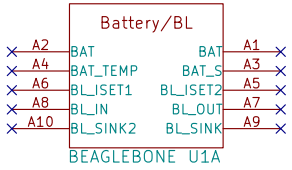
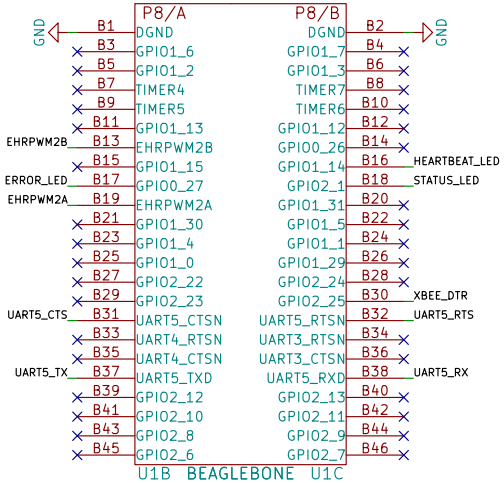
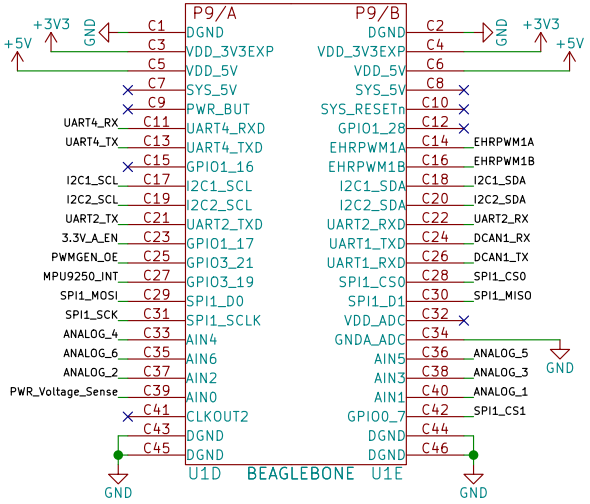
Beaglebone black connections

Not using the internal battery management of the Beaglebone black because it only supports 1S Lipo input

