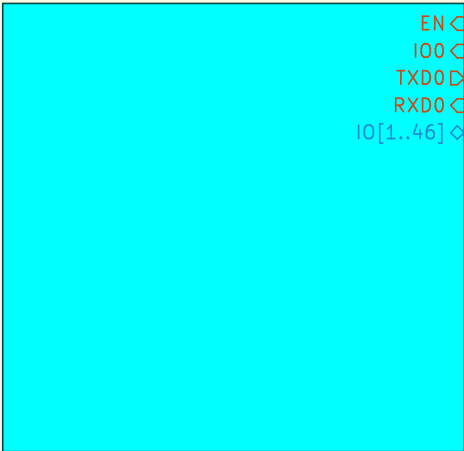
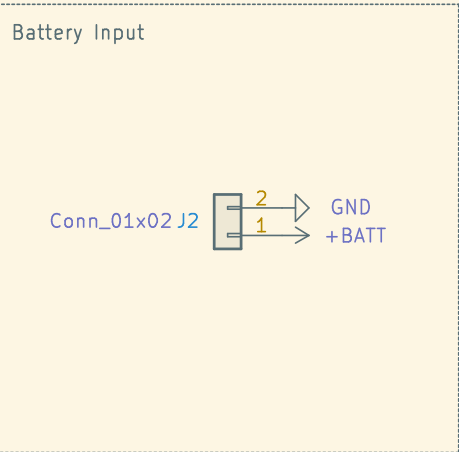


