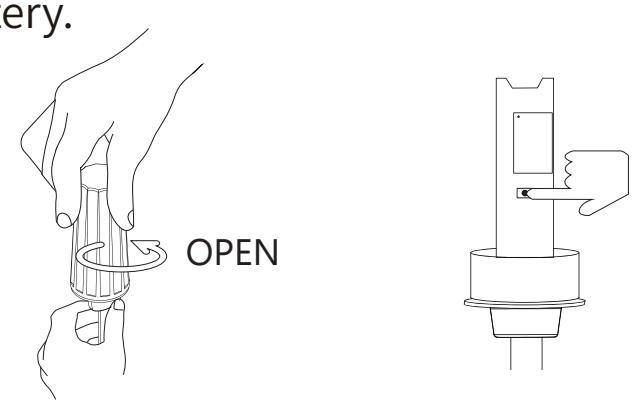


LED Indicator

LED Status	Description
Blue blinking	Pairing mode
Red slow blinking	Offline
Red double blinking	Low battery

Setup

1. Open the battery cover. Remove the battery insulation tab and install the battery.



2. Press and hold the reset button for 5 seconds until the LED light turns red, release the reset button and the LED starts blue blinking, indicating it enters Zigbee pairing mode.
3. Follow the instructions of your smart home hub /smart speaker with built-in Zigbee hub to pair the sensor in the corresponding app.

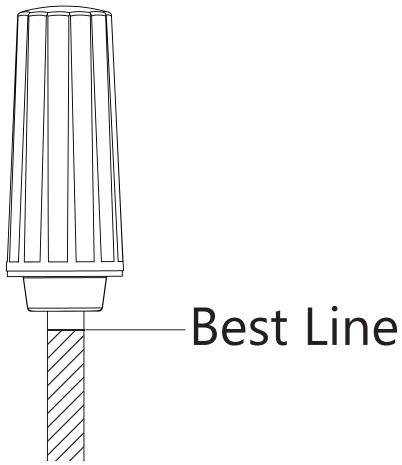
How to Use

Set up your smart soil moisture sensor.
When inserting the sensor into the soil to be measured, align the sensor’ s marking line with the soil surface to ensure measurement accuracy.
Create an automation or water the plant manually based on your observation of specific plant and soil situation, to start irrigation of certain period of time when soil moisture falls below certain value.
Note: Check multiple moisture values during certain period of time before and after irrigation, to ensure accurate soil moisture data when creating irrigation automation.

Installation

Recommend: Use a suitable tool to dig a small hole in the soil and then insert the sensor.

* When installing the sensor, make sure the marked best line is flush with the soil surface.

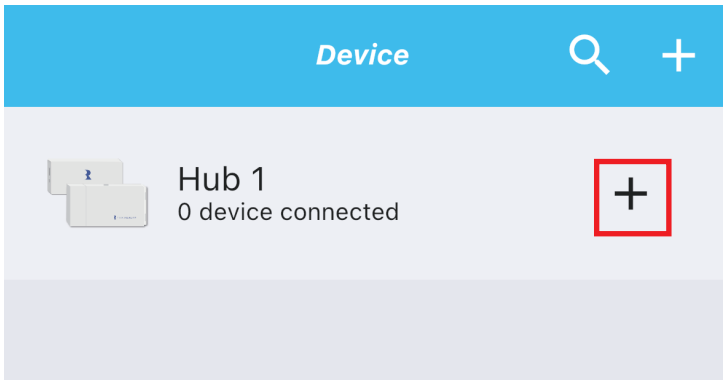


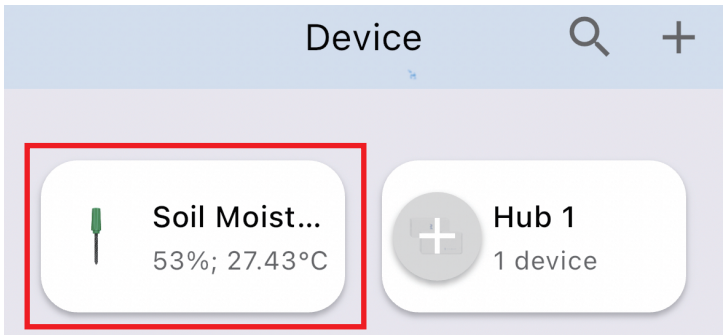
* Friction can damage the sensor and affect its accuracy. It is not recommended to insert the sensor directly into hard soil, which may damage the sensor.
* Designed to measure soil moisture ONLY.

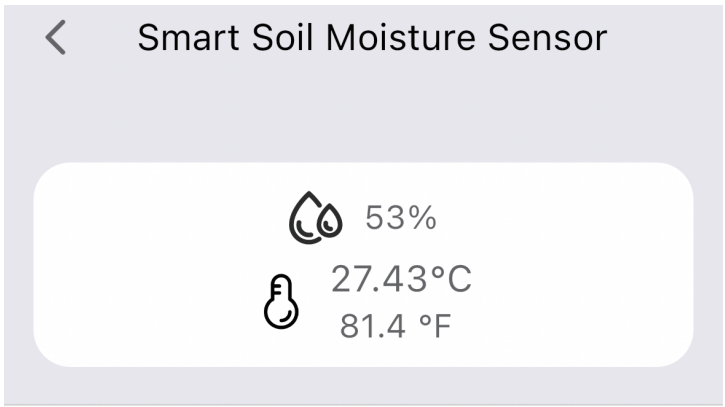
Setup with Third Reality Hub and SKILL

The Third Reality Hub (sold separately) allows you to control your device remotely via the Third Reality App, making it a great option for smart home beginners or those without a system from major providers. Additionally, the Third Reality Cloud supports SKILL integration with Google Home or Amazon Alexa, enabling you to connect your device to these platforms. However, due to the potential for slow and unreliable Cloud-to-Cloud connections, we recommend using the Bridge solution if Google Home or Alexa is your primary smart home platform.

1. Ensure your hub is properly set up with Third Reality App.
2. Open the battery cover, install the battery, press and hold the reset button for 5 seconds and release the hold; The blue blinking LED light indicates the sensor enters Zigbee pairing mode.
3. Open the Third Reality App, press the “+” icon next to the hub, and select “Quick Pair.”
4. The sensor will pair with your hub and appear in the Third Reality App.
5. Optionally, you can enable the Third Reality SKILL in either the Alexa or Google Home app to enable Cloud-to-Cloud communication.





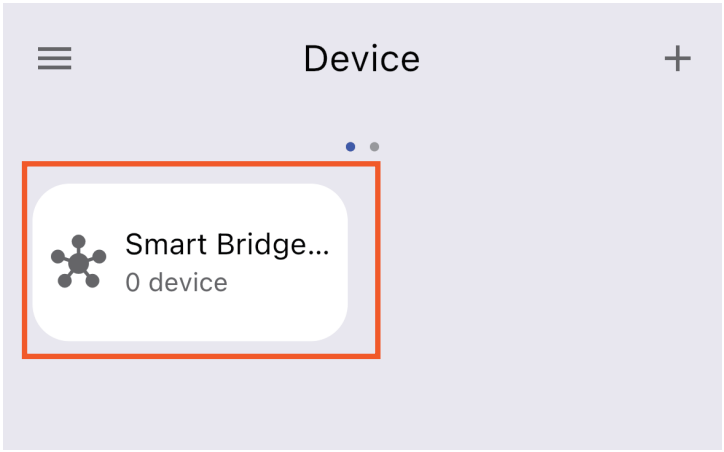


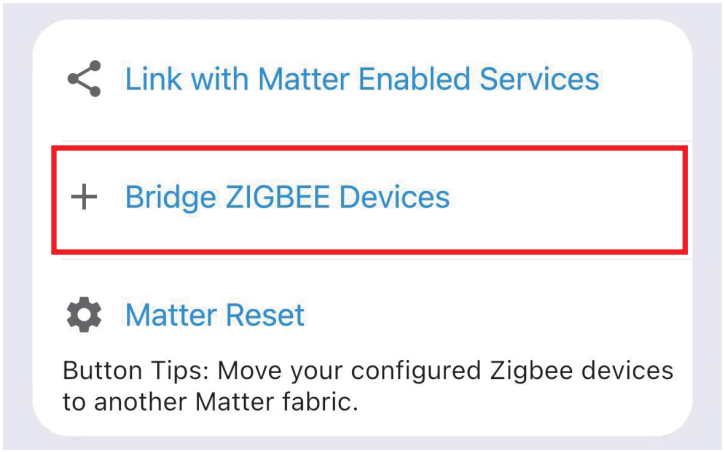
Name	Soil Moisture Sensor 1
Network	Connected
Type	Smart Soil Moisture Sensor
Mac	A4C138260AEC7BE7
Battery	High
Version	v1.00.24
Connected to	Hub 1

