ATIF KHAN

PROJECTS PORTFOLIO

FULL STACK EMBEDDED ENGINEER

atifed6@gmail.com | +92 345 6888102

LISTED ONE OF MY BEST PROJECTS

I am Atif Khan, an experienced Embedded Hardware Design Engineer with a Bachelor's degree in Engineering Sciences, specialized in OptoElectronics. With over 2 years of professional experience, including freelance work on Fiverr and roles at RMA Pipeline Equipment and NR Trading Company, I have delivered a wide range of successful projects in the fields of embedded systems, PCB design, and industrial electronics. My core expertise includes circuit design, multi-layer and RF PCB layout, embedded firmware development (8051, STM32, PIC, Arduino), and ATEX-compliant hardware for hazardous environments. I've worked extensively on real-world systems such as the ECOGATE gas meter communication device, the EVC gas metering system, and a Sight Monitoring System for generator control and battery management. In addition to hardware, I also design professional-grade 3D enclosures and mechanical housings using SolidWorks, ensuring a complete, functional solution from electronics to physical casing. My approach focuses on reliability, manufacturability, and seamless hardware–firmware integration tailored to industrial and IoT applications.

IoT Beacon

KiCad DESIGNED WITH

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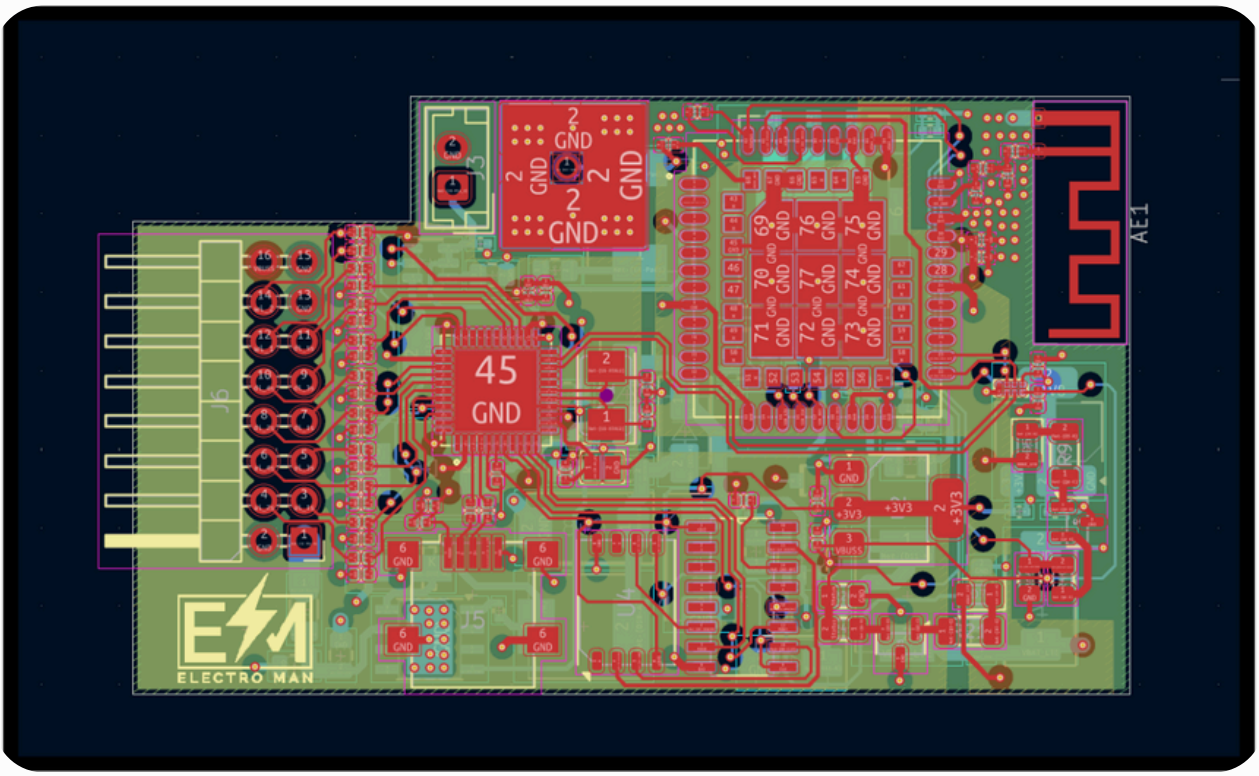
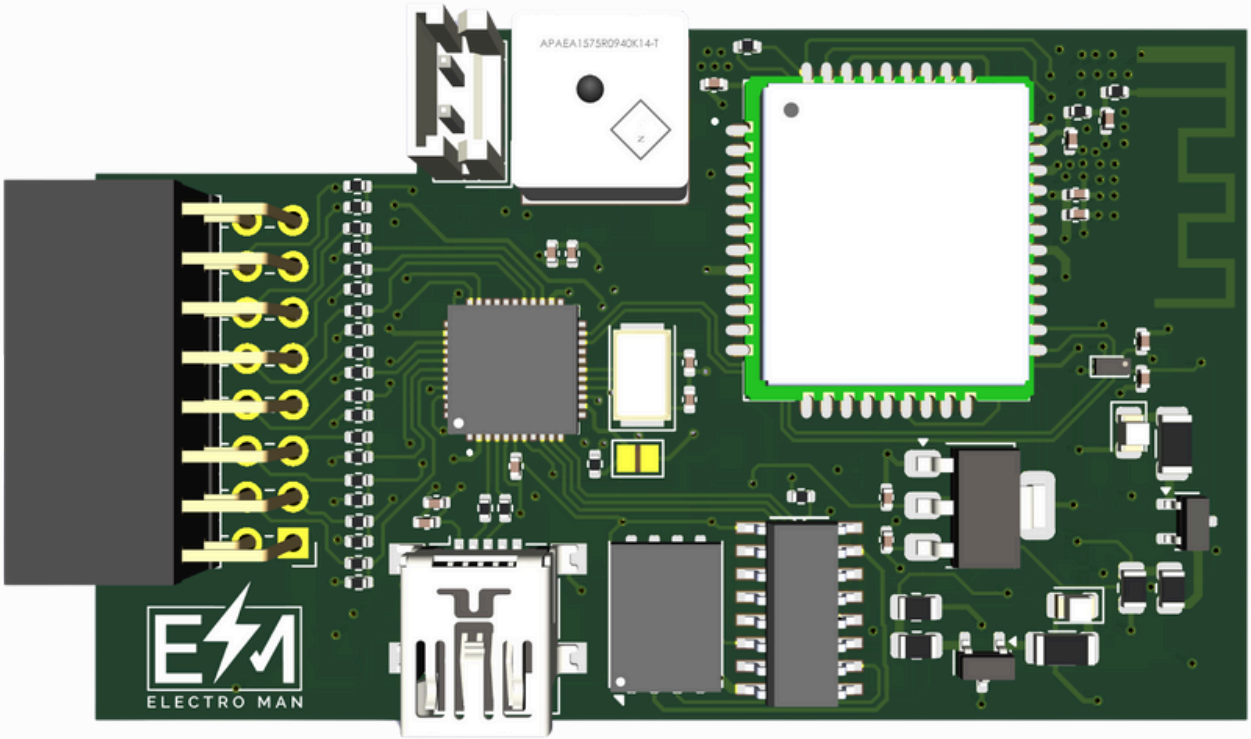
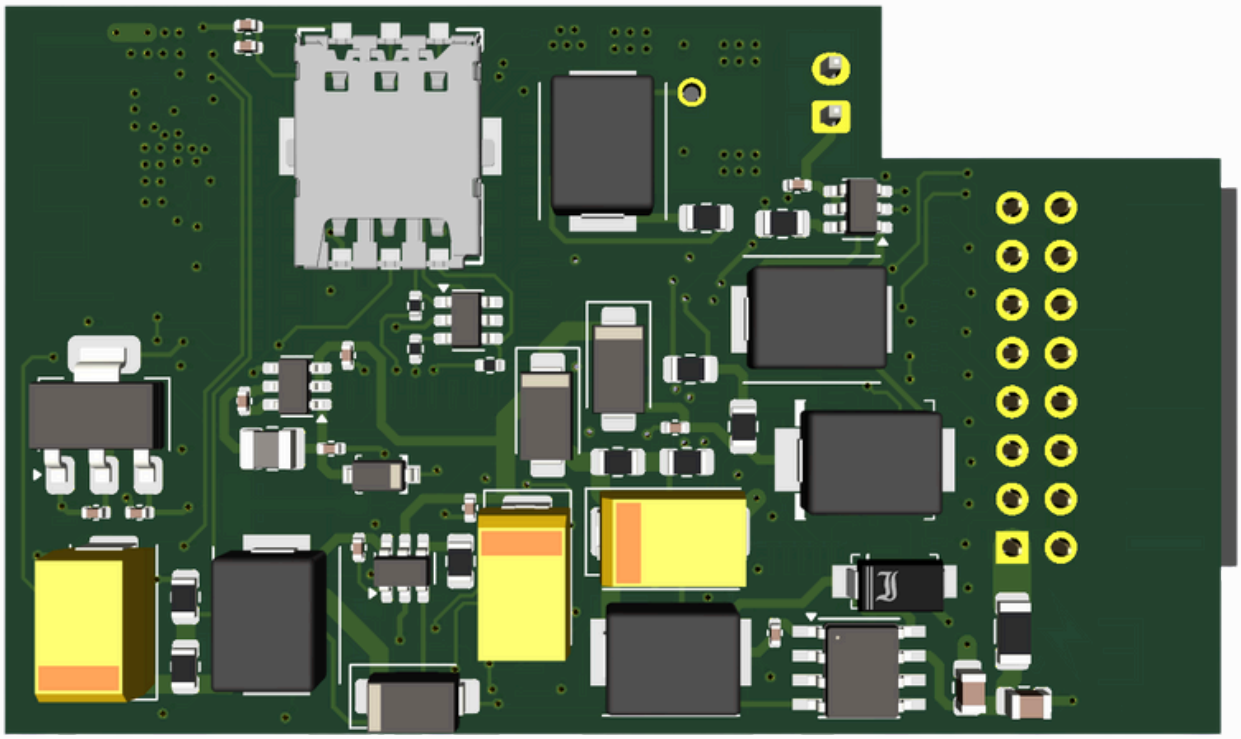




