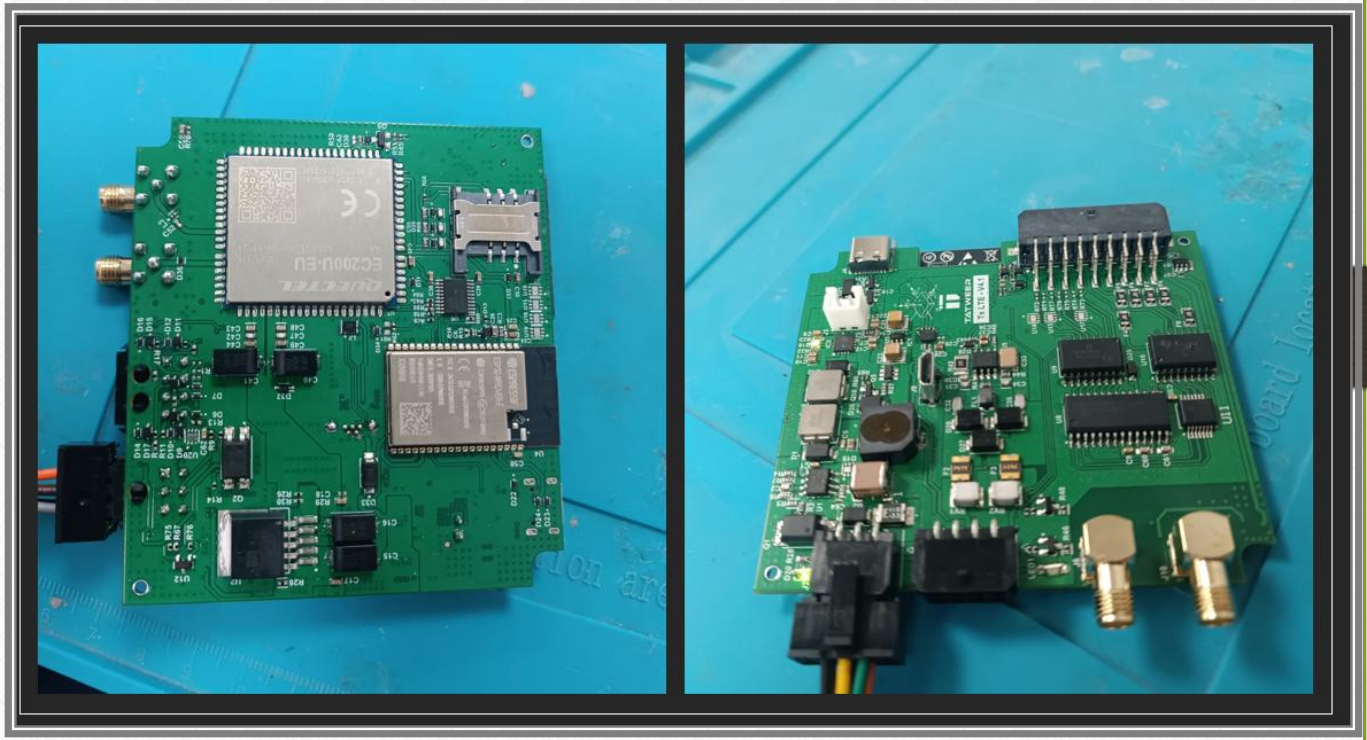
Projects

Mohamed Elshamy

mramdanelshamy@gmail.com

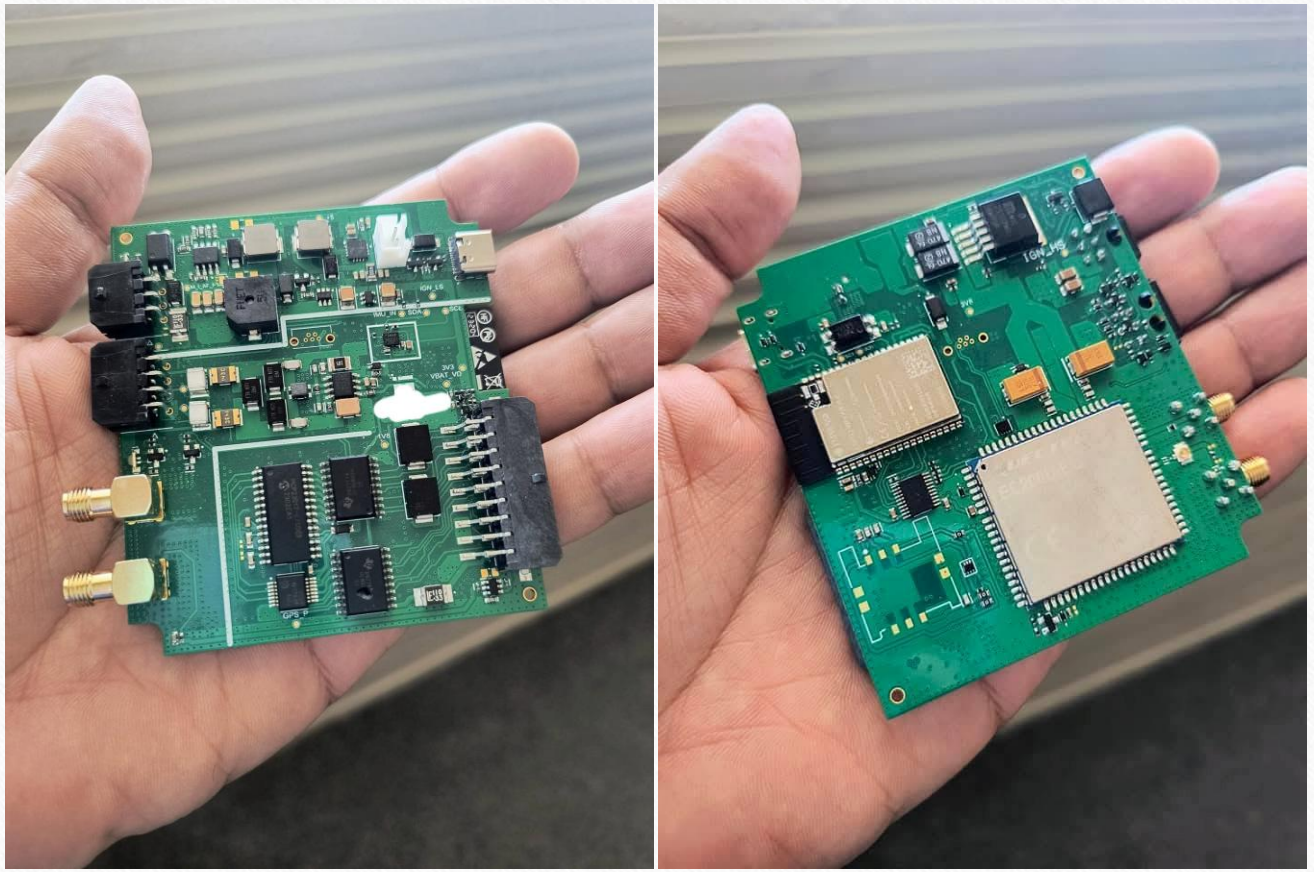
Low Power Telematics Device – V3

- A compact, automotive-grade telematics and tracking unit designed for low power consumption
- Real-time sensor acquisition, and vehicle location tracking, programmed using Micro Python for efficient and flexible edge processing.



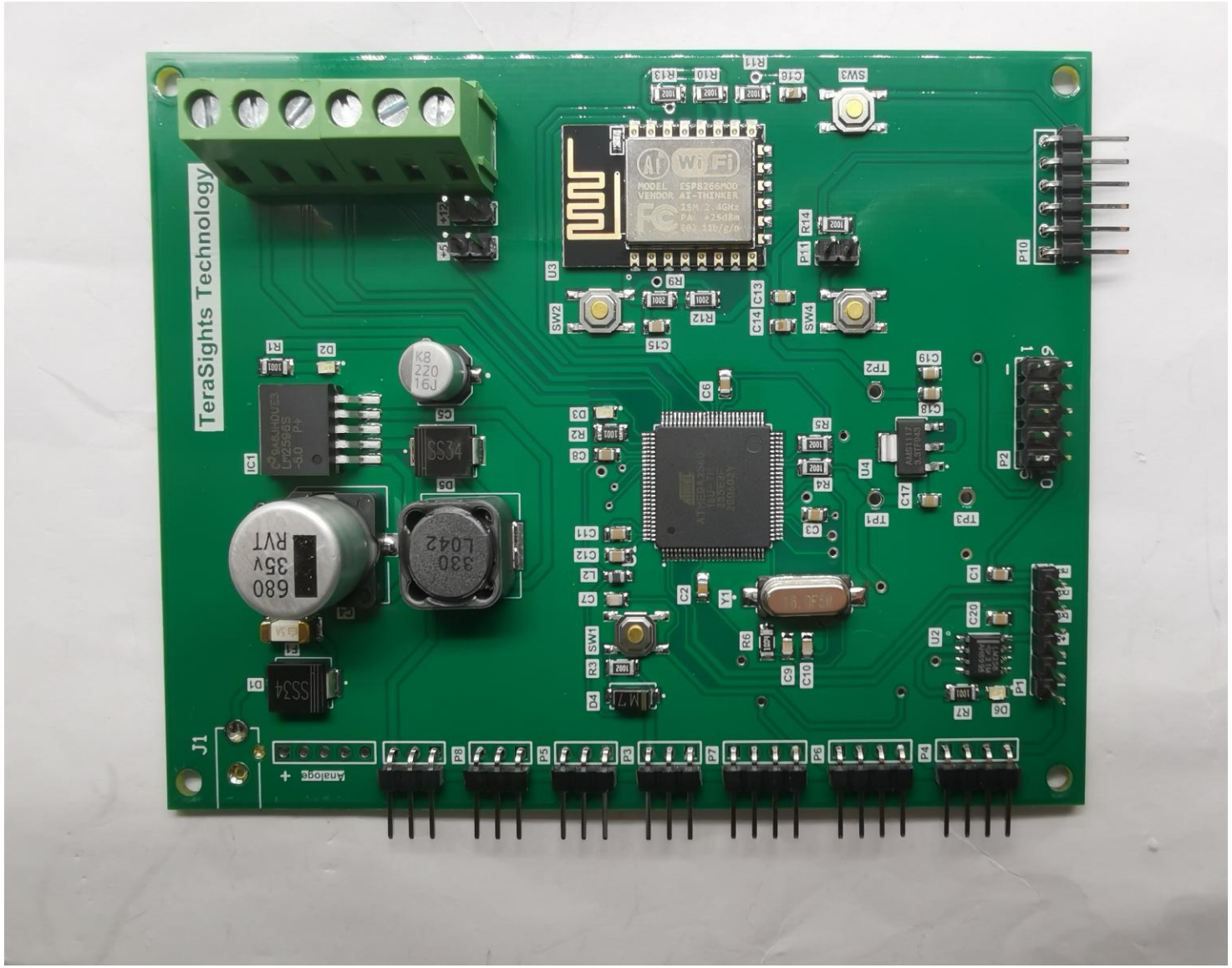
Low Power Telematics Device – V4

- A compact, automotive-grade telematics and tracking unit designed for low power consumption
- Real-time sensor acquisition, and vehicle location tracking, programmed using Micro Python for efficient and flexible edge processing.



Low Power IOT system

- This circuit is considered as industrial kit for IOT systems .
- It can treat with analog and digital signals .
- Contain switched mode power supply hand made, esp8266 and ATMEGA 2560 .
- It completely assembled in china.

