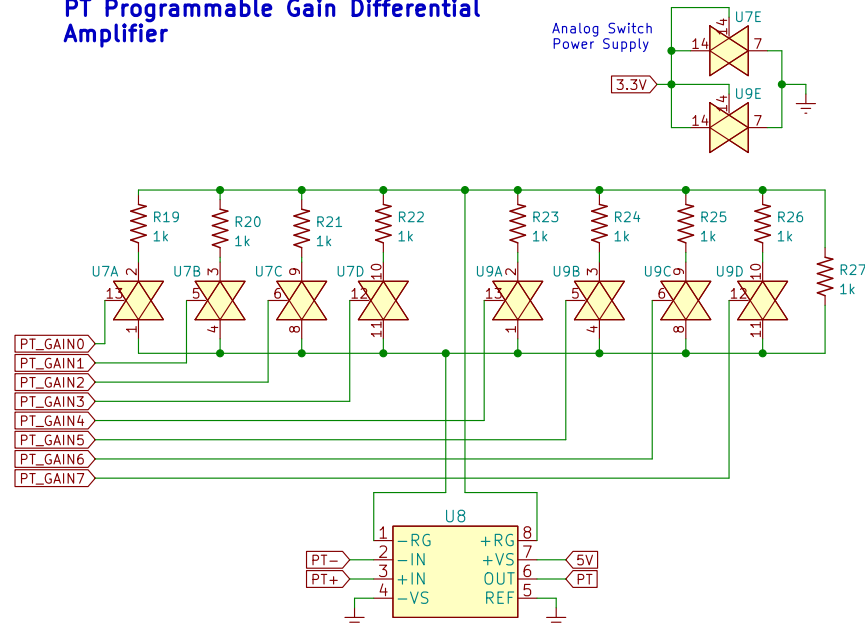
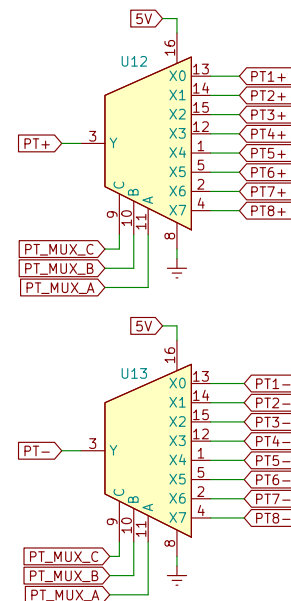


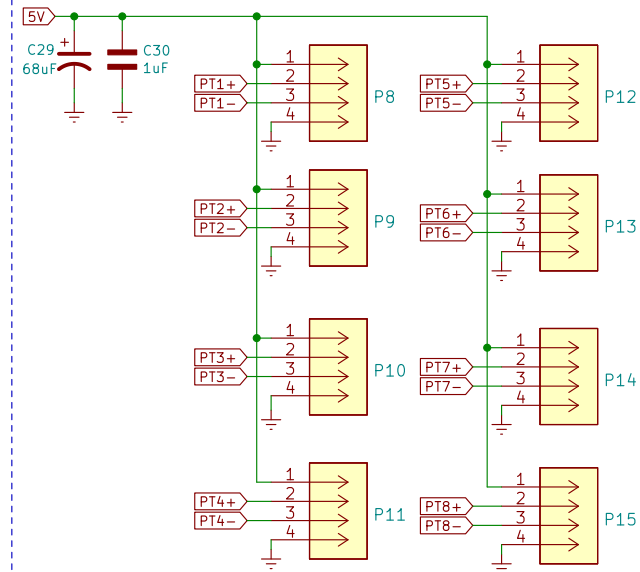
PT Programmable Gain Differential Amplifier



