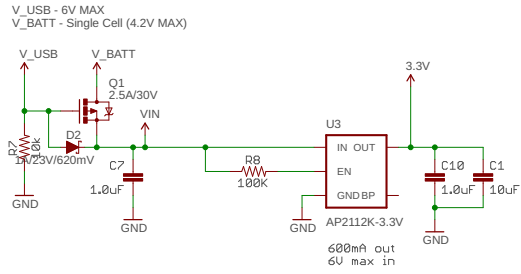
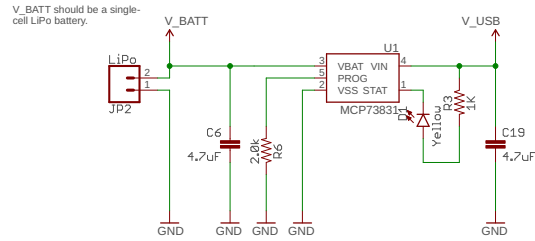


Voltage Regulator and Battery Charger

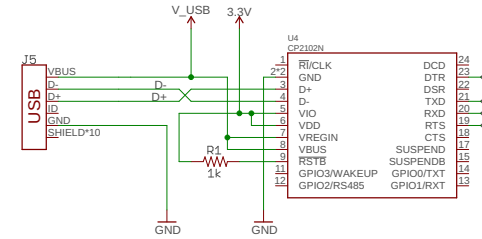


Lithium-Polymer Battery Charger (1-cell)

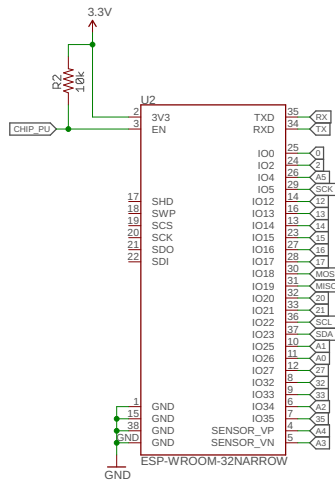


Charge current:
 $I_{CHG} = 1000 / R_{PR06}$
 $R_{PR06} = 2k ; I_{CHG} = 500mA$

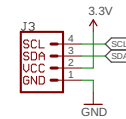
CP2102N (USB-to-Serial Converter)



Espressif ESP32



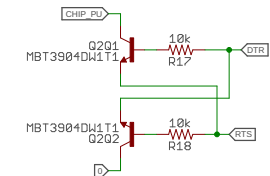
QWIC Connector



Auto-Reset

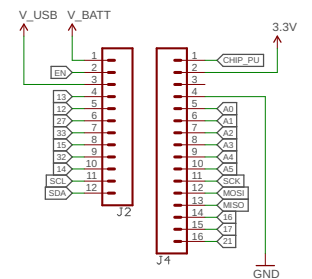
Pin	Default	Boot	Download
GPIO0	1	1	0
U0TXD	1	1	x
GPIO2	0	x	0
GPIO4	0	x	x
HTDO	1	x	x
GPIO5	1	1	x

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.

Headers



THIS IS A FOUR-LAYER BOARD!

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TITLE: ESP32_Thing_Plus

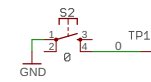
Design by: Mike Hord
Revised by: Alex Wende

Date: 2/25/2019 1:42 PM

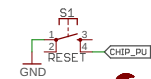
REU: v10

Sheet: 1/1

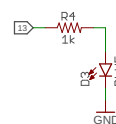
GPIO0 Button



Reset Button



GPIO13 LED



Original ESP32 Thing by Jim Lindblom