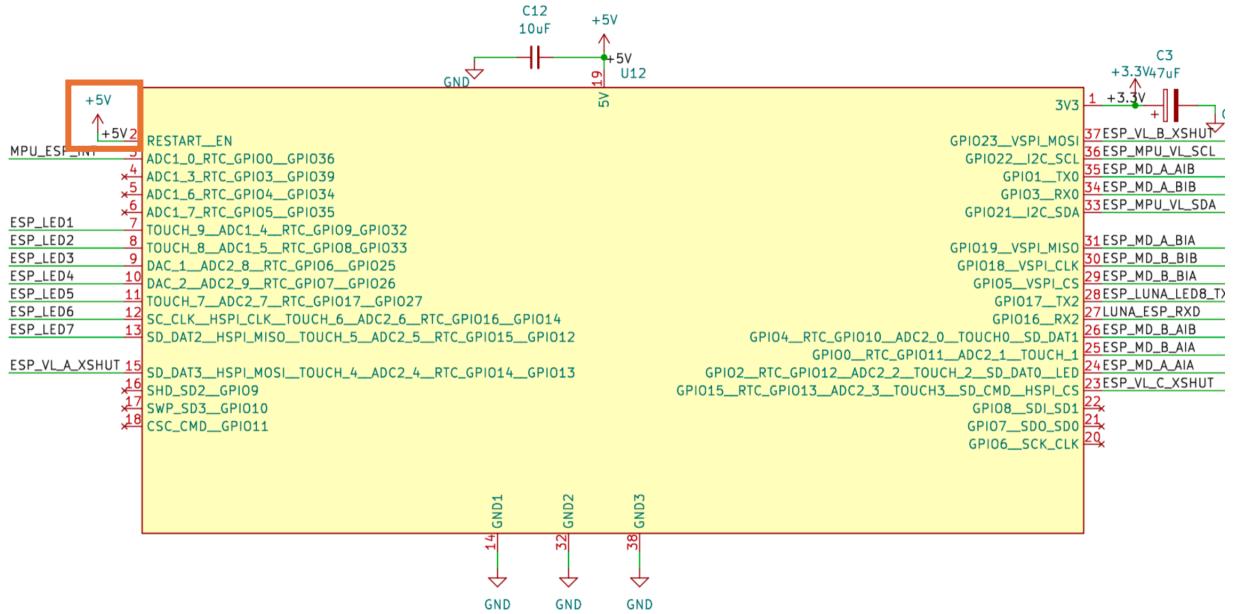


Error Sheet For Spinning Top PCB

- The RESTART_EN should be disconnected from +5V (pin number 2 in ESP32 DEV Module (U12 in schematic)):



Now there is a scratch on PCB that disconnects it and solves the problem:



2. The pins for TF-LUNA sensor connector (U10 in schematic) should be in a reversed order, i.e. pins: {1,6}, {2,5}, {3,4} should be swapped.

In practice, it means changing the connections of routing to the pins and the silk of number “1”. Note that “1” must be for the connection of the 5[V].

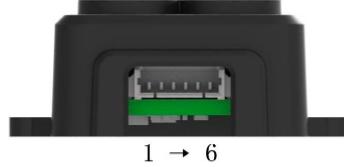


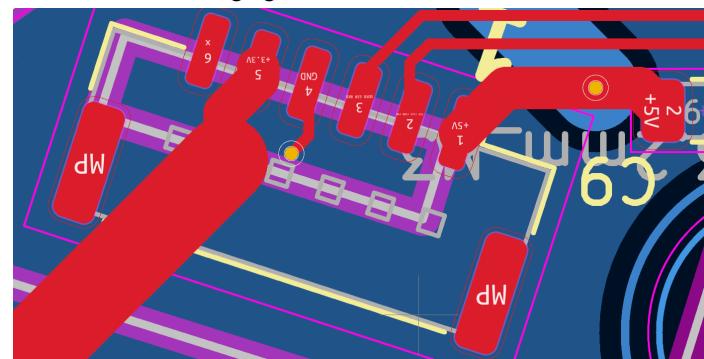
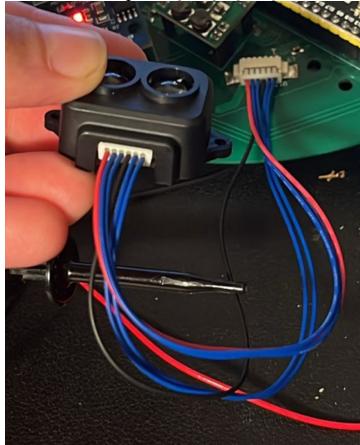
Figure 4 TF-Luna's pin numbers

Table 6: The Function and Connection Description of each pin

No.	Function	Description
1	+5V	Power supply
2	RXD/SDA	Receiving/Data
3	TXD/SCL	Transmitting/Clock
4	GND	Ground
5	Configuration Input	Ground: I2C mode /3.3V: Serial port Communications mode
6	Multiplexing output	Default: on/off mode output I2C mode: Data availability signal on but not switching value mode

Now:

