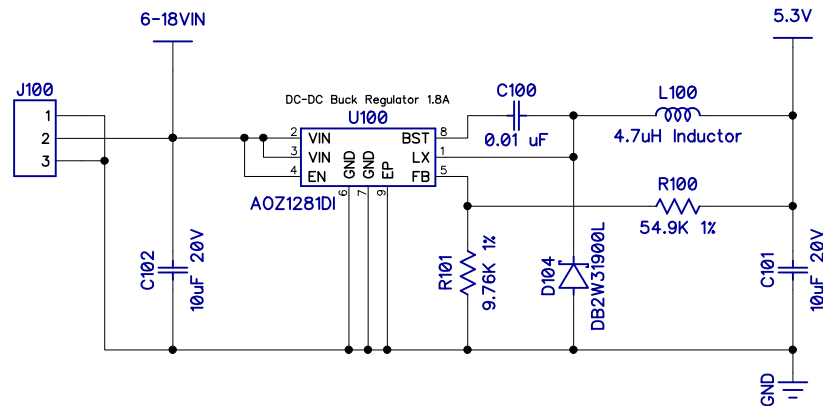


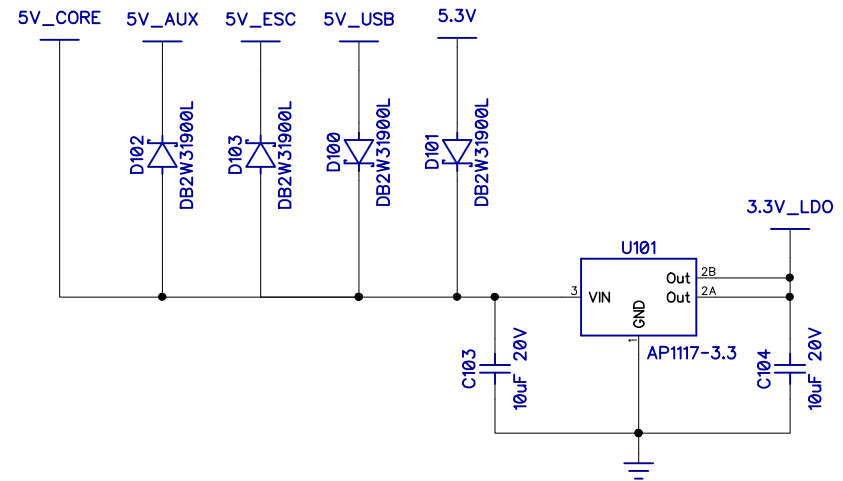
6 5 4 3 2 1

TODO: Clean up component patterns/naming (Some imported - should all be consistent!)
Check DCDC Vout resistor for new BOM !!!!!

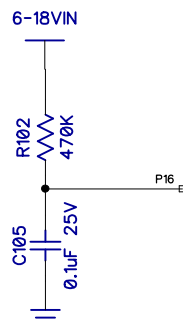
5v Switching power supply



3v3 Low dropout regulator (LDO)



Battery voltage monitor



set IO low to discharge cap
start counter and set pin input
count until pin goes high represents vin
not linear! create lookup DAT table

OPTION: Reduce C105 to 0.01uF
faster sample / less accurate ?

Prop IO: 1

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Rocklin, CA 95765
(916) 632-4664
<http://www.parallax.com>

Part Number: 80204

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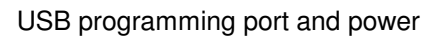
ELEV-8 Flight Controller

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REV
A

Power

6 5 4 3 2 1



Consider 5mA Blue LED (to balance out brightness)

CBUS0 = PWREN# (Flexible indicator)

