

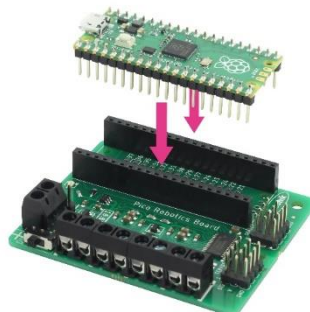
## Simply Robotics for Pico

The Simply Robotics Board features 2 Dual H-Bridge Motor Driver ICs (capable of driving 2 brushed motors or 1 stepper motor) and 8 servo outputs (capable of driving standard and continuous rotation servos), all controlled from a Raspberry Pi Pico. The Motor Driver ICs are capable of upto 1A per channel, and can drive a variety of small motors. They feature built in protections for over current, which can be reset by power cycling the board.

The IO break out provides connections to 5 GPIO pins, including the Analog inputs on the Pico. These IO points allow input devices, for example, sensors, or output devices, such as ZIP LEDs, to be added to the board.

Power is provided via a terminal block. The supply is controlled by an on/off power switch to the board. There is a green LED to indicate when the board is turned on. The board then produces a regulated supply which is fed into the connected Pico, removing the need to power the Pico separately. There are 3V and GND pins broken out on the additional header, which means external devices can also be powered (see **Page 2 for the electrical specifications**).

**Inserting a Pico:** To use the Simply Robotics board the Pico should have soldered pin header and be inserted firmly into the connector as shown.

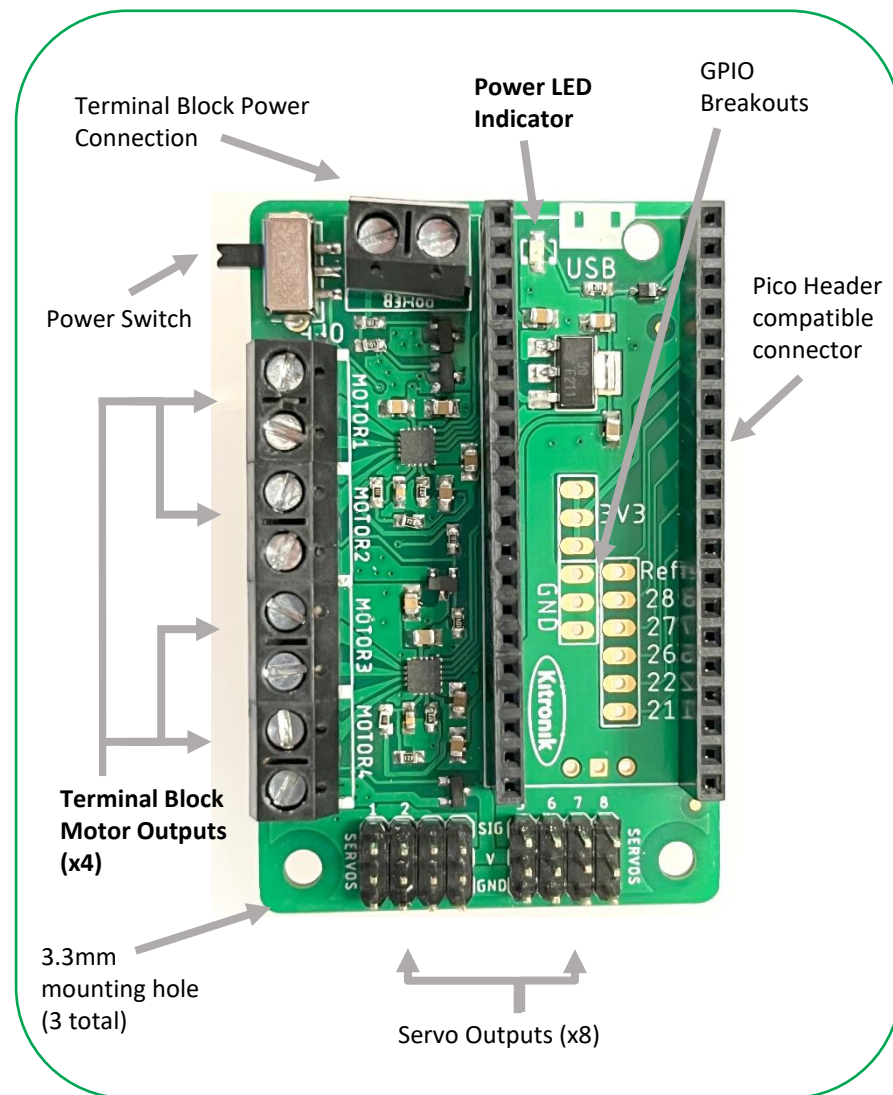


### Example Pico Code:

Kitronik have developed a micro-python module and sample code to support the use of this board with the Raspberry Pi Pico.

