UMSATS
StellarScope 2015

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INTERNATIONAL
SPACE APPS
CHALLENGE

Designed By UMSATS: Emerich Kovacs III

Title		
Size	Number	Revision
Letter		
Date: 11/04/2015		Sheet of
File: C:\Users\..\[01] - COVER PAGE.SchDoc	Drawn By:	

A

3V3　5V

POWER
8　IOREF
7　RESET
6　3V3
5　5V
4　GND
3　GND
2　VIN
1

GND

IOH
SCL　10
SDA　9
AREF　8
GND　7
IO13　6
IO12　5
IO11　4
IO10　3
IO9　2
IO8

IOH

I2C_5V_SCL
I2C_5V_SDA

GND

GPS　5V
1
2　GPS_RX
3　GPS_TX
4

5-103672-3

GND

B

5V　5V

DS1　DS2
Green　Green

AD
AD0　1
AD1　2
AD2　3
AD3　4
AD4　5
AD5　6

IOL
IO7　8
IO6　7
IO5　6
IO4　5
IO3　4
IO2　3
IO1　2
IO0

R1　R2
150R 5% 0603(1608)　150R 5% 0603(1608)

ENC_B
ENC_A
GPS_TX
GPS_RX

ENCODER　5V
1　ENC_A
2
3　ENC_B
4
5

5-103673-4

GND

C

D
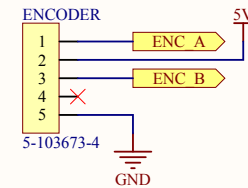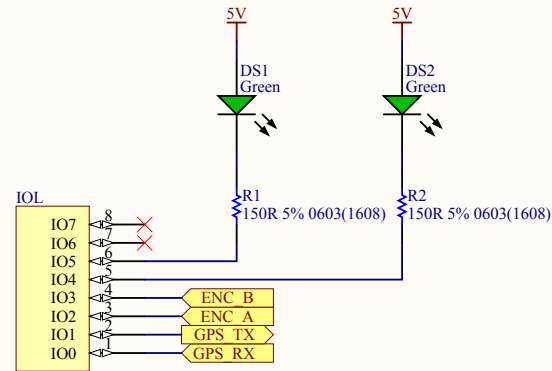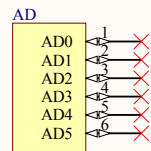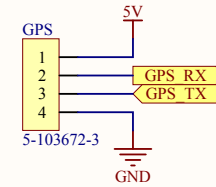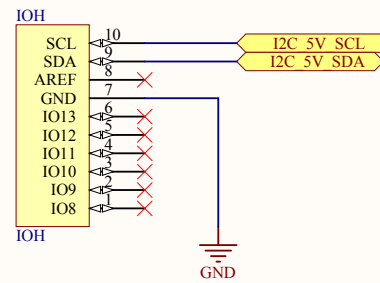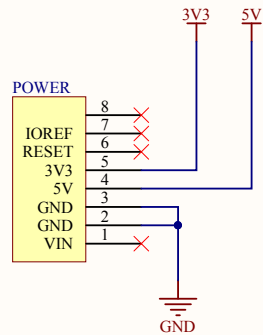
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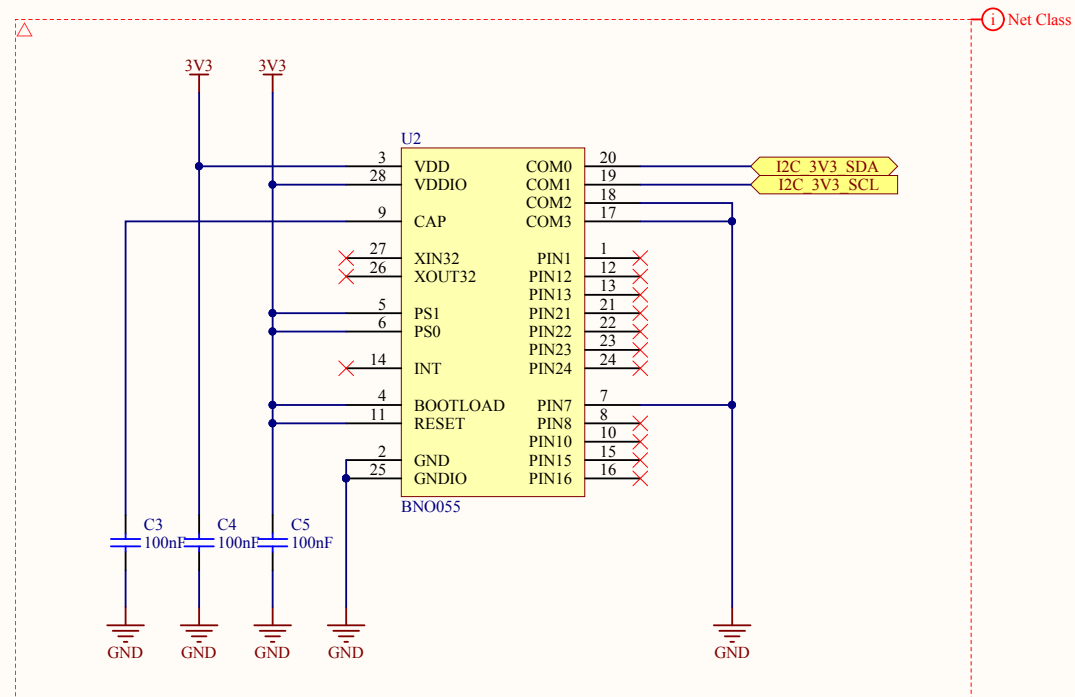
A

