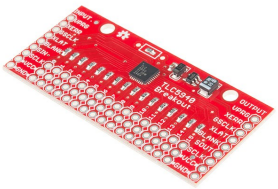

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SparkFun LED Driver Breakout - TLC5940 (16 Channel)

BOB-10616 ROHS

2

DESCRIPTION DOCUMENTS

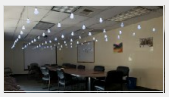
The TLC5940 is a 16 channel PWM unit with 12 bit duty cycle control (0-4095), 6 bit current limit control (0-63), and a daisy chainable serial interface. This breakout board is a good way to take full advantage of this useful IC. All 16 PWM channels are broken out to standard 0.1" headers, which run alongside convenient voltage and ground rails. Also, because the TLC5940 can be daisy-chained, the breakout is designed to support that feature. On the left-hand side of the board all serial inputs are broken out to 0.1" headers and likewise with output on the right-hand side.

Use this board to increase the number of PWM pins available to your microcontroller for applications such as Monocolor, Multicolor or Full-Color LED Displays, LED Signboards, Display Backlighting, Servo control, or any other project where a large number of PWM drivers are necessary.

Note: While each 3-pin PWM header is 0.1" spaced, the space between each header is slightly larger in order to accommodate servo connections. In order to make this board suitable for use with servos, 2.2k pull-up resistors have been included on each output as well. Finally, the 2.2k resistor on the Iref pin sets the output current to 17.8mA but a parallel through-hole connection is provided for an additional resistor to increase the current if necessary. To determine the resistor value you need for a given output check the equations provided on the schematic.

SparkFun LED Driver Breakout - TLC5940 (16 Channel) Product Help and Resources

TUTORIALS VIDEOS SKILLS NEEDED



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APRIL 10, 2014

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Customer Reviews

4.5 out of 5

Based on 2 ratings:

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4 star		1
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Traces...

about a year ago by DOOOOOOOOOOOOOOOOM verified purchaser

I've bought 4 of these and the traces of VCC have fallen off two of the modules Edit: once we got the problem solved it worked perfectly for my chandelier.

> ROB-24601 replied on August 17, 2016:
> Sorry to hear that. We haven't seen this before. I'll be contacting you directly to take care of this for you.

General purpose extended PWM device.

last year by Member #522954 verified purchaser

Great Stuff this board is. Took a bit of research to discover just the coding-detail necessary to accomplish daisy-chaining multiple boards, but of course, once obtained, that was finally easy. I use this multi-channel device to drive many tricolor LEDs, Galvanometer Gauges, and Solid State Relays, all in the same application, and with fine control. Users should be aware: the many-device daisy-chain application required a separate power supply to the TLC5940, and the LEDs must be Anode. Be aware of your polarity requirements.

START SOMETHING

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No matter your vision, SparkFun's products and resources are designed to make the world of electronics more accessible. In addition to over 2,000 open source components and widgets, SparkFun offers curriculum, training and online tutorials designed to help demystify the wonderful world of embedded electronics. We're here to help you start something.

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