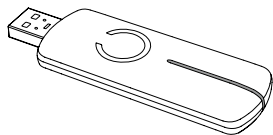# AEOTEC
BY AEON LABS

Z-Stick GEN5

View the expanded manual:
http://aeotec.com/support

① Aeotec by Aeon Labs Z-Stick.

Aeon Labs Z-Stick Gen5 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.

The Z-Stick Gen5 is also device firmware upgradeable by the end consumer. This enables the product to always have the latest Z-Wave protocol, capabilities and commands.

By taking advantage of the Z-Wave mesh network, commands can be routed to their destination via intermediary "listening" Z-Wave products. Products that are Z-Wave certified can be used and communicate with other Z-Wave certified devices.

② Familiarize yourself with your Z-Stick.

Action Button

Reset Button
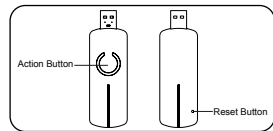
③ Quick start.

The Z-Stick operates in three distinct modes: Inclusion-Mode, Removal-Mode and SerialAPI-Mode. Both Inclusion-Mode and Removal-Mode require the Z-Stick to be unplugged from the USB connector of the host, while SerialAPI-Mode requires that the Z-Stick to be plugged into the USB connector of the host. Software drivers for the "ZW050x_USB_VCP_PC_Driver" may need to be installed in order for the Z-Stick to be recognized on some computers (drivers can be found at http://www.aeotec.com/support).

◉ Inclusion-Mode: Adding/Including Z-Wave Devices into the Z-Wave Network.

1. Plug Z-Stick Gen5 into a host controller (can be a PC, Mac, Raspberry Pi, etc). Choose the right COM port.

2. Open the selected third party software

3. Set the third party software into its 'add device' mode in order to connect a Z-Wave device to your Z-Wave system. Refer to the third party software instructions if you are unsure of how to perform this step.

4. Press Action Button on the Z-Wave device which you want to add into the Z-Wave network. If it is non-Aeotec Z-Wave device, please refer to its manual for inclusion operation.

5. You will see the name of the device on the software's interface when it is successfully added.

6. Repeat step 3 and 4 to include any further devices.

◉ Removal-Mode: Deleting/Removing/Excluding Z-Wave Devices from the Z-Wave Network.

1. Set the host controller into its 'remove' mode in order to exclude a Z-Wave device from your Z-Wave system. Refer to the host controller's manual if you are unsure of how to perform this step.

2. Press Action Button on the Z-Wave device which you want to remove from the system.

3. You will see the name is removed from the software's interface when it is successfully removed.

4. Repeat step 3 and 4 for exclude any further devices.

◉ Installation and Maintenance Application (IMA) feature.

When the Z-Stick is in Serial API-Mode and acts a primary controller, it can measure the network health for each device in the network. The different colour of LED indicates the communication quality between the Z-Stick Controller and devices in the network.

Install the IMA tool software first (note: the IMA tool can be downloaded from here: http://www.aeotec.com/support). Select the node device and then click the IMA test button to start the IMA test between the Central Controller and the node devices. Your IMA tool client will receive the test result and use different colour of LED icon to indicate the network health level, its colour will be changed follow with the change of network health level. If the colour of LED is changed to green, which means the current network quality is good. If the colour of LED is changed to orange, which means the current network quality is acceptable but latency can occur. If the colour of LED is changed to red, which means the current network quality is insufficient. If the IMA tool return a !, which means the current network is critical because node is not responding.

When the Z-Stick acts an independent/secondary controller that has been un-plugged from the USB host, it also can measure the network health in Z-Wave network. The different colour of LED on the Z-Stick indicates the communication quality between the Central Controller and the current location of Z-Stick in the network.

Short press the Action Button 5 times, if the colour of LED is changed to purple and then it follows with fast blink, which means it goes into the IMA feature. The colour of LED will be changed according to the network health level. If the colour of LED is changed to green, which means the current communication quality is more than 95% on -7dBm. If the colour of LED is changed to orange, which means the current communication quality is more than 95% on 0dBm. If the colour of LED is changed to purple, which means the current communication quality is less than 95% on 0dBm. If the colour of LED is changed to red, which means the current communication has failed.