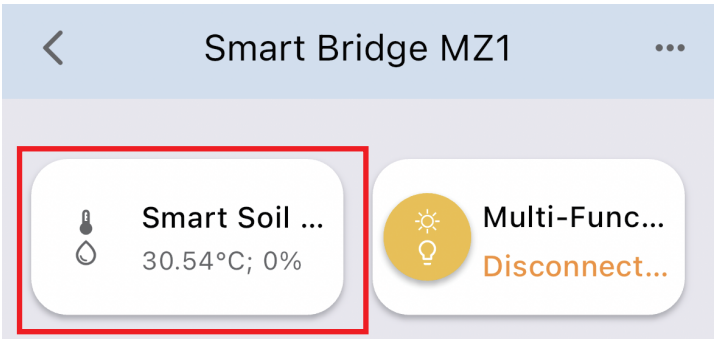
Setup with Smart Bridge MZ1

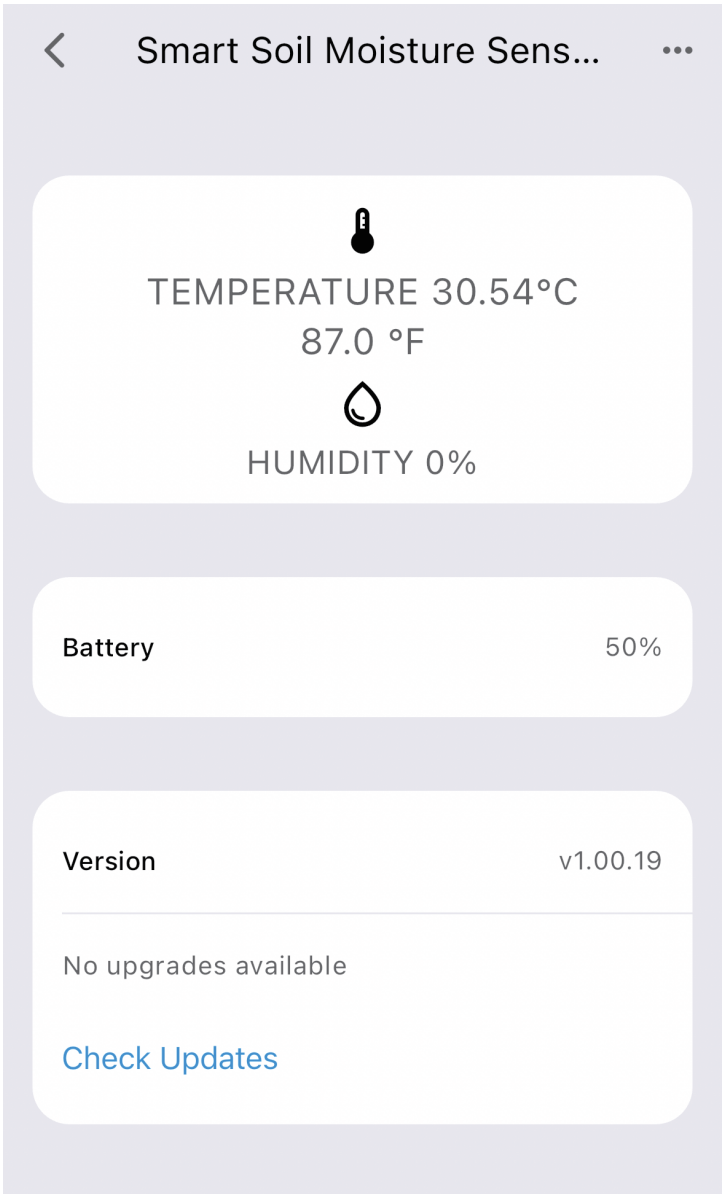
The Smart Bridge (sold separately) enables your Zigbee device to become Matter-compatible, allowing seamless integration with major Matter ecosystems like Apple Home, Google Home, Amazon Alexa, Samsung SmartThings, and Home Assistant. By setting up your Zigbee smart soil moisture sensor with the Smart Bridge, it transforms into a Matter compatible smart color bulb, enabling local control through Matter. Third Reality also offers the 3R-Installer App, which lets you configure Zigbee smart soil moisture sensor attributes such as default-on behavior and perform firmware updates.

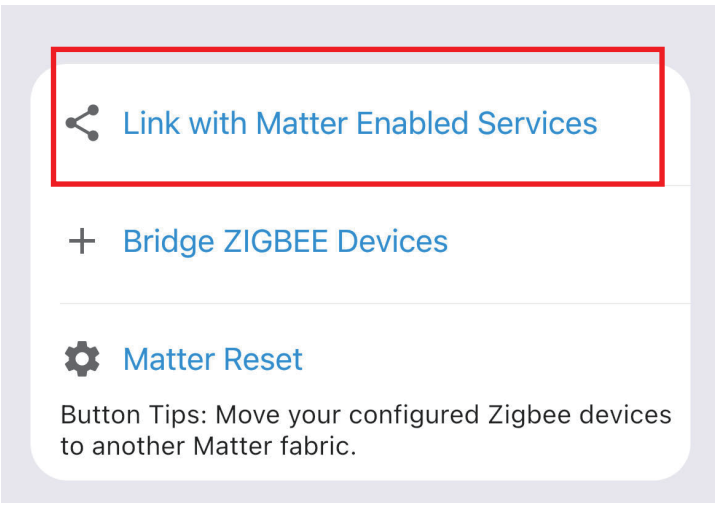
1. Ensure your bridge is already set up within your smart home system.
2. Open the battery cover, install the battery, press and hold the reset button for 5 seconds and release the hold; The blue blinking LED light indicates the sensor enters Zigbee pairing mode.
3. Press the pinhole button on the bridge to activate Zigbee pairing mode. The Zigbee blue LED should start blinking.
4. The sensor will pair with the bridge, and a new device will appear in your smart home app, such as Google Home or Alexa.
5. Optionally, you can install the 3R-Installer App and use the multi-admin feature in your smart home app to share permissions with the 3R-Installer App.

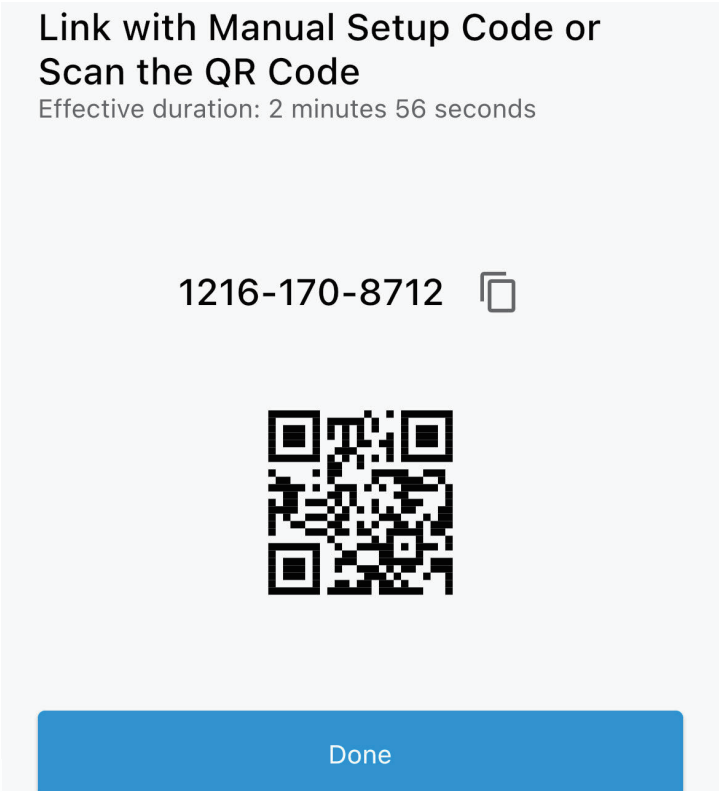

Device
Smart Bridge...
0 device


Link with Matter Enabled Services
Bridge ZIGBEE Devices
Matter Reset
Button Tips: Move your configured Zigbee devices to another Matter fabric.


Smart Bridge MZ1
Smart Soil ...
30.54°C; 0%
Multi-Func...
Disconnect...


Smart Soil Moisture Sens...
TEMPERATURE 30.54°C
87.0 °F
HUMIDITY 0%
Battery
50%
Version
v1.00.19
No upgrades available
Check Updates


Link with Matter Enabled Services
Bridge ZIGBEE Devices
Matter Reset
Button Tips: Move your configured Zigbee devices to another Matter fabric.


Link with Manual Setup Code or Scan the QR Code
Effective duration: 2 minutes 56 seconds
1216-170-8712
Done

Setup with Compatible Third-Party Zigbee Hubs

Third Reality supports integration with various open Zigbee platforms, including Amazon Echo with built-in Zigbee, Samsung SmartThings, Home Assistant (with ZHA or Z2M), Homey and Hubitat. If you own any of these devices, you can pair the smart soil moisture sensor directly with-out the need for an additional bridge or hub.

1. Ensure your Zigbee Hub is already set up within your smart home system.
2. Open the battery cover, install the battery, press and hold the reset button for 5 seconds and release the hold; The blue blinking LED light indicates the sensor enters Zigbee pairing mode.
3. Open your smart home app and follow the on-screen instructions to begin the Zigbee pairing process.
4. The sensor will flash and then turn warm white, indicating it has successfully paired with the Zigbee hub.
5. You can now use your smart home app to turn the sensor on/off.

