

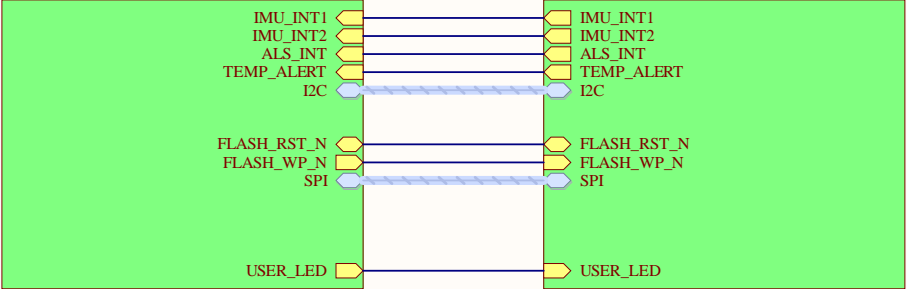
1

2

3

4

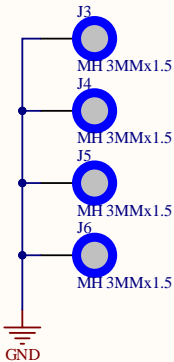
Power and MCU
MCU.SchDoc



Errata (v0.1)

1. TEMP_ALERT not connected
2. ALS_INT not connected
3. Flash RST_N and CLK connections are swapped
4. Bottom layer pour not filled
5. Fiducials must be holes at JLCPCB

Mounting Holes



Fiducials



| | | |
|--|--------------------------|---------------|
| Title "Snoot": Dog Collar | | |
| Size A4 | Number | Revision v0.1 |
| Date: 11/21/2021 | Sheet of 1 / 3 | |
| File: C:\Users\...\snoot_sch_v1.SchDoc | Drawn By: Mikhail Skobov | |

