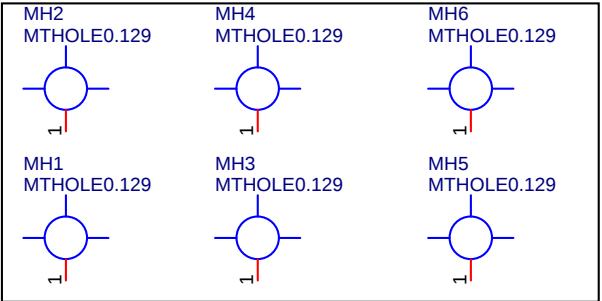
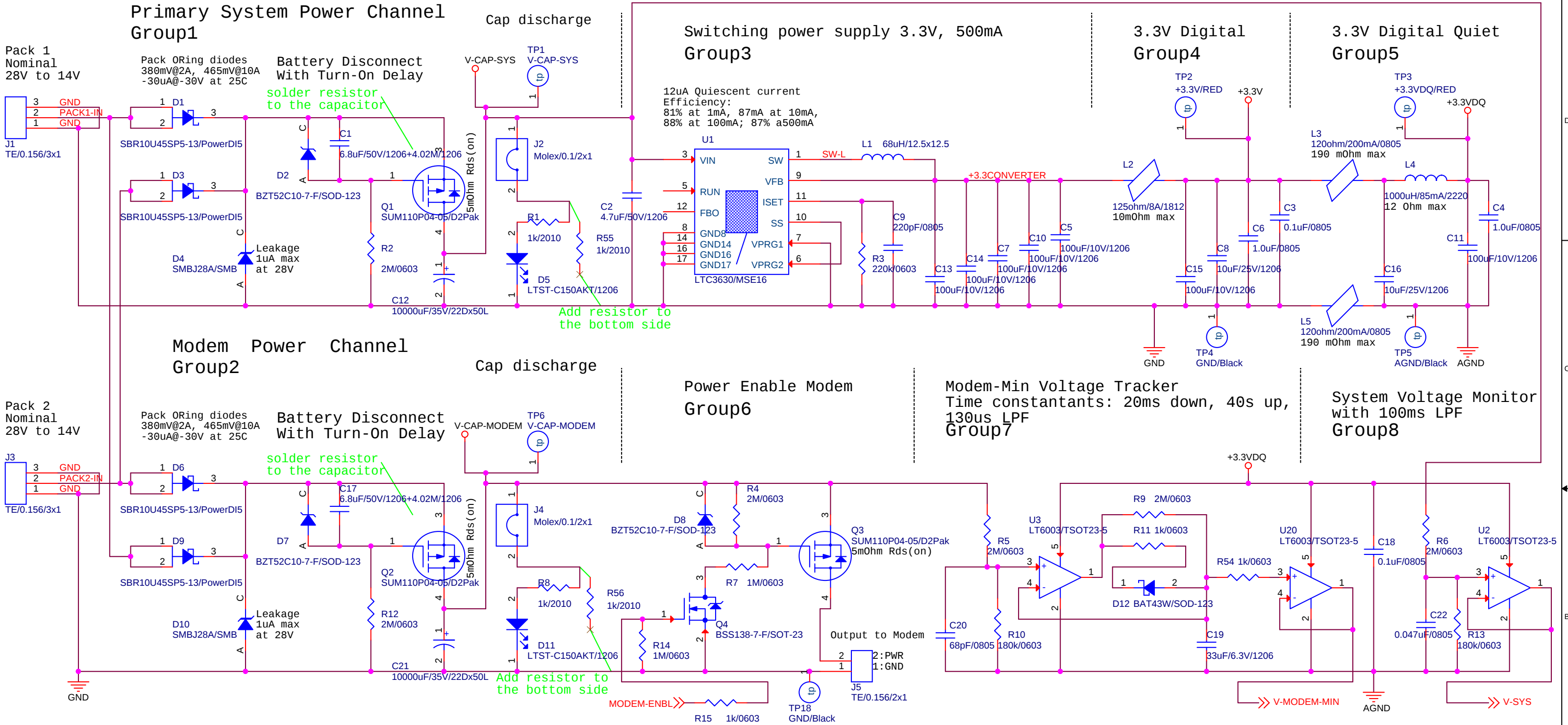