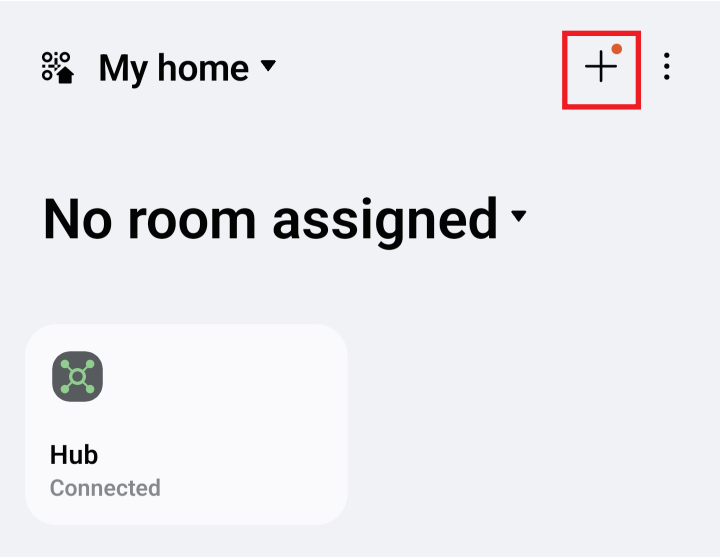
Pairing with SmartThings

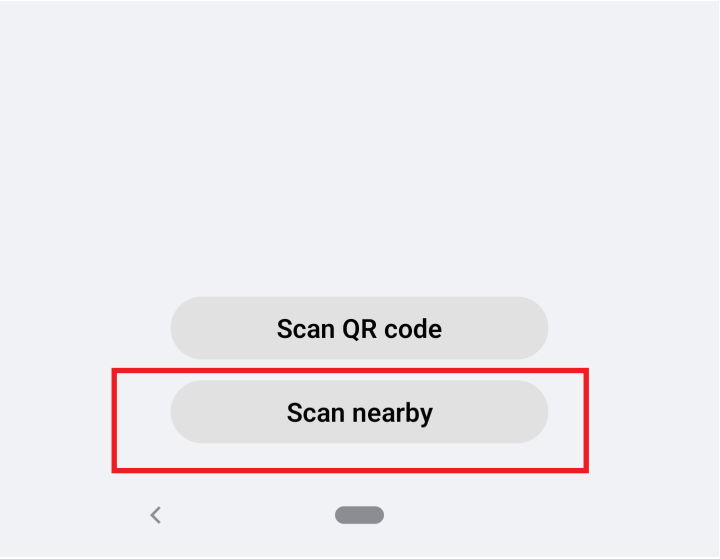
App: SmartThings App

Devices: SmartThings Hub 2nd Gen(2015) and 3rd Gen(2018), Aeotec Smart Home Hub.

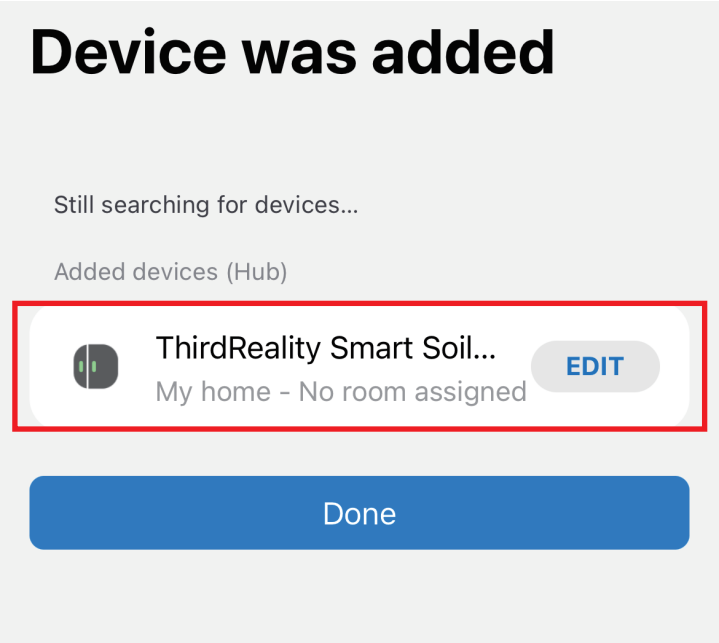
Pairing steps:

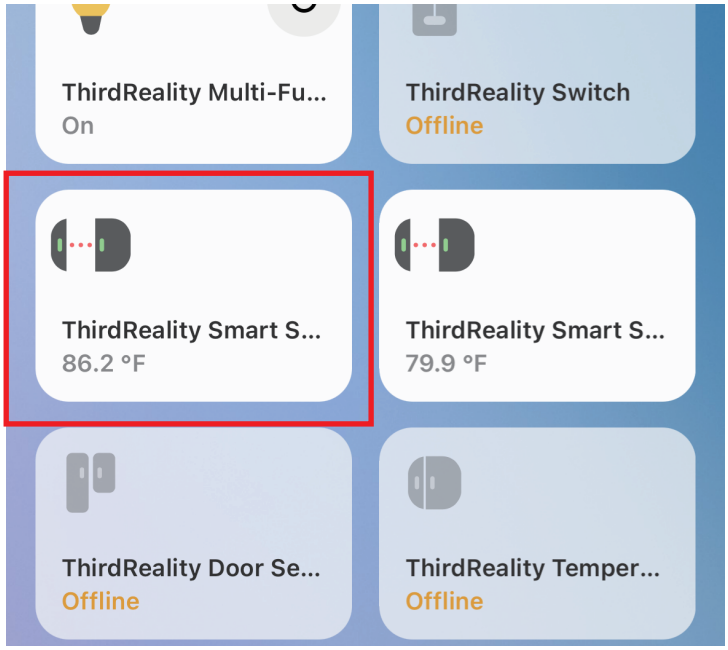
1. Before pairing, check for updates to make sure the SmartThings Hub firmware is up to date.
2. Open the battery cover and install the batteries, press and hold the reset button for 5 seconds and release the hold; The LED light turns blue blinking, indicating it enters pairing mode.
3. Open your SmartThings App, tap “+” on the up right corner to ”Add device” and then tap “Scan nearby”.



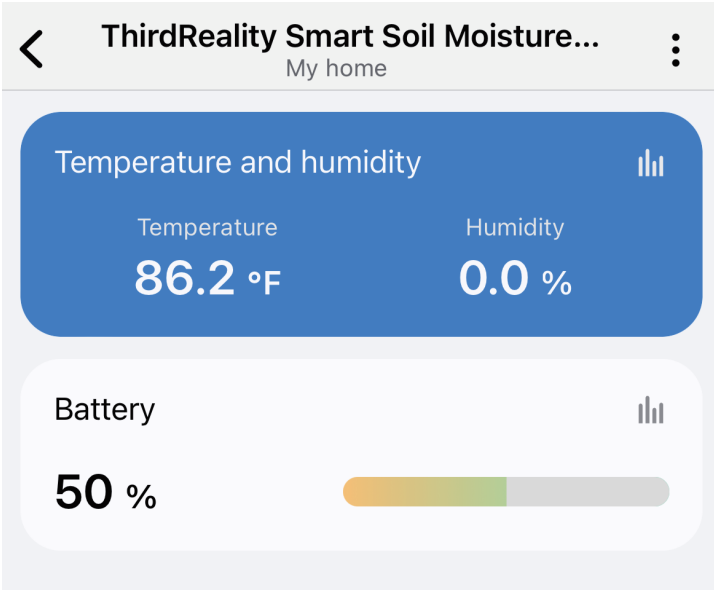


4. The sensor will be added to your SmartThings hub in a few seconds.





5. Create routines to control connected devices.

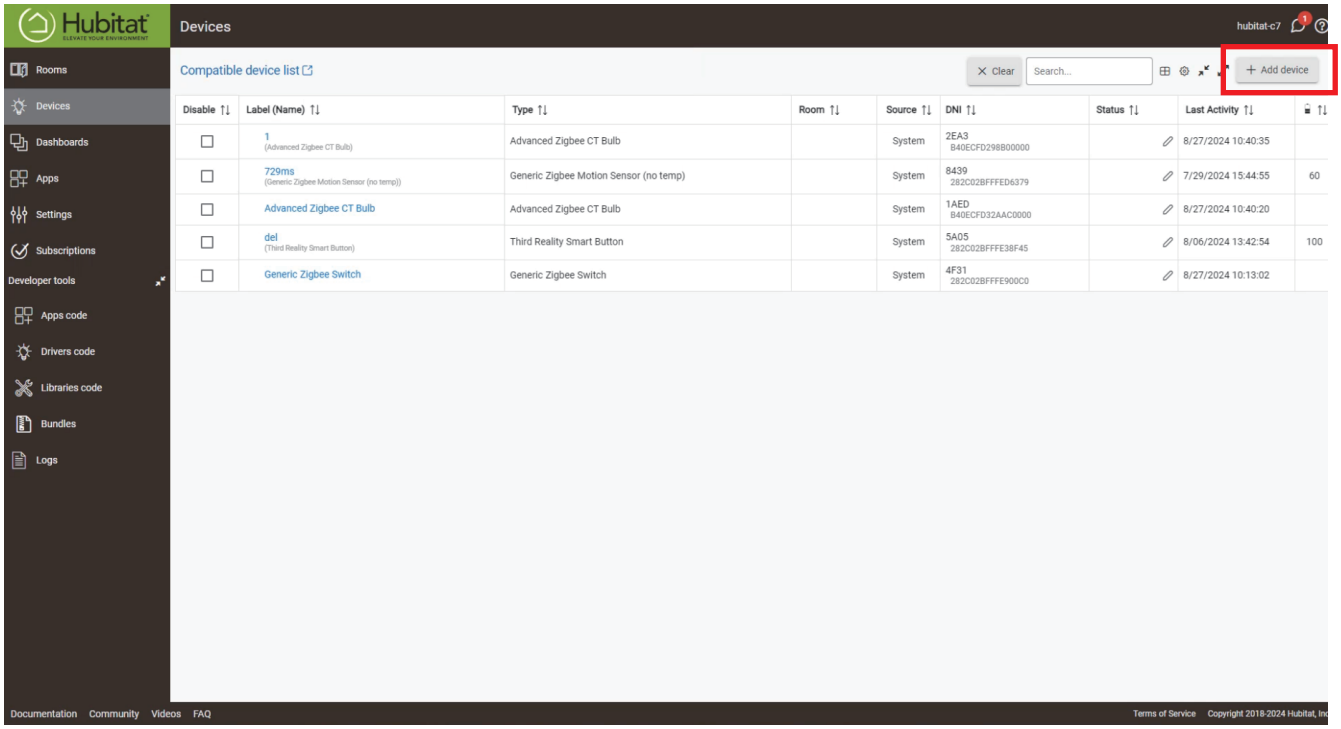


Pairing with Hubitat

Website: http://find.hubitat.com/

Pairing steps:

