

Teensy

The diagram illustrates the connection of a Teensy 4.0 microcontroller to a MicroMod board. The Teensy 4.0 is shown with its various pins and components, including capacitors (C41, C42, C43), resistors (R41, R42, R43, R44, R62, R63, R7, R8, R9, R10), and connectors (X1, X2, X3, X4). The MicroMod board is shown with its pins and components, including capacitors (C41, C42, C43), resistors (R41, R42, R43, R44, R62, R63, R7, R8, R9, R10), and connectors (X1, X2, X3, X4). The connections are as follows:

- Power:** 3.3V (Teensy 4.0 pin 28) to MicroMod pin 3. GND (Teensy 4.0 pin 27) to MicroMod pin 4. USB_VIN (Teensy 4.0 pin 11) to MicroMod pin 11. USB_D+ (Teensy 4.0 pin 3) to MicroMod pin 3. USB_D- (Teensy 4.0 pin 5) to MicroMod pin 5.
- I2C:** I2C_SDA (Teensy 4.0 pin 18) to MicroMod pin 18. I2C_SCL (Teensy 4.0 pin 19) to MicroMod pin 19.
- SPI:** SPI_SCK (Teensy 4.0 pin 13) to MicroMod pin 13. SPI_CS (Teensy 4.0 pin 10) to MicroMod pin 10. SPI_SDO (Teensy 4.0 pin 11) to MicroMod pin 11. SPI_SDI (Teensy 4.0 pin 12) to MicroMod pin 12.
- TX/RX:** TX1 (Teensy 4.0 pin 1) to MicroMod pin 1. RX1 (Teensy 4.0 pin 0) to MicroMod pin 0. TX_REMOTE (Teensy 4.0 pin 19) to MicroMod pin 19. RX_REMOTE (Teensy 4.0 pin 22) to MicroMod pin 22.
- Other Pins:** TX3 (Teensy 4.0 pin 14) to MicroMod pin 14. TX2 (Teensy 4.0 pin 8) to MicroMod pin 8. TX4 (Teensy 4.0 pin 17) to MicroMod pin 17. TX5 (Teensy 4.0 pin 21) to MicroMod pin 21. TX6 (Teensy 4.0 pin 20) to MicroMod pin 20. TX7 (Teensy 4.0 pin 7) to MicroMod pin 7. TX8 (Teensy 4.0 pin 23) to MicroMod pin 23. TX9 (Teensy 4.0 pin 36) to MicroMod pin 36. TX10 (Teensy 4.0 pin 40) to MicroMod pin 40. TX11 (Teensy 4.0 pin 41) to MicroMod pin 41. TX12 (Teensy 4.0 pin 42) to MicroMod pin 42. TX13 (Teensy 4.0 pin 43) to MicroMod pin 43. TX14 (Teensy 4.0 pin 44) to MicroMod pin 44. TX15 (Teensy 4.0 pin 45) to MicroMod pin 45. TX16 (Teensy 4.0 pin 46) to MicroMod pin 46. TX17 (Teensy 4.0 pin 47) to MicroMod pin 47. TX18 (Teensy 4.0 pin 48) to MicroMod pin 48. TX19 (Teensy 4.0 pin 49) to MicroMod pin 49. TX20 (Teensy 4.0 pin 50) to MicroMod pin 50. TX21 (Teensy 4.0 pin 51) to MicroMod pin 51. TX22 (Teensy 4.0 pin 52) to MicroMod pin 52. TX23 (Teensy 4.0 pin 53) to MicroMod pin 53. TX24 (Teensy 4.0 pin 54) to MicroMod pin 54. TX25 (Teensy 4.0 pin 55) to MicroMod pin 55. TX26 (Teensy 4.0 pin 56) to MicroMod pin 56. TX27 (Teensy 4.0 pin 57) to MicroMod pin 57. TX28 (Teensy 4.0 pin 58) to MicroMod pin 58. TX29 (Teensy 4.0 pin 59) to MicroMod pin 59. TX30 (Teensy 4.0 pin 60) to MicroMod pin 60. TX31 (Teensy 4.0 pin 61) to MicroMod pin 61. TX32 (Teensy 4.0 pin 62) to MicroMod pin 62. TX33 (Teensy 4.0 pin 63) to MicroMod pin 63. TX34 (Teensy 4.0 pin 64) to MicroMod pin 64. TX35 (Teensy 4.0 pin 65) to MicroMod pin 65. TX36 (Teensy 4.0 pin 66) to MicroMod pin 66. TX37 (Teensy 4.0 pin 67) to MicroMod pin 67. TX38 (Teensy 4.0 pin 68) to MicroMod pin 68. TX39 (Teensy 4.0 pin 69) to MicroMod pin 69. TX40 (Teensy 4.0 pin 70) to MicroMod pin 70. TX41 (Teensy 4.0 pin 71) to MicroMod pin 71. TX42 (Teensy 4.0 pin 72) to MicroMod pin 72. TX43 (Teensy 4.0 pin 73) to MicroMod pin 73. TX44 (Teensy 4.0 pin 74) to MicroMod pin 74. TX45 (Teensy 4.0 pin 75) to MicroMod pin 75.

