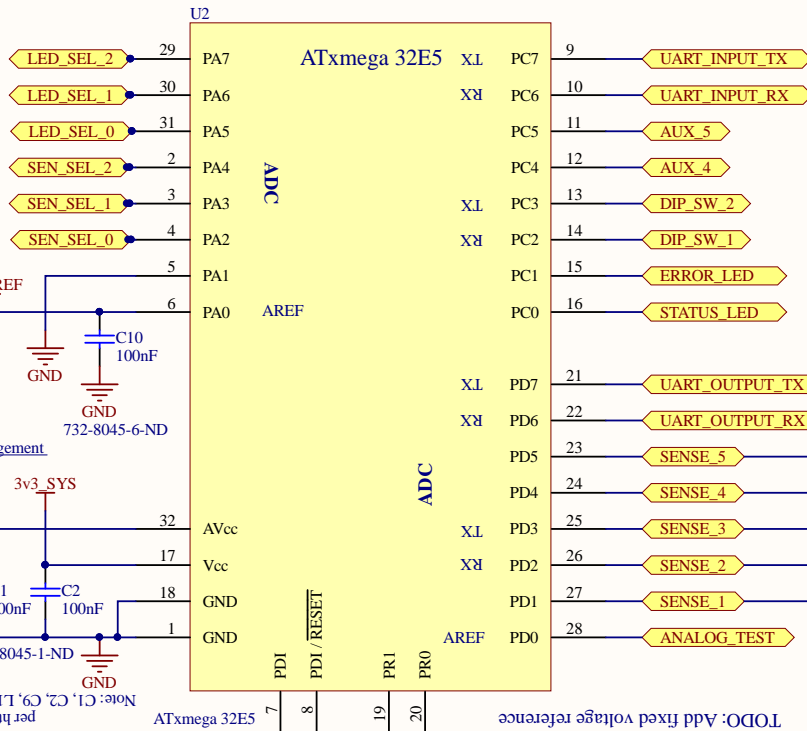
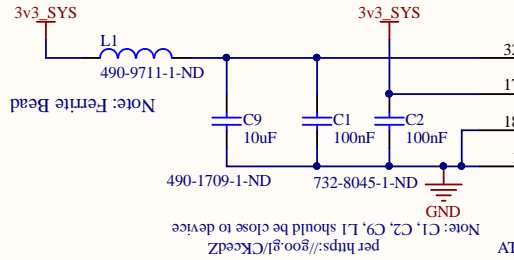


MCU



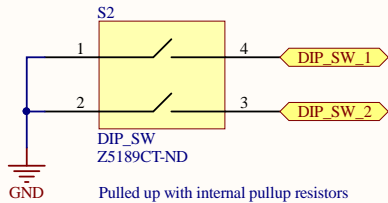
Source Code

Note: Source code can be found at:
<https://github.com/OSURoboticsClub/InventoryManagement>

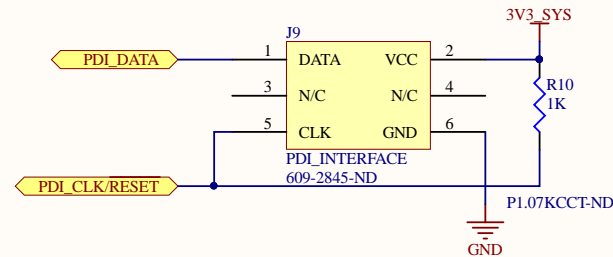


TODO: Do we want some voltage divider references on the ADC inputs?