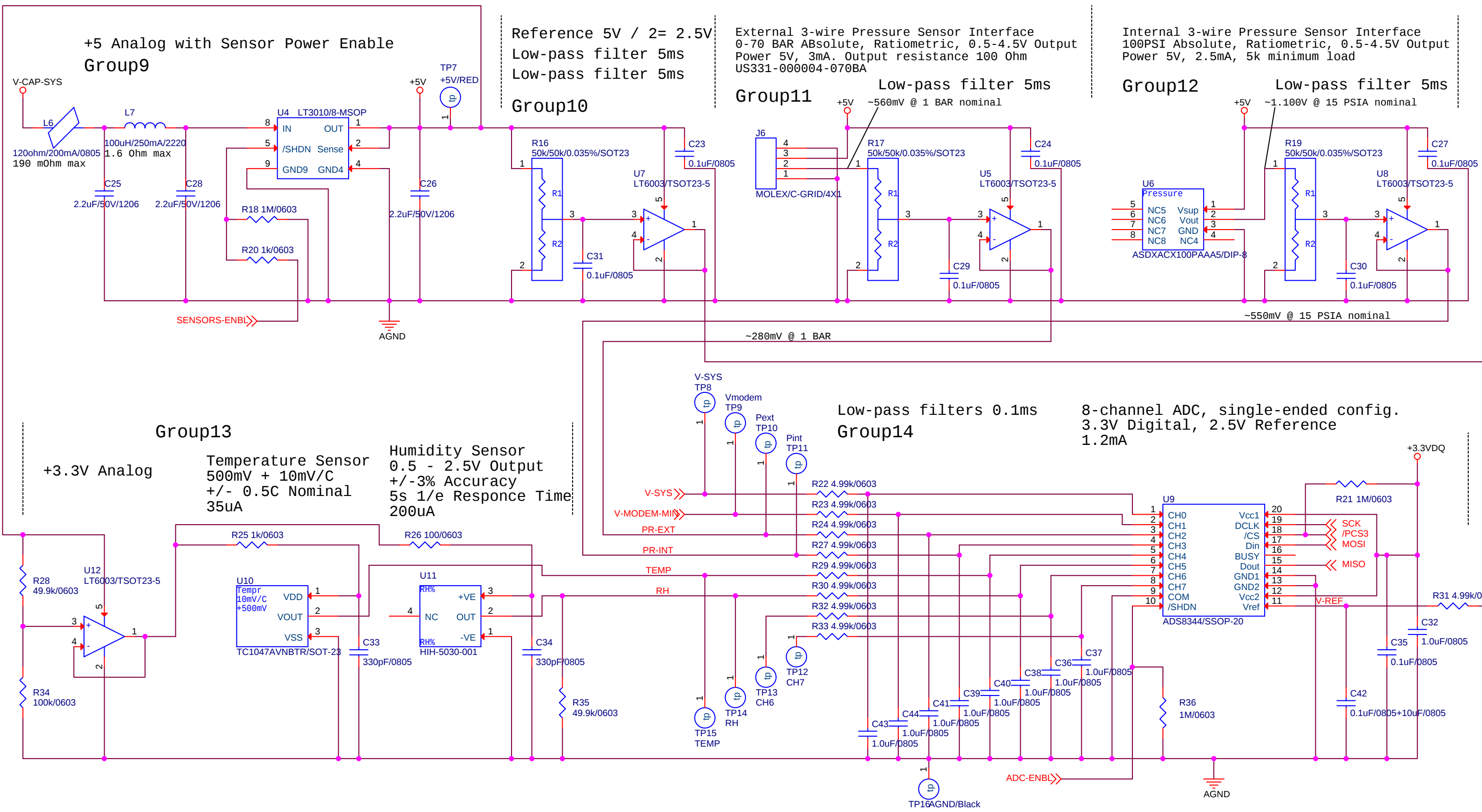




