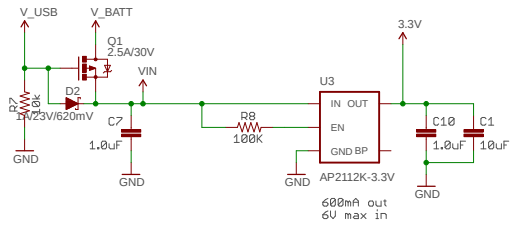
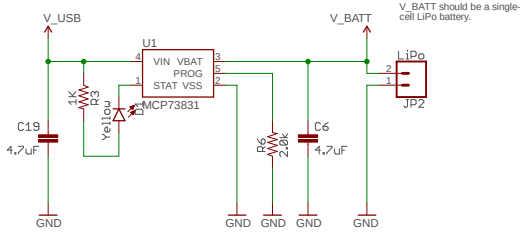
Voltage Regulator and Battery Charger

V_USB - 6V MAX
V_BATT - Single Cell (4.2V MAX)

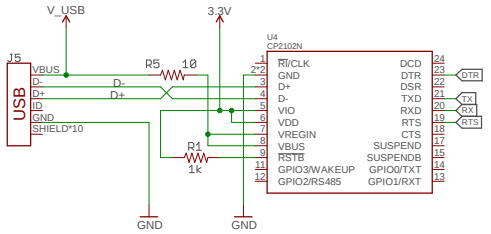


Lithium-Polymer Battery Charger (1-cell)

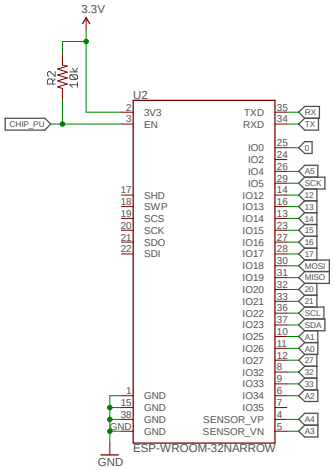


Charge current:
I_CHG = 1000 / R_PROG
R_PROG=2k : I_CHG=500mA

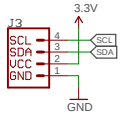
CP2102N (USB-to-Serial Converter)



Espressif ESP32



QWIIC Connector

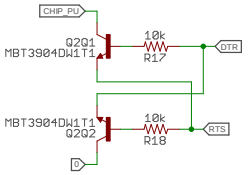


Auto-Reset

Boot Mode Configuration

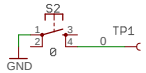
Pin	Default	Boot	Download
GPIO0	1	1	0
U0TXD	1	1	x
GPIO2	0	x	0
GPIO4	0	x	x
MTDO	1	x	x
GPIO5	1	1	x

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

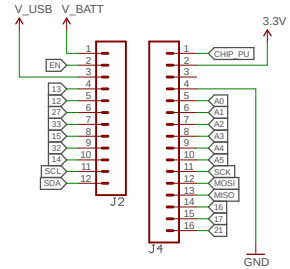


If DTR is LOW, toggling RTS from HIGH to LOW resets to run mode.
If RTS is HIGH, toggling DTR from LOW to HIGH resets to bootloader.

GPIO0 Button

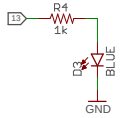


Headers

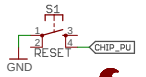


THIS IS A FOUR-LAYER BOARD!

GPIO13 LED



Reset Button



Original ESP32 Thing by Jim Lindblom

TITLE: ESP32_Thing_Plus

Design by: Mike Hord
Revised by: Alex Wende

REV: v20

Date: 1/9/2020 1:05 PM

Sheet: 1/1