

Smart RF Wi-Fi thermostat



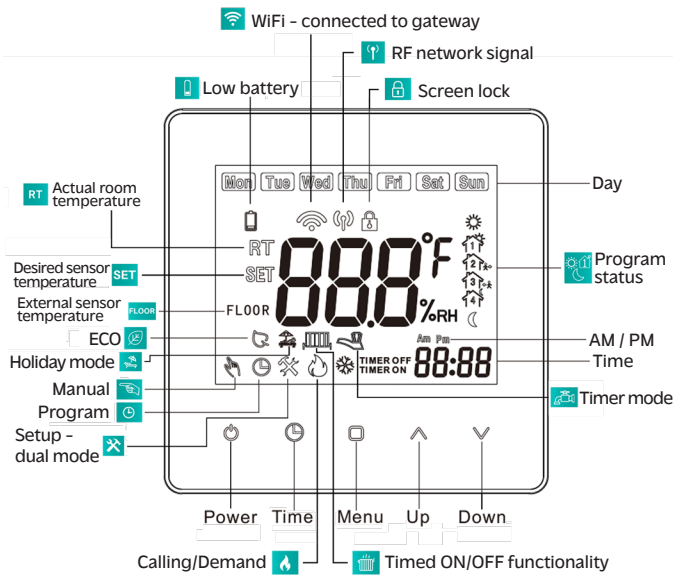
Product Code	Product Description
TIOEVO0001	230v white smart RF thermostat
TIOEVO0002	230v black smart RF thermostat

Icon Overview

	RF network signal Flashing - Pairing Stable - Connected		Eco - set point selected
	WiFi - connected to gateway		Setup -when in dual mode
	Actual room temperature		Calling/Demand
	Desired sensor temperature		Timed ON/OFF functionality
	Screen lock		Holiday mode selected
	Manually (clock and hand) or in permanent manual mode (hand only)		Low battery Solid - 10% Flashing - 1%
	Programming mode - running defined programs		Timed mode - ON/OFF function only
	Programmed status		External sensor temperature

Configuration Menu

No.	Function	Setting Options	Default
1	Operating mode	1. Thermostat 2. Timer 3. Thermostat & timer	1
2	System type	rA: Radiators UF: Underfloor	UF
3	Temperature calibration	-9°C to 9°C	0
4	Dead band	1°C to 5°C	1
5	Lock screen	0: All lock excluding power button. 1: All lock	0
6	Sensor select	In: Internal Ext: External All: Dual	In
7	Max. settable temperature	20°C to 45°C	35°C
8	Min. settable temperature	5°C to 20°C	5°C
9	Over temperature cut off	20°C to 70°C	45°C
10	Anti-frost temperature	2°C to 10°C	5°C
11	Display mode	0: Room & set temperature 1: Set temperature only	0
12	Anti-freeze	0: OFF 1: ON	1
13	Frost protection	0: OFF 1: ON	0
14	Frost protection temperature set	5°C to 30°C	16°C



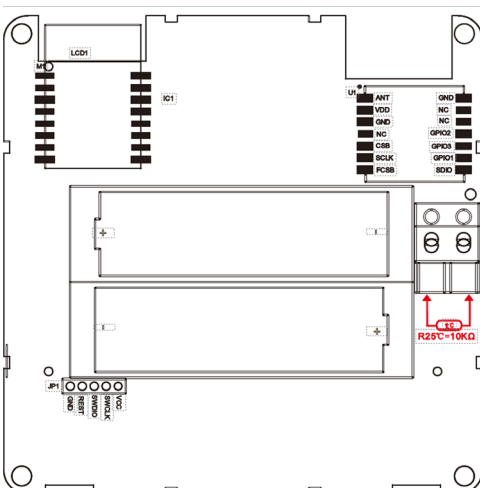
Factor Default Programs

Please familiarise yourself with the thermostats pre-programmed factory settings.