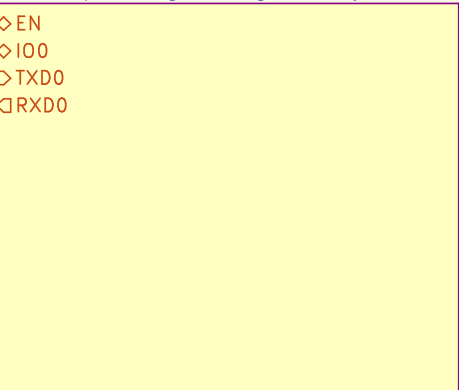
ESP32S2



File: esp32-s2-feather-MCU.kicad_sch

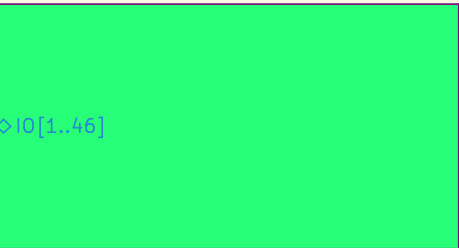


Bootstrap + Programming Circuitry



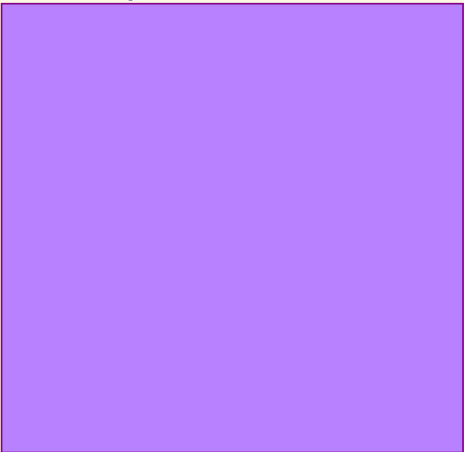
File: esp32-s2-feather-prog.kicad_sch

Feather Headers



File: esp32-s2-feather-headers.kicad_sch

Power Management



File: esp32-s2-feather-PMS.kicad_sch

GLOBALS

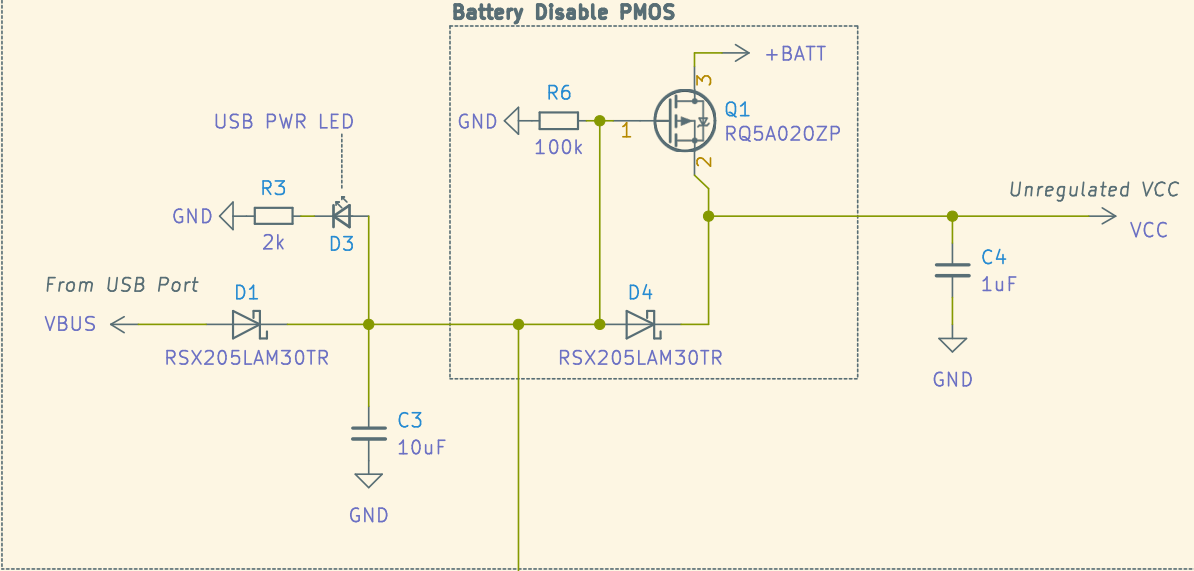
- +BATT Li-Ion Cell +4.2V
- VBUS USB Port +5V
- VCC Unregulated Power Input (VBUS if available, else BATT)
- +3V3 500mA Regulated +3.3V
- GND
- +3.3VA 500mA Regulated +3.3V For Auxiliary Output
- GND
- SCL Primary I2C Bus
- SDA TODO: Add Pull-ups
- PORT_D+ USB-C Port Data Lines
- PORT_D-

TODO

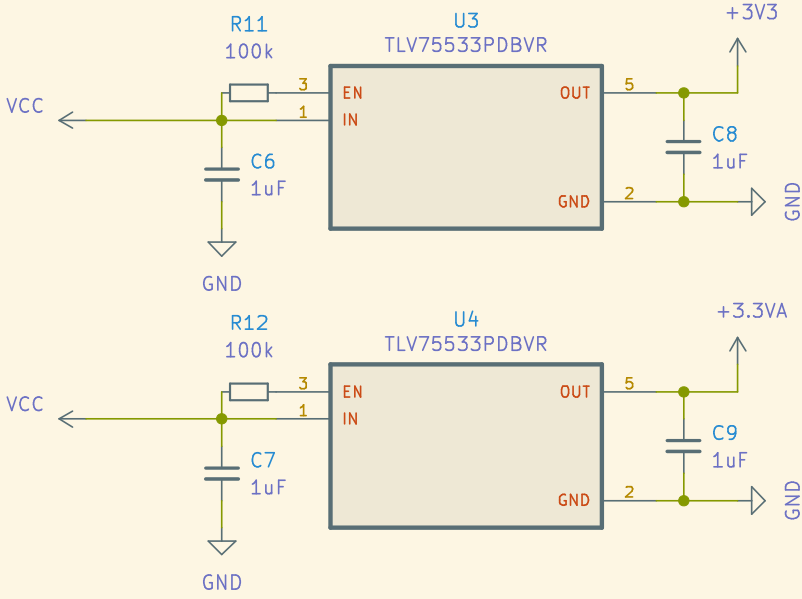
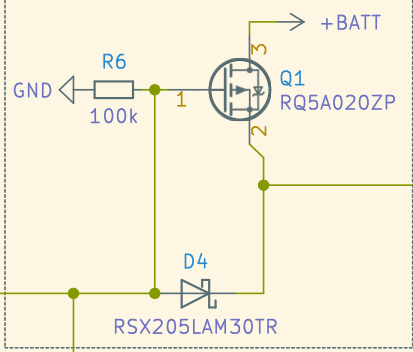
- USB-C Port
- [x] CC Pin Pull-downs
- [] ESD Protection
- Power Management Subsystem
- [x] Input Source Switching
- [x] Battery Fuel Gauge
- [] Reverse-polarity Protection
- Bootstrap + Prog. Sheet
- [] ESP32S2 Bootstrapping
- [] ESP32S2 Prgm. Switches
- [] ESP32S2 UART Breakout
- [] ESP32S2 UART Auto-Prog. Circuit
- Feather Headers Sheet
- [] Feather-spec Pinout Headers
- [] Decide on what useful GPIO to have.
- [] Route UART1 / UART2 hardware UARTS.

