

A

A

B

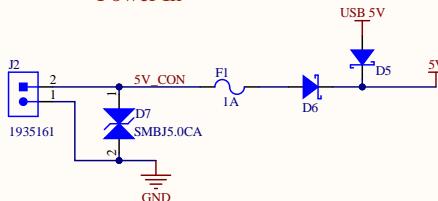
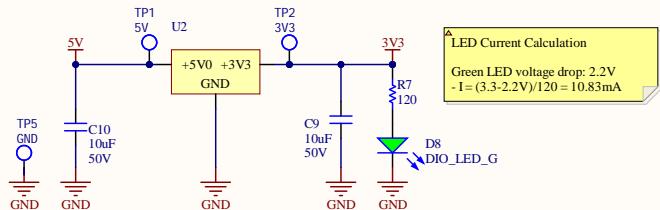
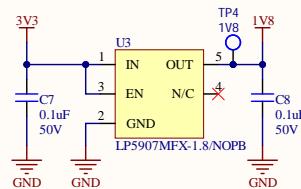
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C

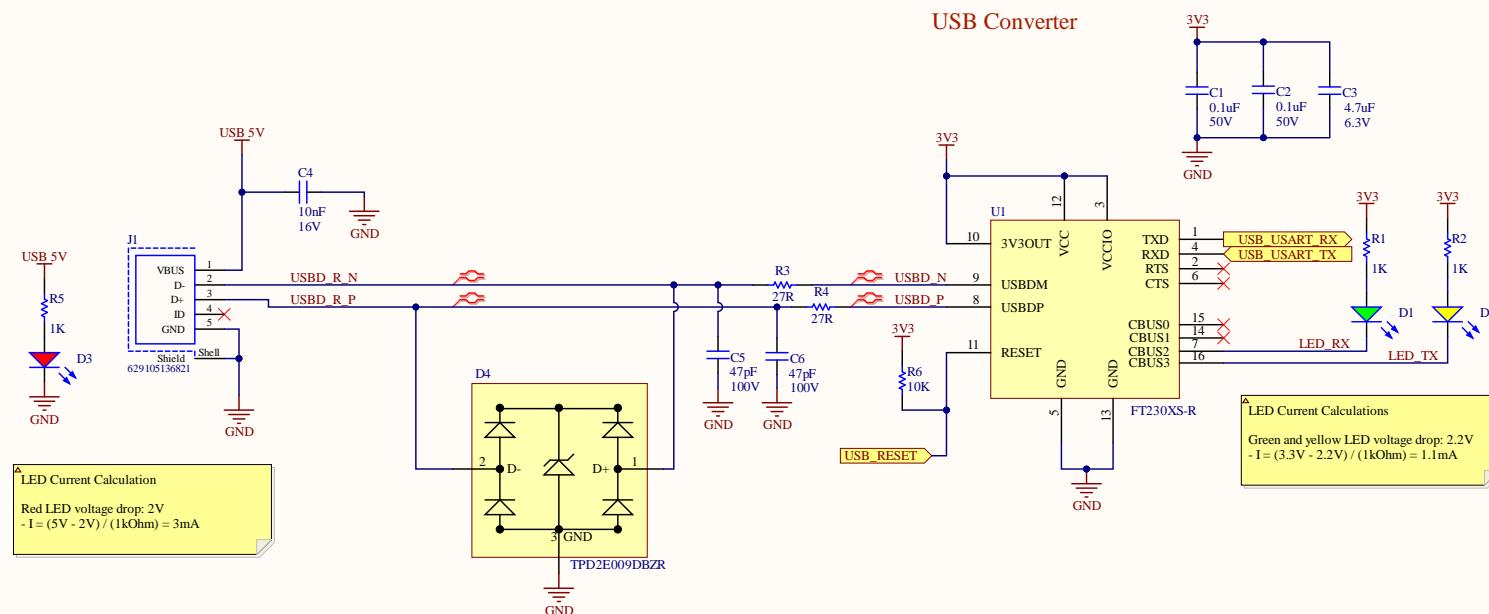
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D