CBUS1 = TXLED#

CBUS2 = RXLED#

CBUS3 = PWREN#

USB Config / MaxPower = 400mA

Enable CBUS pulldown option

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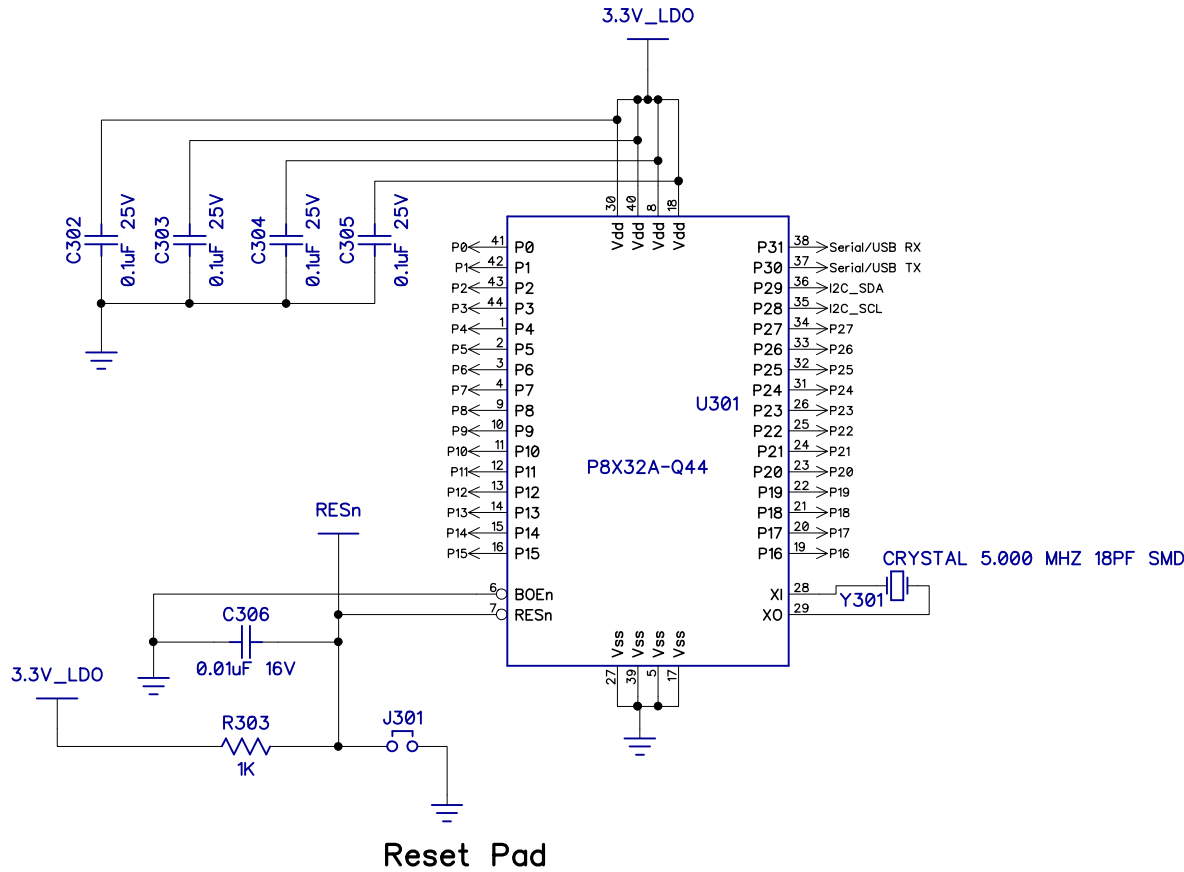
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REV
A

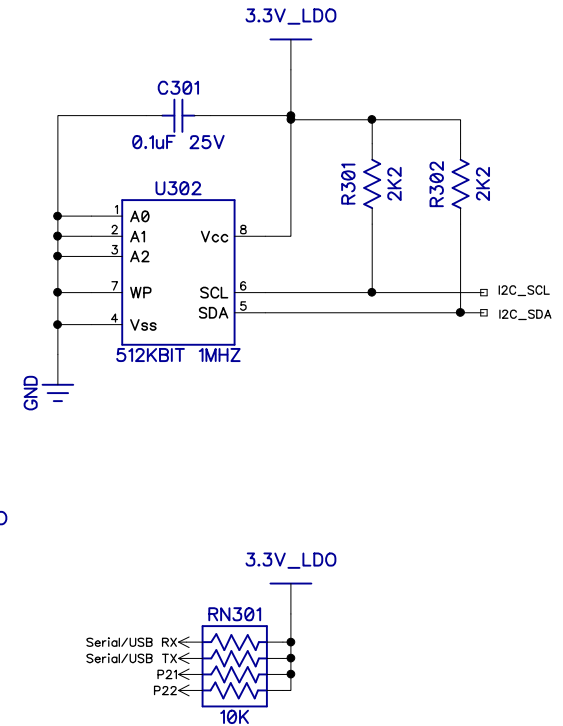
USB

REV
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Propeller microcontroller



