

## **OPERATING MANUAL**

### **NanoMote One**

**ZWA004-A/C**

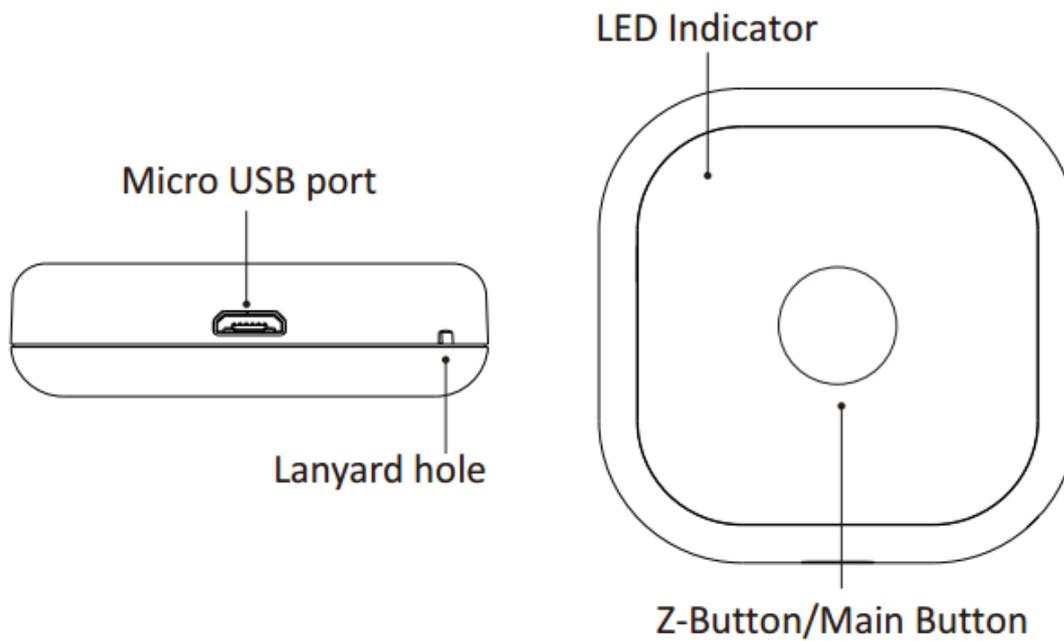
NanoMote One is a wireless, portable and rechargeable product. On one hand, it can be used to control separate Z-Wave device, such as a smart Plug, smart Dimmer, Bulb, etc. through Z-Wave Gateway. On the other hand, it can also be used to program a scene by Gateway app which groups many smart nodes such as Plugs, Bulbs, and Siren... The scene may refer to sleep scene, movie scene and entertainment scene, etc. as you created.

Features:

1. Z-Wave Plus certified for good compatibility (500 serials chipset)
2. Z-Wave S2 system
3. Support remote control anywhere and anytime.
4. The battery is rechargeable, will run for three months per charge
5. Support low battery alarm with buzzer
6. Support Child Lock function
7. Supporting firmware OTA

