



Aeon Labs Z-Stick Series 2

(Z-Wave USB Adapter)



Change history

Revision	Date	Change Description
1	05/08/2013	Initial draft.
2	06/08/2013	Add CN version

Aeon Labs Z-Stick Series 2
Engineering Specifications and Advanced Functions for Developers
(V3.08)

The Aeon Labs Z-Stick S2 (Series 2) is a self-powered Z-Wave USB adapter with remote network creation capabilities (independent from external power and host microprocessor). By being able to remotely include/remove Z-Wave devices, this greatly simplifies Z-Wave network installation. When connected to a host controller (via USB), it enables the host controller to take part in the Z-Wave Network.

1. Library and Command Classes

1.1 SDK: 5.02 Patch 3

1.2 Library

- I Basic Device Class: BASIC_TYPE_STATIC_CONTROLLER
- I Generic Device class: GENERIC_TYPE_STATIC_CONTROLLER
- I Specific Device Class: SPECIFIC_TYPE_PC_CONTROLLER

1.3 Commands Class

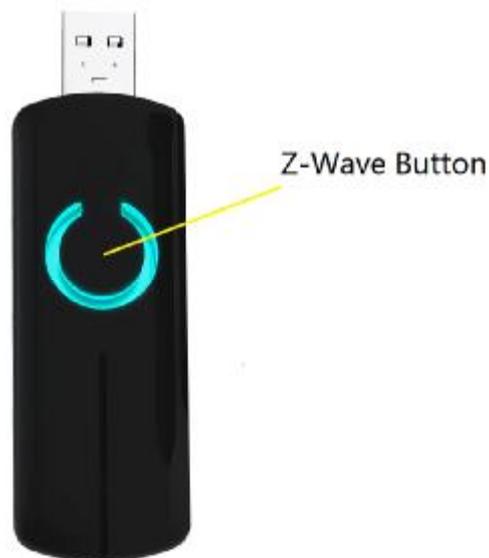
- I COMMAND_CLASS_CONTROLLER_REPLICATION V1
- I COMMAND_CLASS_BASIC V1
- I COMMAND_CLASS_VERSION V1

2. Technical Specifications

Operating Distance: Up to 100 ft (30 meters) indoors and 300 ft (100 meters) outdoors.

3. Familiarize yourself with your Z-Stick

3.1 Interface



4. Independence Mode and SerialAPI-Mode Functions

4.1 Independence Mode function of Z-Wave Button

Button action	Description
Clicked	Adding/Including Z-Wave Device into the Z-Wave network: 1. Unplug the Z-Stick from the USB connector and then tap the button. (The LED will blink slowly.) 2. To include a new Z-Wave device into the network, simply go to the device with the Z-Stick and press the button on the device you wish to include. (The LED on the Z-Stick will blink fast during a network neighbor discovery and stay solid for 3 seconds to indicate successful inclusion of the device into the network.) 3. The LED will then return to blinking slowly, indicating readiness for further device inclusions. 4. If the Adding/including failed, please repeat the process from step 2.
Press and hold 3 seconds and releasing	Removing/Excluding Z-Wave Devices from the Z-Wave Network: 1. Unplug the Z-Stick from the USB connector. Then press and hold down the button for approximately 3 seconds. (The LED will transition from blinking slowly to blinking fast.) 2. To remove a Z-Wave device from the network, simply go to the device with the Z-Stick and press the button on the device you wish to remove. (The LED on the Z-Stick will immediately stay solid for 3 seconds to indicate successful removal from the network.) 3. The LED will then return to blinking fast, indicating readiness for further device exclusions. Repeat step 2 for each device as you wish to exclude.

4.2 Function of SerialAPI-Mode

Plug the Z-Stick into the USB connector of the host, the Z-Stick will initiate SerialAPI-Mode, it is always listening (awake and always in RX receive mode) and acts as a Z-Wave adapter and responds to commands sent through USB by the host processor software.

5. Special Functions of Z-Stick

5.1 Factory reset

This must be done through the host software which takes control of the Z-Stick USB adapter while the Z-Stick is in SerialAPI-Mode (If you don't know how to do this, please consult the instruction manual of the host software to perform a network reset).

5.2 Add Z-Stick to a pre-existing Z-Wave network

This function also must be done through the host software which takes control of the Z-Stick USB adapter while the Z-Stick is in SerialAPI-Mode. Please consult the instruction manual of the host software to add the Z-Stick to a pre-existing Z-Wave network (i.e. "Learn", "Sync", "Add as Secondary Controller", etc.).

5.3 Support the functionality of SerialAPI

The list functions of SerialAPI:

Functions:
SUPPORT_SERIAL_API_GET_INIT_DATA
SUPPORT_SERIAL_API_APPL_NODE_INFORMATION
SUPPORT_APPLICATION_COMMAND_HANDLER
SUPPORT_SERIAL_API_GET_CAPABILITIES

SUPPORT_SERIAL_API_SOFT_RESET
SUPPORT_ZW_SEND_NODE_INFORMATION
SUPPORT_ZW_SEND_DATA
SUPPORT_ZW_GET_VERSION
SUPPORT_MEMORY_GET_ID
SUPPORT_MEMORY_GET_BYTE
SUPPORT_MEMORY_PUT_BYTE
SUPPORT_ZW_GET_CONTROLLER_CAPABILITIES
SUPPORT_ZW_SEND_DATA_MULTI
SUPPORT_ZW_SEND_DATA_ABORT
SUPPORT_ZW_GET_NODE_PROTOCOL_INFO
SUPPORT_ZW_SET_DEFAULT
SUPPORT_ZW_REPLICATION_COMMAND_COMPLETE
SUPPORT_ZW_REQUEST_NODE_NEIGHBOR_UPDATE
SUPPORT_ZW_APPLICATION_CONTROLLER_UPDATE
SUPPORT_ZW_REQUEST_NETWORK_UPDATE
SUPPORT_ZW_ADD_NODE_TO_NETWORK
SUPPORT_ZW_REMOVE_NODE_FROM_NETWORK
SUPPORT_ZW_REMOVE_FAILED_NODE_ID
SUPPORT_ZW_REPLACE_FAILED_NODE
SUPPORT_ZW_SET_LEARN_MODE
SUPPORT_ZW_GET_SUC_NODE_ID
SUPPORT_ZW_SET_RF_RECEIVE_MODE
SUPPORT_ZW_WATCHDOG_START
SUPPORT_ZW_WATCHDOG_STOP
SUPPORT_ZW_GET_RANDOM
SUPPORT_ZW_REQUEST_NODE_INFO
SUPPORT_ZW_SET_SUC_NODE_ID
SUPPORT_ZW_ENABLE_SUC