1. Open the battery cover and install the batteries, press and hold the reset button for 5 seconds and release the hold; The LED light turns blue blinking, indicating it enters pairing mode.
2. Visit your Hubitat Elevation hub device page from your web browser, select the Devices menu item from the sidebar, then select Discover Devices in the upper right.
3. Click Start Zigbee Pairing button after you select a Zigbee device type, the Start Zigbee Pairing button will put the hub in Zigbee pairing mode for 60 seconds.
4. Pairing is completed.
5. Set device type to generic Zigbee Temperature/Humidity sensor, Save Device.
6. Tap Apps, and Create New Basic Rules, select Humidity Sensor - smart soil moisture sensor, turn on your plant watering system when humidity changes.


Hubitat
Devices
hubitat-c7
Rooms
Devices
Dashboards
Apps
Settings
Subscriptions
Developer tools
Apps code
Drivers code
Libraries code
Bundles
Logs
Compatible device list
Clear
Search...
+ Add device
Disable
Label (Name)
Type
Room
Source
DNI
Status
Last Activity
1
(Advanced Zigbee CT Bulb)
Advanced Zigbee CT Bulb
System
2EA3
B40ECFD298B00000
8/27/2024 10:40:35
729ms
(Generic Zigbee Motion Sensor (no temp))
Generic Zigbee Motion Sensor (no temp)
System
8439
282C02BFFFED6379
7/29/2024 15:44:55
60
Advanced Zigbee CT Bulb
Advanced Zigbee CT Bulb
System
1AED
B40ECFD32AAC0000
8/27/2024 10:40:20
del
(Third Reality Smart Button)
Third Reality Smart Button
System
5A05
282C02BFFFE38F45
8/06/2024 13:42:54
100
Generic Zigbee Switch
Generic Zigbee Switch
System
4F31
282C02BFFFE900C0
8/27/2024 10:13:02
Documentation
Community
Videos
FAQ
Terms of Service
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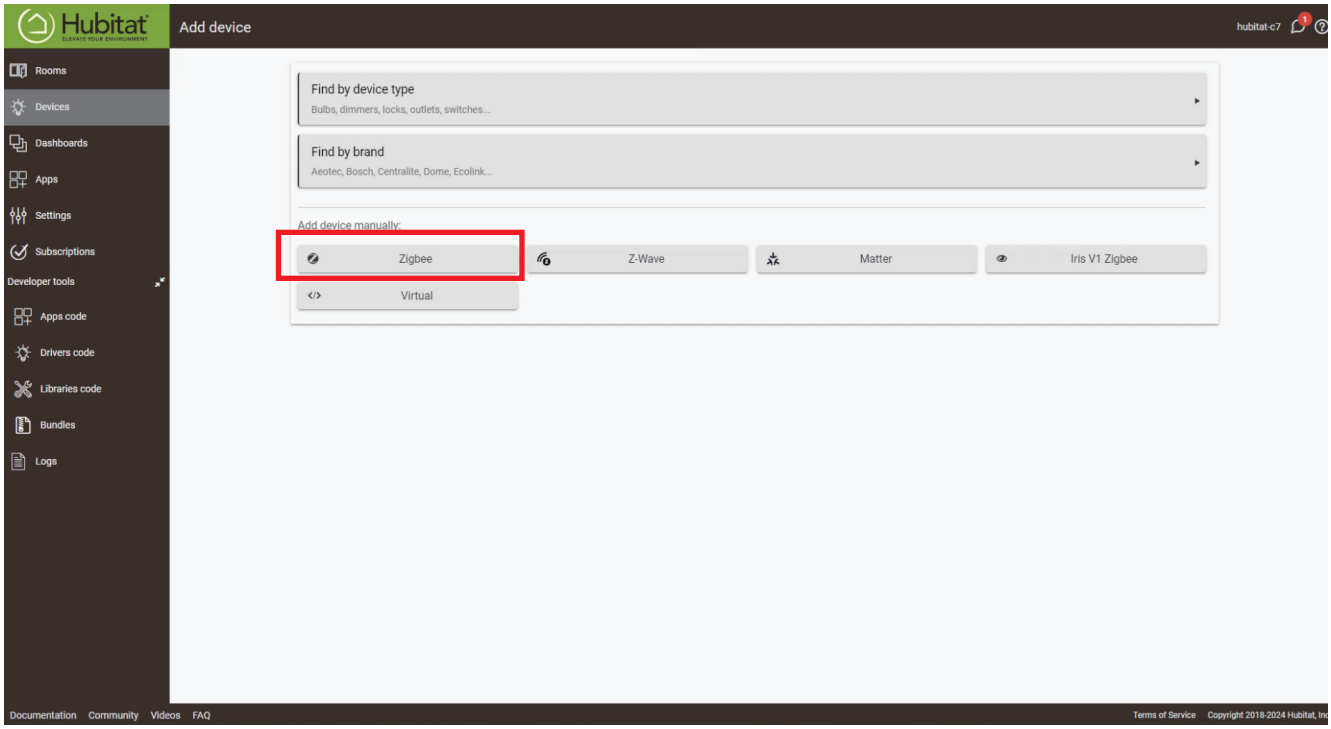
Hubitat
Add device
hubitat-c7
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Apps code
Drivers code
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Bundles
Logs
Find by device type
Bulbs, dimmers, locks, outlets, switches...
Find by brand
Aeotec, Bosch, Centralite, Dome, Ecolink...
Add device manually:
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Iris V1 Zigbee
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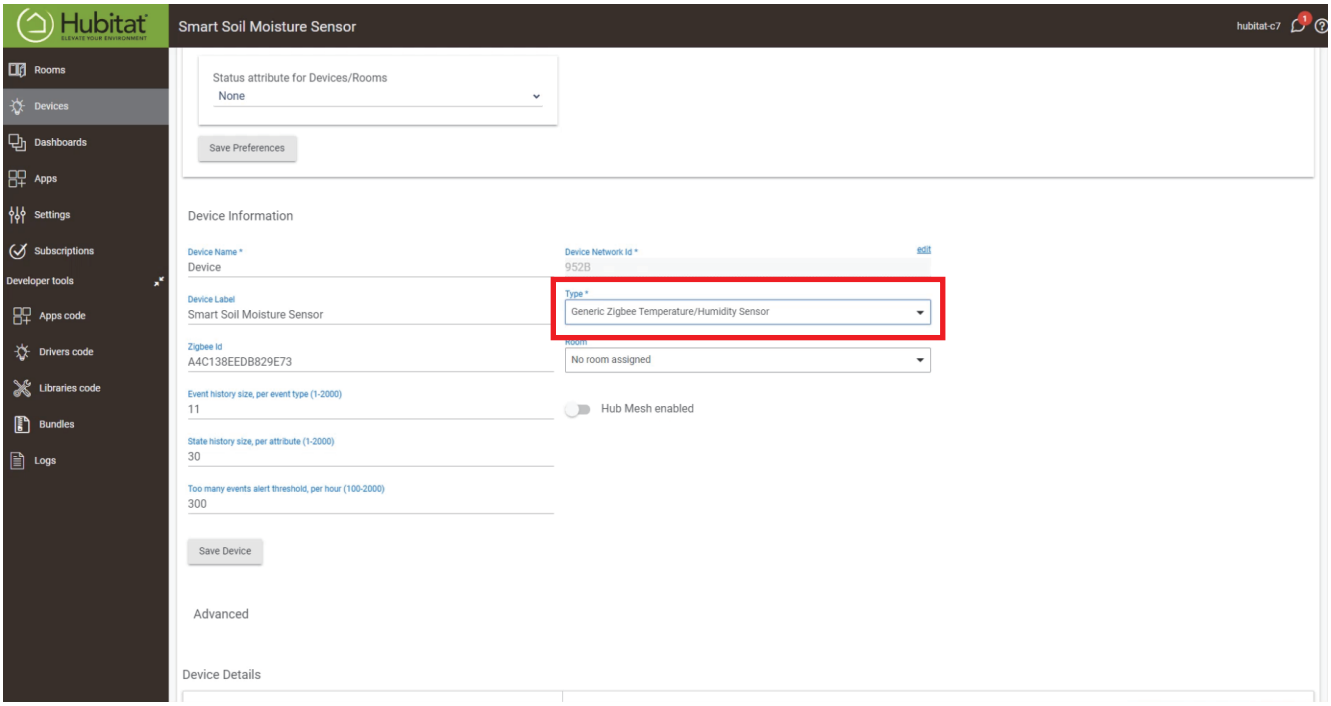
Hubitat
Smart Soil Moisture Sensor
hubitat-c7
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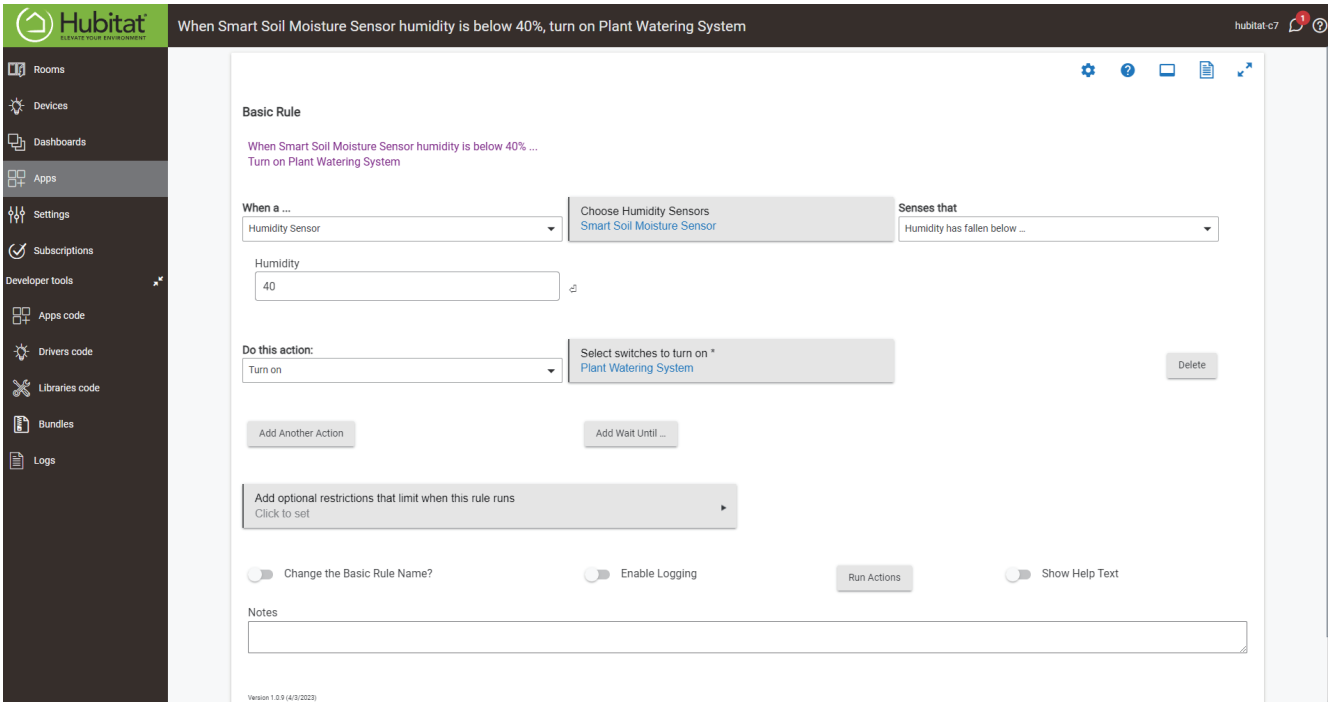
Apps code
Drivers code
Libraries code
Bundles
Logs
Status attribute for Devices/Rooms
None
Save Preferences
Device Information
Device Name *
Device
Device Network Id *
952B
edit
Device Label
Smart Soil Moisture Sensor
Type *
Generic Zigbee Temperature/Humidity Sensor
Zigbee Id
A4C138EEDB829E73
Room
No room assigned
Event history size, per event type (1-2000)
11
Hub Mesh enabled
State history size, per attribute (1-2000)
30
Too many events alert threshold, per hour (100-2000)
300
Save Device
Advanced
Device Details