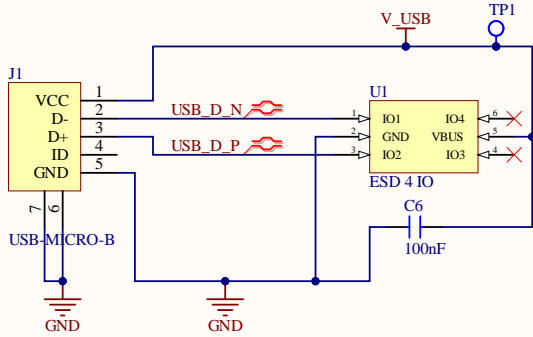
1

2

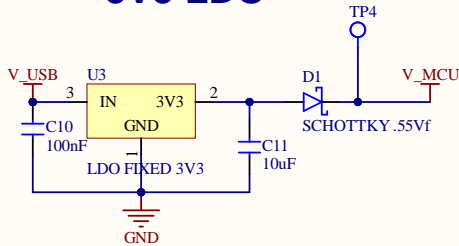
3

4

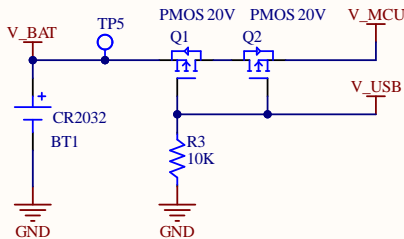
Micro USB



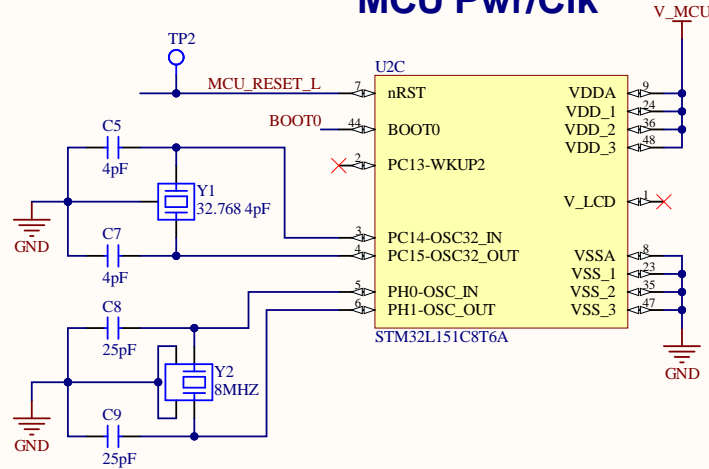
3V3 LDO



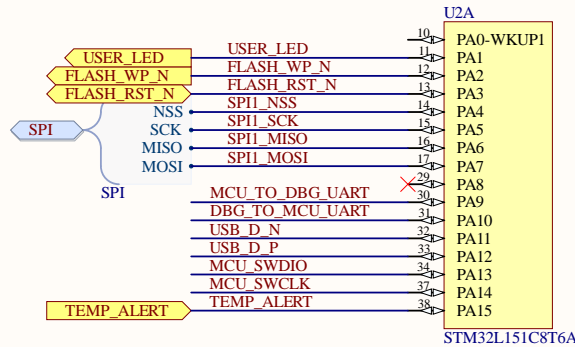
Battery



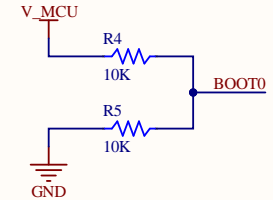
MCU Pwr/Clk



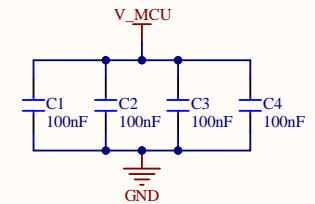
