

Atmel ATSAMR21G18A Controller with USB,
SWD Debugger, and 802.15.4 using Chip Antenna.
Additional 128Mbit of SPIFLASH.

Low Noise 3.3V Regulated Supply for MCU and RF Systems

DAC with SPI Interface to MCU. Voltage Output Range is 0-3.3V.
Two audio filters allow line out with a 3-pin connector.

USB and Grove Connectors

Plug-in Electret Microphone and Preamp
AIN16 alternate line-in filter.

Signal Connector and Rotary Encoder

SaikoLED 802.15.4 LED Controller
Designer: Brian Neltner, Ph.D.
Neltner Labs - <http://neltnerlabs.com>

TITLE: Saiko 802.15.4

Document Number: 18050600

Date: 5/23/2018 10:55 PM

REV: X1

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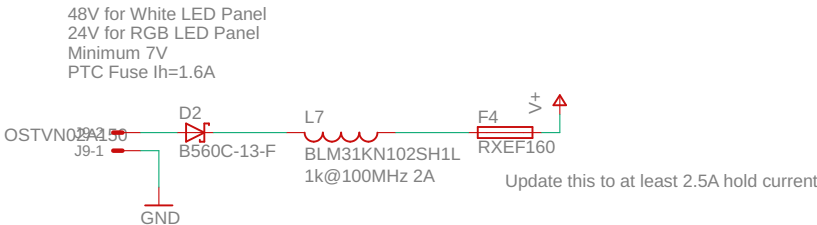
4

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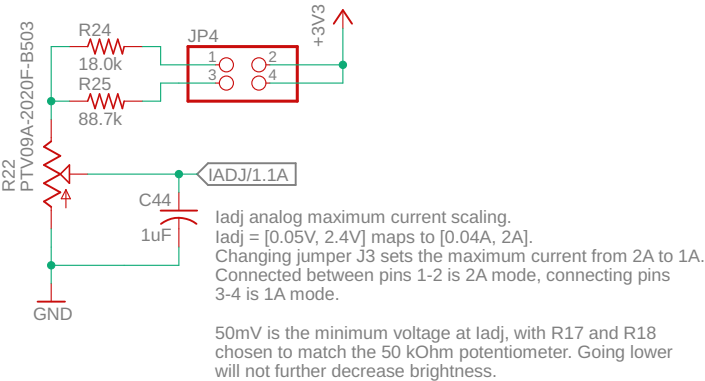
2

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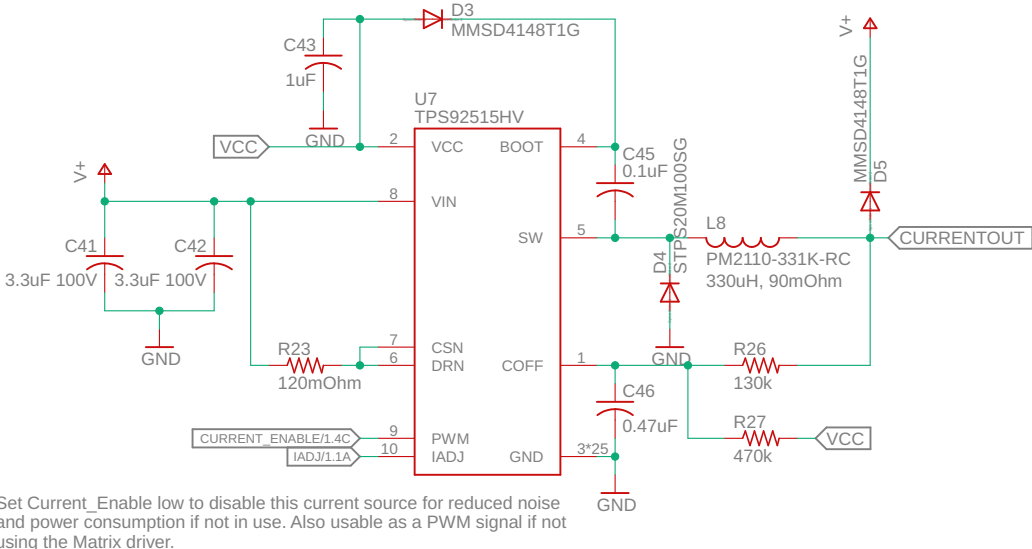
Power Entry and Filtering