TOP



BOTTOM

SPECIFICATIONS

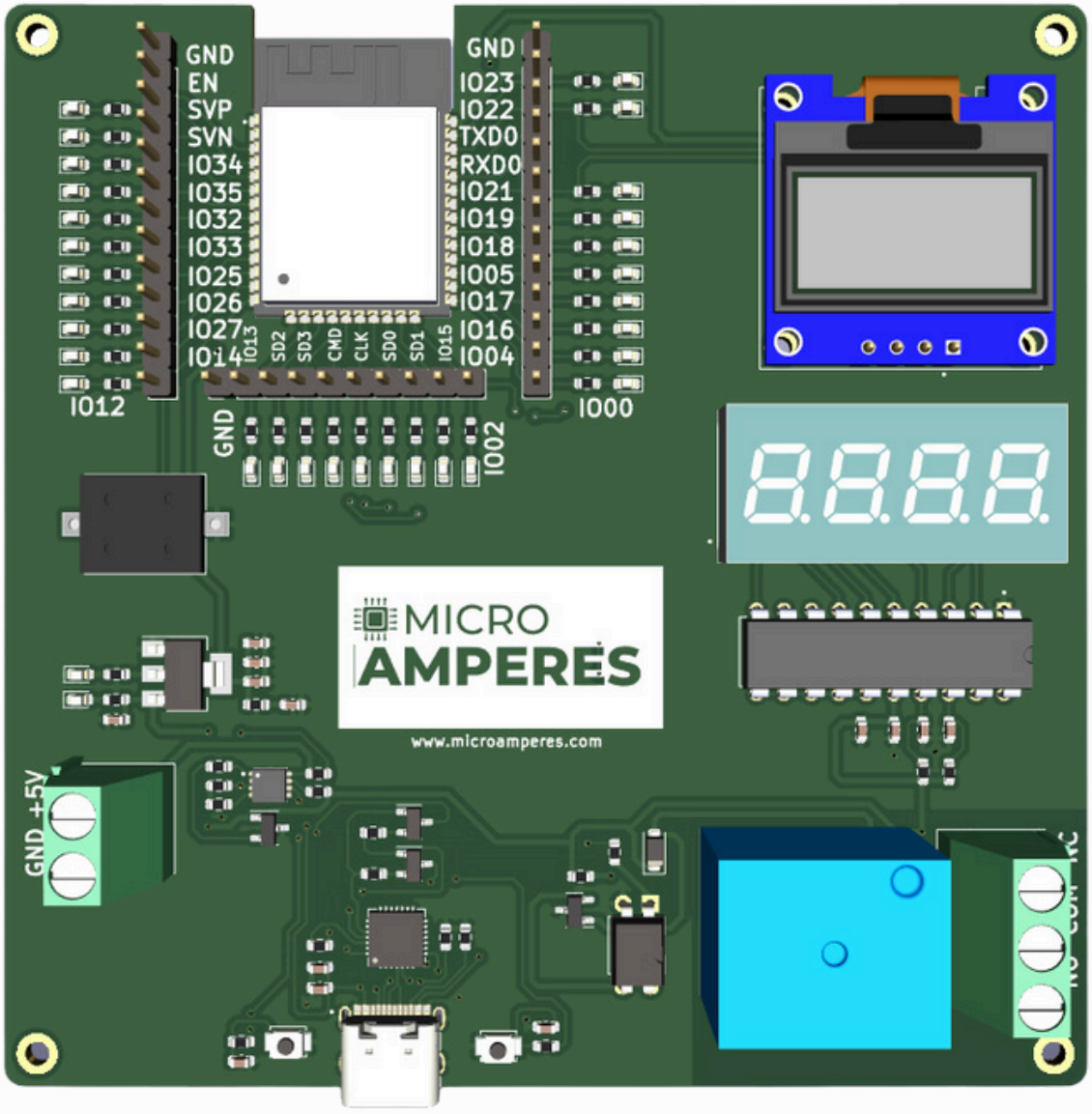
- Internet of Things Beacon Device.
- Dual Power Source.
- Energy saving, non-Stop Monitoring.
- 10 Analog Sensors Input.
- 2 One-Wire Sensors Input.
- Cellular Communication.
- GNSS Compatible.

The Project has been divided into small sections:

1. Modules Test Methodology,
2. Hardware Design,
3. Firmware,
4. Software section.

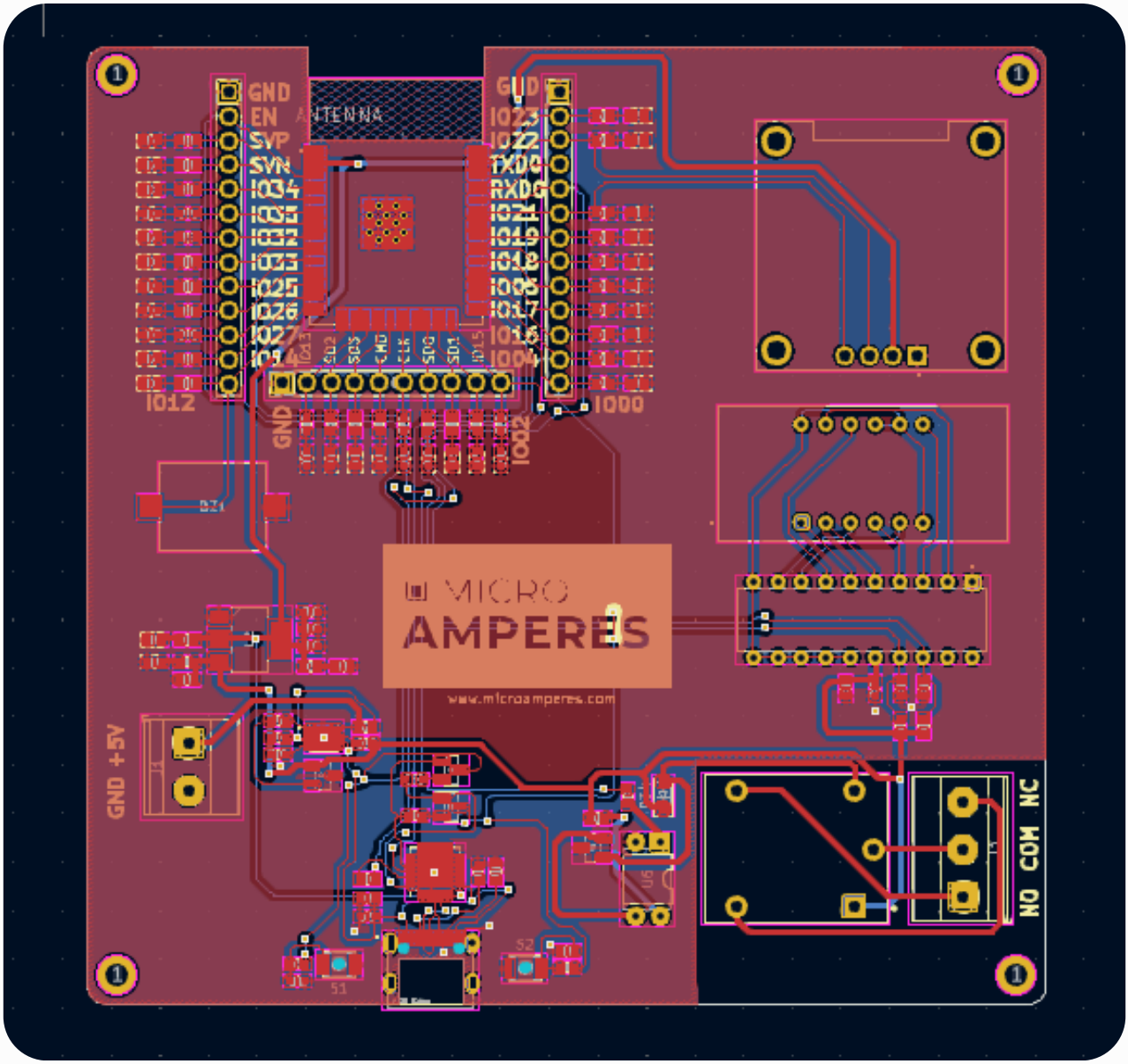
ESP 32 Dual Power Sourece Dev Board

KiCad DESIGNED WITH



SPECIFICATIONS

- ESP32 Dev Board
- Dual Power Source.
- Energy saving, non-Stop Monitoring.
- ESP32 All GPIOs
- OLED Display
- Seven Segment Display
- Buzzer
- 5V Relay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SVN
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IO35
IO32
IO33
IO25
IO26
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SD3
CMD
CLK
SD0
SD1
IO15
IO2
IO0
GND
IO23
IO22
TXD0
RXD0
IO21
IO19
IO18
IO5
IO17
IO16
IO4
ANTENNA
MICRO
AMPERES
www.microamperes.com
GND +5V
NO COM NC

ESP8266 with BAT Charger & SIM800L

KiCad DESIGNED WITH

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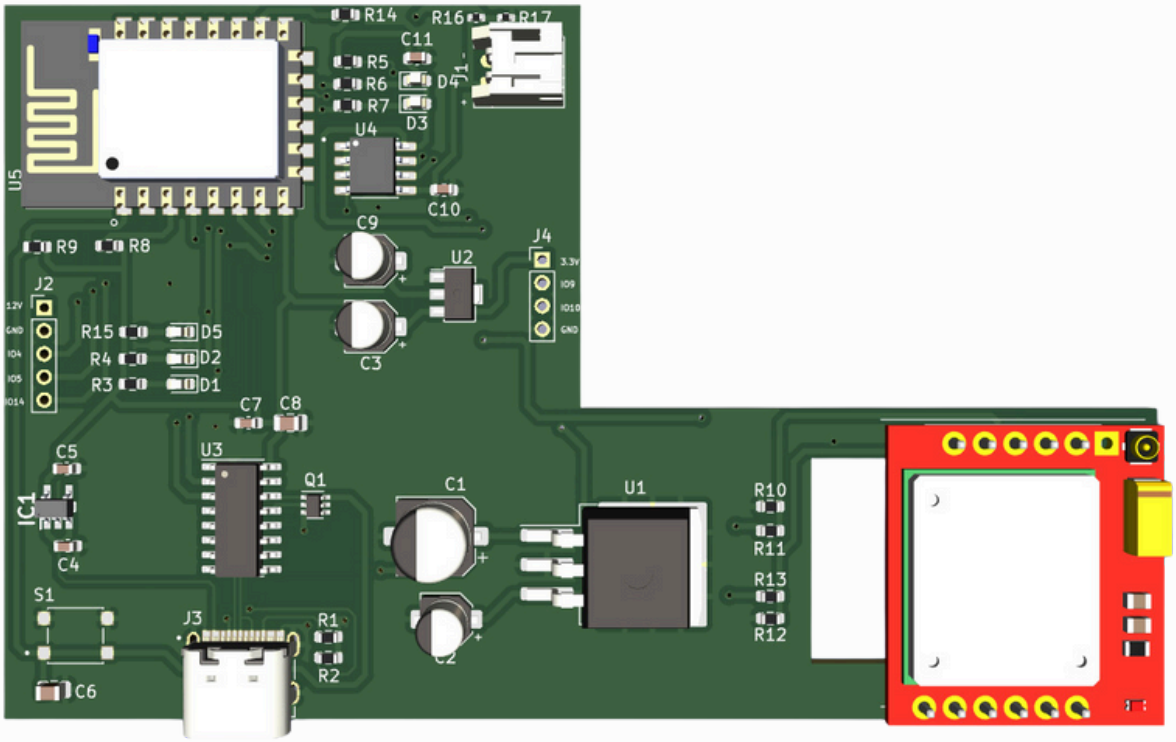
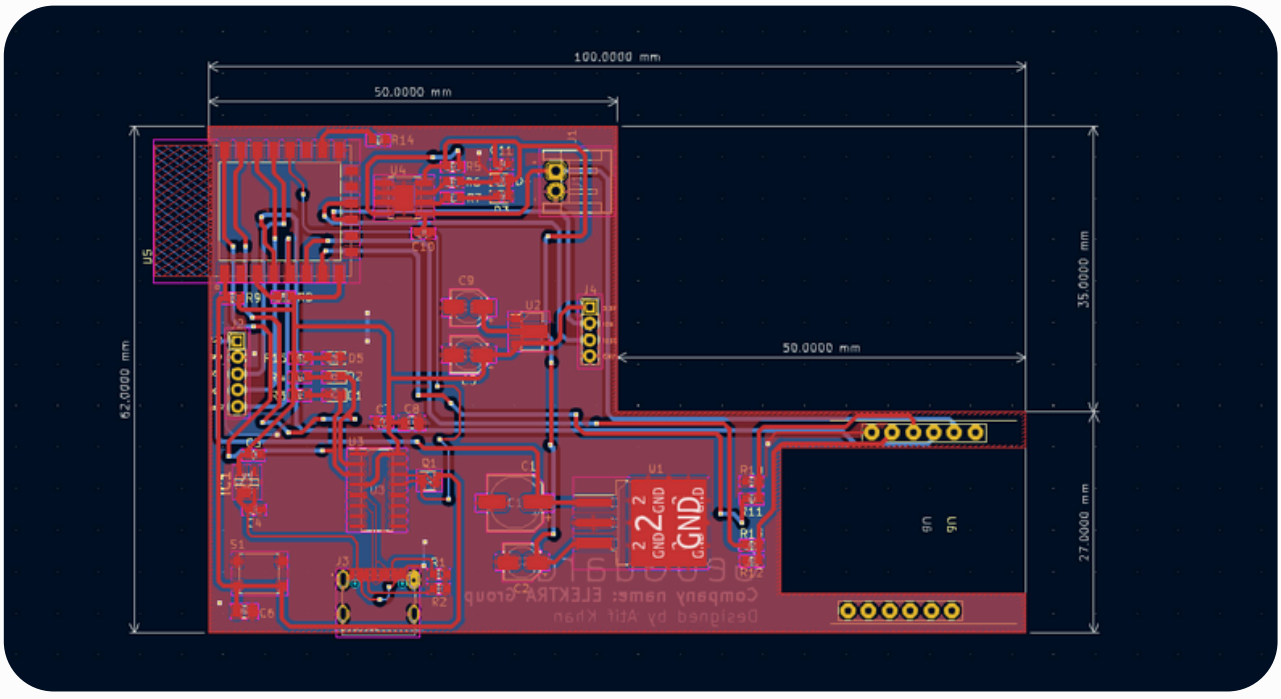


