Z-Stick 10 Pro

(Z-Wave® / Zigbee 3.0 USB Adapter)

Engineering Specification

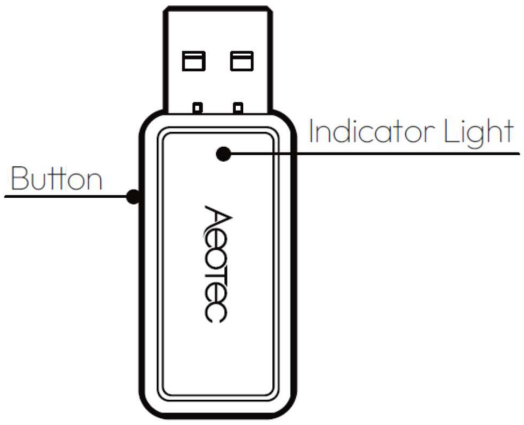
Z-Stick 10 Pro

Document No.	SPEC-ZWA060-Z-Stick 10 Pro
Description	This document mainly introduces the new generation Aeotec self-powered Z-Wave® USB Adapter. The content mainly includes its interfaces, features, quick start, and operation function definition. Z-Stick 10 Pro is a Z-Wave Plus® and Zigbee 3.0 combined NCP with many advantages. • Z-Wave and Zigbee 3.0 Dual–USB adapter. • Support Serial API for Z-Wave and EZSP for Zigbee 3.0 • Support the traffic indicator for either Z-Wave or Zigbee 3.0 • Support Zigbee Bootloader enable feature for update the firmware under the Windows Platform instead of Linux Platform.
Written By	
Date	
Reviewed By	
Date	
Approved By	
Date	

REVISION RECORD		
Version	Date	Brief description of changes
1	2024.10.24	First revision.

Table of Content

1 INTERFACES & ACCESSORIES



Terminology	Description
Button	Used for force Zigbee firmware into Bootloader mode when hold it at the moment of the product is inserted into the USB port, this feature will help the customer update the zigbee firmware under Windows platform.
Indicator Light	Used for indicating traffic status for either Z-Wave and Zigbee
USB port	Used to connect to host application

2 FEATURES & SPECIFICATIONS

2.1 Structural Characteristics

Parameter	Value
Product Identifier	ZWA060-A/B/C
Dimensions	15×18×10mm
Weight	10g
Color	White
Shell Surface Treatment	Frosted
Shell Fire-proof Level	UL94 V-0
Waterproof and	Rated IP20 under IEC 60529
Usage	For indoor use. Used for remotely inclusion/exclusion Z-Wave devices
Operating Temperature	32~104°F (0~40°C)
Relative Humidity	8%~80%

2.2 Hardware Characteristics

Parameter	Value
Z-Wave Soc	EFR32ZG23
Zigbee Soc	EFR32MG21
Indicator Light Color	Blue Led
Buttons and	Zigbee Bootloader Enable Button, USB port
Battery Included	No
Built-in Sensors	No
RF Operating Distance	More than 30m indoors
Safety Certifications	CE/ FCC

2.3 Software Characteristics

Parameter	Value
Wireless Technology	Z-Wave
Certification Type	Z-Wave Plus Certification
Z-Wave SDK Version	7.22.00
Z-Wave Serial API	Controller Bridge Lib, er.10
Z-Wave Library Type	Static Controller
Z-Wave Role Type	ROLE_TYPE_CONTROLLER_CENTRAL_STATIC
Generic Device Type	GENERIC_TYPE_STATIC_CONTROLLER
Specific Device Type	SPECIFIC_TYPE_PC_CONTROLLER

Multi Channel Device	No
Z-Wave LR	US-LR/EU-LR
Radio Frequency Set via	Support
Radio Tx Power Set via API	Support
Factory Reset via API	Support
USB to UART Bridge	Standard COM Port

Parameter	Value
Wireless Technology	Zigbee 3.0
EZSP Version	0x08
Stack type	0x02
Stack Version	6.10.9 GA build 464
HW flow control for UART	Support
USB to UART Bridge	Enhanced COM Port

3 PRODUCT QUICK START

3.1 Important safety information

Please read this Engineering Specification carefully for correct and effective use.

Failure to follow the recommendations set forth by AEOTEC Limited may be dangerous or cause a violation of the law. The manufacturer, importer, distributor, and/or reseller will not be held responsible for any loss or damage resulting from not following any instruction in this guide or in other materials.

3.2 How to install the product

3.2.1 Z-Wave

Getting your Z-stick up and running is as simple as plugging it to the USB port of the host. You can use the PC Controller application to control your Z-Wave devices via its Serial API function, this greatly simplifies Z-Wave network installation. Note: The corresponding descriptor of the USB port is named as "Standard COM Port".

3.2.2 Zigbee

Getting your Z-stick up and running is as simple as plugging it to the USB port of the host. You can use the Z3GatewayHost application to control your Zigbee devices via its EZSP interface, this greatly simplifies Zigbee network installation.
Note: The corresponding descriptor of the USB port is named as "Enhanced COM Port".

3.3 How to add other devices into Z-Wave network

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

3.3.1 Serial API-Mode

Plug the Z-Stick into the USB connector of the host, the Z-Stick will initiate Serial API-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.

3.3.2 Add a Z-Stick to another Z-Stick/a pre-existing Z-Wave network

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

3.4 How to add other devices into Zigbee network

This product can add and operate other Z-Wave certified devices from other manufacturers and/or other applications in the same Zigbee network. All non-battery operated nodes within the network will act as router regardless of vendor to increase reliability of the network.

3.4.1 EZSP-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.

3.4.2 Bootloader-Mode

This function can enable the zigbee firmware into a bootloader mode by hold the button when the device is inserted into the USB port of the host, so that the user can use the serial tools with x-modem protocol under the Windows platform to update the zigbee firmware.

4 SOFTWARE FUNCTION DEFINITION

4.1 User Behavior Interaction

User behavior	Function and Indicator
No Operation	LED indicator off.
Z-Wave/ Zigbee Traiffic	LED indicator on.

4.2 Supported the functionality of Z-Wave Serial API

No Changed, determined by Z-Wave SDK completely.

4.3 Supported the functionality of Zigbee EZSP

No Changed, determined by Zigbee SDK completely.