This code is available in the GitHub repo at:

<https://github.com/KitronikLtd/Kitronik-Pico-Simply-Robotics-MicroPython>

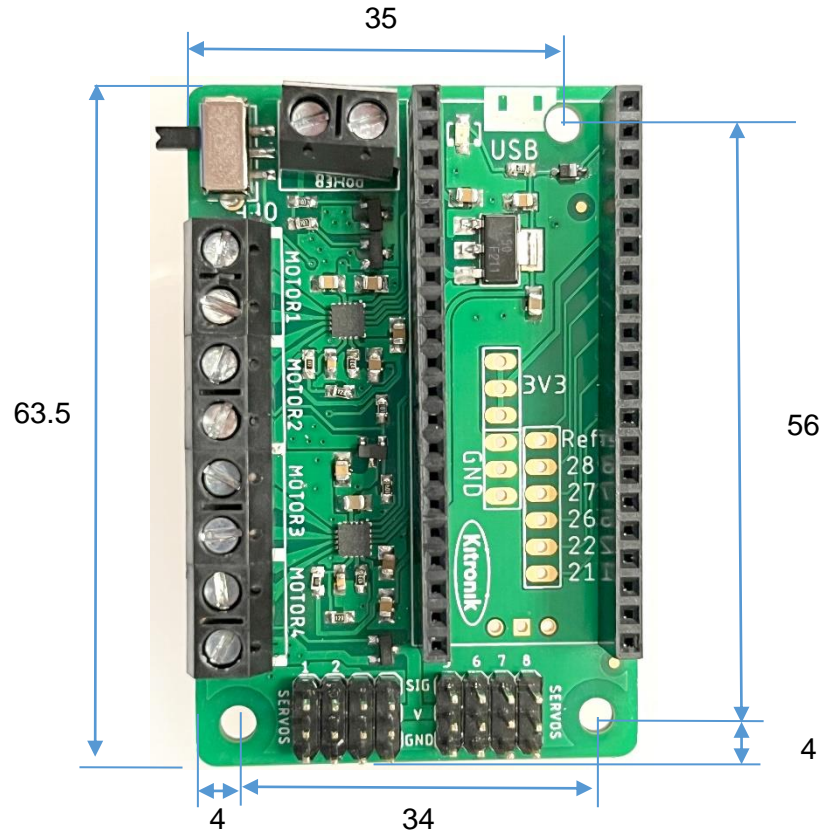


## Electrical Information

Operating Voltage (Supply via Terminal Blocks or Servo Power Connector)	+3.0V – 12V (Recommended: 4.5V - 6.0V)
Max 3V3 current output ( on expansion pads)	100mA
Servo and Motor Voltage	Operating Voltage
Max Input Current (All Servos and Motors)	10A
Servo Output Connections	8 (Provides operating voltage to servos) GPIO Pins: 15,14,13,12,19,18,17,16 for Servo 0 to Servo 7 in order
Motor Output Connections	4 [2 stepper motors] (1A max current draw per motor) Motor 1 GPIO 2 + GPIO 5 - Motor 2 GPIO 4 + GPIO 3 - Motor 3 GPIO 6 + GPIO 9 - Motor 4 GPIO 8 + GPIO 7 - 4 wire Stepper Motors should be connected using motor 1 and 2, or motor 3 and 4
External Connections	All spare Pico IO Pins, 3V3 (P36) and GND

## Dimensions

(All measurements are given in mm)



(Dimensions +/- 0.8mm)

Mounting holes are 3.3mm Diameter (M3 clearance)

## Python Class and Example Code

An example MicroPython class and example code showing its use is available in the Kitronik GitHub at:

<https://github.com/KitronikLtd/Kitronik-Pico-Simple-Robotics-MicroPython>

