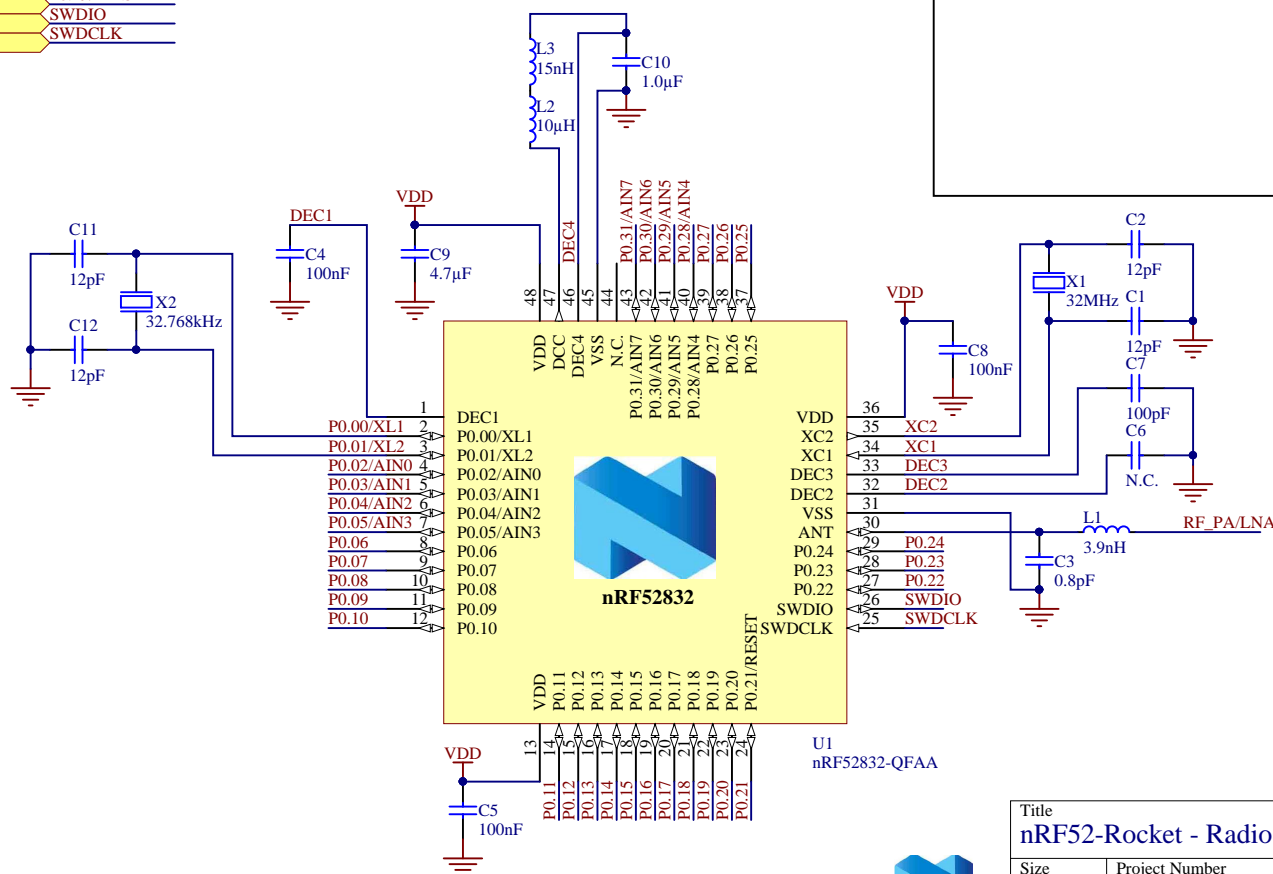
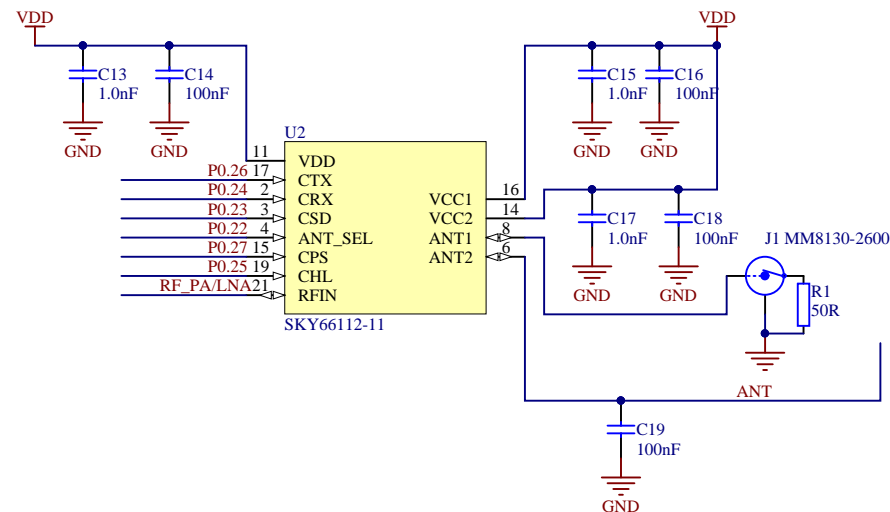