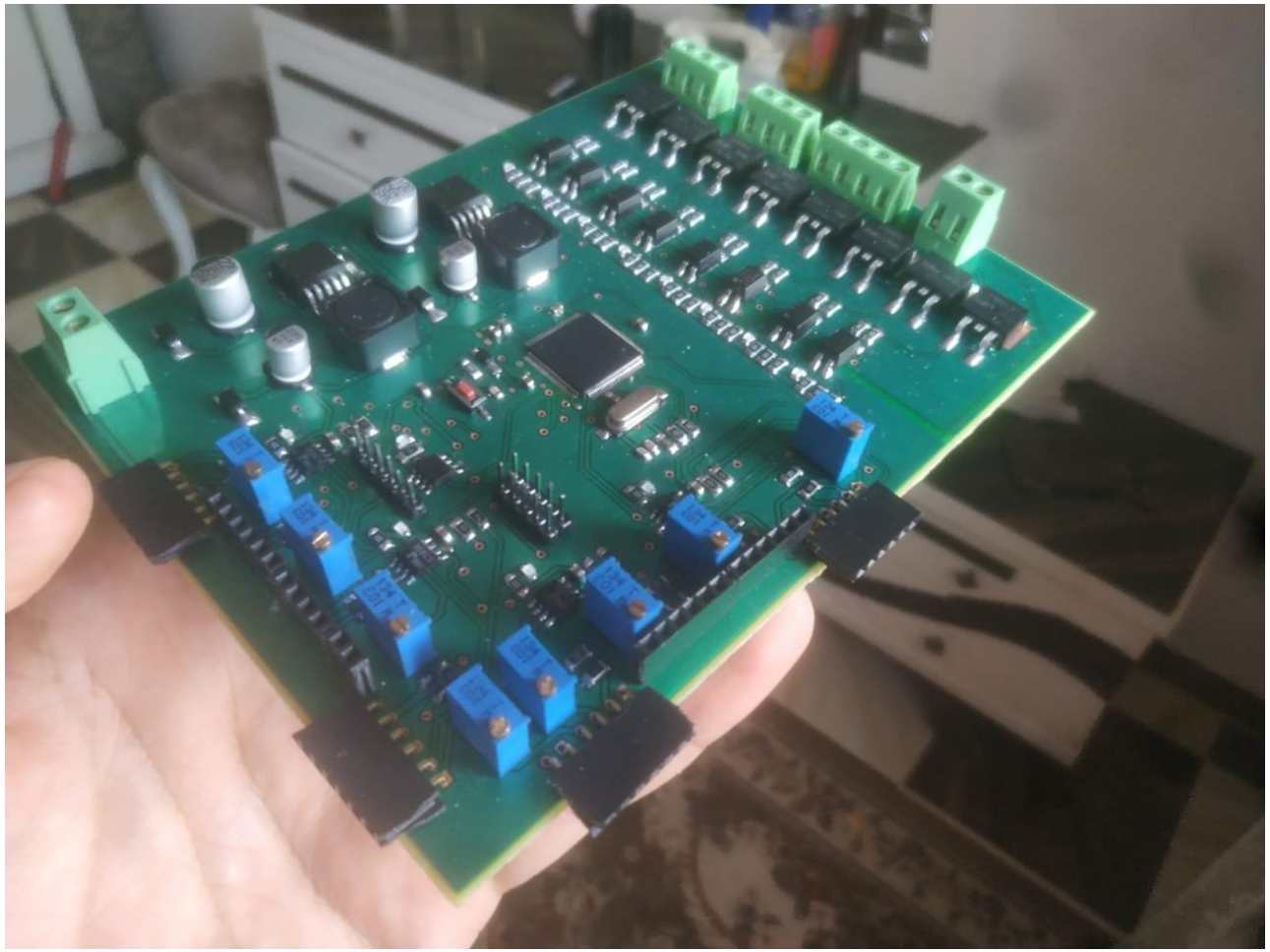


Data logger circuit

- I made this kit to give a complete solution for all types of communication protocols like RS485, RS232, GPRS, and WIFI communication .
- The kit contains 16 digital inputs, 16 analog input, backup power, and smart battery charger with the indications of battery levels.
- The kit contain all types of protection like short circuit, reverse polarity, and ESD protection.
- The kit is designed on ALTIUM designer program.

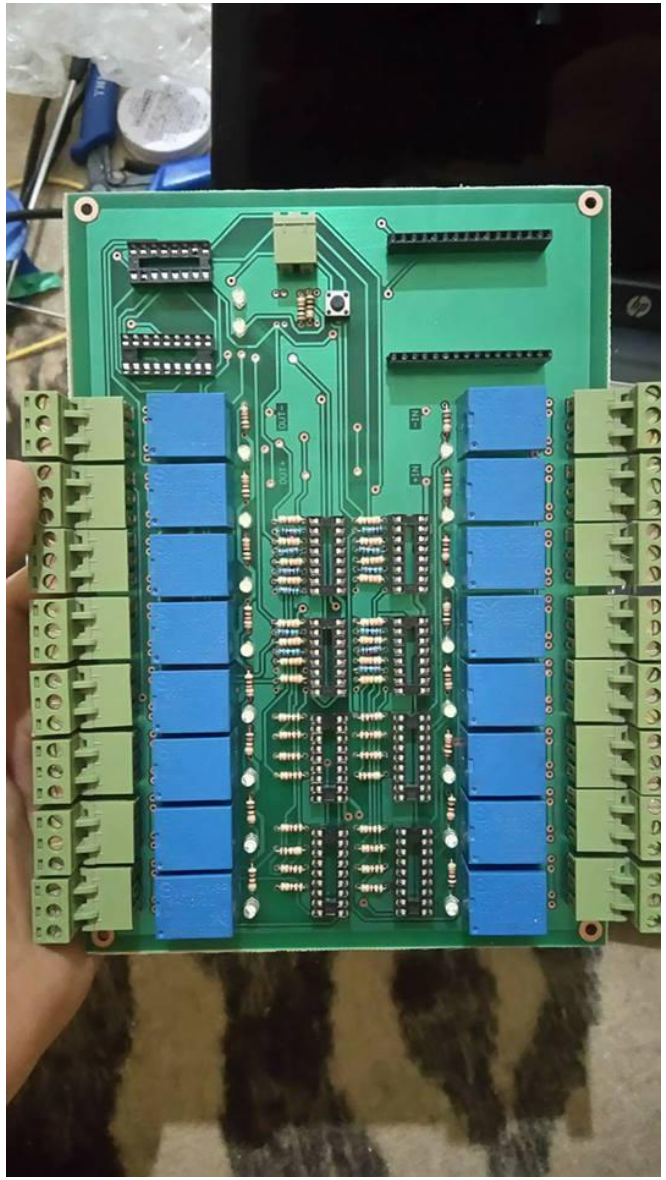
contactless switches

- The circuit is designed so we can order floors in the elevator without touching the keys.
- The kit is designed on ALTIUM designer program and programmed with Arduino IDE.



Smart home system with 16 loads

- This circuit depends on the esp8266 WIFI module and you can control 16 devices with it .
- The kit is designed on ALTIUM designer program and programmed with Arduino IDE.

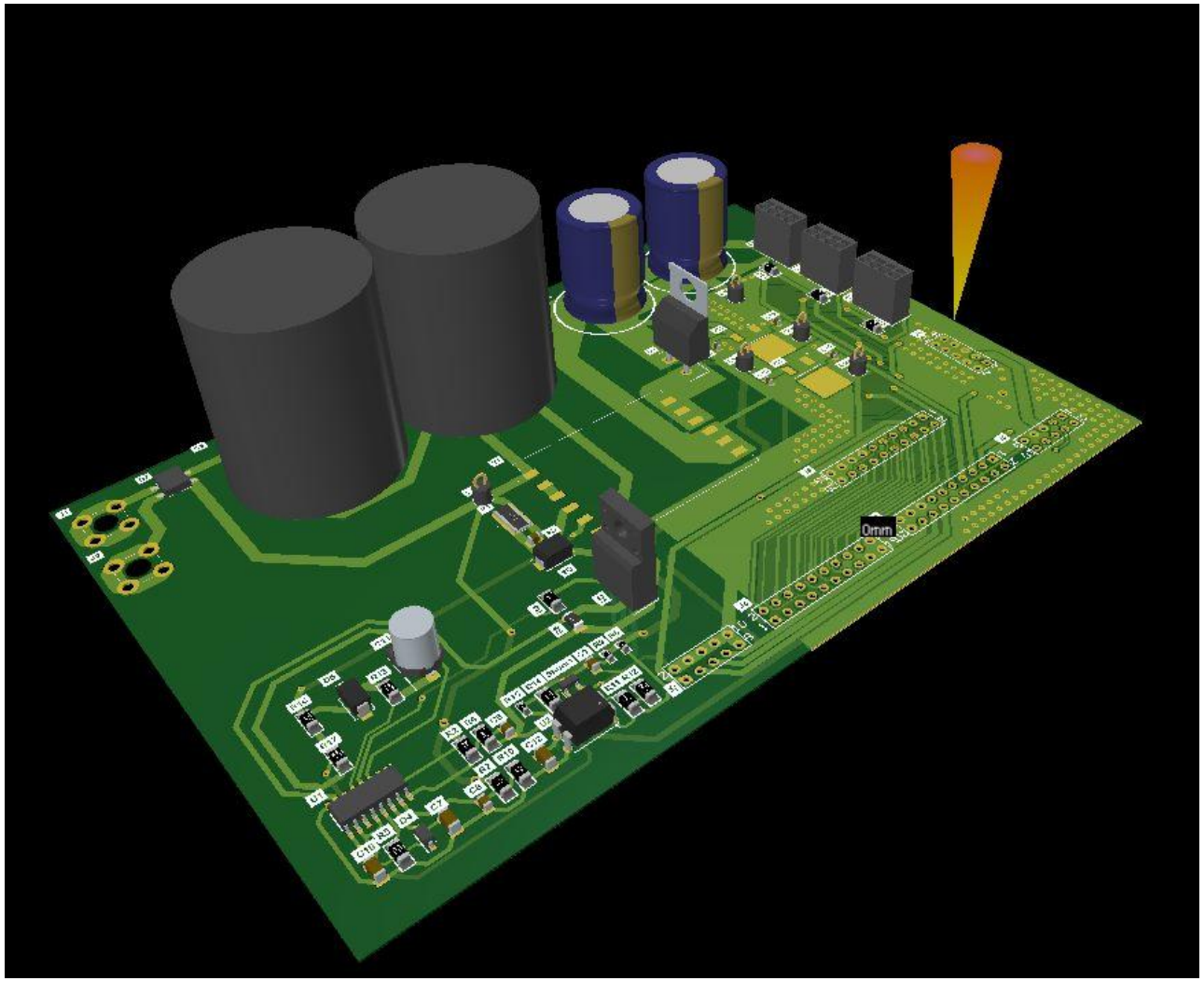


Smart home system with 16 loads SMD

- This circuit depends on the esp8266 WIFI module and you can control 16 devices with it .
- The kit is designed on ALTIUM designer program and programmed with Arduino IDE.

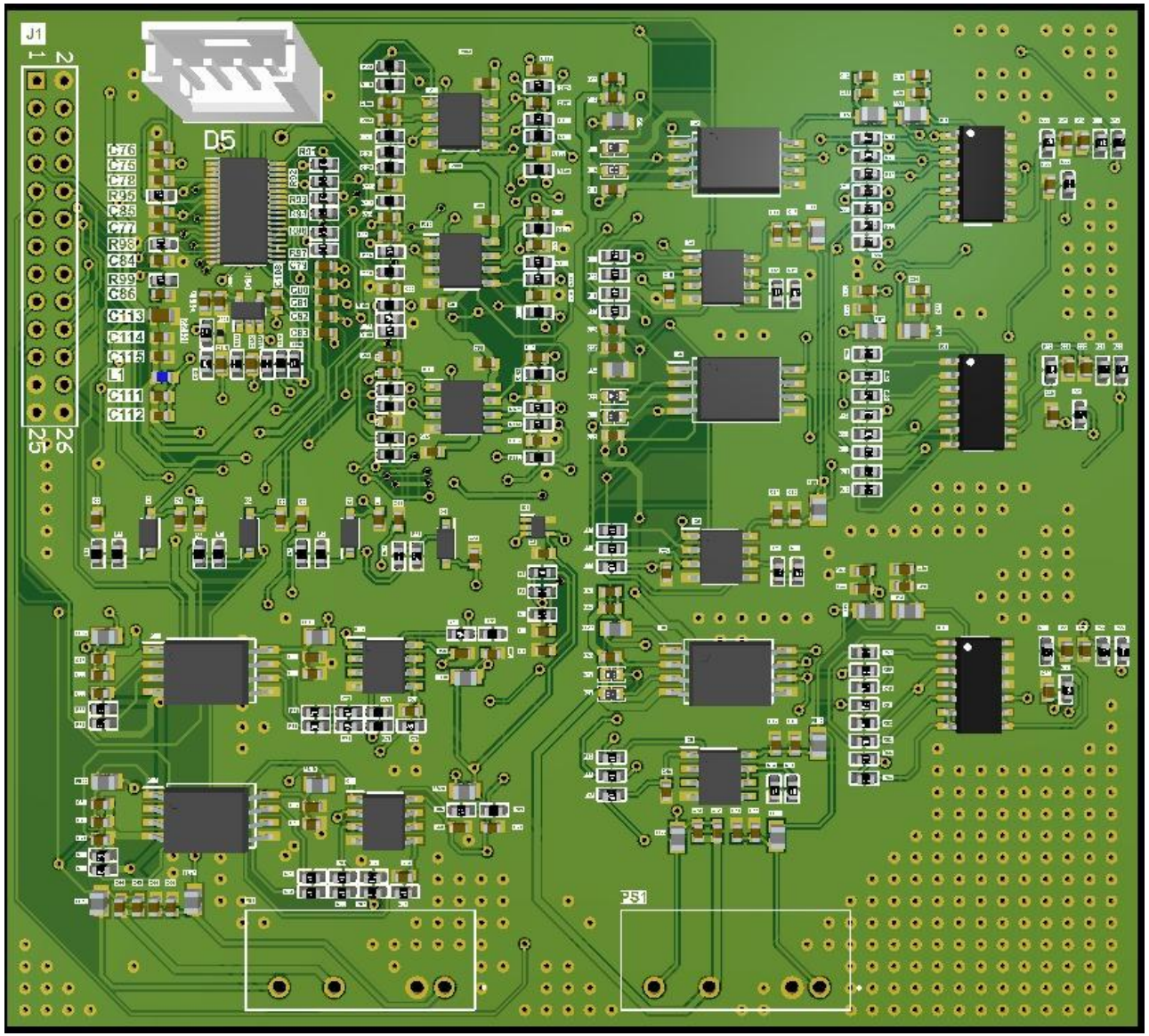
Switched Mode power supply

- The circuit is designed on ALTIUM designer.



