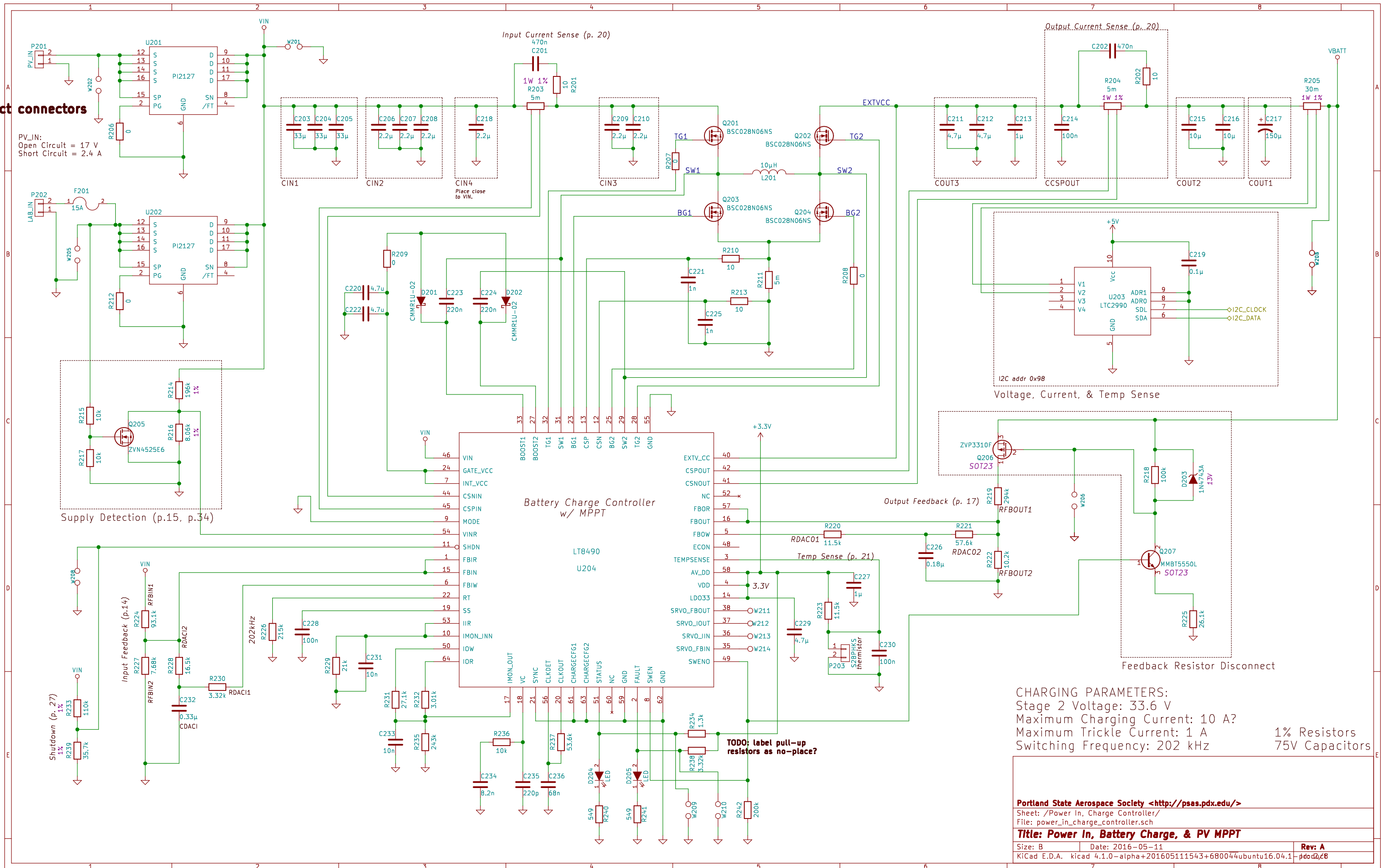