Hubitat
When Smart Soil Moisture Sensor humidity is below 40%, turn on Plant Watering System
hubitat-c7
Rooms
Devices
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Apps code
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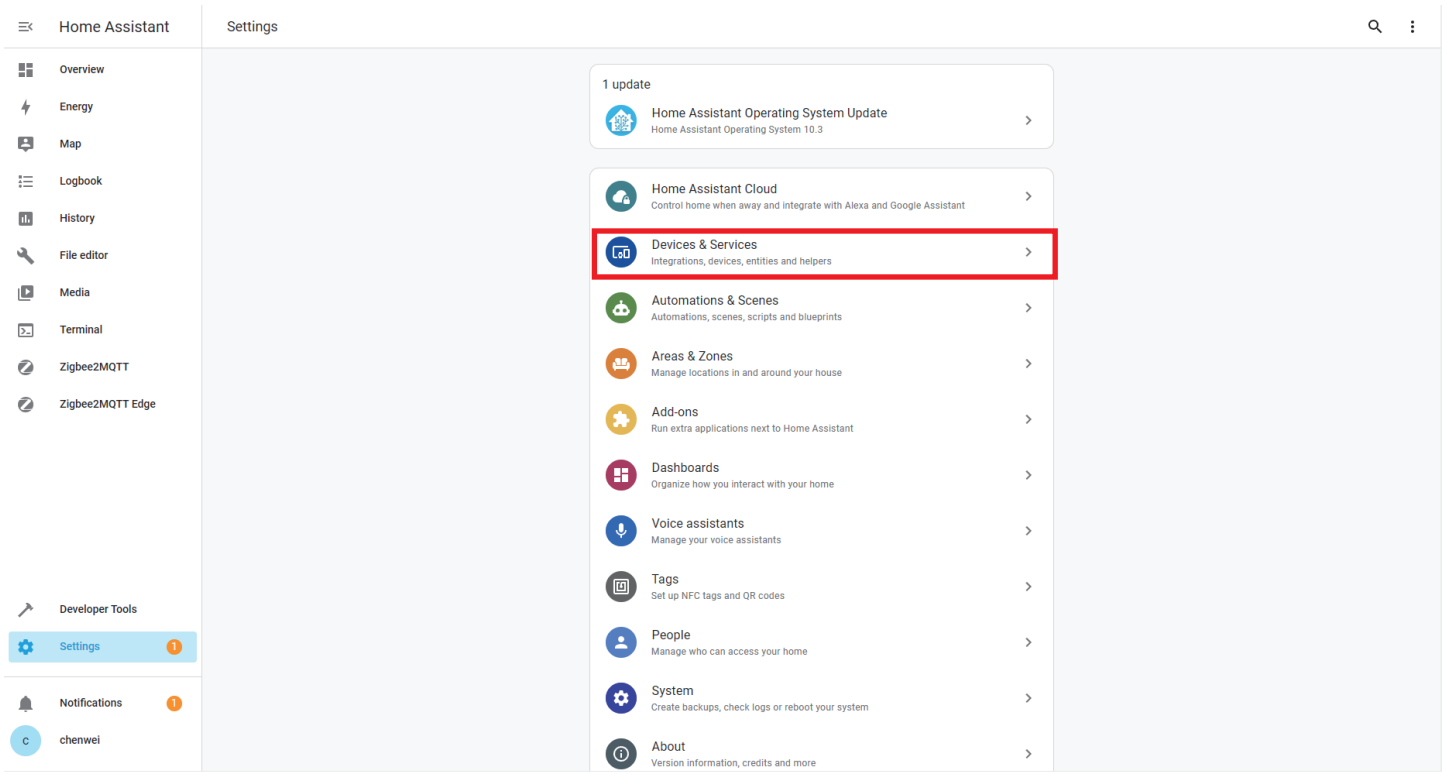
Logs
Basic Rule
When Smart Soil Moisture Sensor humidity is below 40% ...
Turn on Plant Watering System
When a ...
Humidity Sensor
Choose Humidity Sensors
Smart Soil Moisture Sensor
Senses that
Humidity has fallen below ...
Humidity
40
Do this action:
Turn on
Select switches to turn on *
Plant Watering System
Delete
Add Another Action
Add Wait Until ...
Add optional restrictions that limit when this rule runs
Click to set
Change the Basic Rule Name?
Enable Logging
Run Actions
Show Help Text
Notes