BOOST_ENABLE	P0.11
SC_DUMP	P0.12
IGNITION_1	P0.13
IGNITION_2	P0.14
VSC_SENSE	P0.05/AIN3
SERVO_EN	P0.15
SERVO1_CTRL	P0.20
SERVO2_CTRL	P0.19
SERVO3_CTRL	P0.18
SERVO4_CTRL	P0.17
SERVO5_CTRL	P0.16
SCL	P0.07
SDA	P0.06
MPU_INT	P0.09
MPL_INT1	P0.10
MPL_INT2	P0.28/AIN4
LED1_R	P0.30/AIN6
LED1_G	P0.29/AIN5
LED1_B	P0.28/AIN4
SWDIO	SWDIO
SWDCLK	SWDCLK

Power Amplifier/Low Noise Amplifier for Radio



Need better grounding vias near the RF section in general

Antenna is too short on the PCB!

C19 needs better grounding

P0.26 TP10
P0.24 TP11
P0.23 TP12
P0.27 TP13
P0.25 TP14

P0.03/AIN TP?
P0.04/AIN TP?
P0.02/AIN TP?



Title
nRF52-Rocket - Radio

Size
A4

Project Number
4425

Date: 02.09.2016

File: pca20027 - radio.SchDoc

Revision
v0.5

Sheet 1 of 5

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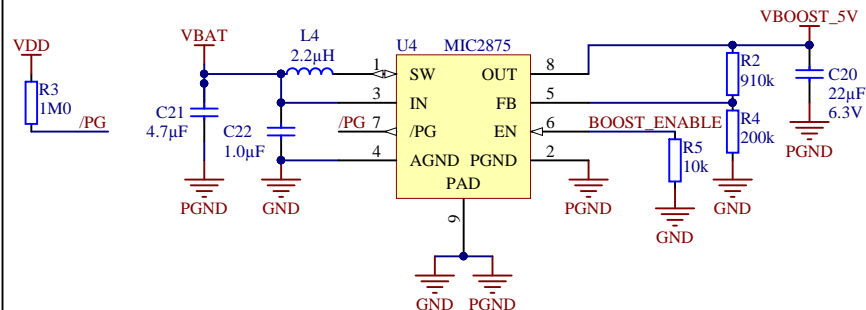


BOOST_ENABLE BOOST_ENABLE

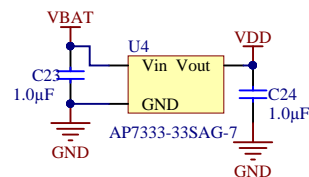
/PG NEEDS TO GO TO A GPIO!!

