Z-WAVE>ME
BUILDS THE SMART HOME

By Z-Wave.Me,
Smart Systems Distribution Sàrl

Z-Wave & Zigbee/Thread mPCIe Adaptor

ZME_mPCIe_ZW_ZB

Congratulations! You have got a modern Z-Wave & Zigbee/Thread mini PCI Express adaptor. It will transform your computer into a full featured smart home gateway.

Installation Steps

1. Install the Z-Wave & Zigbee/Thread mPCIe adaptor in your embedded hardware.

2. Install Z-Way software

The maximum potential of the Z-Wave & Zigbee/Thread mPCIe adaptor is achieved

together with Z-Way software.

To install Z-Way on your embedded hardware visit https://storage.z-wave.me/z-way-server/ site. Supported platforms are: Debian/Ubuntu x64, Raspbian OS armhf (32 bits), FreeBSD (C library only), Windows 32 bits.

NOTE: Z-Wave & Zigbee/Thread mPCIe Adaptor is also compatible with other third party Z-Wave software supporting Silicon Labs Z-Wave Serial API.

After the successful installation of Z-Way, make sure that your are in the same local network as your embedded hardware and open the Z-Way Web UI using a browser by typing in the address bar: http://IP:8083.

PRIVACY NOTE: Z-Way by default connects to the server find.z-wave.me in order to provide remote access. If you don't need this service, you can turn off this feature after logging into Z-Way (Main menu > Settings > Remote Access). All communications between Z-Way and the server find.z-wave.me are encrypted and protected by certificates.

Learn More

Full documentation, training videos and technical support can be found on the website https://z-wave.me/products/mpcie/.

You can change the radio frequency of the Z-Wave & Zigbee/Thread mPCIe Adaptor at any time by going to the Expert UI http://IP:8083/expert, Network > Control and select the desired frequency from the list.

The Z-Wave & Zigbee/Thread mPCIe Adaptor constantly improves and adds new features. To use them, you need to update the is done from the Z-Way Expert UI under Network > Controller Information.

Interface

The "Smart Home" user interface looks similar on different devices such as desktops, smartphones or tablets, but adapts to the screen size. The user interface is intuitive and simple:

- Dashboard (1)
- Rooms (2)
- Widgets (3)
- Events (4)
- Quick automation (5)
- Main menu (6)
- Device widgets (7)
- Widget settings (8)

1. Favourite devices are displayed on the Dashboard (1)

2. A devices can be assigned to a Room (2)

3. The full list of all devices is in Widgets (3)

4. Every sensor or relay triggerings are displayed in Events (4)

5. Set up scenes, rules, schedules and alarms in Quick Automation (5)

6. Apps and system settings are in the Main menu (6)

A device can provide several functions, for example a 3-in-1 Multisensor provides: motion sensor, light sensor and temperature sensor. In this case there will be three separate widgets (7) with individual settings (8).

Advanced automation can be configured using local and online Apps. Apps allow you to set up rules like “IF > THEN”, to create scheduled scenes, set auto off timers. Using applications you can also add support for additional devices: IP cameras, Wi-Fi plugs, EnOcean sensors and set up integrations with Apple HomeKit, MQTT, IFTTT etc. More than 50 applications are built-in and more than 100 can be downloaded for free from the Online Store. Applications are managed in the Main menu > Apps.

Mobile App Z-Wave.Me

App Store

Google Play

Hardware Spectfication

Z-Wave Transceiver	Silicon Labs ZGM130S
Zigbee Transceiver	Silicon Labs EFR32MG21P
Wireless Range	Min. 40 m indoor in direct line of sight
Dimensions	30 x 51 x 4 mm
Interface	USB (mPCIe form factor)
USB driver	Silicon Labs CP2105
Z-Wave frequency range	865...869 MHz: Europe (EU), India (IN), Russia (RU), China (CN), South Africa (EU), Middle East (EU) 908...917 MHz: America, excluding Brazil and Peru (US), Israel (IL) 919...921 MHz: Australia / New Zealand / Brazil / Peru (ANZ), Hong Kong (HK), Japan (JP), Taiwan (TW), Korea (KR)
Zigbee/Thread frequency range	2.4 GHz 802.15.4

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. 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.
Warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE: 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.

FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20mm between the radiator & your body.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

2.2 List of applicable FCC rules
FCC Part 15 Subpart C 15.247 & 15.207 & 15.209

2.3 Specific operational use conditions
IEEE 802.15.14 (Zigbee/Thread):
Operation Frequency:2402~2480MHz
Number of Channel:40 Channels
Modulation Type:OQPSK
Antenna Type:External antennai (Provided by LAB)
Antenna Gain(Peak):1.5 dBi (Provided by LAB)

Z-Wave：
Operation Frequency:908.42MHz,912MHz,916MHz,921MHz
Number of Channel:4 Channels
Modulation Type:GFSK
Antenna Type:External antennai (Provided by LAB)
Antenna Gain(Peak):1.5 dBi (Provided by LAB)
The module can be used for mobile or portable applications with a maximum 1.5dBi antenna. The host manufacturer installing this module into their product must ensure that the final composit product complies with the FCC requirements by a technical assessment or evaluation to the FCC rules, including the transmitter operaition. The host manufacturer has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

2.4 Limited module procedures
Not applicable. The module is a Single module and complies with the requirement of FCC Part 15.212
.

2.5 Trace antenna designs

Not applicable. The module has its own antenna, and doesn't need a host's printed board microstrip trace antenna etc.

2.6 RF exposure considerations

The module must be installed in the host equipment such that at least 20mm is maintained between theantenna and users' body; and if RF exposure statement or module layout is changed, then the host product manufacturer required to take responsibility of the module through a change in FCC ID or new application. The FCC ID of the module cannot be used on the final product. In these circumstances, the host manufacturer will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

2.7 Antennas

Antenna Specification are as follows:
Antenna Type:External antennai
Antenna Gain(Peak):1.5 dBi (Provided by LAB)
This device is intended only for host manufacturers under the following conditions:
The transmitter module may not be co-located with any other transmitter or antenna;
The module shall be only used with the External antenna(s) that has been originally tested and certified with this module. The antenna must be either permanently attached or employ a 'unique' antenna coupler.

As long as the conditions above are met, further transmitter test will not be required. However, the host manufacturer is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

2.8 Label and compliance information

Host product manufacturers need to provide a physical or e-label stating “Contains FCC ID 2ALIB-ZMEMPCIEZWZB With their finished product.

2.9 Information on test modes and additional testing requirements

IEEE 802.15.14 (Zigbee/Thread):
Operation Frequency:2402~2480MHz
Number of Channel:40 Channels
Modulation Type:OQPSK
Antenna Type:External antennai (Provided by LAB)
Antenna Gain(Peak):1.5 dBi (Provided by LAB)

Z-Wave：
Operation Frequency:908.42MHz,912MHz,916MHz,921MHz
Number of Channel:4 Channels
Modulation Type:GFSK
Antenna Type:External antennai (Provided by LAB)
Antenna Gain(Peak):1.5 dBi (Provided by LAB)
Host manufacturer must perfom test of radiated & conducted emission and spurious emission, etc according to the actual test modes for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.
Only when all the test results of test modes comply with FCC requirements, then the end product can be sold legally.

2.10 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is **only** FCC authorized for FCC Part 15 Subpart C 15.247 & 15.207 & 15.209 and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuity), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.