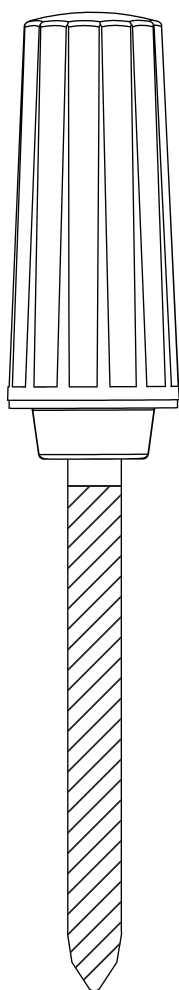


Smart Soil Moisture Sensor

User Manual



THIRD REALITY

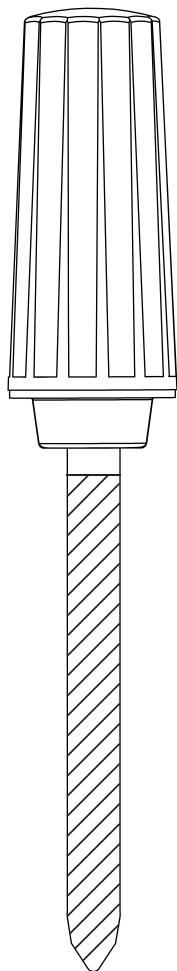
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Introduction	01
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LED Status	02
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Introduction

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.

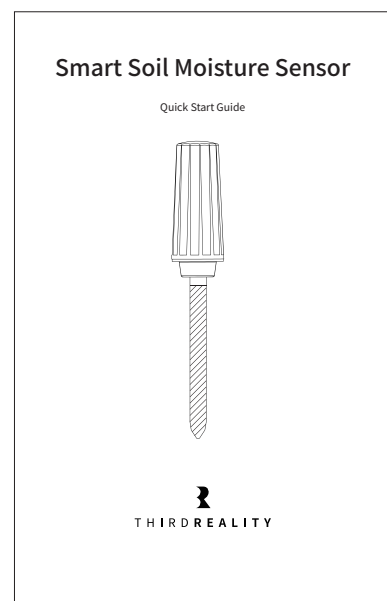
What's in the Box



Smart Soil Moisture Sensor



AA Battery

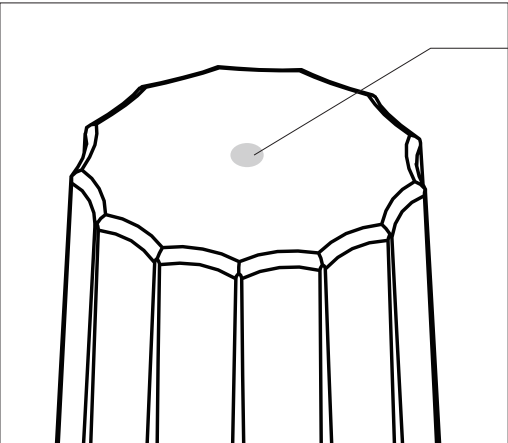


Quick Start Guide

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

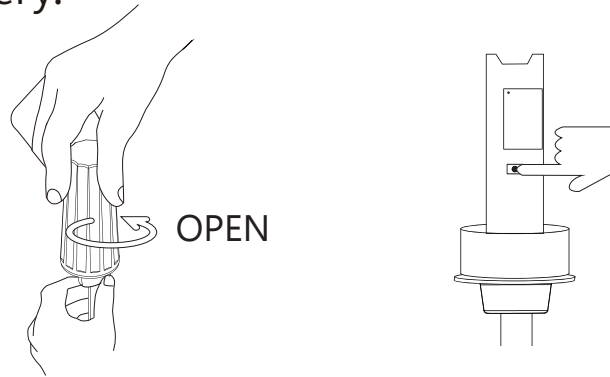


LED Indicator

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.

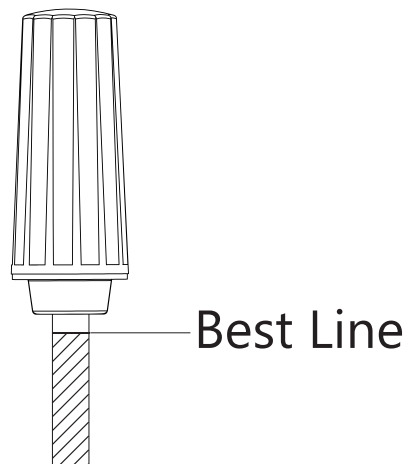
Create an automation or water the plant manually based on your observation of specific plant and soil situation, to start irrigation of certain period of time when soil moisture falls below certain value.

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.

Device

Hub 1
0 device connected

+

Device

Soil Moist...