Period Display	Description	Time	Set Temp. °C
	Morning	06:00	22
	Leaving home	08:00	16
	Returning home	18:00	22
	Bedtime/Overnight	22:00	16

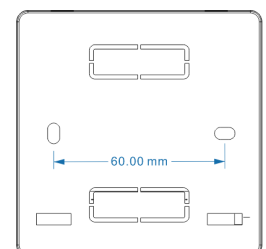
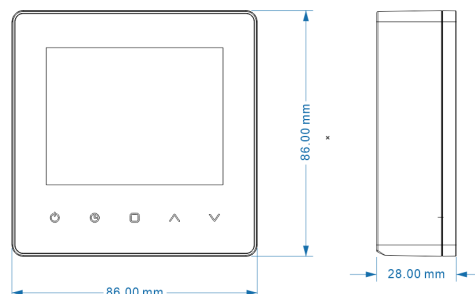
Sensor Compatibility

The TEVO thermostat can be connected with an external sensor.



Holiday Mode

1. With the thermostat on, long press for 7 seconds to enter holiday mode.
2. Short press button to set the day and temperature parameters you need.
3. Press to exit this. During holiday mode, H/W timer is OFF.
4. To exit holiday mode, short press .



Wireless RF central control centre

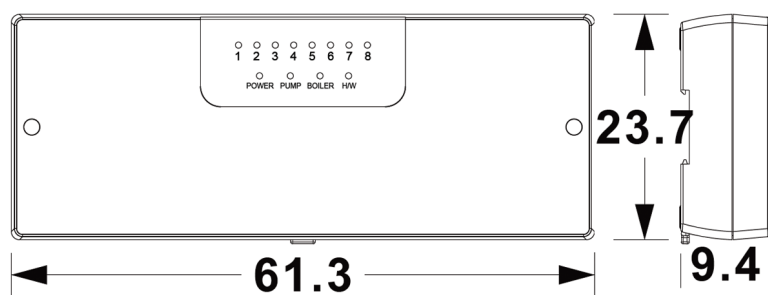


Product Code	Product Description
TIOEVO0003	Wireless RF central control box

System Components and Technical Information



This product can only be installed by a competent engineer.



Power:	95-240V AC 50/60Hz
Operating temperature:	-20°C - 60°C
Relay output max:	3A
Colour/material:	White ABS
Dimensions:	280 x 110 x 43.5mm
Number of zones:	8
Pump delay adjustment:	3-5 minutes
Fuse rating:	10A
IP rating:	20
Radio frequency:	568Mhz
Max load on H/W outputs:	3A

The TEVO wireless wiring centre from Tio Climate Solutions is an 8 zone wiring centre for use with TEVO wireless thermostats. Most commonly used for underfloor heating applications, the wiring centre can also be used for central control of multi-use systems by using the independent control outputs for hot water zone control and a dedicated channel for a radiator zone valve. The wiring centre can control the heat source activation through volt free output as well as offering a 230V output to the manifold circulating pump.

Other features within the wiring centre include:

- LED indicators for quick system status checks.
- Optional pump delay function to delay the pump activation during loop opening.
- Pump exercise function to prevent pump blocking issues.
- Commissioning switches for engineer testing.

