

## Z-Pi 7 user guide.

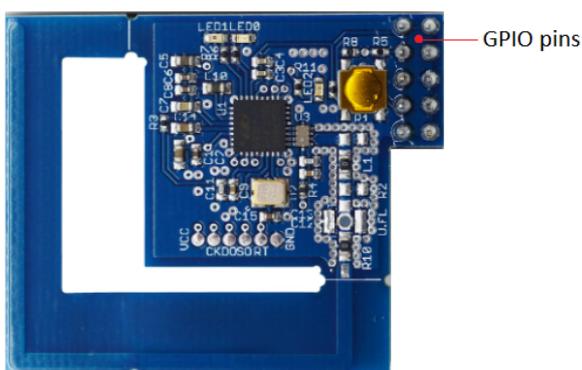
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Aeotec Z-Pi 7 was developed to control actuators and sensors in a Z-Wave Plus Network as a self-powered Z-Wave® GPIO Adapter. It's powered by (<https://aeotec.com/z-wave-home-automation/z-wave-gen7.html>) [Series 700](https://aeotec.com/z-wave-home-automation/z-wave-700-series.html) (<https://aeotec.com/z-wave-home-automation/z-wave-700-series.html>), and [Gen7](https://aeotec.com/z-wave-home-automation/z-wave-gen7.html) (<https://aeotec.com/z-wave-home-automation/z-wave-gen7.html>), technology utilizing [SmartStart](https://aeotec.com/z-wave-home-automation/z-wave-smart-start.html) (<https://aeotec.com/z-wave-home-automation/z-wave-smart-start.html>), native integration and [S2](https://aeotec.com/z-wave-s2/) (<https://aeotec.com/z-wave-s2/>), security.

The **technical specifications of Z-Pi 7** (<https://aeotec.freshdesk.com/a/solutions/articles/6000230553>) can be viewed at that link.

## Get to know your Z-Pi 7



### Z-Pi 7 compared to Z-Stick Gen5+

There are large differences in the Z-Pi7 using Series 700 Z-Wave compared to Z-Stick Gen5+ using the previous Series 500 Z-Wave hardware, you can learn more by reading the table at this page : <https://aeotec.com/z-wave-home-automation/development-kit-pcb.html> (<https://aeotec.com/z-wave-home-automation/development-kit-pcb.html>)

## Important safety information

Please read this and other device guides carefully. 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 instructions in this guide or in other materials.

Keep product away from open flames and extreme heat. Avoid direct sun light or heat exposure.

Z-Pi 7 is intended for indoor use in dry locations only. Do not use in damp, moist, and / or wet locations.

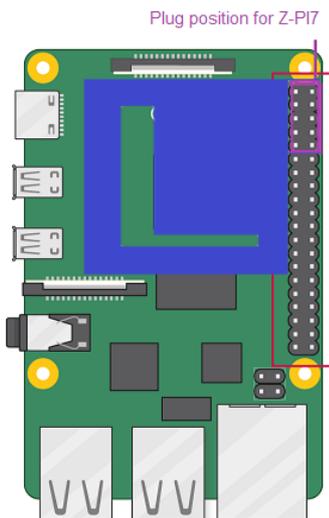
## Quick start

The following will step you through using Z-Pi 7 when it is attached to a host controller (Raspberry Pi or Orange Pi Zero) as a primary controller.

Please make sure the host controller is pre-installed; this includes any drivers that the corresponding OS may need.

1. Connect Z-Pi 7 to a host controller. The following diagrams show how to install the Z-Pi on each system.

### 1.1. Install Z-Pi 7 on Raspberry Pi





### OS: Linux - Raspian "Stretch" or higher:

The Z-Pi7 uses the same port as Bluetooth. To use Z-Pi 7, you must deactivate Bluetooth.

1.1.1. Open an SSH connection to your system, use Putty ([Link \(https://www.chiark.greenend.org.uk/~sgtatham/putty/\)](https://www.chiark.greenend.org.uk/~sgtatham/putty/)), you can find out how to connect Putty to RPi in this link: [SSH Putty to RPi \(https://raspberrypi4dummies.wordpress.com/2013/03/17/connect-to-the-raspberry-pi-via-ssh-putty/\)](https://raspberrypi4dummies.wordpress.com/2013/03/17/connect-to-the-raspberry-pi-via-ssh-putty/).

1.1.2. Enter the user "pi".

1.1.3. Enter your password "raspberrypi"(standard).

1.1.4. Now enter the following command.

```
sudo nano /boot/config.txt
```

1.1.5. Add the following line depending on the hardware version of RPi that you are using.

#### Raspberry Pi 3

```
dtoverlay=pi3-disable-bt
```

#### Raspberry Pi 4

```
dtoverlay=disable-bt
```

1.1.6. Exit the Editor with Ctrl X and save with Y.

1.1.7. Reboot the system with:

```
sudo reboot
```

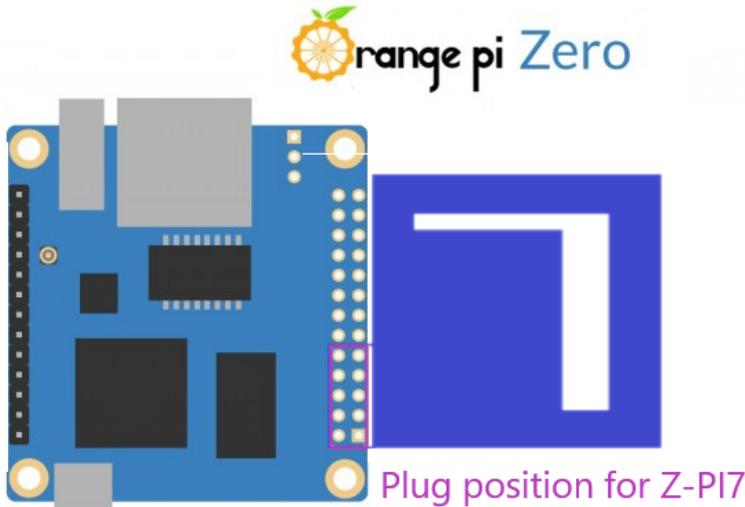
1.1.8. Login with SSH again, enter your username and password.

