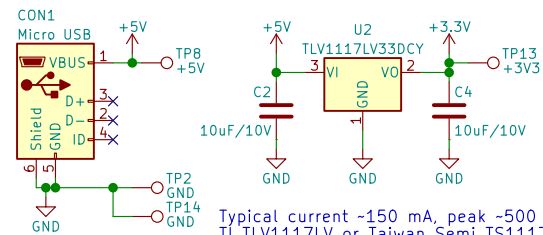


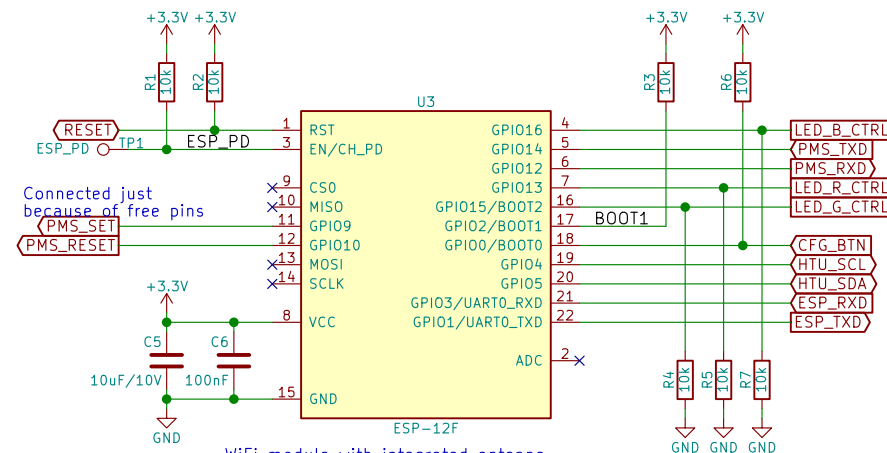
Power supply

Default power supply input – micro USB charger.
500mA minimum.



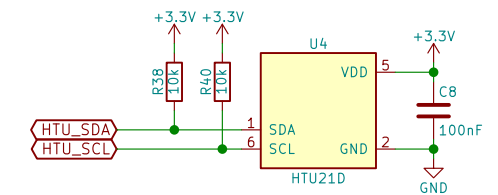
Typical current ~150 mA, peak ~500 mA.
 TI TLV1117LV or Taiwan Semi TS1117B can
 be used. ST LD1117, ON Semi NCP1117 can
 be unstable with ceramic capacitor!

WiFi/processing module

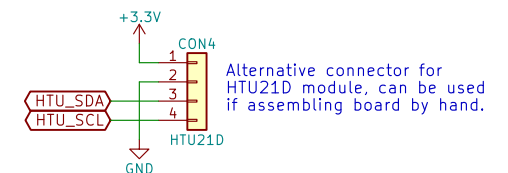


WiFi module with integrated antenna.
Improved version of ESP-12E.
Typical current ~50mA, peak >400mA

Humidity and temperature sensor



HTU21D, HDC1080, Si7020 can be used.
According to datasheet , central pad
should be left floating.
Current consumption negligible.



Alternative connector for HTU21D module, can be used if assembling board by hand.

Optional power supply input

Optional power supply input – 2.1x5.5 DC barrel jack.
Jack and LM7805 is not installed by default.

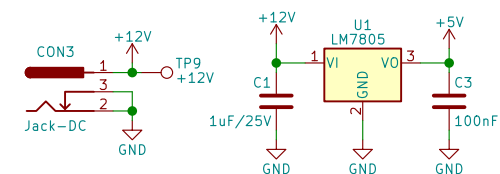
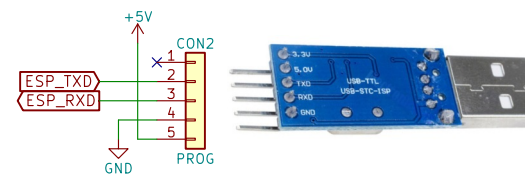


Diagram illustrating the power flags for KiCad electrical rule check:

- +12V** (Red arrow pointing up)
- PWR_FLAG** (Green text)
- GND** (Green arrow pointing down)
- PWR_FLAG** (Green text)