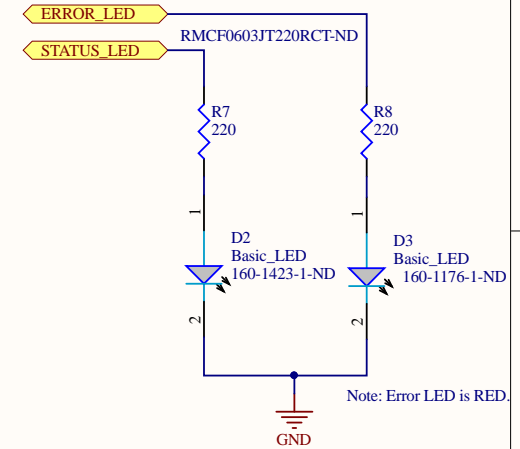
Settings Switch



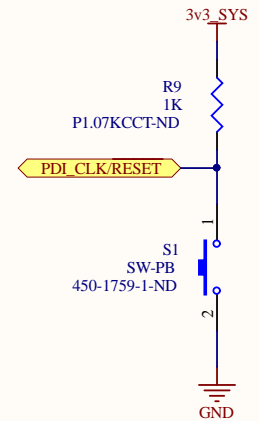
MCU PDI



MCU LEDs



MCU Reset



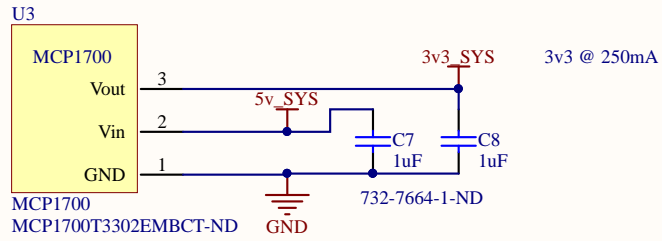
XMega ADC Application Notes

Note: One of the first 7 channels needs to be GND, for our reference
 Note: AREFA and AREFD are bit 0
 Note: They need to be fed (3v3~-6) volts if used

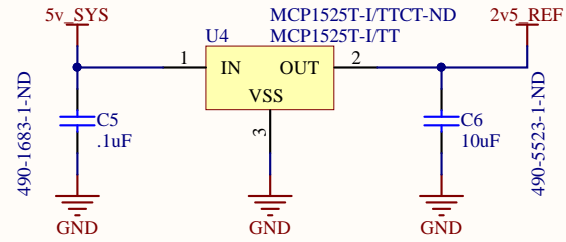
Title: Microcontroller.SchDoc		
Size: A4	Number: 1	Engineer: Nick McComb
Date: 11/29/2016	Time: 11:13:22 AM	Sheet 1 of 6
File: H:\Google Drive\OSURC Master Drive [2016-2017]\Programs\ECE Capstone - Inventory Management System 2016-2017\Hard		



3v3 Linear



2v5v Reference

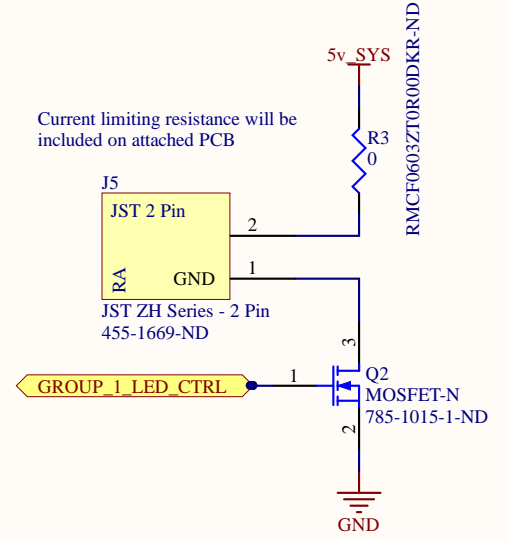
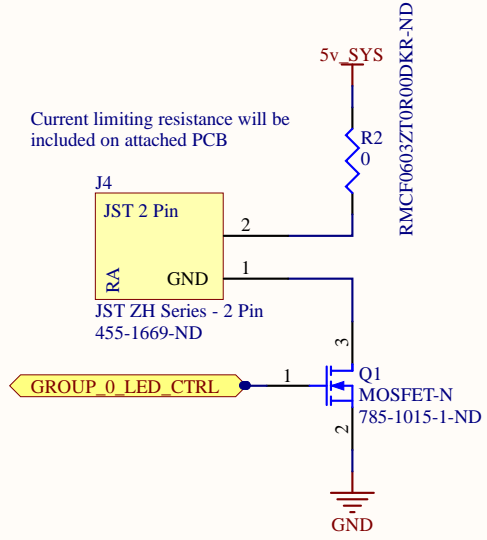
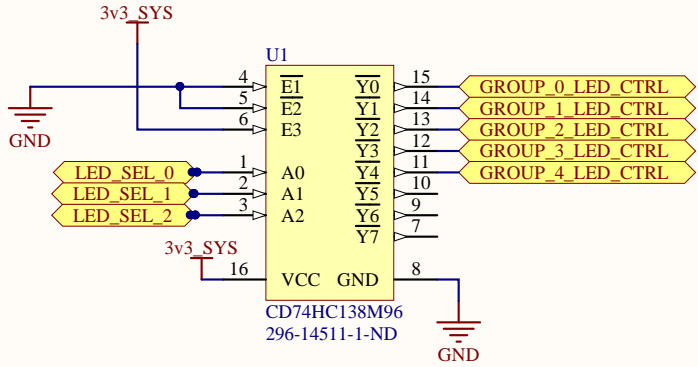


