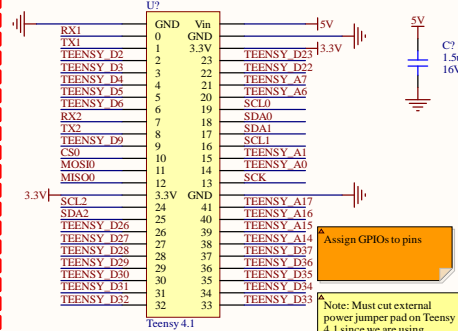


Teensy and IMU

Replace 0402 resistors with 0805 resistors or 0603 resistors

Teensy 4.1



Assign GPIOs to pins

Note: Must cut external power jumper pad on Teensy 4.1 since we are using external power

GPIOs:

Outputs:

- IMU_RST (Active Low): Reset. Pull low to reset the sensor
- GNSS_EXTINT: Customizable GNSS module external interrupt
- GNSS_RST (Active Low): Reset. Drive low to reset the GNSS module

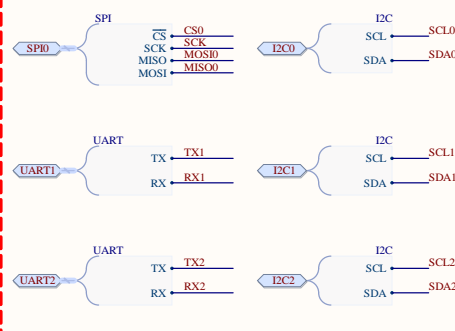
Inputs:

- IMU_INT (Active Low): Interrupt/Data Ready. Indicates that the BNO085 needs the host's attention
- PWR_SRC: high = usb pwr, low = bat pwr
- CHARGE_STAT1, CHARGE_STAT2, CHARGE_PG: See datasheet for state diagram
- NetAv (Active High): Iridium Network Available signal
- RI (Active Low): Iridium Ring Indicator signal
- Onoff: Iridium on = high, Iridium off = low

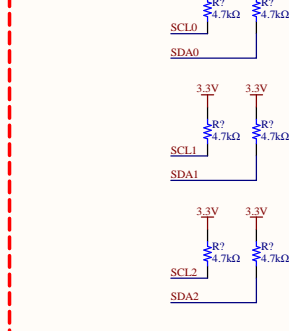
Bidirectional:

Analog Inputs:

Serial I/O Mapping

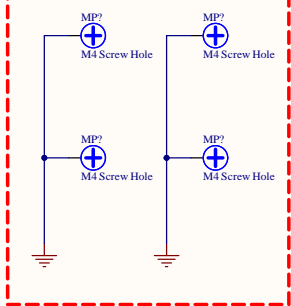


I2C Pullups



Mechanical

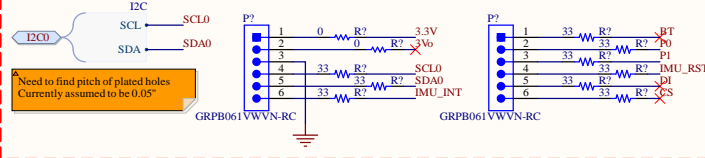
Mounting



Fiducials

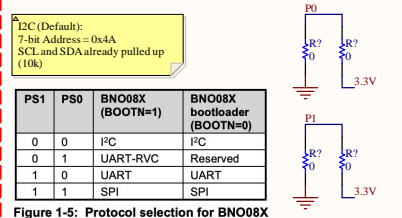


IMU



GPIO Breakout Connector

IMU Communication Select



External Buttons

External LEDs

Project Name: Capstone PCB.PrjPcb

Drawer: Cameron Gordon & Elise Cooke

Variant: [No Variations]

