

Avionics
Avionics.sch

Power
Power.sch

Connectors
Connectors.sch

RF_and_GPS
RF_and_GPS.sch

Burn_Wires
Burn_Wires.sch

PyCubed mainboard adapted for the KickSat-2 mission.
<https://github.com/kicksat>

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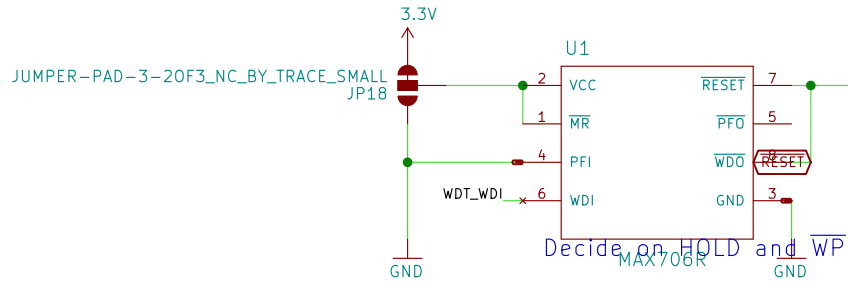
Sheet: /
File: mainboard.sch

Title: PyCubed Mainboard

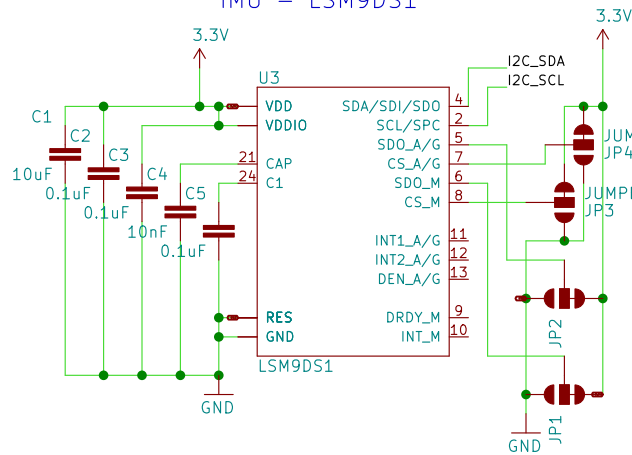
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KiCad E.D.A. kicad (5.1.0)-1