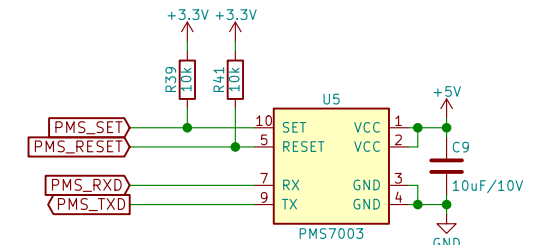
Power flags for KiCad electrical rule check

Programming connector

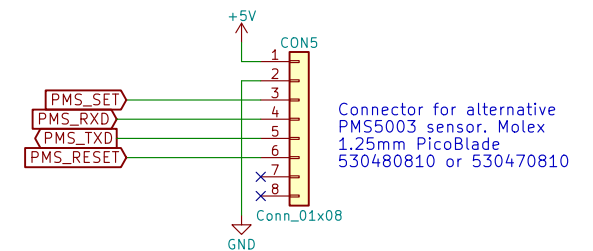


Programming connector – UART to USB adapter.
To enter programming mode, hold CFG button
and press RESET buton.

Particulate matter sensor

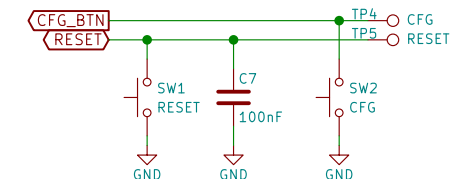


Laser particulate matter sensor.
Max. current 100 mA.

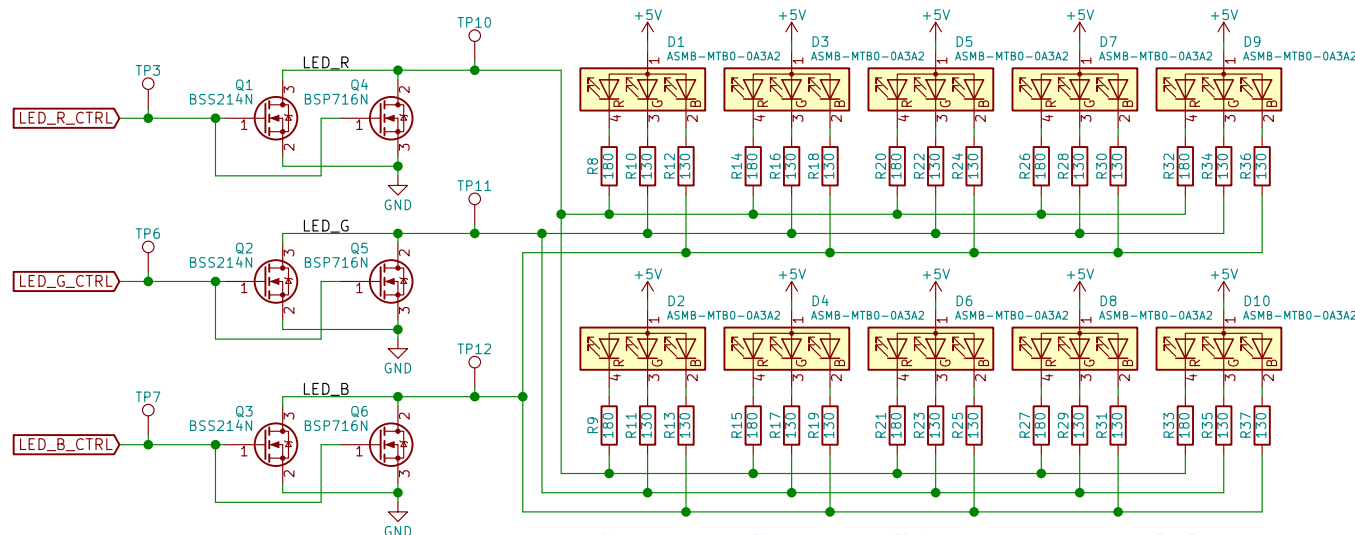


Connector for alternative
PMS5003 sensor. Molex
1.25mm PicoBlade
530480810 or 530470810

Buttons



LEDs



Alternative, bigger transistor packages

Max 20mA per single LED @ minimum LED forward voltage and supply 5V+5%.
Max. total current 200mA for one color, 600mA for all total on, but software limited to 200mA max.

Less-Smog

Sheet: /
File: sensor.sch

Title: ESP8266 Air Quality Sensor

Size: User	Date:
KiCad E.D.A. kicad 4.0.7	

Rev:
Id: 1/1