DC power converter control

- The circuit is designed on ALTIUM designer.

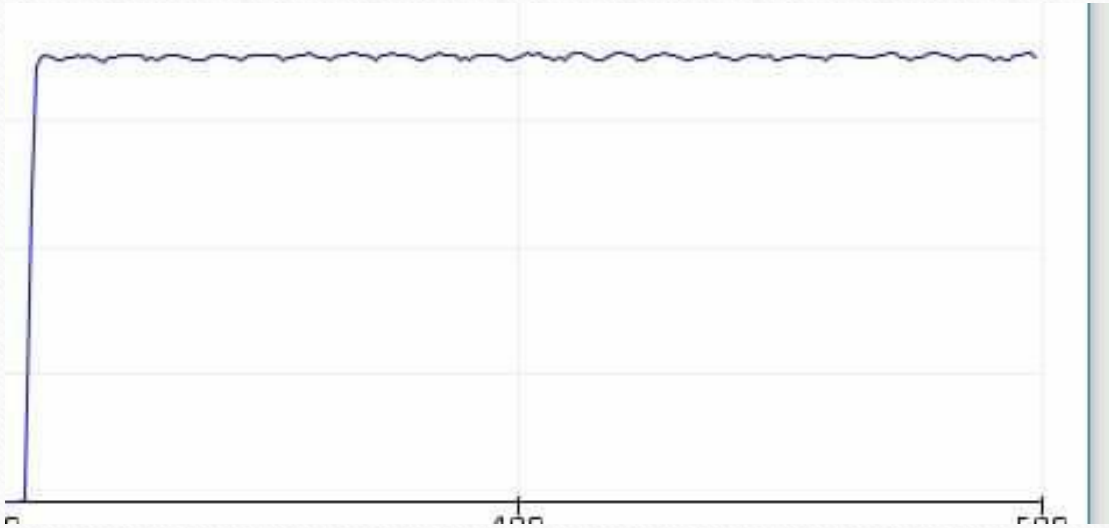


7 – Complete sound system for elevator

- This circle can tell us the floor number where the elevator is located and tell the users to avoid the elevator in case of emergency work.
- The circuit is designed on Autodesk EAGLE and programmed using MICRO C program.

8 – Modular and Robust PID algorithm

- This a modular and robust PID controller applied on DC motor with quadrature encoder .
- The algorithm is developed without using any library form the Arduino library.

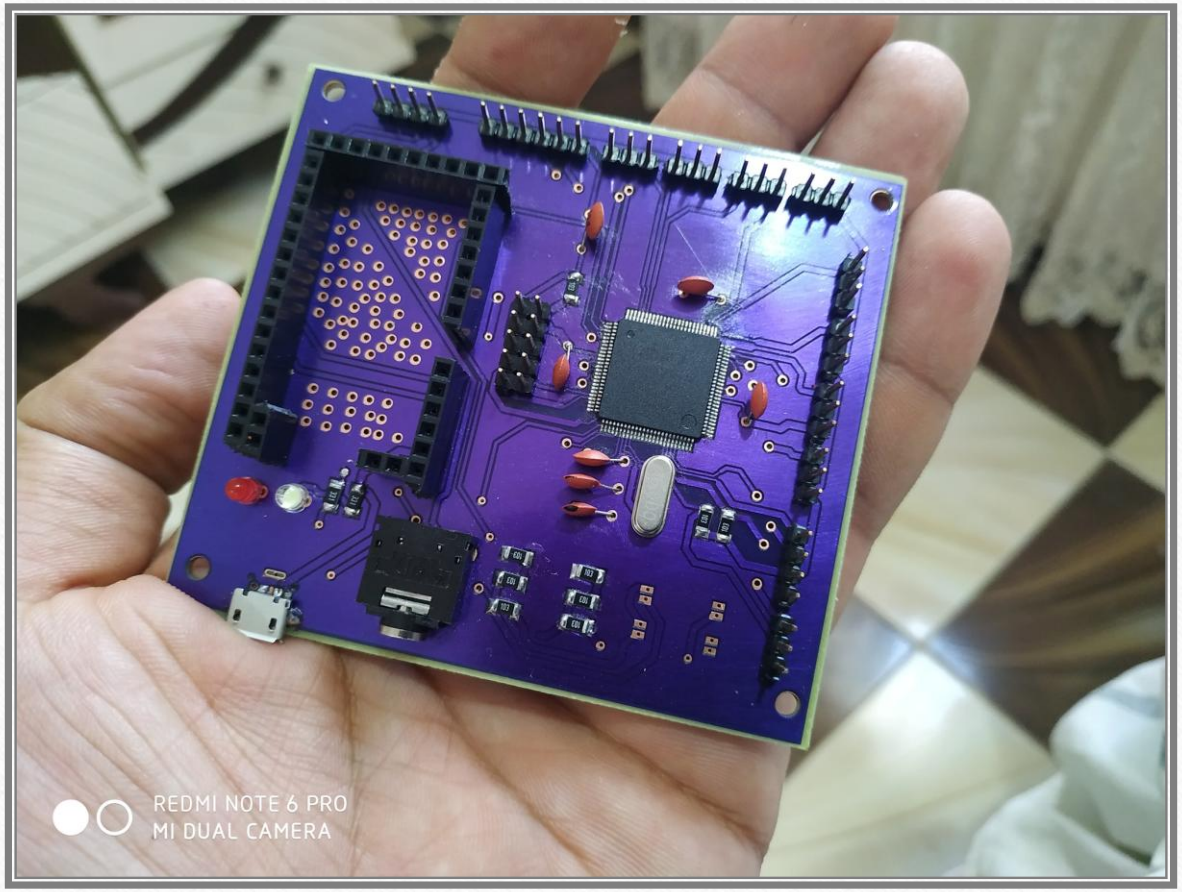


Power inverter for solar cell

- This is 250 watt for solar cell and the circuit contain a smart charging techniques for batteries.
- The circuit is designed using EAGLE and programmed using MICRO C software.

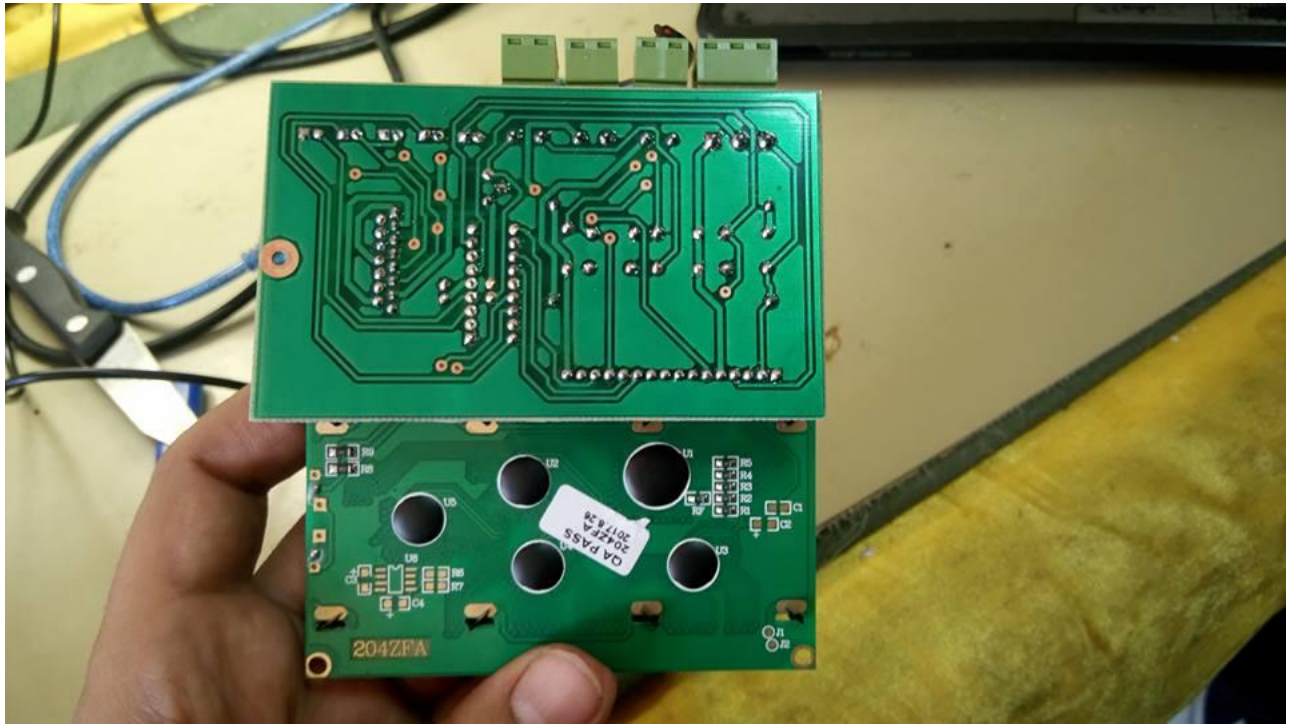
control things using A9G GSM/GPRS

- This circuit use A9G GSM with ATMEGA 2560 to control loads from any place .



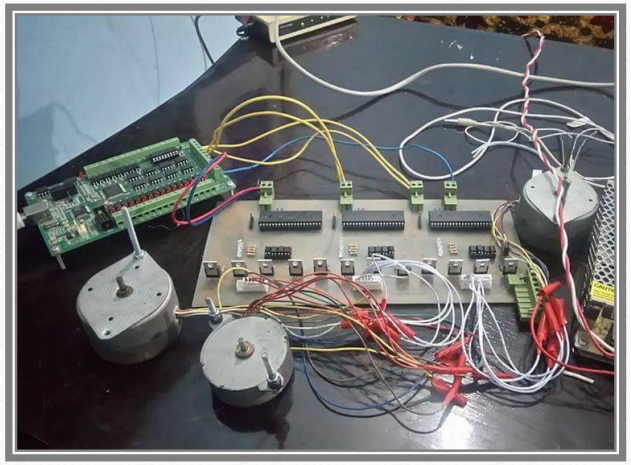
Electronic circuit to control a medical chair (Mar. 2018)

- This circuit is used in physical therapy devices.
- The circuit is designed on ALTIUM designer.



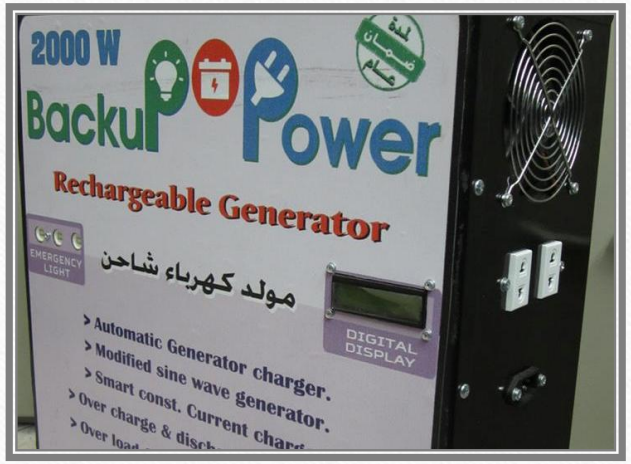
CNC machine for fabricating printed circuit board

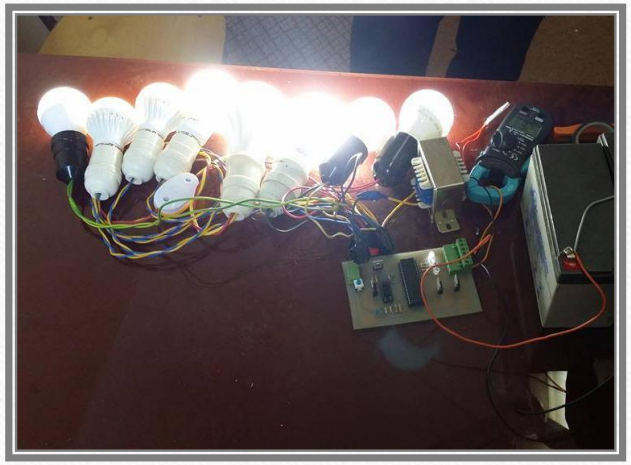
- This my graduation project I construct all control circuit by myself .
- The drivers circuit I add to it a new way to controlling stepper motor by a smoothly way.



