



Raspberry Pi Pico Servo Driver Module User Guide

[Home](#) » [Raspberry](#) » Raspberry Pi Pico Servo Driver Module User Guide 

Contents

- [1 Raspberry Pi Pico Servo Driver Module](#)
- [2 Features](#)
- [3 Specification](#)
- [4 Pinout](#)
- [5 Hardware connection](#)
- [6 Setup environment](#)
- [7 Raspberry Pi](#)
 - [7.1 Python](#)
- [8 Document](#)
- [9 Documents / Resources](#)
 - [9.1 References](#)
- [10 Related Posts](#)



Raspberry Pi Pico Servo Driver Module



Servo Driver Module For Raspberry Pi Pico, 16-Channel Outputs, 16-Bit Resolution

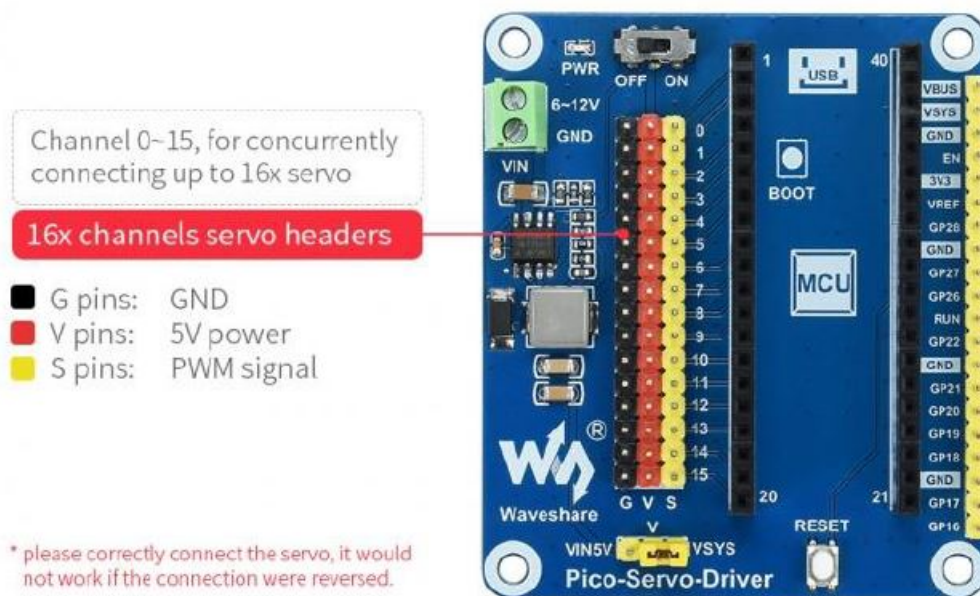
Features

- Standard Raspberry Pi Pico header, supports Raspberry Pi Pico series boards
- Up to 16-Channel servo/PWM outputs, 16-bit resolution for each channel
- Integrates 5V regulator, up to 3A output current, allows battery power supply from the VIN terminal
- Standard servo interface, supports commonly used servo such as SG90, MG90S, MG996R, etc.
- Exposes unused pins of Pico, easy expansion.

Specification

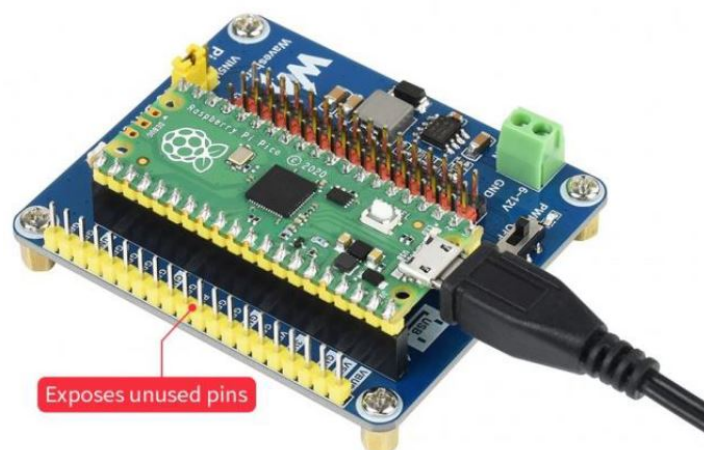
- Operating voltage: 5V (Pico) or 6~12V VIN terminal.
- Logic voltage: 3.3V.
- Servo voltage level: 5V.
- Control interface: GPIO.
- Mounting hole size: 3.0mm.
- Dimensions: 65 × 56mm.

Pinout



Hardware connection

Connect the Driver board to Pico, please take care of the direction according to the USB silk screen printing.



Setup environment

Please refer to Raspberry Pi's guide: <https://www.raspberrypi.org/documentation/pico/getting-started>

Raspberry Pi

1. Open a terminal of Raspberry Pi
2. Download and unzip the demo codes to directory Pico C/C++ SDK

```
sudo apt-get install p7zip-full
cd ~
sudo wget https://www.waveshare.com/w/upload/3/31/Pico_Servo_Driver_Code.7z
7z Pico_Servo_Driver_Code.7z -o./Pico_Servo_Driver_Code
cd ~/Pico_Servo_Driver_Code
```

1. Hold the BOOTSEL button of Pico, and connect the USB interface of Pico to Raspberry Pi then release the button
2. Compile and run the pico servo driver examples.

```
cd ~/Pico_Servo_Driver_Code/c/build/
cmake ..
make
sudo mount /dev/sdal /mnt/pico && sudo cp rtc.uf2 /mnt/pico/ && sudo sync && sudo umount /mnt/pico && sleep
2 && sudo minicom -b 115200 -o -D /dev/ttyACM0
```

Python

1. Raspberry Pi's guides to setup Micropython firmware for Pico.
2. Open the Thonny IDE, update it if your Thonny doesn't support Pico.

```
sudo apt upgrade thonny
```

Click File->Open >python/Pico_Servo_Driver_Code/python/servo.py to open the example and run it.

Document

- Schematic
- Demo codes

Documents / Resources

	Raspberry Pi Pico Servo Driver Module [pdf] User Guide Pi Pico, Servo Driver Module, Pi Pico Servo Driver Module, Driver Module, Module
---	--

References

-  [Raspberry Pi Documentation - Microcontrollers](#)

-  [File:Pico-Servo-Driver-details-3.jpg - Waveshare Wiki](#)
-  [File:Pico-Servo-Driver-details-5.jpg - Waveshare Wiki](#)

Manuals+.