Max Current: 8mA

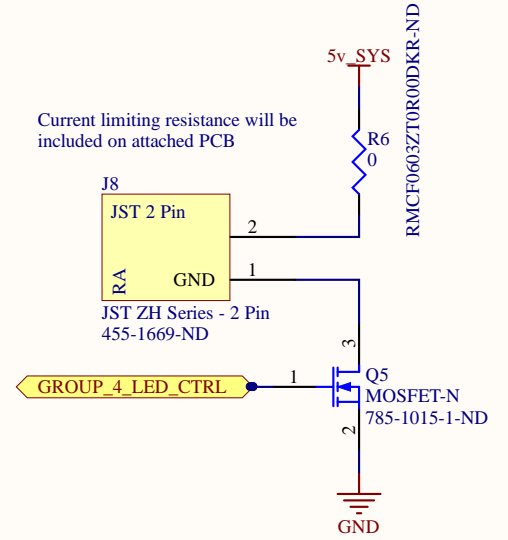
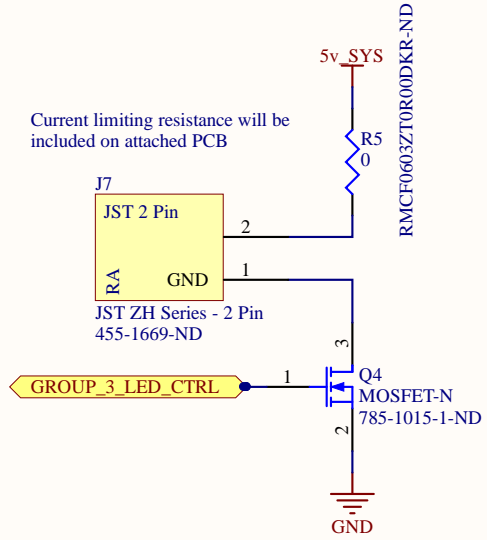
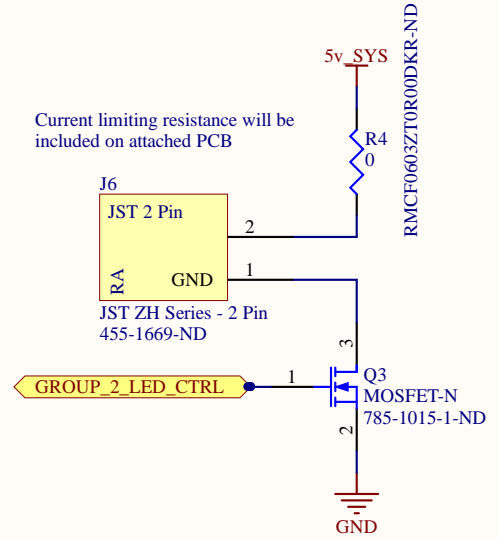
Title: PowerManagement.SchDoc		
Size: A4	Number: 2	Engineer: Nick McComb
Date: 11/29/2016	Time: 11:13:22 AM	Sheet 2 of 6
File:		

