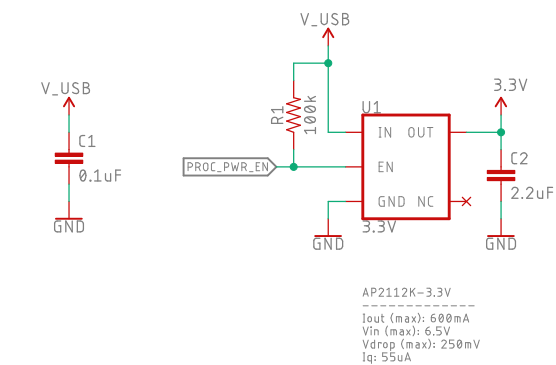
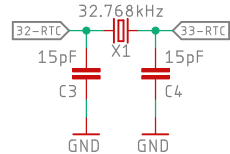


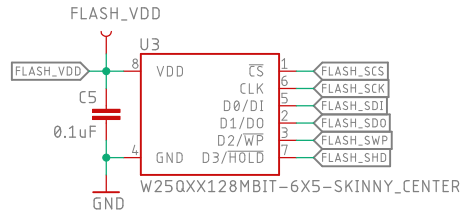
Voltage Regulation



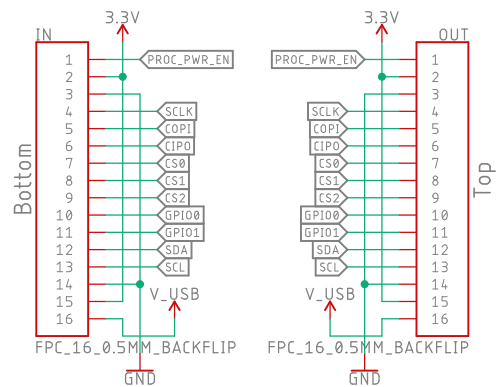
32.768kHz RTC Crystal



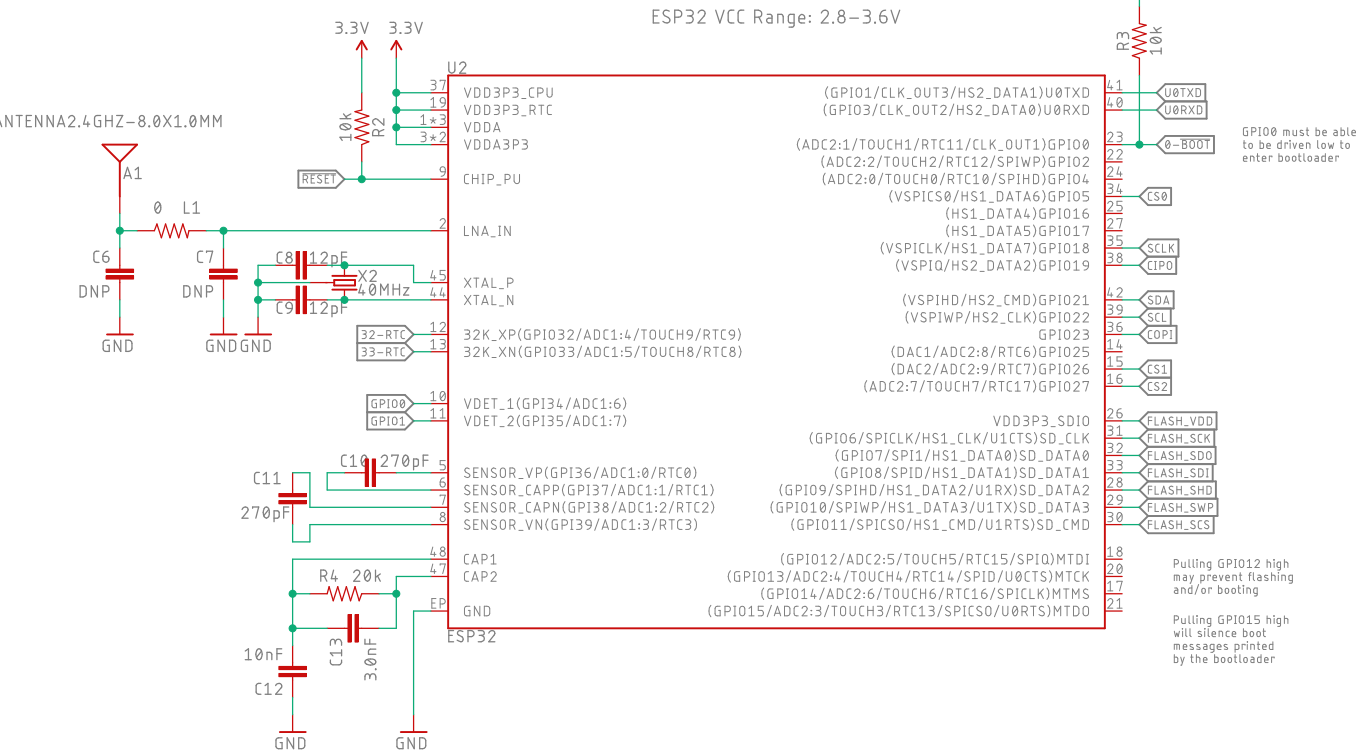
128Mb Flash



EZ Connectors

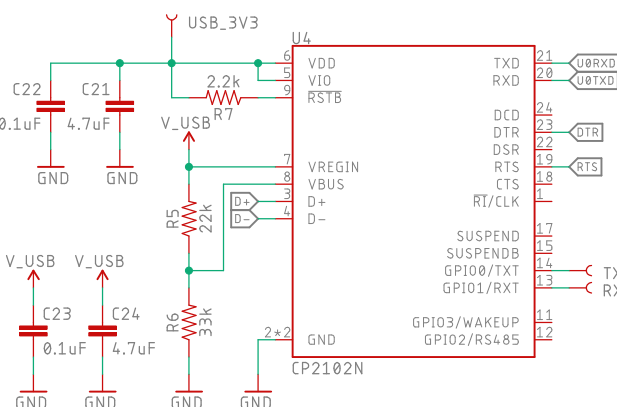


Espressif ESP32



RF Track Impedance: Coplanar Waveguide with Ground Calculations
<https://chemandy.com/calculators/coplanar-waveguide-with-ground-calculator.htm>
JLCPCB JLC7628 4-Layer 1.6mm Impedance Control Stackup (Er = 4.6)
Ground is on layer 2.
Prepreg thickness: 0.2mm
12 mil track with 4 mil gap = 49.5 Ohms

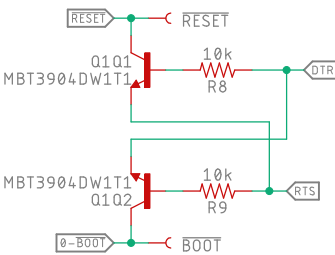
CP2102N (USB-to-Serial Converter)



Auto-Reset

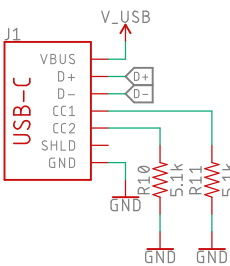
Boot Mode Configuration			
Pin	Default	Boot	Download
GPIO0	1	1	0
U0TXD	1	1	x
GPIO2	0	x	0
GPIO4	0	x	x
MTD0	1	x	x
GPIO5	1	1	x

If U0TXD, GPIO2, GPIO5 are floating, GPIO0 determines boot mode



If DTR is LOW, toggling RTS from HIGH to LOW resets to run mode.
If RTS is HIGH, toggling DTR from LOW to HIGH resets to bootloader.

USB



Special Instructions	
Released under the Creative Commons Attribution Share-Alike 4.0 License https://creativecommons.org/licenses/by-sa/4.0/	
TITLE: SparkX_EZ_ESP32	
Design by: Paul Clark	REV: X01
Date: 12/05/2021 13:52	Sheet: 1/1