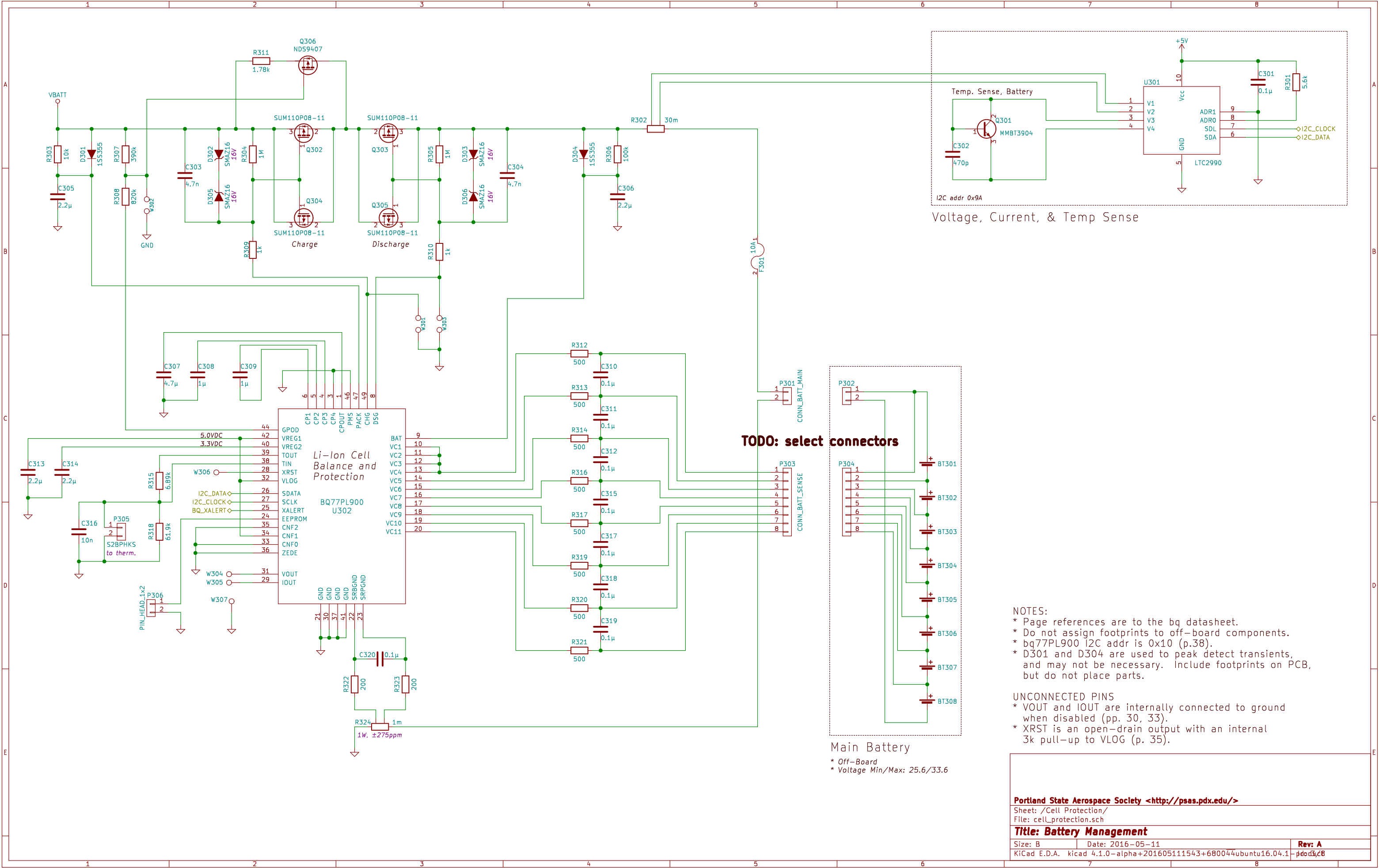