1.1.9. Check if the port ttyAMA0 is available with:

```
dmesg | grep tty
```

```
pi@raspberrypi:~$ dmesg | grep tty
[ 0.000000] Kernel command line: bcm2708_fb.fbwidth=656 bcm2708_fb.fbheight=
16 bcm2708_fb.fbswap=1 vc_mem.mem_base=0x1ec00000 vc_mem.mem_size=0x20000000 d
c_otg.lpm_enable=0 console=tty1 root=PARTUUID=61bcd77b-02 rootfstype=ext4 elev
tor=deadline fsck.repair=yes rootwait
[ 0.001310] console [tty1] enabled
[ 0.976697] 20201000.serial: ttyAMA0 at MMIO 0x20201000 (irq = 81, base_baud
= 0) is a PL011 rev2
[ 7.860412] cdc_acm 1-1.4:1.0: ttyACM0: USB ACM device
```

## 1.2. Install Z-Pi 7 on Orange Pi Zero



OS: Linux - Armbian:

To use Z-Pi 7 with Orange Pi Zero the port must be activated.

1.2.1. Open an SSH connection to your system, use Putty ([Link](https://www.chiark.greenend.org.uk/~sgtatham/putty/) (<https://www.chiark.greenend.org.uk/~sgtatham/putty/>)), you can find out how to connect Putty to RPi in this link: [SSH Putty to RPi](https://raspberrypi4dummies.wordpress.com/2013/03/17/connect-to-the-raspberry-pi-via-ssh-putty/) (<https://raspberrypi4dummies.wordpress.com/2013/03/17/connect-to-the-raspberry-pi-via-ssh-putty/>).

1.2.2. Enter the user "root" (standard at first connection).

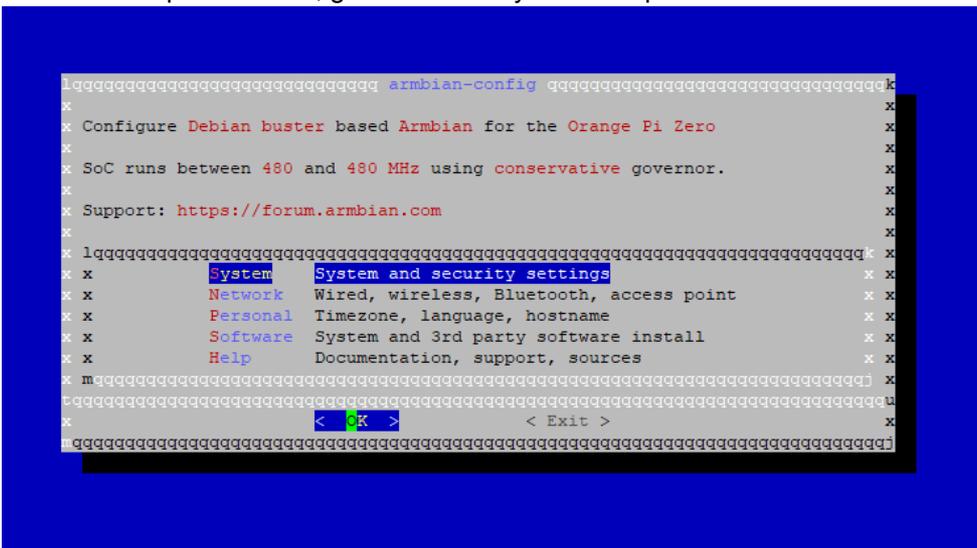
1.2.3. Enter your Password.

1.2.4. Now enter the following command.

HTML

```
armbian-config
```

1.2.5. In the opened menu, go to the item system and press OK.



1.2.6. Go to Hardware and press OK



```
ls -la /dev/ttyS*
```

2. Open your selected third party software.

3. Following your third party software instructions for connecting a Z-Wave USB adapter. Select the COM or virtual port Z-Pi 7 is associated to.

In most cases, any devices already paired with Z-Pi 7 network will automatically show up in the software's interface.

## Advanced

### Z-Pi 7 Pinout

Below are the pin outs for the Z-Pi 7.

|       |      |        |
|-------|------|--------|
| 3.3V  | 1 2  | 5V     |
| GPIO2 | 3 4  | 5V     |
| GPIO3 | 5 6  | GND    |
| GPIO4 | 7 8  | GPIO14 |
| GND   | 9 10 | GPIO15 |

### Adding Z-Pi 7 to a pre-existing Z-Wave network

This must be done through the host software which takes control of Z-Pi 7. Please consult the instruction manual of the host software to add the Z-Pi 7 to a pre-existing Z-Wave network (i.e. "Learn", "Sync", "Add as Secondary Controller", etc.).

This function can only be performed through a compatible host software.

### Reset your Z-Pi 7

Z-Pi also can be reset to the factory defaults settings via the host software (host software can be any third party software such as: Homeseer, Domoticz, Indigo, Axial, etc.).

- The host software must take control of Z-Pi.
- Find the Reset Z-Wave controller option in your third party software.