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Multiplexing

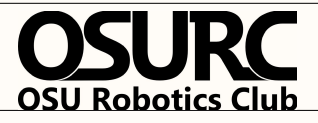


IR LED Control

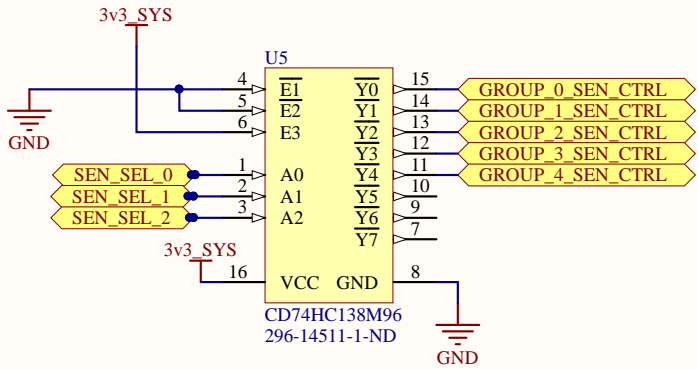


Note: These connections are to PCBs that control the LED outputs
They provide control circuitry for the LEDs

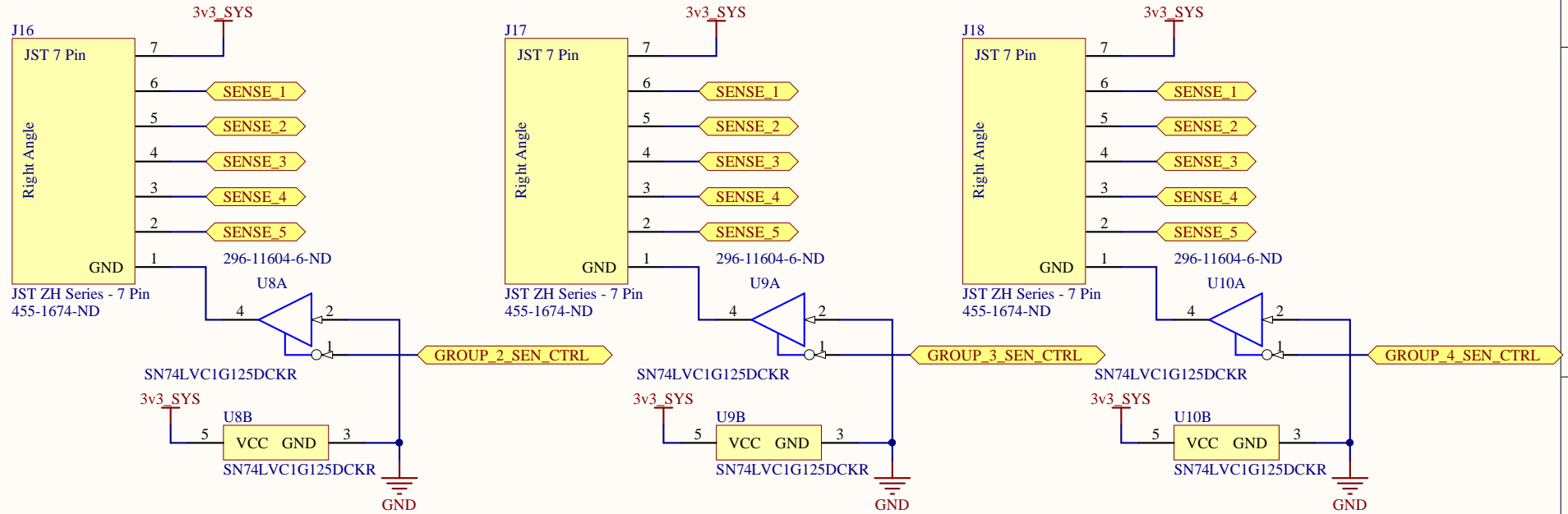
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Date: 11/29/2016	Time: 11:13:22 AM	Sheet 3 of 6
File:		



