

**POWER**

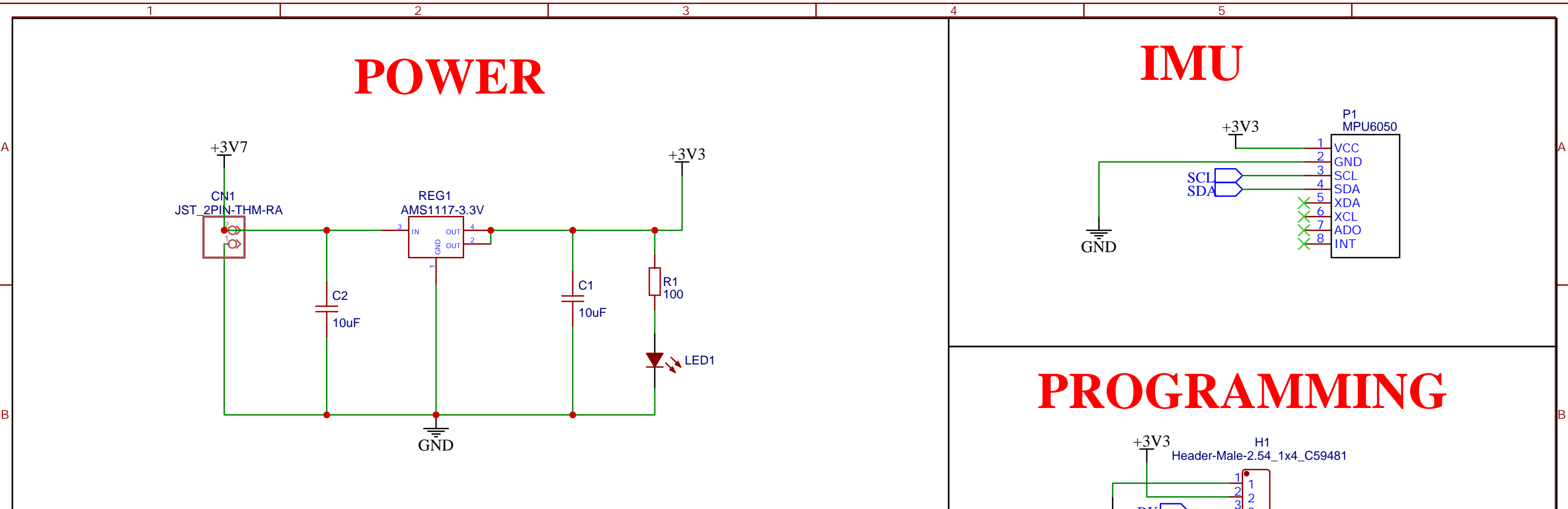
The power section of the circuit is designed to regulate a 3.7V input to a 3.3V output. It features a JST\_2PIN-THM-RA connector (CN1) for the +3V7 input. This input is connected to the IN pin of an AMS1117-3.3V voltage regulator (REG1). The regulator's GND pin is connected to the common ground. The OUT pin of the regulator provides the +3V3 output, which is decoupled by a 10uF capacitor (C1). A second 10uF capacitor (C2) is connected across the input and ground for additional filtering. An LED (LED1) in series with a 100 ohm resistor (R1) is connected to the +3V3 output to indicate power is present.

**IMU**

The IMU section shows the connection of an MPU6050 sensor (P1) to the power rails. The VCC pin (1) is connected to +3V3, and the GND pin (2) is connected to ground. The I2C interface pins are connected to a bus: SCL (3) and SDA (4) are connected to the same bus lines, while XDA (5), XCL (6), ADO (7), and INT (8) are marked with 'X' to indicate they are not connected.

**PROGRAMMING**

The programming section shows a 2.54mm header (H1) connected to the power rails. The header is a Header-Male-2.54\_1x4\_C59481. Pin 1 is connected to +3V3, and pin 2 is connected to ground. Pin 3 is marked with 'X' to indicate it is not connected.