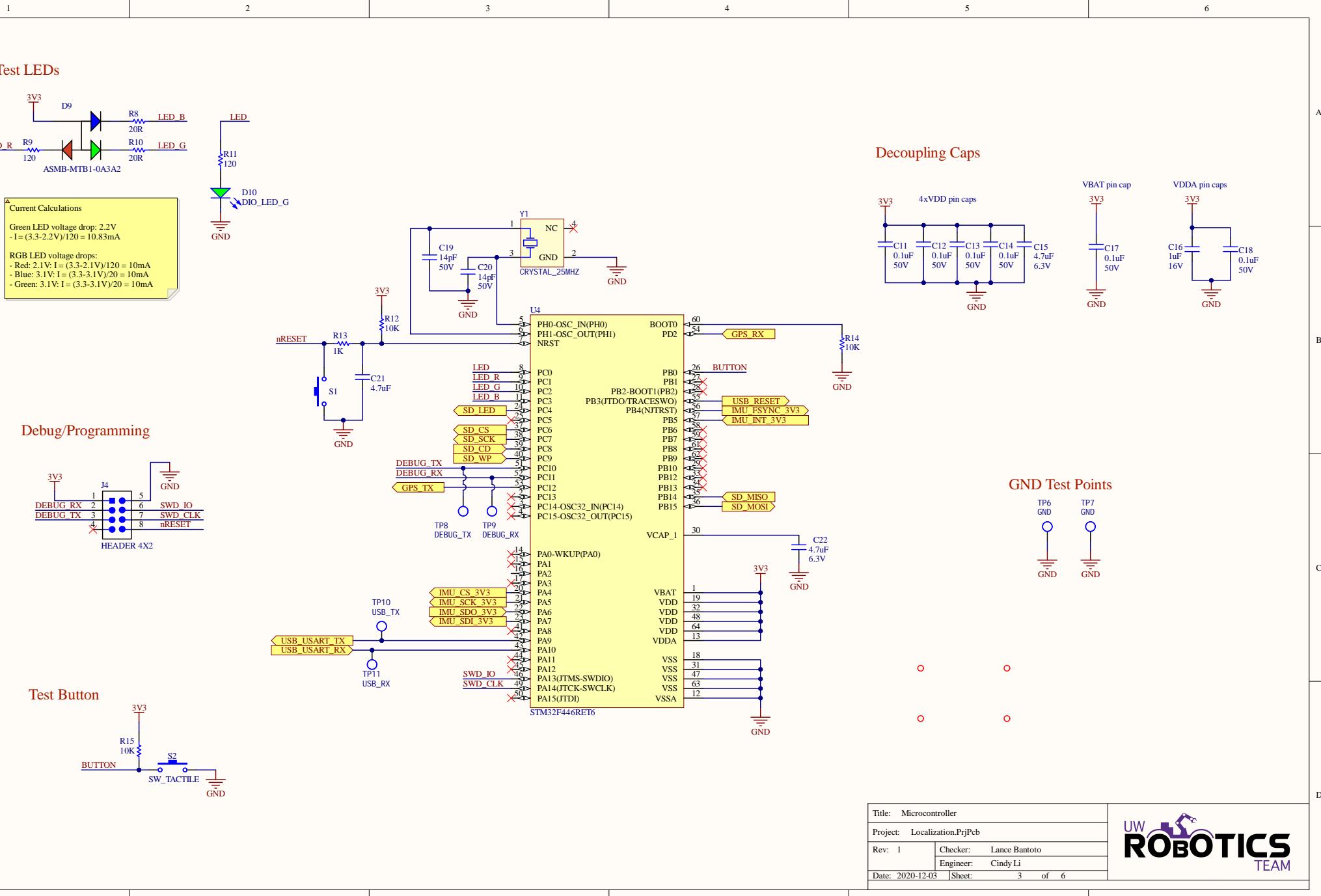
D

Power In**5V to 3.3V LDO****3.3V to 1.8V LDO**

Title: Power	
Project: Localization.PrjPcb	
Rev: 1	Checker: Lance Bantoto
Engineer: Cindy Li	
Date: 2020-12-03	Sheet: 1 of 6



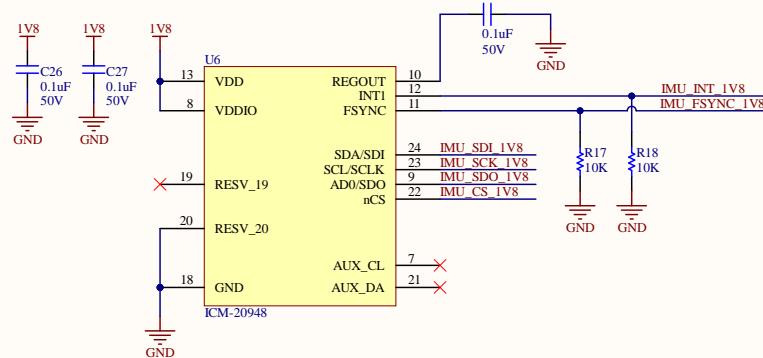
Title: USB	
Project: Localization.PrjPcb	
Rev: 1	Checker: Lance Bantoto
Engineer: Cindy Li	
Date: 2020-12-03	Sheet: 2 of 6



Title: Microcontroller	
Project: Localization.PrjPcb	
Rev: 1	Checker: Lance Bantoto
Engineer: Cindy Li	Date: 2020-12-03 Sheet: 3 of 6