Short press the Action Button 5 times again, the Z-Stick will automatically exit the IMA feature.

◉ SerialAPI-Mode: Allowing a Host Processor To Take Control of the Z-Stick and Take Part in the Z-Wave Network.

To initiate SerialAPI-Mode, plug the Z-Stick into the USB connector of the host (i.e. PC, MAC, or Gateway).

Note:
1). While in SerialAPI-mode, the Z-Stick is always listening (it is awake and always in RX receive mode) for instructions and acts as a Z-Wave adapter and responds to commands sent through USB by the host processor software.

2). Pressing the Action Button will not have any effect while in SerialAPI-Mode. But short pressing the Reset Button will reset the USB port.

◉ Add the Z-Stick to a pre-existing Z-Wave network.

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. 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.). This function can only be performed via host software.

⊛ Reset your Z-Stick.

At some stage, you may wish to reset all of your Z-Stick's settings to their factory defaults. To do this, press and hold the Reset Button for 20 seconds and then release it. The Z-Stick will now be reset to its original settings, and the blue LED will solid for 2 seconds as confirmation. Need to note that this procedure should only be used when the primary controller is inoperable.

The Z-Stick also can be reset to the factory defaults settings via the host software.

To do this, the host software must take 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 perform a network reset (i.e. factory reset on the Z-Stick).

⊛ Upgrading the Z-Stick with the Latest Software.

1. Download the Aeon Labs Z-Stick upgrade software that contains the firmware update and UART to USB driver at http://www.aeotec.com/support and run the downloaded program.

2. Follow the on screen instructions to complete installation.

④ Technical specifications.

Power Supply: USB DC 4.75V to 5.25V or built-in rechargeable lithium battery 3.7V, 100mAh.
Max Standby Current: 30uA.
Max Operating Current: 98mA in PA mode or 40mA in normal mode.
Operating Temperature: 0℃ to 50℃.
Storage Temperature: -20℃ to 70℃.
Operating Distance: Up to 500 feet/150 metres outdoors in normal mode or 1310 feet/400 metres outdoors in PA mode.

⑤ Warranty.

Aeon Labs warrants to the original purchaser of Products that for the Warranty Period (as defined below), the Products will be free from material defects in materials and workmanship. The foregoing warranty is subject to the proper installation, operation and maintenance of the Products in accordance with installation instructions and the operating manual supplied to Customer. Warranty claims must be made by Customer in writing within thirty (30) days of the manifestation of a problem. Aeon Labs' sole obligation under the foregoing warranty is, at Aeon Labs' option, to repair, replace or correct any such defect that was present at the time of delivery, or to remove the Products and to refund the purchase price to Customer.

The "Warranty Period" begins on the date the Products is delivered and continues for 12 months.
Any repairs under this warranty must be conducted by an authorized Aeon Labs service representative and under Aeon Labs' RMA policy. Any repairs conducted by unauthorized persons shall void this warranty.

Excluded from the warranty are problems due to accidents, acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophes, misuse, misapplication, storage damage, negligence, electrical power problems, or modification to the Products or its components.

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Customer must prepay shipping and transportation charges for returned Products, and insure the shipment or accept the risk of loss or damage during such shipment and transportation. Aeon Labs will ship the repaired or replacement products to Customer freight prepaid.

Customer shall indemnify, defend, and hold Aeon Labs and Aeon Labs'

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STORE INDOORS WHEN NOT IN USE. SUITABLE FOR DRY LOCATIONS. DO NOT IMMERSE IN WATER. NOT FOR USE WHERE DIRECTLY EXPOSED TO WATER.
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. 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.
• Consul the dealer or an experienced radio/TV technician for help.

⊜ Warning
Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

⊜ Certifications (regional):
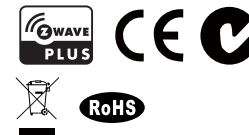
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