MCU I/O



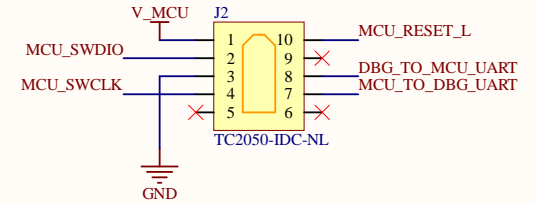
Boot Sel



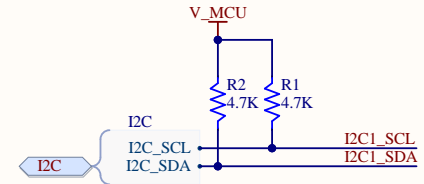
MCU Decoupling



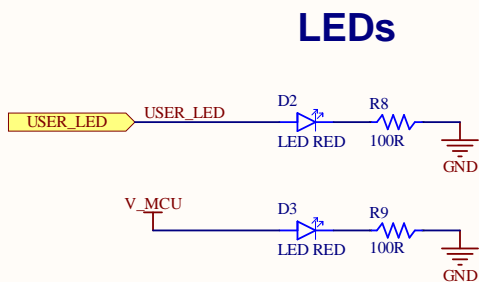
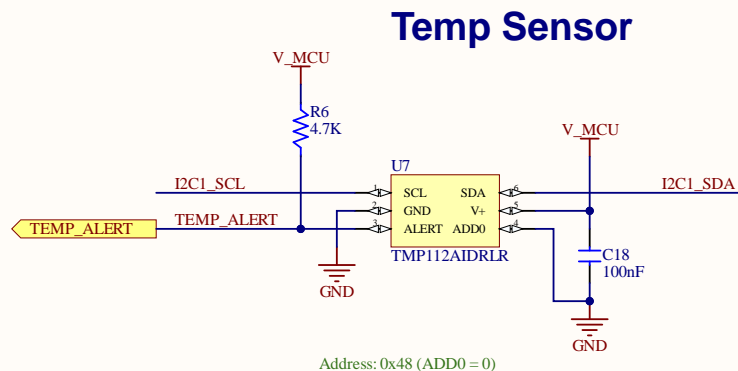
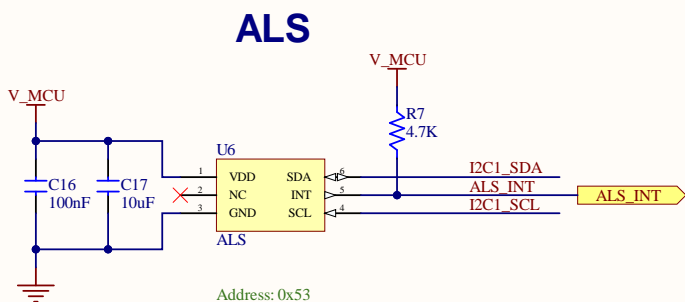
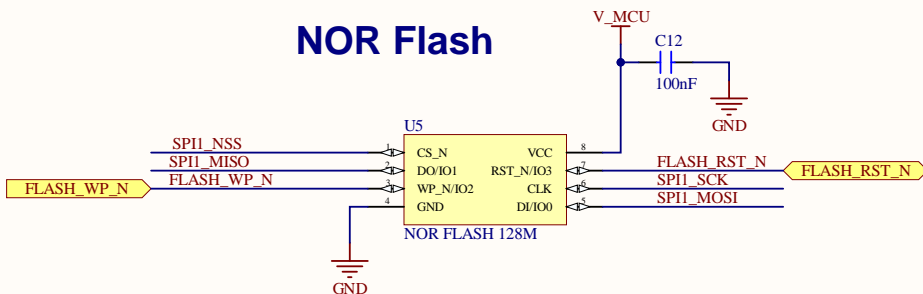
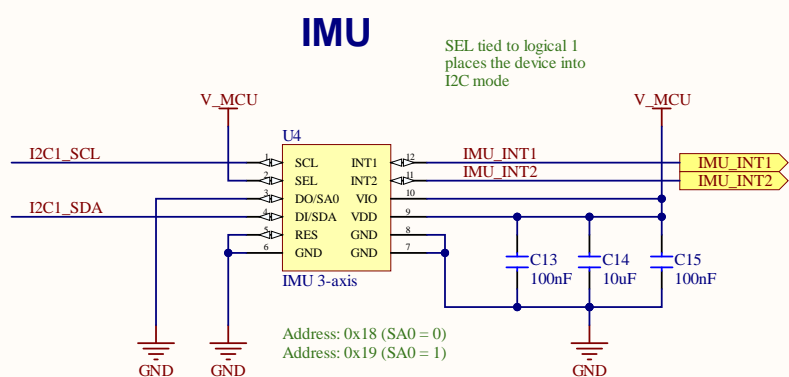
Debug Port



