

EZZee™

Z-Wave Interface Board

- Fifth Generation Z-Wave
- Integrated PCB Antenna
- SerialAPI or ASCII
- Over-the-Wire Firmware
- Raspberry Pi connector
- Z-Wave Certified
- Color LED

Features

Z-Wave Interface

- Fifth Generation 500 series Z-Wave
- 300' line-of-sight RF range
- 100/40/9.6Kbps 900MHz RF
- Integrated PCB antenna
- Primary Controller
- Z-Wave Plus Certified



Field Upgradeable Firmware

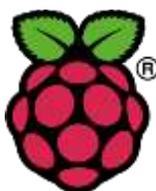
- Over-the-Wire (OTW) firmware updates
- Latest API ensures long product lifetime
- SerialAPI or ASCII Protocol
- Customizable firmware

Color LED

- Eight colors

Raspberry Pi (RPi) compatible interface

- 3.3V @50mA
- UART @231kbps
- RPi fanless enclosure available



Designed and assembled in USA

100mil 2x6 connector pinout

Name	Pin#	Name
3.3V	1 2	
LEDR	3 4	
LEDG	5 6	GND
LEDB	7 8	TXD
GND	9 10	RXD
	11 12	RST_N



Actual Size

Overview

The EZZee Z-Wave Interface Board provides a simple to use and easy to integrate Z-Wave interface for any embedded computer. Specifically designed for the Raspberry Pi, EZZee uses a UART interface available on most embedded CPUs. The Sigma Designs SerialAPI provides a standard software interface to communicate with any Z-Wave device on the Z-Wave network.

The available fanless enclosure for EZZee and the Raspberry Pi makes a complete Z-Wave hub that can communicate directly to the cloud. Power consumption under 5 watts with the ability to drive full HD HDMI screens means the system is also a fully capable standalone Linux computer.

The fifth generation Z-Wave technology enhances the reliability and speed of every device on a Z-Wave network by using the very latest routing algorithms and the very best radio technology currently available. Firmware is updated using the standard OTW protocol which can be upgraded in the field extending the lifetime of any product incorporating the EZZee.

Why is the EZZee better than the Sigma Designs ZM5304 module?

The ZM5304 uses a fixed firmware that is not field upgradeable and cannot be customized. The firmware is available only in binary form directly from Sigma. The source code is not available. Z-Wave certification is still required with the ZM5304. EZZee is Z-Wave Certified as a Hardware Platform so only your software needs to be certified.

Ordering information:

EZZee-US SKU: 661799815055

RF Frequency: 908/916MHz (US)

Dimensions: 2.2"H x 1.25"W x 0.5"D

Weight: 8g

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ASCI Protocol

EZZee includes a vastly simplified serial interface that can be used to get your Z-Wave device to market with a lot less software development. EZZee handles all of the network management functions and you just need to tell the nodes what do.

The complexities of Security scheme S0 and S2 are completely handled with EZZee. The complex Nonce exchange for every transfer as well as the initial secure key exchange is completely handled so you don't have to!

Brief description of the ASCI Protocol commands:

```

$abb = Basic_Set of node aa to value bb
&aa  = Basic_Get of node aa
=aabb = Basic_Report from node aa value bb
(nn   = ZWSendData of nn bytes of data that follow
)nn   = ZWSendData return data
+     = enter Inclusion Mode to add a node
-     = enter Exclusion Mode to remove a node
[aa   = get NodeInfo frame of Node aa
]aann = NodeInfo from Node aa
{     = get list of NodeIDs
}nn   = list of NodeIDs in the network
<aa   = get node statistics of Node aa
>aann = Node statistics data returned
  
```

Commands return:

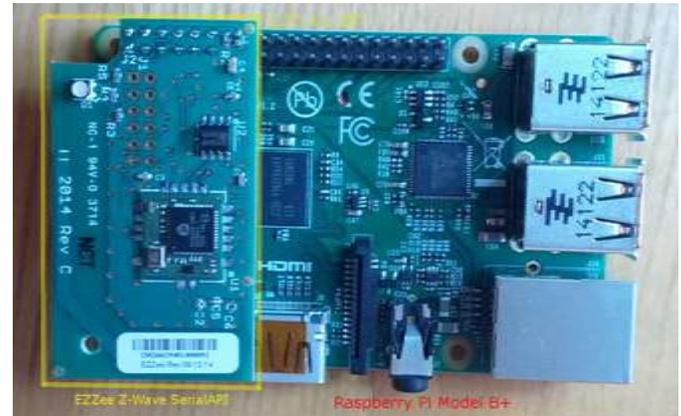
```

!     = Command delivered (ACKed)
?     = Command not understood (Error)
*     = Command NOT delivered (not ACKed)
#     = Busy - command dropped, try again later
  
```

At any time, sending a 0x01 enters normal SerialAPI mode since in ASCI mode all bytes MUST be ASCII characters.

Security scheme S0 and S2 is handled within the EZZee module. The security key is returned as part of the node statistics for node 01 if desired but there is no ability to change it. Switch to the full SerialAPI for full control.

Network management module monitors the send/receive statistics for every node on the network and automatically rediscovers neighbors and reassigns return routes to keep the network reliable. Statistics can be used to diagnose network problems which may need additional repeater nodes in a network.



Enclosure for the Raspberry Pi 3 with the EZZee available. All connectors are available on the exterior of the enclosure. EZZee antenna is internal and provides 360 degree RF coverage.



Federal Communications Commission (FCC)

FCCID: UTH-ZW1512

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

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation.

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 or device.
- 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.

WARNING!

Changes or modifications not expressly approved by Express Controls could void the user's authority to operate the equipment.



Warranty Information

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