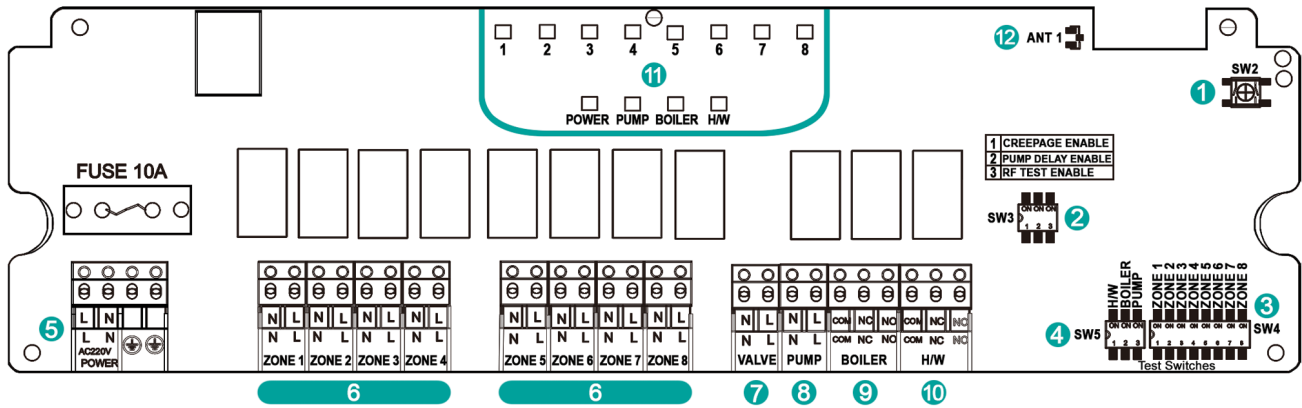
The TEVO wireless system can be used as standalone UFH or combined with hot water and radiators. By selecting the thermostat system application during set up and pairing with the wiring centre, the system use case can be determined easily. With the TEVO wireless thermostat set to UFH control it will communicate with the selected zone/channel in the wiring centre and activate the UFH loop, manifold circulating pump and heat source. If the TEVO wireless thermostat has 'hot water mode' selected the thermostat channel will act as a time switch and control the hot water output terminals.

If the TEVO wireless thermostat has 'radiator control mode' selected it will act as a conventional programmable room thermostat and control the output to a separate heating zone valve via the channel terminals.

Note: In radiator mode, the heat source will be activated but the manifold pump will remain inactive until a demand is given from an underfloor heating circuit.

System Components and Technical Information

- ① Switch 2 - Primary Control Switch
- ② Switch 3 - Engineer DIP Switches
- ③ Switch 4 - Actuator Test Switches
- ④ Switch 5 - H/W, Boiler & Pump Test Switches
- ⑤ Power Terminal
- ⑥ Actuator Terminals
- ⑦ Valve Terminal
- ⑧ Pump Terminal
- ⑨ Boiler Terminal
- ⑩ Hot Water Terminal
- ⑪ LED Indicators
- ⑫ Antenna - Increase RF Range



Operation

Pump Exercise Function

During periods of inactivity (summer months or between installation and general use) a manifold circulating pump can seize and cause problems when the system is reactivated. To help prevent this issue, the TEVO wireless wiring centre has an optional ‘pump exercise’ dip switch (SW3) which, when selected to ON, will operate the pump for 5 minutes once every month.

Pump Delay Function

Commonly, the electrical thermal actuators which open the individual loops will take up to 5 minutes to fully open. The pump delay function will then delay activation of the manifold circulating pump by 3 minutes, from activation, in order to allow the vales to fully open.

Commissioning Switches

For engineer use only during commissioning. These offer the ability to activate loops and test the electrical outputs.

Engineers Test Switches

These are a block of 12 dip switches used to test each zone, boiler, pump and H/W outputs. To enable any output, put the switch in the ON position. When installation is complete, all switches MUST be in OFF position.

DIP Switches

There is a 3 way dip switch responsible for 3 functions:

- 1: Pump Exercise Function
- 2: Pump Delay Function
- 3: RF Test Enable

In normal use, these DIP switches can be ignored and should be down in the OFF position.

DIP Switch 1

To enable the pump delay, put switch 1 to the ON position.