53%; 27.43°C

+

Hub 1
1 device

Smart Soil Moisture Sensor

53%

27.43°C

81.4 °F

Name

Soil Moisture Sensor 1

Network

Connected

Type

Smart Soil Moisture Sensor

Mac

A4C138260AEC7BE7

Battery

High

Version

v1.00.24

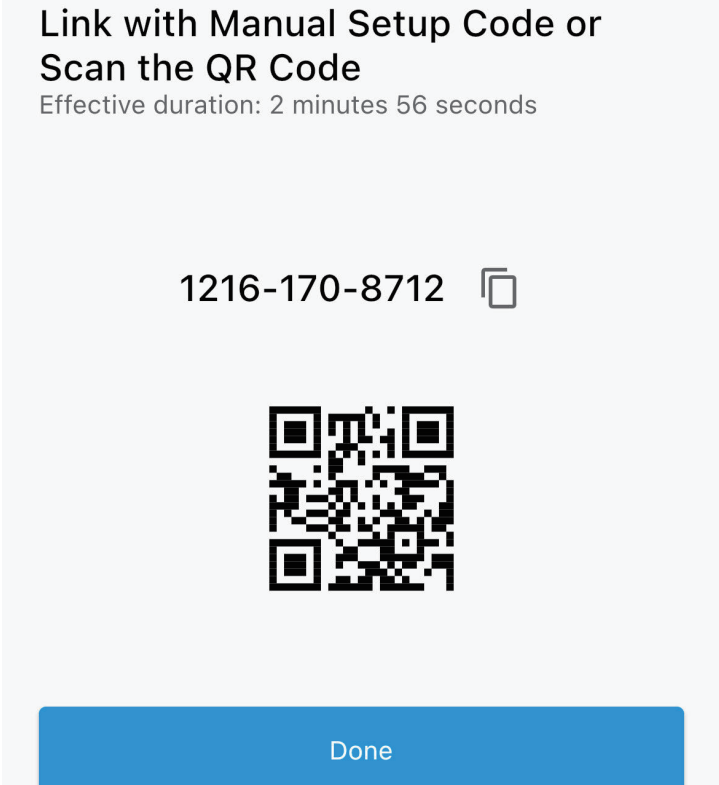