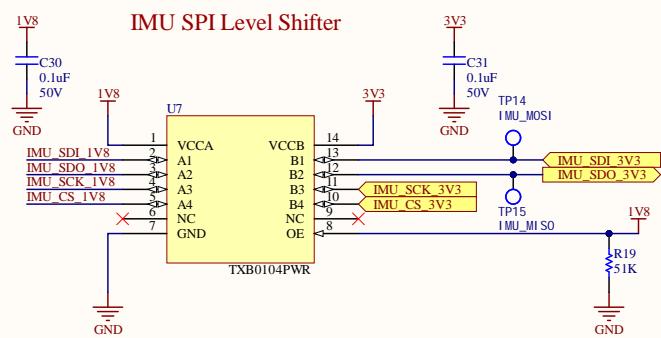
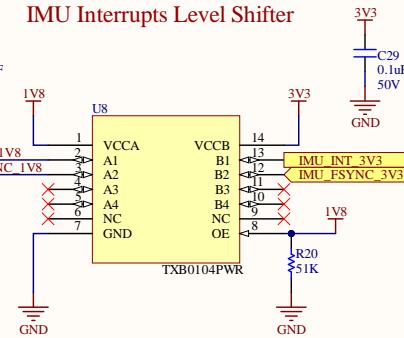
A

A

IMU Module

B

B

IMU SPI Level Shifter**IMU Interrupts Level Shifter**

Title: IMU

Project: Localization.PrjPcb

Rev: 1 Checker: Lance Bantoto

Engineer: Cindy Li

Date: 2020-12-03 Sheet: 4 of 6



A

A

B

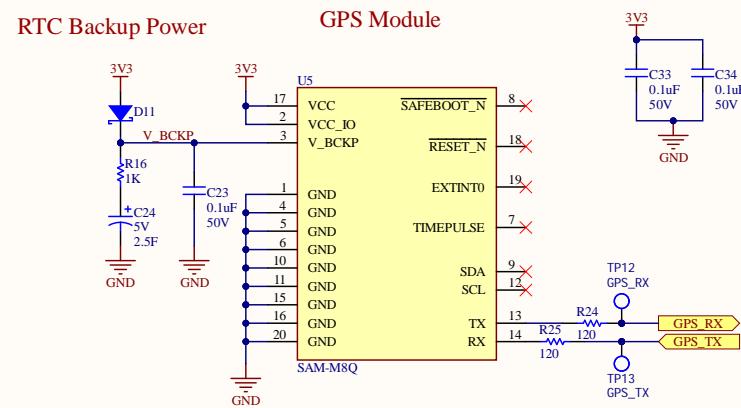
B

C

C

D

D



Supercapacitor Calculations

$V_{cc} = 3.3V$, $V_f = 0.22V$, $V_{min} = 1.4V$, $I_{b kp} = 15\mu A$, $C = 2.5F$
 $t_{b kp} = (2.5F) * (3.3V - 0.22V - 1.4V) / (15\mu A) = 280,000s = 3.241 \text{ days}$
 Capacitor tolerance: -0%, +100%

Title: GPS	
Project: Localization.PrjPcb	
Rev: 1	Checker: Lance Bantoto
Engineer: Cindy Li	
Date: 2020-12-03	Sheet: 5 of 6



A

A

B

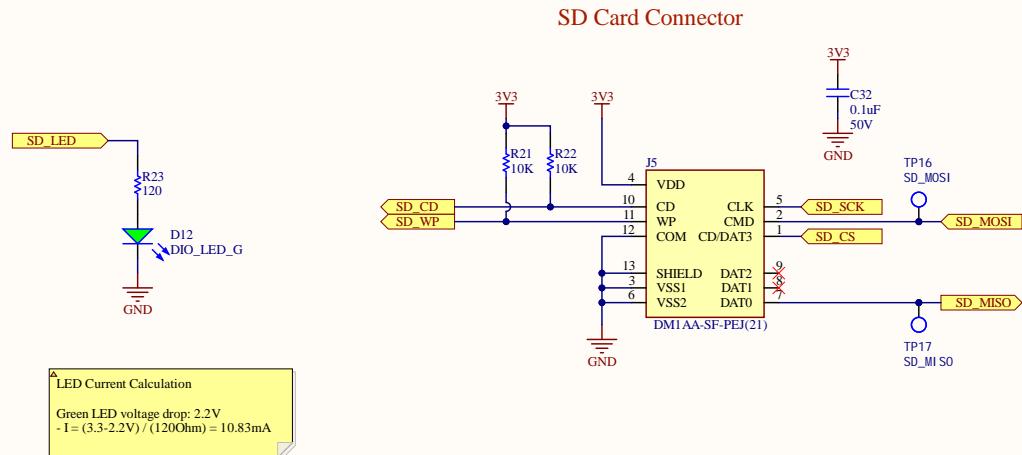
B

C

C

D

D



Title: SD Card	
Project: Localization.PrjPcb	
Rev: 1	Checker: Lance Bantoto
Engineer: Cindy Li	
Date: 2020-12-03	Sheet: 6 of 6