Rev: v01
Id: 1/6

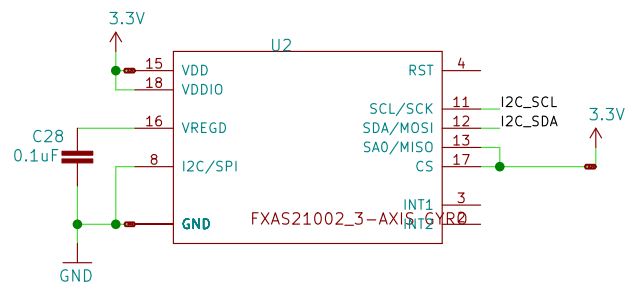
External WDT



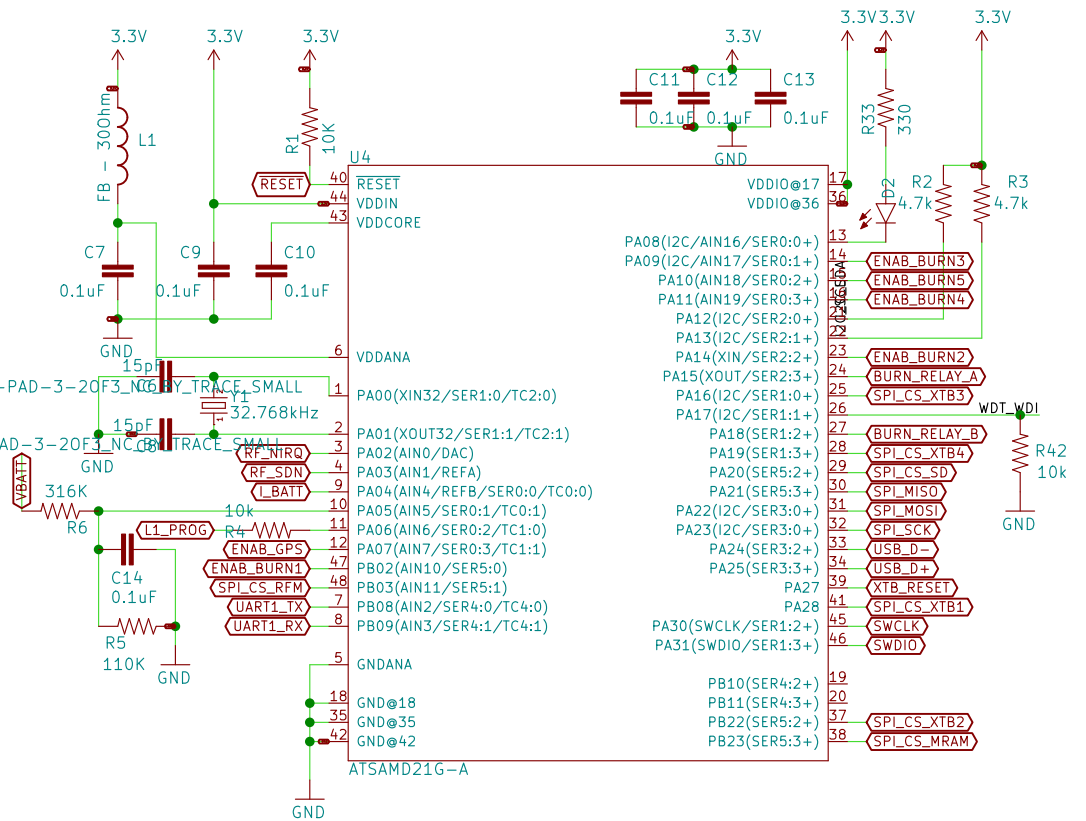
IMU - LSM9DS1



3-AXIS GYROSCOPE ADDRESS = 0x21



ATSAMD21G18 32-bit ARM Microprocessor



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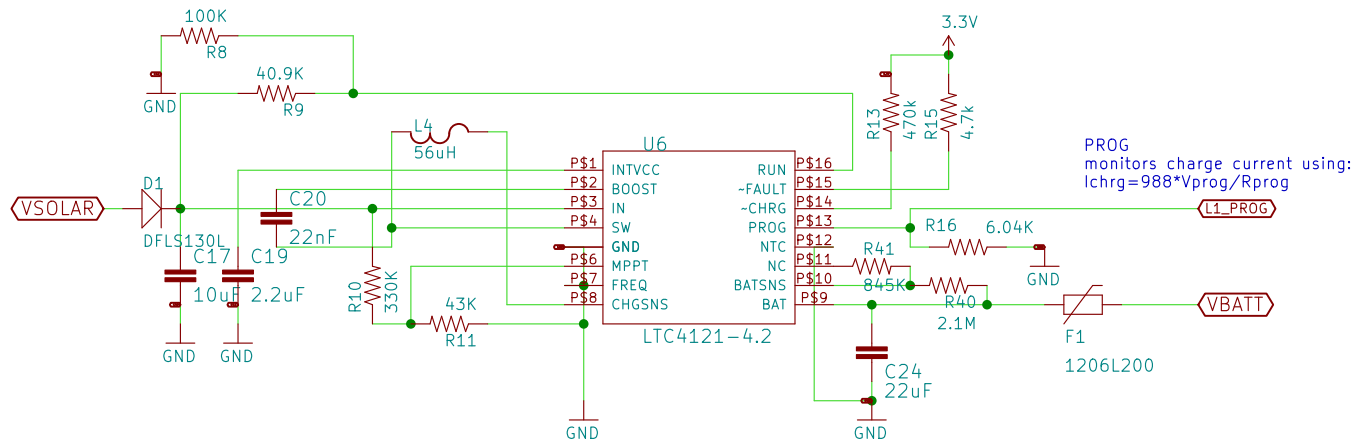
Avionics

