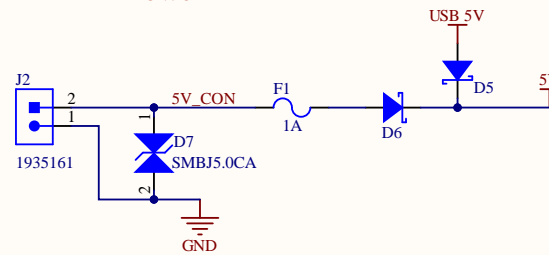
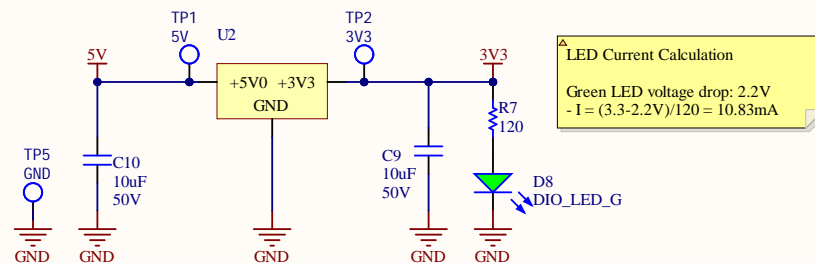


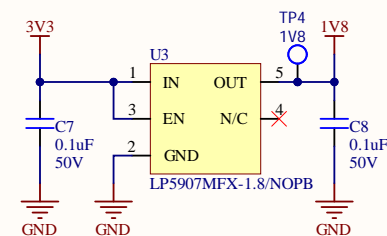
## Power In



## 5V to 3.3V LDO

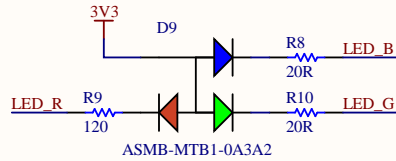


## 3.3V to 1.8V LDO





## Test LEDs

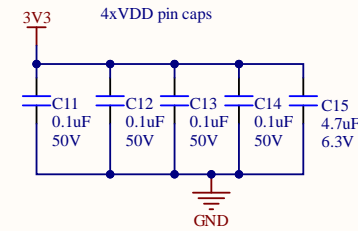


### Current Calculations

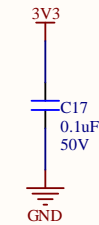
Green LED voltage drop: 2.2V  
 $- I = (3.3 - 2.2V) / 120 = 10.83mA$

RGB LED voltage drops:  
 - Red: 2.1V:  $I = (3.3 - 2.1V) / 120 = 10mA$   
 - Blue: 3.1V:  $I = (3.3 - 3.1V) / 20 = 10mA$   
 - Green: 3.1V:  $I = (3.3 - 3.1V) / 20 = 10mA$