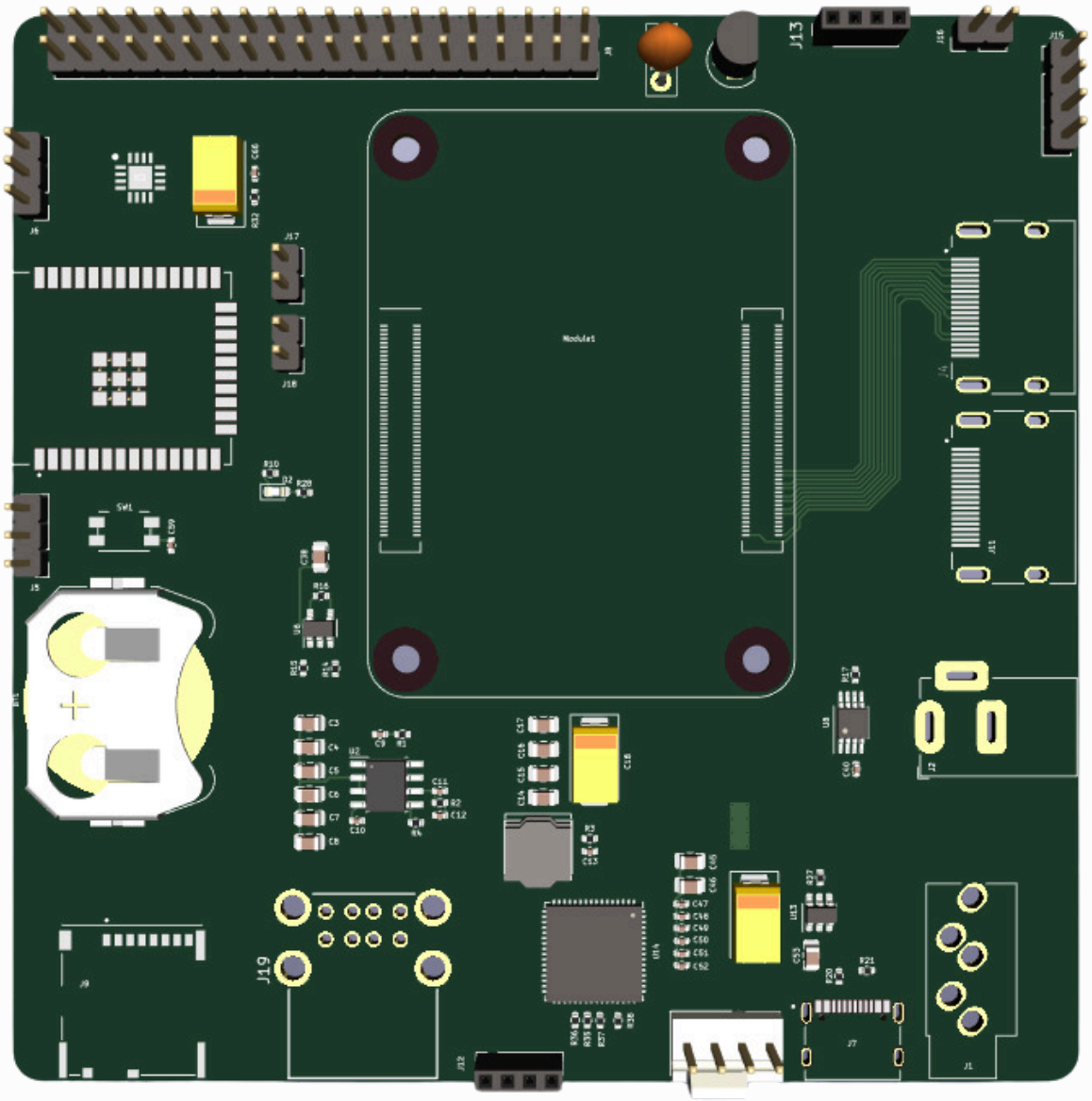


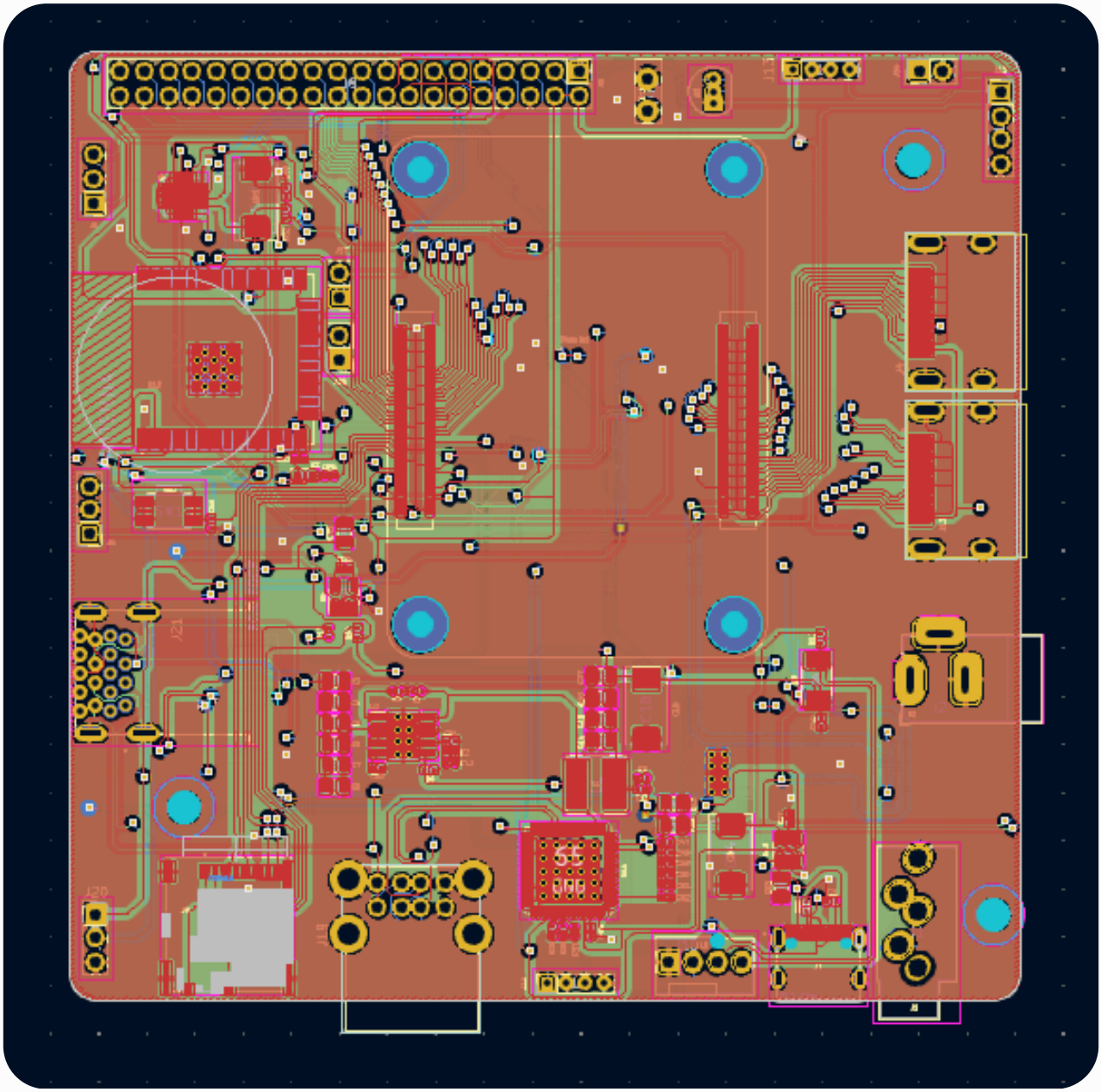
SPECIFICATIONS

- ESP8266 WIFI
- Li-ON charger
- SIM800L

Interfacing Raspberry Pi with ESP32

KiCad DESIGNED WITH 4

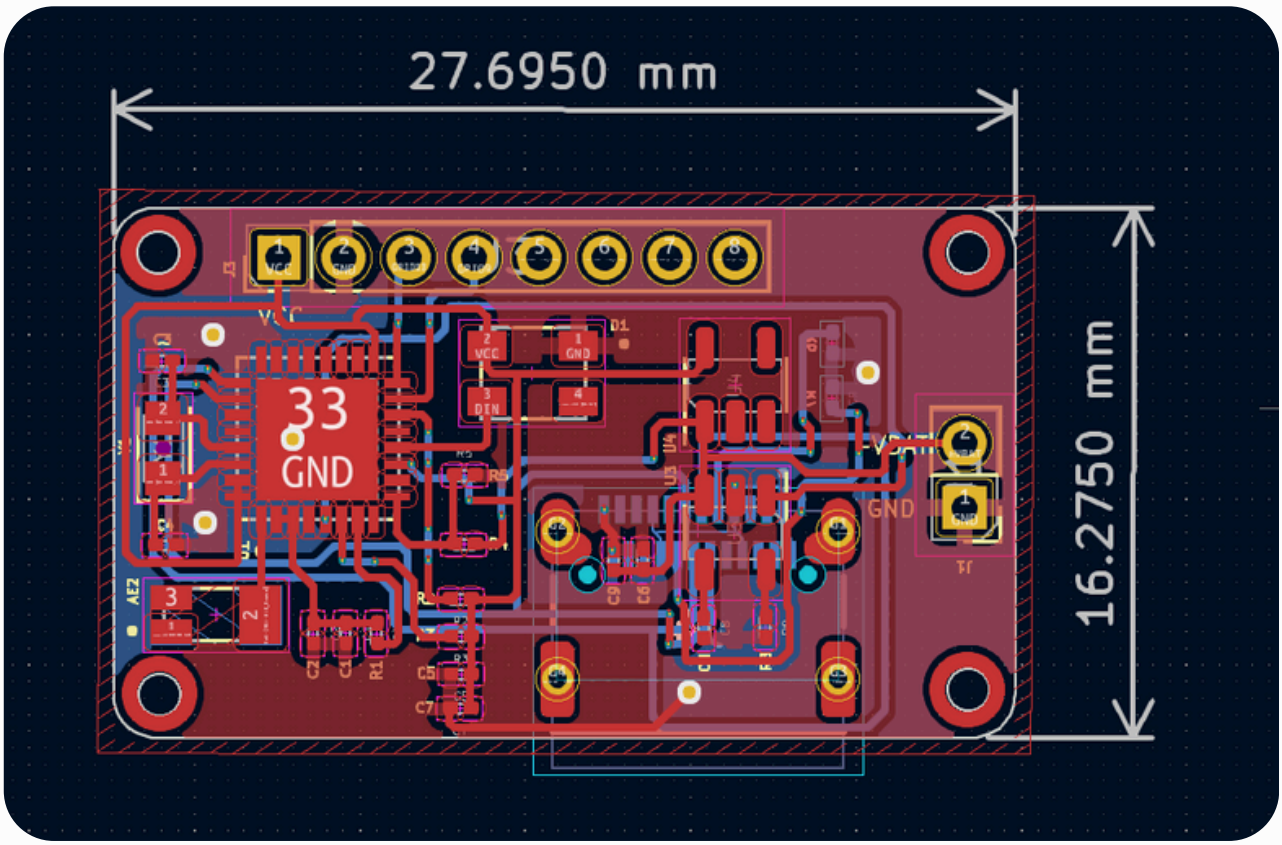


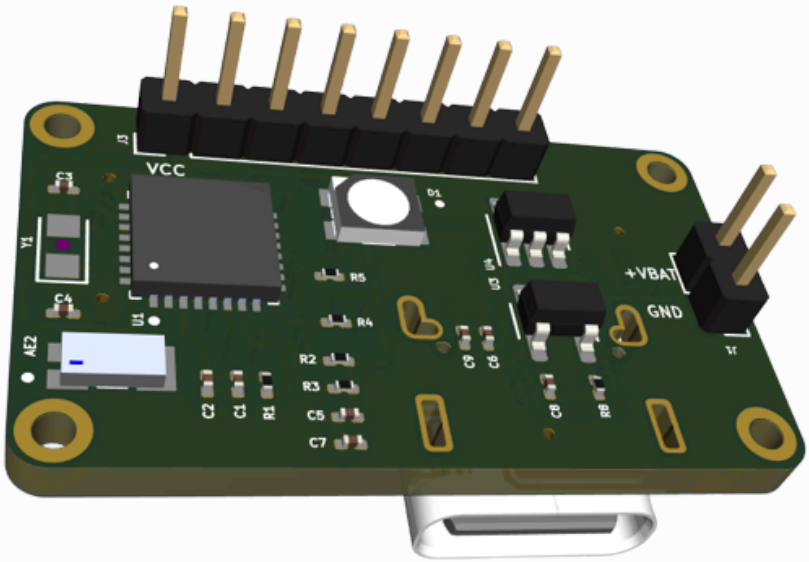


SPECIFICATIONS

- RasberryPi B with ESP32.
- USB 2.0 and Ethernet with power Jack.
- HDMI Connectors.
- GPIOs Connector