Revision: V1.0

Date: 8/14/2023

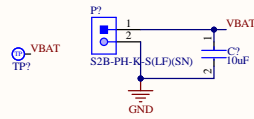
Page: 1 of 3

Capstone 2023

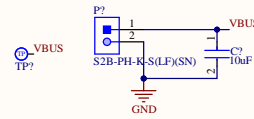


Power Management

Battery Connector

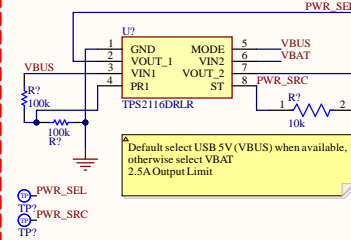


USB 5V Connector

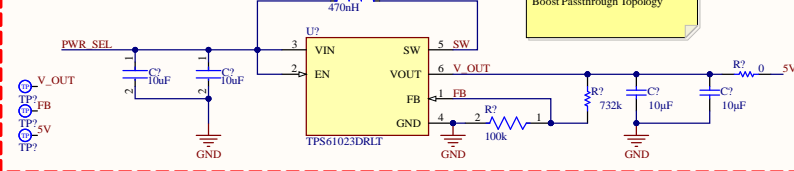


Replace 0402 resistors with 0805 resistors or 0603 resistors

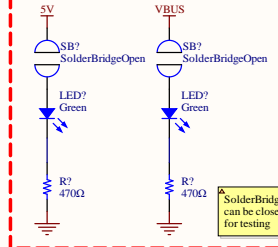
Power MUX



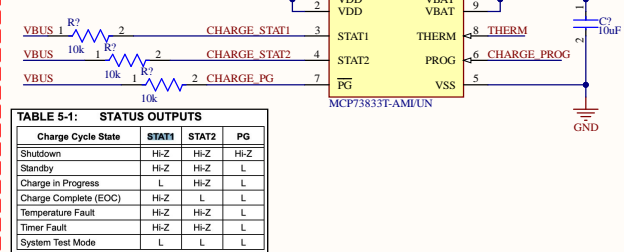
Boost Converter



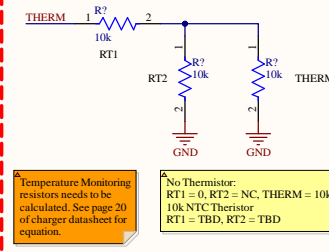
Power LEDs



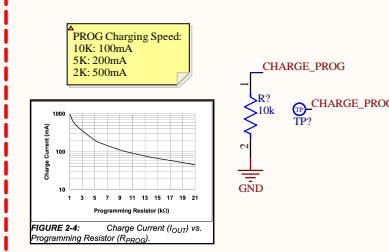
Battery Charger



Charge Temperature Set



Charge Current Set



Project Name: Capstone PCB.PrjPcb

Drawer: Cameron Gordon & Elise Cooke

Variant: [No Variations]

Revision: V1.0

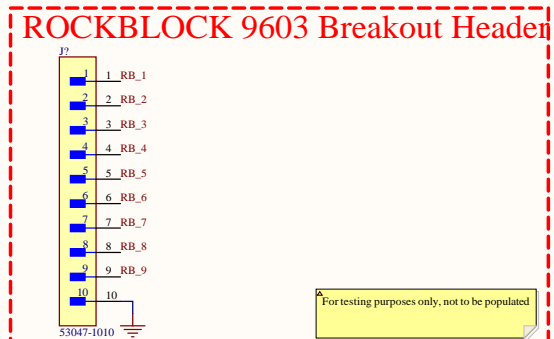
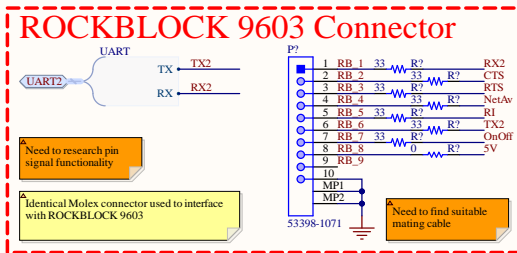
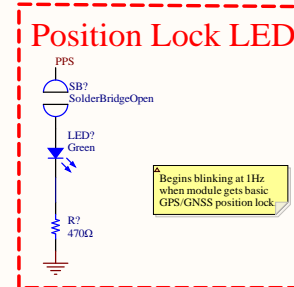
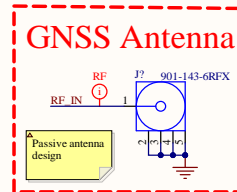
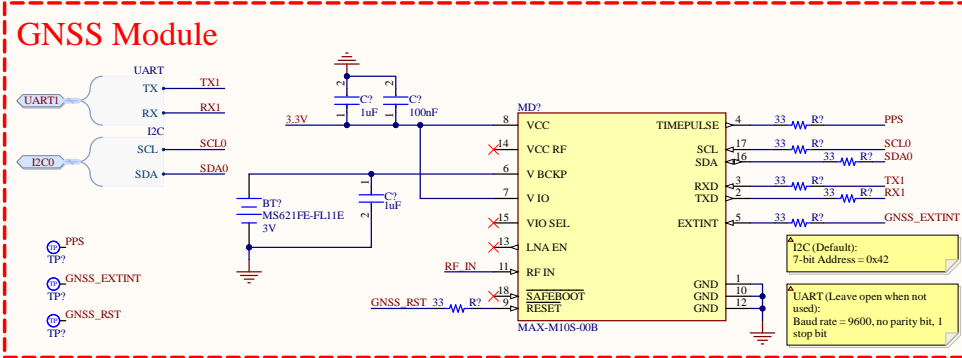
Date: 8/14/2023

Page: 2 of 3

Capstone 2023



GNSS Module and Iridium Transceiver



Project Name: Capstone PCB.PrjPcb

Drawer: Cameron Gordon & Elise Cooke

Variant: [No Variations]

Revision: V1.0

Date: 8/14/2023

Page: 3 of 3

Capstone 2023