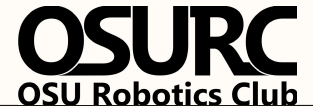
Multiplexing



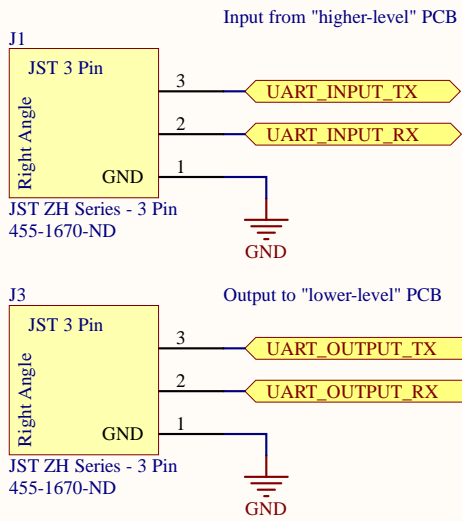
IR Reciever Input Control



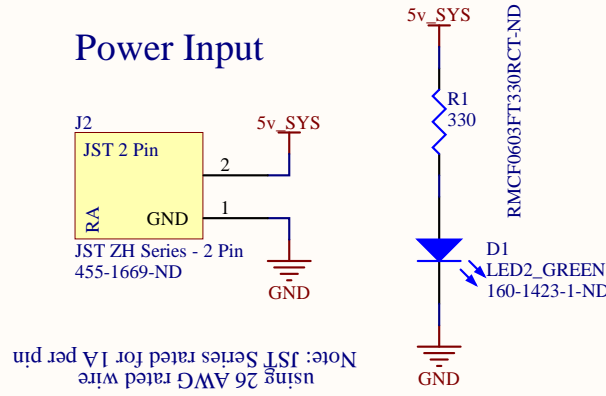
Title Sensing.SchDoc		
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Date: 11/29/2016	Time: 11:13:22 AM	Sheet 4 of 6
File:		



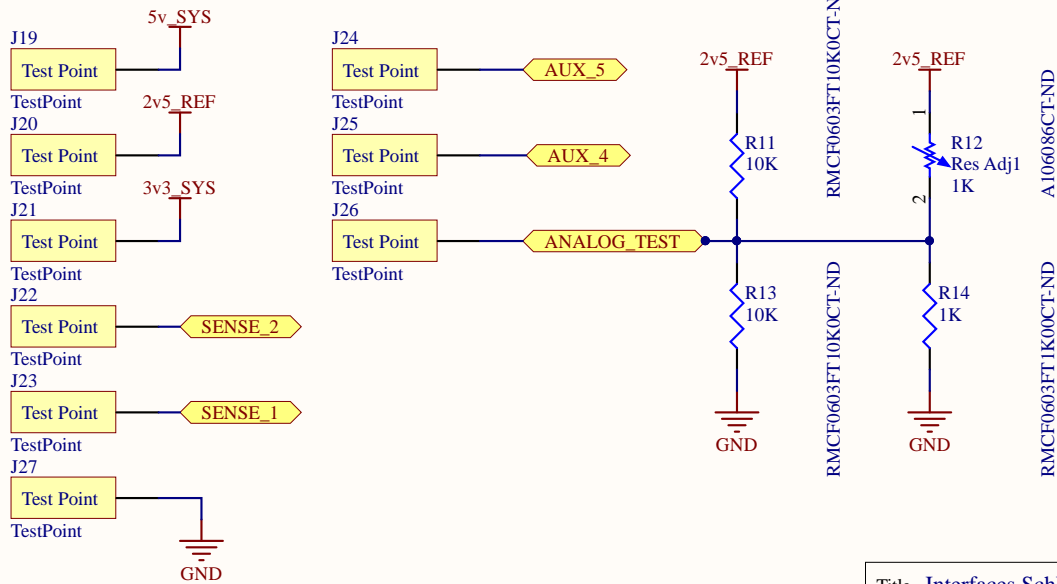
UART Communication



Power Input



UART Communication



Title Interfaces.SchDoc		
Size: A4	Number: 5	Engineer: Nick McComb
Date: 11/29/2016	Time: 11:13:22 AM	Sheet 5 of 6
File:		

