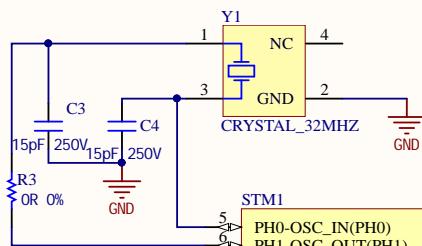


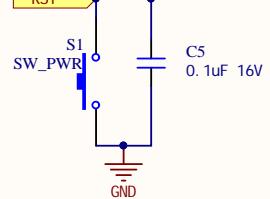
A

A



B

B



**LED**  
LED\_1  
LED\_2  
LED\_3  
LED\_4

**UART**  
UART\_TX  
UART\_RX  
  
**LIM\_GIMB**  
**LED\_MTRX**

PA0-WKUP(PA0)  
PA1  
PA2  
PA3  
PA4  
PA5  
PA6  
PA7  
PA8  
PA9  
PA10  
PA11  
PA12  
PA13(JTMS-SWDIO)  
PA14(JTCK-SWCLK)  
PA15(JTDI)

**CAN**  
CAN\_RX\_1  
CAN\_TX\_1  
**SWD**  
SWD\_IO  
SWD\_CLK  
**UART**  
UART\_RTS

PH0-OSC\_IN(PH0)  
PH1-OSC\_OUT(PH1)  
NRST

BOOT0  
PD2

PB0  
PB1

PB2-BOOT1(PB2)

PB3(JTDO/TRACESWO)

PB4(NJTRST)

PC0  
PC1  
PC2  
PC3  
PC4  
PC5  
PC6  
PC7  
PC8  
PC9  
PC10  
PC11  
PC12  
PC13  
PC14-OSC32\_IN(PC14)  
PC15-OSC32\_OUT(PC15)

PC15  
PB5  
PB6  
PB7  
PB8  
PB9  
PB10  
PB12  
PB13  
PB14  
PB15

VCAP\_1

VBAT

VDD

VDD

VDDA

VSS

VSS

VSSA

ULTRA\_1\_TRIG  
ULTRA\_1\_ECHO

ULTRA\_2\_TRIG  
ULTRA\_2\_ECHO

CAN\_RX\_2  
CAN\_TX\_2

PWM\_CR

PWM\_MG

+3V3

GND

3xVDD pin caps

0.1uF 16V

0.1uF 16V

0.1uF 16V

4.7uF 6.3V

GND

0.1uF 16V

0.1uF 16V

10nF

1uF 16V

GND

0.1uF 16V

1uF 16V

GND

STM32F446RET6

C

C

D

D

Title Gimbal MCU Schematic

Size: Letter Drawn By: Jing Hao Yao

Date: 2020-01-02 Sheet1 of 5

File: C:\Users\gratt\Documents\University\Design Teams\UW Mars Rover\2020 Electrical Repo\MarsRover2020-PCB\Projects\

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Waterloo  
Ontario  
Canada N2L 3G6