select connectors

PV_IN:
Open Circuit = 17 V
Short Circuit = 2.4 A



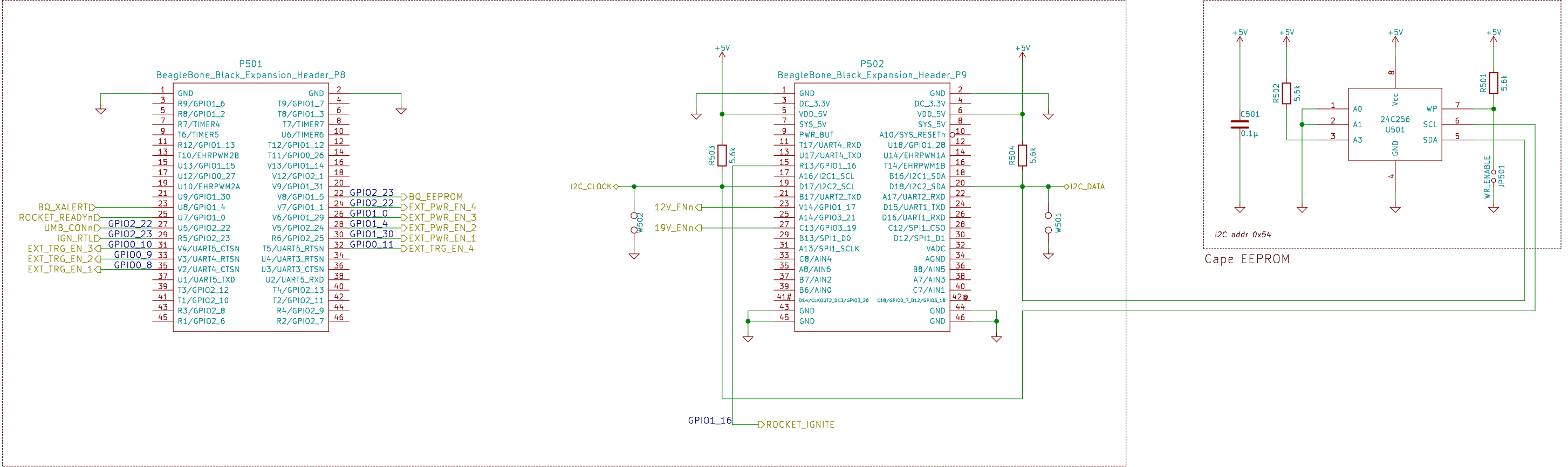


NOTES:

- * Page references are to the bq datasheet.
- * Do not assign footprints to off-board components.
- * bq77PL900 I2C addr is 0x10 (p.38).
- * D301 and D304 are used to peak detect transients, and may not be necessary. Include footprints on PCB, but do not place parts.

UNCONNECTED PINS

- * VOUT and IOUT are internally connected to ground when disabled (pp. 30, 33).
- * XREST is an open-drain output with an internal 3k pull-up to VLOG (p. 35).



BeagleBone Expansion Headers

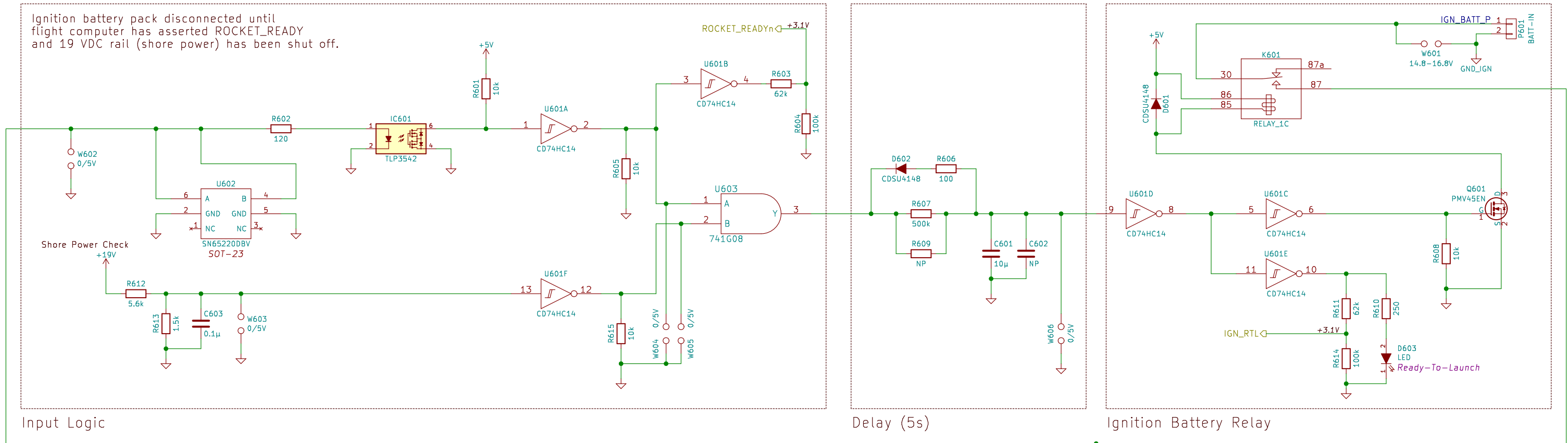
I2C Devices			
ADDR	Part	Type	Location
0x10	U203	BQ77PL900	B/PM
0x54	U501	EEPROM	BBB
0x90	U402	LTC2991	DC-DC
0x98	U203	LTC2990	Power In
0x9A	U301	LTC2990	B/PM

