HOME SECURITY BREAKOUT

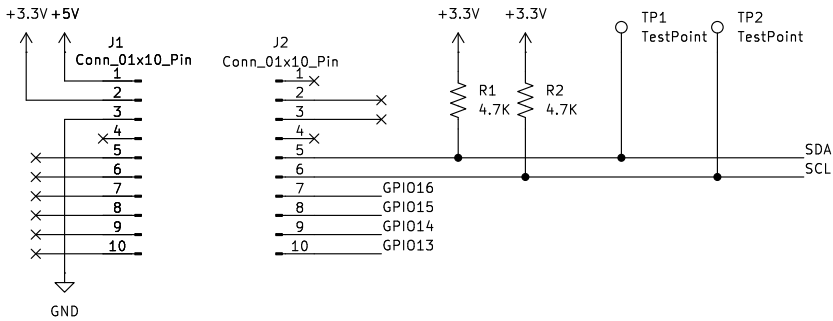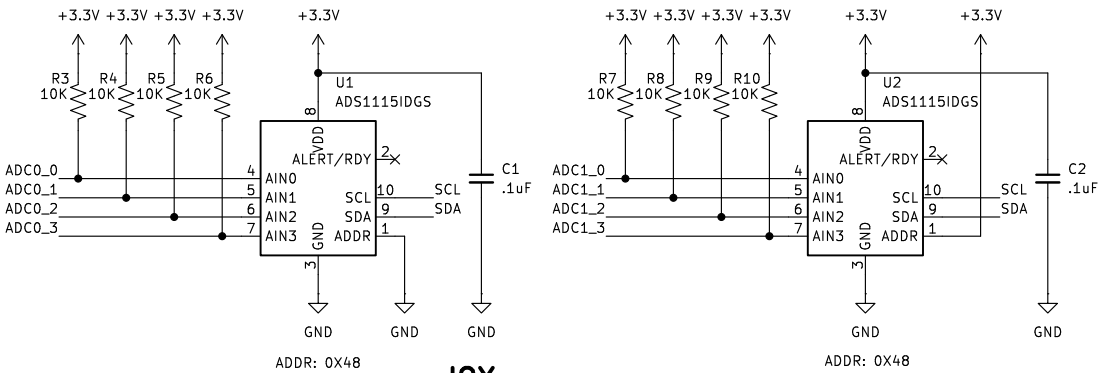## OLIMEX CONN

* GPIO0, GPIO1 — are used during programming, after that they are free
* GPI35 is free to use but may be connected to measure battery voltage with SENS_BAT_I1 jumper
** GPI39 — is connected to measure external power supply voltage
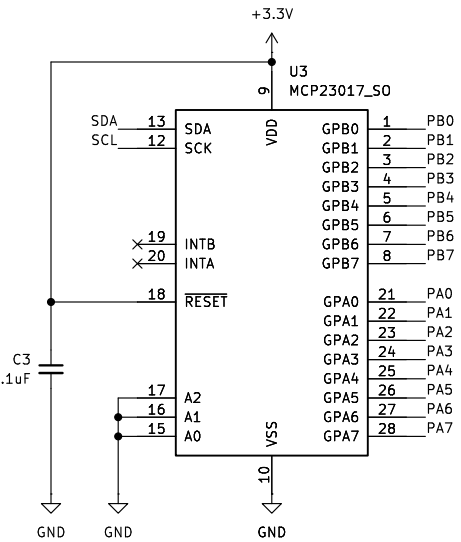** GPI34 is connected to button and has a 10K pullup

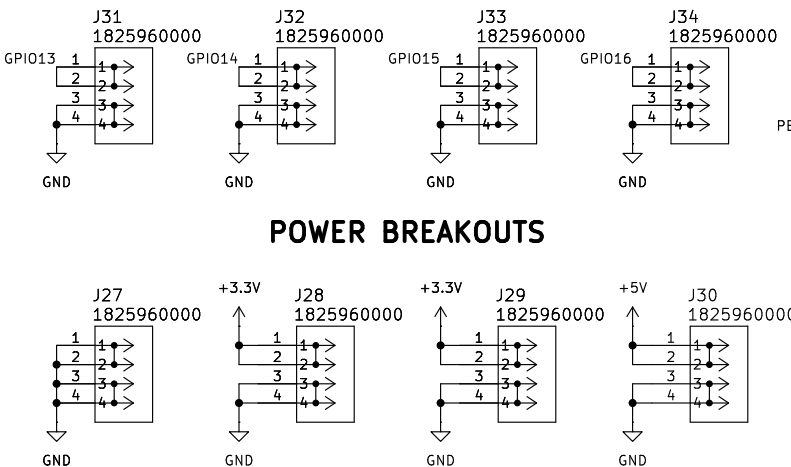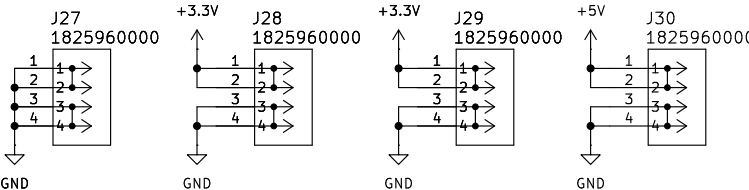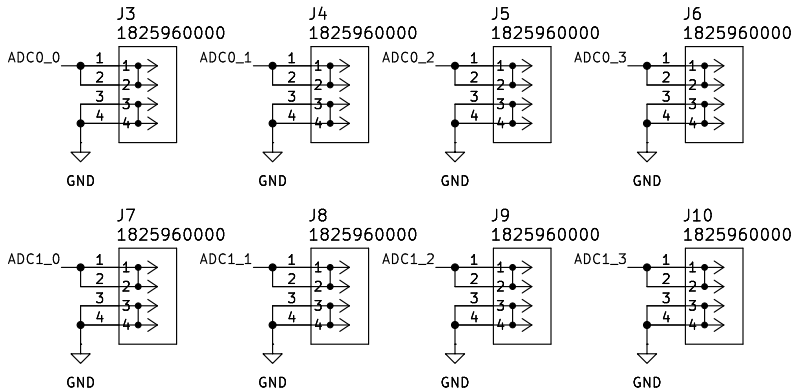* = can fuck with
** = let's not fuck with