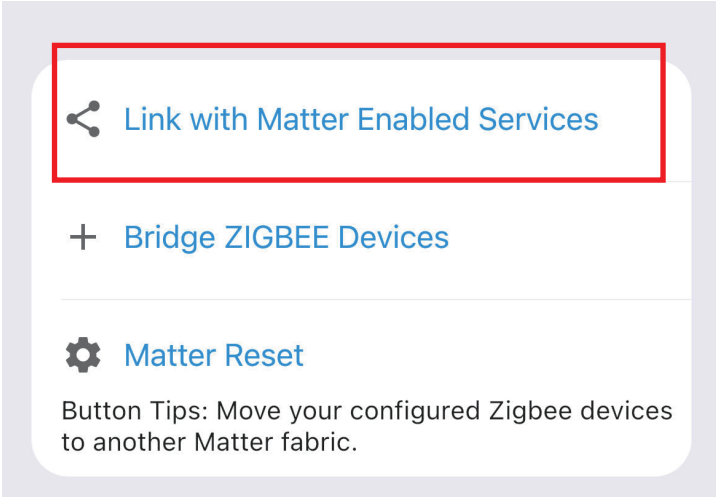
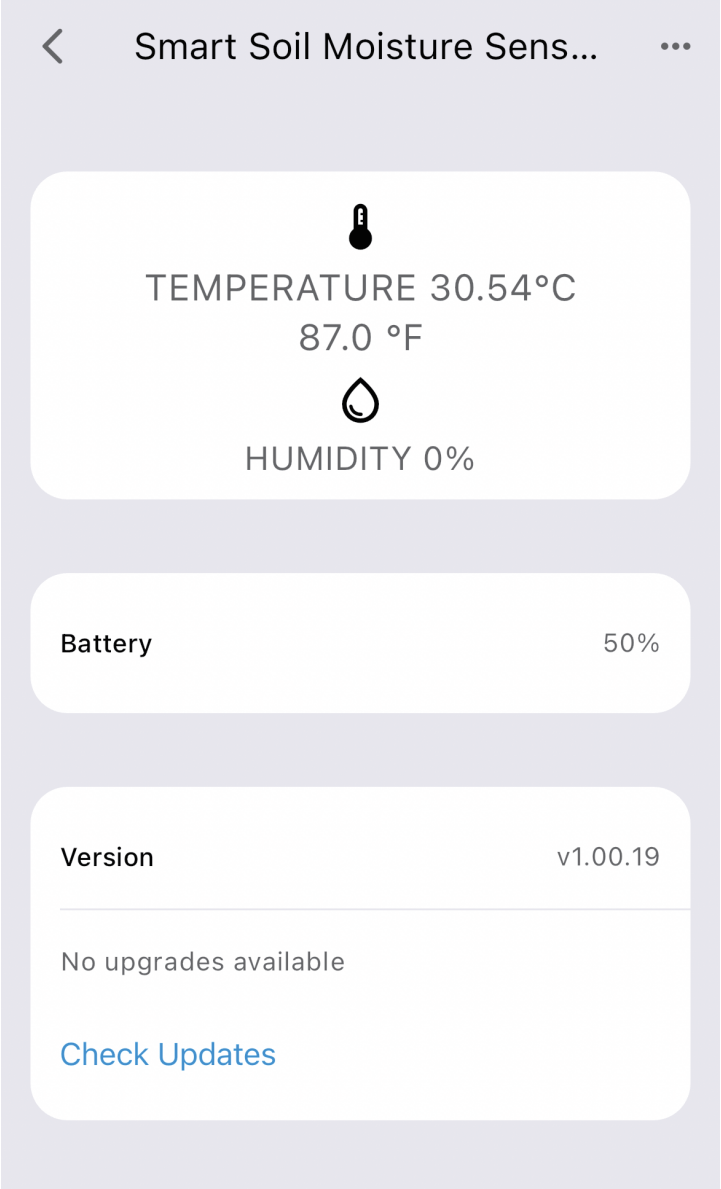
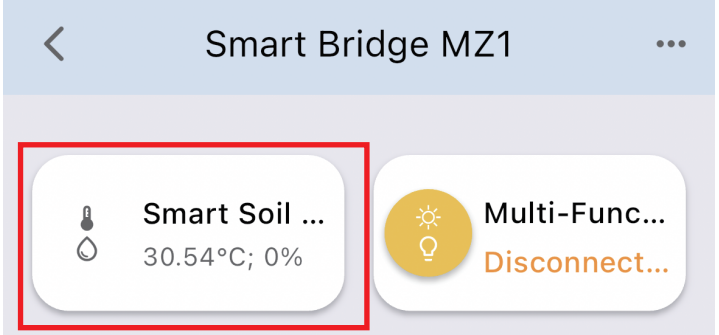
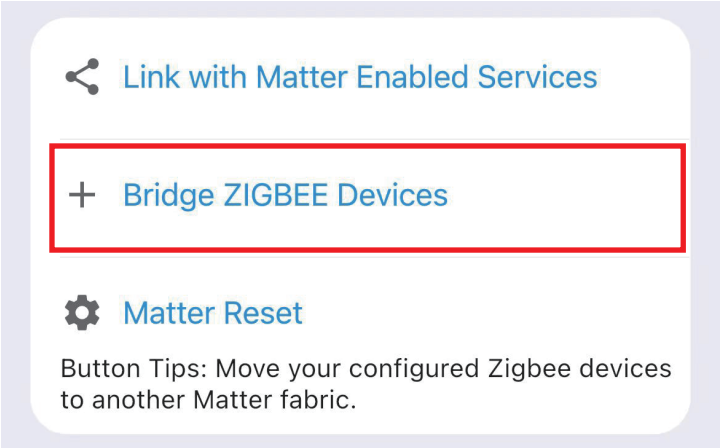
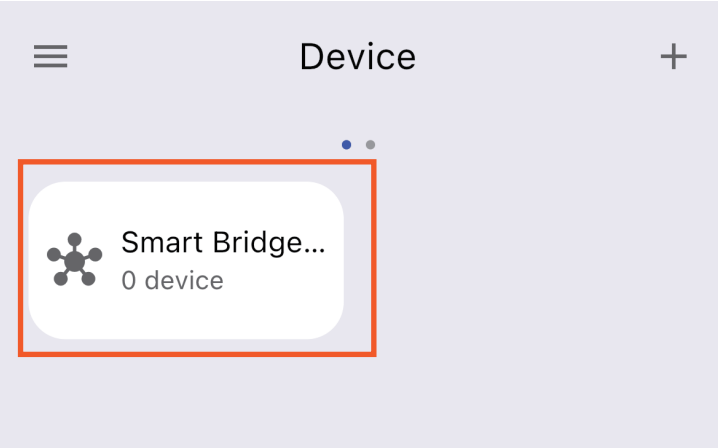
Connected to

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.