Pairing with Home Assistant

Device: Zigbee dongle

Zigbee Home Automation

1. Open the battery cover and install the batteries, press and hold the reset button for 5 seconds and release the hold; The LED light turns blue blinking, indicating it enters pairing mode.
2. In Zigbee Home Automation, go to “Configuration” page, click “integration”.
3. Then click the “Devices” on the Zigbee item, the click “Add Devices”.
4. Pairing completed.
5. Back to “Devices” page to find the sensor added.
6. Click to enter in the control interface to set the sensor.
7. Click “+” belongs to Automation and add trigger and actions.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Zigbee2MQTT Edge
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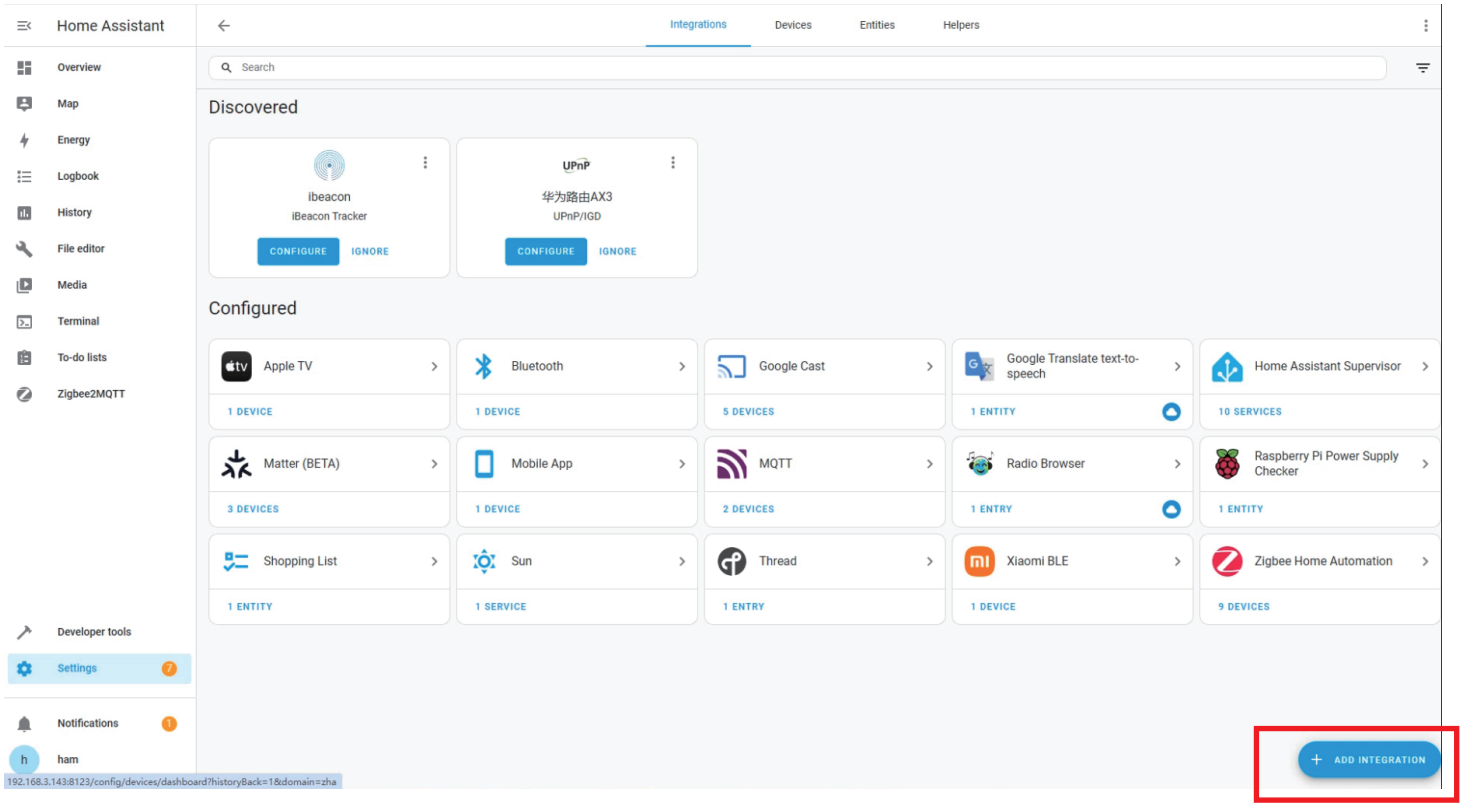
chenwei
1 update
Home Assistant Operating System Update
Home Assistant Operating System 10.3
Home Assistant Cloud
Control home when away and integrate with Alexa and Google Assistant
Devices & Services
Integrations, devices, entities and helpers
Automations & Scenes
Automations, scenes, scripts and blueprints
Areas & Zones
Manage locations in and around your house
Add-ons
Run extra applications next to Home Assistant
Dashboards
Organize how you interact with your home
Voice assistants
Manage your voice assistants
Tags
Set up NFC tags and QR codes
People
Manage who can access your home
System
Create backups, check logs or reboot your system
About
Version information, credits and more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UPnP
华为路由AX3
UPnP/IGD
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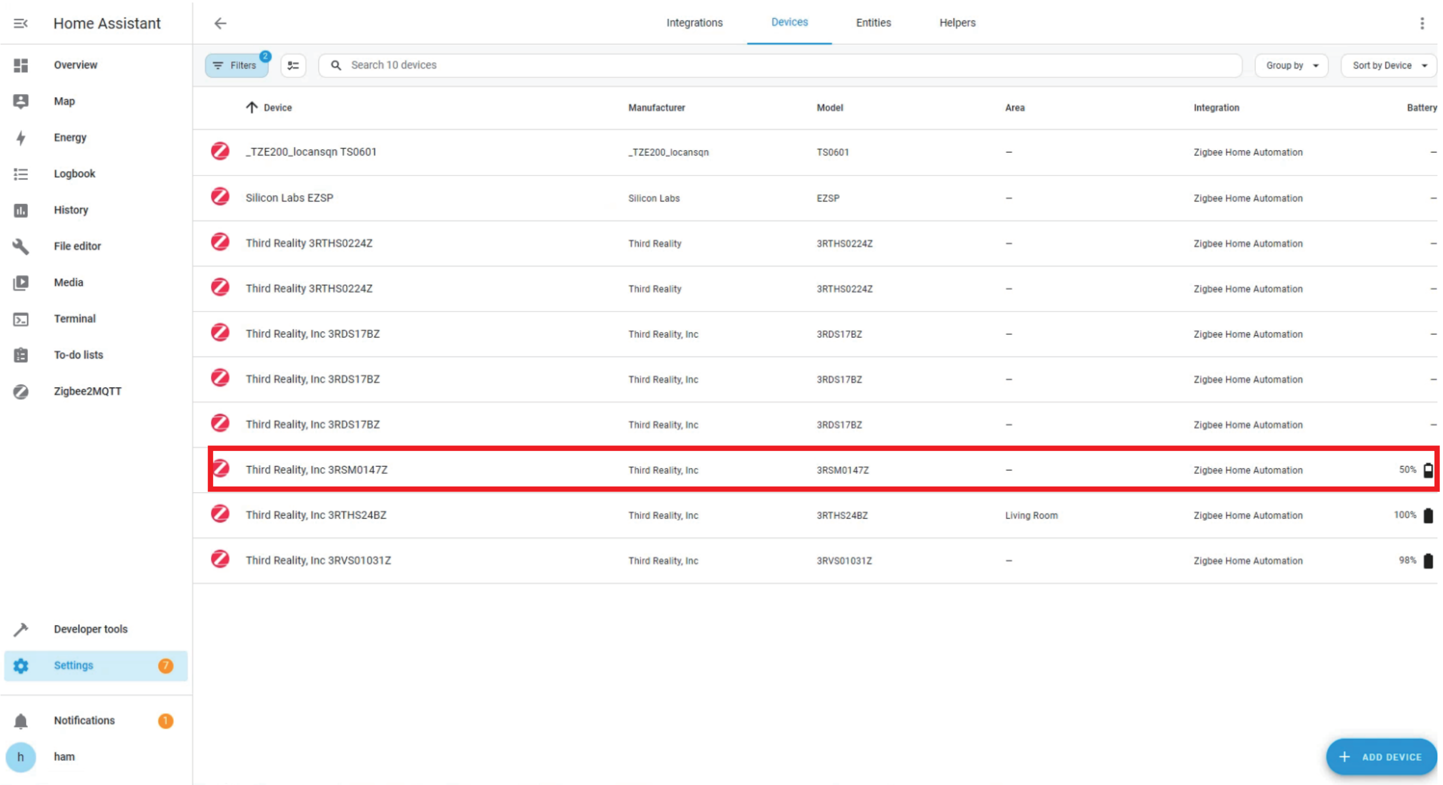
IGNORE
Configured
Apple TV
1 DEVICE
Bluetooth
1 DEVICE
Google Cast
5 DEVICES
Google Translate text-to-speech
1 ENTITY
Home Assistant Supervisor
10 SERVICES
Matter (BETA)
3 DEVICES
Mobile App
1 DEVICE
MQTT
2 DEVICES
Radio Browser
1 ENTRY
Raspberry Pi Power Supply Checker
1 ENTITY
Shopping List
1 ENTITY
Sun
1 SERVICE
Thread
1 ENTRY
Xiaomi BLE
1 DEVICE
Zigbee Home Automation
9 DEVICES
ADD INTEGRATION
192.168.3.143:8123/config/devices/dashboard?historyBack=1&domain=zha