ES32 C3 Mini With RGB Light



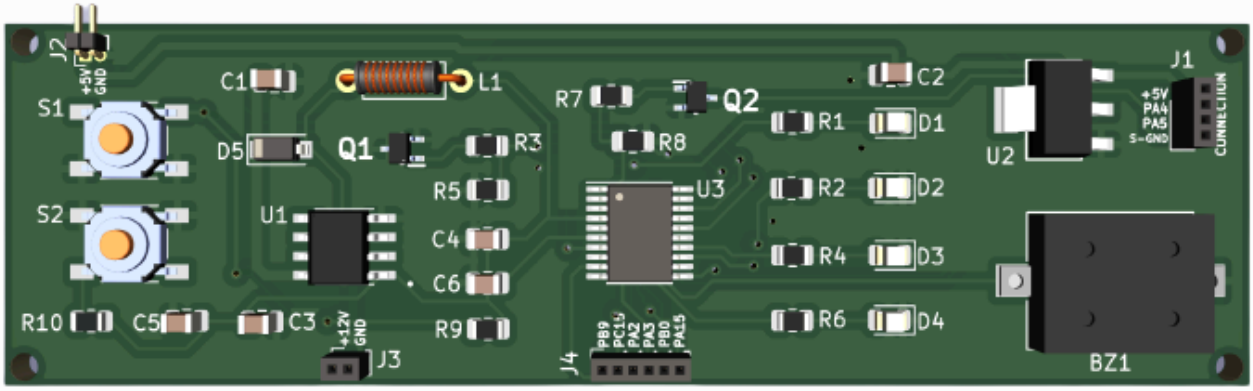


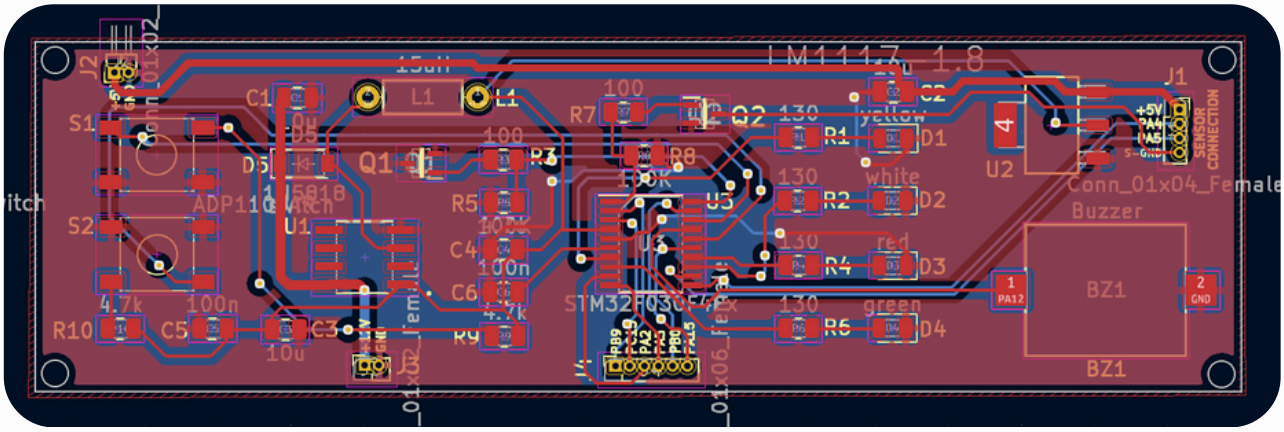
SPECIFICATIONS

- ESP32 C3 Mini
- RGB LEDs.
- Water Proof Type C
- GPIOs

ES32 C3 Mini With RGB Light

KiCad DESIGNED WITH 6

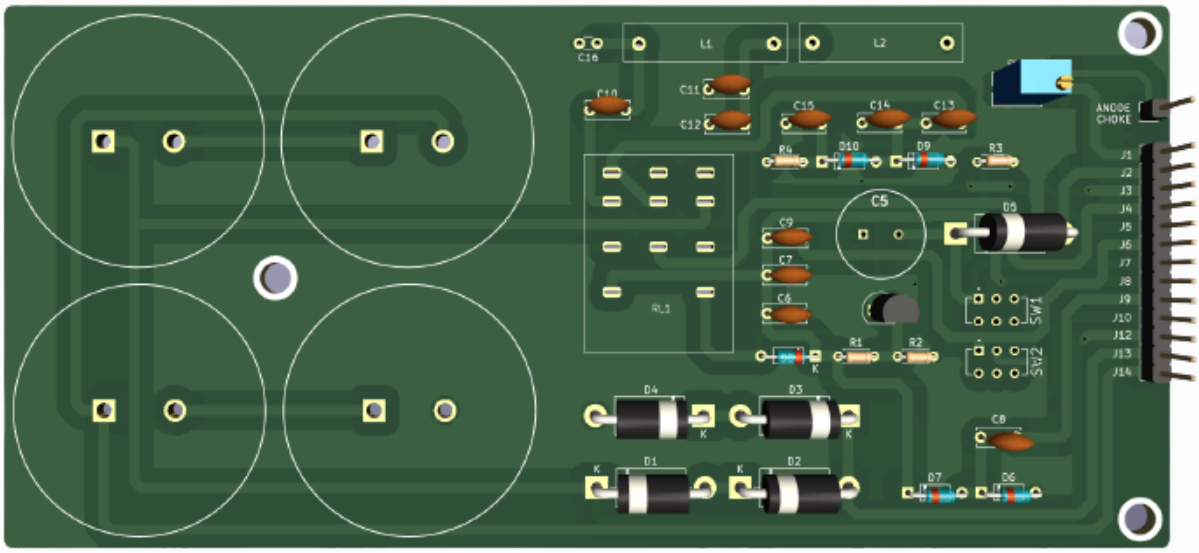


