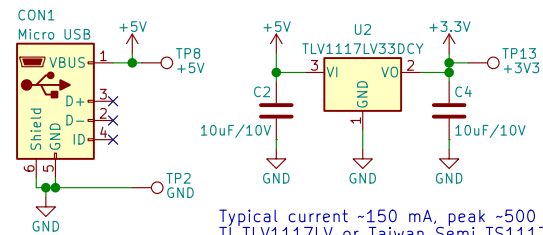


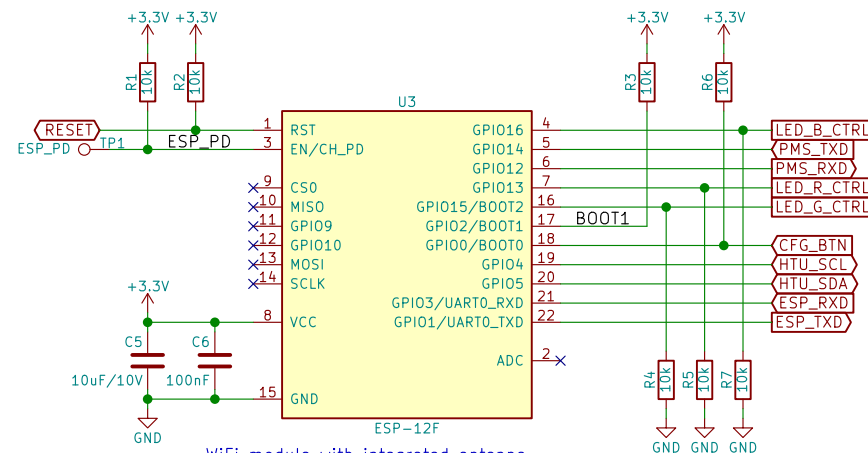
Power supply

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



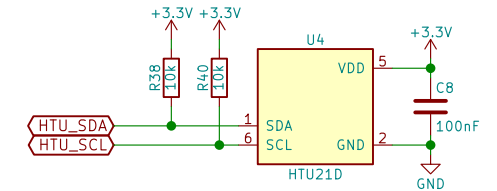
Typical current ~150 mA, peak ~500 mA.
TI TLV1117LV or Taiwan Semi TS1117B can be used. ST LD1117, ON Semi NCP1117 can be unstable with ceramic capacitor!

WiFi/processing module

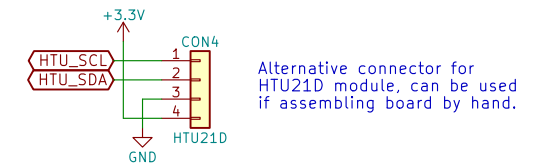


WiFi module with integrated antenna.
Improved version of ESP-12E.
Typical current ~50mA, peak >400mA

Humidity and temperature sensor



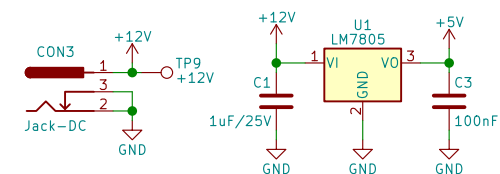
HTU21D, HDC1080, SI7020 can be used.
According to datasheet, central pad should be left floating.
Current consumption negligible.



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

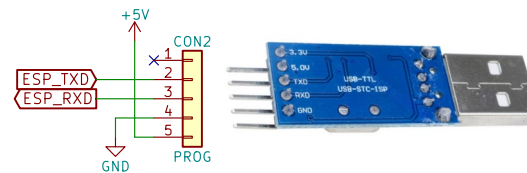
Optional power supply input

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



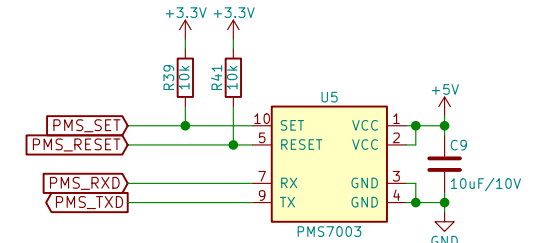
Power flags for KiCad electrical rule check
+12V PWR_FLAG
GND

Programming connector

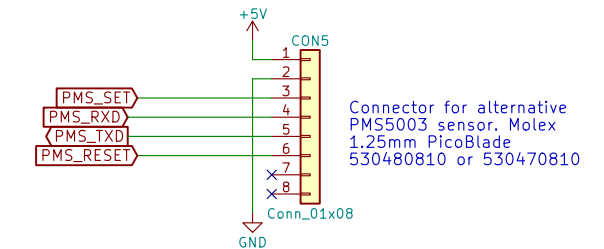


Programming connector – UART to USB adapter.
To enter programming mode, hold CFG button and press RESET button.

Particulate matter sensor

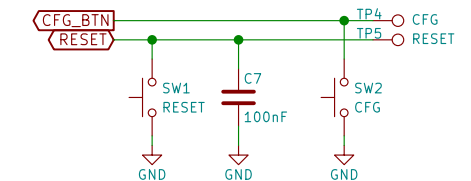


Laser particulate matter sensor.
Max. current 100 mA.

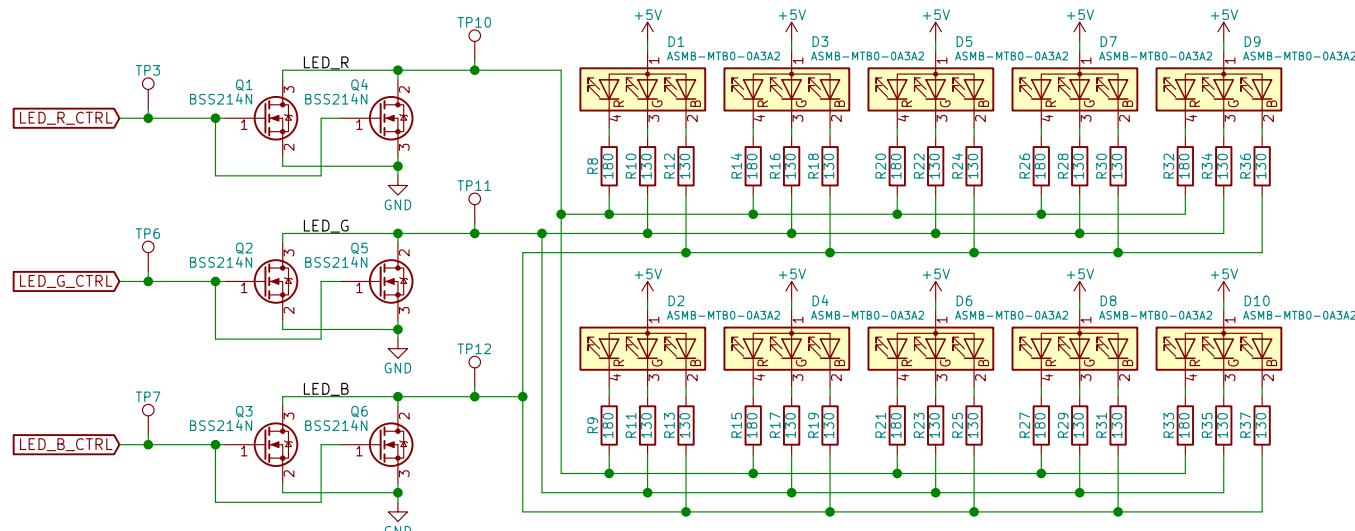


Connector for alternative PMS5003 sensor. Molex 1.25mm PicoBlade 530480810 or 530470810

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