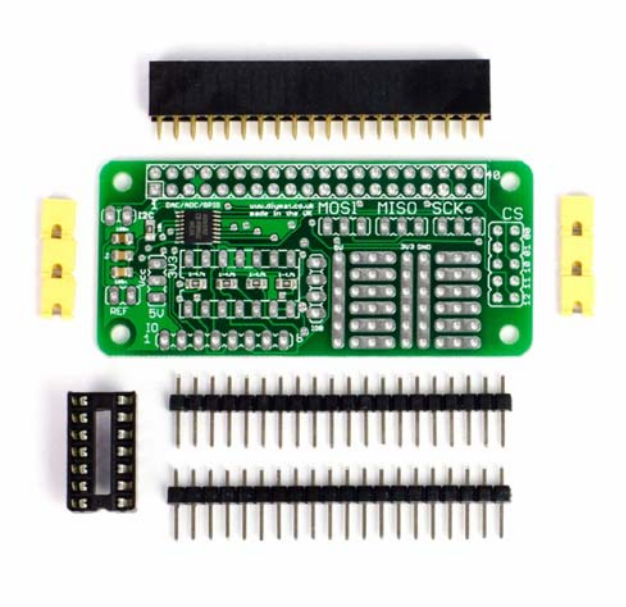
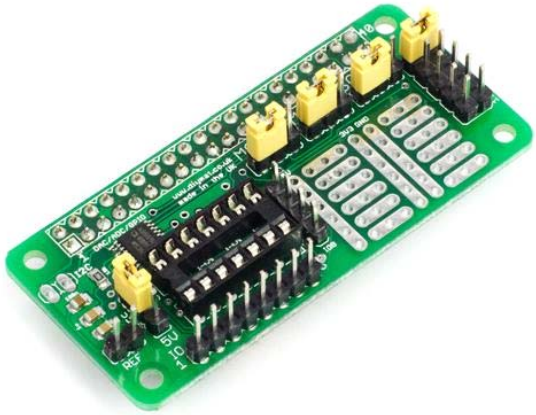
PIMORONI

Purveyors of fine Maker goods, worldwide

Universal Zero DIYMAT001





Universal Zero is an 8 port DAC / ADC / GPIO expansion board. Fits any 40 pin Raspberry Pi

- read up to **8 analog 12 bit inputs (ADC)**
- write up to **8 analog 12 bit outputs (DAC)**
- read or write up to **8 digital channels (GPIO)**
- internal **thermometer**
- fast **25MHz** SPI**, 400kSPS** ADC
- internal 2.5V (or 2x 2.5V) or external 3.3V ADC & DAC Voltage reference

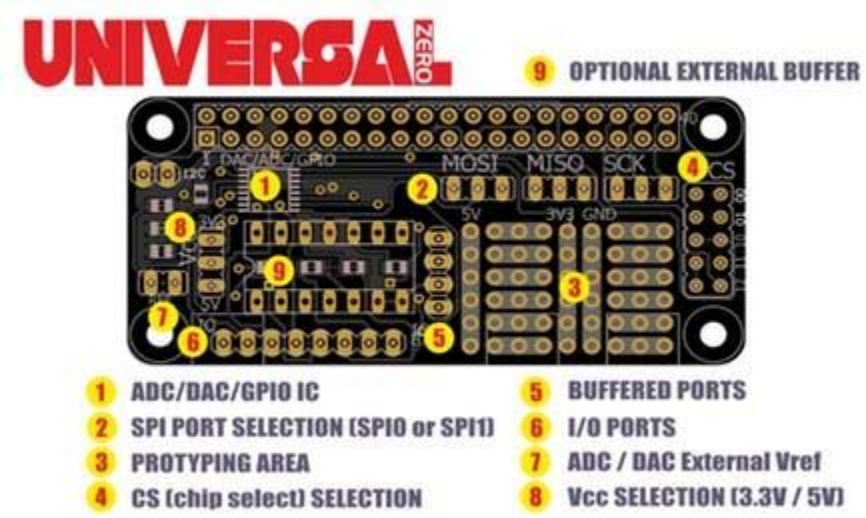
It is fully **software configurable** (find the libraries here) https://github.com/diymat/UniversalZero Any of the 8 pins can act as ADC (analog input), DAC (analog output) or GPIOs . Possibly projects include

- **weather station**
- **voltmeter**
- **parts tester**
- **digital thermometer**
- **robot**
- almost any **embedded** device

You can:

- control **engines**
- read **potentiometers**
- read **joysticks** and **dials**
- read **analog and digital** sensors
- **provide signals** for analog circuits
- act as a **digital potentiometer**
- read and write **any signal** (analog or digital)

Board Layout
https://cdn.shopify.com/s/files/1/0174/1800/files/mnl.pdf?15815831175326407072



The board's ADC/DAC/GPIO IC can be supplied from 5V (jumper 8). It gives a potential possibility to measure directly voltages up to 5V (up to Vcc actually). This is an experimental feature, and it is very probable to damage your PI if the 5V option is used. Please always use 3.3V option.