**POWER**

3V7

CN1  
JST\_2PIN-THM-RA

REG1  
AMS1117-3.3V

C2  
10uF

C1  
10uF

R1  
100

3V3

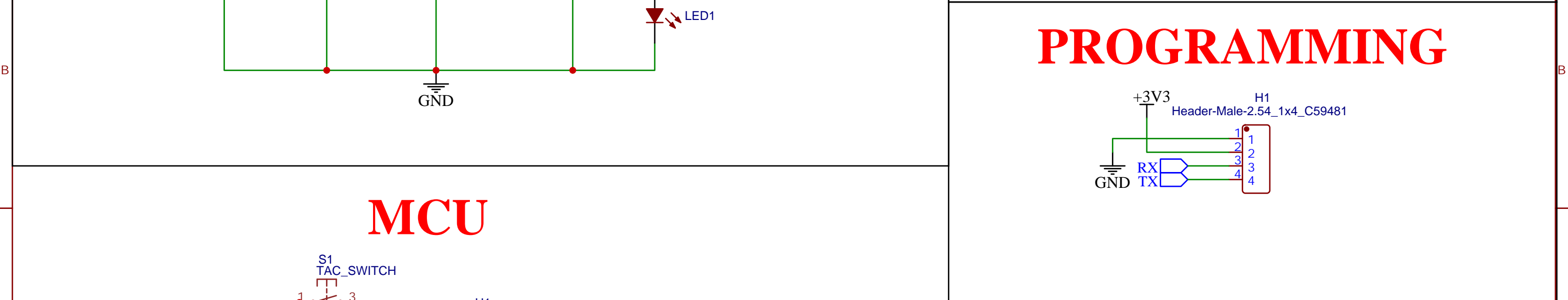
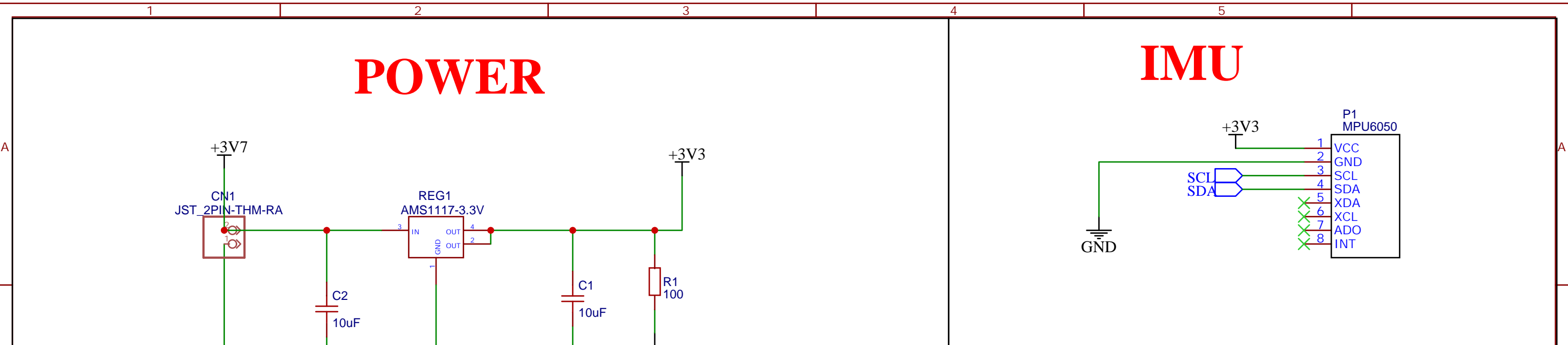
**IMU**