NOTES:

- * Do NOT change ROCKET_IGNITE, pin default reset state is High-Z w/ pulldown resistor. Other pins can be configured in EEPROM at boot time.
- * All I2C devices on LTC3 are slaves. The BBB is the only master so the LTC will not need arbitration.

TODO: select conn.

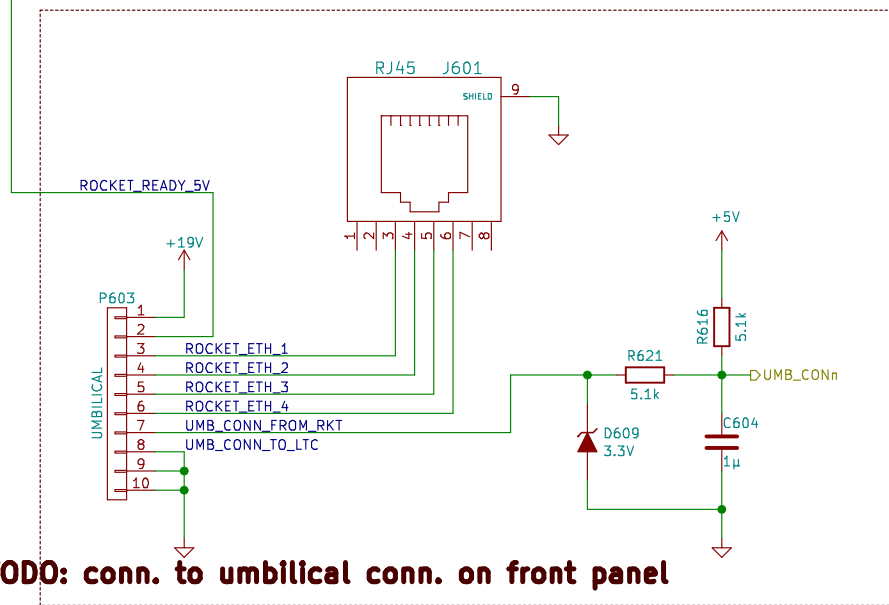
Ignition battery pack disconnected until flight computer has asserted ROCKET_READY and 19 VDC rail (shore power) has been shut off.



Input Logic

Delay (5s)