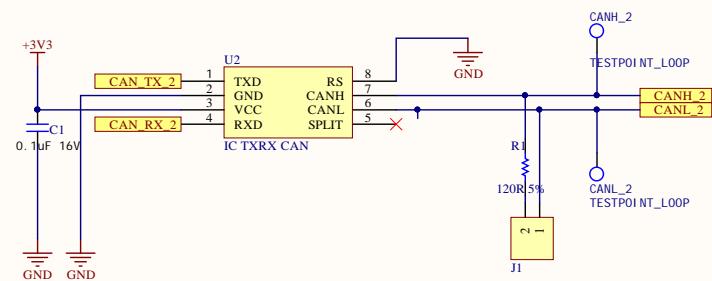
UW  
ROBOTICS  
TEAM

A

A

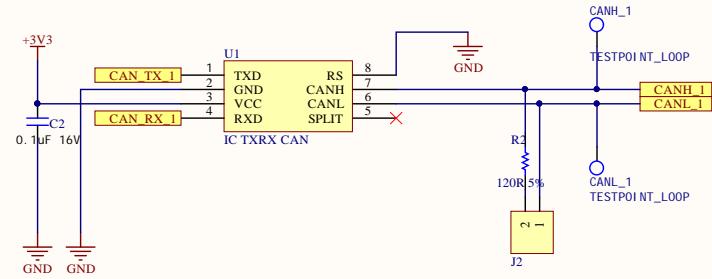
B

B



C

C



D

D

Title Gimbal CAN Schematic	UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G8
Size: Letter	Drawn By: Jing Hao Yao & Aidan Grattan
Date: 2020-01-02	Sheet 1 of 5
File: C:\Users\gratt\Documents\University\Design Teams\UW Mars Rover\2020 Electrical Repo\MarsRover2020-PCB\Projects\Gimbal\Rev1\sch\CAN.SchDoc	<b>UW ROBOTICS TEAM</b>

A

A

B

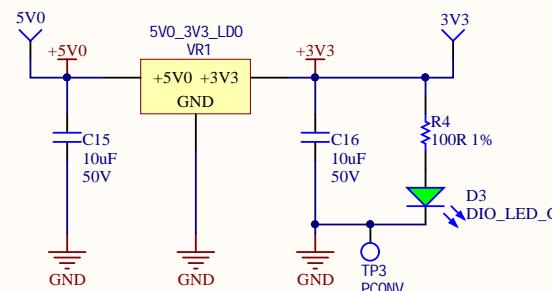
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C

C

D

D



Title Gimbal Power Schematic

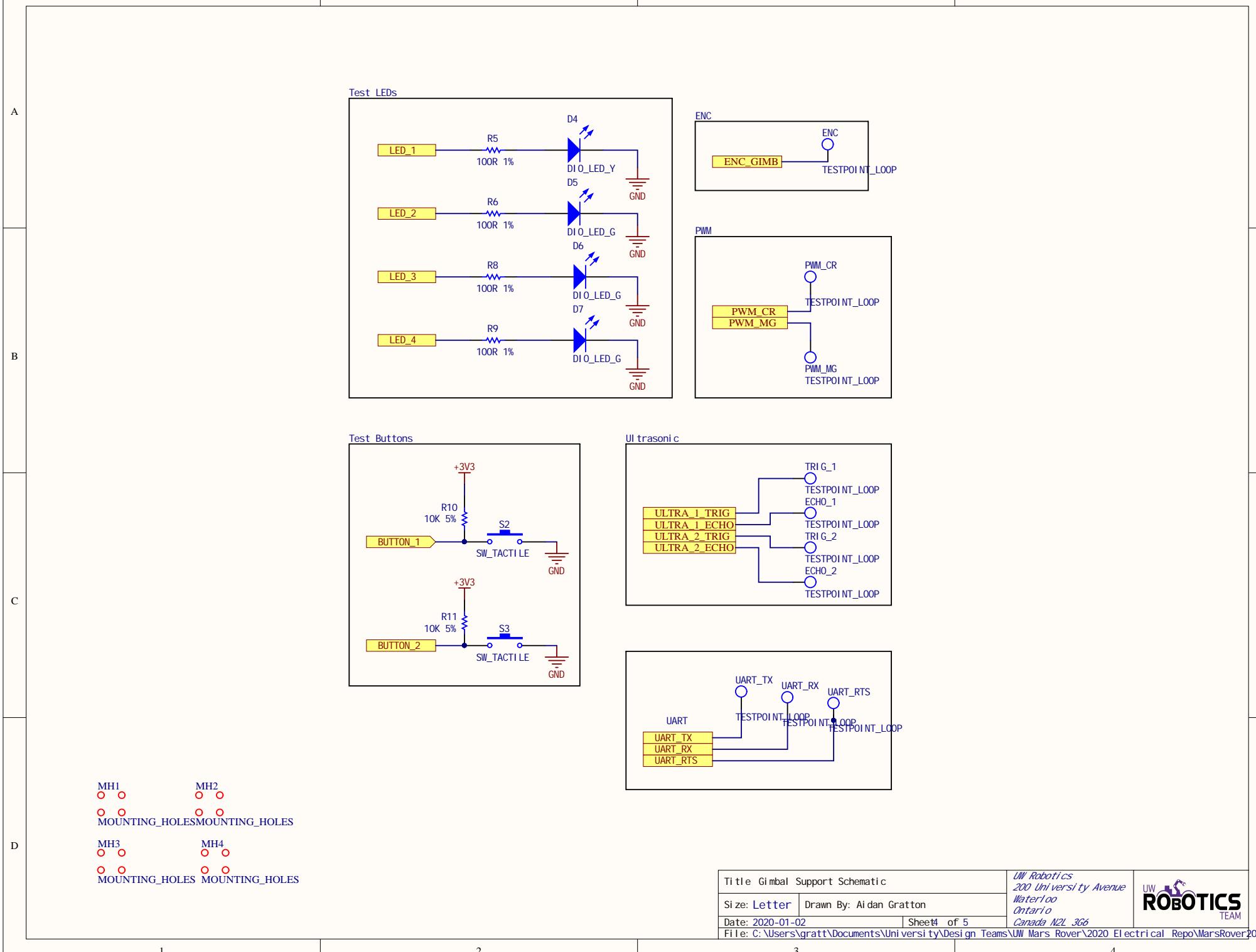
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Date: 2020-01-02 Sheet 3 of 5