## **I . GENERAL INFORMATION ABOUT NanoMote One**

### **1. Product layout**

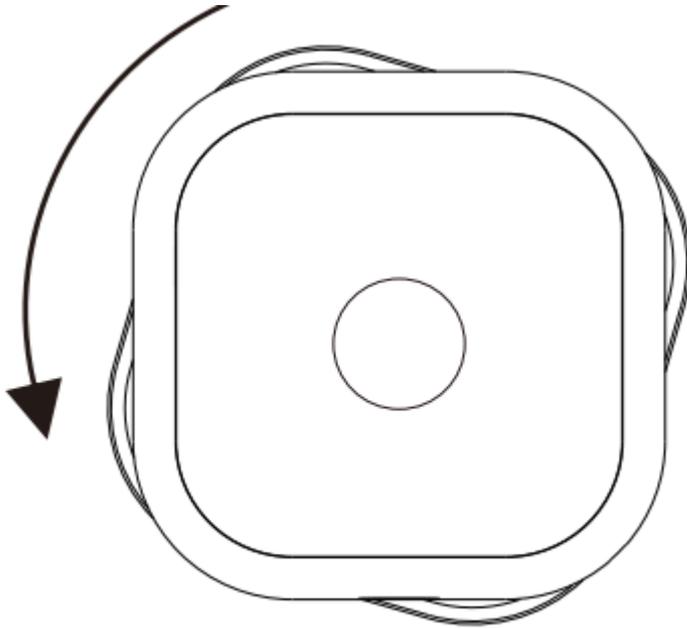


## 2. Specifications

Power supply:	1 x LIR2450 3.6V Battery
Storage environment:	-10 °C -50 °C    0%-85%
Operational temperature:	0-40 °C
Radio protocol:	Z-Wave
Radio frequency:	868.42MHz (EU)    908.42MHz (US) 921.42MHz (ANZ)
Range:	More than 100m outdoors About 30m indoors (depending on building materials)
Dimensions:	50*50*14.5MM
Working current:	36mA
Standby current:	2.5uA

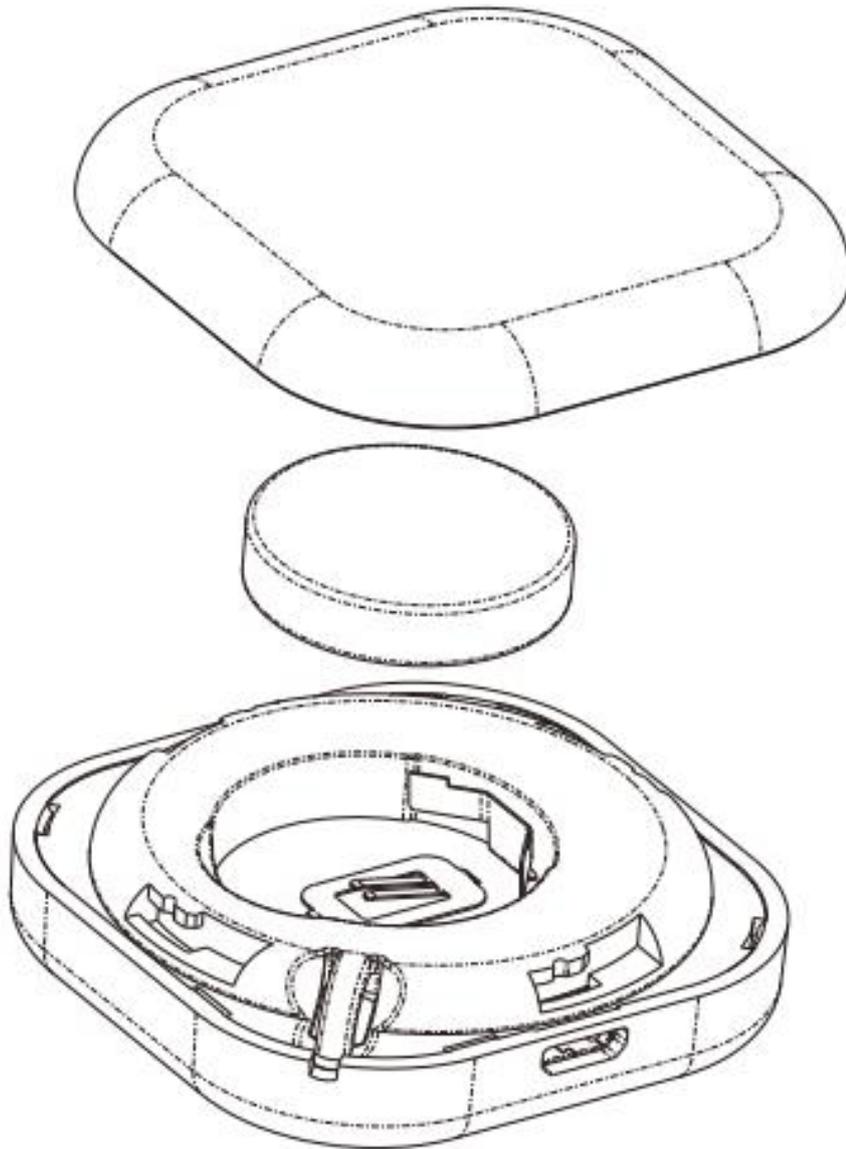
## II . INSTALLATION

Open the cover



close the cover

Insert battery and



### **III. Z-WAVE NETWORK INCLUSION**

NanoMote One 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.