EEPROM



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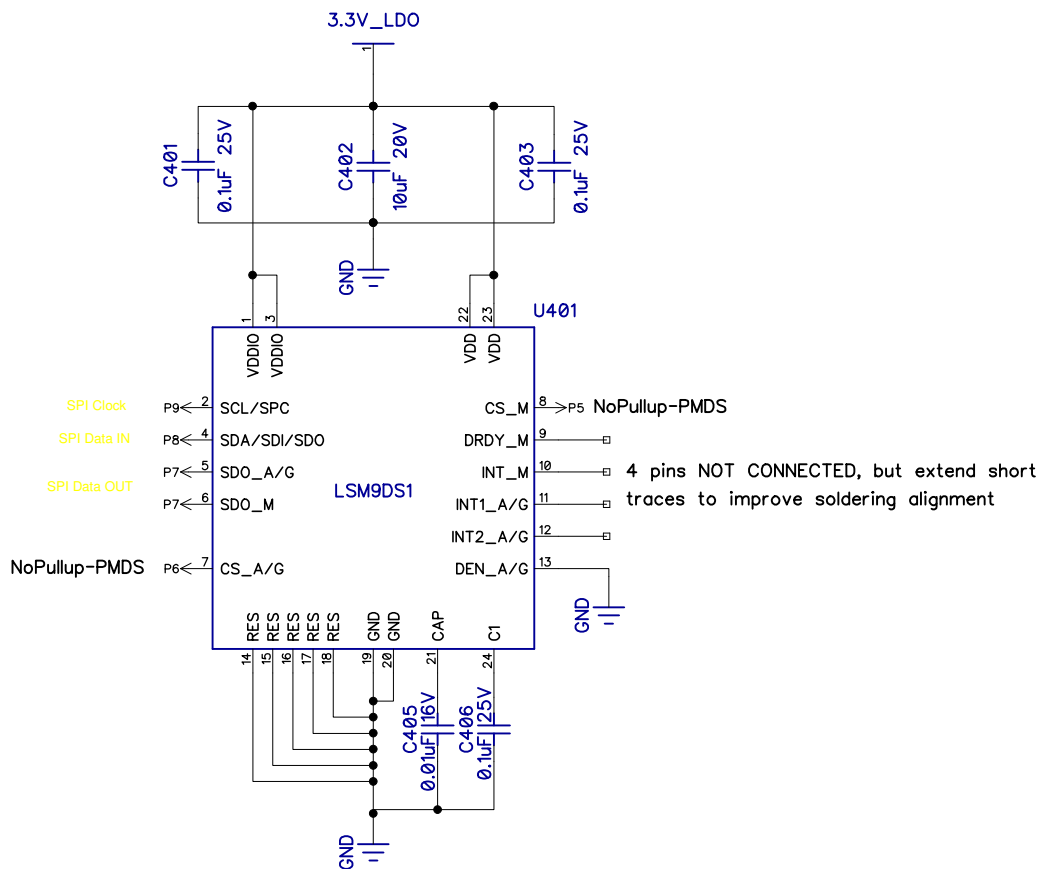
Part Number: 80204

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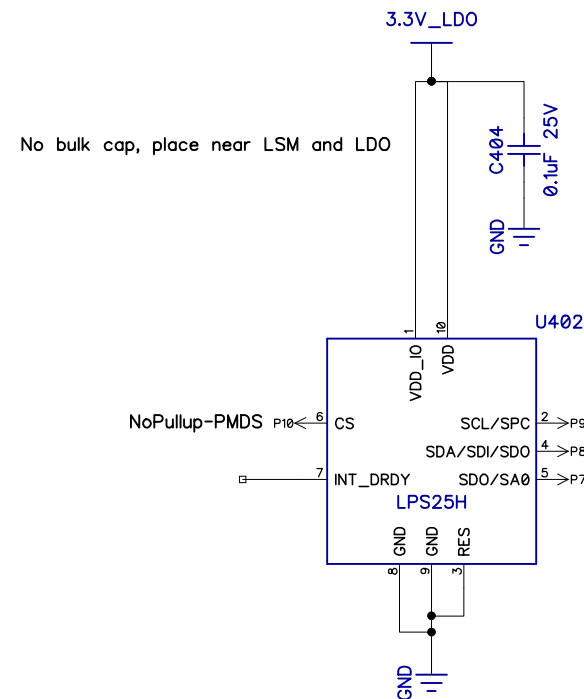
REV
A