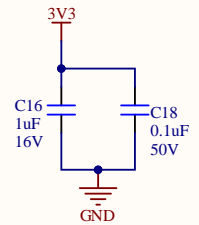
## Decoupling Caps



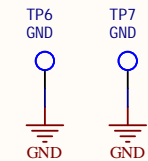
### VBAT pin cap



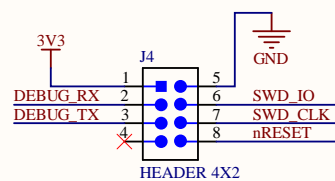
### VDDA pin caps



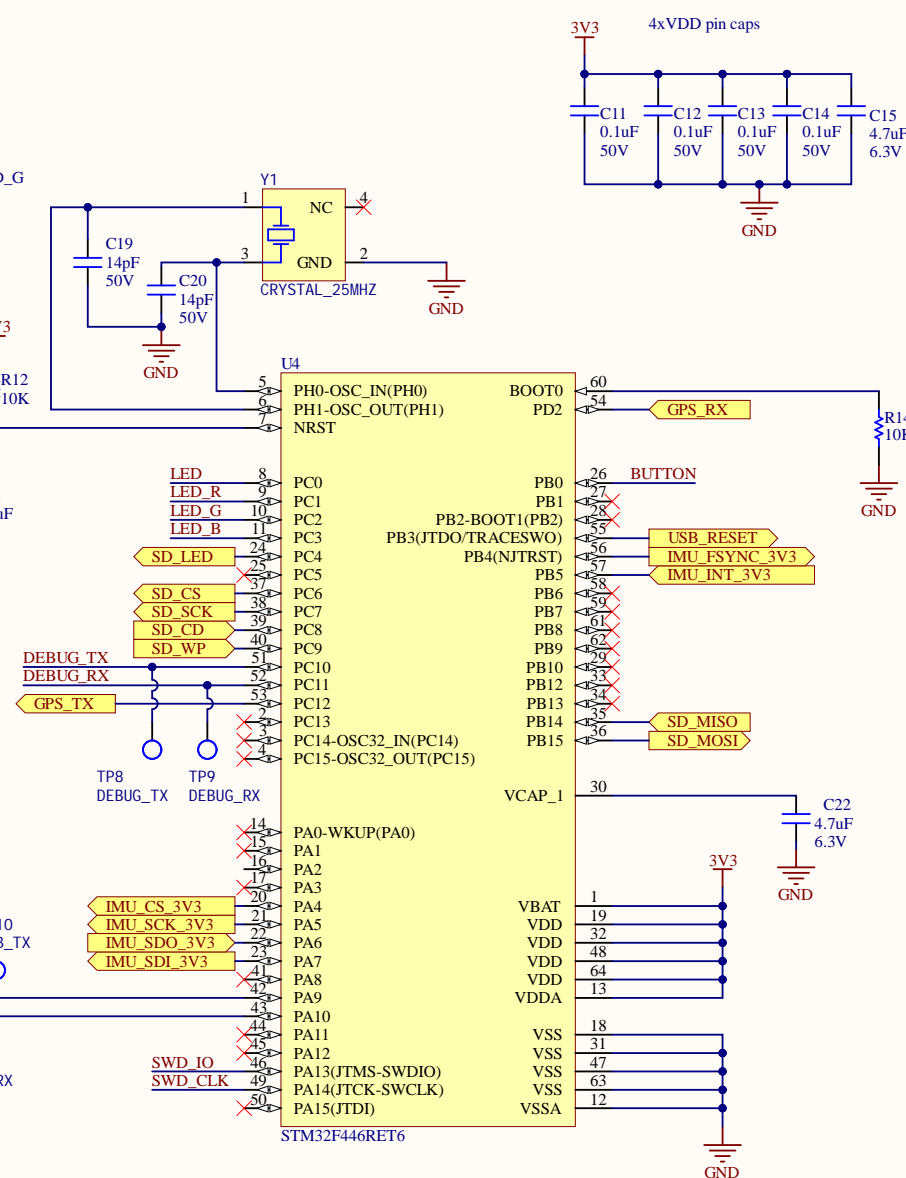
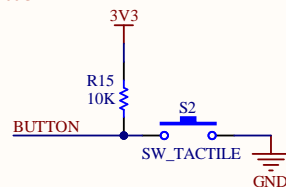
## GND Test Points