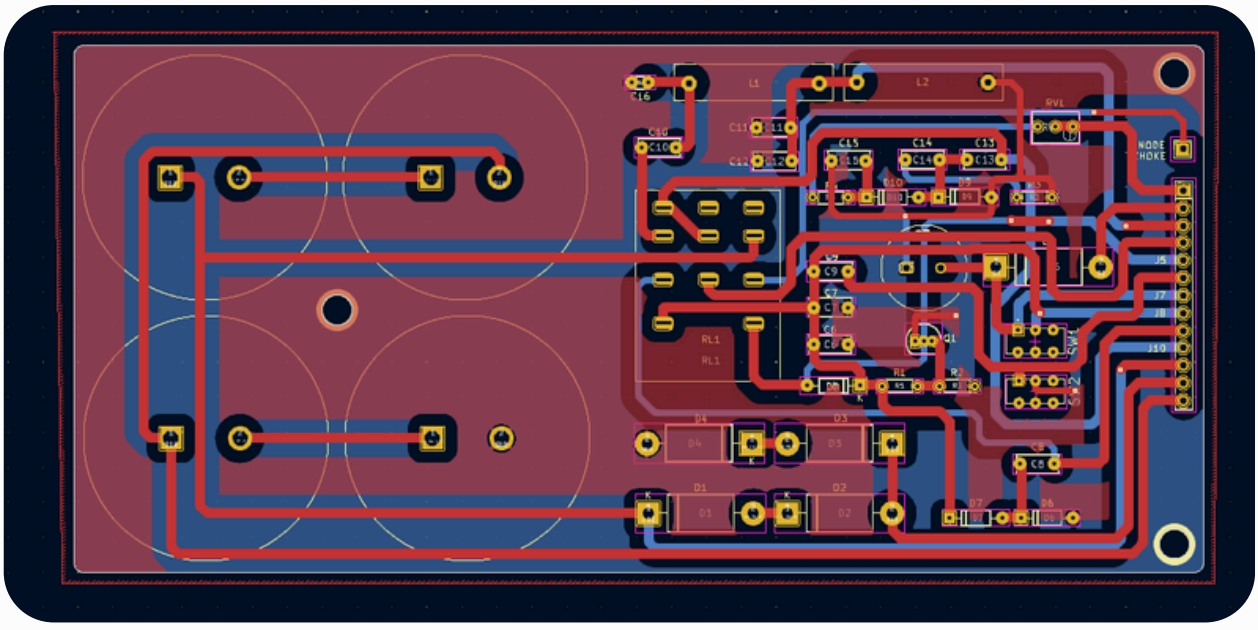


SPECIFICATIONS

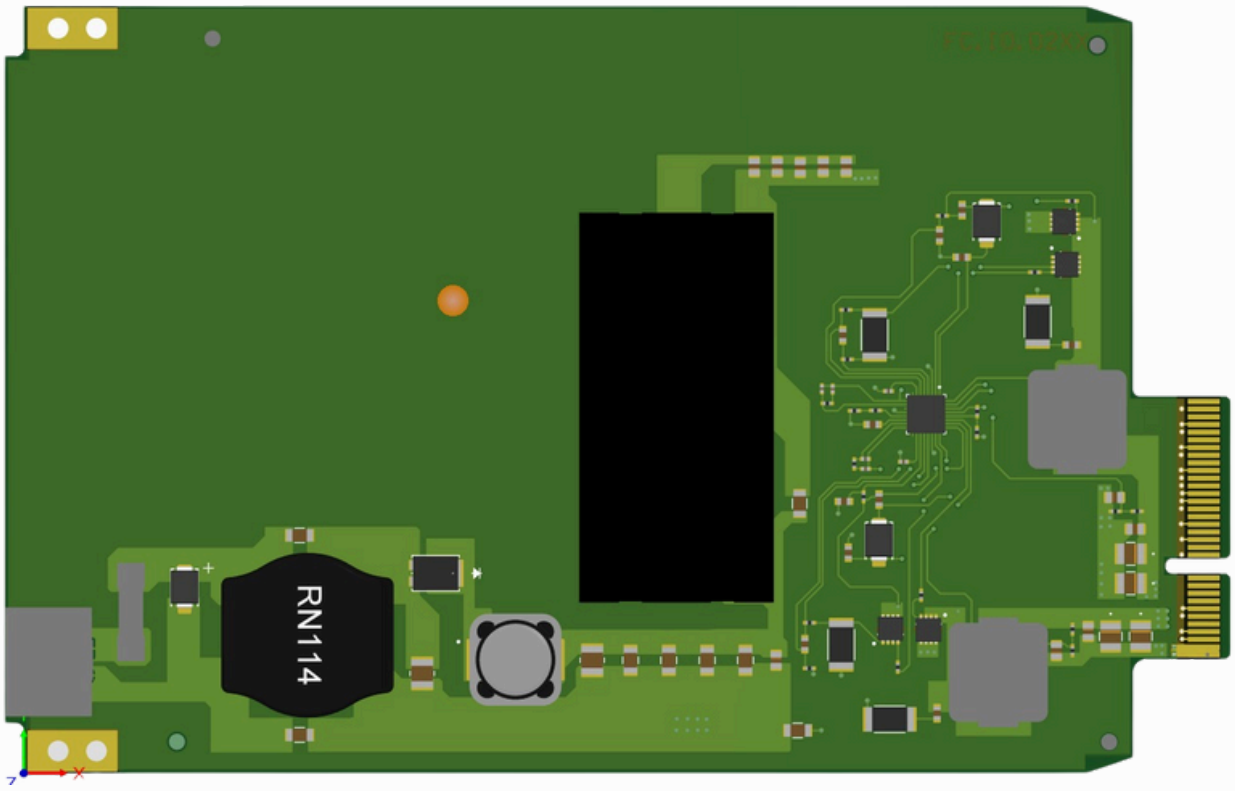
High Power Amplifier

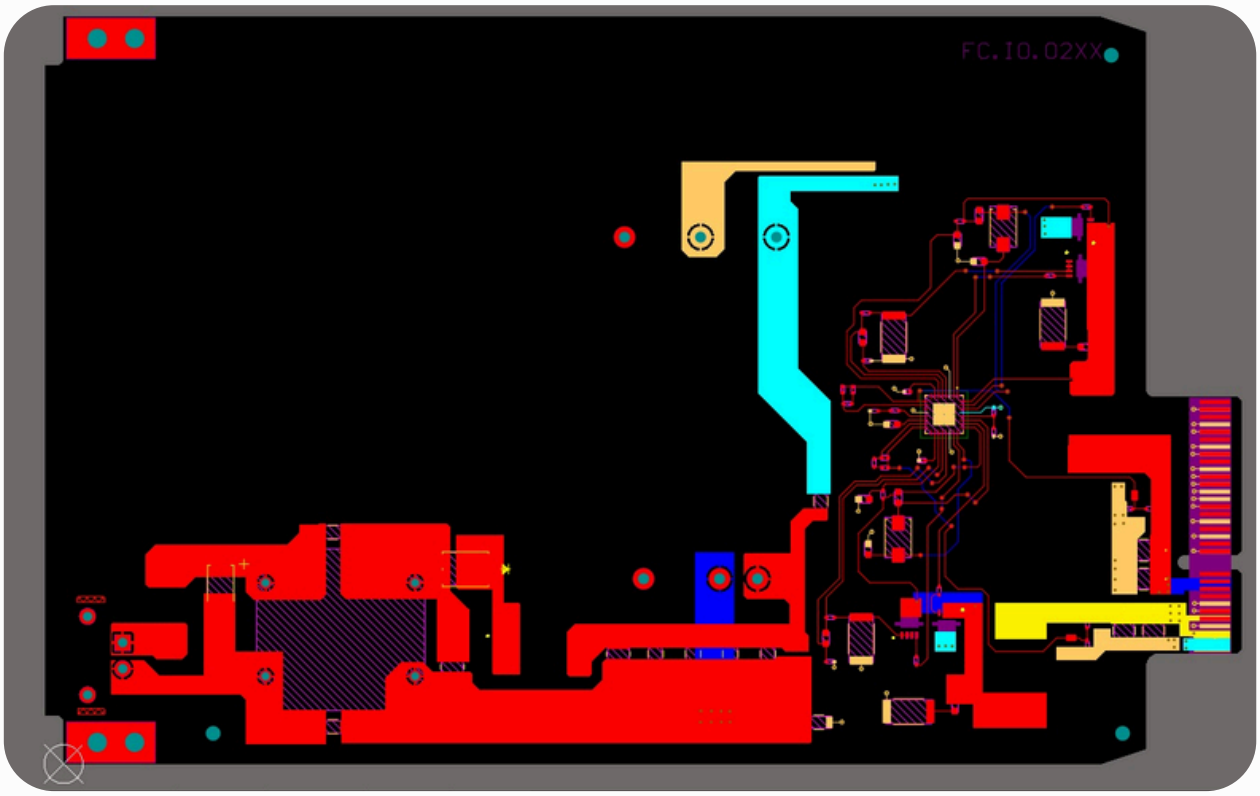
KiCad DESIGNED WITH 7



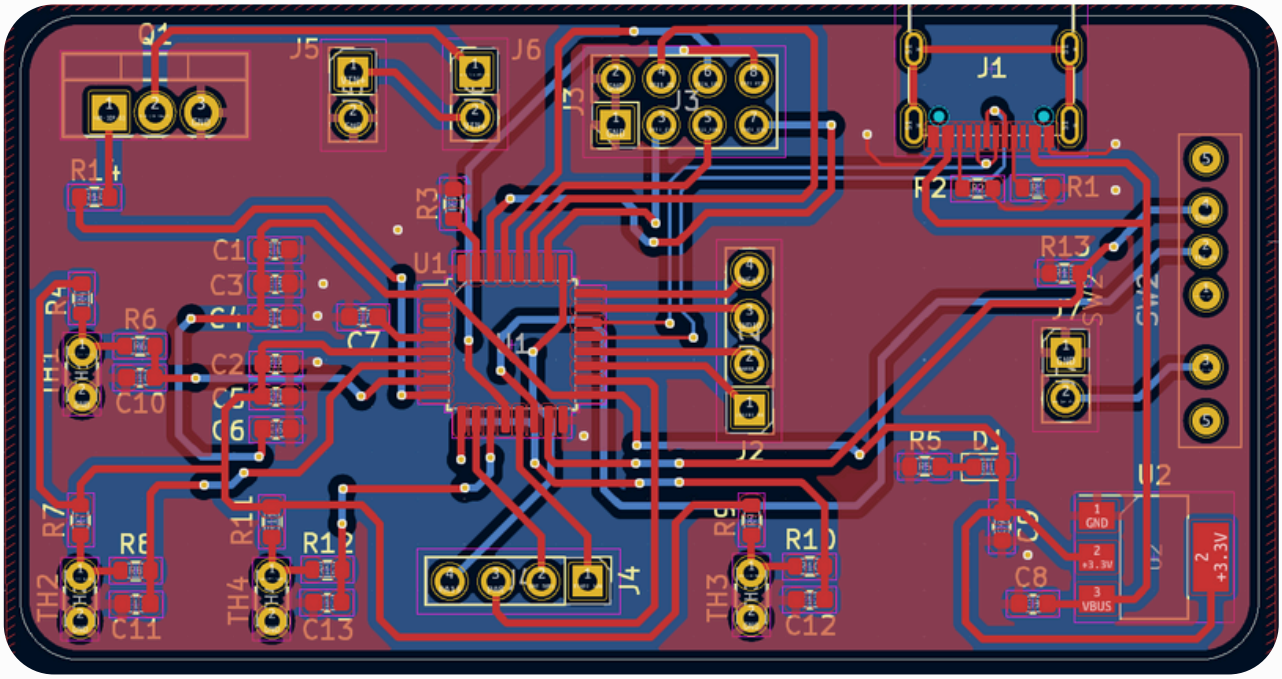


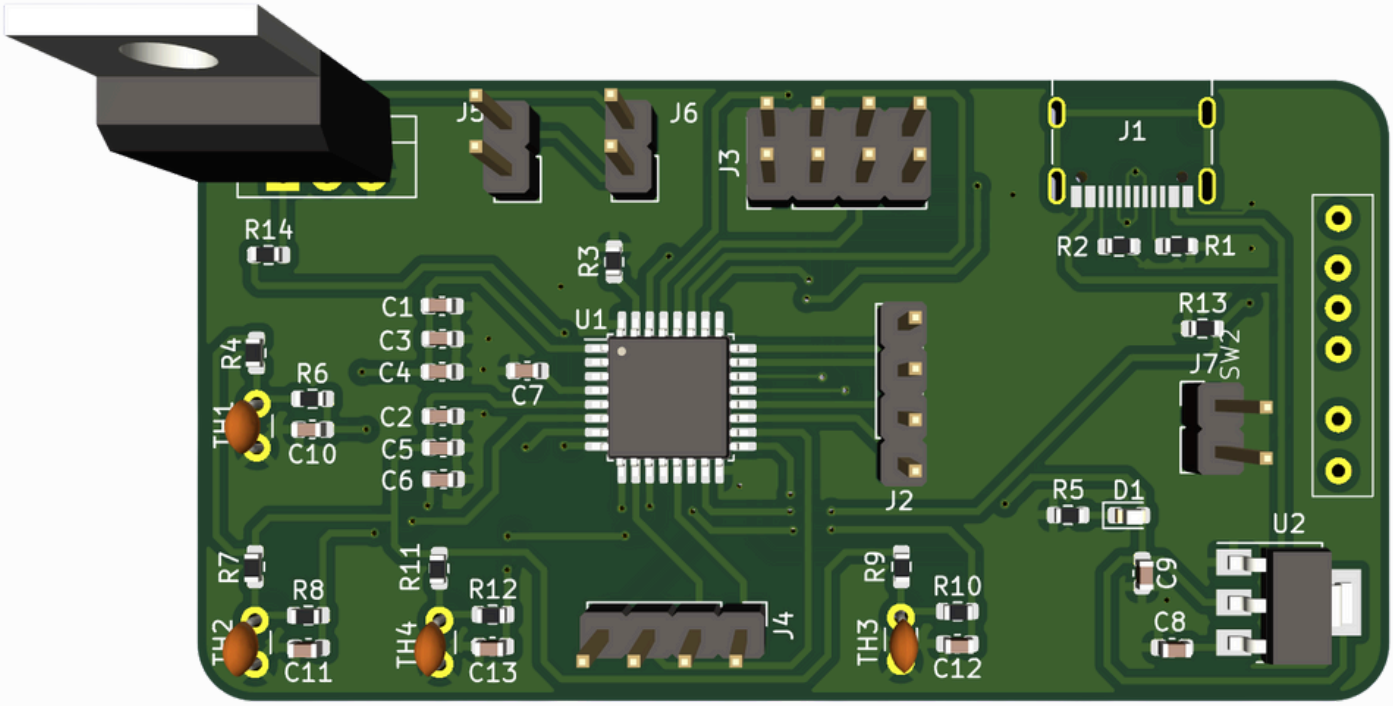
Flow Computer Power Board





ATMEGA32u4 with GPIOs





