AC Power Switch

Microsoft Research

Microsoft Corp.
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Physically secure computer controlled AC power switch system design -

Supported Modules:
- Control *(ATSAMD51)*
- Radio Support *(Adafruit Feather Socket)*

Interface:
- Wireless *(BT/WiFi/LAN as needed)*
- USB *(Type B 2.0)*
- LED & Sound
- GPIO

System Components:
- Flash
- RTC *(32.768 kHz)*
- Power Filtering *(120VAC)*
- Battery *(Backup support)*

Title *AC Power Switch*		*BrickRed Systems* *2509 152nd Ave NE* *Suite B* *Redmond, WA 98052*
Secure AC controlled power switch	Revision: 0*	
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File: Title Page.SchDoc		

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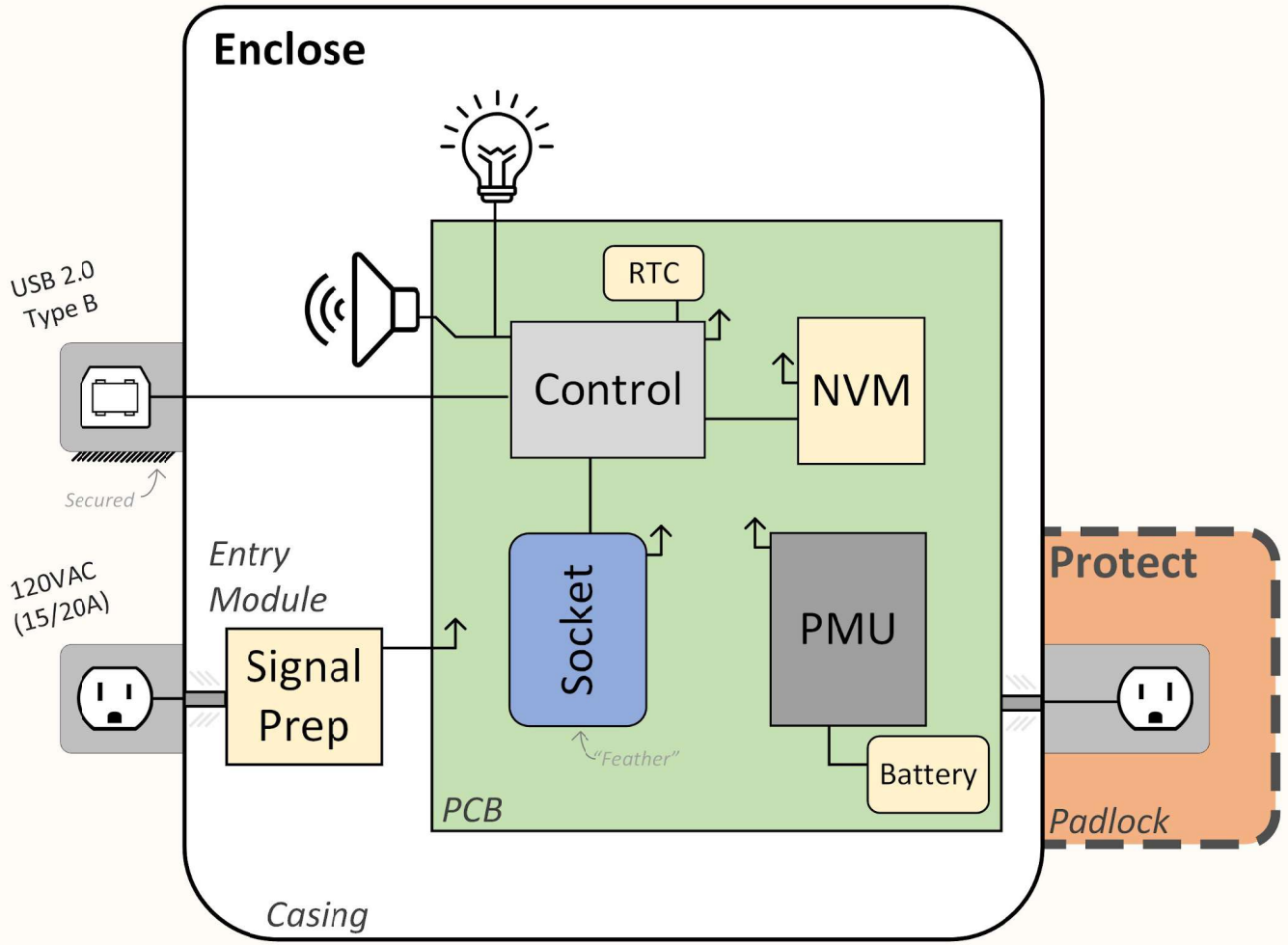