Home Assistant
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Terminal
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Zigbee2MQTT
Developer tools
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Filters
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Group by
Sort by Device
Device
Manufacturer
Model
Area
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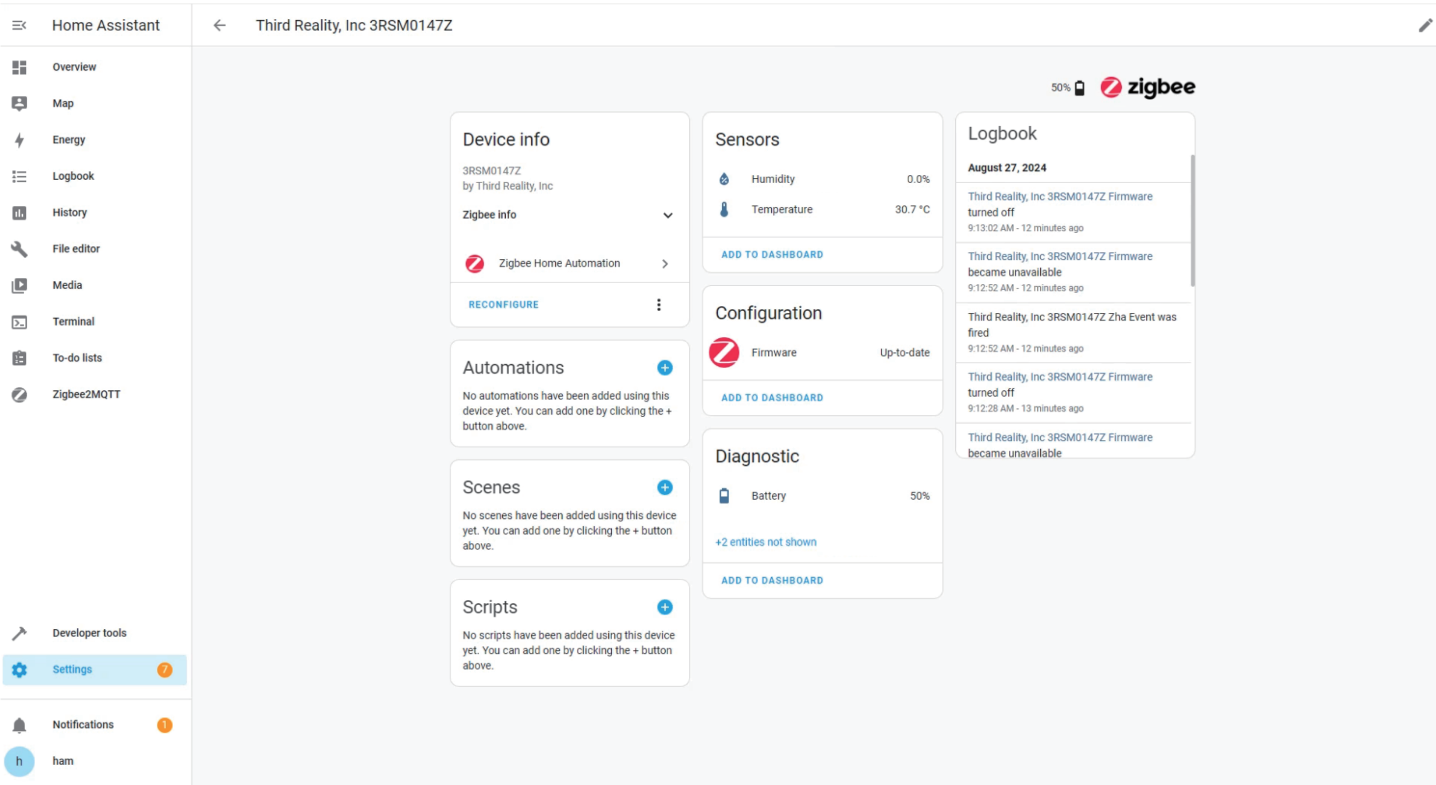
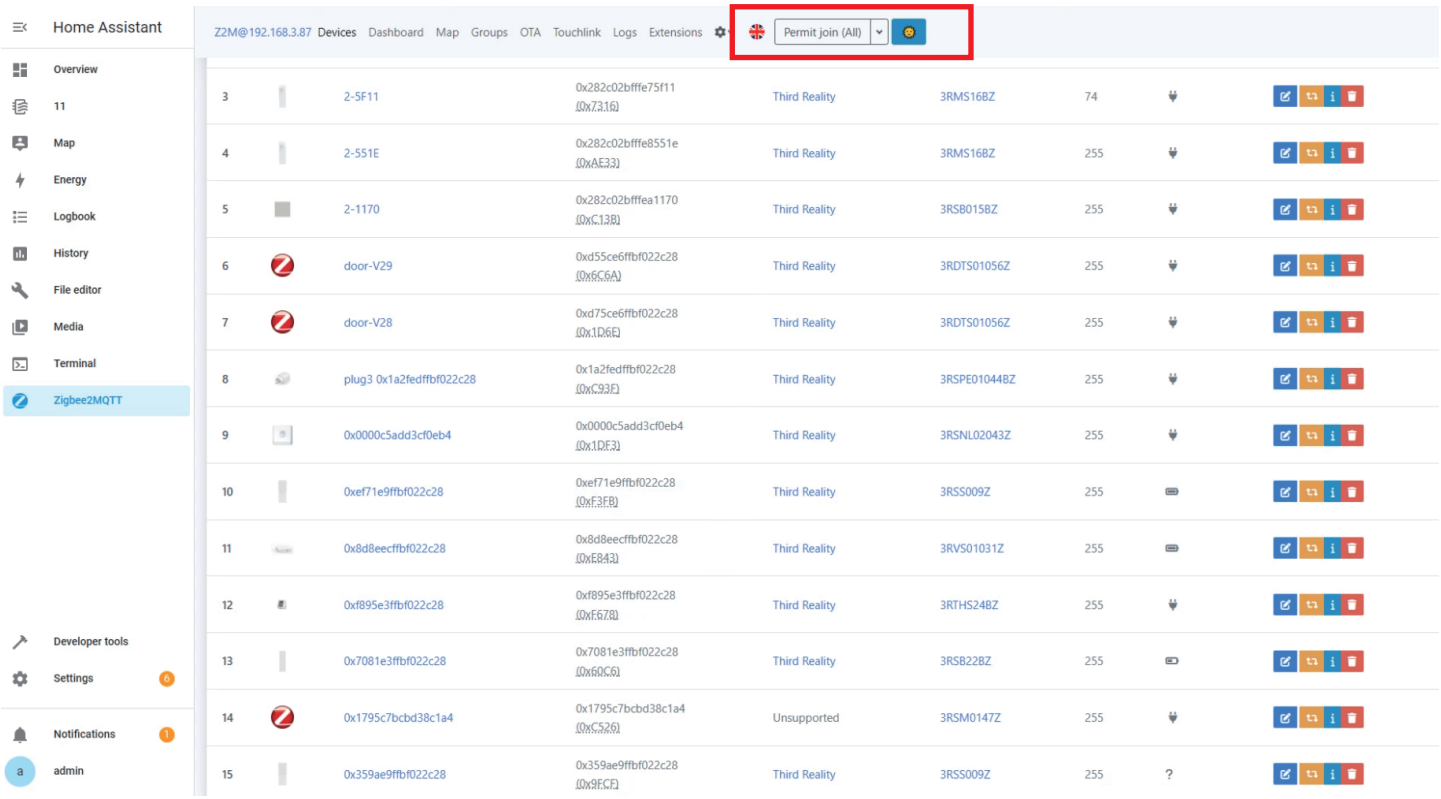
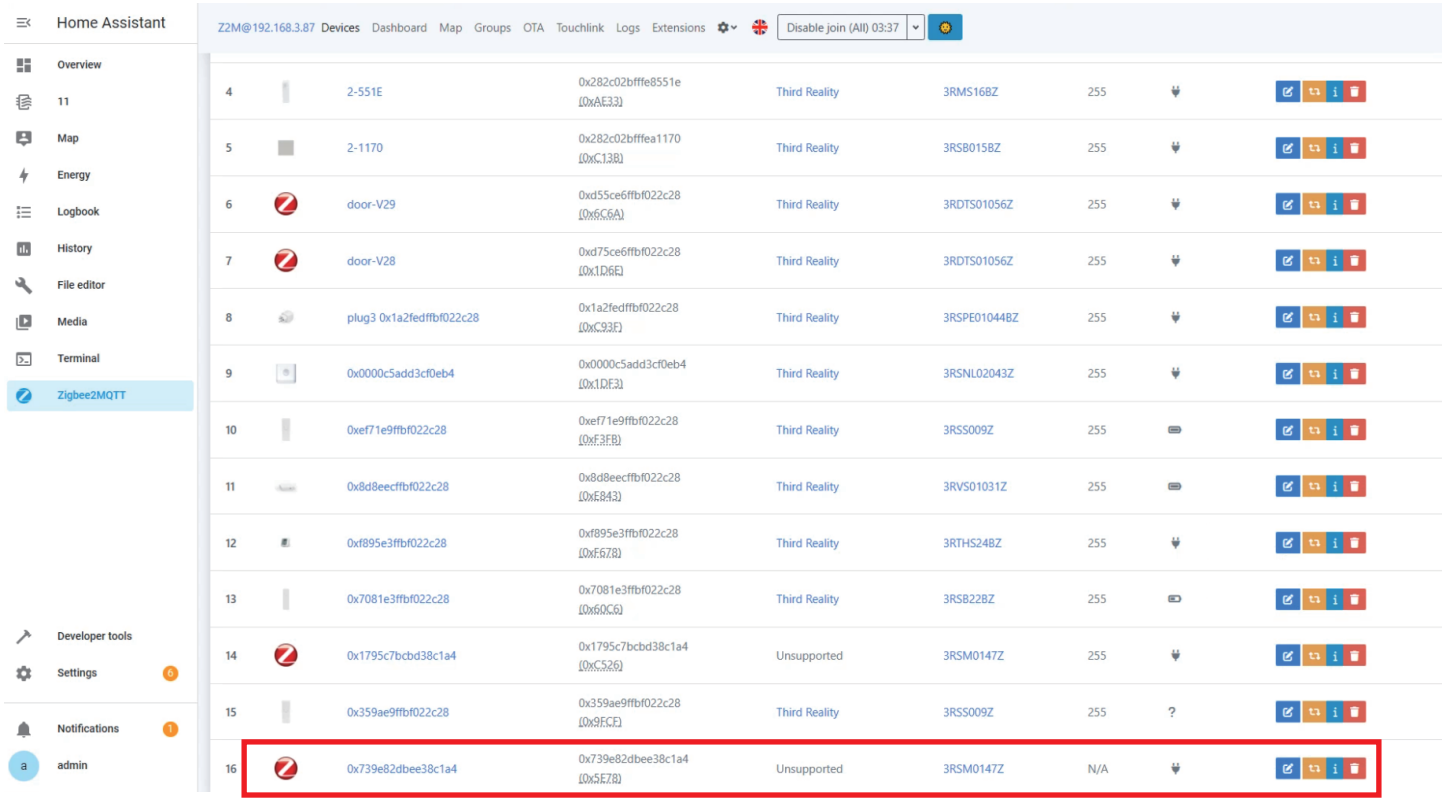
Battery
_TZE200_locansqn TS0601
_TZE200_locansqn
TS0601
Zigbee Home Automation
Silicon Labs EZSP
Silicon Labs
EZSP
Third Reality 3RTHS0224Z
Third Reality
3RTHS0224Z
Third Reality, Inc 3RDS17BZ
Third Reality, Inc
3RDS17BZ
Third Reality, Inc 3RSM0147Z
3RSM0147Z
50%
Third Reality, Inc 3RTHS24BZ
3RTHS24BZ
Living Room
100%
Third Reality, Inc 3RVS01031Z
3RVS01031Z
98%
ADD DEVICE