1. Insert the LIR2450 battery.
2. Place the device within the direct range of your Z-Wave controller.
3. Set the main controller's adding mode (see the controller's manual).
4. Click the button once, the LED indicator should blink fast.
5. Wait for the adding process to end.
6. Successful adding will be confirmed by the Z-Wave controller's message.

**TIP:**

If you want your NanoMote to be a security device that use secure/encrypted message to communicate in a Z-Wave network, then a security enabled Z-Wave controller is needed.

#### IV. Z-WAVE NETWORK EXCLUSION

To remove the NanoMote from the Z-Wave network:

1. Insert the LIR2450 battery.
2. Place the device within the direct range of your Z-Wave controller.
3. Set the main controller remove mode (see the controller's manual).
4. Double click the button quickly, the LED indicator should blink fast.
5. Wait for the removing process to end.
6. Successful adding will be confirmed by the Z-Wave controller's message.

#### V. Security features of NanoMote One in Z-Wave network

7. The following is a list of supported command classes:

8. 1.The node info frame supports:

COMMAND_CLASS_ZWAVEPLUS_INFO	V2
COMMAND_CLASS_SECURITY	V1
COMMAND_CLASS_SECURITY_2	V1
COMMAND_CLASS_TRANSPORT_SERVICE	V2

2. Security Command Supported Report Frame:

COMMAND_CLASS_VERSION	V2
COMMAND_CLASS_MANUFACTURER_SPECIFIC	V2
COMMAND_CLASS_ASSOCIATION_GRP_INFO	V1
COMMAND_CLASS_ASSOCIATION	V2
COMMAND_CLASS_BATTERY	V1
COMMAND_CLASS_WAKE_UP	V2
COMMAND_CLASS_POWERLEVEL	V1
COMMAND_CLASS_CONFIGURATION	V1
COMMAND_CLASS_SUPERVISION	V1
COMMAND_CLASS_FIRMWARE_UPDATE_MD	V3
COMMAND_CLASS_DEVICE_RESET_LOCALLY	V1
COMMAND_CLASS_CENTRAL_SCENE	V3
COMMAND_CLASS_MARK	V1
COMMAND_CLASS_SWITCH_MULTILEVEL	V2

#### VI. LOW BATTERY ALARM FUNCTION

NanoMote One will send battery report to the lifeline group when button is triggered during the sleep mode. If the battery level of the NanoMote One is less than 20%, the NanoMote One will

send a low battery alarm to the main controller.

## VII. WAKE UP

Pressing and holding button for 5 seconds and then release so the NanoMote One will wake up itself and send wake-up notification out to Z-Wave Controller. After that, it can be operated to update parameters, OTA, and detect battery level etc.

## VIII. CHILD LOCK FUNCTION

Child Lock function. If enable the Child Lock function, the LED indicator will not be on when press down the button. To switch on/off the Child Lock function, please press and hold the button for 10 seconds, the LED indicator will be solid on in red. Then release the button, the LED indicator will be continuously stay in red for 2 seconds. During this 2 seconds, please click the button once, the LED light will be blink fast in red for 2 seconds.

## IX. TESTING Z-WAVE NETWORK RANGE

Press and hold the button for 15 seconds, the LED light will be solid on in purple. Then release the button, the LED light will be stay in purple for 2 seconds, during this 2 seconds, please click the button once, it will start to test the Z-Wave network range and LED light will blink fast in purple. After finish the test, if the LED light is in green, it refers to strong signal; if in blue, it refers to medium signal, and if in red, it refers to weak signal or no signal.



**TIP:**

This function works only when NanoMote One has been included into a Z-Wave network.

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## X. RESET NanoMote One

Reset procedure clears the NanoMote One's memory, including Z-Wave network information.

To reset NanoMote One:

Press and hold the button for 20 seconds, the LED light will be solid on in red. Then release the button, the LED light will be stay in red for 2 seconds, during this 2 seconds, please click the button once, it will start to restore factory default. At the same time, the LED light will be solid on in colorful for 15 seconds. Then Sending Device Reset locally notification to the controller.