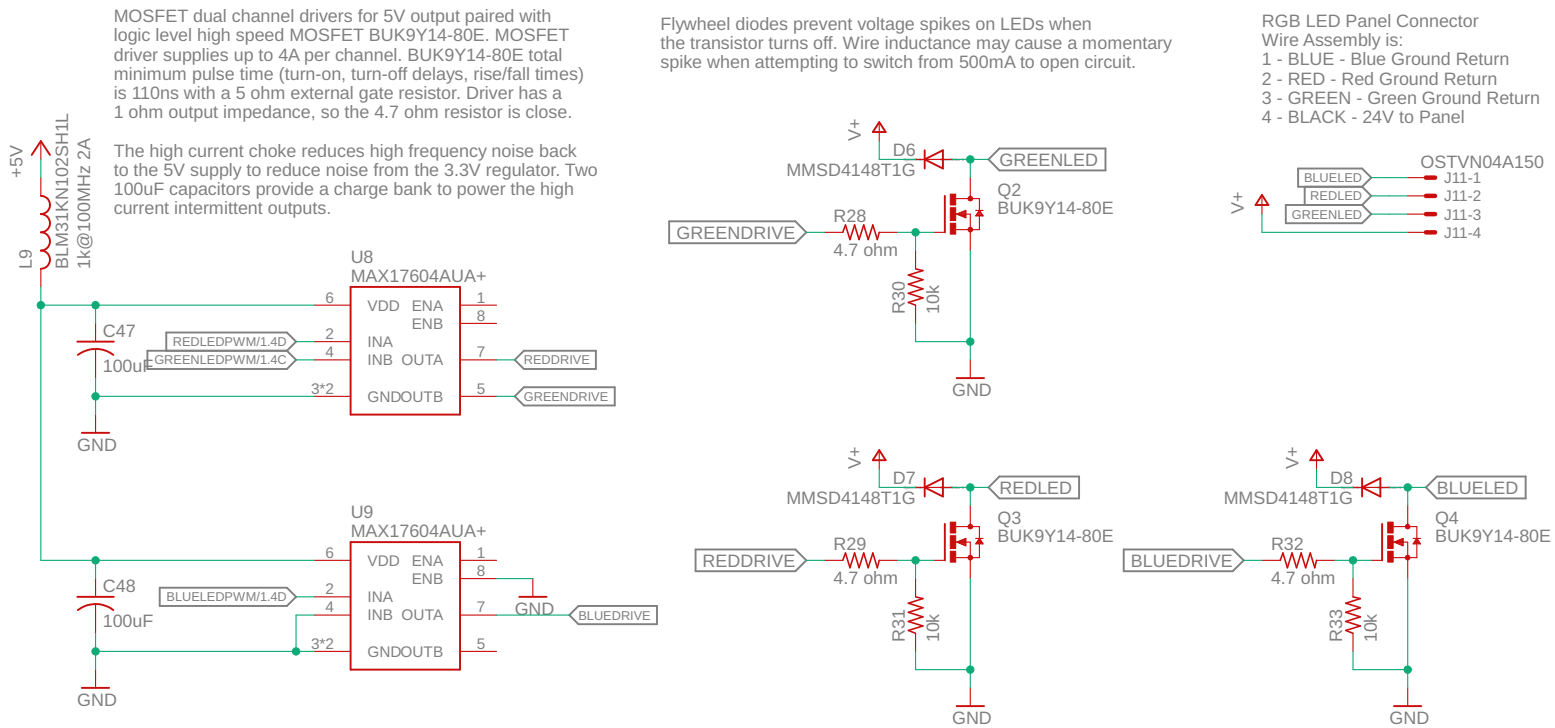
Manual Knob for Current Output Control



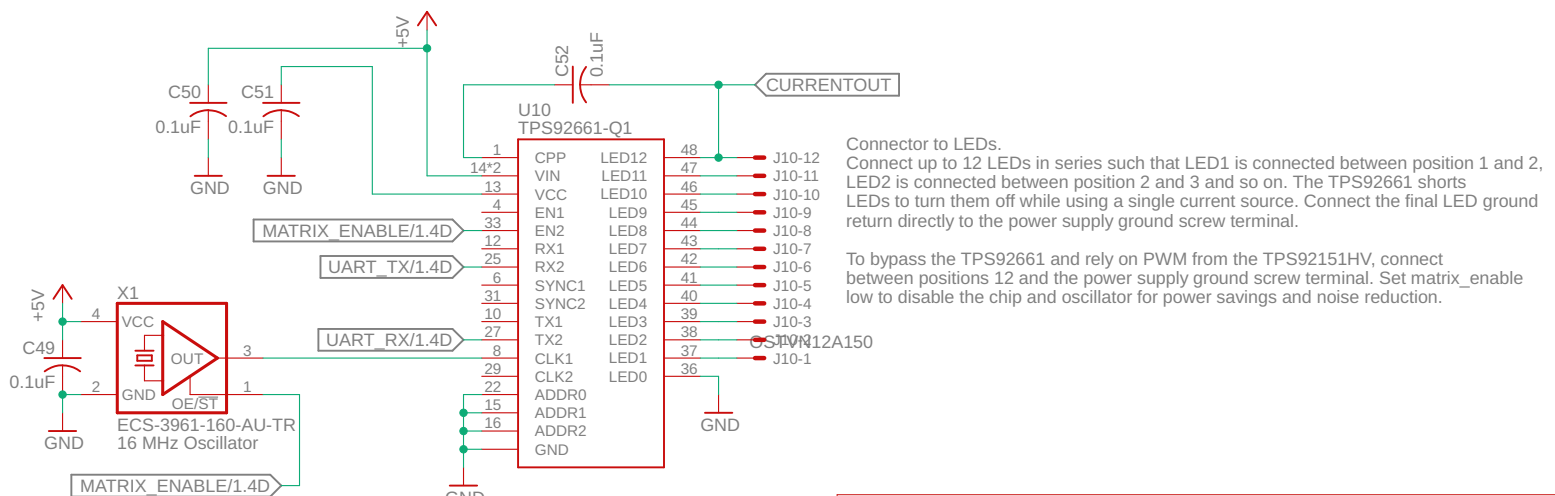
Maximum 2A Current Source
Adjust down with JP3 or by replacing R13/R14 as appropriate.



RGB MOSFET Based Control of Return Path



Matrix LED Driver shorts between adjacent pins to provide dimming for up to 9 LEDs from a single current source. Clock is 16MHz for 125ns minimum pulse width for 10-bit built in PWM.



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