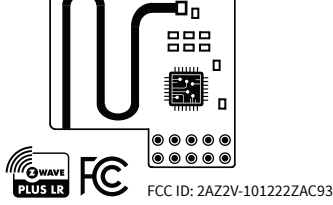


# USER MANUAL



## 800LR Z-WAVE GPIO MODULE

ZAC93 LR



[www.getzooz.com](http://www.getzooz.com)

### FEATURES

- Z-Wave Plus Static Controller to easily add Z-Wave communication to your smart home ecosystem
- Latest S2 security protocol for a truly private network
- 800 Series Long Range Z-Wave for fast, low-power direct communication
- Extended range up to a mile in open space when using Long Range
- Designed for Raspberry Pi and Home Assistant Yellow hardware

### SPECIFICATIONS

- Model Number: ZAC93 LR
- Z-Wave Frequency: 908.42 MHz
- Power: 3.3 VDC
- SDK: 7.18.3
- Operating Temperature: 32-104° F
- Operating Humidity: Up to 85%
- Installation and Use: Indoor only
- Dimensions: 1.1" x 1.1"

### SET-UP

Use this 800 Series Z-Wave Plus GPIO Module as a wireless radio for your host controller, such as Raspberry Pi. Follow the detailed instructions in the link below to connect the module. Please proceed with caution when installing the device.



Scan the code with your phone's camera and click on the link to access detailed installation instructions for the GPIO module.

Once the controller is set up and connected to your home automation software, you can enjoy a fully secure, private Z-Wave Plus mesh network. If the software supports Z-Wave Long Range, enable direct communication between your devices and the controller for supreme range up to 1 mile and a larger network size up to 4000 nodes.

**Questions? [ask@getzooz.com](mailto:ask@getzooz.com)**

### GPIO MODULE AS SECONDARY CONTROLLER

You can use the GPIO module as a secondary controller to your current Z-Wave system if it accepts additional controllers.

To enroll the module in your current system, send the inclusion command and put the module into learning mode, using the SerialAPI mode in the interface.

### FACTORY RESET

The GPIO Module can only be reset by the host software while it's in SerialAPI mode. The device is reset once an appropriate command from the host software is sent to reset the Z-Wave network.

There is no way to manually reset the module without a connection to the host software.



Scan to register your product for extended warranty, priority customer service, and more perks.

[www.getzooz.com/register](http://www.getzooz.com/register)

## ⚠ WARNING

- This product should be installed **indoors** upon completion of any building renovations.
- Do not install the device in a place with direct sun exposure, high temperature, or humidity.
- Keep away from chemicals, water, and dust.
- Ensure the device is never close to any heat source or open flame to prevent fire.
- Ensure the device is connected to an electric power source that does not exceed the maximum load power.
- No part of the device may be replaced or repaired by the user.



This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

This product features the latest Security 2 (S2) framework to remove smart home network hacking risks. This device is equipped with a unique authentication code for trusted wireless communication.

## WARRANTY

This product is covered under a standard 12-month warranty and an extended 5-year limited warranty once registered. To read the full warranty policy or file a warranty claim, please go to:

**[www.getzooz.com/warranty](http://www.getzooz.com/warranty)**

## REGISTER YOUR PRODUCT HERE:

**[www.getzooz.com/register](http://www.getzooz.com/register)**

### FCC 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. STORE INDOORS WHEN NOT IN USE. SUITABLE FOR DRY LOCATIONS ONLY. DO NOT IMMERSE IN WATER. NOT FOR USE WHERE DIRECTLY EXPOSED TO WATER.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following conditions:

1. This device may not cause harmful interference,
2. This device must accept any interference received, including interference that may cause undesired operation.

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 according to instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in any given installation.

If this equipment causes harmful interference to radio or television reception, the user may try to correct the interference by taking one or more of the following measures:

- Reorient or relocate receiving antenna
- Increase the separation between equipment and receiver
- Connect equipment into a separate outlet or circuit from receiver
- Consult the dealer or an experienced radio/TV technician for additional assistance

FCC Part 15 Subpart C 15.215 & 15.205 & 15.207 & 15.209 & 15.249

2.3 Specific operational use conditions

The module is an SRD module.

Operation Frequency: 908.40 - 920.00 MHz

Modulation: FSK

Type: On-board antenna Gain: -2.75 dBi

The module can be used for mobile or applications with a maximum

-2.75 dBi antenna. The host manufacturer installing this module into

their product must ensure that the final Composite product

complies with the FCC requirements by a technical assessment or

evaluation to the FCC rules, including the transmitter operation. The

host manufacturer has to be aware not to provide information to the

end user regarding how to install or remove this RF module in the

user's manual of the end product which integrates this module. The

end user manual shall include all required regulatory

information/warning as show in this manual.

2.4 Limited module procedures

Applicable. The module is a Limited module and complies with the

requirement of FCC Part 15.249.

According to FCC Part 15 Subpart C Section 15.212, The radio

elements must have the radio frequency circuitry shielded. However,

due to there is noshield for this Module, this module is granted as a

Limited Modular Approval. When this Module is installed into the

other host, a Class II Permissive Change or a New FCC ID submission is

required to ensure the full compliance of FCC relevant requirements.

2.5 Trace antenna designs

Not applicable. The module has its own antenna, and doesn't need

a host's printed board microstrip trace antenna etc.