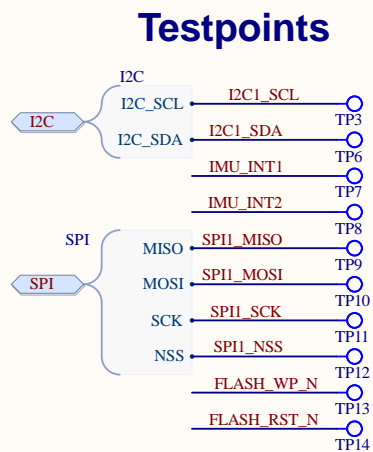
V_MCU



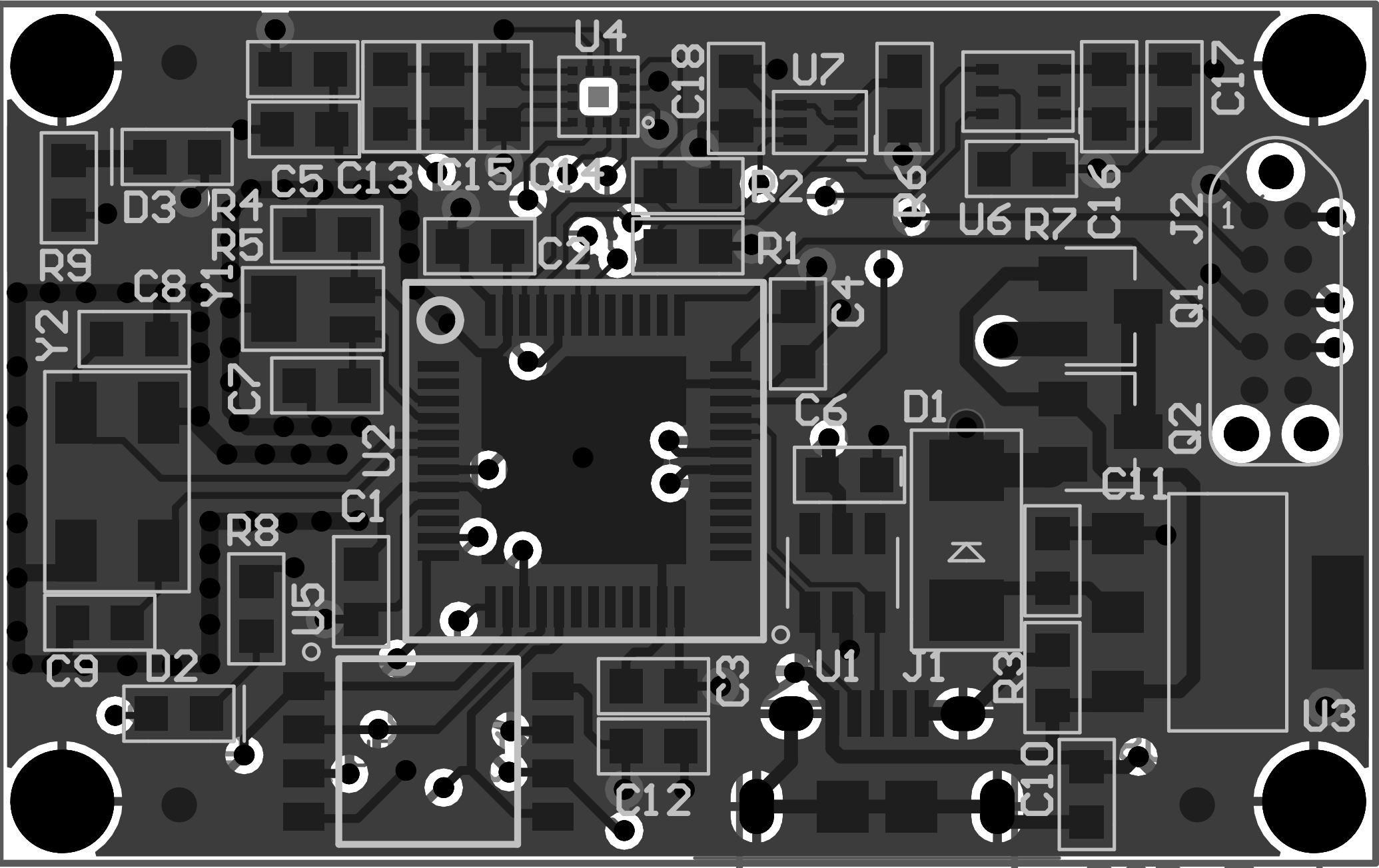
| Title | | |
|---------------------|-------------------------|--------------------------|
| "Snoot": Dog Collar | | |
| Size | Number | Revision |
| A4 | | v0.1 |
| Date: | 11/21/2021 | Sheet of 2 / 3 |
| File: | C:\Users\...\MCU.SchDoc | Drawn By: Mikhail Skobov |



Note:
D3 must be de-soldered
prior to "deployment"



| | | |
|---------------------------------------|--------------------------|---------------|
| Title "Snoot": Dog Collar | | |
| Size A4 | Number | Revision v0.1 |
| Date: 11/21/2021 | Sheet of 3 / 3 | |
| File: C:\Users\...\Peripherals.SchDoc | Drawn By: Mikhail Skobov | |