VBOOST_5V TP1
VBAT TP2
VDD TP3
GND TP4

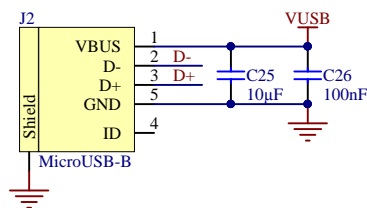
5V Boost Converter



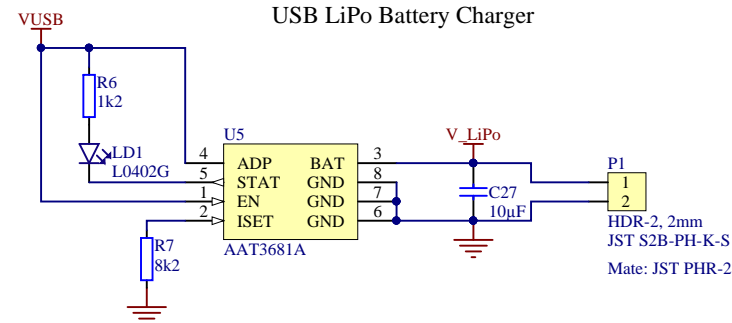
3.3V LDO



USB Connector



USB LiPo Battery Charger



Title
nRF52-Rocket - Power

Size
A4

Project Number
4425

Revision
v0.5

Date: 02.09.2016

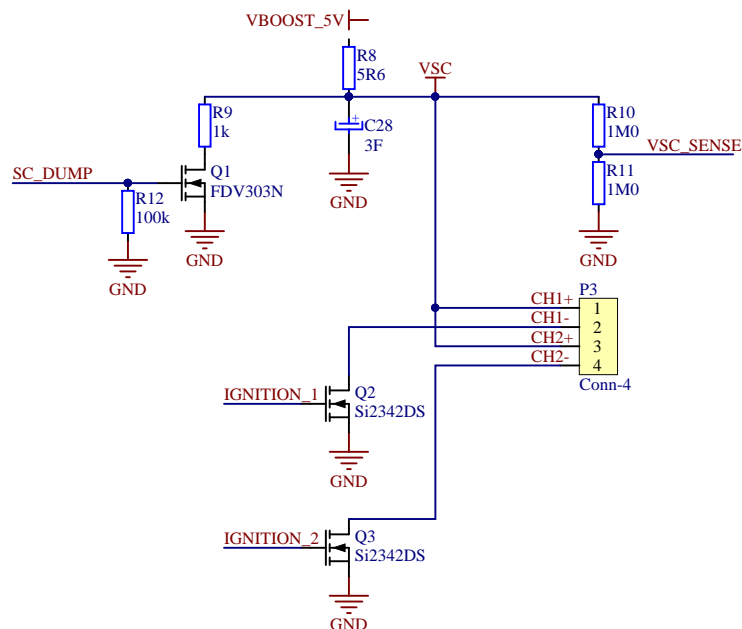
Sheet 2 of 5

File: pca20027 - power.SchDoc

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Supercapacitor Charging and Rocket Engine Ignition



SC_DUMP	SC_DUMP
IGNITION_1	IGNITION_1
IGNITION_2	IGNITION_2
VSC_SENSE	VSC_SENSE
SERVO_EN	SERVO_EN
SERVO1_CTRL	SERVO1_CTRL
SERVO2_CTRL	SERVO2_CTRL
SERVO3_CTRL	SERVO3_CTRL
SERVO4_CTRL	SERVO4_CTRL
SERVO5_CTRL	SERVO5_CTRL

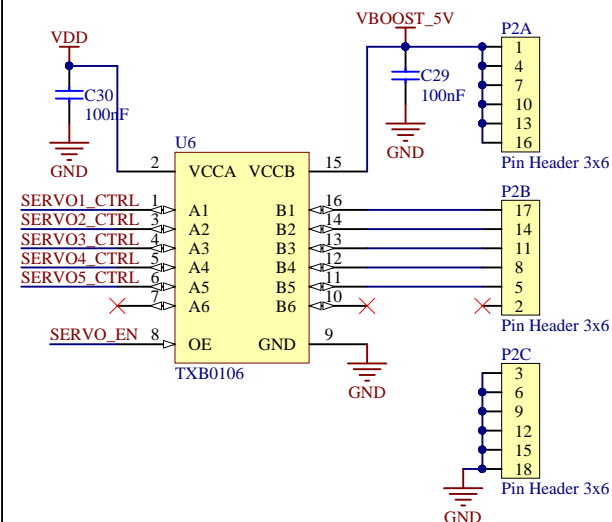
VSC	TP5
VSC_SENSE	TP6
IGNITION_1	TP7
IGNITION_2	TP8
SERVO_EN	TP9

▲ R8: Single 201 resistor cannot handle that much power from the initial capacitor charging!!!