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 without 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

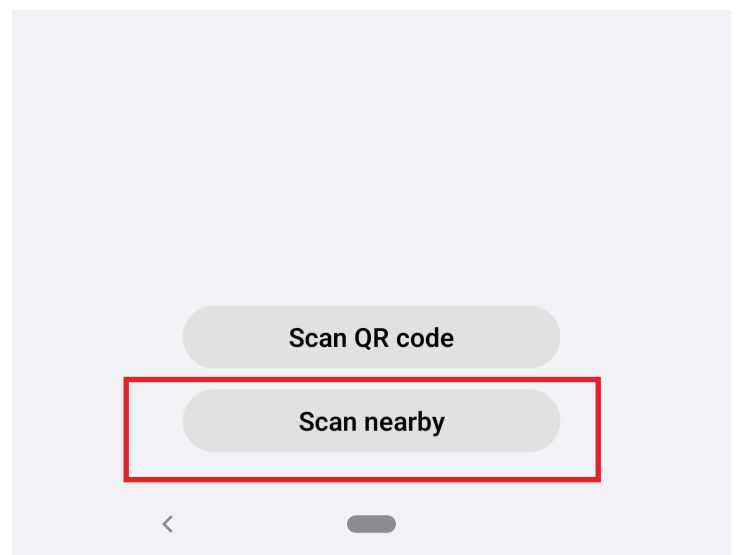
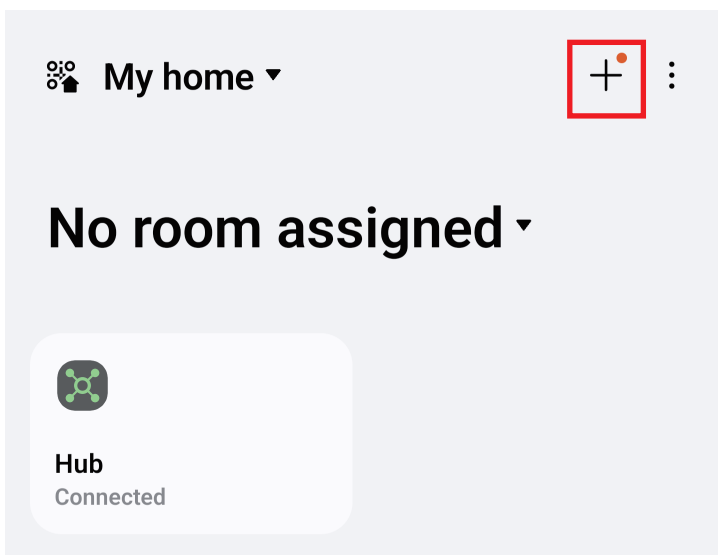
App: SmartThings App