2.6 RF exposure considerations

The module must be installed in the host equipment such that at least

20cm is maintained between the antenna and users' body; and if RF

exposure statement or module layout is changed, then the host

product manufacturer required to take responsibility of the module

through a change in FCC ID or new application. The FCC ID of the

module cannot be used on the final product. In these circumstances,

the host manufacturer will be responsible for re-evaluating the end

product (including the transmitter) and obtaining a separate FCC

authorization

2.7 Antenna Specification are as follows:

Type: On-board antenna Gain: -2.75 dBi

This device is intended only for host manufacturers under the

following conditions:

The transmitter module may not be co-located with any other

transmitter or antenna;

The module shall be only used with the internal antenna(s) that has

been originally tested and certified with this module. The antenna

must be either permanently attached or employ a 'unique' antenna

coupler.

However, the host manufacturer is still responsible for testing their

end-product for any additional compliance requirements required

with this module installed (for example,

digital device emissions, PC peripheral requirements, etc.).

2.8 Label and compliance information

Host product manufacturers need to provide a physical or e-label

stating "Contains FCC ID: 2AZ2V-101222ZAC93" with their finished

product.

2.9 Information on test modes and additional testing requirements

Operation Frequency: 908.40 - 920.00 MHz

Modulation: FSK

Host manufacturer must perform test of radiated & conducted

emission and spurious emission, etc according to the actual test

modes for a stand-alone modular transmitter in a host, as well as for

multiple simultaneously transmitting modules or other transmitters in

a host product.

Only when all the test results of test modes comply with FCC

requirements, then the end product can be sold legally.

2.10 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for FCC Part 15

Subpart C 15.215 & 15.205 & 15.207 & 15.209 & 15.249 and that the

host product manufacturer is responsible for

compliance to any other FCC rules that apply to the host not covered

by the modular

transmitter grants of certification. If the grantee markets their

product as being Part 15 Subpart B compliant (when it also contains

unintentional-radiator digital circuitry), then the grantee shall

provide a notice stating that the final host product still requires Part

15 Subpart B compliance testing with the modular transmitter

installed.

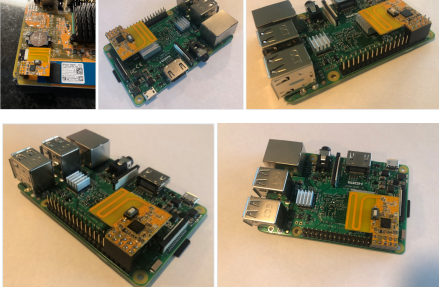
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## ZAC93 800 GPIO Module Installation Guide

Here are some tips for installing your GPIO module on the host hardware of your choice and for setting it up with your home automation software. Please remember that this device is for expert users only and we're not able to provide troubleshooting or support for the smart home software you're using. Please refer to the support channels of the software for any questions with Z-Wave installation and device management.

### Home Assistant Yellow Installation

Connect the ZAC93 GPIO module to the "Wireless smart home" pins located in the bottom left corner of the HA Yellow board, right next to the Zigbee chip. Just like in the images below:



**Never force any connections as these are fragile electronic components.**

Once the GPIO module is connected, you can access it on the Home Assistant software through the dev/ttyAMA0 port. It may show as an unknown manufacturer device but this will not affect performance or functionality in any way. Proceed with installing Z-Wave JS on your Home Assistant software according to the instructions here.

If you need any assistance with your Home Assistant set-up, please refer to the available platform resources such as the community forums for general help and report any issues on GitHub or Discord.

### About Raspberry Pi

PI motherboard (Raspberry Pi) is a microcomputer based on ARM processor. By carrying our ZAC93 GPIO module, the motherboard can realize the function of Z-Wave micro gateway.

ZAC93 GPIO module can be installed on Raspberry Pi series models (e.g. Raspberry Pi 4, etc.).

Connect the ZAC93 GPIO module to pins 1-10.

#### - Professional installation requirements:

1. These are the same pins reserved for Bluetooth so please make sure you disable Bluetooth first.
2. Reserve enough space on the PI motherboard to prevent physical space interference with the ZAC93 GPIO module.
3. The module is installed with the corresponding interface (see Figure 1), and is one-to-one connected with the standard interface (pin 1-10) on the PI motherboard (see Figure 2).
4. The ZAC93 GPIO module is powered by the standard 3.3V power supply on the PI motherboard, as shown in Figure 3 after installation.
5. The ZAC93 GPIO module with PCB antenna. Do not use metal or conductive material to cover the product during use, otherwise the wireless performance will be seriously affected.
6. The ZAC93 GPIO module must be installed in the host equipment such that at least 20cm is maintained between the antenna and users' body.
7. The device is only for indoor use.

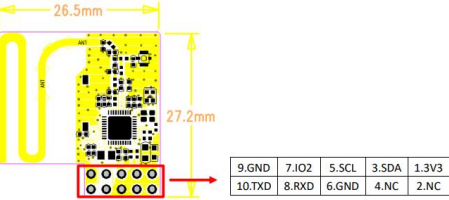


Figure 1

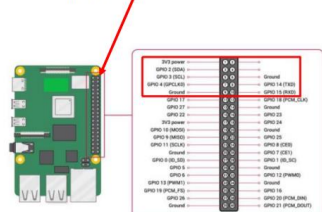


Figure 2

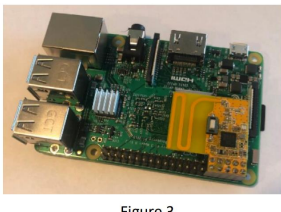


Figure 3

Once the GPIO module is installed on the Pi, proceed with your software installation according to the set-up instructions for your smart home interface. Use the dev/ttyAMA0 port to access your GPIO module.

If there is a hardware problem with your ZAC93 module, please get in touch with our team 7 days a week and we'll assist you with getting the device serviced. Please register your product to unlock an extended 5-year warranty.