Rev0(01/24/2013): Initial Release
Rev1(05/07/2013): C1,C17(2.2uF to 6.8uF+4M), R2,R12(1M to 2M), R55,R56(1k, added), L3(1k to 120ohm), L5(600ohm to 120ohm), C11(10uF to 100uF), C19(10uF to 33uF), cont. Page2

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Rev2 (cont. from Page1): L6(1k/200mA to 120ohm/200mA), R25(100 to 1k), C33,C34(0.1uF to 300pF), R22-R33(1k to 5k), C37-C41,C43,C44(0.1uF to 1.0uF), C42(0.1uF to 0.1uF+10uF), R31(1k to 5k), cont. to Page3

Group19

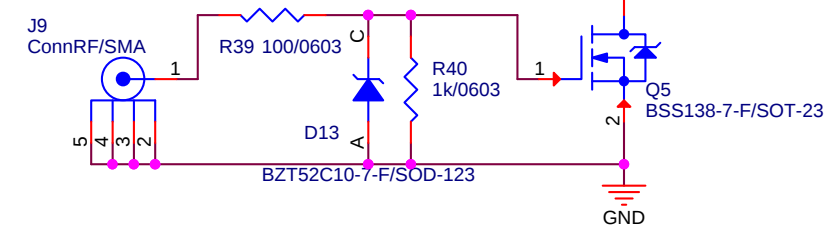
Serial Port Controller
0.3mA; 1uA in shutdown