▲ R9: should use a smaller resistor for faster draining

▲ Could also use a transistor here in series with the supercapacitor so 5V enable is decoupled from cap charging

3V to 5V Translator for Servo Control or Other Peripherals



▲ A6 could be connected to a free GPIO if desired

▲ ^ 5V and SIGNAL ARE SWITCHED in physical position. Thus all the used servos not in packages have switched Signal and Power

Title
nRF52-Rocket - Rocketry

Size
A4 Project Number
4425

Date: 02.09.2016

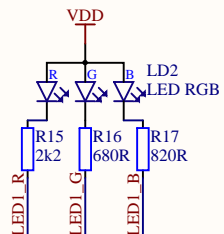
File: pca20027 - rocketry.SchDoc

Revision
v0.5

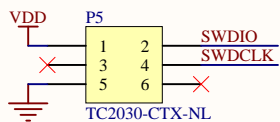
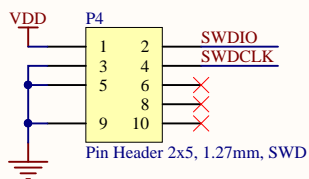
Sheet 3 of 5

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Programming / debugging interface



Title
nRF52-Rocket - User Interface

Size
A4

Project Number
4425

Revision
v0.5



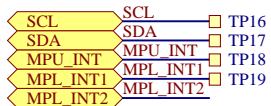
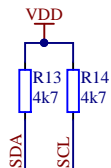
Date: 02.09.2016

Sheet 4 of 5

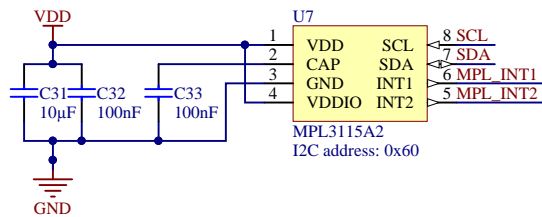
File: pca20027 - user_interface.SchDoc

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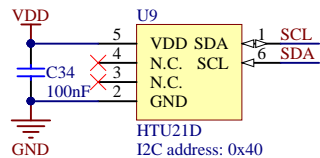
I2C PU resistors



Altimeter

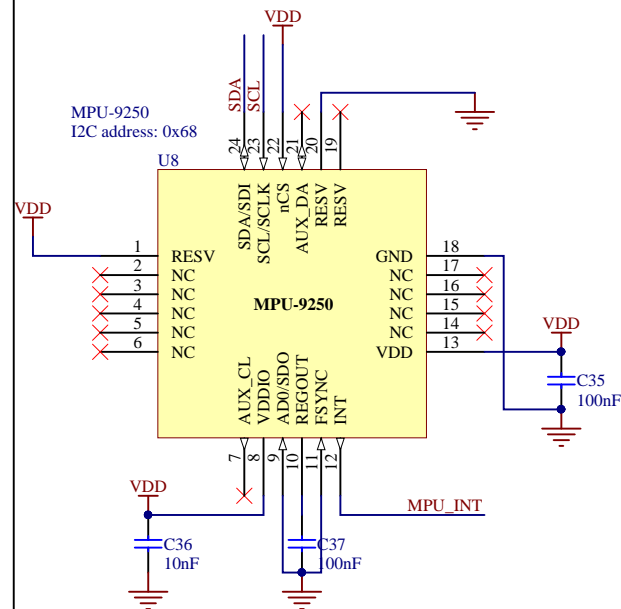


Humidity and Temperature Sensor



▲ SCL AND SDA ARE SWITCHED!

9 Axis IMU



Title
nRF52-Rocket - Sensors

Size
A4

Project Number
4425

Revision
v0.5

Date: 02.09.2016

Sheet 5 of 5

File: pca20027 - sensors.SchDoc

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