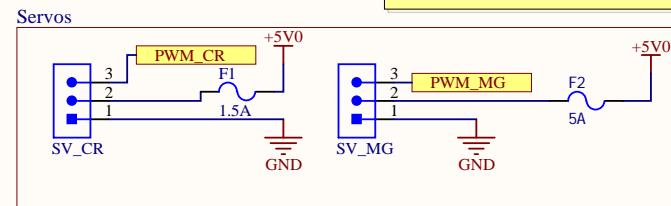
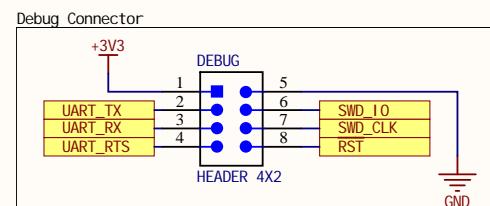
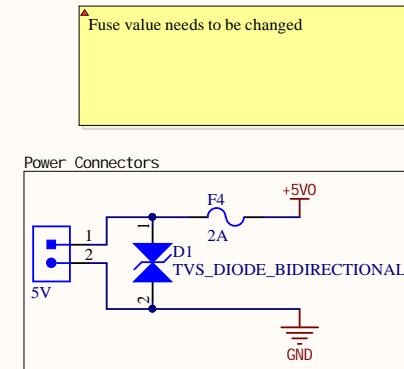
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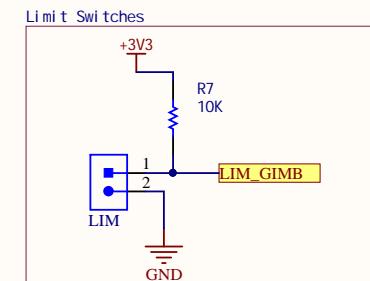
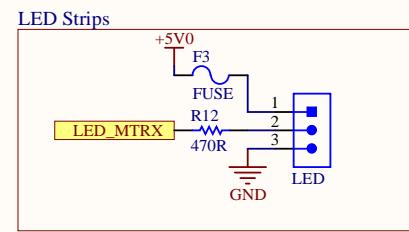