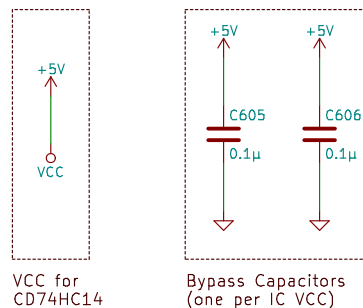
Ignition Battery Relay



TODO: conn. to umbilical conn. on front panel

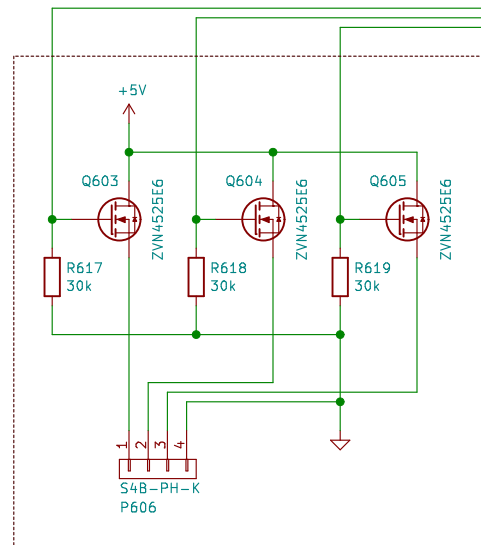
Rocket Umbilical

Rocket-to-BeagleBone Ethernet



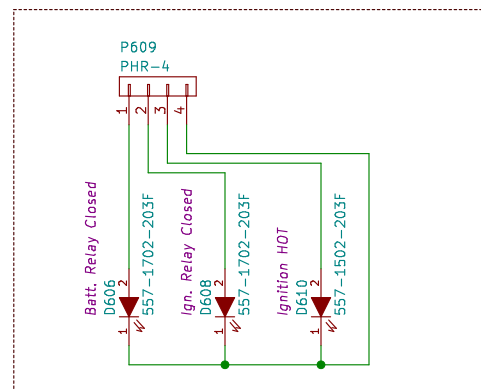
VCC for CD74HC14

Bypass Capacitors (one per IC VCC)

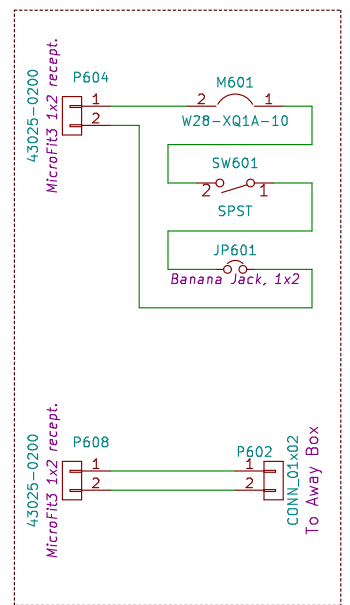
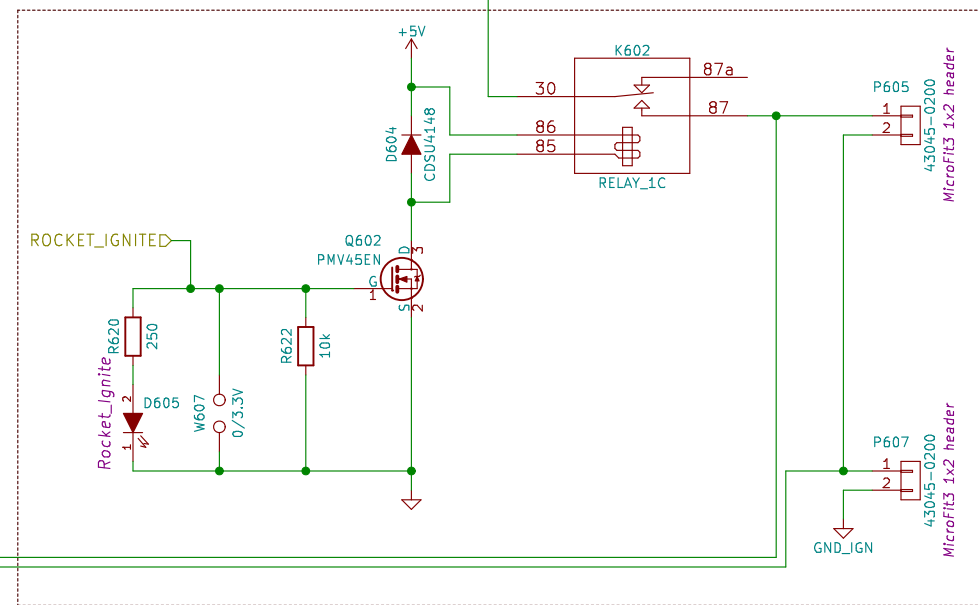


Rocket Ignition Relay

TODO: find out if Dialight 557 LED indicators require current-limiting resistor



BAKERCON Hazard Gauge (super-bright LEDs, exterior panel)



Breaker, Arm Switch, Shorting Bar, & Ignition Connector (front panel)

Portland State Aerospace Society <<http://psas.pdx.edu/>>

Sheet: /Rocket Umbilical & Ignition Control/

File: rocket_interface.sch

Title: LTC3 Rocket Umbilical & Ignition Control

Size: B Date: 2016-05-11

KiCad E.D.A. kicad 4.1.0-alpha+201605111543+680044ubuntu16.04.1

Rev: A

pdo0428