+3V3

GND

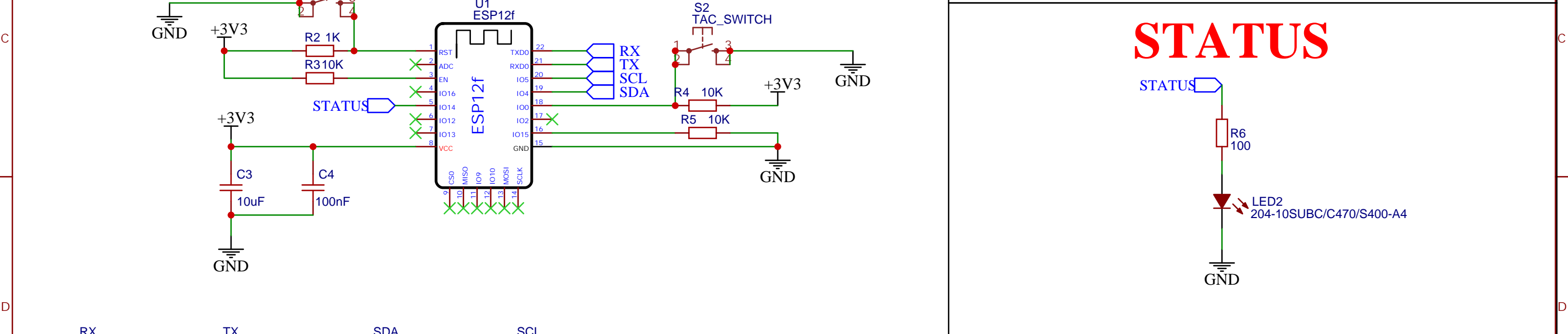
P1  
MPU6050

1 VCC  
2 GND  
3 SCL  
4 SDA  
5 XDA  
6 XCL  
7 ADO  
8 INT



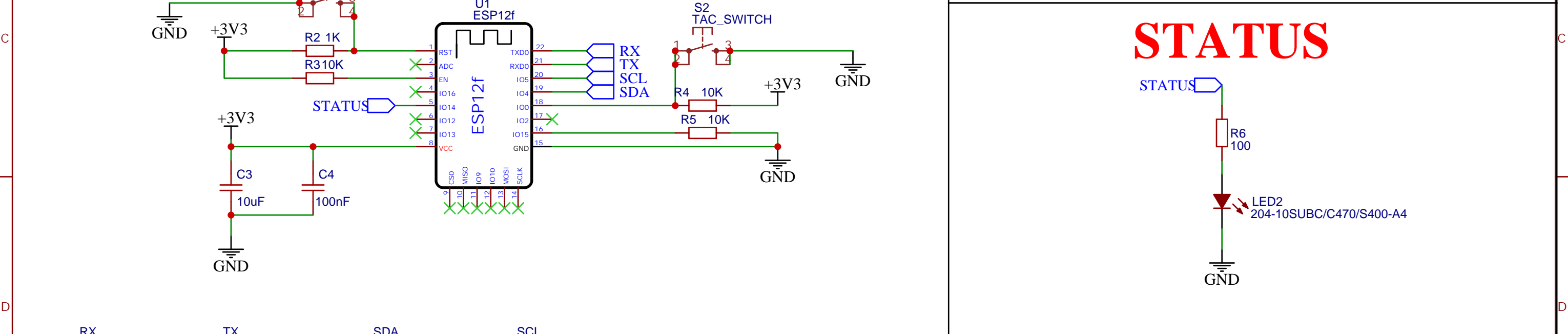
The diagram shows an ESP12f module with the following connections:

- Power:** VCC (pin 8) is connected to +3V3. GND (pin 15) is connected to GND.
- GPIOs:**
  - IO16 (pin 4) is connected to a STATUS LED (blue arrow) and a 10K resistor (R4) to +3V3.
  - IO14 (pin 5) is connected to a 10K resistor (R5) to +3V3.
  - IO12 (pin 6) is connected to GND.
  - IO13 (pin 7) is connected to GND.
  - IO15 (pin 16) is connected to GND.
- Serial:** TXD0 (pin 22) is connected to TX. RXD0 (pin 21) is connected to RX.
- I2C:** SCL (pin 13) is connected to SCL. SDA (pin 14) is connected to SDA.
- Other:** RST (pin 1) is connected to +3V3. EN (pin 3) is connected to +3V3. A TAC\_SWITCH (S2) is connected to pin 1 and 3, with pin 2 to +3V3 and pin 4 to GND.
- Capacitors:** C3 (10uF) and C4 (100nF) are connected to the +3V3 supply.



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The diagram illustrates a 1-Wire network topology. It features five 1-Wire components: RX, TX, SDA, and SCL, each connected to a 1-Wire bus. The bus is connected to a GND symbol. The components are labeled with their respective pin numbers (1, 2, 3, 4, 5) and the bus is labeled with its pin number (1).

4	5	6
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