Power inverter using microcontroller

- I design this device for solving the problem of electricity cut off in a far region .
- This device is more efficient than another come from other country because it has a constant current constant voltage charger and more safety options.



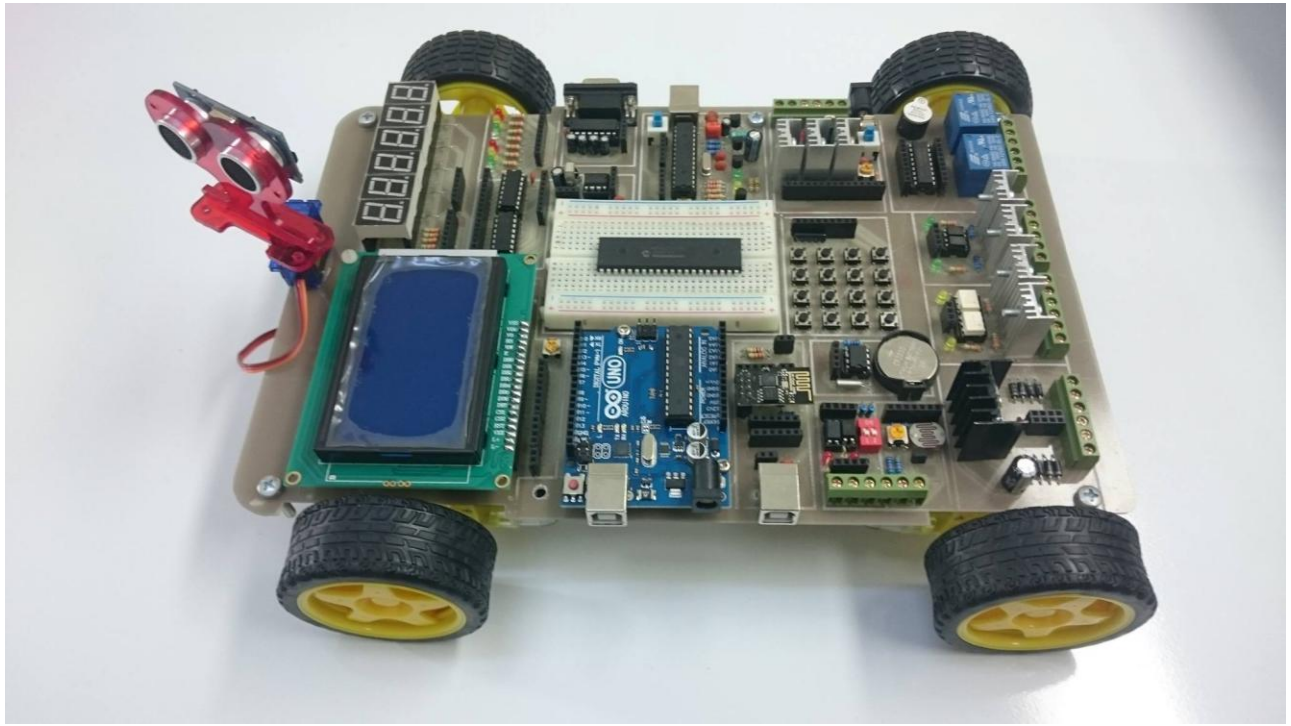


Stabilizer device for regulating electricity.

- I made this device for regulating electricity in a region that have a very little electricity because little electricity is very dangerous for more devices.
- This device has a protection from excessive electricity and have a delay protection .

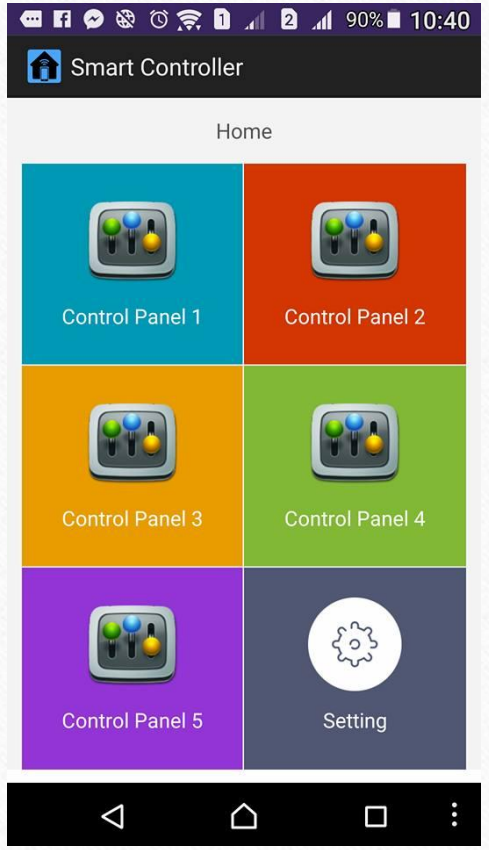
Embedded learning kit AVR , PIC , Arduino and ARM

- This is a learning kit I designed it to simplify the learning of Embedded system to programmers.
- It contain more modules and interfaces and you can control it by PIC or Arduino or ARM or AVR.



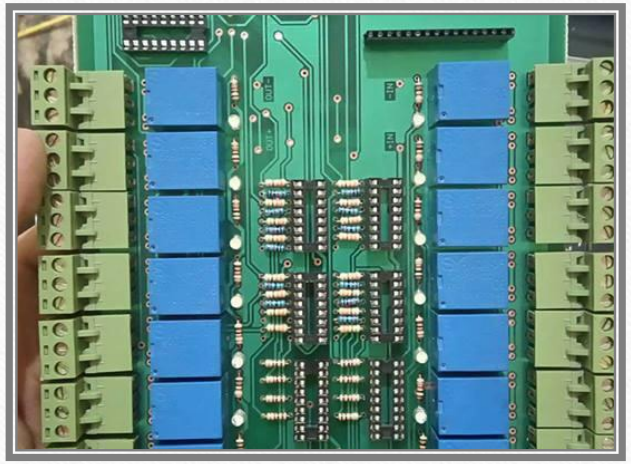
Smart home system for controlling many devices .

- This system can control anything inside your home from anywhere.
- You can know how many devices is run inside your flat at any time .



Smart home system for controlling many devices .

- This system can control anything inside your home from anywhere.
- You can know how many devices is run inside your residence/ company/ … etc.



A constant current/constant voltage charger for batteries.

- This device I made it because this way of charging save the battery long life and when battery charging it not warm yet.

Smart touch switch

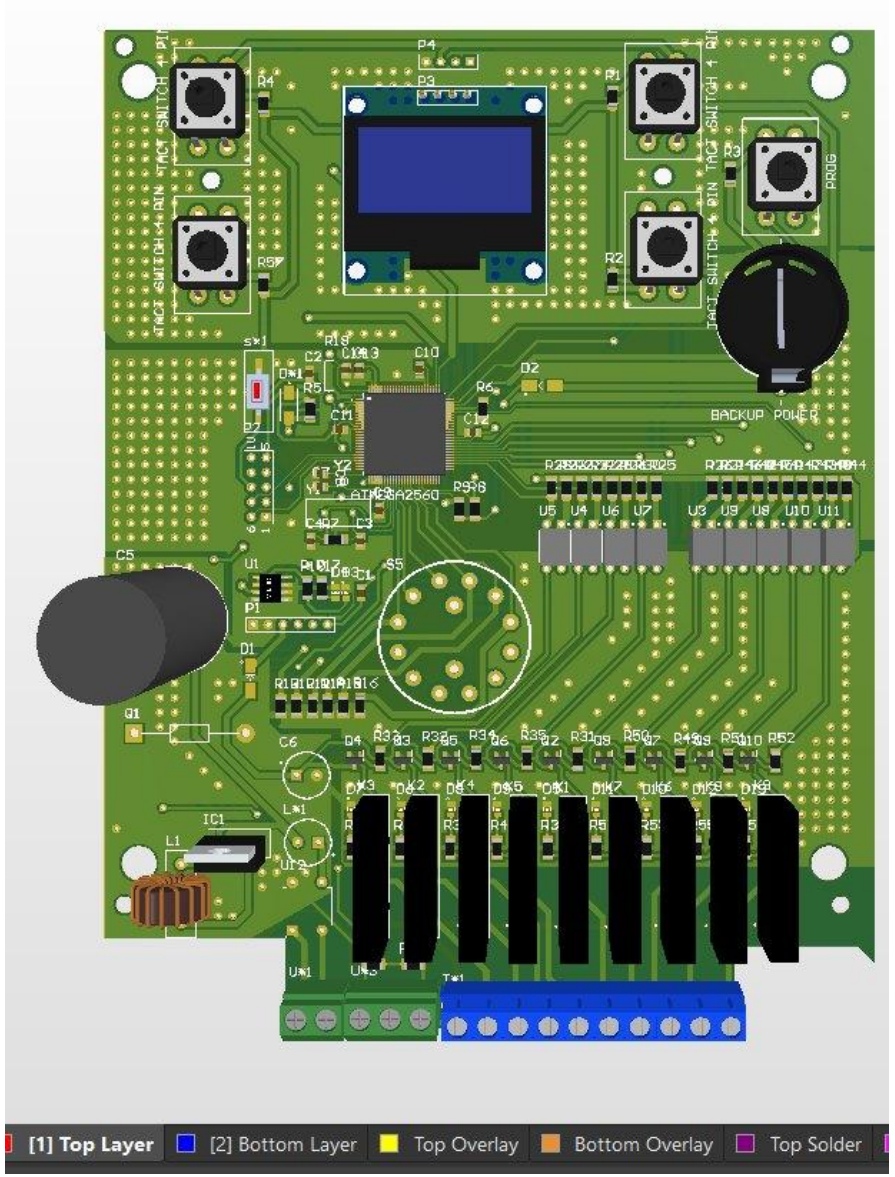
- This circuit I designed it to made a life is easy it convert any switch to touch and you can control on or off to this switch by mobile from anywhere in the world .

PWM controller for solar cell system

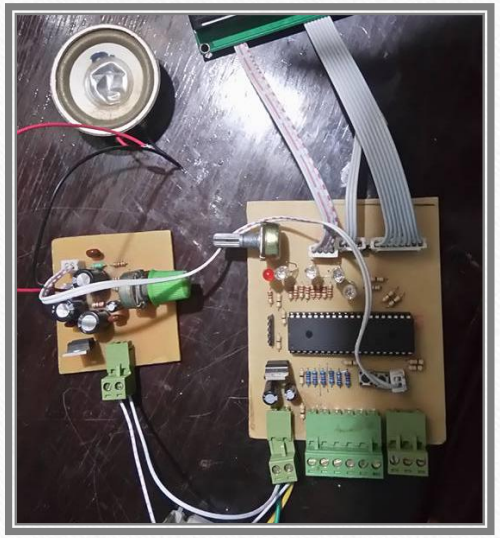
- I made this device to obtain a power from the solar cell at sunset and the circuit regulate the optimum power for charging the battery connected to the solar .

Tracking system for solar cell system.

- This system can track a the sun to obtain the maximum power from sun .



Gas pressure alarm device for hospital.