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

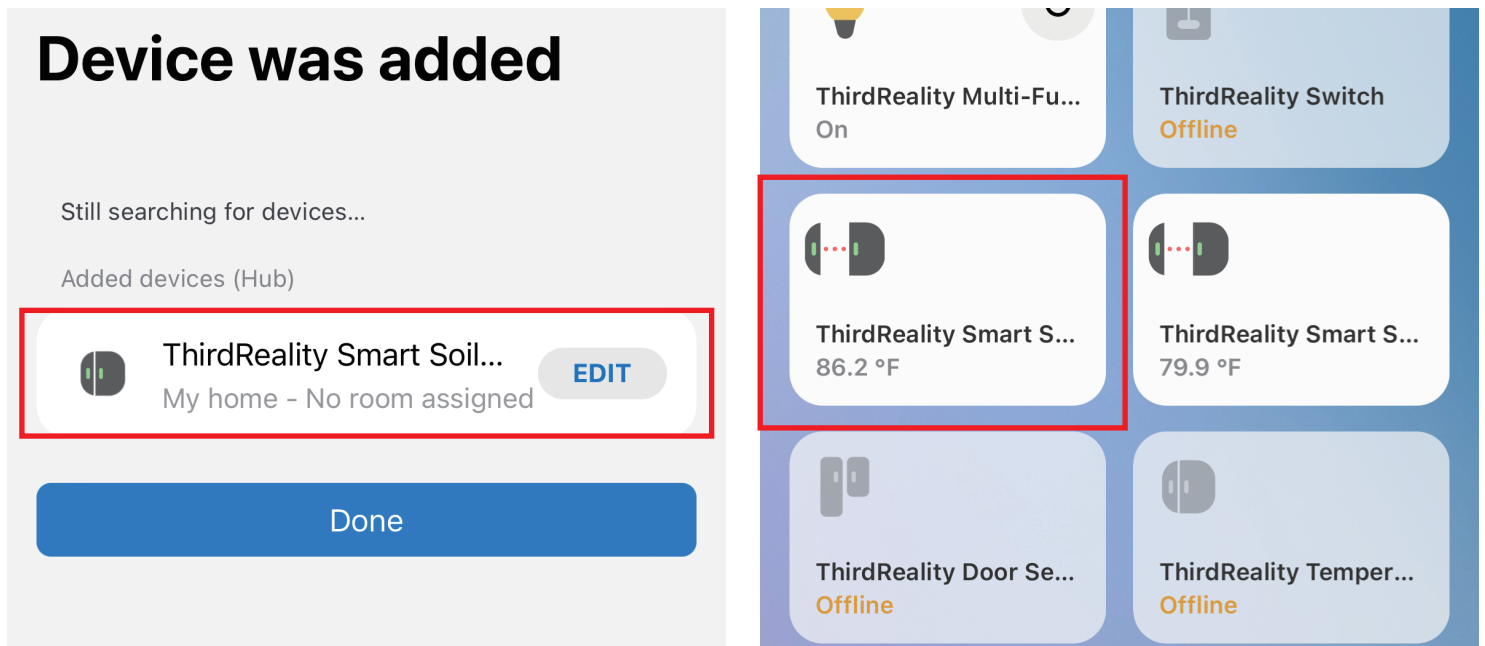


Pairing steps:

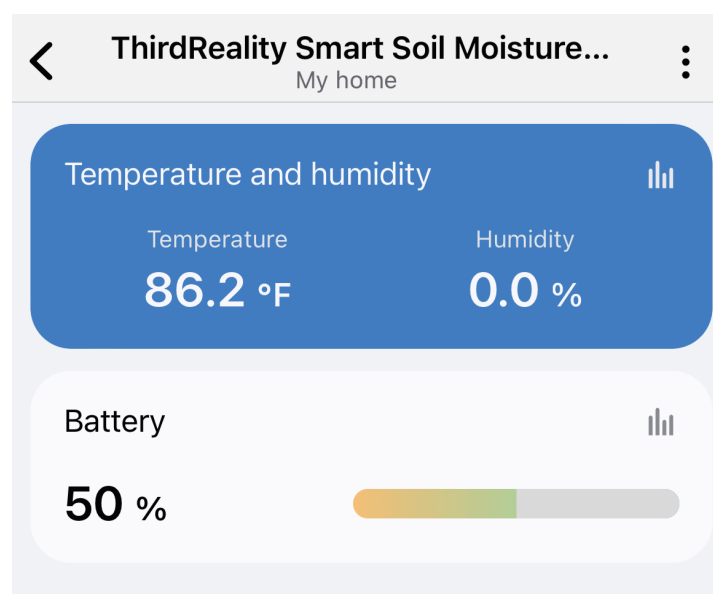
1. Before pairing, check for updates to make sure the SmartThings Hub firmware is up to date.
2. Open the battery cover and install the batteries, press and hold the reset button for 5 seconds and release the hold; The LED light turns blue blinking, indicating it enters pairing mode.
3. Open your SmartThings 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.



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Drivers code

Libraries code

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hubitat-c7

Devices

Compatible device list


X Clear

Search...

+ Add device

Disable	Label (Name)	Type	Room	Source	DNI	Status	Last Activity	
<input type="checkbox"/>	1 (Advanced Zigbee CT Bulb)	Advanced Zigbee CT Bulb		System	2EA3 B40ECFD296B00000		8/27/2024 10:40:35	
<input type="checkbox"/>	729ms (Generic Zigbee Motion Sensor (no temp))	Generic Zigbee Motion Sensor (no temp)		System	8439 282C028BFFED6379		7/29/2024 15:44:55	60
<input type="checkbox"/>	Advanced Zigbee CT Bulb	Advanced Zigbee CT Bulb		System	1AED B40ECFD32AAC0000		8/27/2024 10:40:20	
<input type="checkbox"/>	del (Third Reality Smart Button)	Third Reality Smart Button		System	5A05 282C028BFFFE38F45		8/06/2024 13:42:54	100
<input type="checkbox"/>	Generic Zigbee Switch	Generic Zigbee Switch		System	4F31 282C028BFFFE900CD		8/27/2024 10:13:02	

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Add device

Find by device type
Bulbs, dimmers, locks, outlets, switches...

Find by brand
Aeotec, Bosch, Centralite, Dome, Ecolink...

