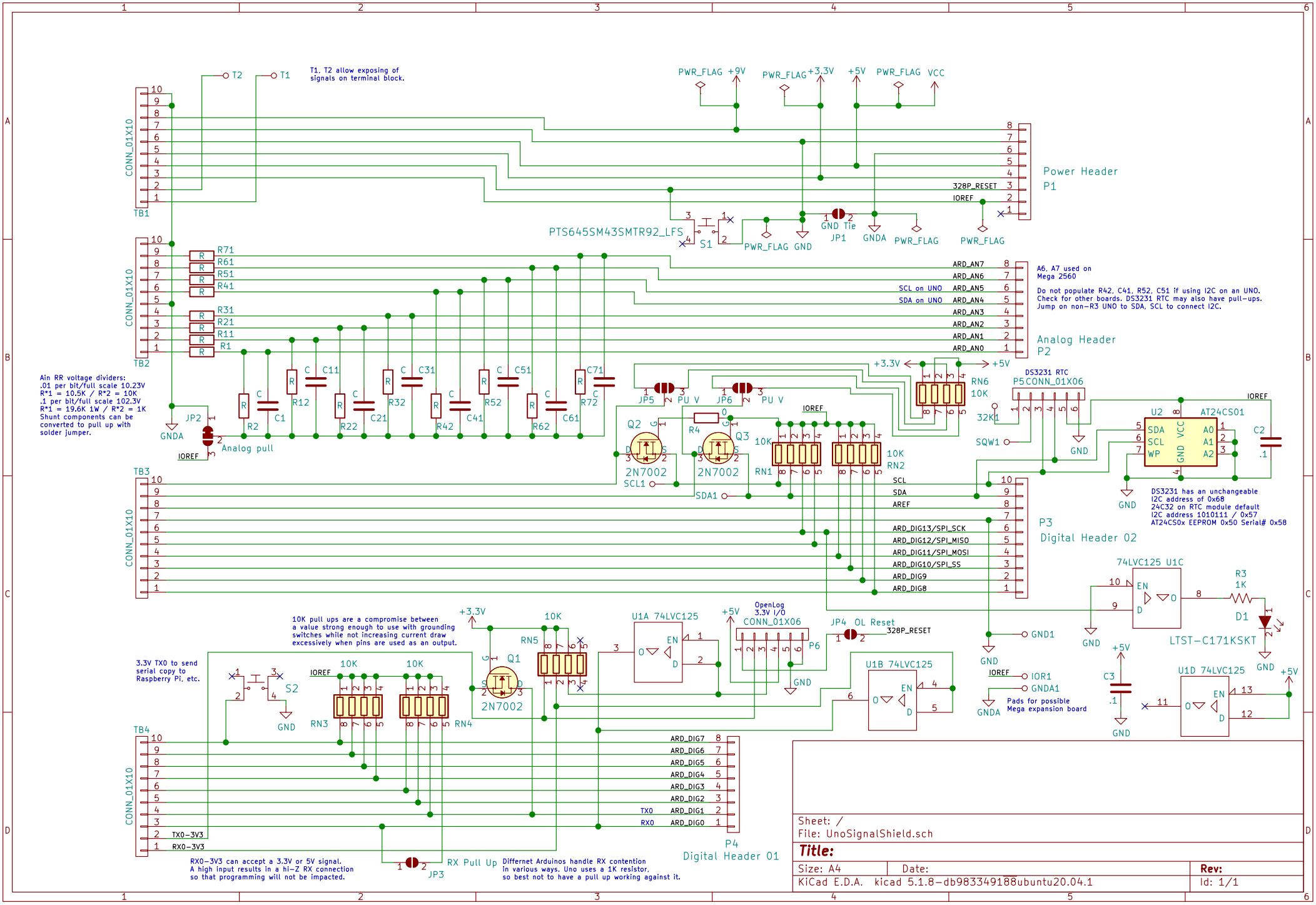
T1, T2 allow exposing of signals on terminal block.
Power Header
P1
Analog Header
P2
A6, A7 used on Mega 2560
Do not populate R42, C41, R52, C51 if using I2C on an UNO. Check for other boards. DS3231 RTC may also have pull-ups. Jump on non-R3 UNO to SDA, SCL to connect I2C.
Ain RR voltage dividers:
.01 per bit/full scale 10.23V
R*1 = 10.5K / R*2 = 10K
.1 per bit/full scale 102.3V
R*1 = 19.6K 1W / R*2 = 1K
Shunt components can be converted to pull up with solder jumper.
Analog pull
DS3231 RTC
P5CONN_01X06
AT24CS01
DS3231 has an unchangeable I2C address of 0x68
24C32 on RTC module default I2C address 1010111 / 0x57
AT24CS0x EEPROM 0x50 Serial# 0x58
P3
Digital Header 02
10K pull ups are a compromise between a value strong enough to use with grounding switches while not increasing current draw excessively when pins are used as an output.
3.3V TX0 to send serial copy to Raspberry Pi, etc.
OpenLog 3.3V I/O
Pads for possible Mega expansion board
P4
Digital Header 01
RX0-3V3 can accept a 3.3V or 5V signal. A high input results in a hi-Z RX connection so that programming will not be impacted.
Differnet Arduinos handle RX contention in various ways. Uno uses a 1K resistor, so best not to have a pull up working against it.
Sheet: /
File: UnoSignalShield.sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. kicad 5.1.8-db983349188ubuntu20.04.1
Id: 1/1