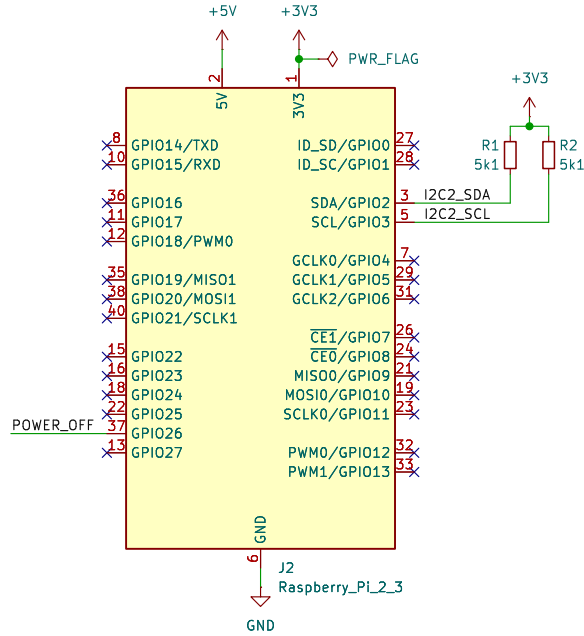
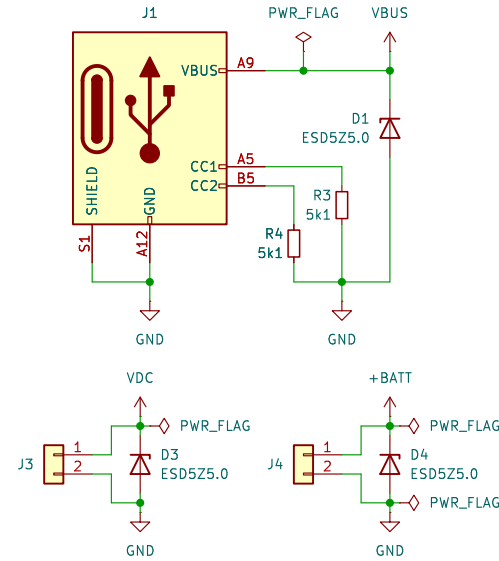


## Raspberry Pi



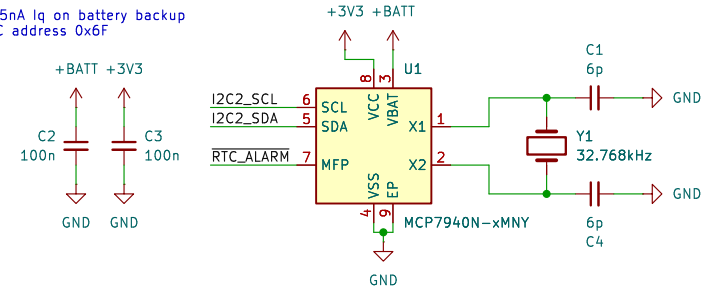
## Connectors

- USB-C charger, JST PH for battery and solar
- Battery cable compatible with Adafruit 1S lipo batteries



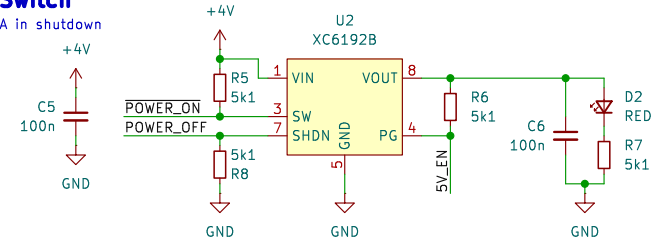
## Real Time Clock

- 925nA Iq on battery backup
- I2C address 0x6F



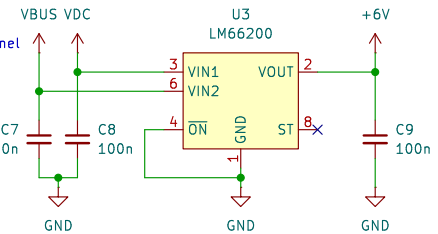
## Load Switch

- Iq 10nA in shutdown



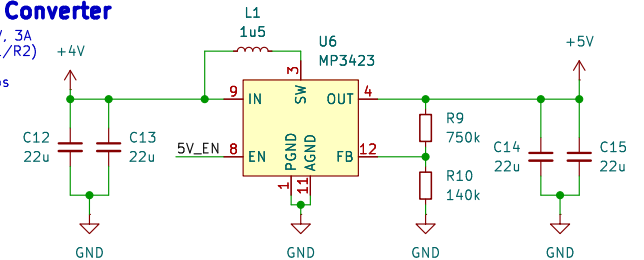
## Ideal Diode

- Input 1.6V – 5.5V
- Up to 2.5A per channel
- 1.32uA Iq



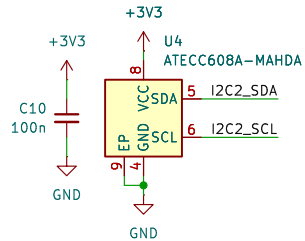
## 5V Boost Converter

- Output 5.13V, 3A
- $0.807 \cdot (1 + R1/R2)$
- $R1 > 600k$
- Low ESR caps



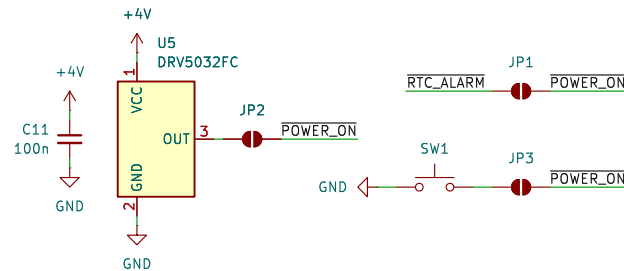
## Certificate Storage

- compatible with NervesKey for connection to NervesHub



## Wakeup Sources

- Open drain interrupts, pull up on POWER\_ON load switch pin

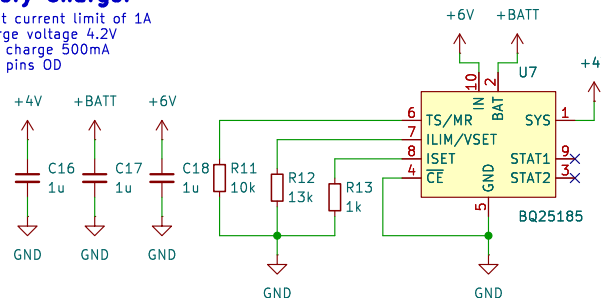


## Mounting Holes



## Battery Charger

- input current limit of 1A
- charge voltage 4.2V
- fast charge 500mA
- stat pins OD



A power-management system for Nerves, featuring low-power sleep mode, USB and solar battery charging, manual wake-from-sleep and support for NervesHub

Designed by Gus Workman

**Protolux Labs**

Sheet: /

File: soleil\_powerpack.kicad\_sch

**Title: Soleil PowerPack**

Size: A4 Date: 2024-08-01

KiCad E.D.A. 8.0.4

**Rev:**

Id: 1/1