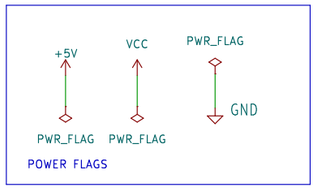

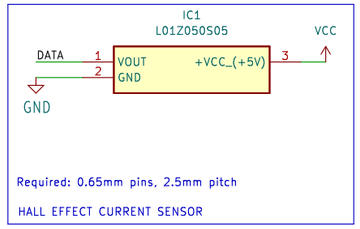

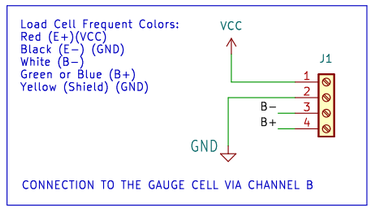

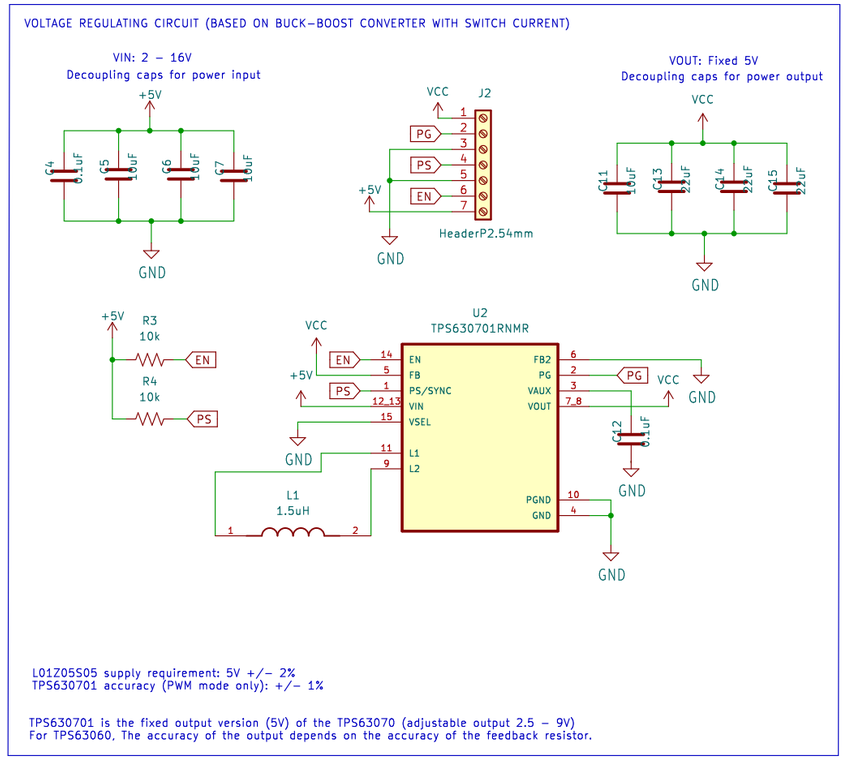

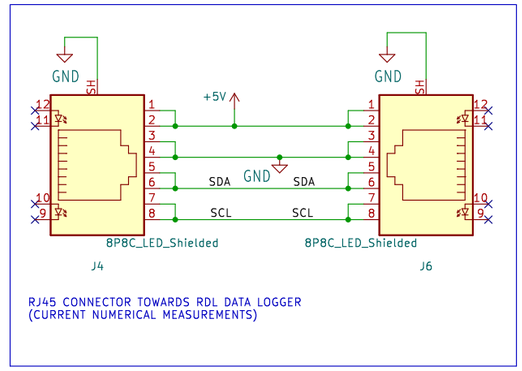

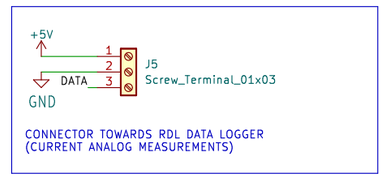

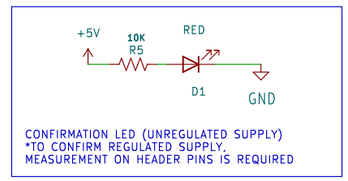

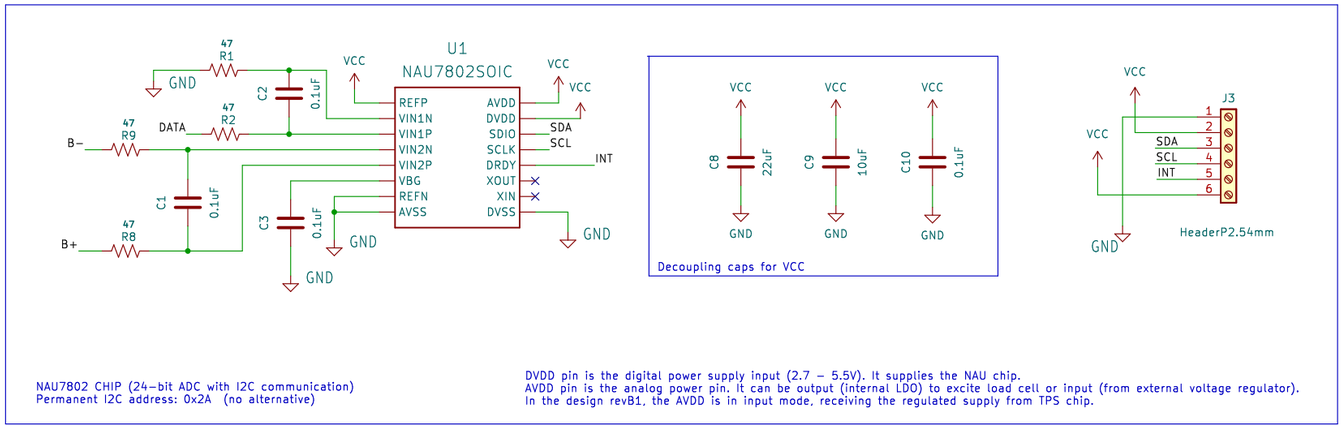

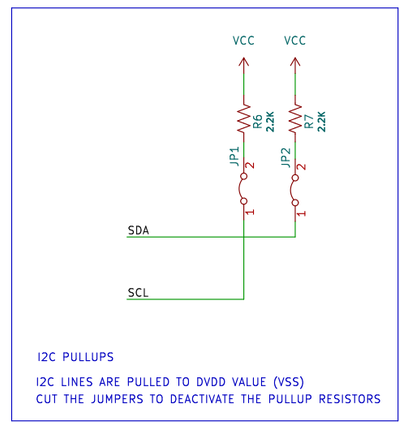

Note: For the current measurements, this design offers analog and digital data communication. For the strain measurements, only digital communication is possible.

Note: Although the RDL outputs 5V nominal, there must be a regulator circuit on the board due to wire loss. This ensures that the 5V +/− 2% sensor requirement of the Hall sensor is met.

Note: A heat sink of dimension 0.19x0.25x0.30" is optional but recommended for the TPS630701 chip.

Note: For this first revision combining NAU7802 and TAMURA, the pin headers are kept to ease any eventual troubleshooting.

Note: The VCC has a redundancy of decoupling capacitors, due to the merger of the two designs.
However, since the experimental setup had this redundancy, we will leave it like that for the first iteration.

Note: The RJ45 pins for the 2 LEDs are not connected because they are not used.

Current Subsection: Original design by Alex Wende for SparkFun. NAU7802 Subsection: Original design by N. Seidle for Sparkfun Electronics.

Main design modifications by FC: Use of chip TPS630701 instead of TPS63070. Removal of voltage selector. Integration of Hall Effect current sensor. Addition of RJ45 connector, addition of decoupling caps on the digital supply.

Modifications by Frederic Coulombe, BEng MSc
Jericho Laboratory Inc.

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File: WIRED−NAU7802−board−revB1.kicad_sch

Title: NAU7802 Board for Current and Strain Measurements

Size: A3	Date: 2024−03−12	**Rev: rev B1**
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