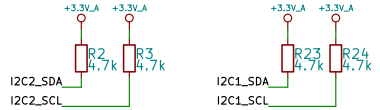




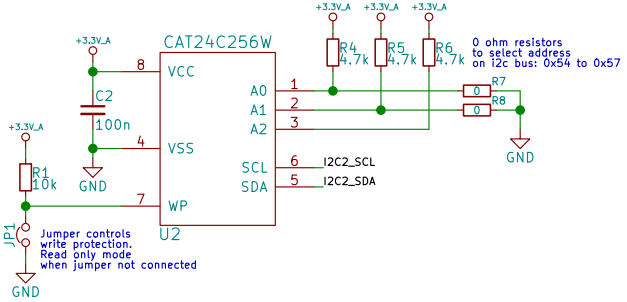


I2C pull-ups

I2C 2 adresses:
EEPROM: 0x54 to 0x57
Barometer: 0x77
RTC: 0x68

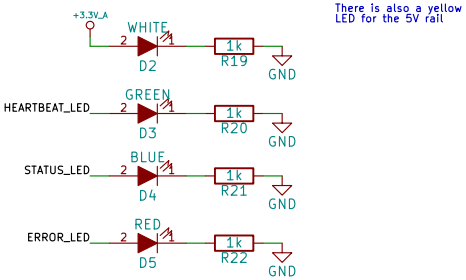


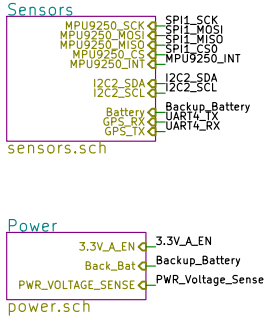
EEPROM

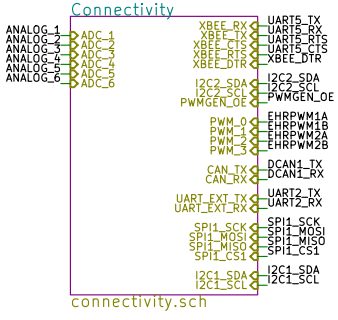


LEDs

There is also a yellow LED for the 5V rail







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Sheet: /
File: robocape.sch

Title: Robotics Cape

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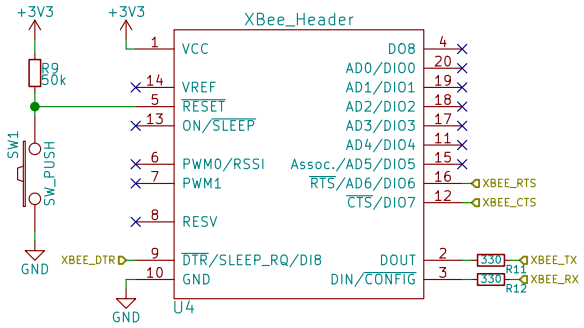
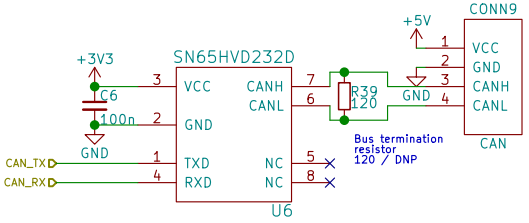
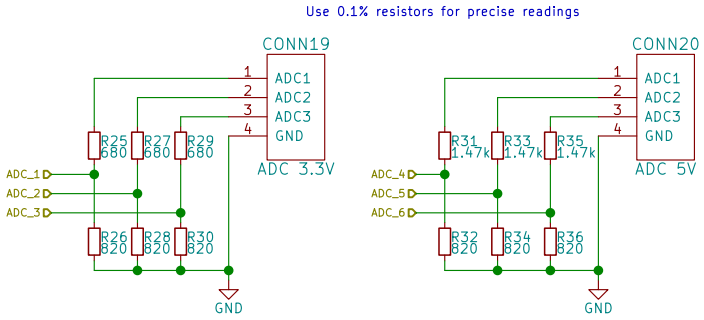
XBee connector



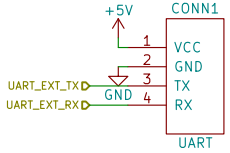
CAN Transceiver



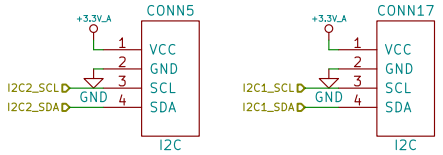
ADC connectors



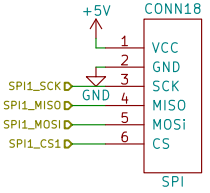
UART connector



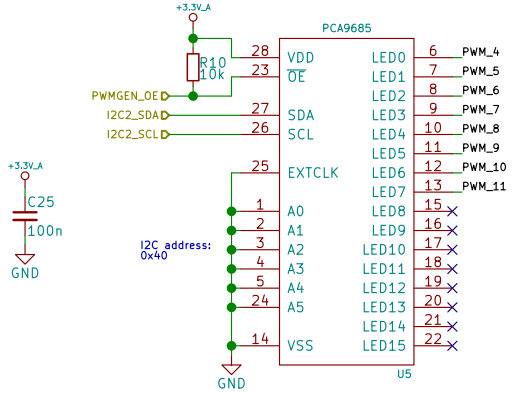
I2C connector



SPI connector



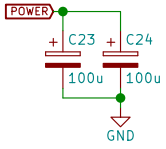
PWM Generator

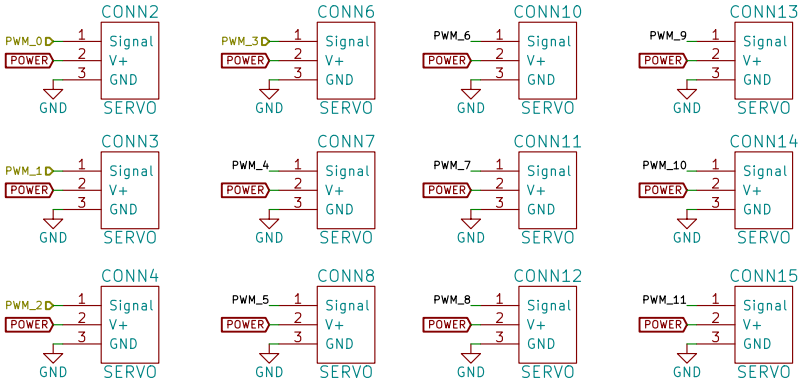


PWM connectors

PWM 0 to 3 are controlled directly by the Beaglebone's PWM

PWM 4 to 11 are controlled through the PWM generator





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File: connectivity.sch

Title: Robotics Cape

Size: A4	Date: 2015-07-20	**Rev: C**
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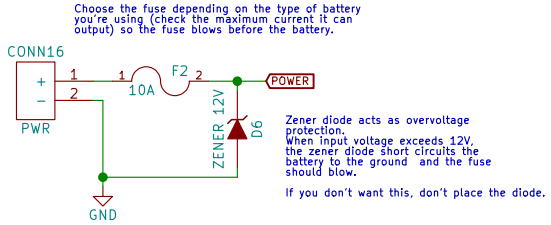
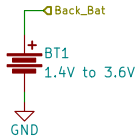
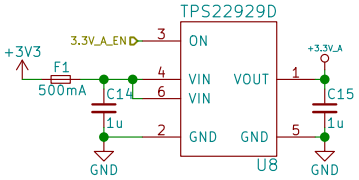
Battery connector
3V to 12V