## Debug/Programming



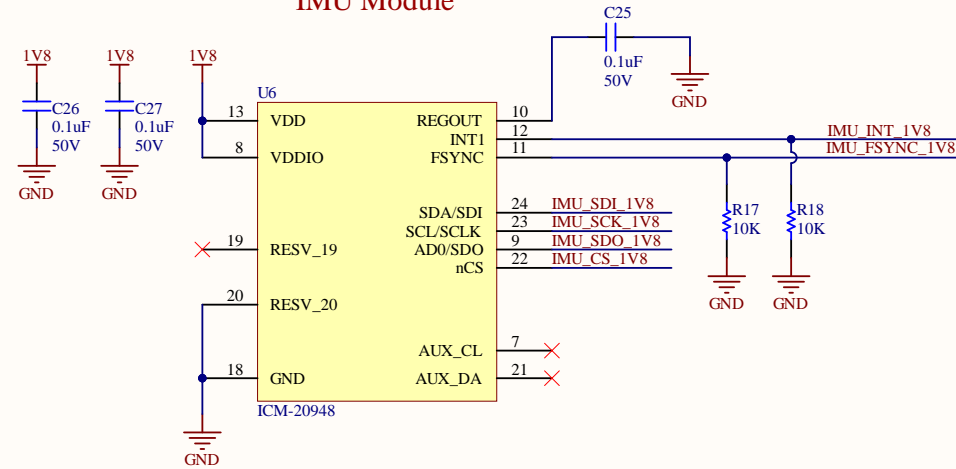
## Test Button



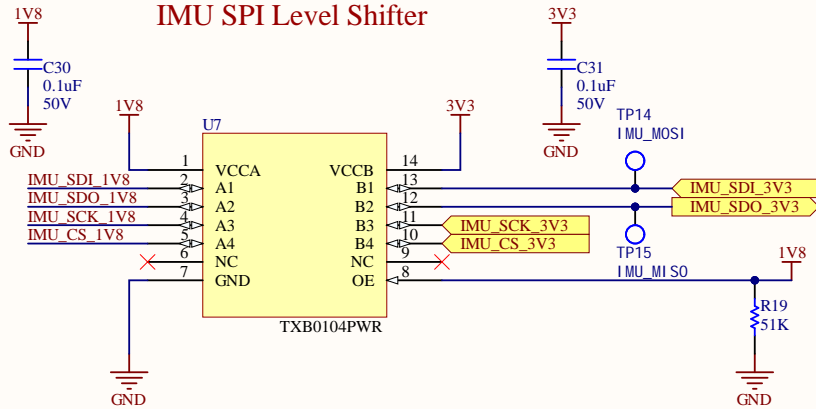
Title	Localization	Altium Limited L3, 12a Rodborough Rd Frenchs Forest NSW Australia 2086
Size:	Letter	Drawn By: Alaina Hansen, Cindy Li
Date:	2020-05-08	Sheet 8 of 6
File:	C:\UWRT\MarsRover2020-PCB\Projects\Localization\Rev1\sch\MCU_SchDoc	



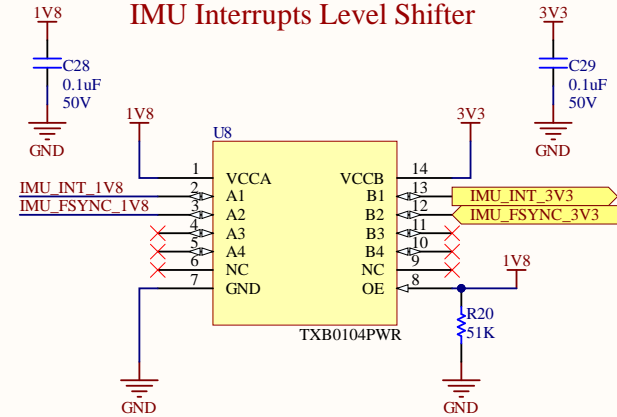
## IMU Module



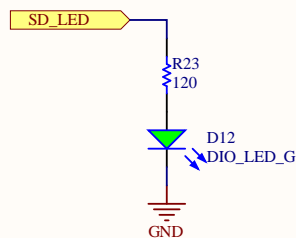
## IMU SPI Level Shifter



## IMU Interrupts Level Shifter







**LED Current Calculation**  
 Green LED voltage drop: 2.2V  
 $I = (3.3 - 2.2V) / (120\text{Ohm}) = 10.83\text{mA}$

## SD Card Connector

