RMB-35-ZW
Z-Wave Router / USB Power Adaptor

Introduction

RMB-35-ZW is an AC Powered Z-Wave Router. After being added into a Z-Wave network, it serves as a router in the Z-Wave network to allow other Z-Wave devices to join the same Z-Wave network.
The router also serves as an USB power adaptor with 2 USB ports.

RMB-35-ZW allows access to the "S2 Unauthenticated" class and supports Z-Wave SmartStart inclusion as well as classic inclusion.

Z-Wave is a wireless communication protocol that uses a low-power RF radio. By taking advantage of the Z-Wave mesh network, commands can be transmitted to their destination via intermediary "listening" Z-Wave products.

Parts Identification

1. LED Indicator (Inside)

The LED Indicator is located inside the cover and only visible when activated

- 2 flashes:
  The Router is powered on.
- 3 flashes:
  The Router is Factory reset.
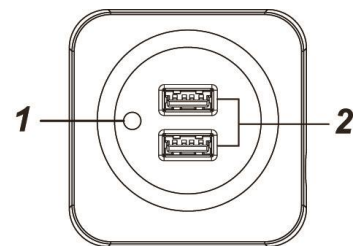
2. USB Ports

The USB ports provide 5V DC 2A power output to connected USB cable.

3. Interchangeable Plug

The plug type may be changed according to regional requirement.

4. Function Button

- Press 3 times within 1.5 seconds to transmit a learn code.
- Press and hold for 10 seconds to factory reset.
- Press once to send battery percentage report to the Z-Wave network.
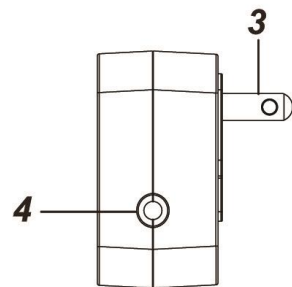
Features

● *Power Supply*

The Router is powered by AC power. Plug the Router into a power socket to activate the Router. The Router will enter normal operation mode.
The Router is installed with a rechargeable battery. When the Router is removed from the wall, it will switch to its internal rechargeable battery for a back-up power supply.

USB Power Supply
The Router has two USB ports which provide 5V 2A DC power to connected USB cable. The USB power supply is interrupted when AC power is disconnected.

● *Low Battery Detection*

The Router will report its battery percentage to the Control Panel respectively at 100%, 75%, 50%, 25%, and 0%. After AC power failure, the Router will transmit a Low Battery signal (25%) to the Control Panel when low battery voltage is detected. When battery is dead (0%), the router will transmit a cut-off signal to the Control Panel. To restore battery, re-plug AC power into the power socket. The Router will transmit a low battery restored notification to the Control Panel for every 25% charged in every 12 hours. (For example: 0%→12hours→25%→12hours→50%→12hours→75%→12hours→100%)

● *AC Failure Detection*

Whenever the Router is removed from the power socket, the Router will send an AC failure signal to the Z-Wave Gateway/Control Panel. If the Router is re-plugged onto the power socket, it will transmit an AC restoration code.

● *Adding Device (Inclusion)*

This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufactures 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.

The device supports both classic inclusion process and SmartStart inclusion process.

Classic Inclusion
- Connect the Router into the power socket to power on.
- Put the Z-Wave Gateway or Control Panel into **Inclusion** mode (please refer to the Z-Wave Gateway or Control Panel manual).
- Within 1.5 seconds, press the Function Button 3 times.
- Refer to the operation manual of the Z-Wave Gateway or Control Panel to complete the adding process.
- If the sensor has already been **added** (included) into another Z-Wave Gateway/Control Panel, or if the sensor is unable to be added into the current Z-Wave Gateway/Control Panel, please exclude it first (see *Removing Device*) before attempting to **include** it into the current Z-Wave Gateway/Control Panel.