ESP32 with SD Card & GPIOs

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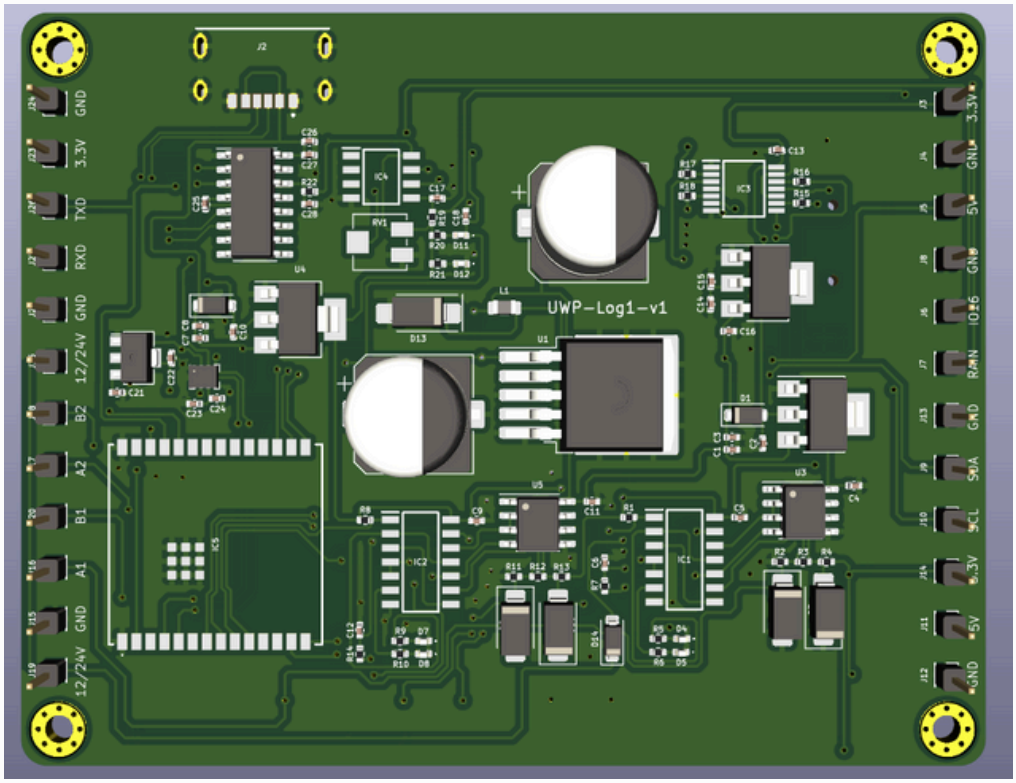

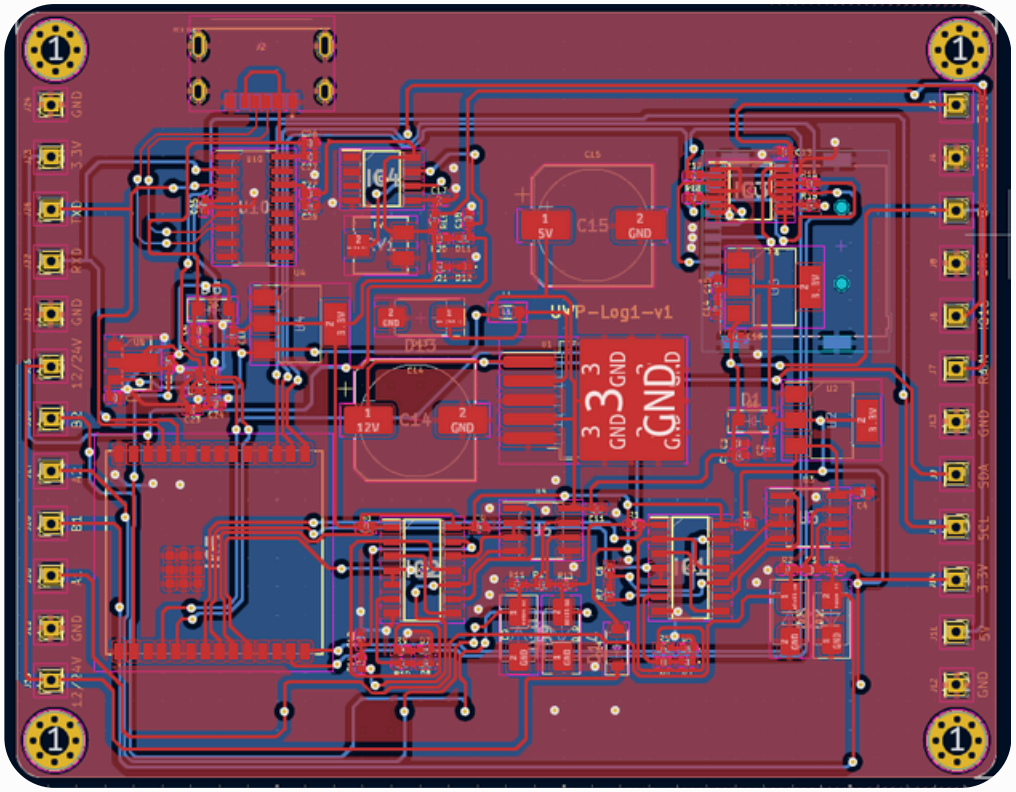

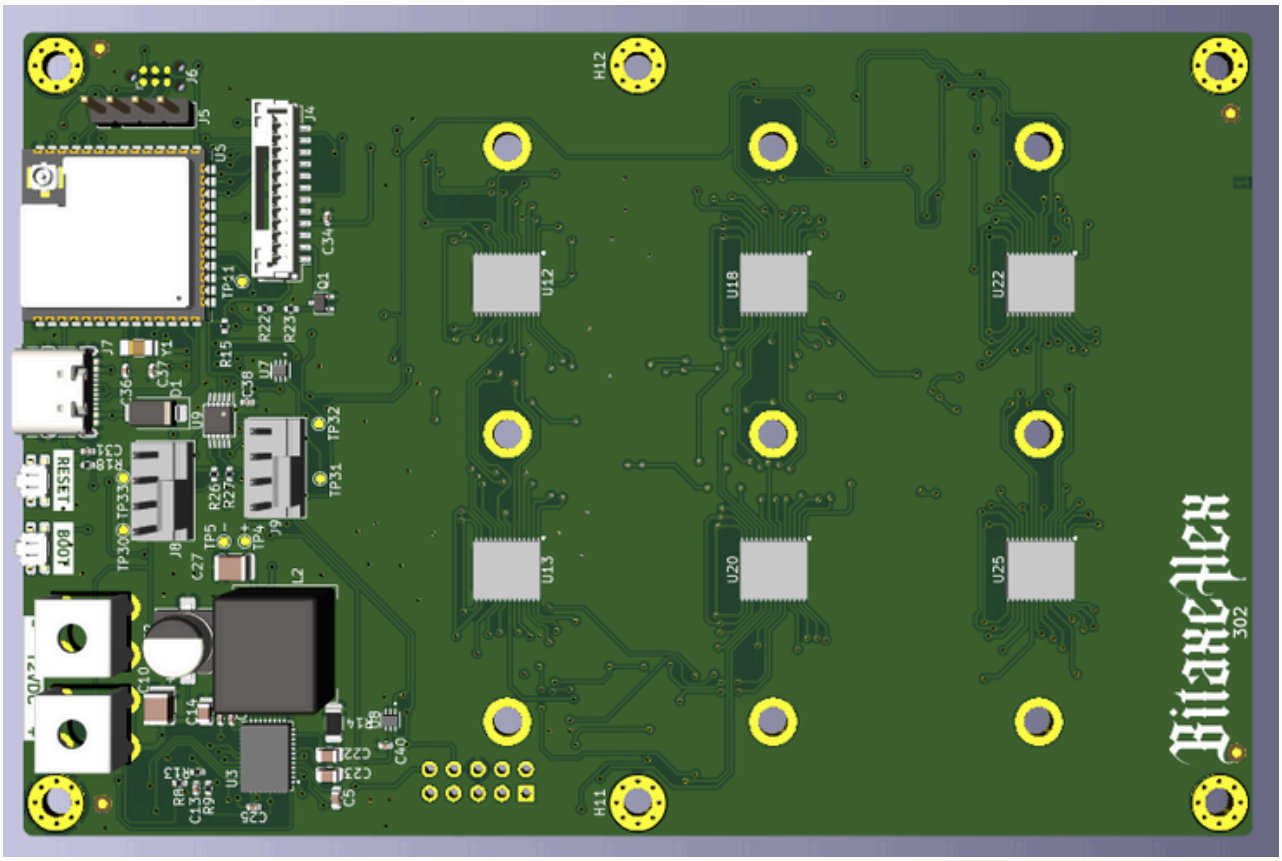
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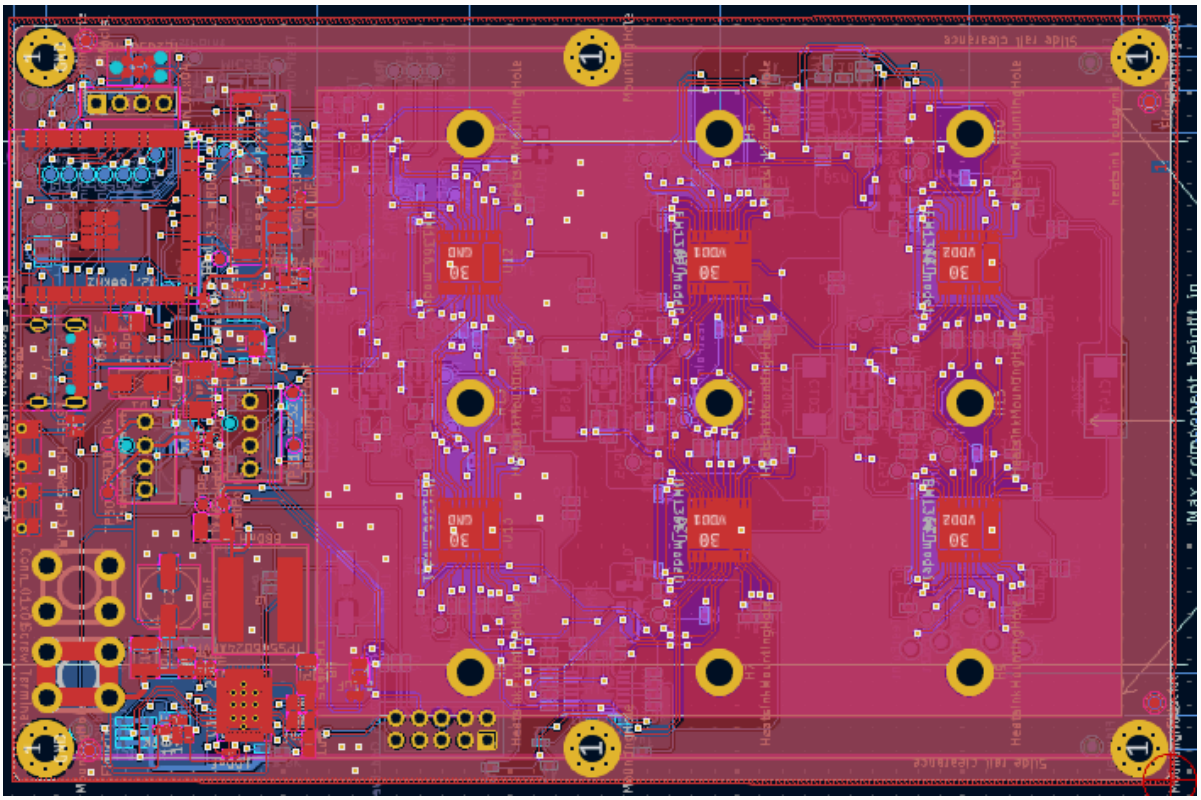