Add device manually:

☒ Zigbee


☐ Z-Wave

☐ Matter

☐ Iris V1 Zigbee

☐ Virtual

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Smart Soil Moisture Sensor

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Status attribute for Devices/Rooms

None

Save Preferences

Device Information

Device Name *

Device

Device Network Id *

952B

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-c7

When Smart Soil Moisture Sensor humidity is below 40%, turn on Plant Watering System

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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

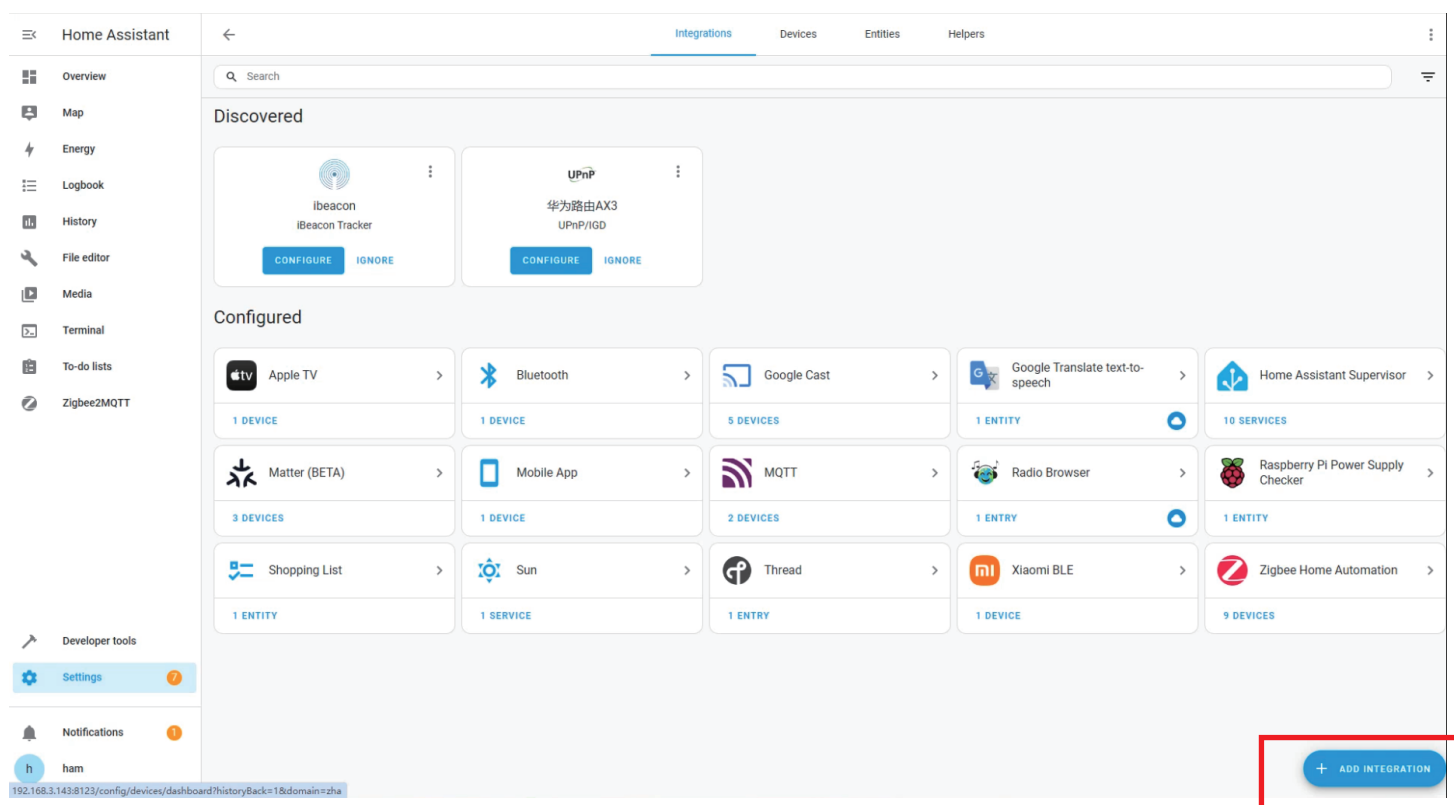
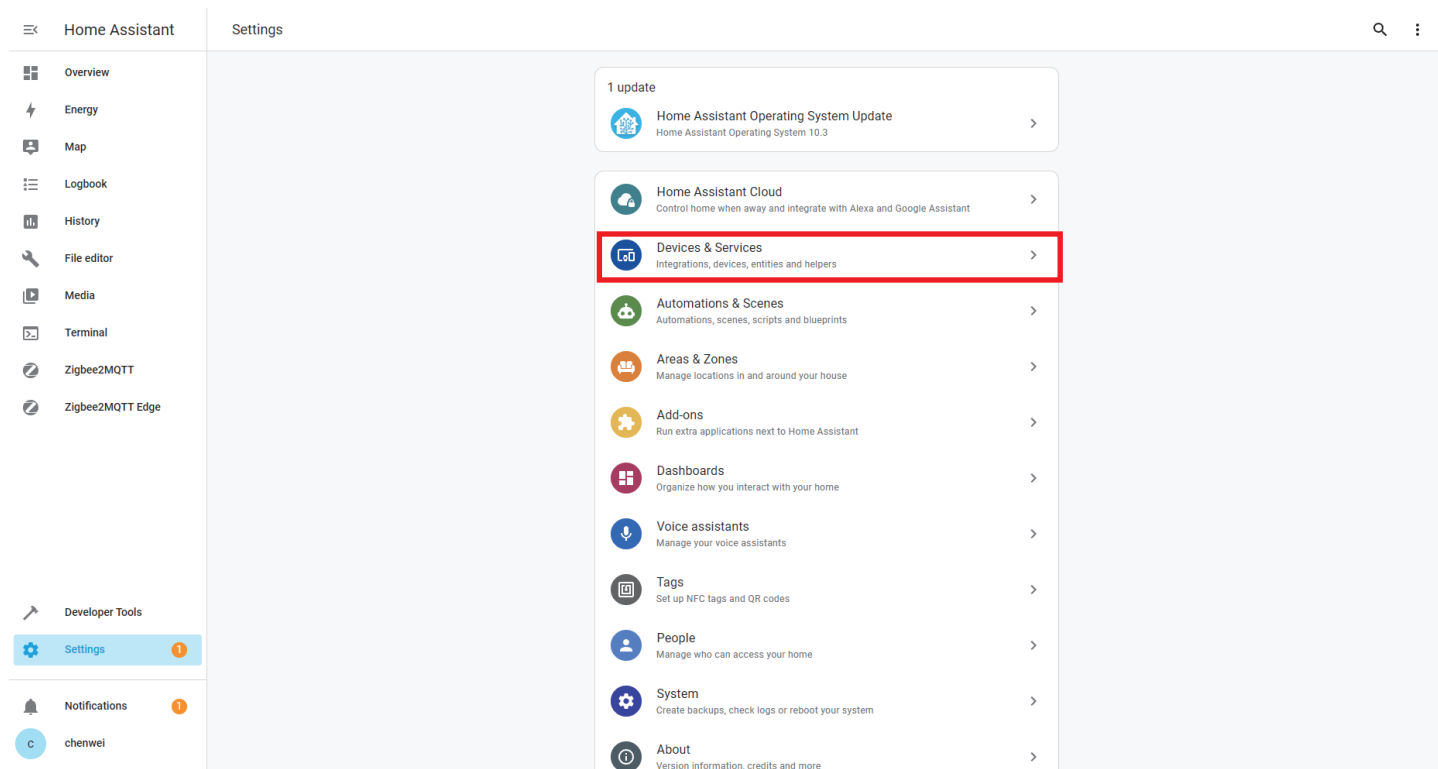
Pairing with Home Assistant