SmartStart Inclusion

SmartStart enabled products can be added into a Z-Wave network by scanning the Z-Wave QR Code present on the product with a controller providing SmartStart inclusion. No further action is required and the SmartStart product will be added automatically within 10 minutes of being switched on in the network vicinity. Z-Wave SmartStart utilizes the DSK of the device to enhance and simplify the inclusion process. DSK is Device Specific Key used for authentication and encrypted communication. The DSK information is stored in the QR code format that is printed on a label and adhered to the front side of the device, as example shown on the right hand side.
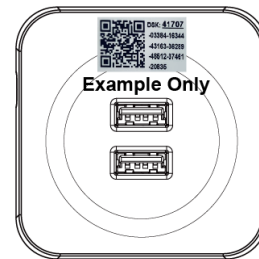
Example Only

Each Z-wave SmartStart device has its own DSK. The QR code in this picture is an example only. Please scan the QR code attached to your device.

- Scan the QR Code sticker on the Router to obtain DSK and transfer to the Z-Wave gateway.
- Plug the Router into a power outlet, a SmartStart inclusion request will be automatically sent to the gateway.
- The gateway will automatically include the device upon recognition of the device by matching the inclusion request with the DSK obtained

< NOTE>

☞ The DSK of the device is used only during inclusion.

☞ The DSK can be read without the Router powered ON, so it is possible to prepare the gateway to include the device prior to powering up the Router.

● *Removing Device (Exclusion)*

The Router must be removed from existing Z-Wave network before being included into another. There are two methods available to exclude a device.

Exclusion Mode
- Put the Z-Wave Gateway or Control Panel into **Exclusion mode** (please refer to the Z-Wave Gateway or Control Panel manual).
- Within 1.5 seconds, press the Function Button 3 times and the Router will be removed from the Z-Wave network.

Factory Reset

(Only use factory reset when network Control Panel/Gateway is missing or inoperable).
- Press and hold the Function Button for 10 seconds to factory reset.

<NOTE>

☞ Factory resetting the Router will restore it to factory default settings (excluded from the Z-Wave network). The Z-Wave Gateway or Control Panel will still keep its Z-Wave settings. Please refer to the Gateway or Control Panel manual on how to remove the Router's Z-Wave settings.

☞ Before you remove or factory reset the Router, please ensure that the device DSK information has been removed or does not exist in the gateway. If you remove or factory reset the device, but its DSK still exists in the gateway, the gateway will automatically include the device again.

Z-Wave Information

Device Type: Generic Type Repeater Slave
Role Type: Always On Slave (AOS)
Max Association Groups: 1
Max Association in Groups: 1
Command Class Support/Control
Mandatory CC Support:

> Z-Wave Plus Info CC
> Association CC, (S2)
> Multi Channel Association CC, (S2)
> Association Group Information CC, (S2)
> Transport Service CC,
> Version CC, (S2)
> Manufacturer Specific CC, (S2)
> Device Reset Locally CC, (S2)
> Powerlevel CC, (S2)
> Battery CC, (S2)
> Security 2,
> Notification CC, (S2)
> Supervision CC
> Firmware Update Md CC, (S2)

● *Z-Wave's Groups (Association Command Class Version 2)*

The Router can be set to send reports to associated Z-Wave devices. It supports 1 association groups with 1 node.

Group 1 for "LifeLine": (maximum node: one)

> Battery CC (COMMAND_CLASS_BATTERY)
>
> Notification CC,V8 (COMMAND_CLASS_NOTIFICATION)
>
> Device Reset Locally CC (COMMAND_CLASS_DEVICE_RESET_LOCALLY)

● *Command Class Data Format*

- **AC Failure/Restore: [COMMAND_CLASS_NOTIFICATION] [NOTIFICATION_REPORT]**
  - When an AC power failure is detected, the RMB-35 will send an AC failure signal to the Control Panel. When AC power is restored, the RMB-35 will send a restore signal to the Control Panel. Notification Type : POWER_MANAGEMENT (0x08)
  - AC Failure: 00 00 00 FF 08 02 00 (Event :02, AC disconnected)
  - AC Restore: 00 00 00 FF 08 03 00 (Event :03, AC reconnected)
- **Battery: [COMMAND_CLASS_BATTERY] [BATTERY_REPORT]**
  - The Router will report its battery percentage to the Control Panel respectively at 100%, 75%, 50%, 25%, and 0%.
  - 0x64 --- 100% Battery Full
  - 0x4B --- 75% Battery
  - 0x32 --- 50% Battery
  - 0x19 --- 25% Low Battery
  - 0xFF --- Battery Dead