ESP32 with dual Power Supply

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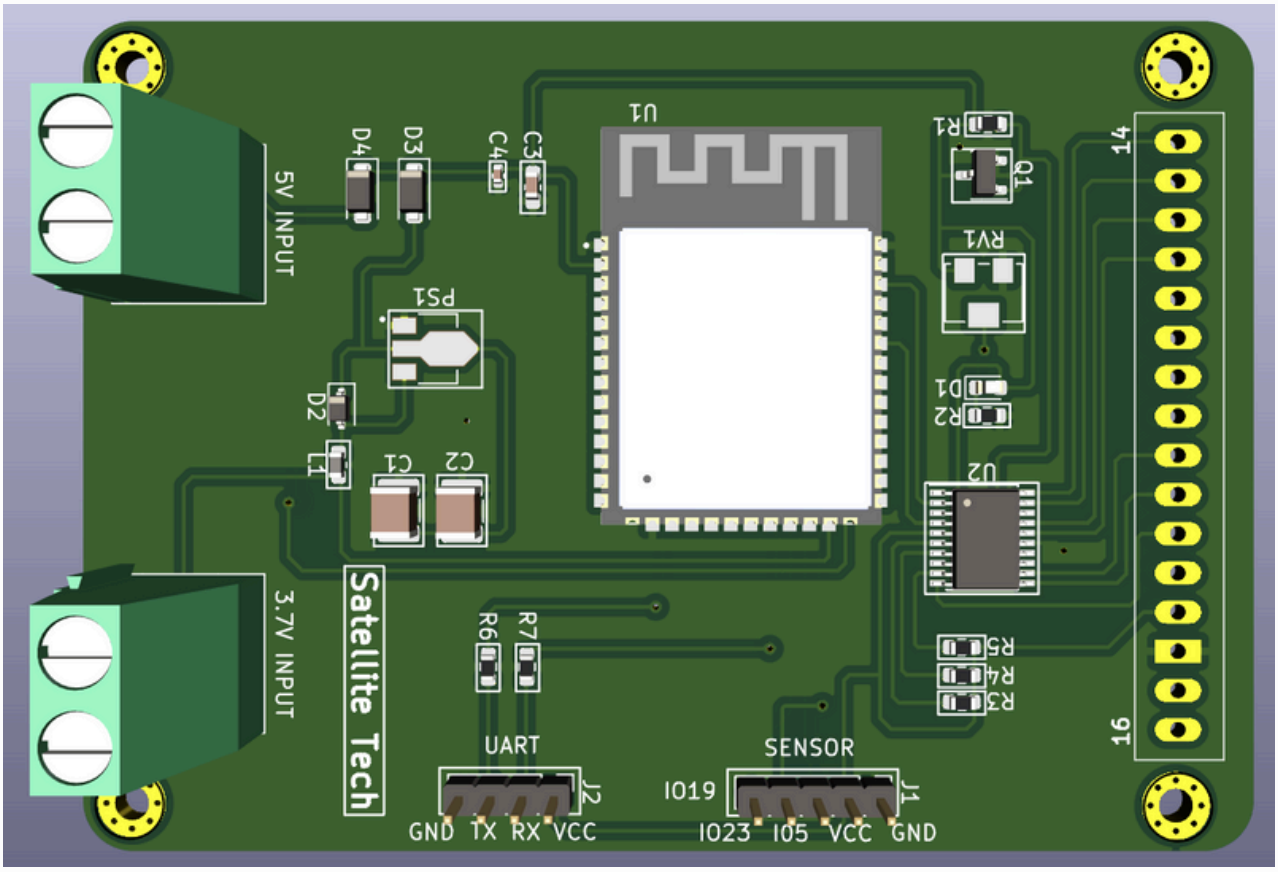

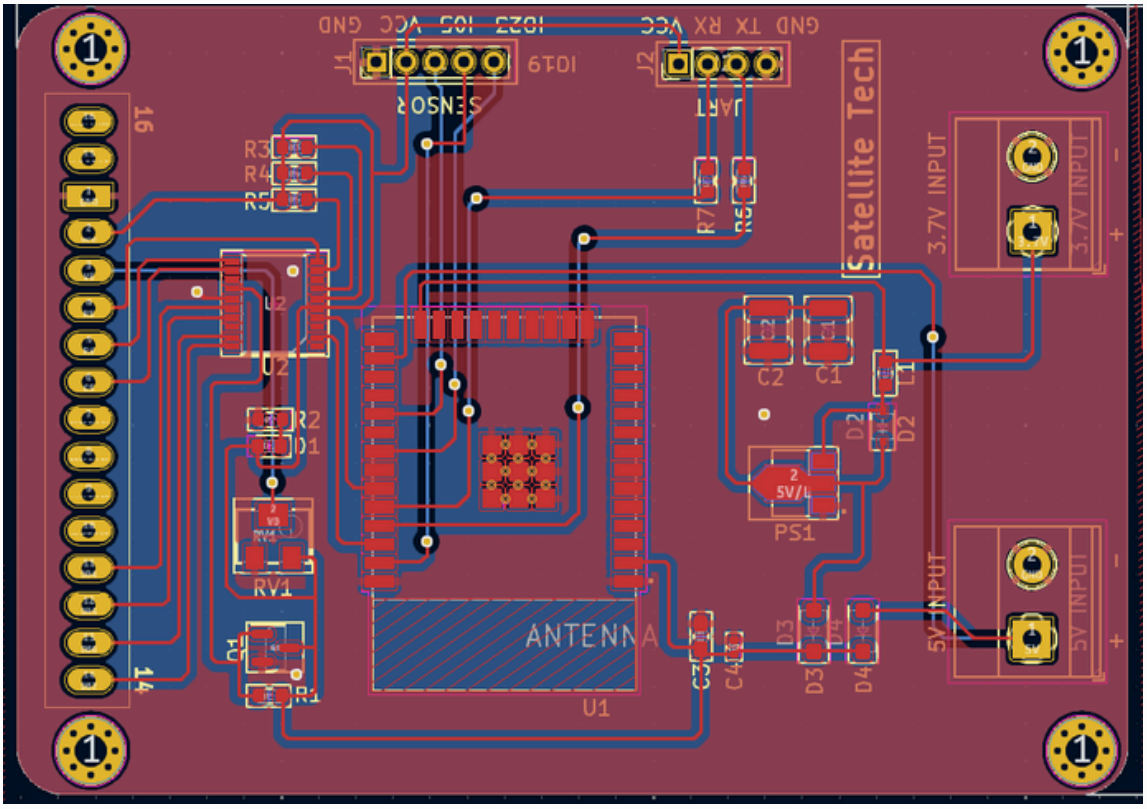

ESP32 with RGB LEDs and Type C

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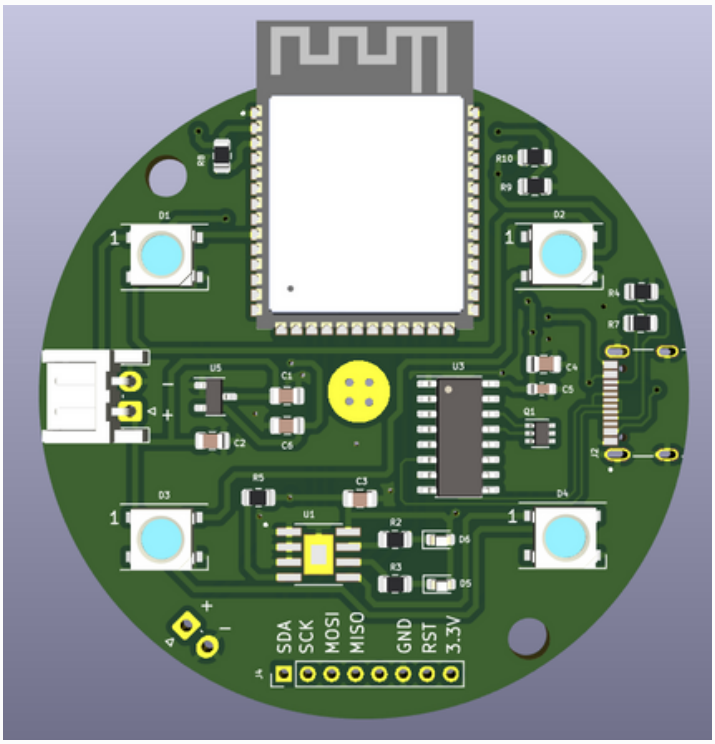