NEO-6M GPS

TX_GPS

RX_GPS

GND

TXR

RXR

VCC

+5V

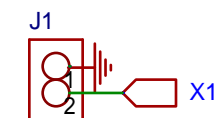
NEO-6M

SHC remote


REMOTE

Diagram illustrating the wiring for the SHC remote module:

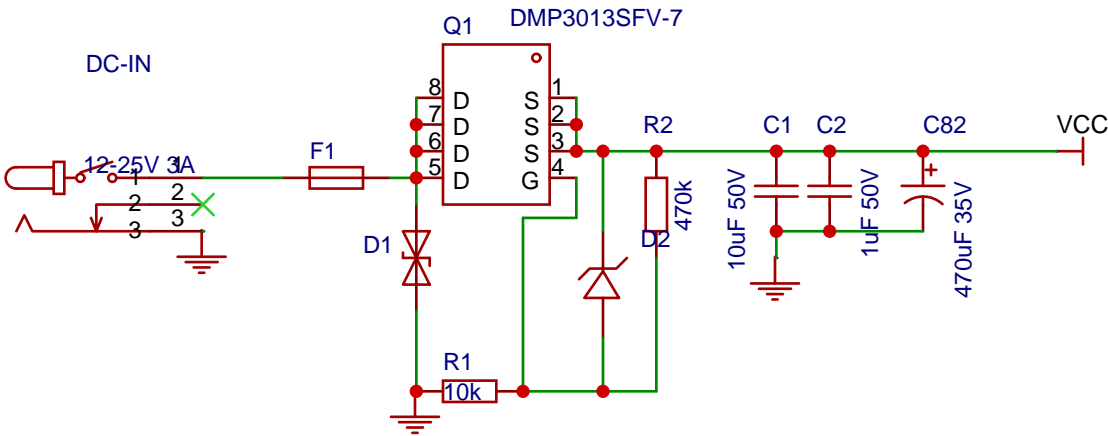
- Pin 1: +5V
- Pin 2: GND
- Pin 3: TX_REMOTE
- Pin 4: RX_REMOTE



