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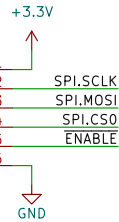
4

5

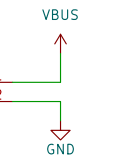
6

A

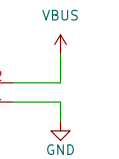
A

J1
spi_ctl_port

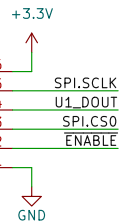
Control the LEDs with a SPI signal on this port.

J2
aux_power_port

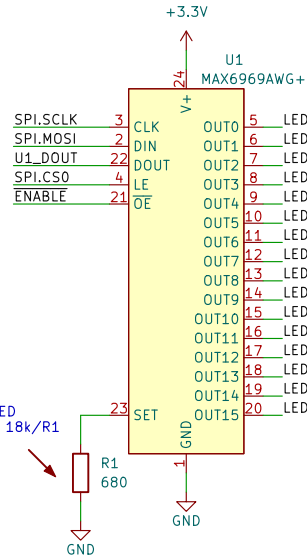
Optional DC power source for the LEDs.

J3
aux_power_thru

Daisy chain aux DC power.

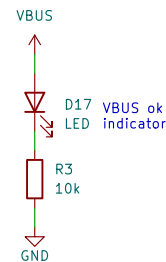
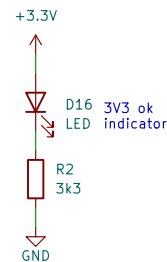
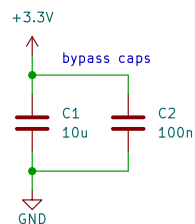
J4
spi_ctl_thru

Daisy chain SPI control.

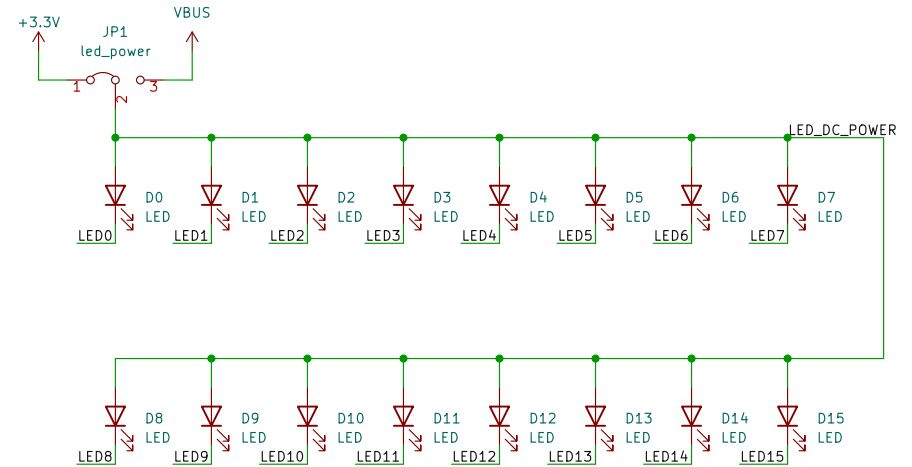


R1 sets LED current = $18k/R1$

Brightness can be varied by adjusting the SET resistors, and also by sending a PWM signal to the ENABLE pin.



Use either the 3.3v power supply from the Raspi OR DC power supplied through the 'aux_power_port' connector to power the LEDs.

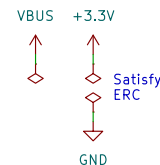
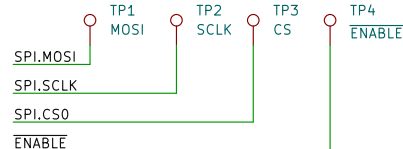


LED_DC_POWER 1 J5
LED14 2 aux_led_1

LED_DC_POWER 1 J6
LED15 2 aux_led_2

There are 30 main LEDs, the last two LEDs on the second board can be used for aux purposes, such as the power light.

test points



Drawn by: Jordan Aceto
Obedience project
SPI LED Drivers

Sheet: /
File: led_breakout.kicad_sch

Title: LED Driver Board

Size: A4 Date: 2022-08-13
KiCad E.D.A. eeschema 6.0.5+dfsg-1-bpo11+1

Rev: 0.1
Id: 1/1

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