Microcontroller and Memory

iNEMO inertial module: LSM9DS1
3D accelerometer, 3D gyroscope, 3D magnetometer



MEMS nano pressure sensor: LPS22H
Absolute digital output altimeter and barometer



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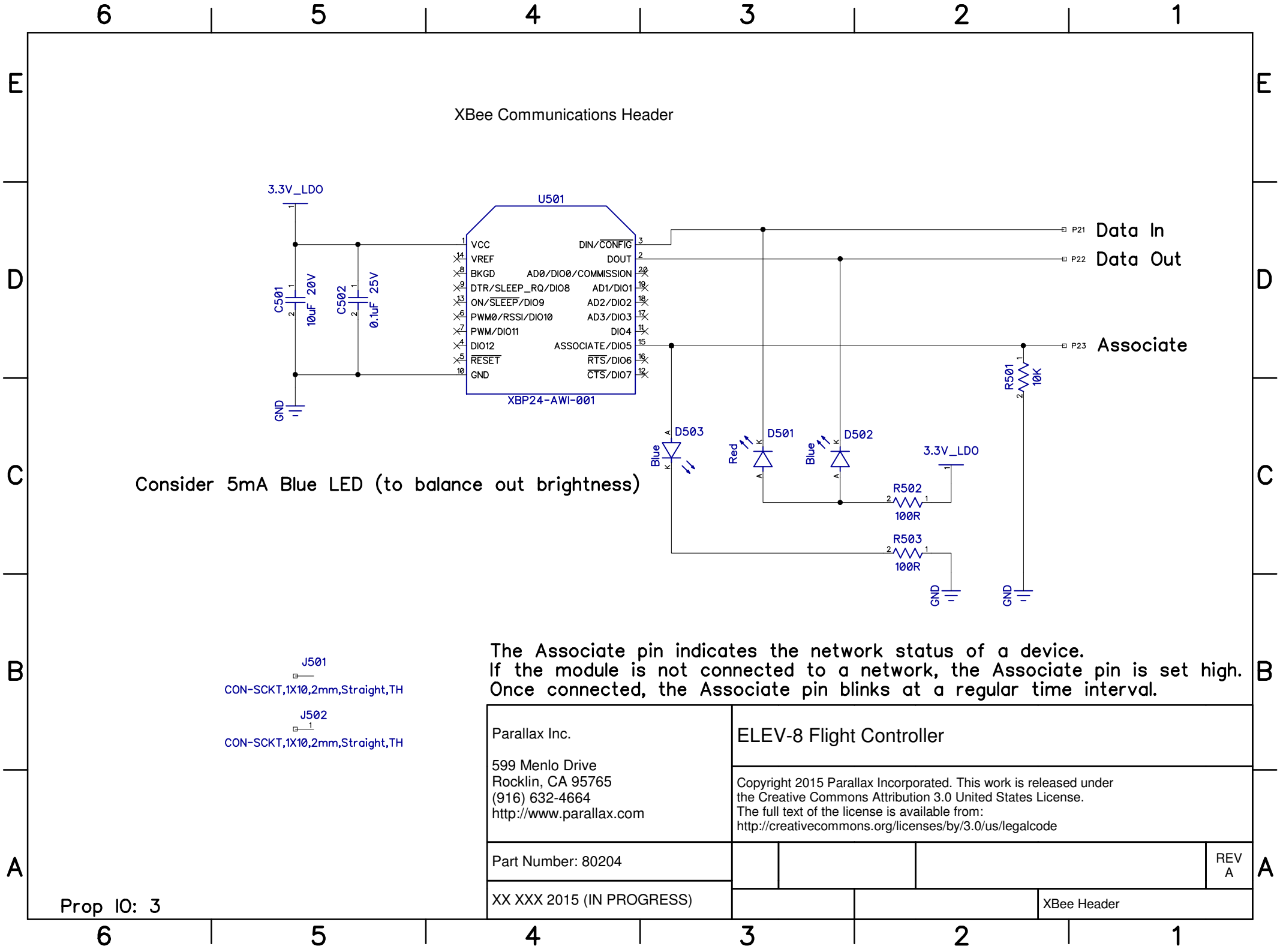
Part Number: 80204