- This device can detect the error in any line of gas in hospital and when this error is eliminated ,it give me a feed back and has a sound system also .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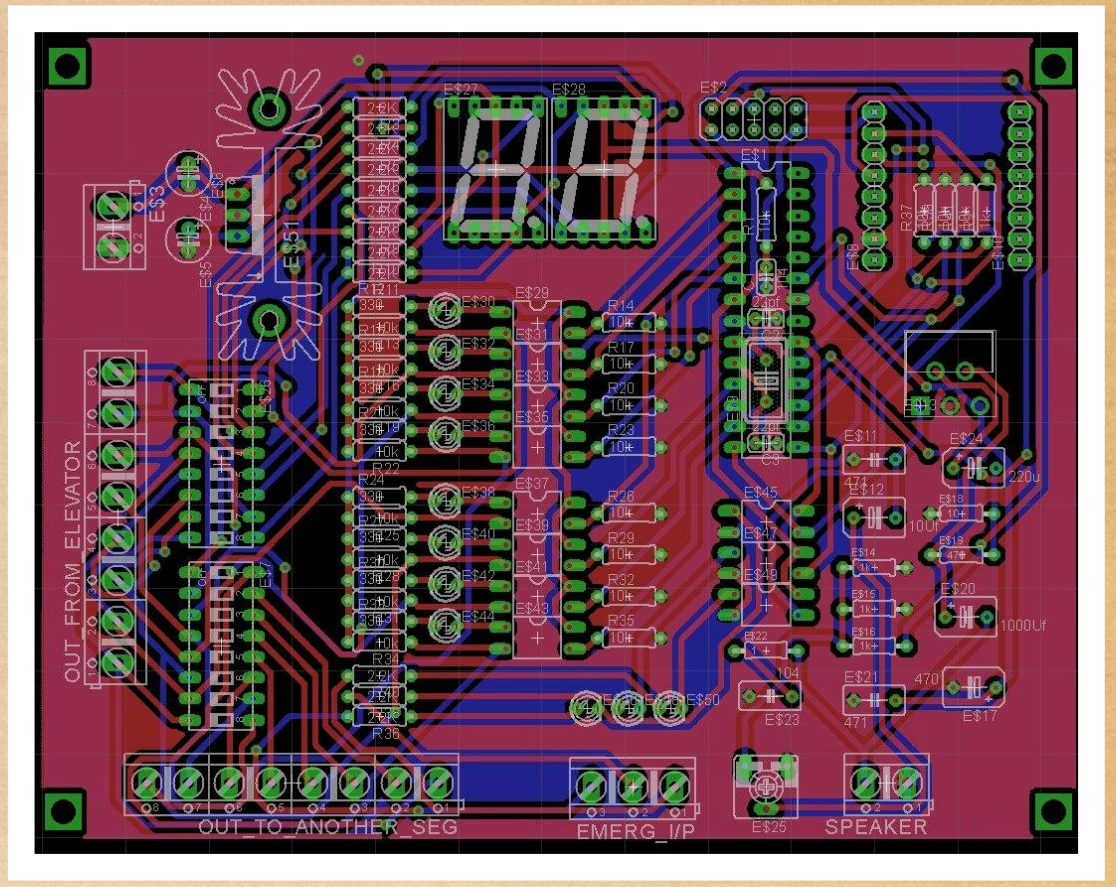
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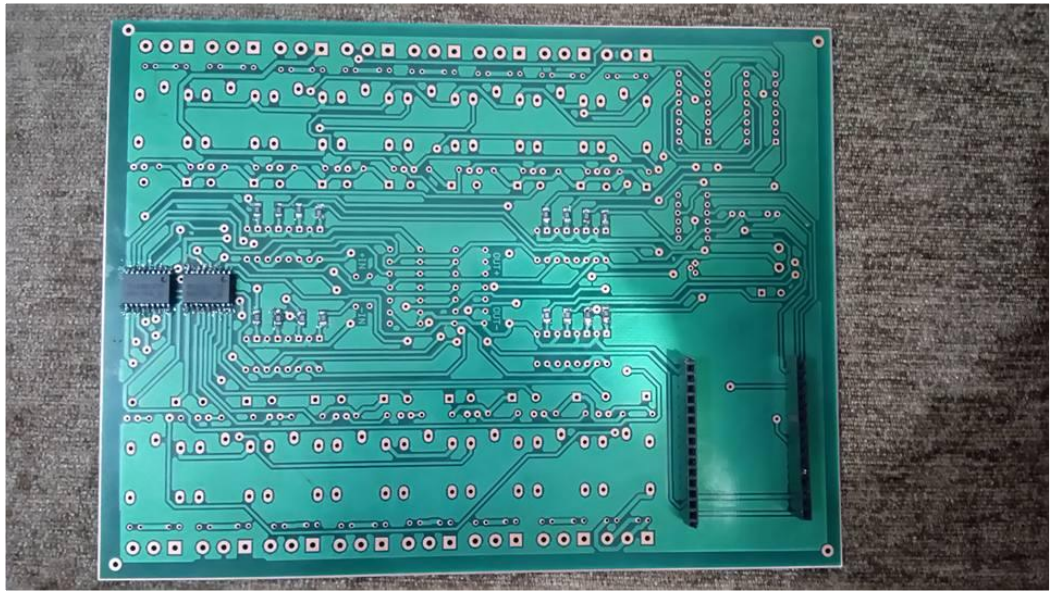
OUT_TO_ANOTHER_SEG
EMERG_I/P
SPEAKER

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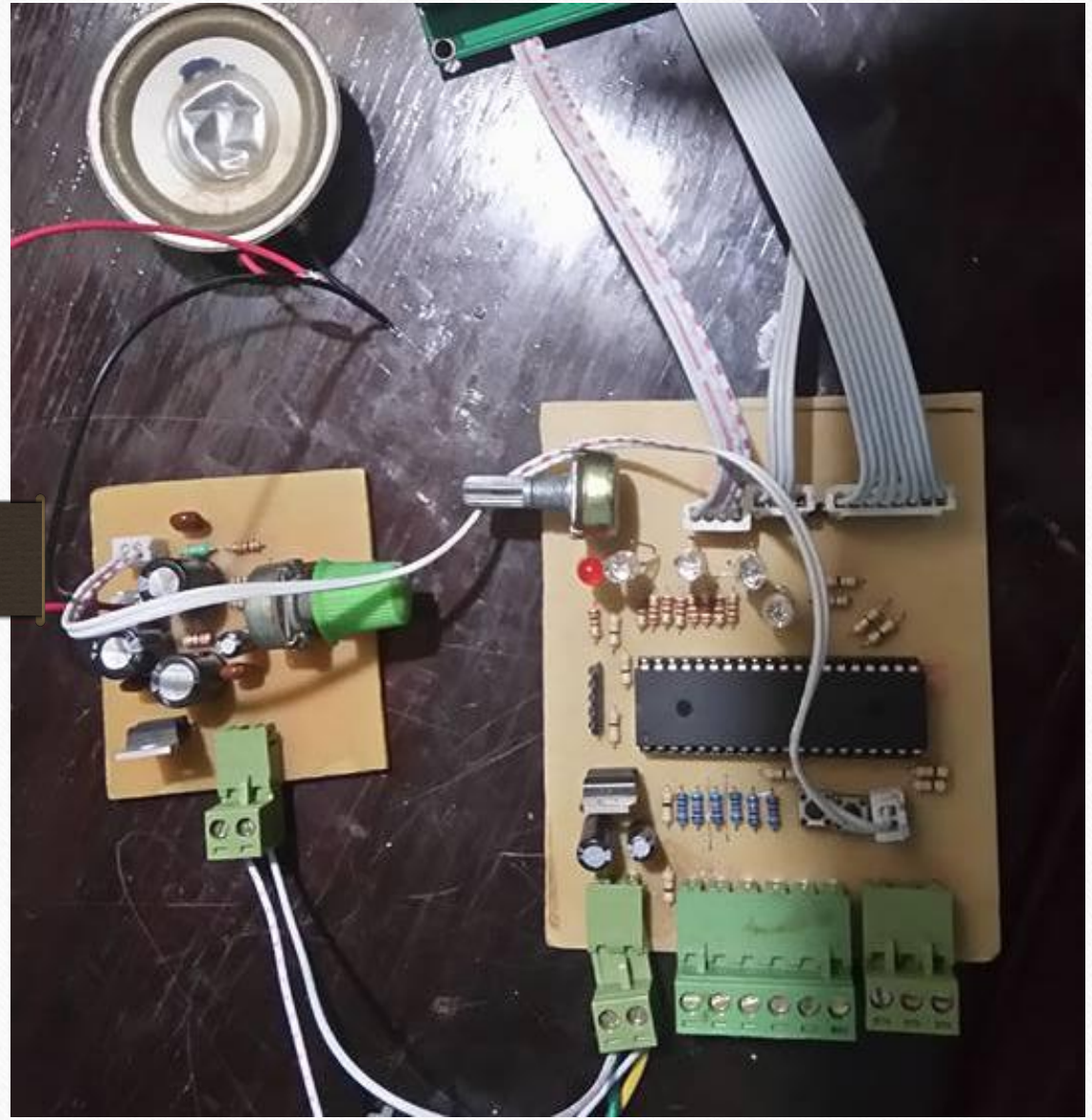

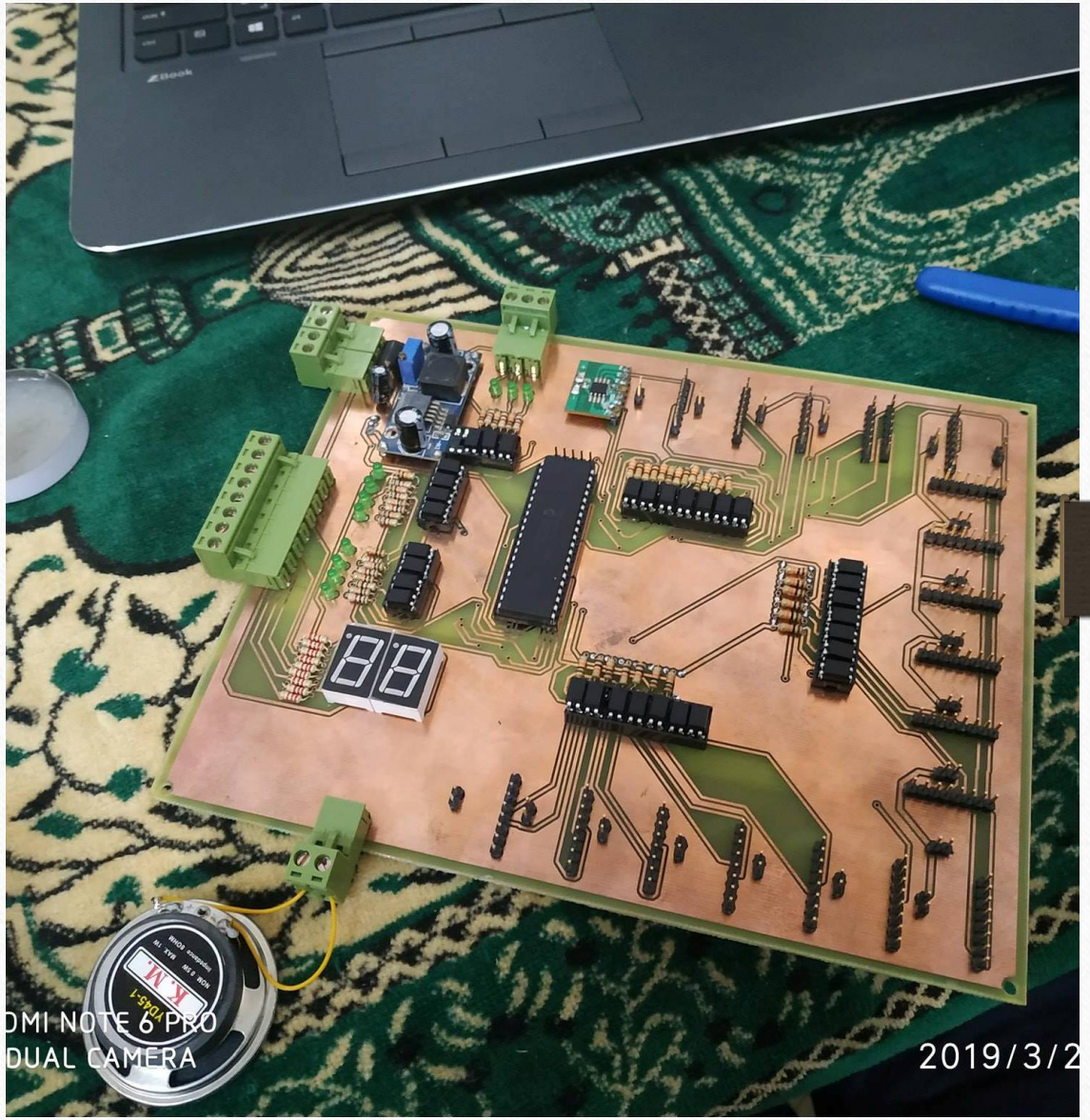
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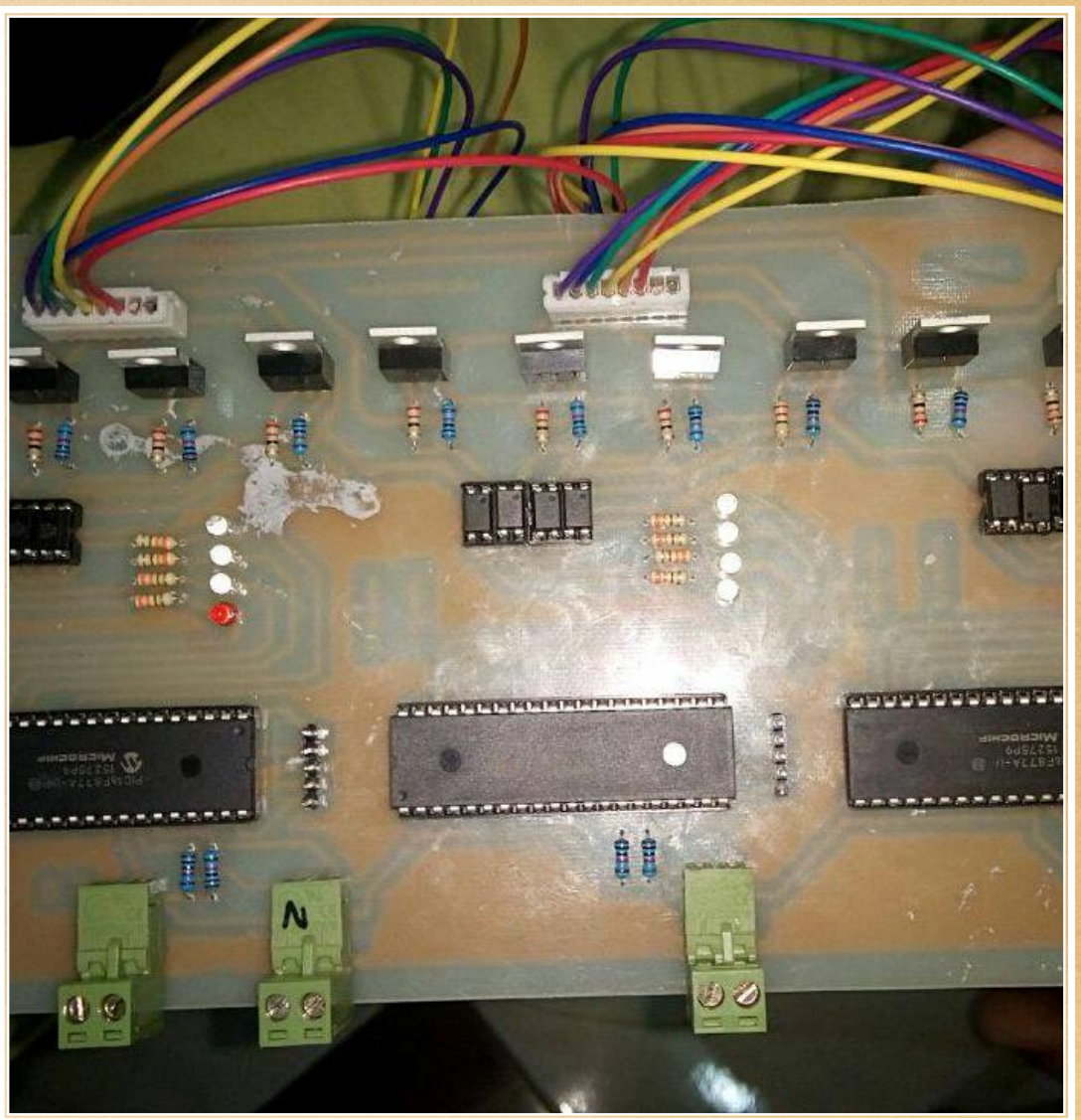