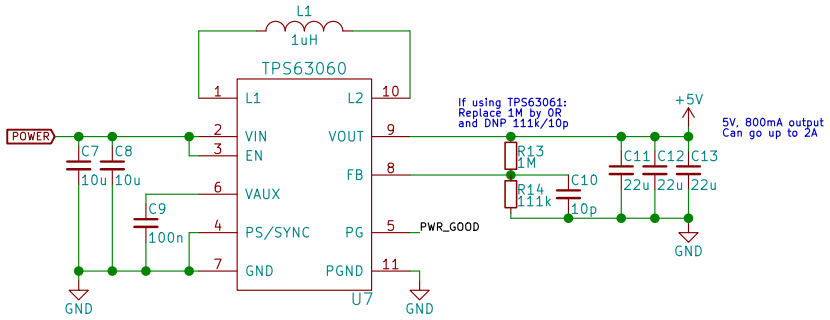
Backup battery for RTC

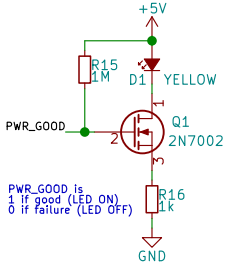


Load switch on i2c modules power

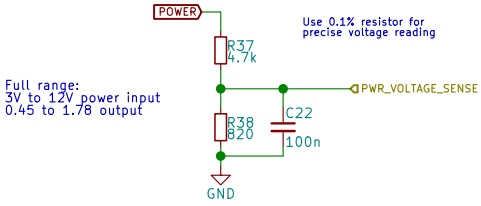


Power supply: 5V output

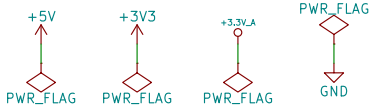




Battery power voltage sense



For KiCad DRC checks



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Sheet: /Power/
File: power.sch

Title: Robotics Cape

Size: A4	Date: 2015-07-20	**Rev: C**
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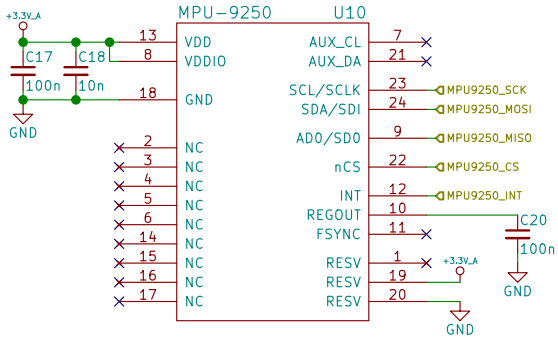
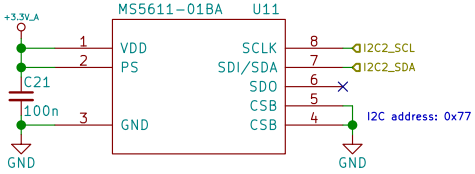
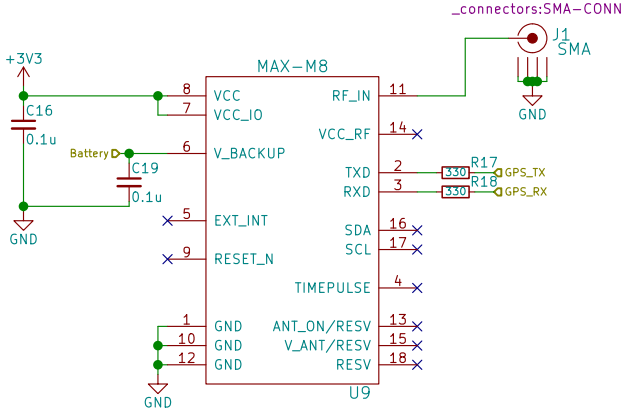
IMU 9 dof
Accelerometer
Gyroscope
Magnetometer



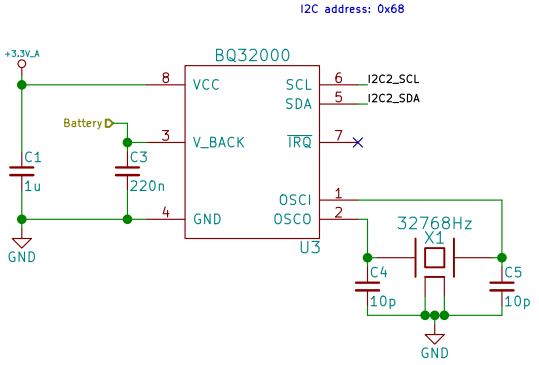
Barometer



GPS with external passive antenna



RTC



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Sheet: /Sensors/
File: sensors.sch

Title: Robotics Cape

Size: A4	Date: 2015-07-20	**Rev: C**
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