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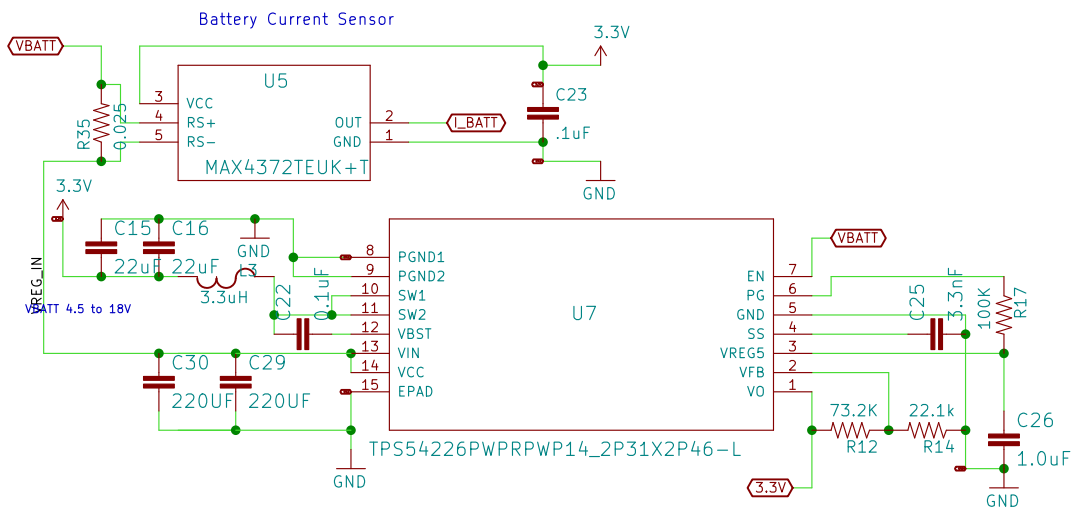
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Rev: v01
Id: 2/6

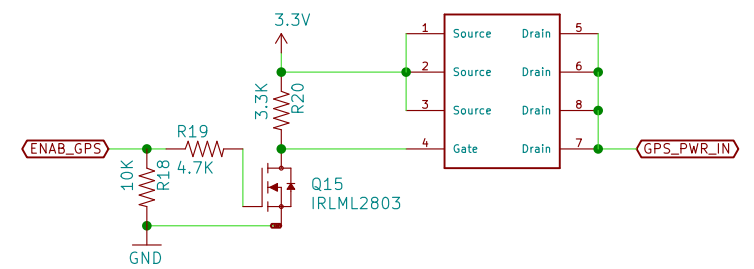
2s2P Li-Ion Battery Charging Circuit



Regulator - 3.3V OUT



GPS Power



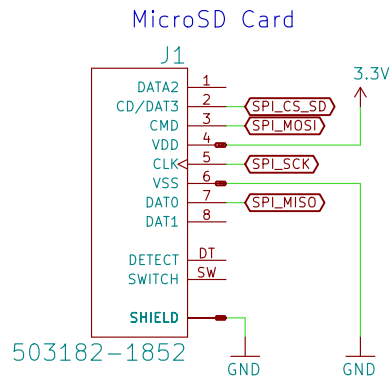
Power

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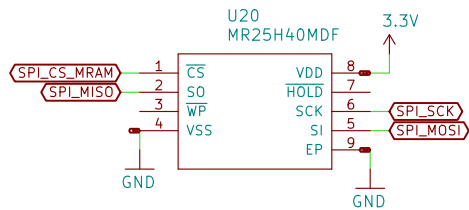
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 KiCad E.D.A. kicad (5.1.0)-1