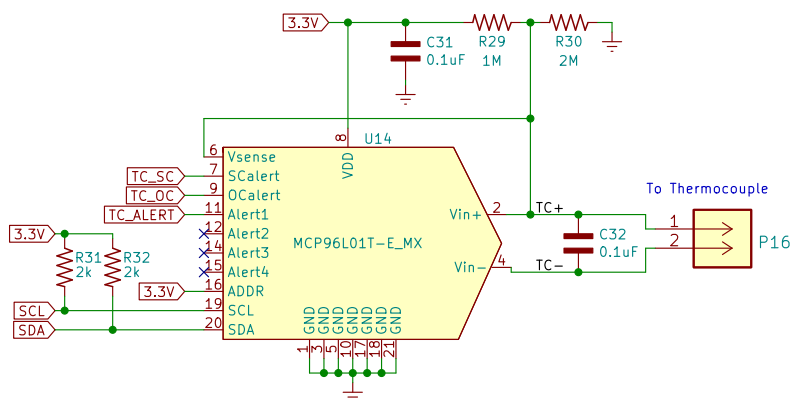
PT Analog Multiplexers



Pressure Transducer Connectors



Thermocouple Cold Junction Compensation



Sheet: /Sensors/
File: Sensors.kicad_sch

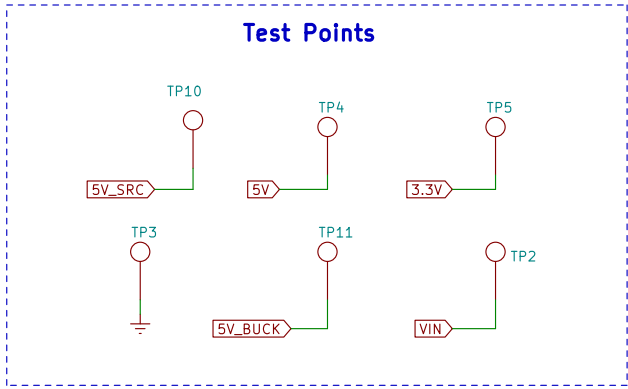
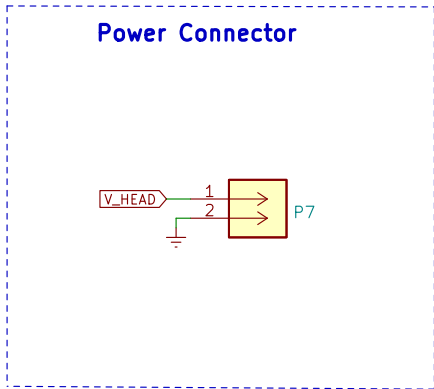
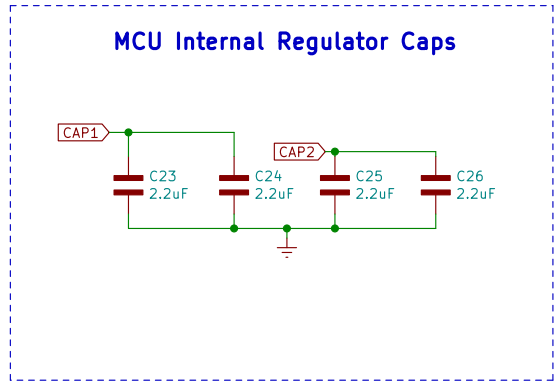
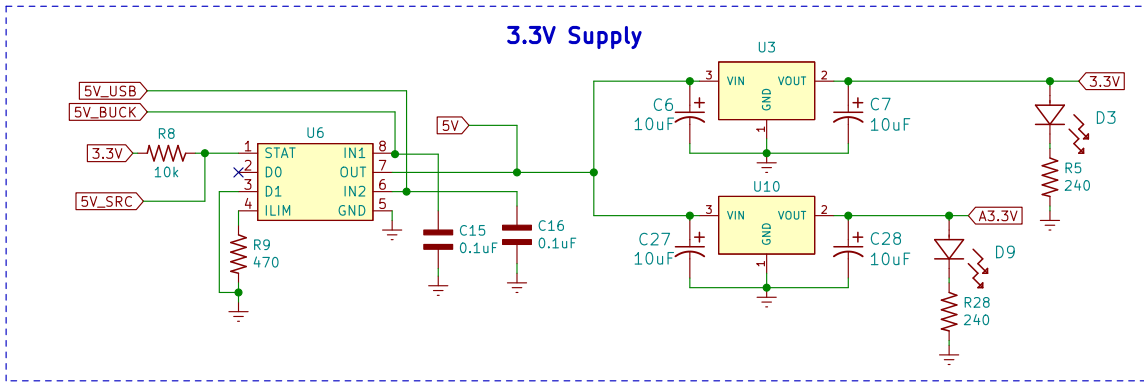
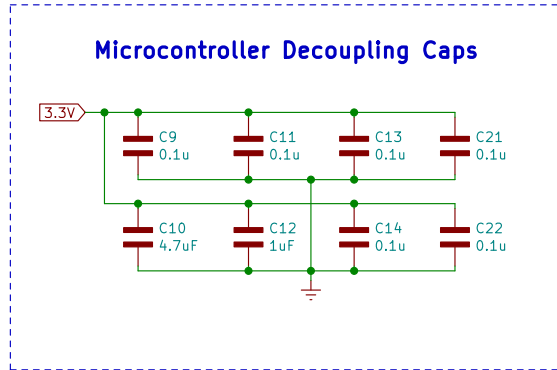
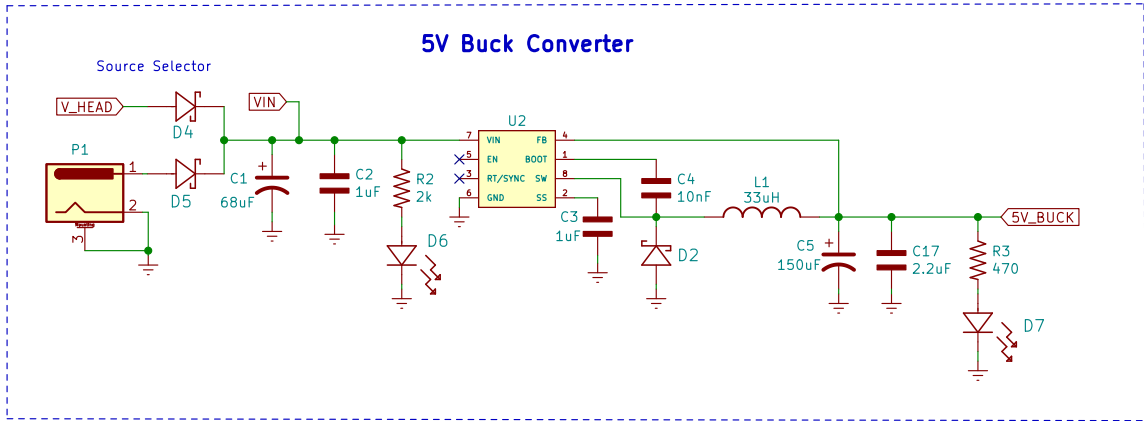
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Date:

Rev:

Id: 4/4



Author: Colton Acosta
Sun Devil Rocketry

Sheet: /Power/
 File: power.kicad_sch

Title: Engine Microcontroller Power Supply

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| Size: A4 | Date: | Rev: 1.0 |
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USB Transceiver

The diagram illustrates a USB Transceiver circuit. It features a P5 connector on the left, a D8 connector in the middle, and a U5 transceiver chip on the right. The P5 connector provides VCC, D-, D+, and GND signals. The D8 connector provides D- and D+ signals. The U5 chip has pins for RX_USB, TX_USB, DTR, DSR, TXD, RXD, RTS, CTS, NC@9, DCD, RI, GND, D-, D+, VDD, REGIN, VBUS, RST, SUSPEND, NC, SUSPEND, NC@1, NC@2, PAD, and NC@8, NC@7, NC@6, NC@5, NC@4, NC@3. The circuit includes a 5V_USB supply, a 3.3V supply, and resistors R13 (4.7k) and R14 (10k). The D8 connector is connected to the D- and D+ lines, which are also connected to the U5 chip. The U5 chip is connected to the P5 connector and the D8 connector. The 5V_USB supply is connected to the VCC pin of the P5 connector and the D- pin of the D8 connector. The 3.3V supply is connected to the RST pin of the U5 chip. The D8 connector is connected to the D- and D+ lines, which are also connected to the U5 chip. The U5 chip is connected to the P5 connector and the D8 connector. The 5V_USB supply is connected to the VCC pin of the P5 connector and the D- pin of the D8 connector. The 3.3V supply is connected to the RST pin of the U5 chip.

Ignition Continuity

3.3V

SP_CONT

NOZ_CONT

R12 10k

R11 10k

P2C

P2B

Solid Propellant Continuity

Nozzle Continuity

Test Points

The diagram illustrates the connection of test points to specific signals. Each test point is represented by a green circle, and the signal name is in a red box. A green line connects the test point to the signal box.

- TP6 is connected to FLASH_SS.
- TP7 is connected to FLASH_MISO.
- TP8 is connected to FIRE.
- TP9 is connected to FLASH_SCK.
- TP12 is connected to FLASH_MOSI.
- TP13 is connected to USB_SUSPEND.

Flash

U4

| Pin | Signal | Chip Pin | Chip Label |
|-----|------------|----------|------------|
| 1 | FLASH_SS | *CE | VDD |
| 2 | FLASH_MISO | SO | *HOLD |
| 3 | FLASH_WP | *WP | SCK |
| 4 | VSS | | SI |
| 5 | FLASH_MOSI | | |
| 6 | FLASH_SCK | | |
| 7 | FLASH_HOLD | | |
| 8 | 3.3V | | |

Valve Controller Serial Interface

The diagram illustrates the wiring for the Valve Controller Serial Interface. A 5V power supply is connected to pin 1 of a 4-pin connector labeled P6. Pin 2 is connected to ValveCtrl_TX, pin 3 to ValveCtrl_RX, and pin 4 to ground. The connector is labeled P6.

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| Size: A4 | Date: | Rev: |
| KiCad E.D.A. kicad (6.0.4) | | Id: 6/4 |