1

2

3

4

Mounting Holes

J10

Mounting Hole

MountingHoles

J11

Mounting Hole

MountingHoles

J12

Mounting Hole

MountingHoles

J13

Mounting Hole

MountingHoles

A

A

B

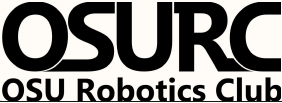
B

C

C

D

D

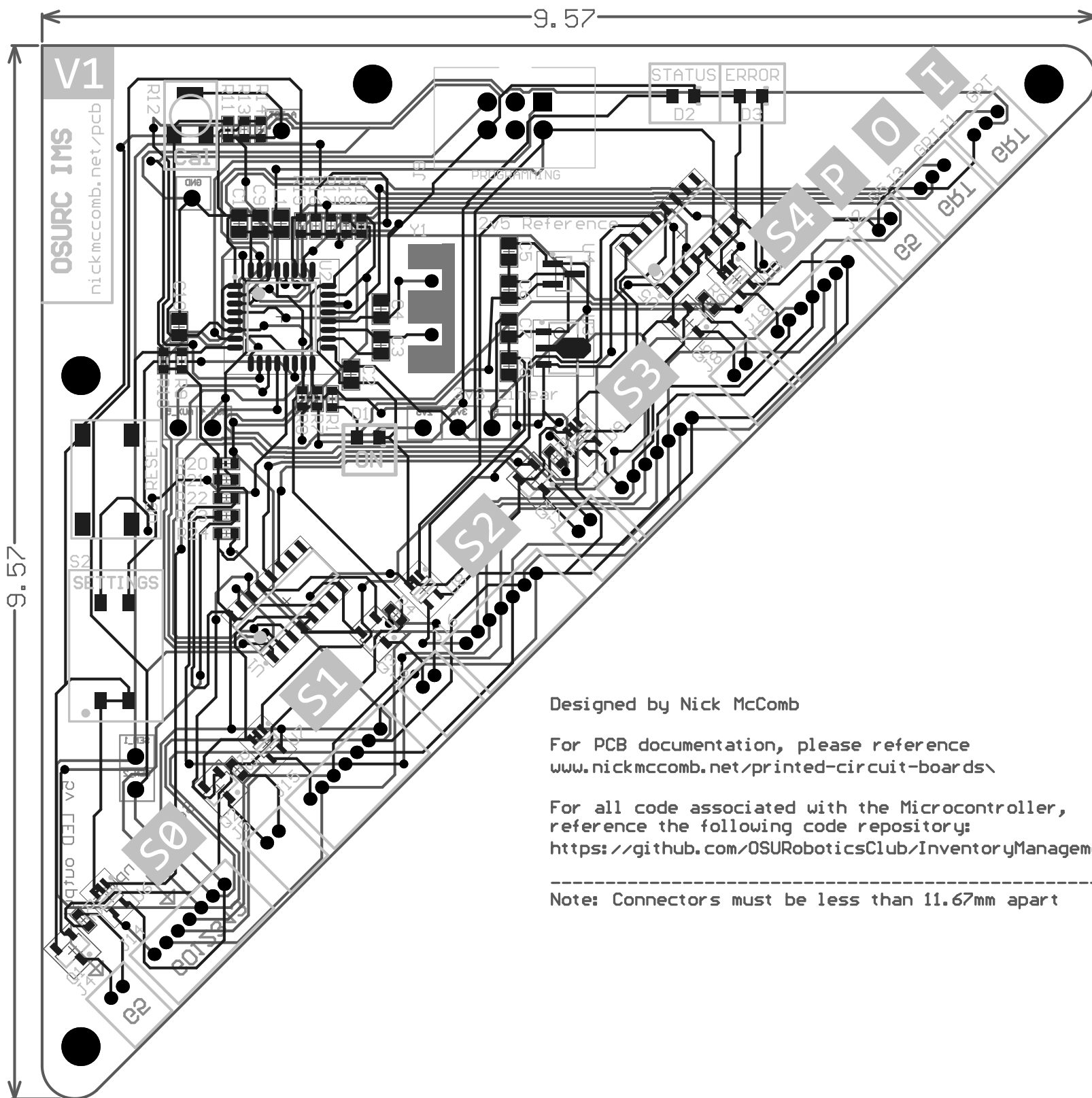
Title MountingHardware.SchDoc			
Size: A4	Number: 6	Engineer: Nick McComb	
Date: 11/29/2016	Time: 11:13:22 AM	Sheet 6 of 6	
File:			

1

2

3

4



Designed by Nick McComb

For PCB documentation, please reference
www.nickmccomb.net/printed-circuit-boards/

For all code associated with the Microcontroller,
 reference the following code repository:
<https://github.com/OSURoboticsClub/InventoryManagement>

 Note: Connectors must be less than 11.67mm apart