



PIS-2012

Description

- 32 Digital Inputs/Outputs
- Control via the Raspberry Pi I2C port
- Stack up to 4 IO Zero 32 boards on a single Raspberry Pi
- Solder jumper selectable I2C addresses
- External 3.3V to 5V Voltage Input with isolation solder jumper
- Based on the PCA9535 from NXP
- Interrupt pins - Open drain interrupt outputs trigger when an input pin changes state
- Polarity Inversion register to configure the polarity of the input port data

The IO Zero 32 is a 32 channel digital expansion board designed for use on the Raspberry Pi. The board is based around the PCA9535 16-bit I/O expander from NXP. A pair of PCA9535 expanders are included on the board allowing you to connect up to 32 digital inputs or outputs to the Raspberry Pi. The IO Zero 32 is powered through the host Raspberry Pi using the GPIO port and extended pins on

the GPIO connector allow you to stack the IO Zero 32 along with other expansion boards.

The I2C address bits are selectable using the on-board solder jumpers. The PCA9535 supports up to 8 different I2C addresses so with two PCA9535 devices on each IO Zero 32 you can stack up to 4 IO Zero 32 boards on a single Raspberry Pi giving a maximum of 128 I/O ports.

The IO Zero 32 includes a voltage input port that can be isolated from the Raspberry Pi via an isolation solder jumper marked "Link" on the PCB so you can use a separate high current power supply to power the IO Zero 32 reducing the load on the Raspberry Pi. When used with an external power supply the IO Zero 32 supports a voltage range of 3.3V to 5V. The voltage input port is compatible with our 5mm screw terminals.

To use the IO Zero 32 externally from the Raspberry Pi you will need to connect the 3.3V (Pin 1), SDA (Pin 3), SCL (Pin 5) and Ground (Pin 6) pins from the Raspberry Pi GPIO header to the corresponding pins on the IO Zero 32. The 5V pin will also need to be connected if you are not using an external power supply.

Compatible with:

- Raspberry Pi 1 Model A+
- Raspberry Pi 1 Model B+
- Raspberry Pi 2 Model B
- Raspberry Pi 3 Model B & 3+
- Raspberry Pi 4B
- Raspberry Pi Zero
- Raspberry Pi Zero W / Zero 2 W
- Orange Pi
- Asus Tinker Board
- Odroid