Home Assistant
Third Reality, Inc 3RSM0147Z
50%
zigbee
Device info
3RSM0147Z
by Third Reality, Inc
Zigbee info
Zigbee Home Automation
RECONFIGURE
Automations
No automations have been added using this device yet. You can add one by clicking the + button above.
Scenes
No scenes have been added using this device yet. You can add one by clicking the + button above.
Scripts
No scripts have been added using this device yet. You can add one by clicking the + button above.
Sensors
Humidity
0.0%
Temperature
30.7 °C
ADD TO DASHBOARD
Configuration
Firmware
Up-to-date
Diagnostic
Battery
50%
+2 entities not shown
Logbook
August 27, 2024
Third Reality, Inc 3RSM0147Z Firmware turned off
9:13:02 AM - 12 minutes ago
Third Reality, Inc 3RSM0147Z Firmware became unavailable
9:12:52 AM - 12 minutes ago
Third Reality, Inc 3RSM0147Z Zha Event was fired
9:12:52 AM - 12 minutes ago
Third Reality, Inc 3RSM0147Z Firmware turned off
9:12:28 AM - 13 minutes ago
Third Reality, Inc 3RSM0147Z Firmware became unavailable

Zigbee2MQTT

1. Open the battery cover and install the batteries, press and hold the reset button for 5 seconds and release the hold; The LED light turns blue blinking, indicating it enters pairing mode.
2. Permit join to start Zigbee pairing in Zigbee2MQTT.
3. Pairing completed, the sensor will be displayed in the device list Go to Settings page, create automation.




Home Assistant
Overview
11
Map
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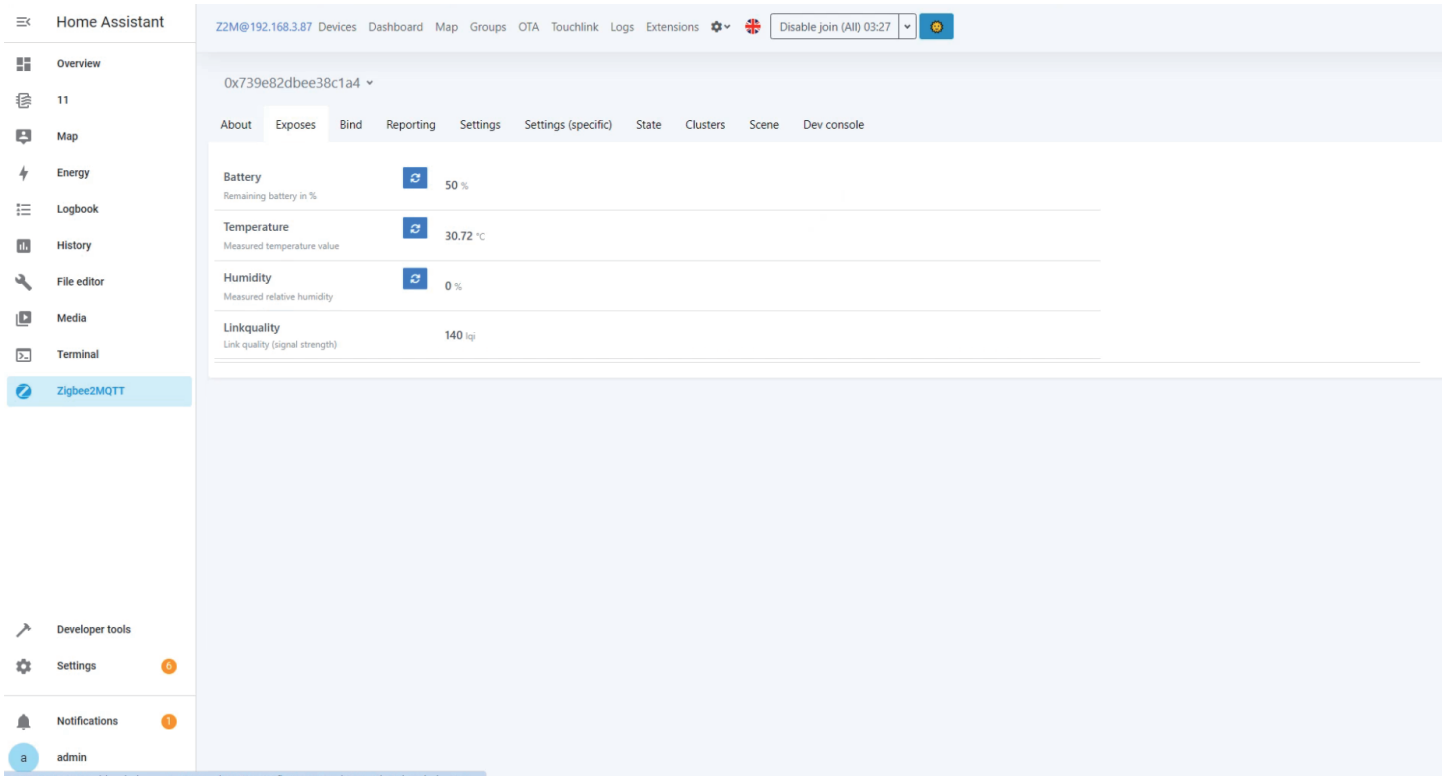
Zigbee2MQTT
Developer tools
Settings
Notifications
admin
Z2M@192.168.3.87 Devices Dashboard Map Groups OTA Touchlink Logs Extensions
Disable join (All) 03:37
4 2-551E 0x282c02bfffe8551e (0xAE33) Third Reality 3RMS16BZ 255
5 2-1170 0x282c02bfffea1170 (0xC138) Third Reality 3RSB015BZ 255
6 door-V29 0xd55ce6ffbf022c28 (0x6C6A) Third Reality 3RDTS01056Z 255
7 door-V28 0xd75ce6ffbf022c28 (0x1D6E) Third Reality 3RDTS01056Z 255
8 plug3 0x1a2fedfffbf022c28 0x1a2fedfffbf022c28 (0xC93F) Third Reality 3RSPE01044BZ 255
9 0x0000c5add3cf0eb4 0x0000c5add3cf0eb4 (0x1DF3) Third Reality 3RSNL02043Z 255
10 0xef71e9ffbf022c28 0xef71e9ffbf022c28 (0xF3FB) Third Reality 3RSS009Z 255
11 0x8d8eecffbf022c28 0x8d8eecffbf022c28 (0xE843) Third Reality 3RVS01031Z 255
12 0xf895e3ffbf022c28 0xf895e3ffbf022c28 (0xF678) Third Reality 3RTHS24BZ 255
13 0x7081e3ffbf022c28 0x7081e3ffbf022c28 (0x60C6) Third Reality 3RSB22BZ 255
14 0x1795c7bcbd38c1a4 0x1795c7bcbd38c1a4 (0xC526) Unsupported 3RSM0147Z 255
15 0x359ae9ffbf022c28 0x359ae9ffbf022c28 (0x9FCF) Third Reality 3RSS009Z 255
16 0x739e82dbee38c1a4 0x739e82dbee38c1a4 (0x5E78) Unsupported 3RSM0147Z N/A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Z2M@192.168.3.87 Devices Dashboard Map Groups OTA Touchlink Logs Extensions
Disable join (All) 03:27
0x739e82dbee38c1a4
About Exposes Bind Reporting Settings Settings (specific) State Clusters Scene Dev console
Battery
Remaining battery in %
50 %
Temperature
Measured temperature value
30.72 °C
Humidity
Measured relative humidity
0 %
Linkquality
Link quality (signal strength)
140 lqi

FCC Regulatory Conformance

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help important announcement.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user’ s authority to operate the equipment.

RF Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Limited Warranty

For limited warranty, please visit **https://3reality.com/faq-help-center/**.
For customer support, please contact us at **info@3reality.com** or visit **www.3reality com.**
For question on other platforms, visit for corresponding platform’ s application/support platforms.