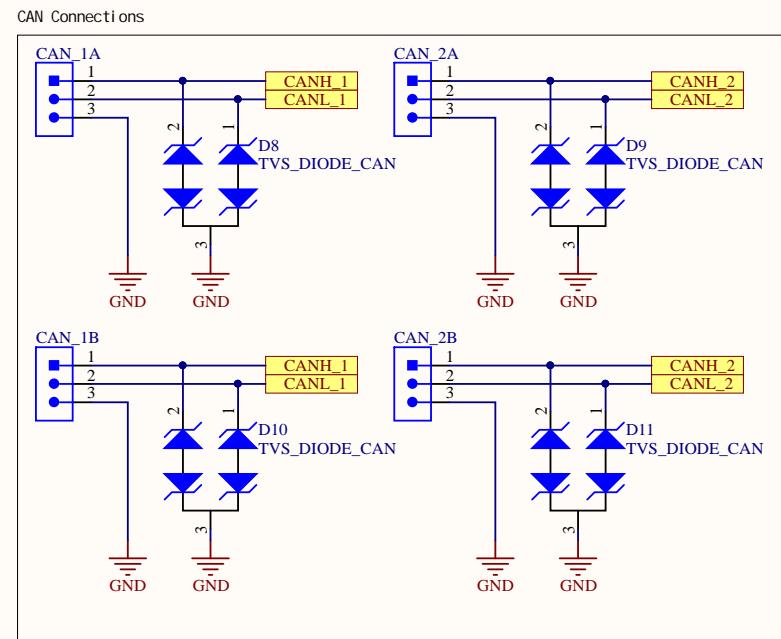
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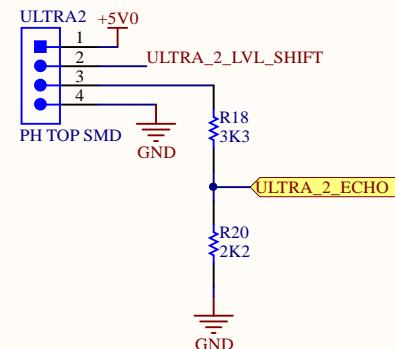
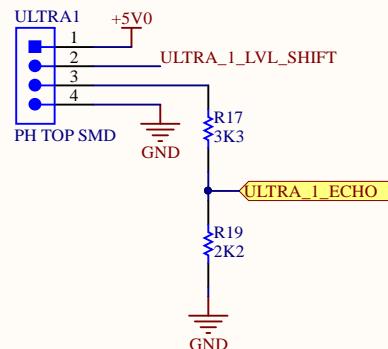


C

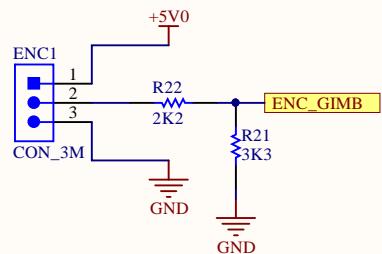


Title: Gimbal Connectors Schematic	UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
Size: Letter	Drawn By: Jing Hao Yao & Aidan Gratton
Date: 2020-01-02	Sheet 15 of 5
File: C:\Users\gratt\Documents\University\Design Teams\UW Mars Rover\2020 Electrical Repo\MarsRover2020-PCB\Projects\	

