**Class D Audio Amp Possibilities**

<https://www.analog.com/en/products/ssm4567.html>

I2S

<https://www.maximintegrated.com/en/products/analog/audio/MAX98357A.html>

I2S

Mono

<https://www.analog.com/en/products/ssm2315.html#product-overview>

Differential

3W

Mono

**MAX9778 -** <https://datasheets.maximintegrated.com/en/ds/MAX9777-MAX9778.pdf>

Differential In

I2C configurable

Headphone/ Speaker automatic detection and switching

3W speaker out

Can switch between 2 inputs

Don’t need I2C for Max9778

<https://www.ti.com/product/LM49450>

Headphone detection

Class D

Stereo 2.5W per channel

I2C configurable

32 step volume control

**MCU**

ATSAMD21G18

Feather M0

**Rotary Encoder**

<https://www.digikey.com/en/products/detail/bourns-inc/PEC11R-4220K-S0024/6164059>

4x GPIOS for each rotary encoder (2 for left/right and 2 for push switch)

**RGB LED**

<https://www.digikey.com/en/products/detail/everlight-electronics-co-ltd/EAST1616RGBB2/8510360>

common anode (for led driver)

**LED Driver**

TLC5947 - <https://www.ti.com/lit/ds/symlink/tlc5947.pdf?ts=1613292426730&ref_url=https%253A%252F%252Fwww.google.com%252F>

Sparkfun libraries

16-channel so 5 rgb leds per chip

Daisy chaineable

Constant Current sink

60 mA max per channel set externally with resistor at Iref

**LDO**

For MCU

<https://www.digikey.com/en/products/detail/diodes-incorporated/AP2127N-3-3TRG1/4470792>

3.3V out

300 mA max

**LDO Options**

* Amp works off of 5V so no need (power off 5V)
* SAMD21 has to work off of 3.3V
* TLC5940 can work off of 3V to 5V (power off 5V)
* Rotary encoder should work with 3.3V
* 3.3V LDO for MCU