Net Class

3V3 3V3

U2

Pin	Name		Name	Pin
3	VDD		COM0	20
28	VDDIO		COM1	19
			COM2	18
9	CAP		COM3	17
27	XIN32		PIN1	1
26	XOUT32		PIN12	12
			PIN13	13
5	PS1		PIN21	21
6	PS0		PIN22	22
			PIN23	23
14	INT		PIN24	24
4	BOOTLOAD		PIN7	7
11	RESET		PIN8	8
			PIN10	10
2	GND		PIN15	15
25	GNDIO		PIN16	16

BNO055

I2C_3V3_SDA
I2C_3V3_SCL

C3 100nF C4 100nF C5 100nF

GND GND GND GND GND

B

C

D
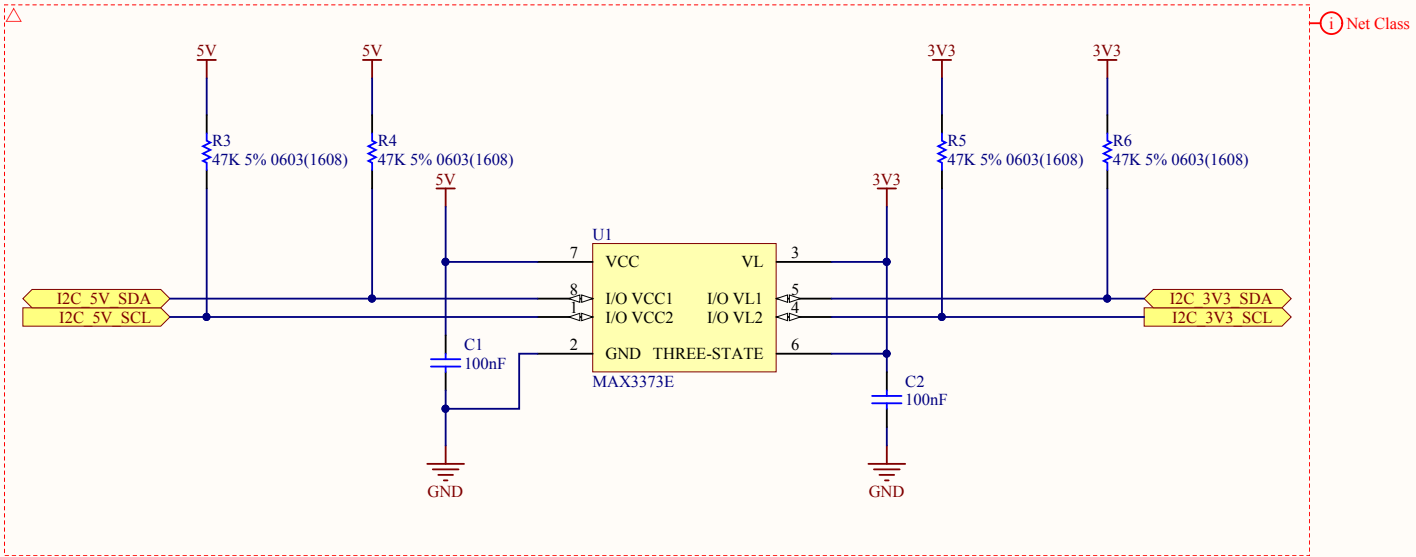
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Net Class

5V   5V   3V3   3V3

R3   R4   R5   R6
47K 5% 0603(1608)   47K 5% 0603(1608)   47K 5% 0603(1608)   47K 5% 0603(1608)

5V   3V3

U1

7   VCC   VL   3

8   I/O VCC1   I/O VL1   5
1   I/O VCC2   I/O VL2   4

I2C_5V_SDA
I2C_5V_SCL

I2C_3V3_SDA
I2C_3V3_SCL

C1   2   GND THREE-STATE   6
100nF
                MAX3373E

C2
100nF

GND   GND

NASA Space Apps Challenge
StellarScope 2015
Designed By UMSATS

Emerich Kovacs III

ENCODER

GPS