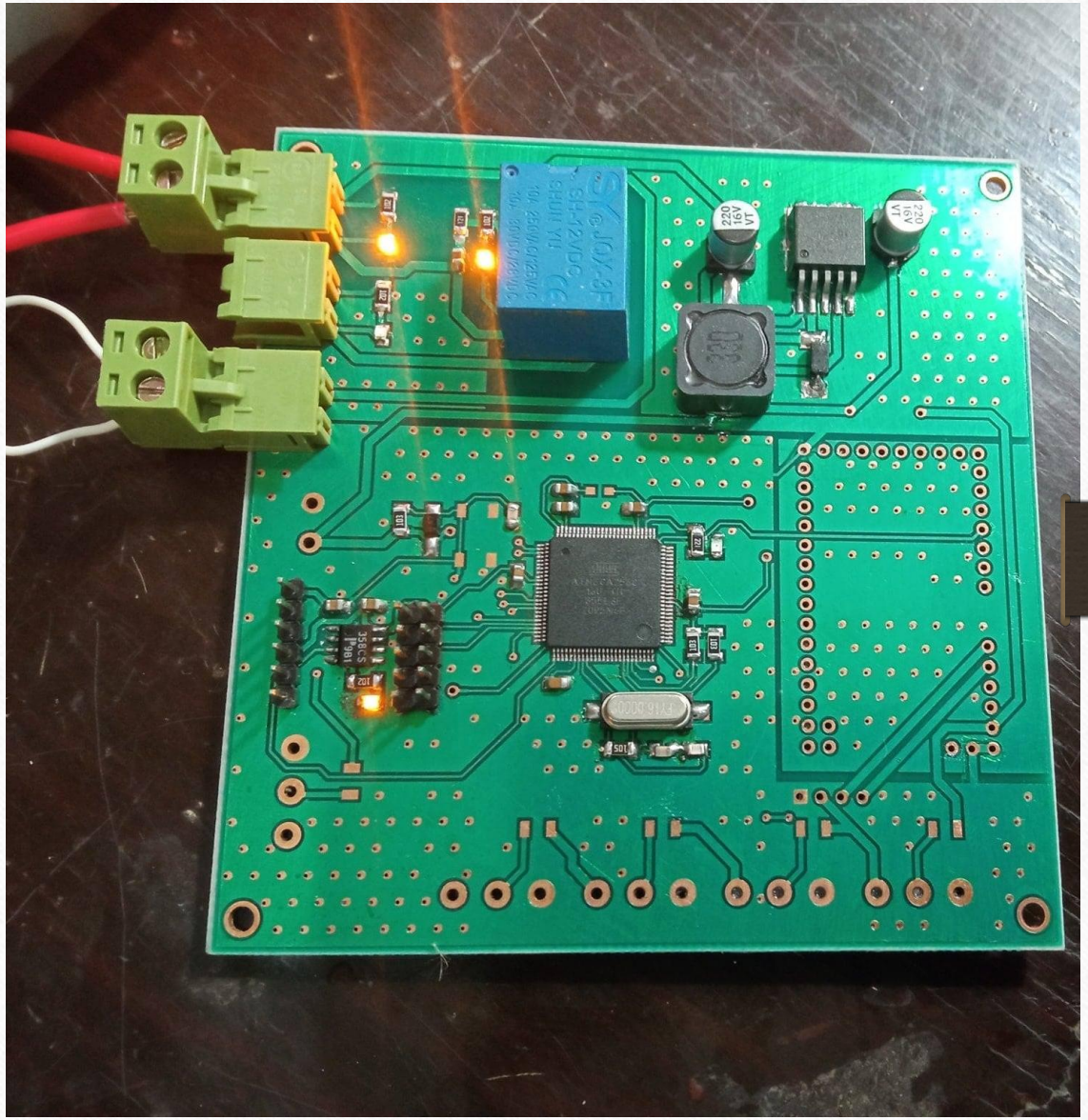


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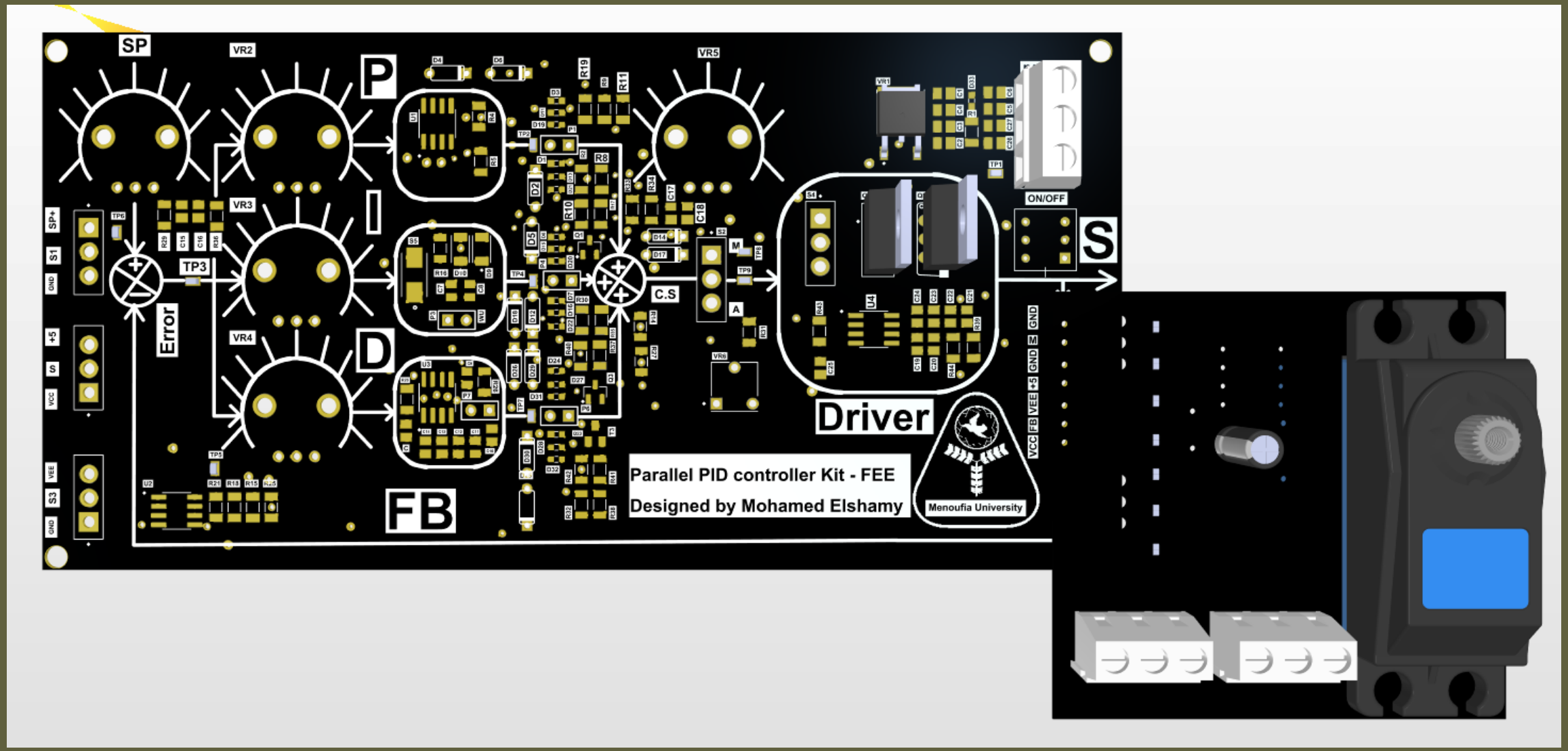
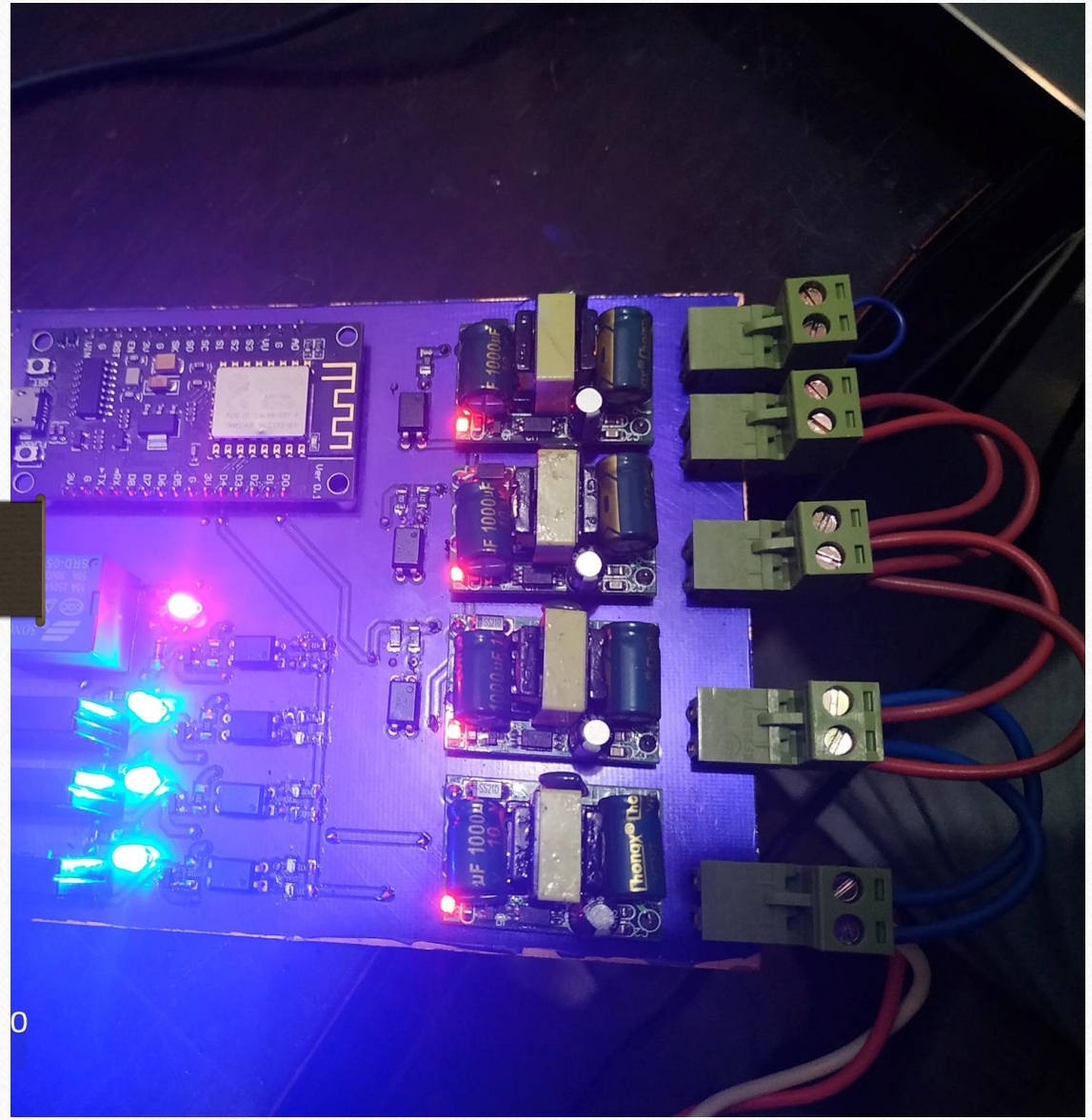
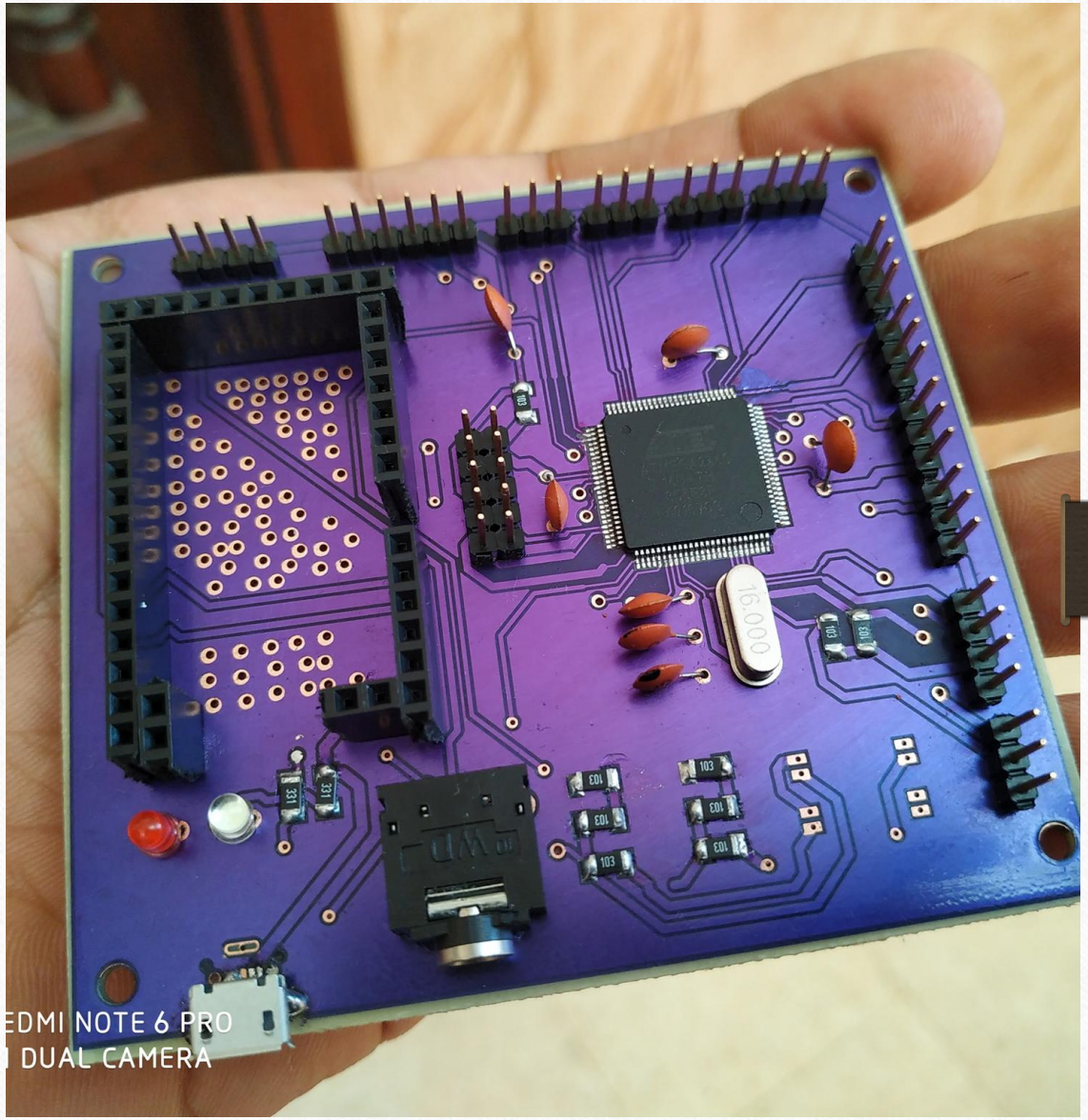

SP
VR2
P
VR5
VR3
I
TP3
Error
VR4
D
FB
C.S
Driver
ON/OFF
S
Parallel PID controller Kit - FEE
Designed by Mohamed Elshamy
Menoufia University
SP+
S1
GND
+5
S
VCC
VEE
S3
GND
VCC FB VEE +5 GND M GND

