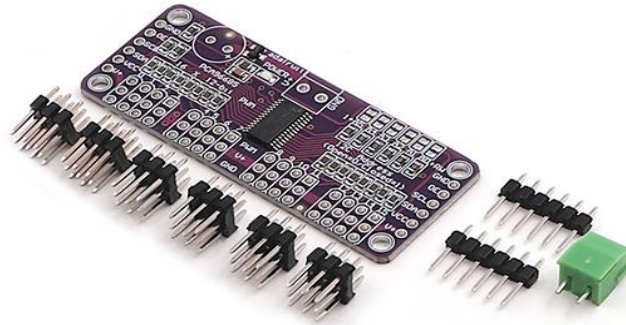


16 Channel 12 Bit PWM Servo Motor Driver I2C Module for Arduino Robot RC Drone DIY Parts Model:PCA9685



Description:

Driving servo motors with the Arduino Servo library is pretty easy, but each one consumes a precious pin - not to mention some Arduino processing power. The Adafruit 16-Channel 12-bit PWM/Servo Driver will drive up to 16 servos over I2C with only 2 pins. The on-board PWM controller will drive all 16 channels simultaneously with no additional Arduino processing overhead. What's more, you can chain up to 62 of them to control up to 992 servos - all with the same 2 pins! The Adafruit PWM/Servo Driver is the perfect solution for any project that requires a lot of servos.

Specifications

- This board/chip uses a 7-bit I2C address between 0x60-0x80, selectable with jumpers.
- Terminal block for power input (or you can use the 0.1" breakouts on the side)
- Reverse polarity protection on terminal block input
- POWER GREEN, good LED.
- 3 pin connectors in groups of 4 so you can plug in 16 servos at a time (Servo plugs are slightly wider than 0.1", so you can only stack 4 next to each other on the 0.1" header "Chain-able" Design)
- One point for put a large capacitor on the V+ line (in case you need it) 220-ohm series resistors on all output lines to protect them and make driving LEDs trivial
- Solder jumpers for the 6 address select pins, i2c-controlled PWM controller with a built-in clock. Unlike the TLC5940 family, you don't need to continuously, send your microcontroller's tether signal, it works completely free!
- It is 5V compliant which means you can control it from a 3.3V microcontroller and still safely drive up to 6V outputs (this is good for when you want to control white or blue LEDs with more than 3.4 forward voltages)
- Select 6 address pins so you can wire up to 62 of these on a single i2c bus, a total of 992 outputs - that's a lot of servos or LEDs.
- PWM adjustable frequency up to about 1.6KHz 12-bit resolution for each output: For servos, that means about 4us resolution at 60Hz refresh rate.
- Drain output Configurable push-pull or open-drain
- Output allows pin to quickly turn off all outputs

Package Includes:

1 x PCA9685 16-Channel 12-bit PWM Servo Motor Driver I2C Module for Arduino Robot