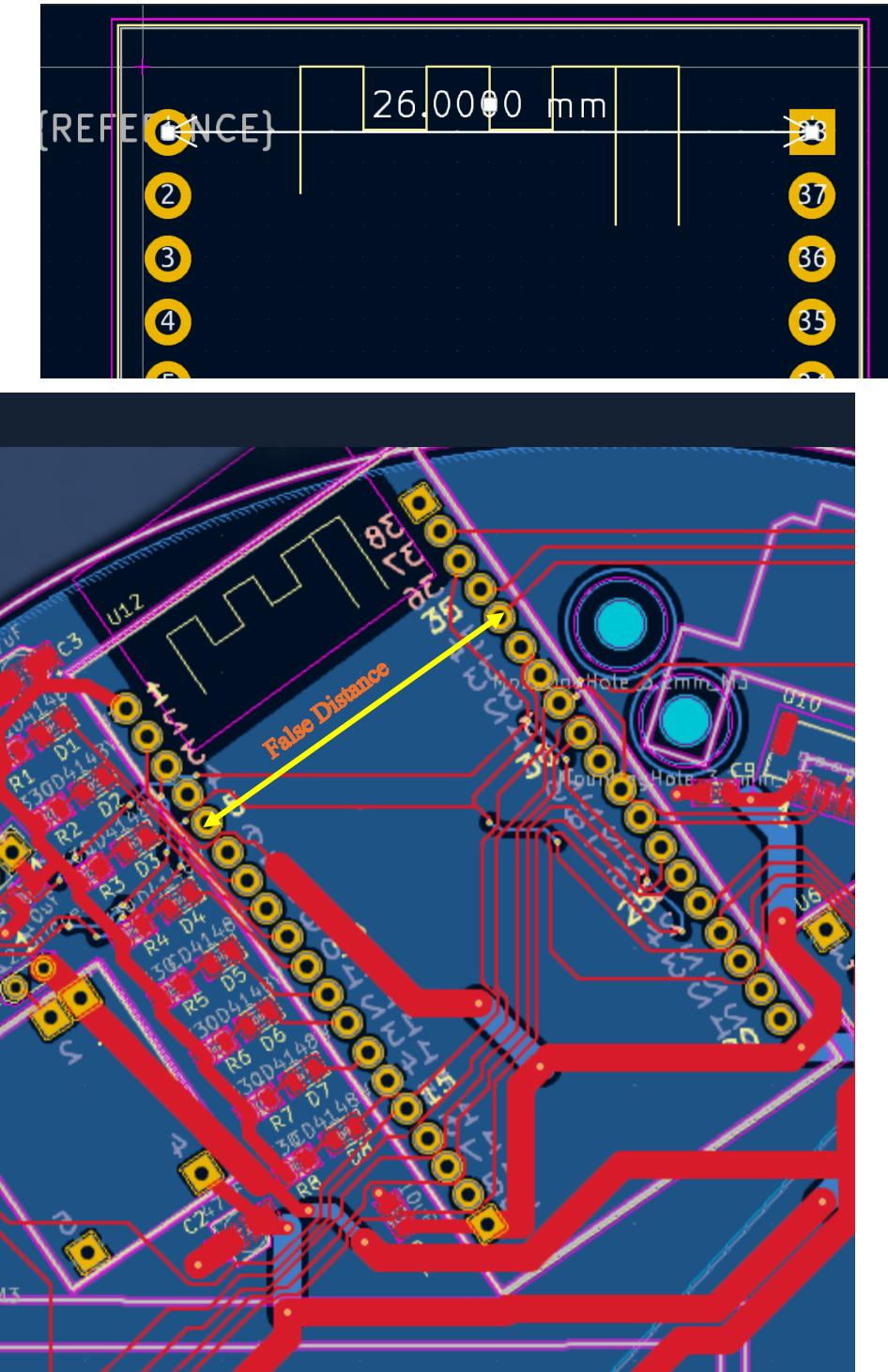
For example- the pins {1,6} are reversed, meaning pin no.1 on the sensor (according to the figure from datasheet above) supposed to be connected to 5[V] on the board, but it is connected to multiplexing output instead. In the same manner- the pins {2,5}, {3,4} are reversed. As you can see in the following figure:



Temporal solution: swap wires {1,6}, {2,5}, {3,4}.

3. ESP32 Footprint pitches are correct, but distance between pins 1-19 to 20-38 is more than should be to fit other common ESP32's.

Now this distance is 26 mm.



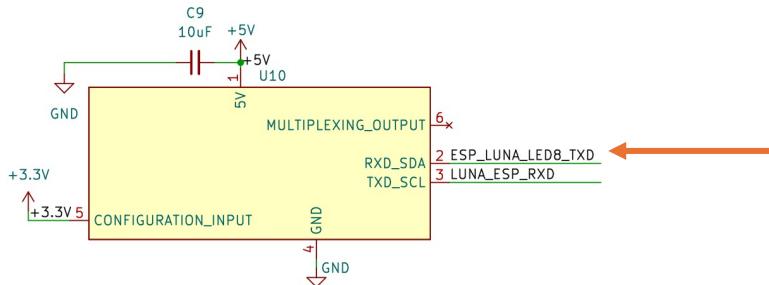
4. The schematic doesn't include the connections to the coils of the 2 hammers, the photoresistor of each hammer and the led of each hammer.
There are not enough pins on ESP32 to connect them.

Optional solution is to use I/O expander component.

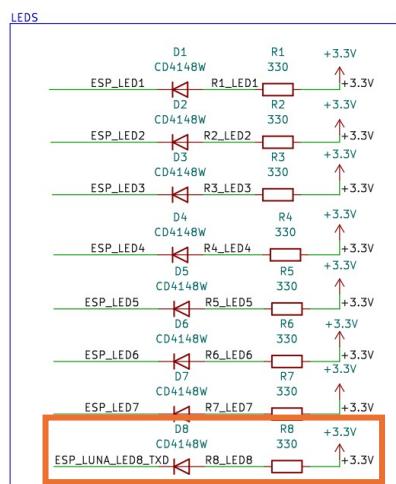
5. Led 8 is connected to RXD_SDA port in tfLuna (ESP_LUNA_LED8_TXD wire).
Led8 doesn't work where tfLuna works ,but works independently.

Optional solution is to use I/O expander component.

Here you can see the current relevant connections:
tfLuna:



Leds:



ESP32:

