

Parts Speccking Sheet

Crystal Oscillator - outputs a 32MHz square wave

<https://www.digikey.com/en/products/detail/w%C3%BCrth-elektronik/831061624/13900420>

High Speed Op-Amp

<https://www.digikey.com/en/products/detail/analog-devices-inc/ADA4891-4ARUZ-R7/2606522>

4 circuits for \$5

Analog MUX / switch

<https://www.digikey.com/en/products/detail/runic-technology/RS2255XN/14544658>

Laser Diode (650nm)

<https://www.digikey.com/en/products/detail/adafruit-industries-llc/1054/5629439>

(full-on module from Adafruit)

Photodiode (650nm)

<https://www.digikey.com/en/products/detail/excelitas-technologies/C30737LH-230-83A/5885823>

Diode for peak detector (may want to shop around a little more)

<https://www.digikey.com/en/products/detail/diodes-incorporated/1N5711W-7-F/808531>

Switch

<https://www.digikey.com/en/products/detail/nidec-copal-electronics/CL-SB-12B-01T/3507823>

Parts we speccked out but are not needed any more:

LT5511 Low Frequency Upconverting Mixer

<https://www.mouser.com/ProductDetail/Analog-Devices/LT5511EFEPBF?qs=hVxg5c3xu%2FpxLytnGXmnA%3D%3D>

Only 32 left in stock on Mouser; 0 in stock on Digikey!

We want this one, because LT has a great datasheet where it tells us exactly how to balance the things. Below ~44MHz, there is no need for inductors in the balancing schematic, which makes our lives a lot easier.

LT5512 Low Frequency Downconverting Mixer

<https://www.digikey.com/en/products/detail/analog-devices-inc/LT5512EUF-TRPBF/958236>

The exact counterpart of the upconverting mixer. Plenty in stock on Digikey.

If no longer in stock, there are a whole bunch of options from the same manufacturer listed at the end of the LT5512 datasheet. They are all much higher frequency, though.

DDS

<https://www.analog.com/media/en/technical-documentation/data-sheets/AD9833.pdf>