Title *AC Power Switch*		BrickRed Systems 2509 152nd Ave NE Suite B Redmond, WA 98052
Schematic table of contents	Revision: 0*	
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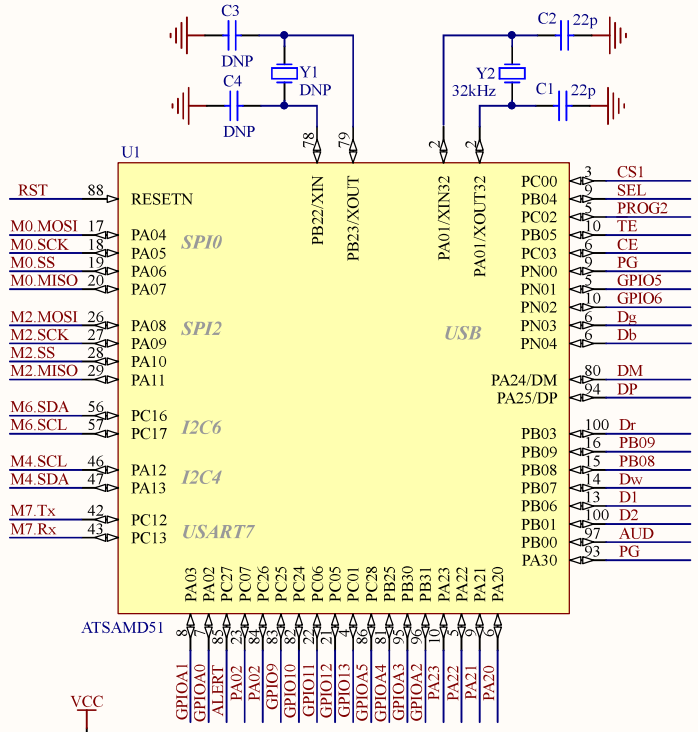
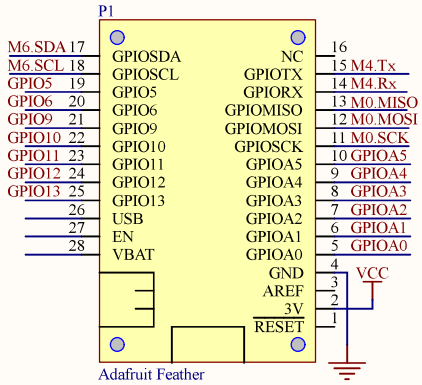
Control

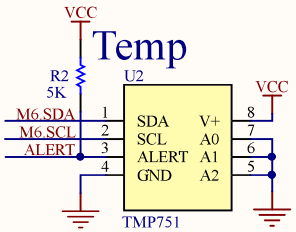
MCU

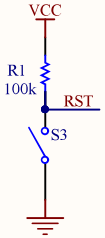


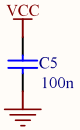
Feather Socket



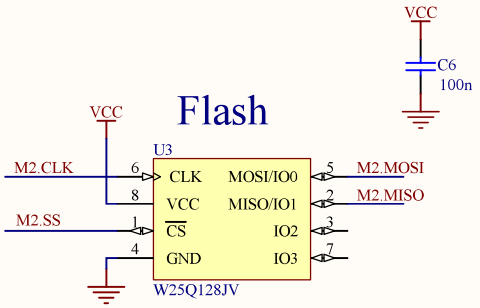
Temp







Flash



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System control & operation	Revision: 0*	*2509 152nd Ave NE*
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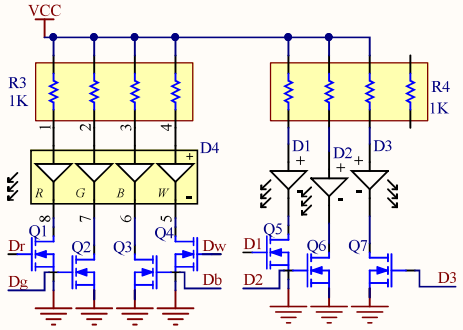
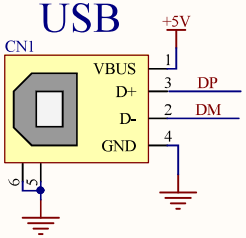
Interface

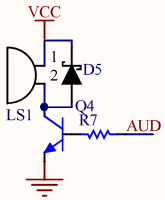
Indication



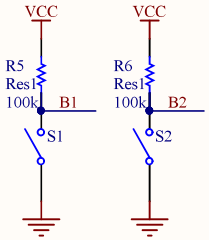
USB



Audio

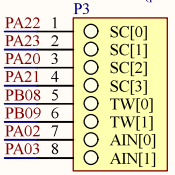


Buttons



GPIO

DNP
(pin access)