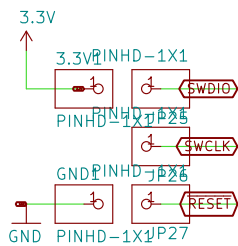
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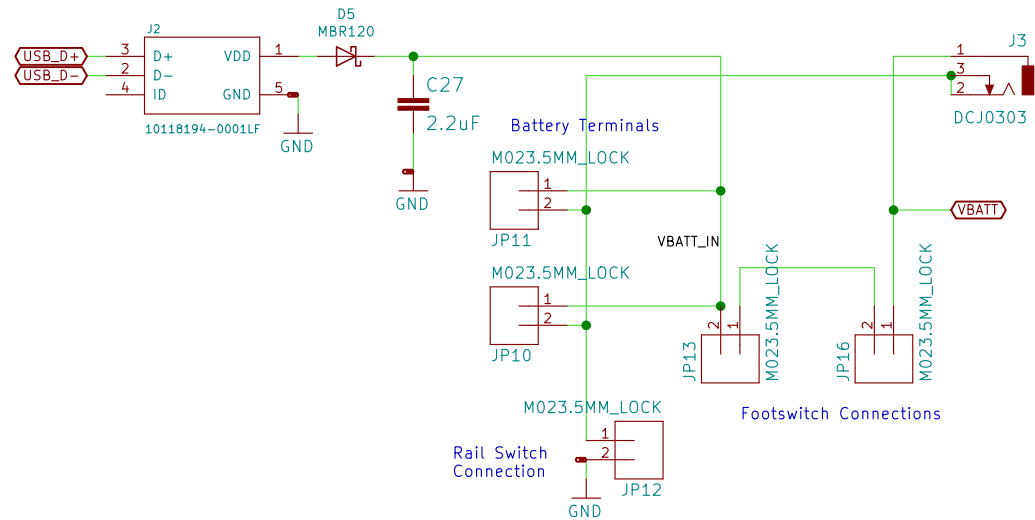
MRAM – Nonvolatile Memory
(4MB storage)



JTAG



Power Connectors: USB, Barrel Plug, Battery



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Connectors

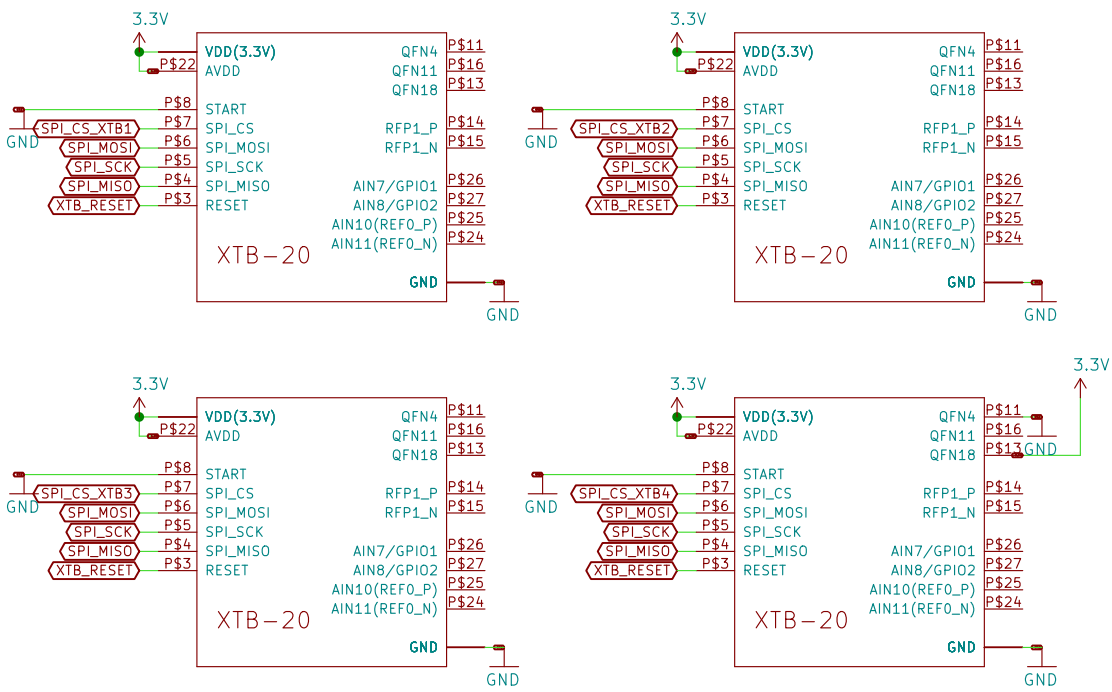
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Title: PyCubed Mainboard