AUX RS-232 port

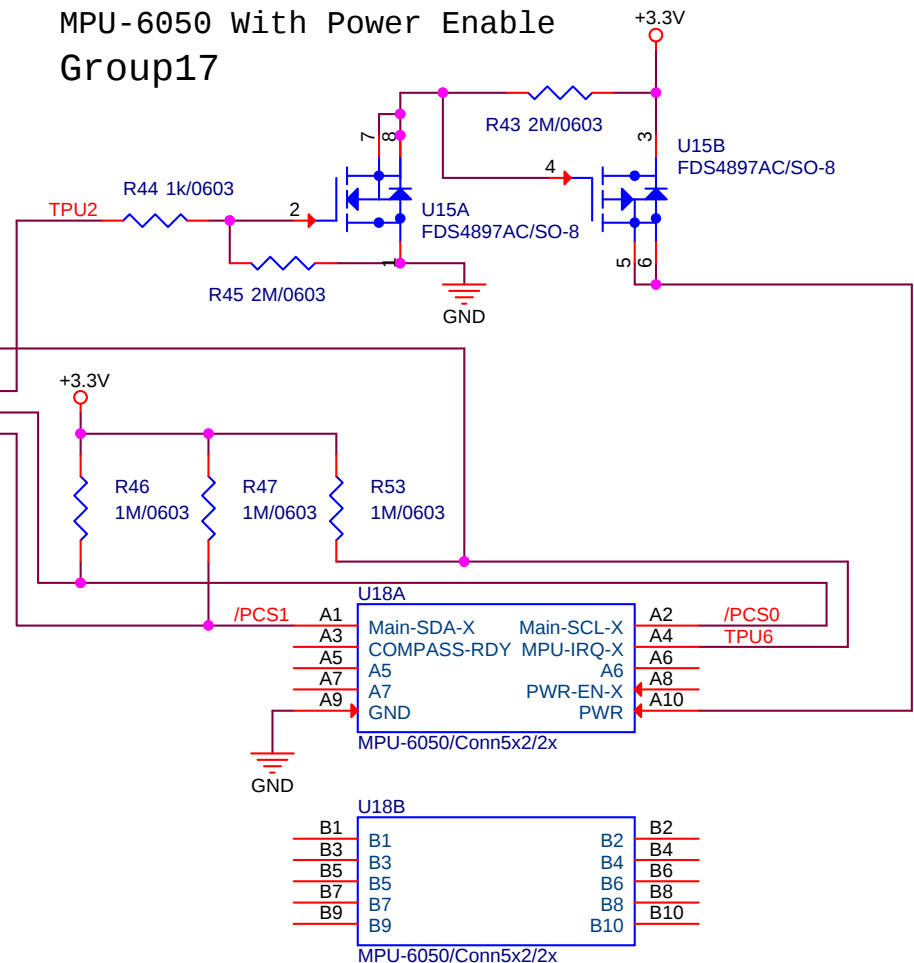
Console RS-232 port

Group16

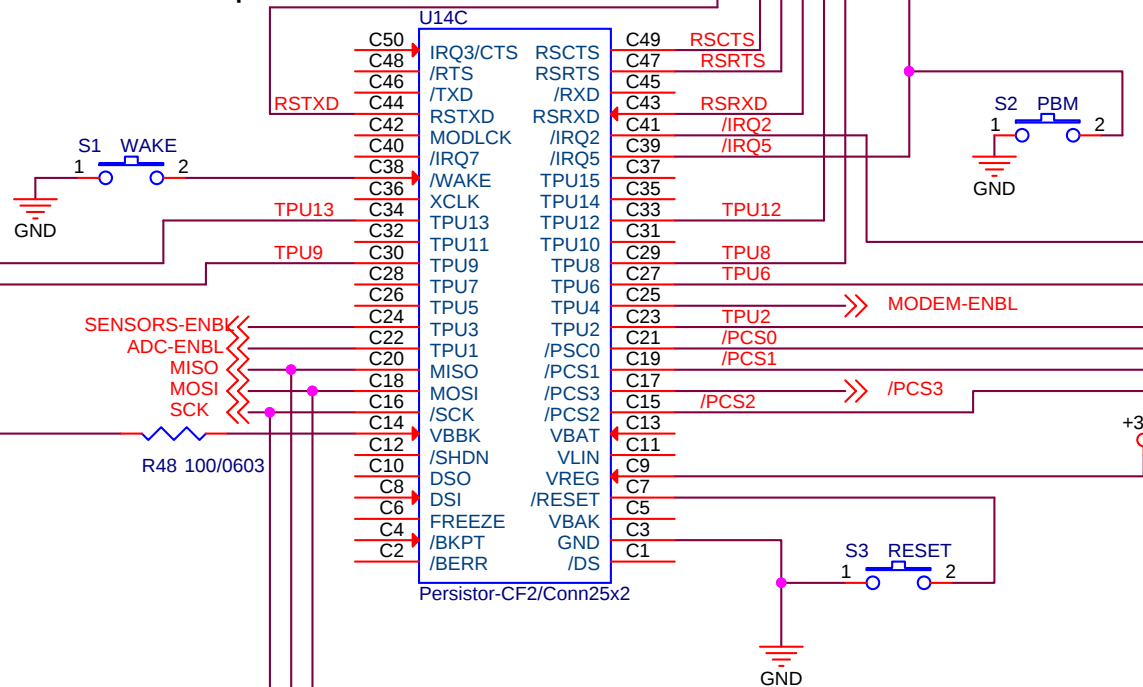
PPS/GPS: 5V 100ms active high
PPS/Clock: 3.3V 400us active high
5nS low pass filter