2x 3v3 LDO for total 1A Output

Power Source Selection



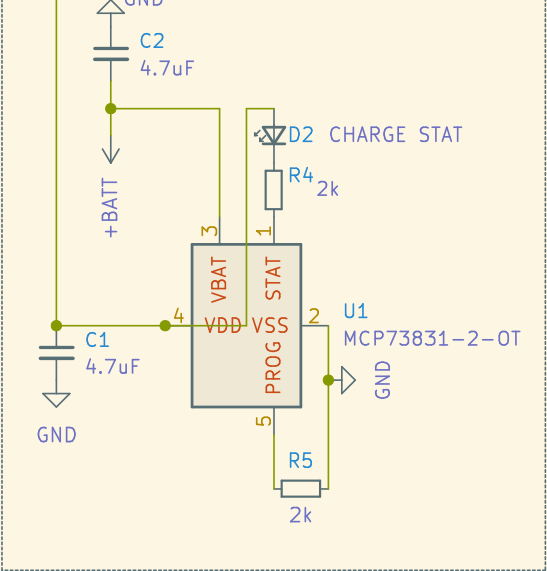
Battery Disable PMOS



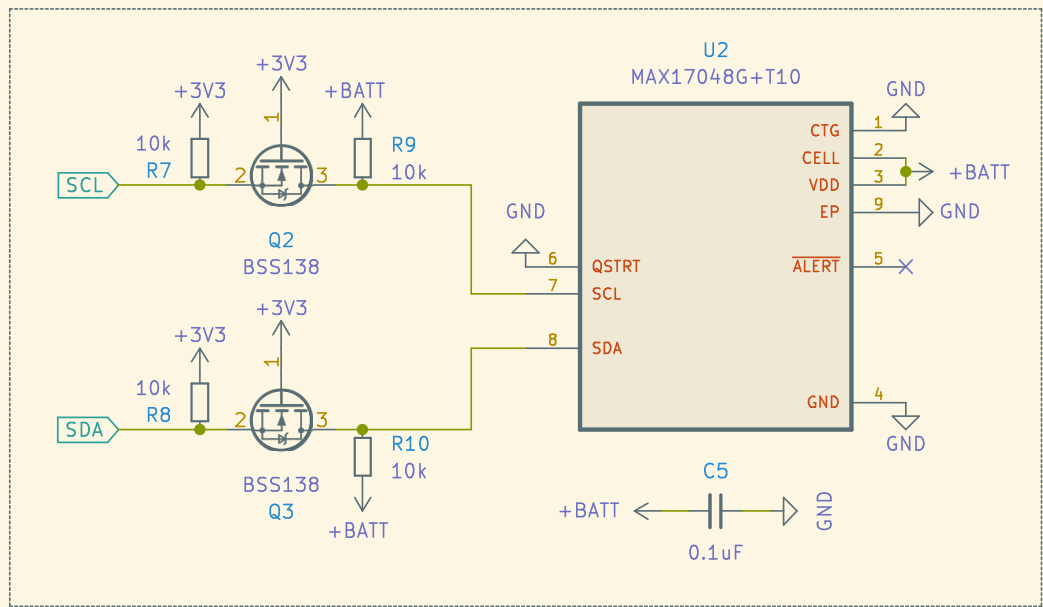
NOTE: 2ND LDO ONLY FOR 3V30 PIN
Do not put LDO's in parallel,
this will cause issues with LOAD BALANCING.