DIP Switch 2

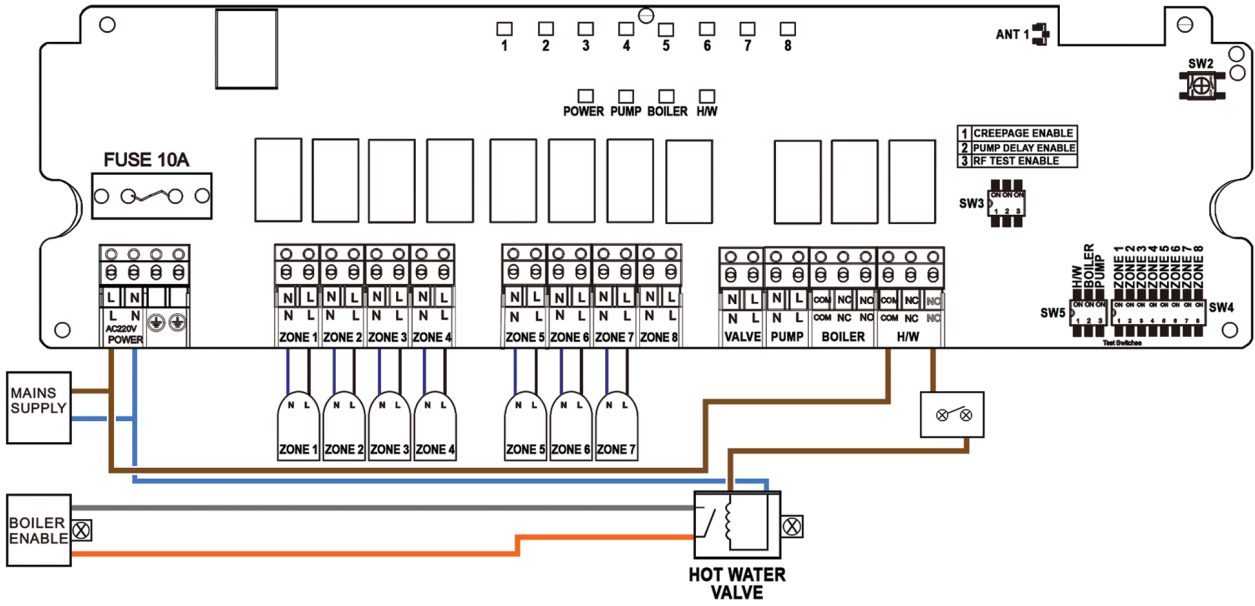
To enable pump exercise function, put SW2 to the ON position.

DIP Switch 3

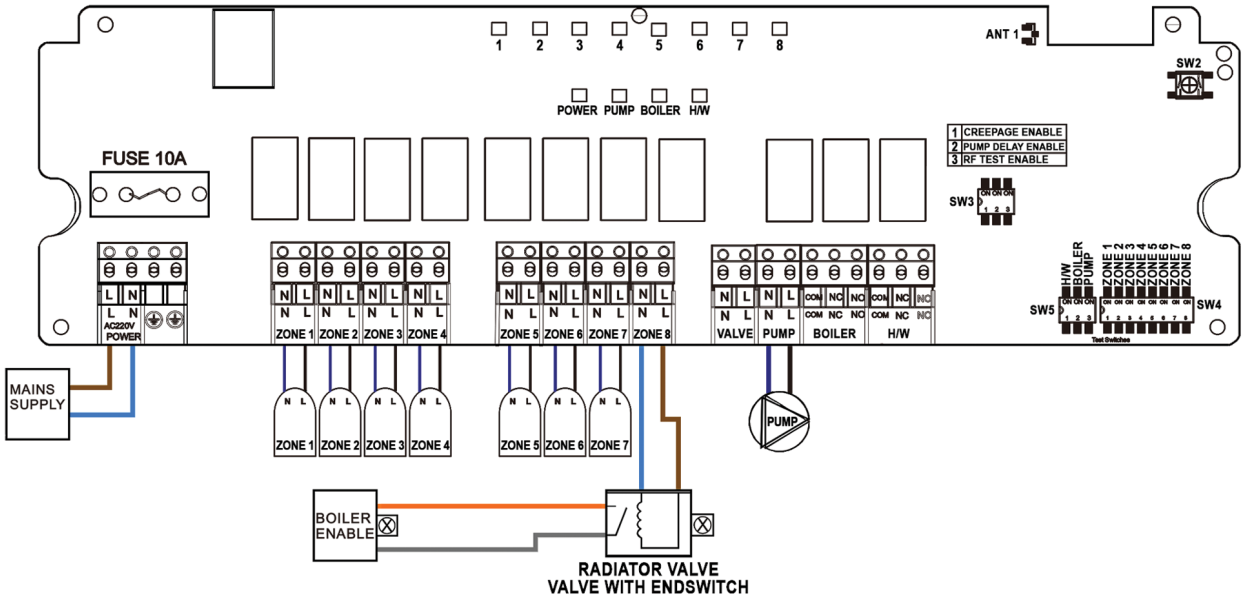
The boiler RF test switch is used to test communications with the RF-Switch receiver.

