

Z-Wave® Panic Button



Introduction

The Panic Button is a wireless switch designed to control the Panic or Scene status of other associated devices through the Z-Wave controller. After receiving the signals emitted by the Panic Button, the Z-Wave controller can then give commands or operate according to its own settings. Its great compatibility with Z-Wave products makes it suitable for smart home cloud based gateway.

The Panic Button is also a security Z-Wave device and supports the Over The Air (OTA) feature for the product's firmware upgrade. If you want it 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.

PackageContents		
Panic Button	x 1	
User Manual	x 1	

Command Class

Z-Wave® Panic Button Command Class Supported

COMMAND_CLASS_ZWAVEPLUS_INFO_V2,
COMMAND_CLASS_SUPERVISION_V1,
COMMAND_CLASS_BATTERY_V1,
COMMAND_CLASS_WAKE_UP_V2,
COMMAND_CLASS_TRANSPORT_SERVICE_V2,
COMMAND_CLASS_SECURITY_V1,
COMMAND_CLASS_SECURITY_2_V1,
COMMAND_CLASS_VERSION_V3,
COMMAND_CLASS_FIRMWARE_UPDATE_MD_V4
COMMAND_CLASS_ASSOCIATION_V2,
COMMAND_CLASS_ASSOCIATION_GRP_INFO_V1,
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3,
COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2,
COMMAND_CLASS_DEVICE_RESET_LOCALLY_V1,
COMMAND_CLASS_POWERLEVEL_V1,
COMMAND_CLASS_NOTIFICATION_V8,
COMMAND_CLASS_CONFIGURATION_V1,

Security

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COMMAND_CLASS_BATTERY_V1,
COMMAND_CLASS_WAKE_UP_V2,
COMMAND_CLASS_VERSION_V3,
COMMAND_CLASS_FIRMWARE_UPDATE_MD_V4

Panic Button Device Information

Basic Device Class: ROUTING_SLAVE
Generic Device Class: SENSOR_NOTIFICATION
Specific Device Class: NOTIFICATION_SENSOR

Detailed description of each command class

【COMMAND_CLASS_ZWAVEPLUS_INFO】
The Z-Wave Plus Info Get Command is used to get additional information of the Z-Wave Plus device in question.

【COMMAND_CLASS_SUPERVISION】
The Supervision Command Class allows a sending node to request application-level delivery confirmation from a receiving node. The delivery confirmation includes relevant application-level status information in the confirmation message. The Supervision Command Class MAY be used for solitary commands such as Set and unsolicited Report commands. The Supervision Command Class MUST NOT be used for session-like command flows such as Get←→Report command exchanges or firmware update.

【COMMAND_CLASS_BATTERY_V1】
The Battery Command Class is used to request and report battery levels for a given device.

【COMMAND_CLASS_WAKE_UP_V2】
The Wake Up Command Class version 2 enables read back of the Wake Up Interval capabilities in a node.

The Z-Wave Panic Button wakes up by wake up timer or presses the physical button once, it will send Wakeup Notification Command to the node ID that requires to be reported and stay awake for 10 seconds, if no WAKE_UP_NO_MORE_INFORMATION command is received.

【COMMAND_CLASS_TRANSPORT_SERVICE_V2】
The Transport Service Command Class supports the transfer of datagrams larger than the Z-Wave frame.

【COMMAND_CLASS_SECURITY_V1】
The Security Command Class create the foundation for secure application communication between nodes in a Z-Wave network. The security layer provides confidentiality, authentication and replay attack robustness through AES-128.

【COMMAND_CLASS_SECURITY_2_V1】
The Security 2 Command Class is a framework for allowing nodes to communicate securely in a Z-Wave network. The Security 2 Command Class

provides backwards compatibility to nodes implementing the Security 0 Command Class. Security 2 Command Class also defines a new encapsulation format, new Security Classes and a new KEX Scheme 1, which together offers a number of advantages over the Security 0 Command Class. Security 2 Command Class is scalable and allows more KEX Schemes, Security Classes and encapsulation formats to be introduced in the future if necessary.

【COMMAND_CLASS_VERSION_V3】
The Version Command Class, version 3 allows supporting nodes to advertise capabilities related to the Version Command Class and optionally provide a detailed list of information regarding implementation on the Z-Wave chip.

【COMMAND_CLASS_FIRMWARE_UPDATE_MD_V4】
【COMMAND_CLASS_ASSOCIATION_V2】
The Association Command Class is used to manage associations to NodeID destinations. A NodeID destination may be a simple device or the Root Device of a Multi Channel device.

【COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3】
The Multi Channel Association Command Class is used to manage associations to Multi Channel End Point destinations as well as to NodeID destinations.

【COMMAND_CLASS_ASSOCIATION_GRP_INFO_V1】
The Association Group Information (AGI) Command Class allows a node to advertise the capabilities of each association group supported by a given application resource. Controllers and installer tools SHOULD use AGI information to support controller-assisted button-to-button association and GUI-based drag-and-drop association in a plug-and-play fashion.

Centralized gateway-based deployments may create a single association from the lifeline association group to a central management application.

Group	Name	Description
1	"Lifeline"	Lifeline group, association with 5 nodes.
2	"Basic set"	ON/OFF group, association with 5 nodes.

When the key is press and hold the button more than 1.5 seconds, a BASIC_SET command will sent On(0xFF) or Off(0x00) to the nodes of Grouping 2.The Basic Command Class support Version 2.

【COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2】
Manufacturer Specific Command Class, version 2 adds a set of commands to communicate unique identification, e.g. the serial number, of the product. Commands not mentioned here remains unchanged as specified for Manufacturer Specific Command Class, Version 2.

【COMMAND_CLASS_DEVICE_RESET_LOCALLY_V1】
The Device Reset Locally Command Class is used to notify central controllers that a Z-Wave device is resetting its network specific parameters.

【COMMAND_CLASS_POWERLEVEL_V1】
The Powerlevel Command Class defines RF transmit power controlling Commands useful when installing or testing a network. The Commands makes it possible for supporting controllers to set/get the RF transmit power level of a node and test specific links between nodes with a specific RF transmit power level.

【COMMAND_CLASS_NOTIFICATION_V8】
The Notification Command Class is used to advertise events or states, such as movement detection, door open/close or system failure. The Notification Command Class supersedes the Alarm Command Class.

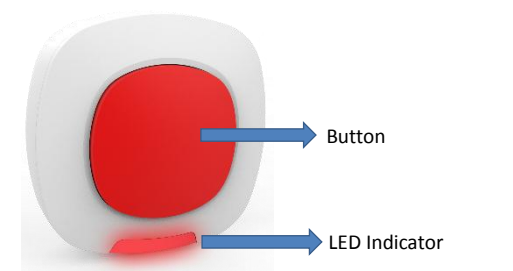
Notification Type	Notification events
0x07 (Home Security)	0x00 (Previous event clear) 0x08 (Button detected)

【COMMAND_CLASS_CONFIGURATION_V1】
The Configuration Command Class allows product specific configuration parameters to be changed. One example could be the default dimming rate of a light dimmer.

This class is used for setting certain vendor specific configuration variables.

ID	Name	Size	Range	Default value	Description
1	LED Light up Time	1	1~100, 127	127	1~100:LED light up 1 ~ 100 Seconds. 127:always on
2	Buzzer beep times	1	0, 1~100, 127	127	0 : Disable 1~100: Sound 1~100 beeps (0.5s on, 0.5s off) 127: Continue beep till cancel trigger

Product Overview



LED Indicator	
LED Signal	Status
OFF	No Power/paired and ready to be triggered (with battery)
Solid Red	Device had been triggered
Red blink three times at one blink per second	Inclusion successful/Exclusion successful/Parameter successfully set
Red blink two times at one blink per second	Device had been deactivated and back to standby mode
Red blinks at one blink	Low battery

per three seconds	
Red blinks for 30 seconds at one blink per two seconds	The device is in unpaired mode and waiting to be inclusion
Solid Red for 5 seconds	The device is in paired mode when insert batteries

Button Function	
Function	Operation
Inclusion	Push the button three times in 1.5 seconds. When inclusion successful, the LED will be RED blink three times.
Exclusion	Push the button three times in 1.5 seconds. When exclusion successful, the LED will be RED blink three times. And the LED will be red blinking for 30 seconds at one blink per two seconds. The device is now waiting to inclusion.
Reset	Push the button three times in 1.5 seconds and hold the third push for 10 seconds till the LED is red blinking. When reset is successful, the device is set to factory default and now waiting to inclusion Please use this procedure only when the network primary controller is missing or otherwise inoperable.
Trigger	Push and hold the button more than 1.5 seconds.
Deactivate	When the device is triggered, push and hold the button more than 6 seconds. The buzzer will mute and the LED will be red blinking two times.

Specification	
Z-Wave® Panic Button	Specification
RF Protocol	Z-Wave Plus (S2)
Power Source	DC 3V, AAA batteries x 2
Z-Wave Frequency	EU:868.42 MHz US:916.00 MHz JP: 922.5 MHz
Data Rate	9.6kbps/40kbps/100kbps
Operation Range	100 feet (About 30M)
LED Indicator	RED
Button	X 1 (Inclusion/Exclusion/Trigger/Reset)
Waterproof Level	IPX4
Operation Temperature	-10~40℃
Regulatory Approvals	CE / FCC/TELEC / Z-Wave® Plus
Dimensions (L*W*H)	80 x 80 x 40.5 mm

Regulatory Compliance

CE Caution

Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1,000 MHz frequency range with power levels ranging up to 500 mW; Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive.

FCC Caution

This device complies with Part 15 of the FCC rules standard. Operation is subject to the following two conditions:

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

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. 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 & your body. 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.

WEEE Information

For EU (European Union) member users: According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country.

For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product

Z-Wave Plus

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 device must be used in conjunction with a Security Enabled Z-Wave Controller in order to fully utilize all implemented functions.

This device is a security enabled Z-Wave Plus product that is able to use encrypted Z-Wave Plus messages to communicate to other security enabled Z-Wave Plus products. Note: A "Security Enable Z-Wave Controller" must be used in order to fully utilize this function.

Security S2

Security S2 is supported with the Authenticated and UnAuthenticated levels of security. The Authenticated level requires the user to enter the PIN code or QR code printed on the box. The UnAuthenticated level does not require the PIN code. Both security levels will encrypt nearly all communication using AES-128 encryption to ensure reliable and secure communication.

SmartStart

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. The pin code is printed on the back of device along with the QR code. Simply enter the PIN code or scan the QR code with a compatible device. Each QR code is unique for every device. SmartStart uses the latest Security S2 encryption technology for all radio communication. It is completely backwards compatible with non-SmartStart systems if your home automation system doesn't support it yet.

About Pin code or QR code example:



Please save the QR code or PIN code carefully. If both the DSK representation on the product and any DSK provided in the product packaging were to fade, rub off, or be lost, the device would not be able to be added to a Z-Wave network.