+3.3V +5V

J1
Conn_01x10_Pin
1
2
3
4
5
6
7
8
9
10

GND

J2
Conn_01x10_Pin
1
2
3
4
5
6
7 GPIO16
8 GPIO15
9 GPIO14
10 GPIO13

+3.3V +3.3V

R1   R2
4.7K   4.7K

SDA
SCL

TP1   TP2
TestPoint TestPoint

ADCs

+3.3V +3.3V +3.3V +3.3V   +3.3V

R3   R4   R5   R6
10K 10K 10K 10K

U1
ADS1115IDGS
VDD 8
ALERT/RDY 2
AIN0 4
AIN1 5
AIN2 6
AIN3 7
SCL 10 SCL
SDA 9 SDA
ADDR 1
GND 3

ADC0_0
ADC0_1
ADC0_2
ADC0_3

C1
.1uF

GND GND GND

ADDR: 0X48

+3.3V +3.3V +3.3V +3.3V   +3.3V   +3.3V

R7   R8   R9   R10
10K 10K 10K 10K

U2
ADS1115IDGS
VDD 8
ALERT/RDY 2
AIN0 4
AIN1 5
AIN2 6
AIN3 7
SCL 10 SCL
SDA 9 SDA
ADDR 1
GND 3

ADC1_0
ADC1_1
ADC1_2
ADC1_3

C2
.1uF

GND GND GND

ADDR: 0X48

IOX

+3.3V

U3
MCP23017_SO
SDA 13 SDA
SCL 12 SCK
VDD 9
INTB 19
INTA 20
RESET 18
A2 17
A1 16
A0 15
VSS 10
GPB0 1 PB0
GPB1 2 PB1
GPB2 3 PB2
GPB3 4 PB3
GPB4 5 PB4
GPB5 6 PB5
GPB6 7 PB6
GPB7 8 PB7
GPA0 21 PA1
GPA1 22 PA2
GPA2 23 PA3
GPA3 24 PA4
GPA4 25 PA5
GPA5 26 PA6
GPA6 27 PA7
GPA7 28 PA7

C3
.1uF

GND GND GND

ADC BREAKOUTS

J3 1825960000   J4 1825960000   J5 1825960000   J6 1825960000
ADC0_0   ADC0_1   ADC0_2   ADC0_3
1 2 3 4   1 2 3 4   1 2 3 4   1 2 3 4
GND   GND   GND   GND

J7 1825960000   J8 1825960000   J9 1825960000   J10 1825960000
ADC1_0   ADC1_1   ADC1_2   ADC1_3
GND   GND   GND   GND

IOX BREAKOUTS

J11 1825960000 J12 1825960000 J13 1825960000 J14 1825960000
PA0   PA1   PA2   PA3
GND   GND   GND   GND

J15 1825960000 J16 1825960000 J17 1825960000 J18 1825960000
PA4   PA5   PA6   PA7
GND   GND   GND   GND

J19 1825960000 J20 1825960000 J21 1825960000 J22 1825960000
PB0   PB1   PB2   PB3
GND   GND   GND   GND

J23 1825960000 J24 1825960000 J25 1825960000 J26 1825960000
PB4   PB5   PB6   PB7
GND   GND   GND   GND

GPIOs

J31 1825960000 J32 1825960000 J33 1825960000 J34 1825960000
GPIO13   GPIO14   GPIO15   GPIO16
1 2 3 4   1 2 3 4   1 2 3 4   1 2 3 4
GND   GND   GND   GND

POWER BREAKOUTS

J27 1825960000   +3.3V J28 1825960000   +3.3V J29 1825960000   +5V J30 1825960000
1 2 3 4   1 2 3 4   1 2 3 4   1 2 3 4
GND   GND   GND   GND