WIRING DIAGRAMS

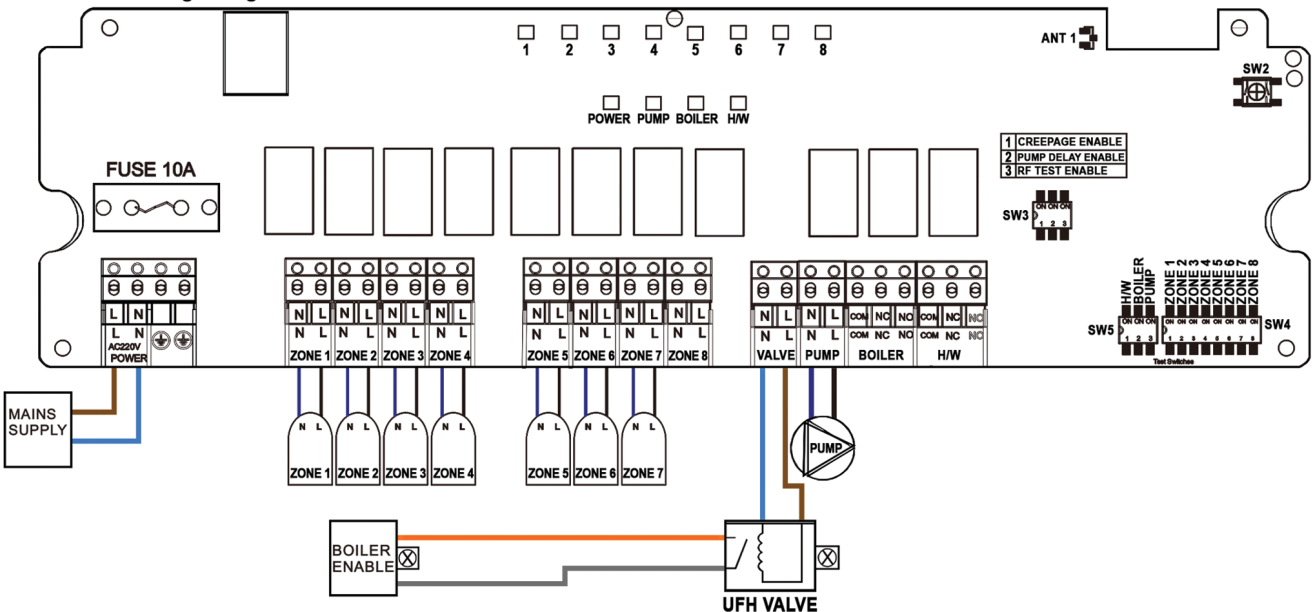
Hot water zone wiring



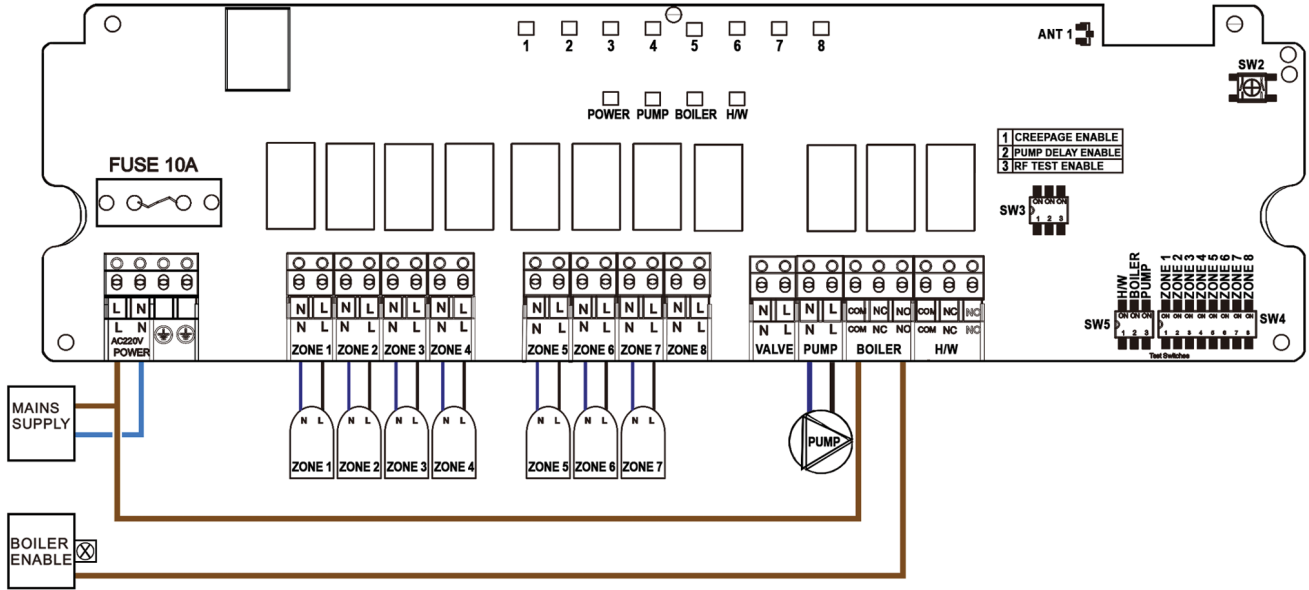
Radiator zone control using external zone valve (switched through heat source volt free terminals - for 230V switching