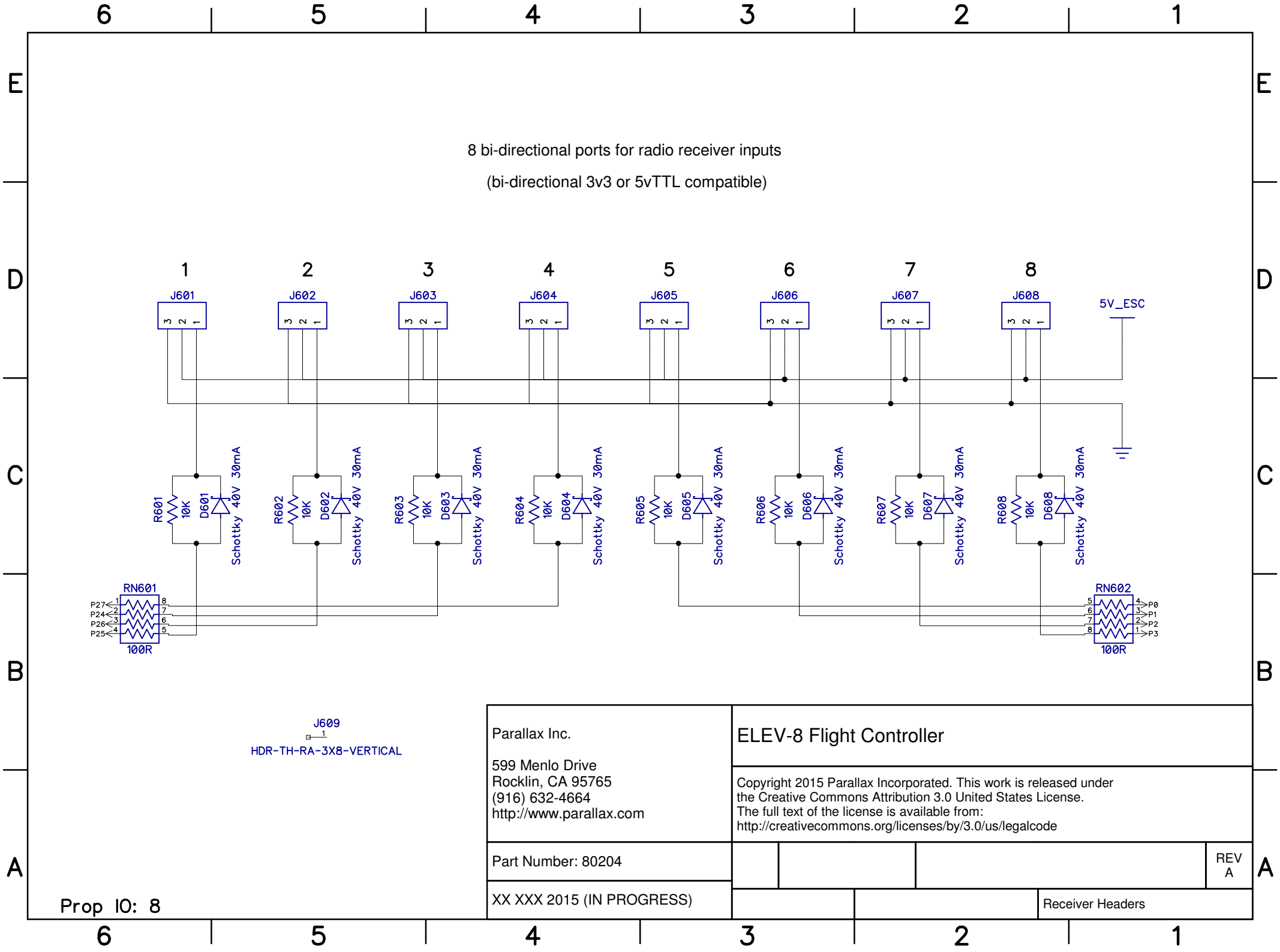
REV
A

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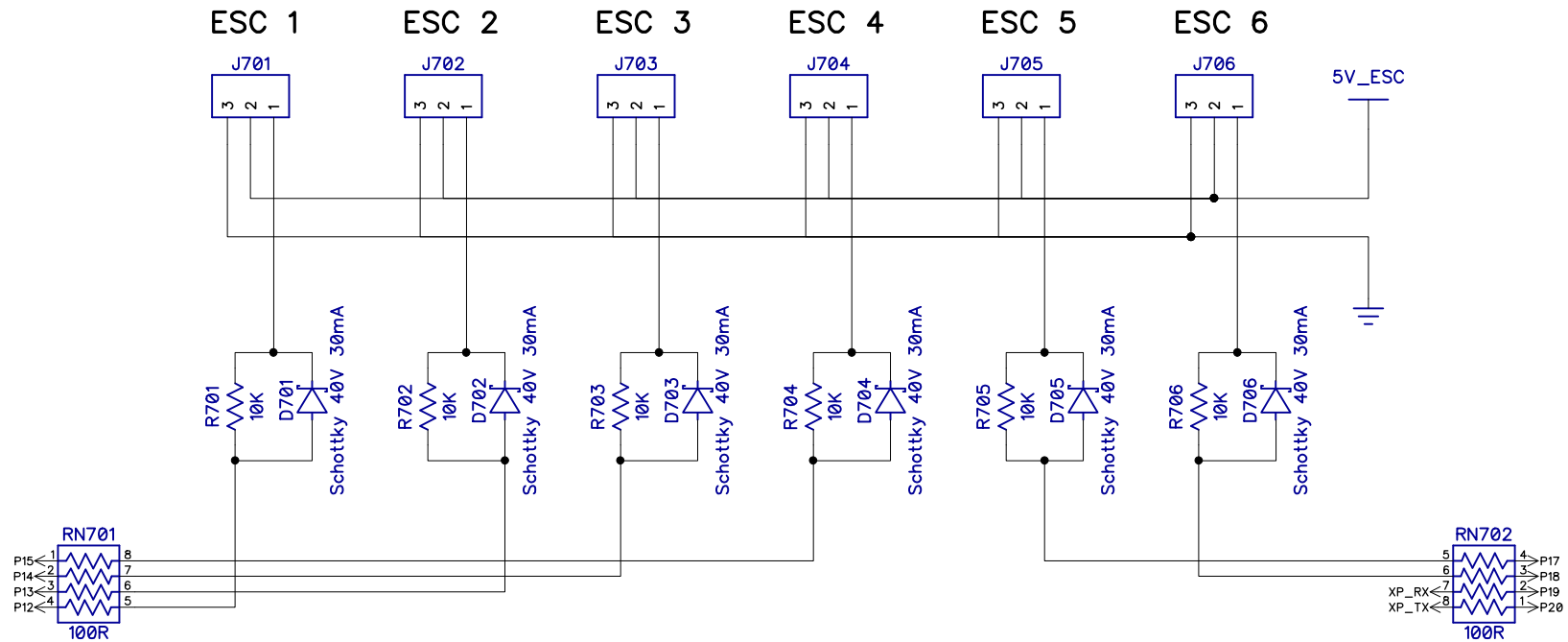
Motion and Environment Sensors

Prop IO: 6





Up to 6 bi-directional motor drivers (ESC - Electronic Speed Controllers)
 Compatible with AVR, Silabs, Parallax XRotor and Opto ESC's
 (bi-directional 3v3 or 5vTTL compatible)