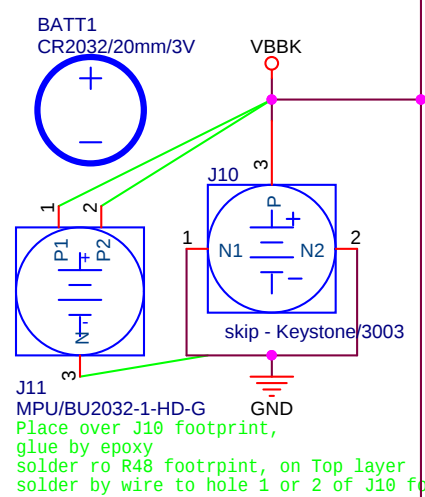
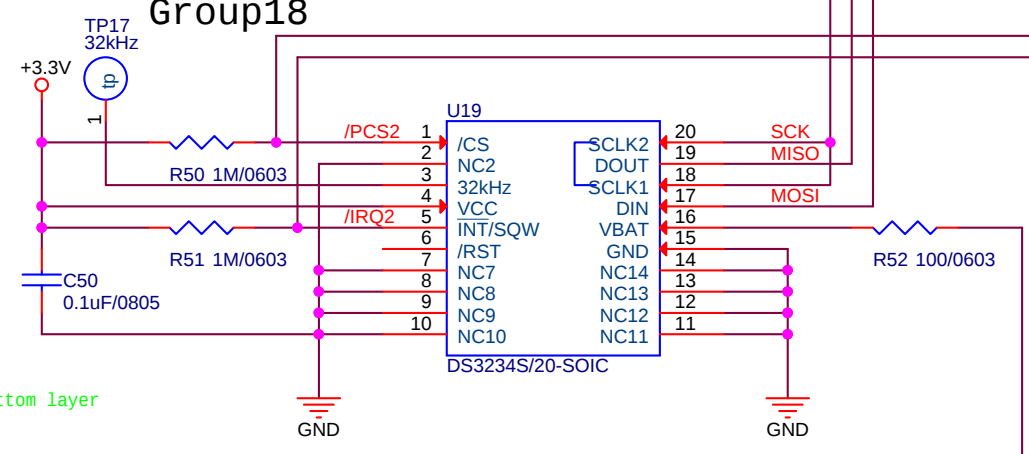
MPU-6050 With Power Enable
Group17



Group15 Persistor Board



SPI Bus RTC with Integrated Crystal and SRAM
Group18



J11 MPU/BU2032-1-HD-G
Place over J10 footprint,
glue by epoxy
solder ro R48 footprint, on Top layer
solder by wire to hole 1 or 2 of J10 footprint on Bottom layer

Rev2 (cont. from Page2): Install J11 (BU2032) instean of J10 (Keystone/3003)

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Bring-up Checklist

Fully assembled Mother Board, no Persistor Board, no MPU-6050 board. Set power supply to 12V, power up.

- 0. Connect jumpers to J2 and J4, verify LEDs light up, record PS current with and without LEDs running
- 1. Check voltage level and noise on 3.3V (TP2) with test load, 100mA (33 Ohm) and 200mA (16 Ohm)
- 2. Check voltage level and noise on 3.3VDQ (TP3) with 100mA (33 Ohm) test load
- 3. Check operation of Modem_Enable with 5 Ohm 50W test load in J5 (2.3A).
- 4. Measure V-CAP-MODEM (TP6), voltage at J5.2, and difference between them (<50mV)
- 5. Check V-SYS (TP8) and V-MODEM-MIN (TP9) trackers with Modem-ENBL cycling and 5 Ohm 50W test load in J5
- 6. Check operation of SENSOR-ENBL and measure 5V (TP7) value and noise.
- 7. Check operation of TPU6 (U14.C27) and voltage on U18.A10

Sensors

- 8. External pressure sensor. Check voltages on J6.3, J6.2, and TP10
- 9. Internal Pressure sensor. Check voltages on U6.1, U6.2, TP11
- 10. Temperature sensor. Check voltage on U10.1 (3.3V) and TP15
- 11. Humidity sensor. Check voltage on U11.3 (3.3V) and TP14.

Plug test Persistor board and run AD Test.
Record values on channels:

- 0:
- 1:
- 2:
- 3:
- 4:
- 5:

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