grey must be connected to a suitable 230V connection)



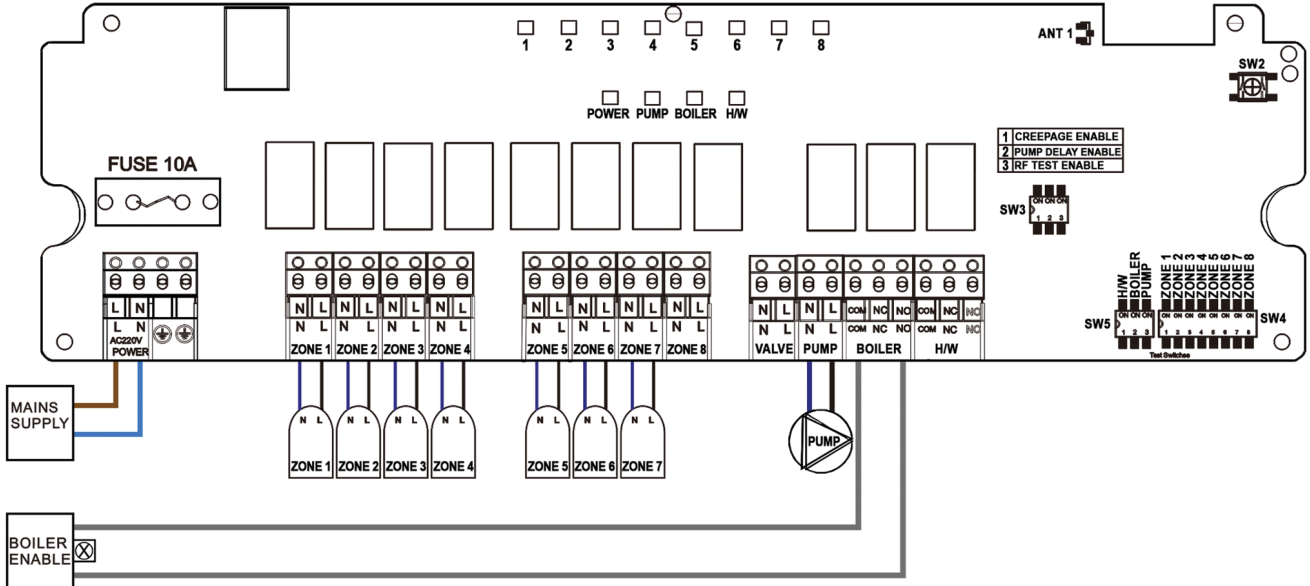
UFH wiring using external zone valve



UFH wiring using internal relay but switching 230V output by linking to main supply and input