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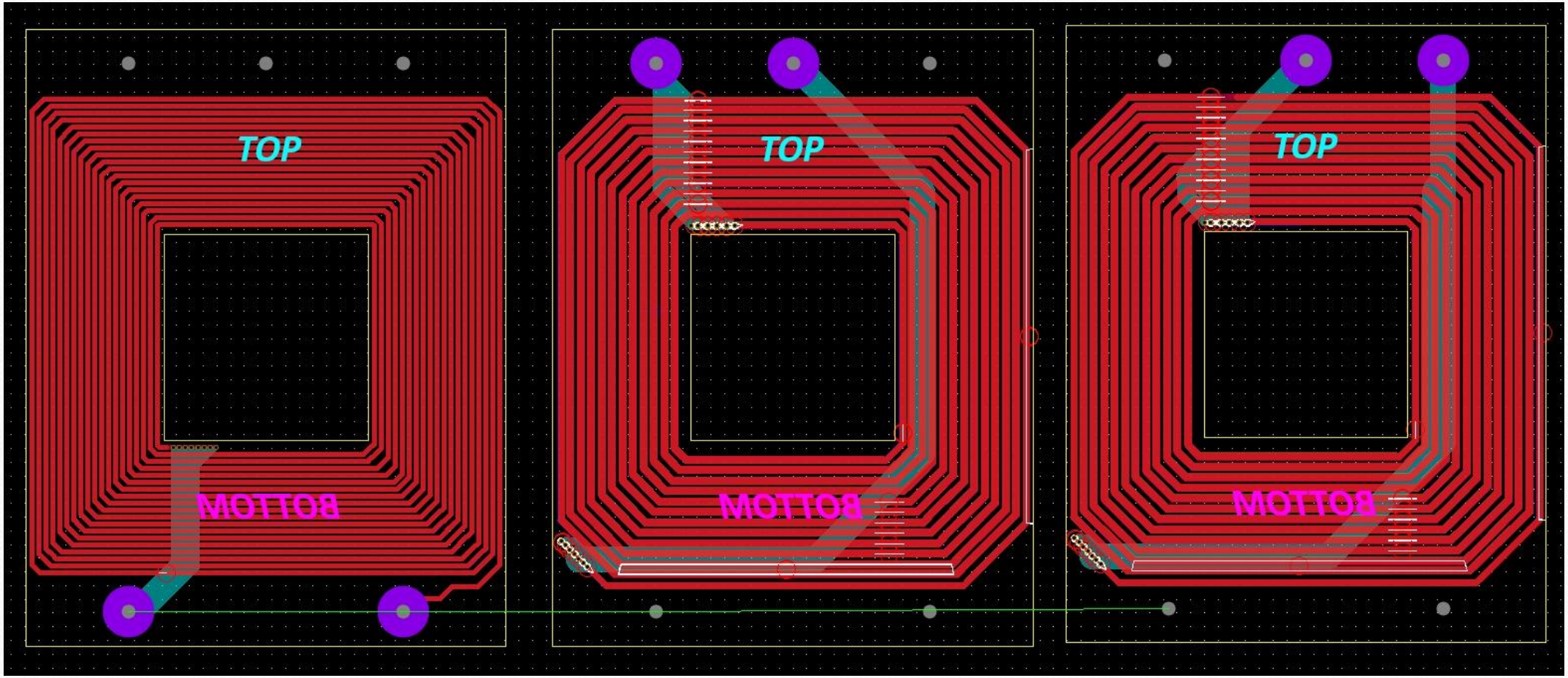
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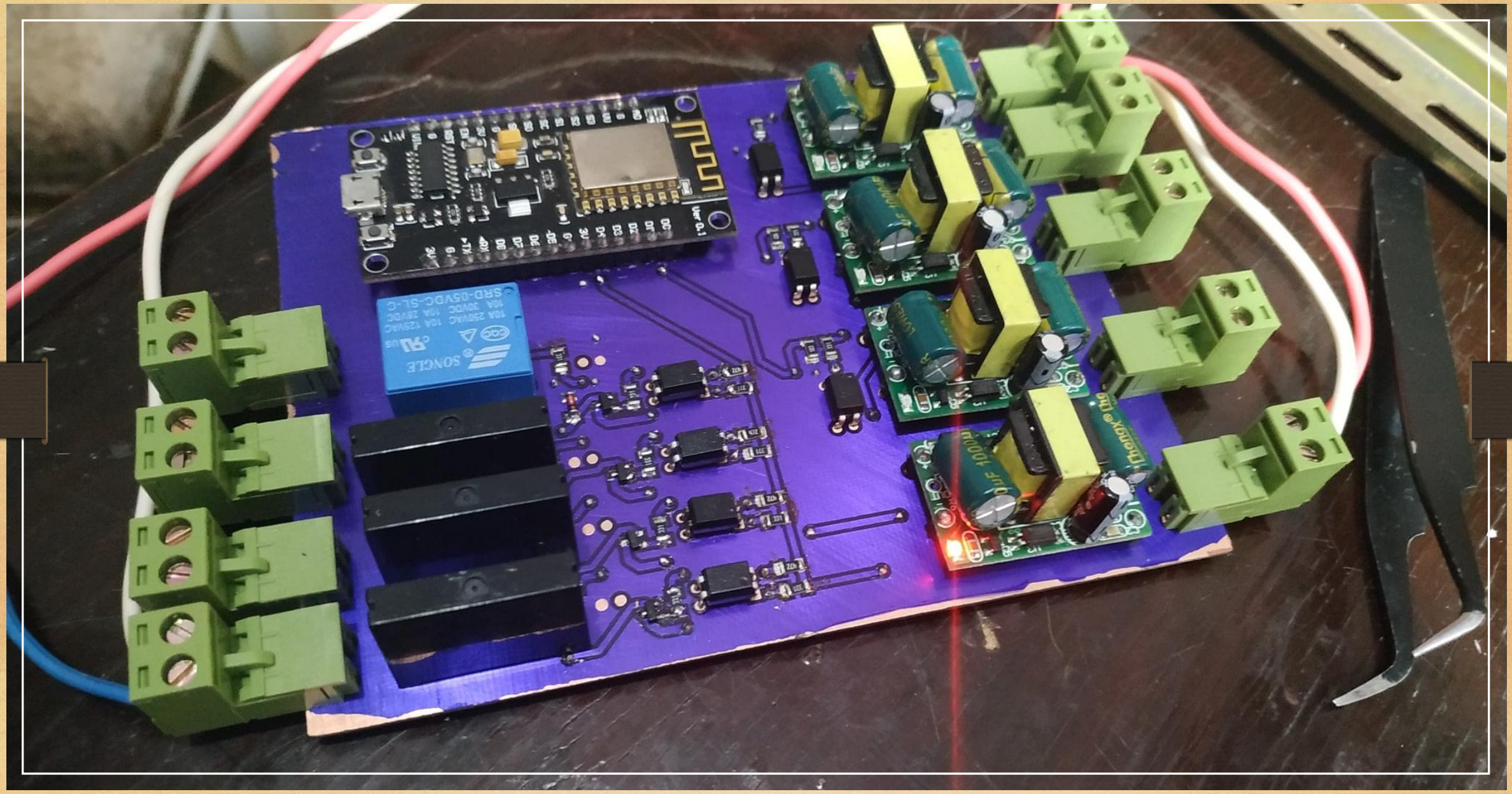
