

Additional Schematic Drawings

MSP430

MSP430.sch

Teensy

Teensy.sch

Sensors

Sensors.sch

Power

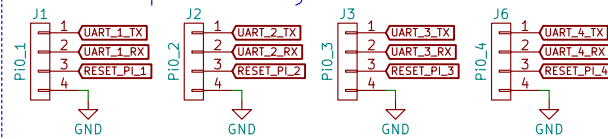
Power.sch

TVS and TP

TVS and TP.sch

MSP-430 Interfaces

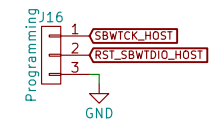
Raspberry Pi Zeros



Comms Board

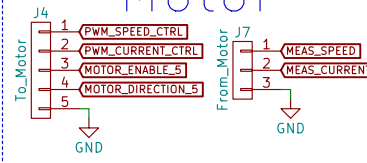


Programming

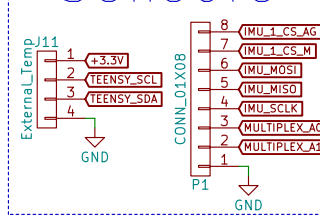


Teensy 3.6 Interfaces

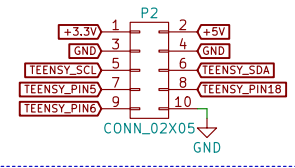
Motor



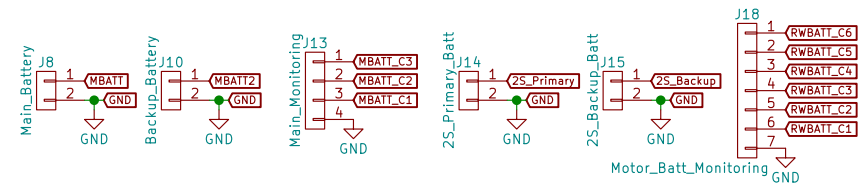
Sensors



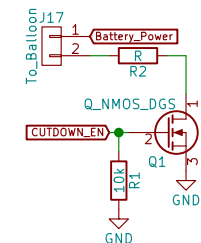
Extra Pins



Battery & Power Connections



Cutdown Mechanism



Sheet: /
File: mainBoardV2.sch

Title:

Size: A4

Date:

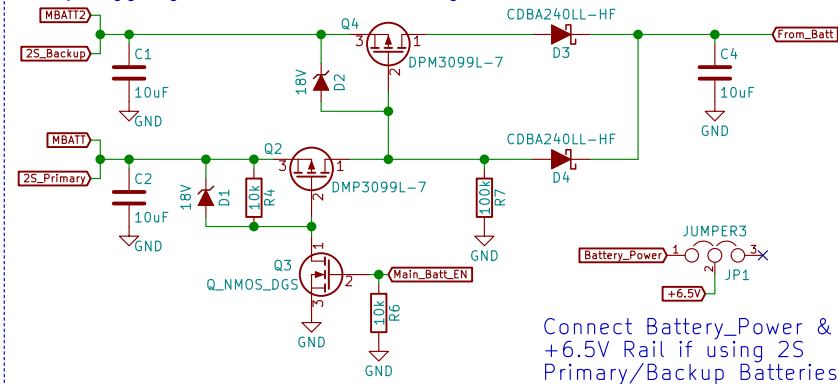
KiCad E.D.A. kicad 4.0.4-stable

Rev:

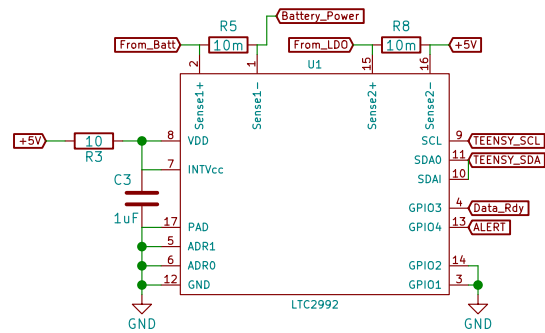
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Battery Input and Switchover