UFH wiring using internal relay and volt free switching (check heat source requirement)





Mini Multi-functional Gateway
 Power input: 1A
 Operating temperature: -10°C - 55°C
 Operating humidity: 10%-90% RH (no condensation)
 Battery specifications: Micro USB DCSV
 Wireless technology: Wi-Fi 802.11b/g/n
 ZigBee/BLE/MESH

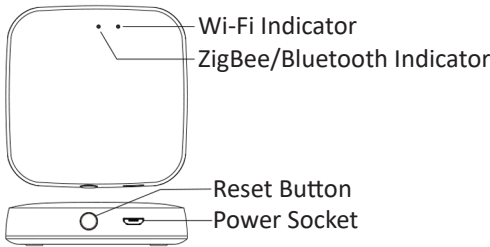
Packing List:

- Smart gateway x 1
- DCSV power supply x 1 (Optional matching)
- Instruction manual x 1
- Power cable x 1

Product Code	Product Description
TIOEVO0004	Gateway hub for app functionality

Product Description

Mini multi-mode gateway is the control center of smart devices. It supports ZigBee and Bluetooth smart devices. Users can design and realise smart application scenarios by adding smart sub-devices.



Preparation For Use

1. Mobile phone is connected to the Wi-Fi.



Ensure that your smart phone is connected to the same network as the gateway.

Please enable your phones Bluetooth and Location services.

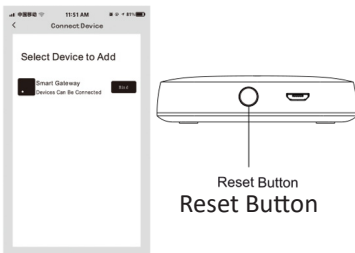
2. In the App Store, search for SmartLife app or scan the QR code above to the download page.

If you are downloading the app for the first time, please tap 'Register' to register your account. If you already have an account, please click the 'Login' button.

Network Settings

- Gateway connects to power.
- Once powered ON, the red light indicator flashes, meaning that the device is waiting for network connectivity. If the indicator does not flash, press and hold the reset button over 10 seconds until the red light flashes.
- Make sure that your mobile phone is connected to the 2.4GHz network band.
- Open the "My Home" page of the mobile app and a pop-up window will appear, prompting you to add a device. Follow the in-app instructions to complete the connection process.
- If there is no pop-up reminder, click the "+" icon to add device in the upper right corner of the app. The app will automatically search for the device. Once your device appears, follow the in-app prompts to complete the process.
- You can also manually connect your gateway by searching for the "Multimode Gateway" on the gateway control menu. Following the connection process in order to connect your gateway to your network.

Add Device



Once the device has been added successfully, you will be able to find the device on the "My Home" page.

Electronic Information, Toxic and Hazardous Substances Declaration

Part name	Toxic or harmful substances or elements				
	Lead Pb	Mercury Hg	Cadmium Cd	Hexavalent chromium Cr (VI)	Polybrominated biphenyl PBB
PCB board	○	○	○	○	○
Housing	○	○	○	○	○
Cable	○	○	○	○	○

O: Indicates that the content of this toxic and hazardous substance in all homogeneous materials of this part is below the maximum limit specified in SJ/T11363-2006 Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

X: Indicates that the toxic or hazardous substance contained in at least one of the homogeneous materials of the part exceeds the maximum limit specified in the SJ/T11363-2006 standard.

10: The figures in this label indicate that the product has an environmental protection use period of 10 years under conditions of normal use, and some parts may also have an environmentally friendly use period mark. The environmental protection use period is based on the number indicated by the mark.