J707
 HDR-TH-RA-3X8-VERTICAL

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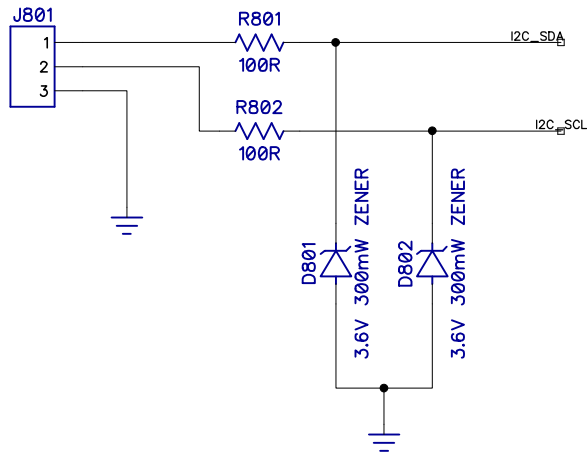
Part Number: 80204

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REV
A

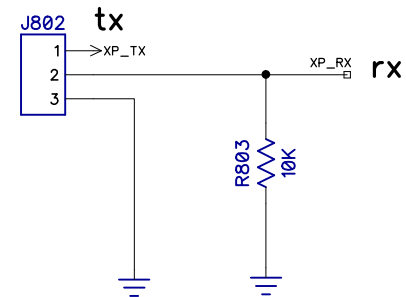
ESC Headers

I2C Header



Zener diodes added for basic protection
from accidental 5V connection to headers

Expansion Serial Bus



Check pin state at reset

If low detected on tx, then slave connected,
else set low and ignore port
(slave must have 10K pulldown on rx)

Prop IO: 2

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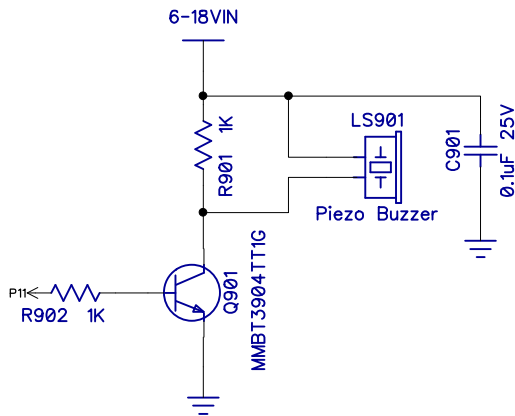
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REV
A

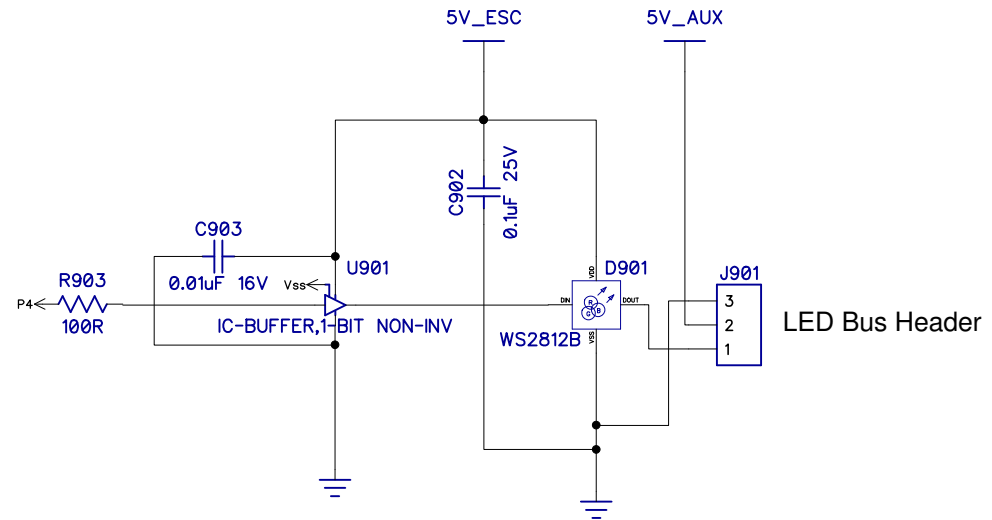
Expansion Headers

Sounder / Buzzer



Set Rb approx. $100\text{ohm} * V_{\text{drive}}$
C901 NOT on PCB
as next to batt-vin / space

Status RGB Led, and LED Bus Header



On board RGB led will operate from USB or battery power
External RGB leds will only operate when battery connected
C903 NOT on PCB as C902 placed near

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REV
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LED / Buzzer

Prop IO: 2