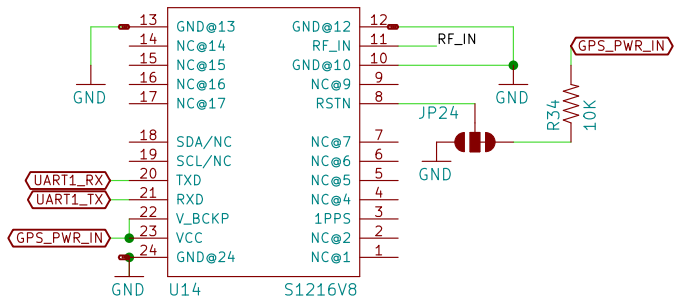
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Rev: v01
Id: 4/6

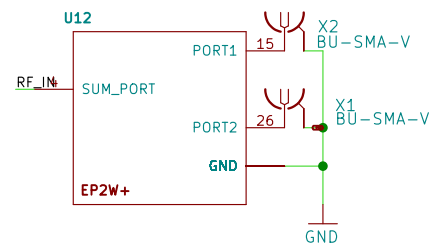
Science Payloads



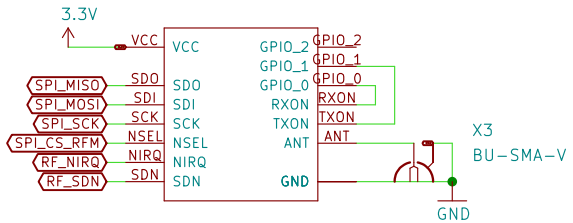
GPS Module



RF Splitter (2 Way, 0deg DC-Pass)