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.



Home Assistant

Overview

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To-do lists

Zigbee2MQTT

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ham

Integrations

Devices

Entities

Helpers

Filters

Search 10 devices

Group by

Sort by Device

Device	Manufacturer	Model	Area	Integration	Battery
._TZE200_jocansqn TS0601	._TZE200_jocansqn	TS0601	-	Zigbee Home Automation	-
Silicon Labs EZSP	Silicon Labs	EZSP	-	Zigbee Home Automation	-
Third Reality 3RTHS0224Z	Third Reality	3RTHS0224Z	-	Zigbee Home Automation	-
Third Reality 3RTHS0224Z	Third Reality	3RTHS0224Z	-	Zigbee Home Automation	-
Third Reality, Inc 3RDS17BZ	Third Reality, Inc	3RDS17BZ	-	Zigbee Home Automation	-
Third Reality, Inc 3RDS17BZ	Third Reality, Inc	3RDS17BZ	-	Zigbee Home Automation	-
Third Reality, Inc 3RDS17BZ	Third Reality, Inc	3RDS17BZ	-	Zigbee Home Automation	-
Third Reality, Inc 3RSM0147Z	Third Reality, Inc	3RSM0147Z	-	Zigbee Home Automation	50%
Third Reality, Inc 3RTHS24BZ	Third Reality, Inc	3RTHS24BZ	Living Room	Zigbee Home Automation	100%
Third Reality, Inc 3RVS01031Z	Third Reality, Inc	3RVS01031Z	-	Zigbee Home Automation	98%

ADD DEVICE

Home Assistant

← Third Reality, Inc 3RSM0147Z

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50%

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

ADD TO DASHBOARD

Diagnostic

Battery

50%

+2 entities not shown

ADD TO DASHBOARD

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

17

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.

The screenshot shows the Zigbee2MQTT web interface. On the left is a sidebar with navigation options: Overview, 11, Map, Energy, Logbook, History, File editor, Media, Terminal, and Zigbee2MQTT (selected). Below these are Developer tools, Settings (with an orange notification dot), Notifications (with an orange notification dot), and an admin user profile. The main area displays a table of 15 Zigbee devices. At the top of this area, a 'Permit join (All)' button is highlighted with a red rectangle. The table lists devices with their IDs, names, MAC addresses, manufacturers, models, and pairing status.