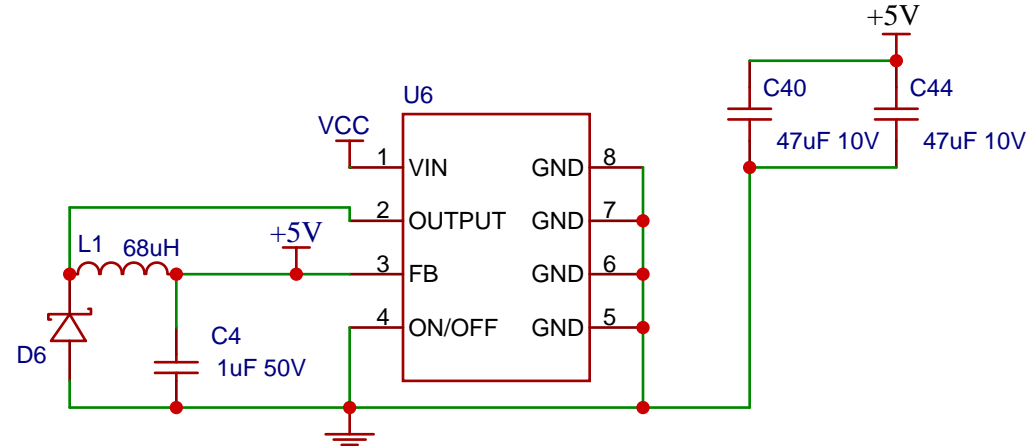
Encoders level conversion

| | | | | | |
|---|--------------|--------------|------|-----------------|------------|
| Schematic | Redux_v3_430 | | | Update Date | 2022-12-18 |
| | | | | Create Date | 2022-07-11 |
| Page | Teensy | | | Part Number | |
| Drawed | lordzurp | TeenAstro v3 | | | |
| Reviewed | lordzurp | | | | |
| | | | | | |
| | | VER | SIZE | PAGE | 1 OF 3 |
|  | | V0.9 | A4 | zUrp Industries | |

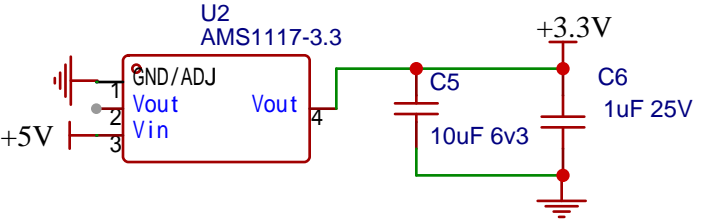
Power reverse protection (25V max)



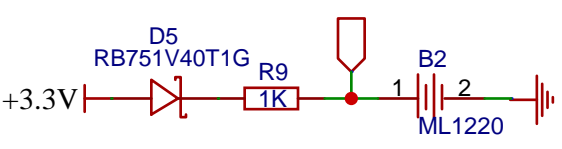
40V -> 5V Step Down



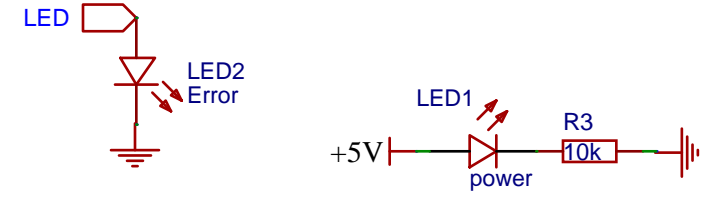
3V3 LDO



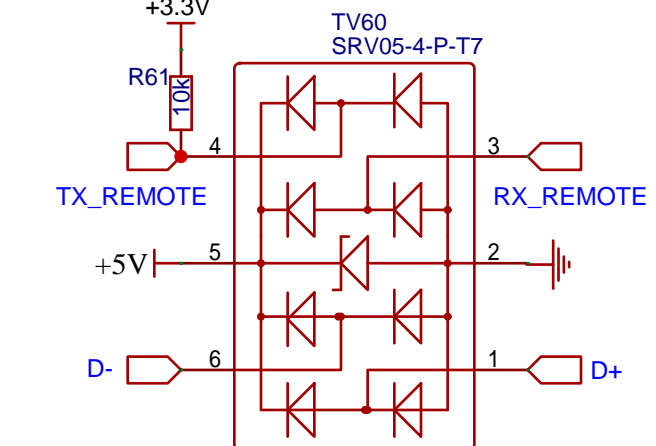
Battery



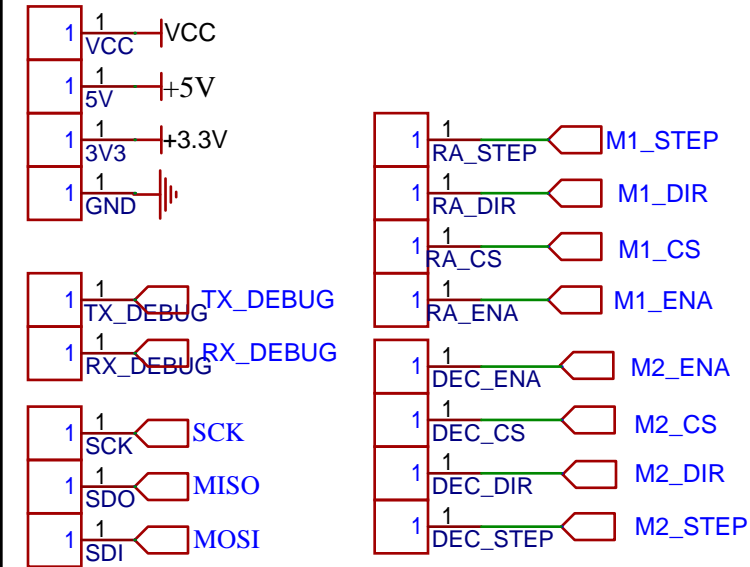
LEDs



ESD protection

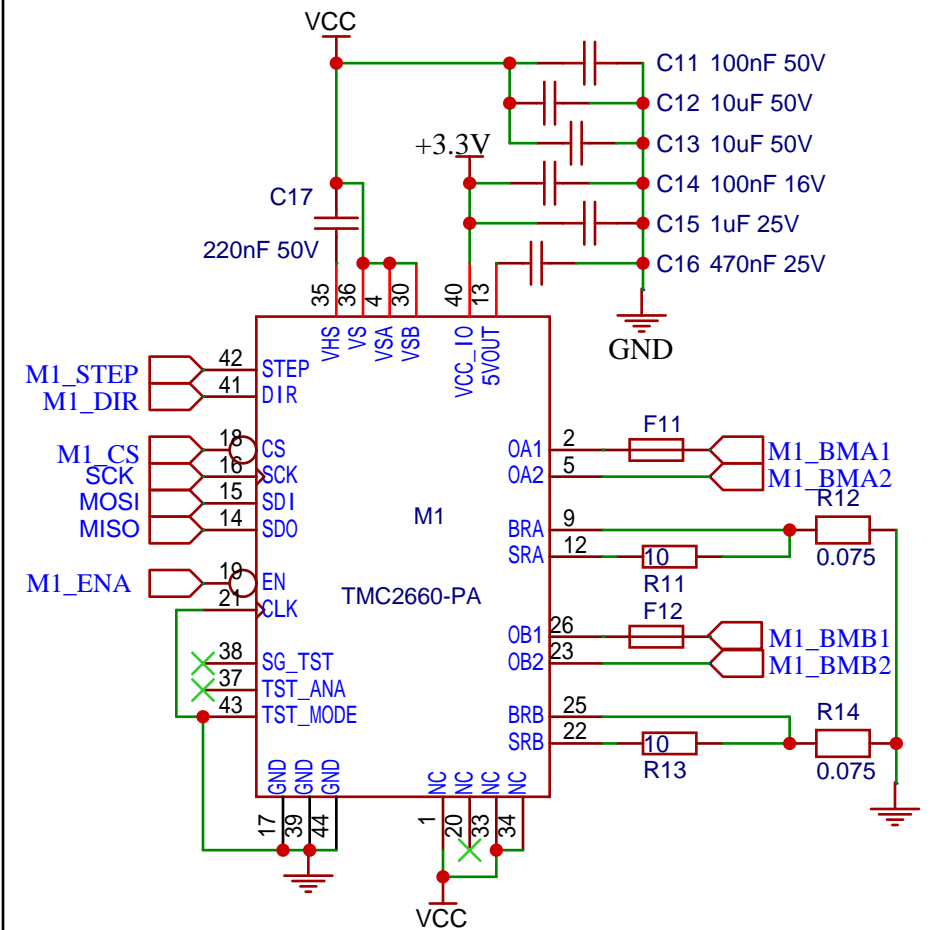


Test Points

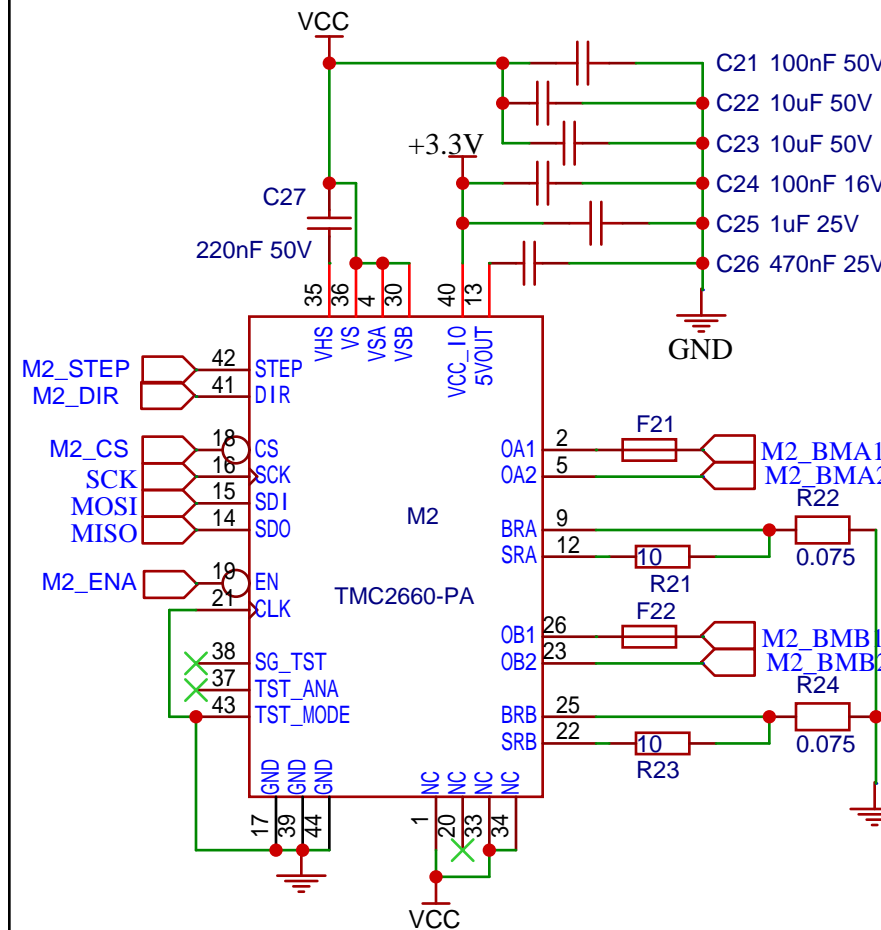


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|-----------|--------------|--------------|------|-----------------|------------|
| Schematic | Redux_v3_430 | | | Update Date | 2022-12-18 |
| | | | | Create Date | 2022-06-27 |
| Page | Power | | | Part Number | |
| Drawn | lordzurp | TeenAstro v3 | | | |
| Reviewed | lordzurp | | | | |
| | | VER | SIZE | PAGE | 2 OF 3 |
| EasyEDA | | V0.9 | A4 | zUrp Industries | |