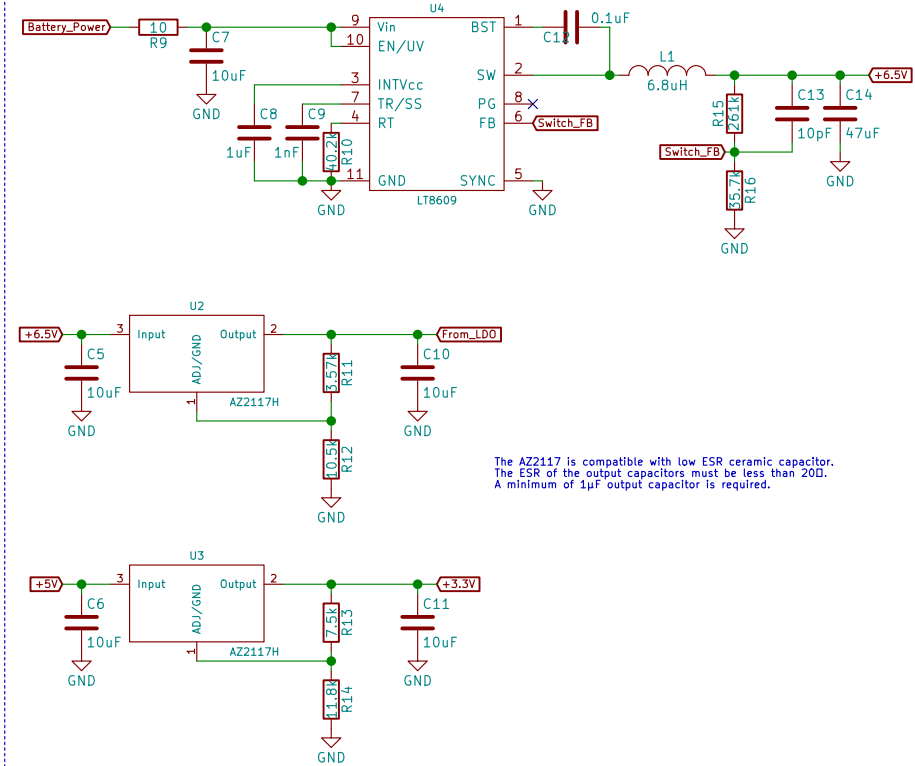
The system is initially powered off of the backup battery but then switches to the main battery during the initialization sequence by toggling the "Batt_EN" GPIO high



Current Measurement



DC-DC Regulators



Sheet: /Power/
File: Power.sch

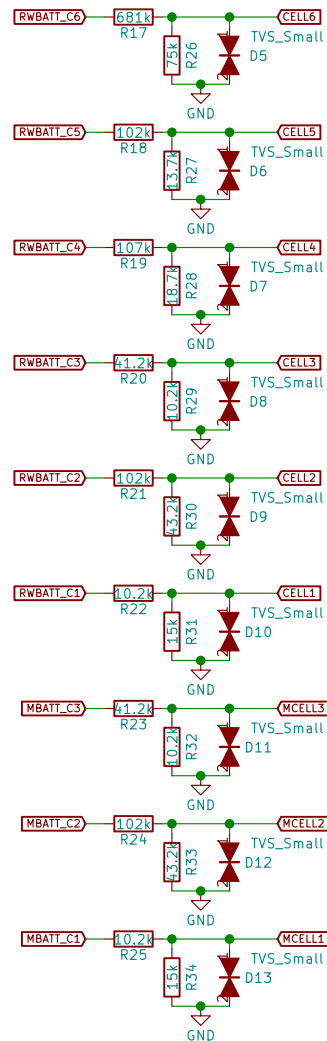
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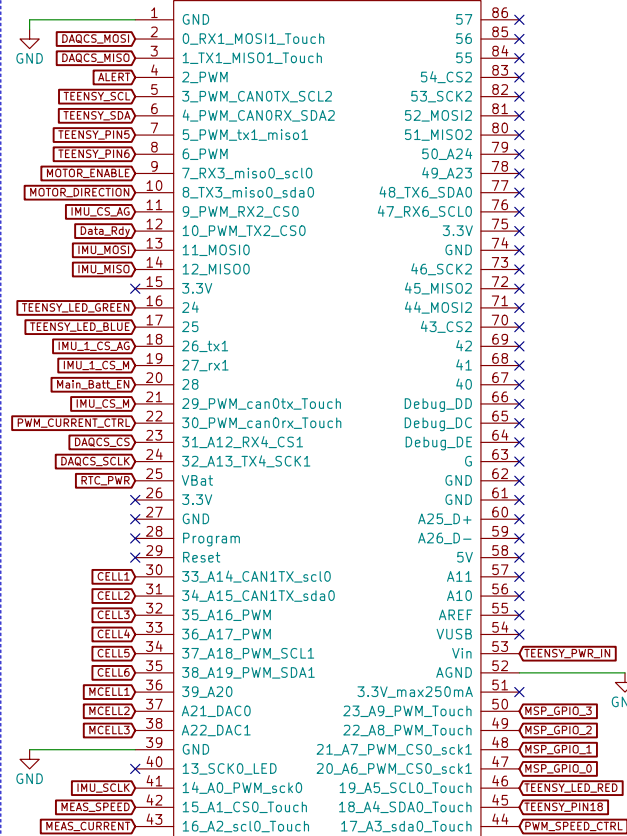
Rev:
Id: 2/6