HopeRF RFM23B module at 3.3V



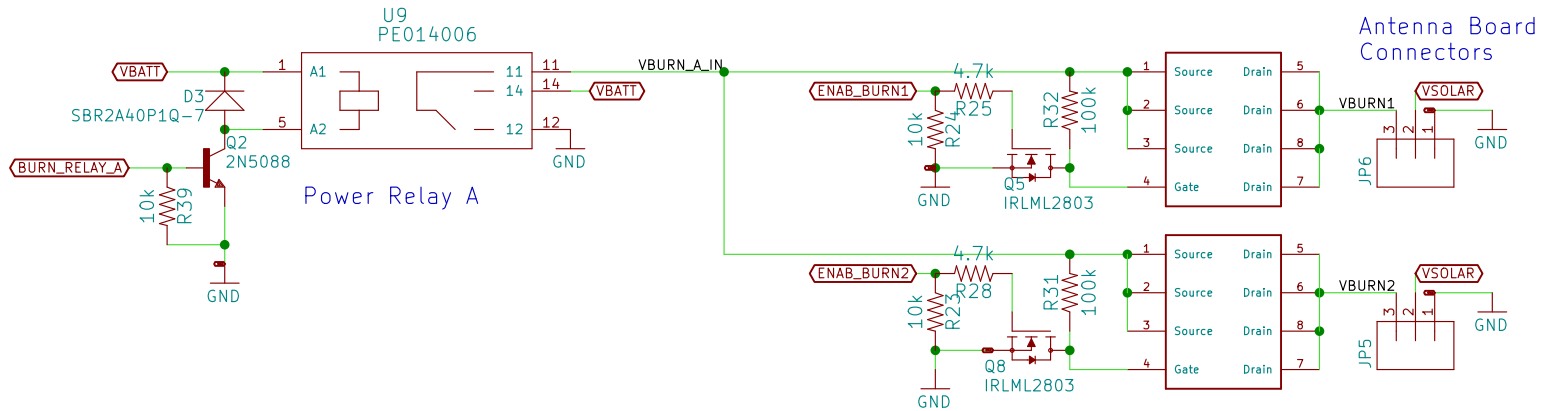
RF and GPS

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 File: RF_and_GPS.sch

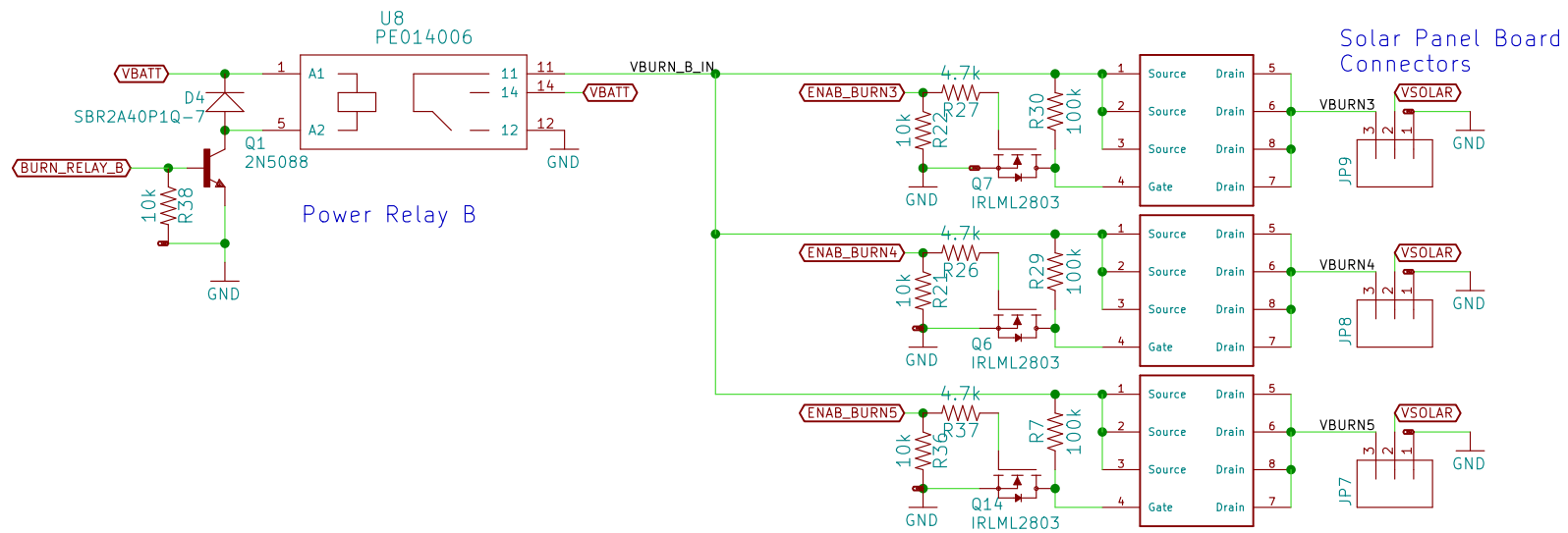
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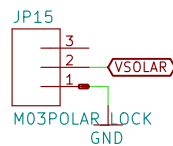
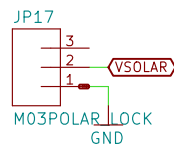
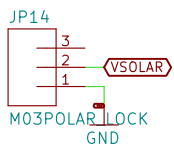
Burn Wire Control (Antenna Deployment)



Burn Wire Control (Sprite deployment)



Solar Panel Connectors



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Size: User	Date:	Rev: v01
KiCad E.D.A.	kiCad (5.1.0)-1	Id: 6/6