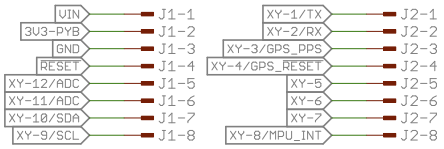
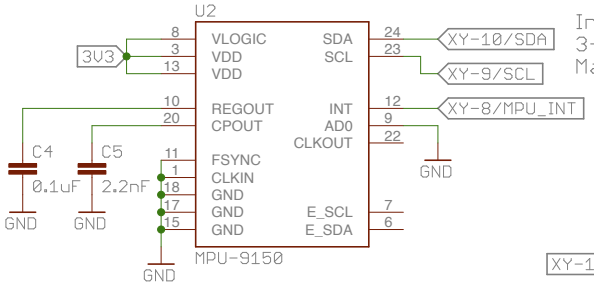
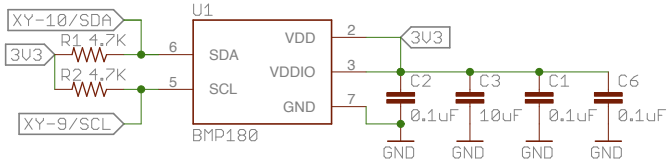
Pyboard connection headers



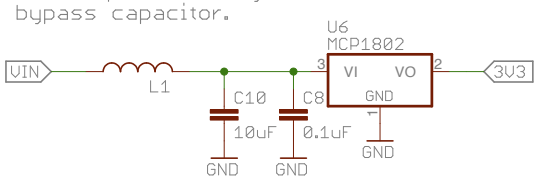


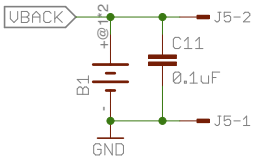
Invensense MPU-9150 9DOF IMU:
3-Axis Accelerometer, Gyroscope,
Magnetometer

Bosch BMP180, 24-bit barometric
altimeter with I2C interface



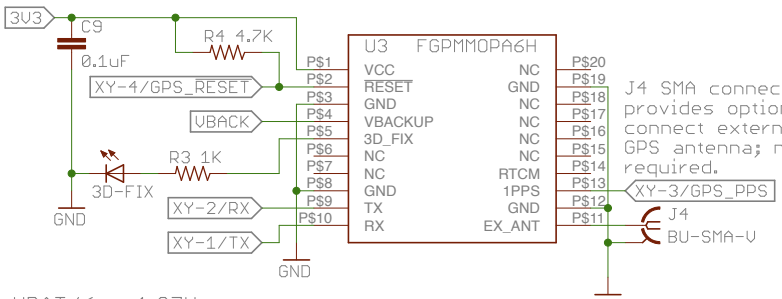
3.3V LDO output connects directly
to C9 on board. If layout is rearranged,
LDO output should get its own 100nF
bypass capacitor.





B1 is a 12mm coin-cell holder.
Battery backup allows GPS to retain
satellite orbital data for faster startup.
J5 provides option to supply backup
power to pyboard RTC.

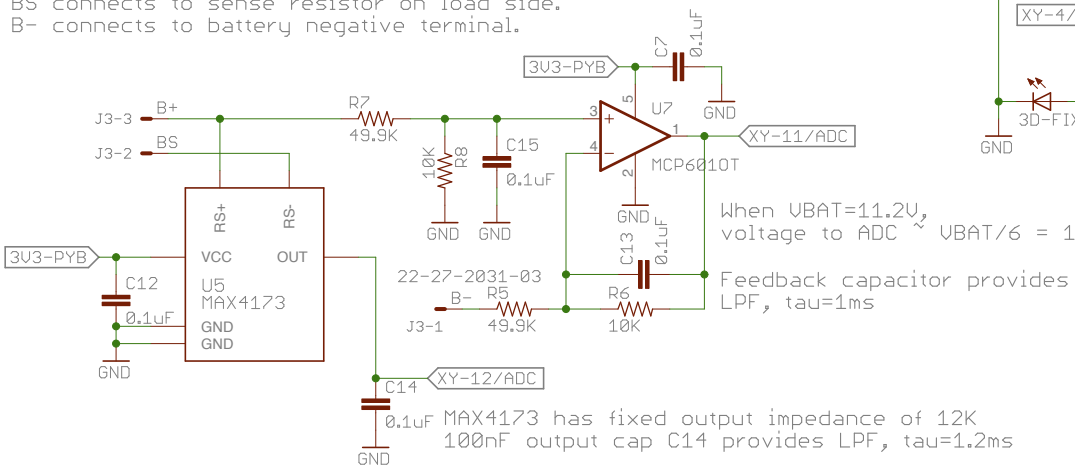
FGPMMOPA6H integrated GPS receiver module from
GlobalTop, based on MediaTek MT3339 GPS chipset.
RTCM is a serial input for external Differential GPS
data, not enabled in default firmware.
Note that DGPS capability is provided by SBAS signal
(WAAS, EGNO, GAGAN, MSAS) which requires no external input.



J4 SMA connector
provides option to
connect external
GPS antenna; not
required.

Battery Pack Current/Voltage Monitor:

In Quadcopter application, Li-poly battery pack
supplies Electronic Speed Controllers (ESC's)
through a ~1milliohm sense resistor connected
to positive terminal of battery pack.
B+ (battery +) connects to sense resitor on battery side.
BS connects to sense resistor on load side.
B- connects to battery negative terminal.



When VBAT=11.2V,
voltage to ADC ~ VBAT/6 = 1.87V

Feedback capacitor provides
LPF, tau=1ms

MAX4173 has fixed output impedance of 12K
100nF output cap C14 provides LPF, tau=1.2ms

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