ID	Name	MAC	Manufacturer	Model	Power	Status	Actions
3	2-5F11	0x282c02bffe75f11 (0x7316)	Third Reality	3RMS16BZ	74	✓	[Edit] [Info] [Delete]
4	2-551E	0x282c02bffe8551e (0xAEC3)	Third Reality	3RMS16BZ	255	✓	[Edit] [Info] [Delete]
5	2-1170	0x282c02bffe1170 (0xC138)	Third Reality	3RSB015BZ	255	✓	[Edit] [Info] [Delete]
6	door-V29	0xd55ce6ffbf022c28 (0x5C6A)	Third Reality	3RDS01056Z	255	✓	[Edit] [Info] [Delete]
7	door-V28	0xd75ce6ffbf022c28 (0x1D6E)	Third Reality	3RDS01056Z	255	✓	[Edit] [Info] [Delete]
8	plug3 0x1a2fedffbf022c28	0x1a2fedffbf022c28 (0xC93E)	Third Reality	3RSPE01044BZ	255	✓	[Edit] [Info] [Delete]
9	0x0000c5add3cf0eb4	0x0000c5add3cf0eb4 (0x1DE3)	Third Reality	3RSNL02043Z	255	✓	[Edit] [Info] [Delete]
10	0xef71e9ffbf022c28	0xef71e9ffbf022c28 (0xF3FB)	Third Reality	3RSS009Z	255	⚡	[Edit] [Info] [Delete]
11	0x8d8eeffbf022c28	0x8d8eeffbf022c28 (0xE843)	Third Reality	3RV501031Z	255	⚡	[Edit] [Info] [Delete]
12	0xf895e3ffbf022c28	0xf895e3ffbf022c28 (0xF678)	Third Reality	3RTHS24BZ	255	✓	[Edit] [Info] [Delete]
13	0x7081e3ffbf022c28	0x7081e3ffbf022c28 (0x60C6)	Third Reality	3RSB22BZ	255	⚡	[Edit] [Info] [Delete]
14	0x1795c7bcd38c1a4	0x1795c7bcd38c1a4 (0xC526)	Unsupported	3RSM0147Z	255	✓	[Edit] [Info] [Delete]
15	0x359ae9ffbf022c28	0x359ae9ffbf022c28 (0x9FCF)	Third Reality	3RSS009Z	255	?	[Edit] [Info] [Delete]

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admin

Z2M@192.168.3.87

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OTA

Touchlink

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Extensions

Disable join (All) 03:37

4		2-551E	0x282c02bffe8551e (0xAEE3)	Third Reality	3RMS168Z	255		
5		2-1170	0x282c02bffa1170 (0xC138)	Third Reality	3RSB0158Z	255		
6		door-V29	0xd55ce6ffb022c28 (0x6C6A)	Third Reality	3RDS01056Z	255		
7		door-V28	0xd75ce6ffb022c28 (0x1D6E)	Third Reality	3RDS01056Z	255		
8		plug3 0x1a2fedffb022c28	0x1a2fedffb022c28 (0xC93F)	Third Reality	3RSPE010448Z	255		
9		0x0000c5add3cf0eb4	0x0000c5add3cf0eb4 (0x1DE3)	Third Reality	3RSNL02043Z	255		
10		0xef71e9ffb022c28	0xef71e9ffb022c28 (0xF3FB)	Third Reality	3RSS009Z	255		
11		0x8d8eecffb022c28	0x8d8eecffb022c28 (0xE843)	Third Reality	3RV501031Z	255		
12		0xf895e3ffb022c28	0xf895e3ffb022c28 (0xF678)	Third Reality	3RTHS248Z	255		
13		0x7081e3ffb022c28	0x7081e3ffb022c28 (0x60C6)	Third Reality	3RSB228Z	255		
14		0x1795c7bcd38c1a4	0x1795c7bcd38c1a4 (0xC526)	Unsupported	3RSM0147Z	255		
15		0x359ae9ffb022c28	0x359ae9ffb022c28 (0x9FCF)	Third Reality	3RSS009Z	255	?	
16		0x739e82dbec38c1a4	0x739e82dbec38c1a4 (0x5E78)	Unsupported	3RSM0147Z	N/A		

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Z2M@192.168.3.87

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Touchlink

Logs

Extensions

Disable join (All) 03:27

0x739e82dbec38c1a4

About

Exposes

Bind

Reporting

Settings

Settings (specific)

State

Clusters

Scene

Dev console

Battery		50 %
Temperature		30.72 °C
Humidity		0 %
Linkquality		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.