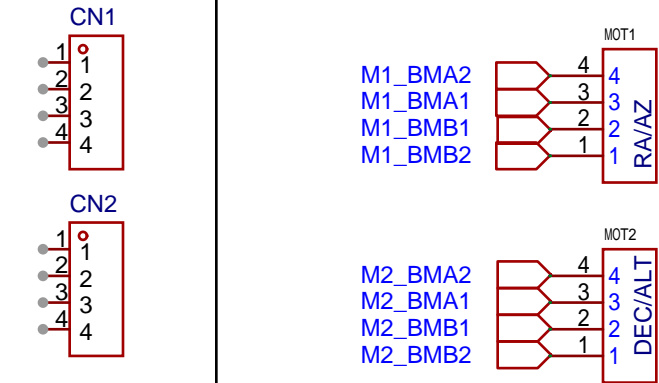
Motor 1 (RA/ AZ)



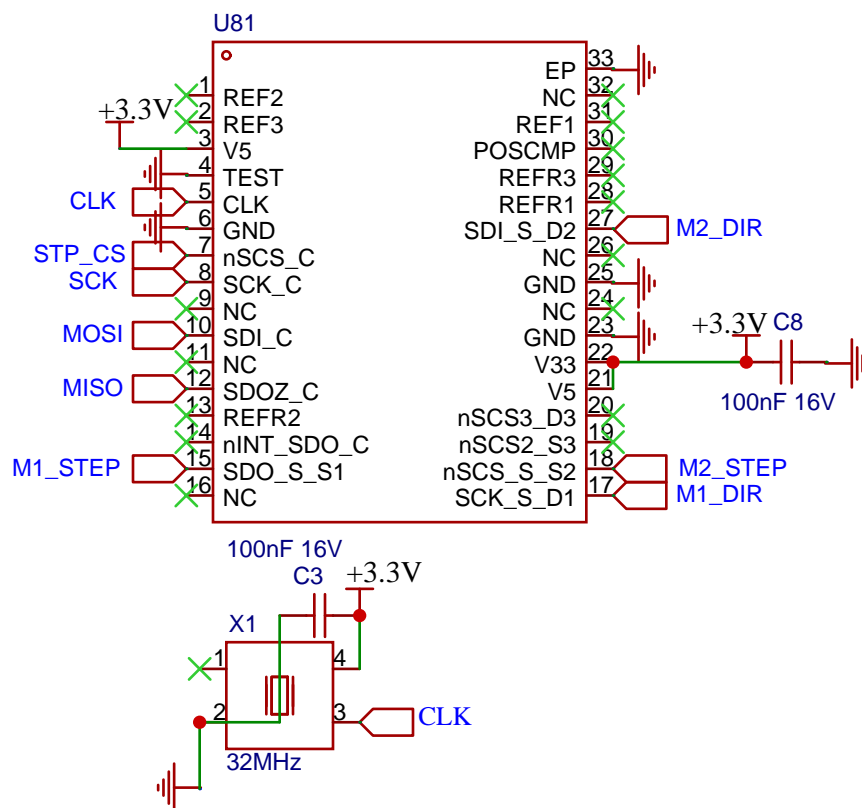
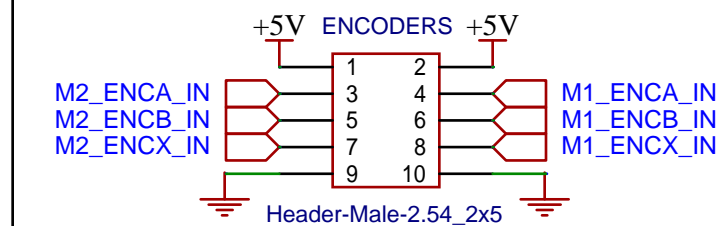
Motor 2 (DEC / ALT)



Motors connectors



Encoders connectors



| | | | | | |
|-----------|--------------|--------------|------|-----------------|------------|
| Schematic | Redux_v3_430 | | | Update Date | 2022-12-18 |
| | | | | Create Date | 2022-06-27 |
| Page | Motors | | | Part Number | |
| Drawn | lordzurp | TeenAstro v3 | | | |
| Reviewed | lordzurp | | | | |
| | | VER | SIZE | PAGE | 3 OF 3 |
| EasyEDA | | V0.9 | A4 | zUrp Industries | |