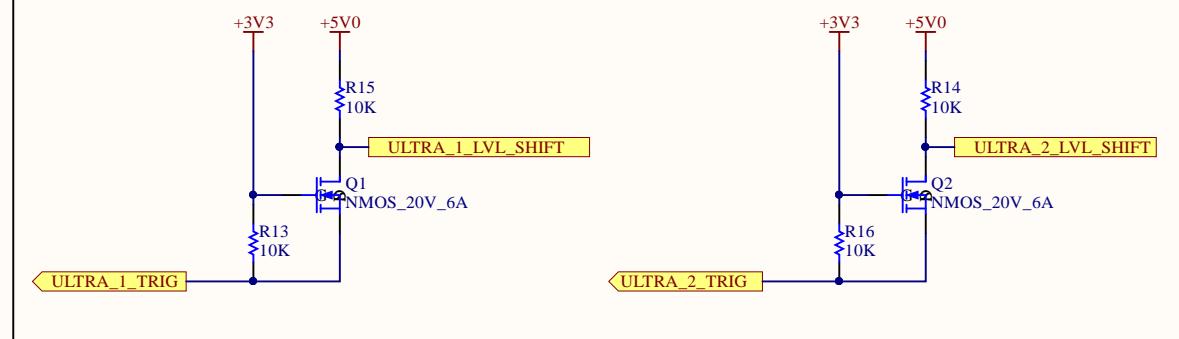
## Ultrasonics



## Encoders



## Level Shifters

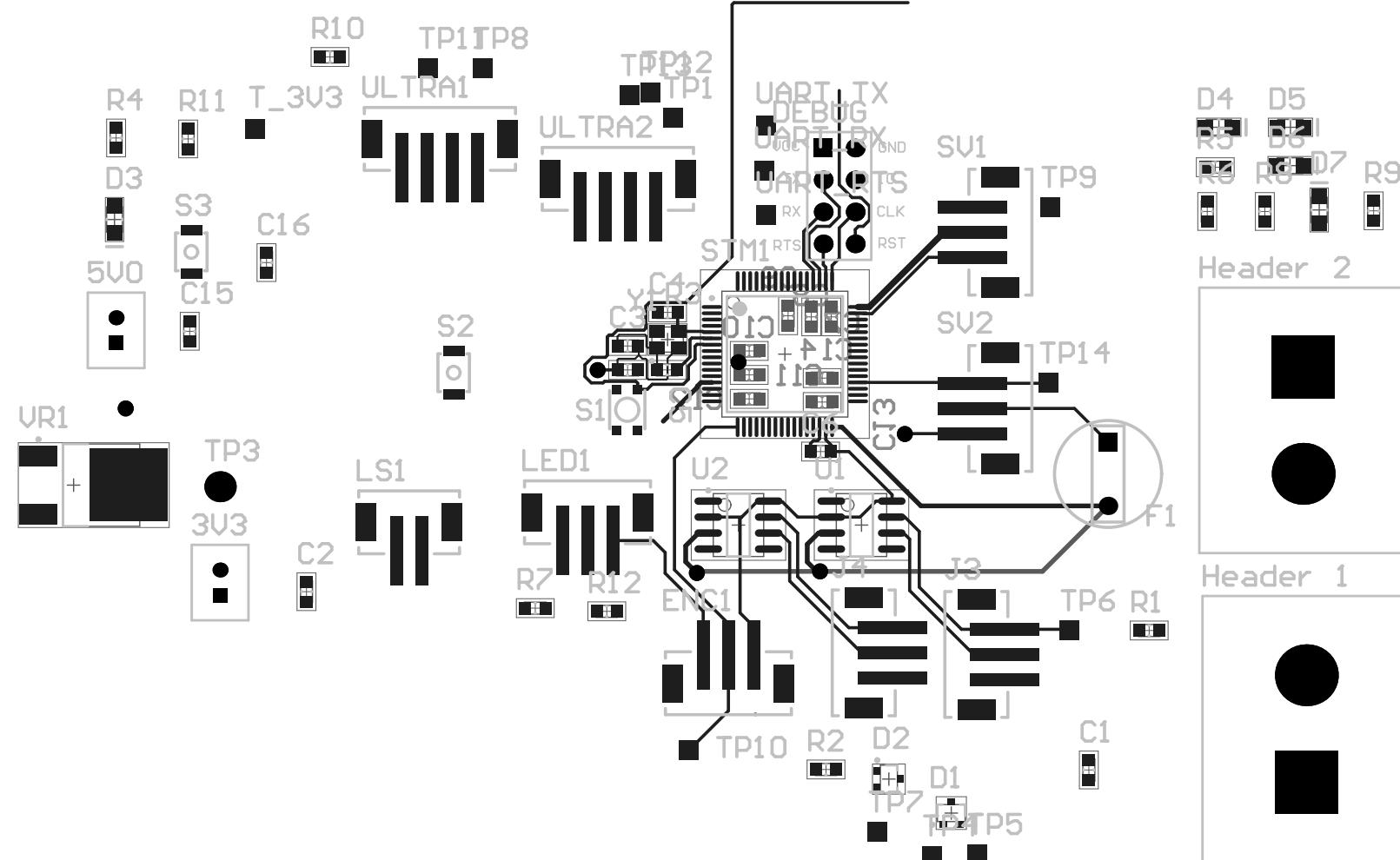


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File: C:\Users\gratt\Documents\University\Design Teams\UW Mars Rover\2020 Electrical Repo\MarsRover2020-PCB\Projects			

MH1



MH2



MH3



MH4