PCB End

| Comment | Description | Designator | Footprint | LibRef | Quantity |
|----------------|--|--|--------------------|------------------------------------|----------|
| CR2032 | CR2032 Battery Holder | BT1 | CR2032_BH-27A-5-WT | BH-27A-5-WT | 1 |
| 100nF | SAMSUNG ELECTRO-MECHANICS - CL10B104KB8WPNC - SMD Multilayer Ceramic Capacitor, 0.1 µF, 50 V, 0603 [1608 Metric], ± 10%, X7R, CL Series, Cap Ceramic 0.1uF 100V X7R 10% Pad SMD 0603 125°C T/R | C1, C2, C3, C4, C6, C10, C12, C13, C15, C16, C18 | C0603 | CL10B104KB8WPNC, CC0603KRX7R0BB104 | 11 |
| 4pF | CAP CER 4PF 50V C0G/NPO 0603 | C5, C7 | C0603 | CL10C040CB8NNNC | 2 |
| 25pF | CAP CER 25PF 50V C0G/NPO 0603 | C8, C9 | C0603 | CL10C250JB8NNNC | 2 |
| 10uF | CAP CER 10UF 6.3V X5R 0603 | C11, C14, C17 | C0603 | CC0603KRX5R5BB106 | 3 |
| SCHOTTKY .55Vf | Rectifier Diode, Schottky, 1 Phase, 1 Element, 1A, 20V V(RRM), Silicon | D1 | DO-214AC | SS12E-TP | 1 |
| LED RED | LED SMD Top View Uni-Color Brilliant Red 624nm 0603 Pkg ø7°T/R 3k | D2, D3 | LED0603 | 19-217/R6C-AL1M2VY/3T | 2 |
| USB-MICRO-B | CONN USB MICRO B RECEPT SMT R/A | J1 | AMPHENOL_10118194 | 10118194-0001LF | 1 |
| PMOS 20V | MOSFET P-CH 20V 3.1A SOT23-3 | Q1, Q2 | SOT-23-3 | SI2301CDS-T1-GE3 | 2 |
| 4.7K | RES SMD 4.7K OHM 1% 1/10W 0603 | R1, R2, R6, R7 | R0603 | RC0603FR-074K7L | 4 |
| 10K | Res General Purpose Thick Film 0603 10K Ohm 1% 1/10W ±100ppm/°C Molded SMD Paper T/R | R3, R4, R5 | R0603 | RC0603FR-0710KL | 3 |
| 100R | Res Thin Film 0603 100 Ohm 0.1% 1/10W ±50ppm/°C Molded SMD SMD Paper T/R | R8, R9 | R0603 | RT0603BRE07100RL | 2 |
| ESD 4 IO | USBLC6 Series 4 Line 6 V Uni / Bi-Directional ESD Protection - SOT-23-6 | U1 | ST_SOT23-6L | USBLC6-4SC6 | 1 |
| STM32L151C8T6A | MCU 32-bit ARM Cortex M3 RISC 64KB Flash 2.5V/3.3V 48-Pin LQFP Tray | U2 | ST_LQFP48 | STM32L151C8T6A | 1 |
| LDO FIXED 3V3 | STMICROELECTRONICS - LD1117S33CTR - LDO VOLTAGE REGULATOR, FIXED, 3.3V, 950MA, SOT-223 4, FULL REEL | U3 | ST_SOT-223 | LD1117S33CTR | 1 |
| IMU 3-axis | ACCEL 2-16G I2C/SPI 12LGA | U4 | ST-LGA-12 | LS2DH12TR | 1 |
| NOR FLASH 128M | IC FLASH 128M SPI 133MHZ 8SOIC | U5 | NOR_FLASH_SOIC_8 | W25Q128JVSQI | 1 |
| ALS | I2C ambient light and UV sensor | U6 | LTR-390UV-01 | LTR-390UV-01 | 1 |
| TMP112AIDRLR | TEXAS INSTRUMENTS TMP112AIDRLR Temperature Sensor IC, Open Drain, 0.5C, 40 C, 125 C, SOT, 6 Pins | U7 | TI_SOT-563 | TMP112AIDRLR | 1 |
| 32.768 4pF | CITIZEN 32.768kHz, 4pF, 70k ESR, 20ppm | Y1 | CM315E | CM315E32768DZZT-4PF | 1 |
| 8MHZ | ABRACON - ABM3B-8.000MHZ-B2-T - CRYSTAL, 8MHZ, 18PF, 5 X 3.2MM | Y2 | ABM3B | ABM3B-8.000MHZ-B2-T | 1 |