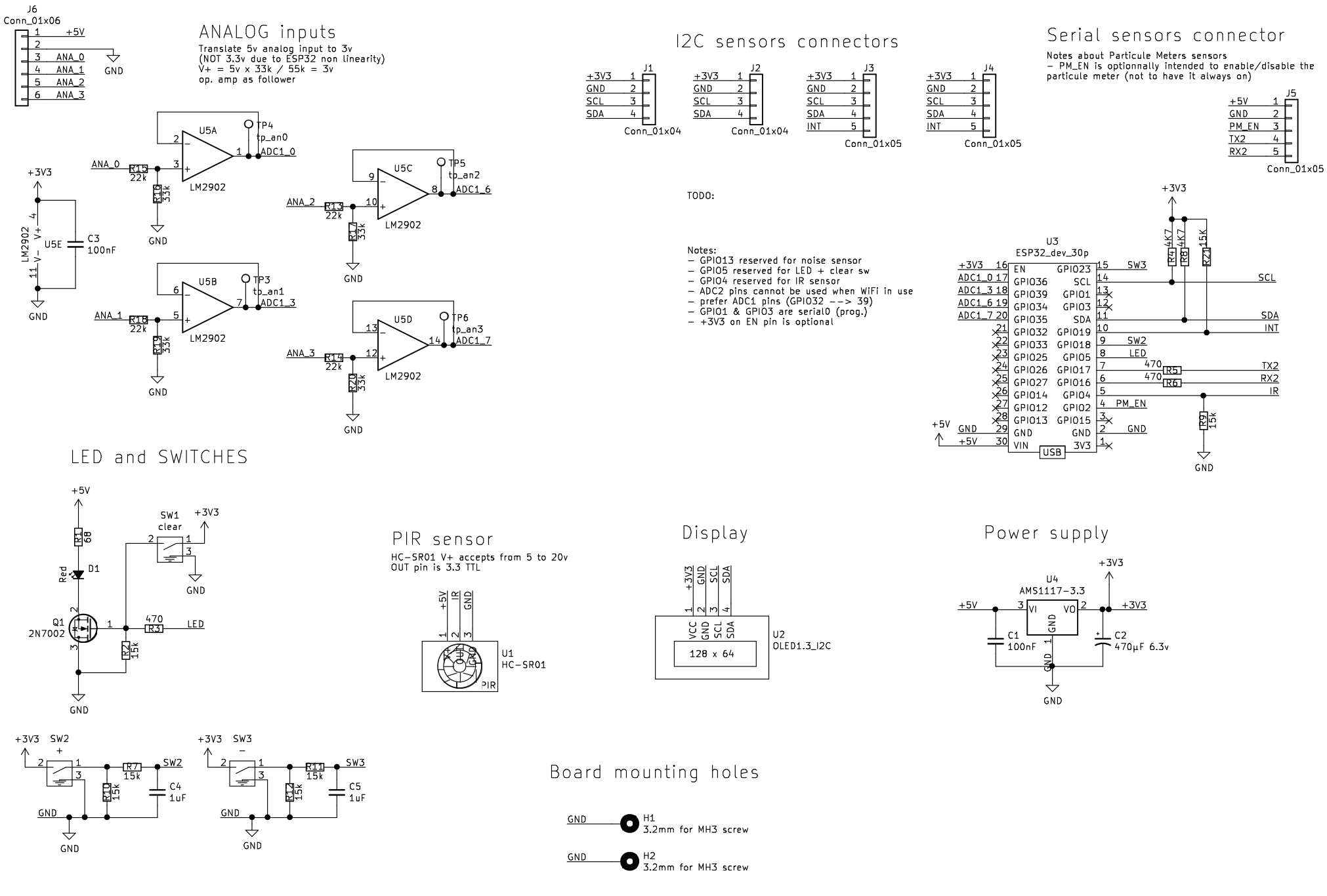
J6
Conn_01x06
+5V
ANA_0
ANA_1
ANA_2
ANA_3
GND
ANALOG inputs
Translate 5v analog input to 3v
(NOT 3.3v due to ESP32 non linearity)
V+ = 5v x 33k / 55k = 3v
op. amp as follower
U5A
U5B
U5C
U5D
U5E
LM2902
TP4
tp_an0
ADC1_0
TP3
tp_an1
ADC1_3
TP5
tp_an2
ADC1_6
TP6
tp_an3
ADC1_7
R15 22k
R16 22k
R13 22k
R14 22k
R18 33k
R19 33k
R17 33k
R20 33k
C3 100nF
+3V3
I2C sensors connectors
J1
J2
J3
J4
Conn_01x04
Conn_01x05
SDA
SCL
INT
Serial sensors connector
Notes about Particule Meters sensors
– PM_EN is optionnally intended to enable/disable the particule meter (not to have it always on)
J5
PM_EN
TX2
RX2
TODO:
Notes:
– GPIO13 reserved for noise sensor
– GPIO5 reserved for LED + clear sw
– GPIO4 reserved for IR sensor
– ADC2 pins cannot be used when WiFi in use
– prefer ADC1 pins (GPIO32 --> 39)
– GPIO1 & GPIO3 are serial0 (prog.)
– +3V3 on EN pin is optional
U3
ESP32_dev_30p
R4 4K7
R8 4K7
R21 15K
R5 470
R6 470
R9 15k
SW1
SW2
SW3
LED
TX2
RX2
IR
LED and SWITCHES
R1 68
D1
Red
Q1
2N7002
R3 470
R2 15k
R7 15k
R10 15k
R11 15k
R12 15k
C4 1uF
C5 1uF
PIR sensor
HC-SR01 V+ accepts from 5 to 20v
OUT pin is 3.3 TTL
U1
HC-SR01
Display
U2
OLED1.3_I2C
128 x 64
VCC
Power supply
U4
AMS1117-3.3
VI
VO
C1 100nF
C2 470µF 6.3v
Board mounting holes
H1
3.2mm for MH3 screw
H2
3.2mm for MH3 screw