Battery Cell Analog Inputs



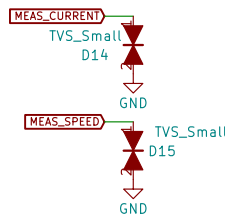
Teensy 3.6

U5

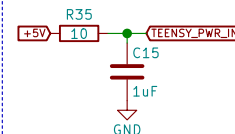


Teensy3.6

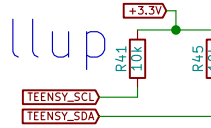
Motor FB



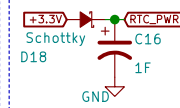
Filtering



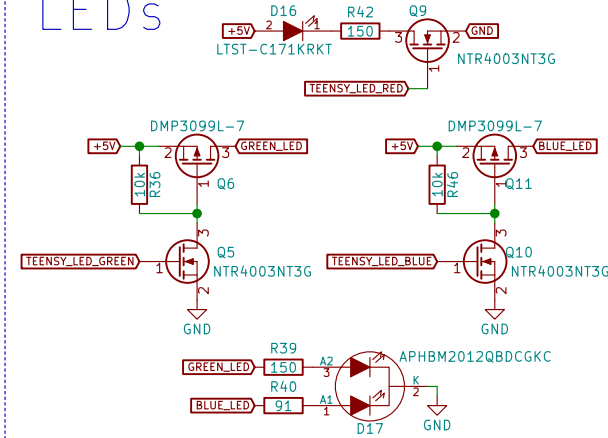
I2C Pullup



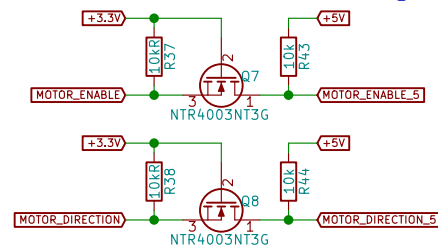
RTC



LEDs



Level Shifting



Sheet: /Teensy/
File: Teensy.sch

Title:

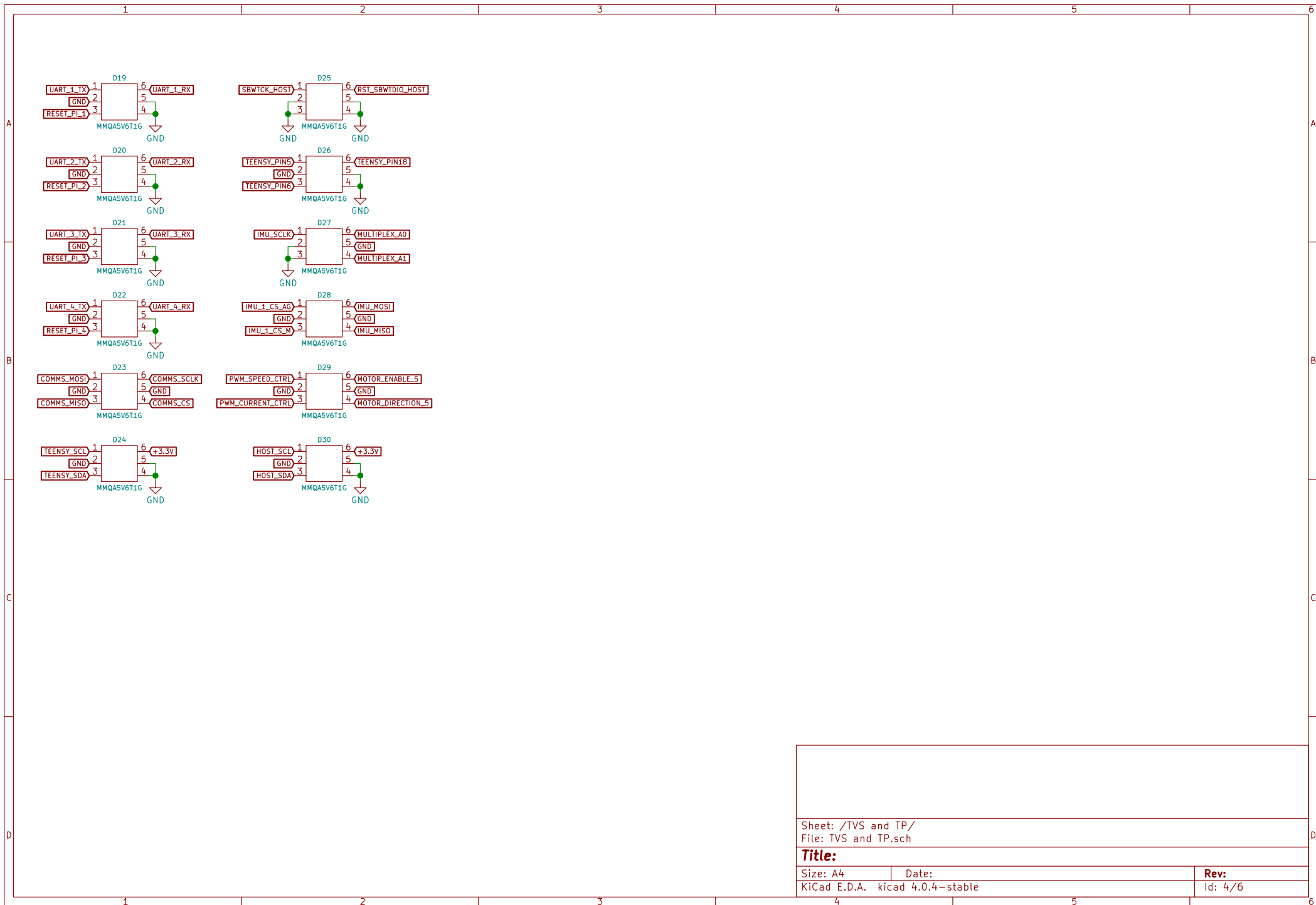
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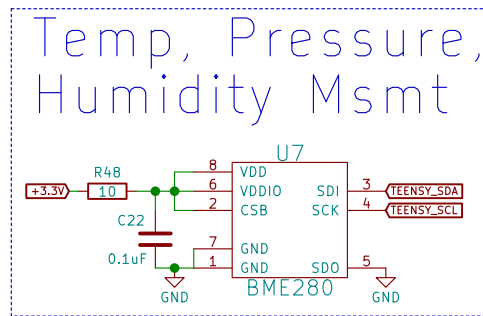
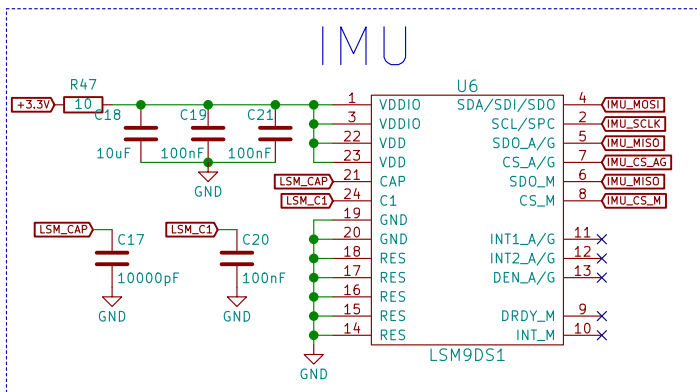
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KiCad E.D.A. kicad 4.0.4-stable

Rev:

Id: 3/6



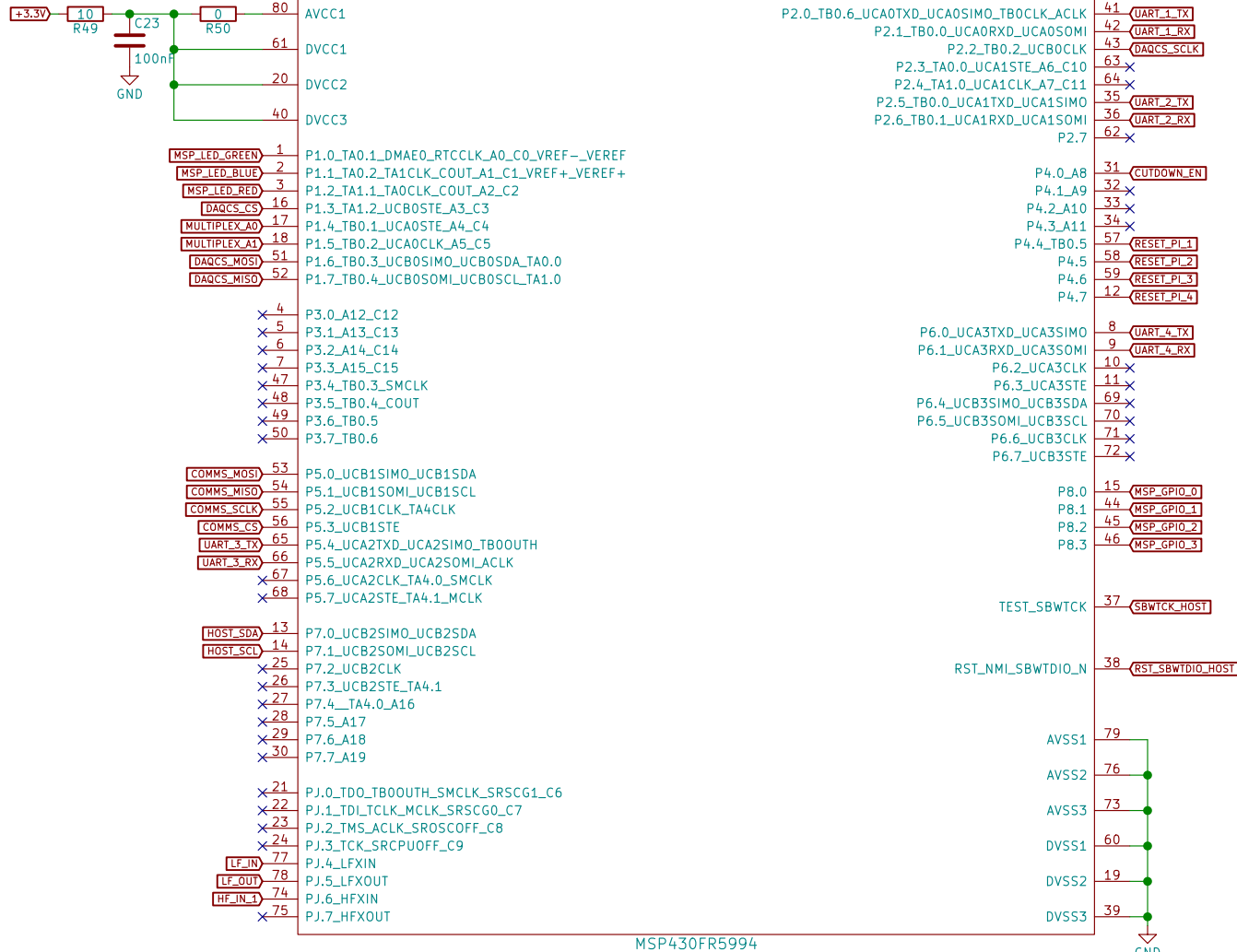


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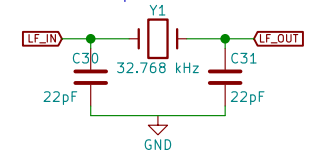
Host MSP430 Pinout

U8

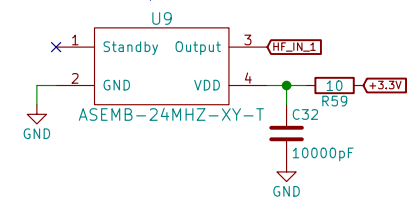
Layout: Place decoupling capacitor as close to pins as possible



Low-Freq. Oscillator



High-Freq. Oscillator



LEDs