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Device user interfaces & control	Revision: 0*	
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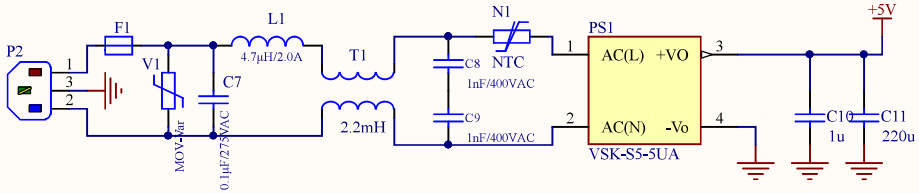
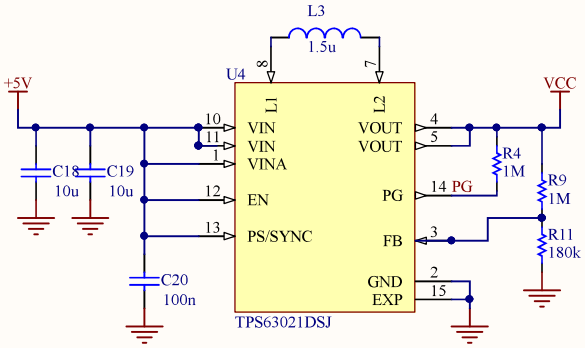
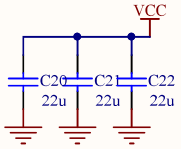
Power

Wall CM Line Filter Wall->5V

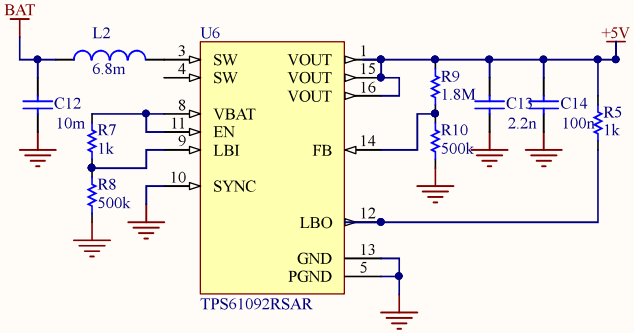


5V->LDO->3.3V

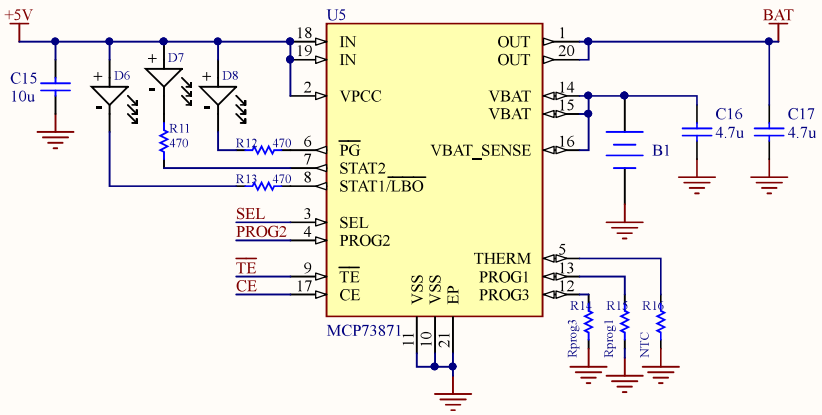


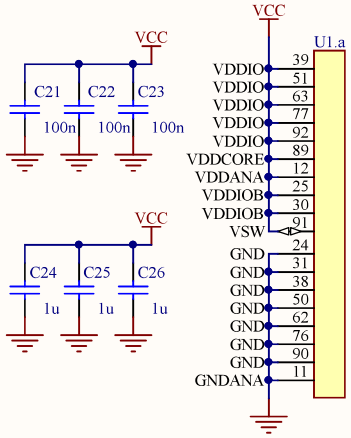


Batt->5V



Charge





Title *AC Power Switch*		*BrickRed Systems*
Input power, conversion & backup	Revision: 0*	*2509 152nd Ave NE*
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Glossary

Design Notes

- This document shares options if needed

Design Opens

- loop connection of U5-U6?
- confirm clock configs

Questions

1. Interest in D4?
2. Capacitance schema for CPU? Many pins
3. Interest in PIP Filter? (e.g. D/K # CCM1603-ND)

Connector Description

- none listed

Rail Description

- VCC: +3.3V system voltage
- +5V: Power system supply
- VBAT: Battery output voltage

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Design notes & opens	Revision: 0*	
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