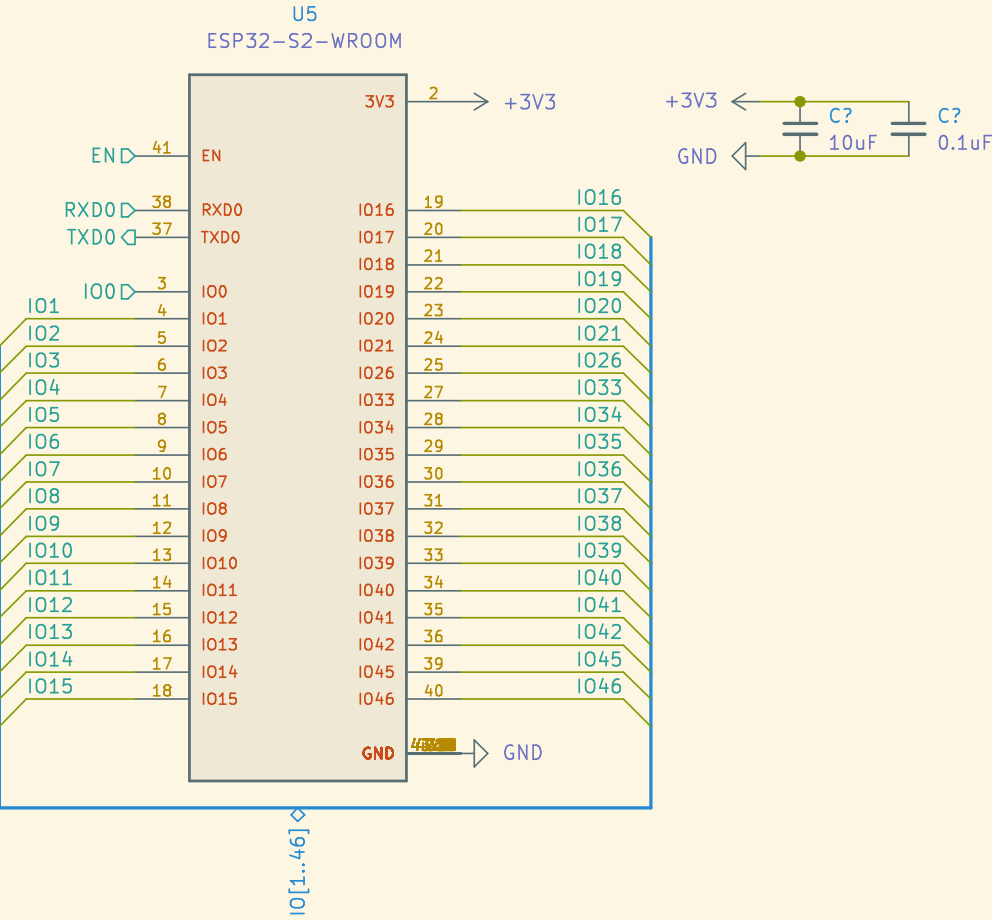
Here, "3V3A" means "Auxiliary 3.3V"

Battery Charger

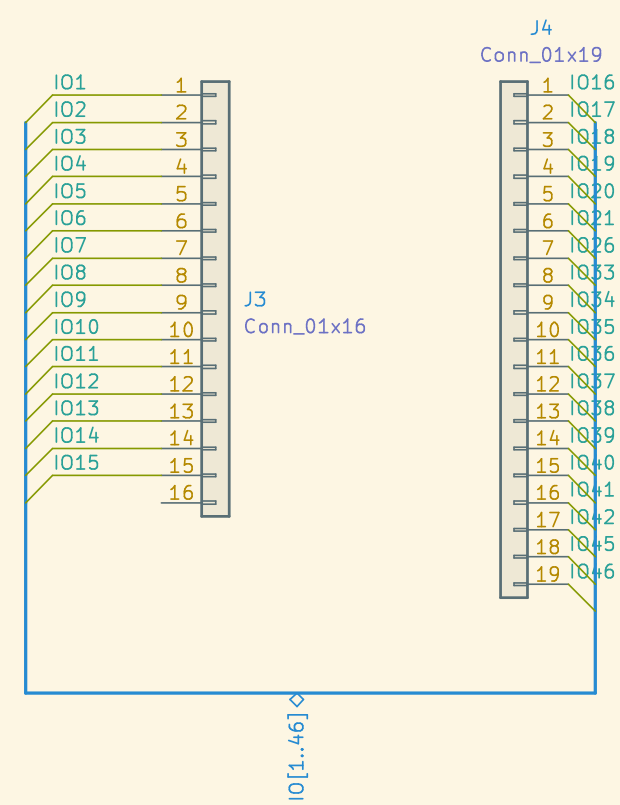


Battery Fuel Gauge + 3v3 I2C Translation





Routes all Feather-spec signals to their header locations.
Serves as a place to pull-out whatever IO from the ESP32S2 IO Bus.



Contains the BOOT + RESET pushbuttons.
UART0 Breakout for serial programming.
BSS138 Auto-Program circuit for serial programming.
LEDs for serial lines?
Test points or whatever for the UART connection.
Resistor pull-ups for bootstrapping.

- ◁TXD0
- ▷RXD0
- ◇EN
- ◇IO0