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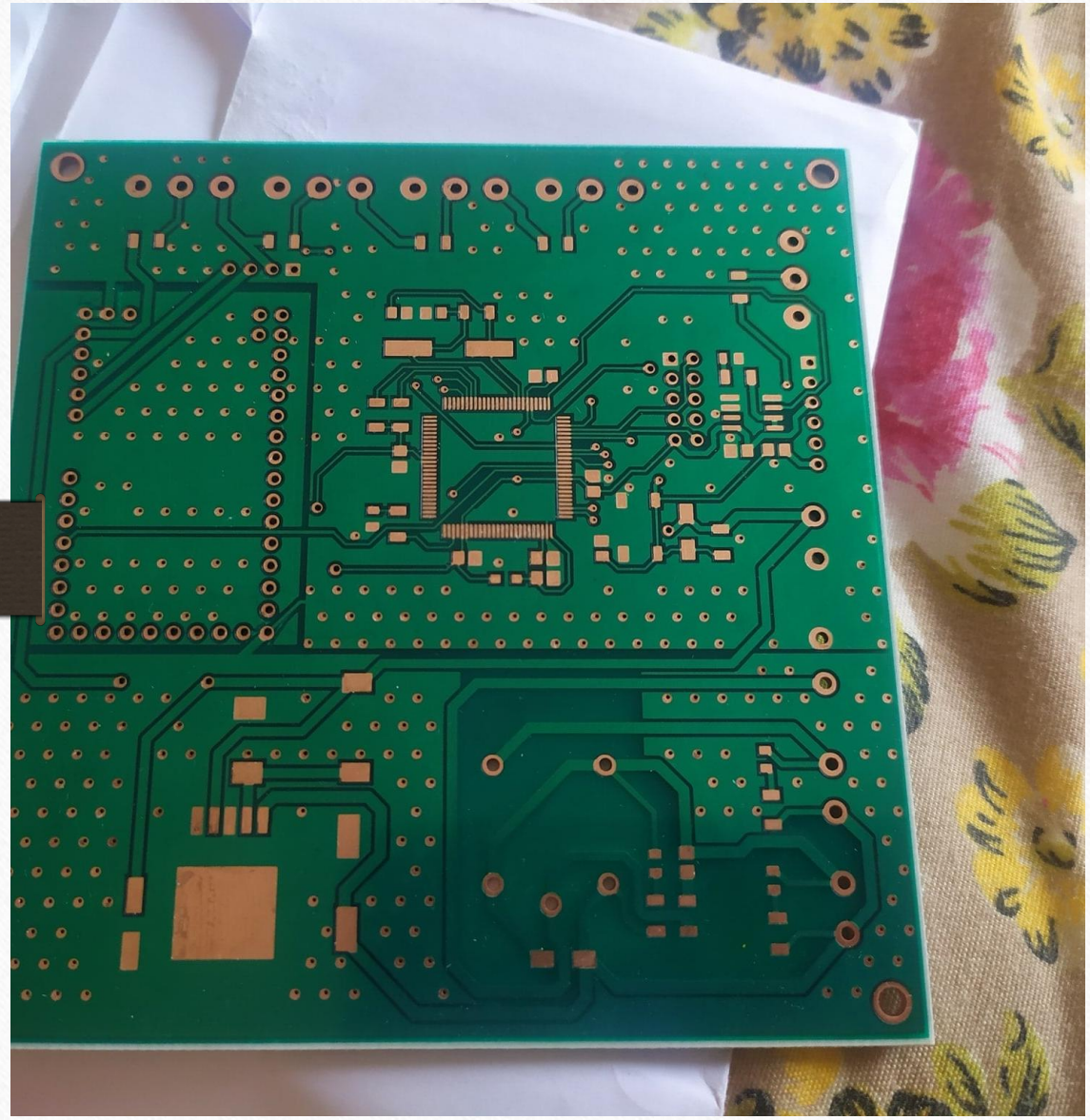
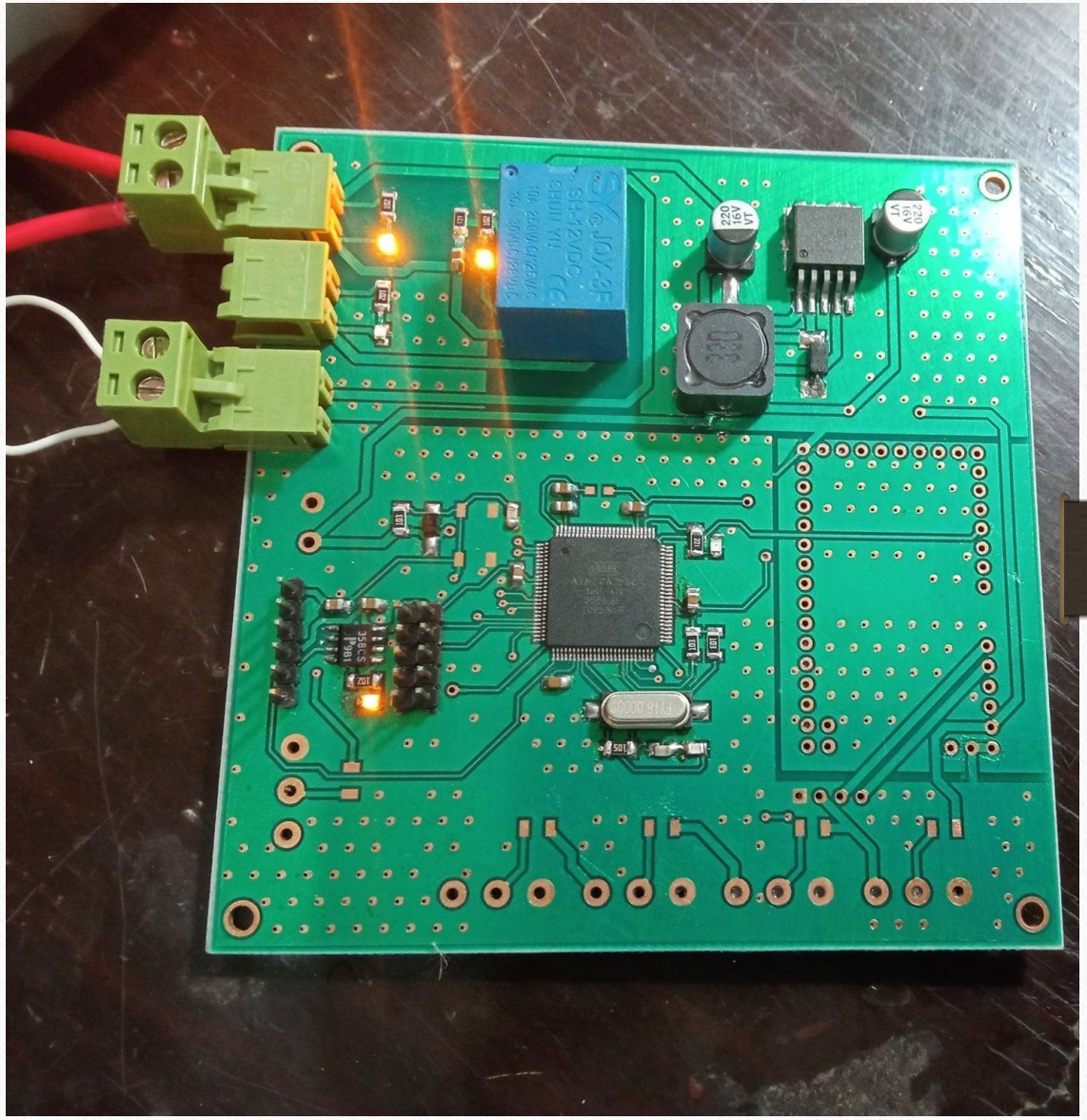
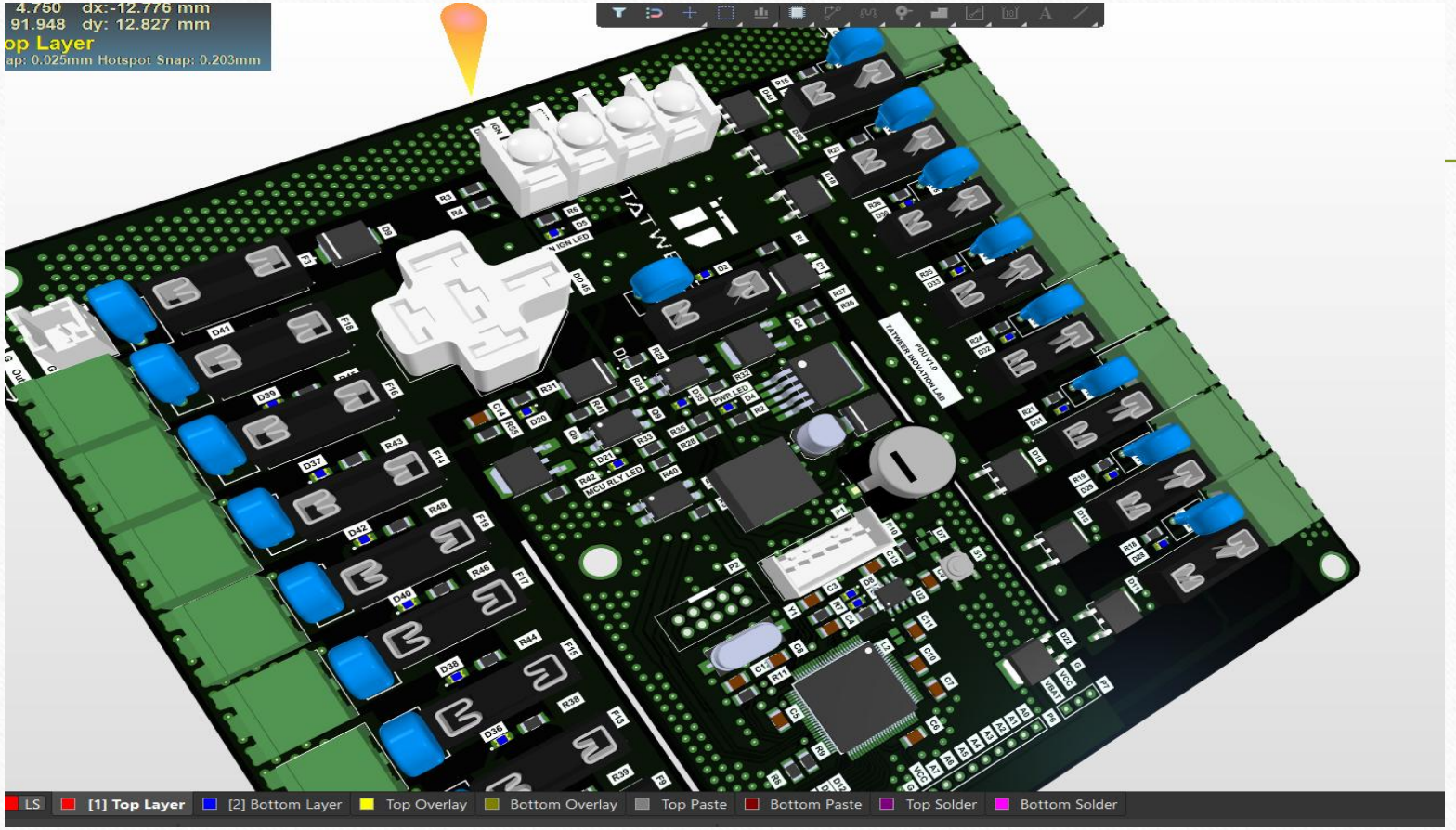




Smart Driving Test Board.



Car tracker devices.