**NOTE:**

Use this procedure only in the event that the network primary controller is missing or otherwise inoperable.

**XI. BATTERY CHARGING**

NanoMote One has an internal rechargeable battery that will run for three months under the normal use condition. The charger's output should be a micro USB terminal with the specification of output DC 5V. The LED color is red during the charging process, and it will turn to green if the charging is finished.

**XII. ASSOCIATION AND BASIC COMMAND****1. Association**

Association allows the NanoMote One to control another Z-wave device directly, such as Smart Switch, Smart Dimmer, etc. NanoMote One supports three association groupings, every group relates to a specific button action. View details in the follow section of "XII. BUTTON FUNCTION".

Group 1 allows NanoMote One sends the central scene notification command and battery report command.

Group 2 allows NanoMote One sends the basic set command.

Group 3 allows NanoMote One sends switch multilevel set, the multilevel start level change and multilevel stop level change command.

Grouping Identifier	Max Nodes	Send Commands
Group 1	0x05	<b>1. Central Scene Notification.</b> NanoMote One will send "Central Scene Notification" to the associated nodes when the Button is short pressed, held and released. <b>2. Battery Report.</b> NanoMote One will Send "Battery Report" to the associated nodes when the Button is triggered during the sleep mode. <b>3. Device Reset Locally Notification.</b> NanoMote One will send "DEVICE_RESET_LOCALLY " to the associated nodes when the Button is long pressed more than 20s.
Group 2	0x05	<b>1. Basic Set:</b> NanoMote One will send "Basic Set (Value= 255/0)" to the associated nodes when the Button is short pressed.
Group 3	0x05	<b>1. Switch Multilevel Set:</b> NanoMote One will Send "Switch Multilevel Set (Value= 255/0)" to

		<p>the associated nodes when the Button is short pressed.</p> <p><b>2.Switch Multilevel Start Level Change</b> NanoMote One will send “Switch Multilevel Start Level Change” to the associated nodes when the Button is held down.</p> <p><b>3.Switch Multilevel Stop Level Change</b> NanoMote One will send “Switch Multilevel Stop Level Change” to the associated nodes when the Button is released.</p>
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## 2. Basic Command

There is no relevant commands are available for mapping.

## 3. Battery Command

NanoMote One will send battery report to the lifeline group when Button is triggered during the sleep mode. If the battery level of the Scene Controller is less than 20%, the Scene Controller will beep 3 times when the button is pressed.



### TIP:

1. The max number of associated nodes of each groups is 5.
2. Association allows for direct transmission of control command between devices and takes place without the participation of the main controller.

## XIII. BUTTON FUNCTION

NanoMote One offers three button action types, including short press, held down and release.

Short press allows Scene Controller sends:

Central scene notification commands to the nodes associated nodes.

Basic set command to the nodes associated nodes.

Switch multilevel set command to the associated nodes.

Press and hold (more than 2 seconds) allows NanoMote One sends:

Central scene notification command to the associated nodes.

Multilevel start level change command to the associated nodes.

Release allows NanoMote One sends:

Central scene notification command to the associated nodes.

Multilevel stop level change command to the associated nodes.

## XIV. ADVANCED CONFIGURATION

NanoMote One offers a wide variety of advanced configuration settings. Below parameters can be

accessed from main controllers configuration interface.

**Parameter No.32 Level of low battery**

Available settings: **10-50 (10% - 50%)**

Default setting: **20 (20%)**

Parameter size: **1[byte]**

**Parameter No.41 Enable send central scene notification.**

**0** - Disable.

**1** – Enable.

Default setting: **1**

Parameter size: **1[byte]**

**Parameter No.42 Setting the duration value of the command switch multilevel.**

Available settings: **0-255**

Default setting: **255**

Parameter size: **1[byte]**

**Parameter No.43 Enable/disable the buzzer alarm when battery is running low.**

**0** - Disable.

**1** –Enable.

Default setting: **0**

Parameter size: **1[byte]**

**XV. NOTES FOR OTA**

With reference to Wake-up operation (VI.WAKE UP) and Z-Wave controller's guidances to do OTA.

**XVI. FCC NOTICE (for USA)**

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.

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

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.