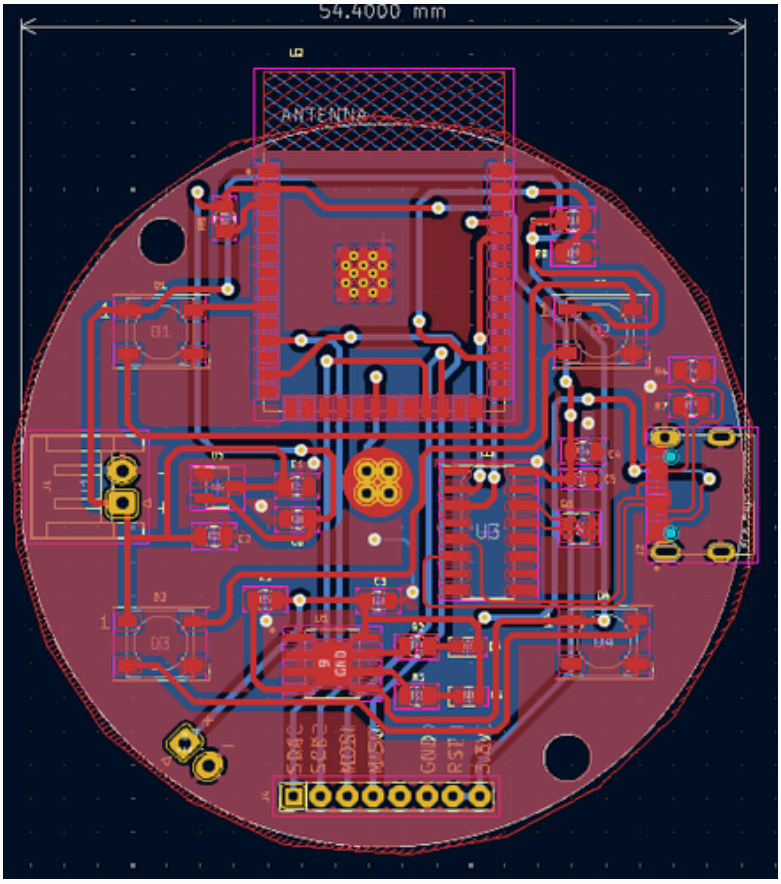

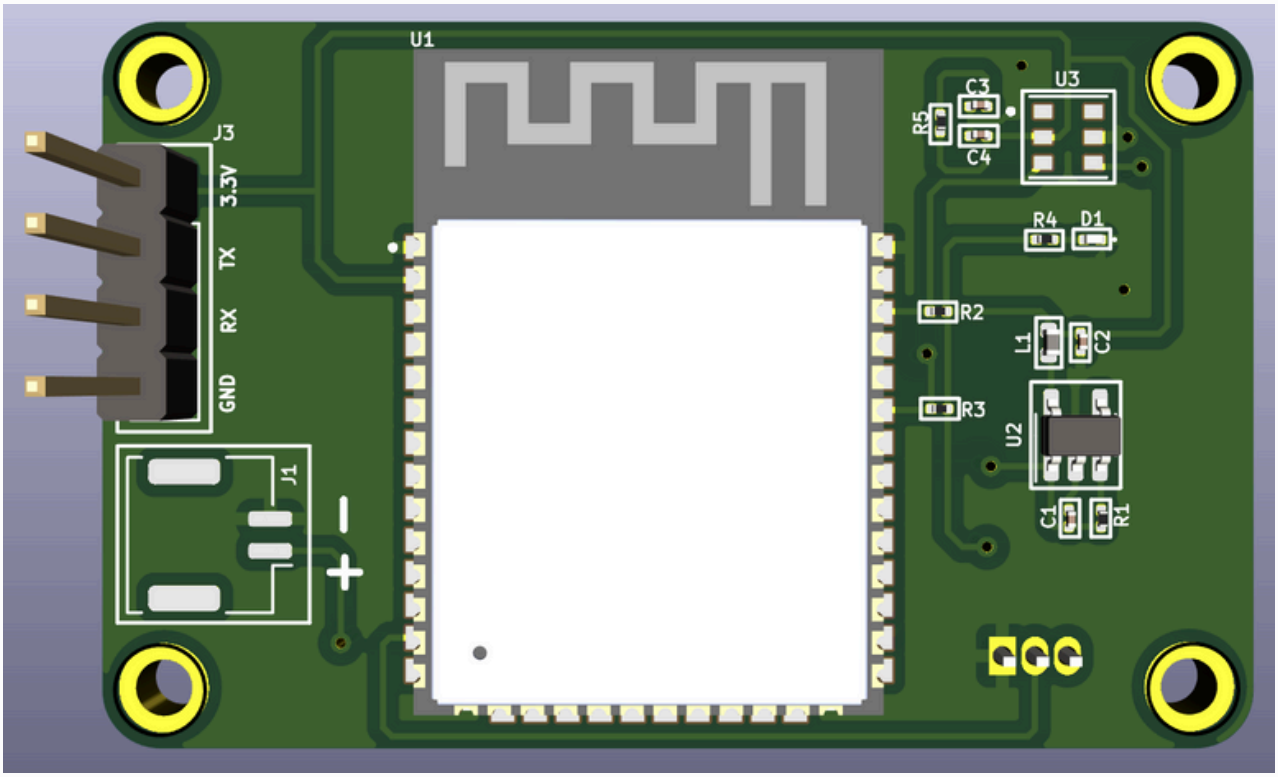
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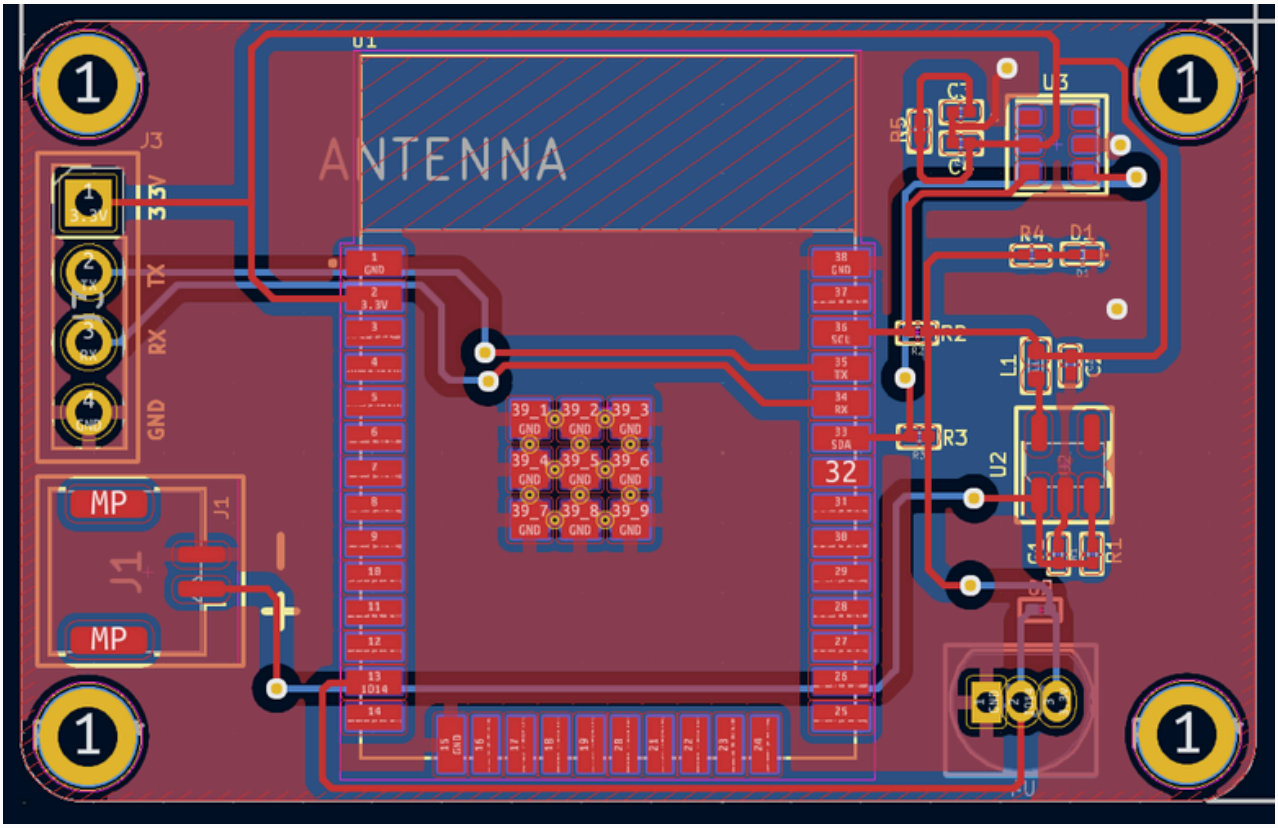
R1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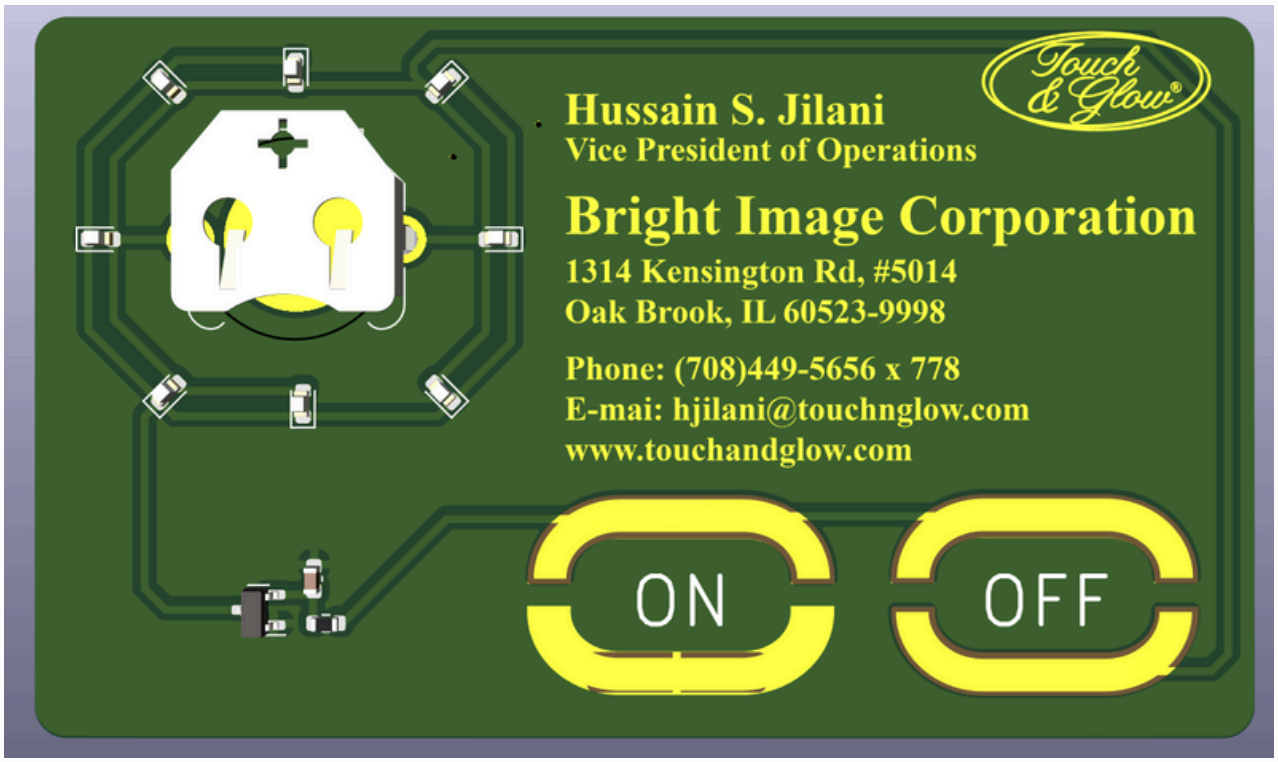
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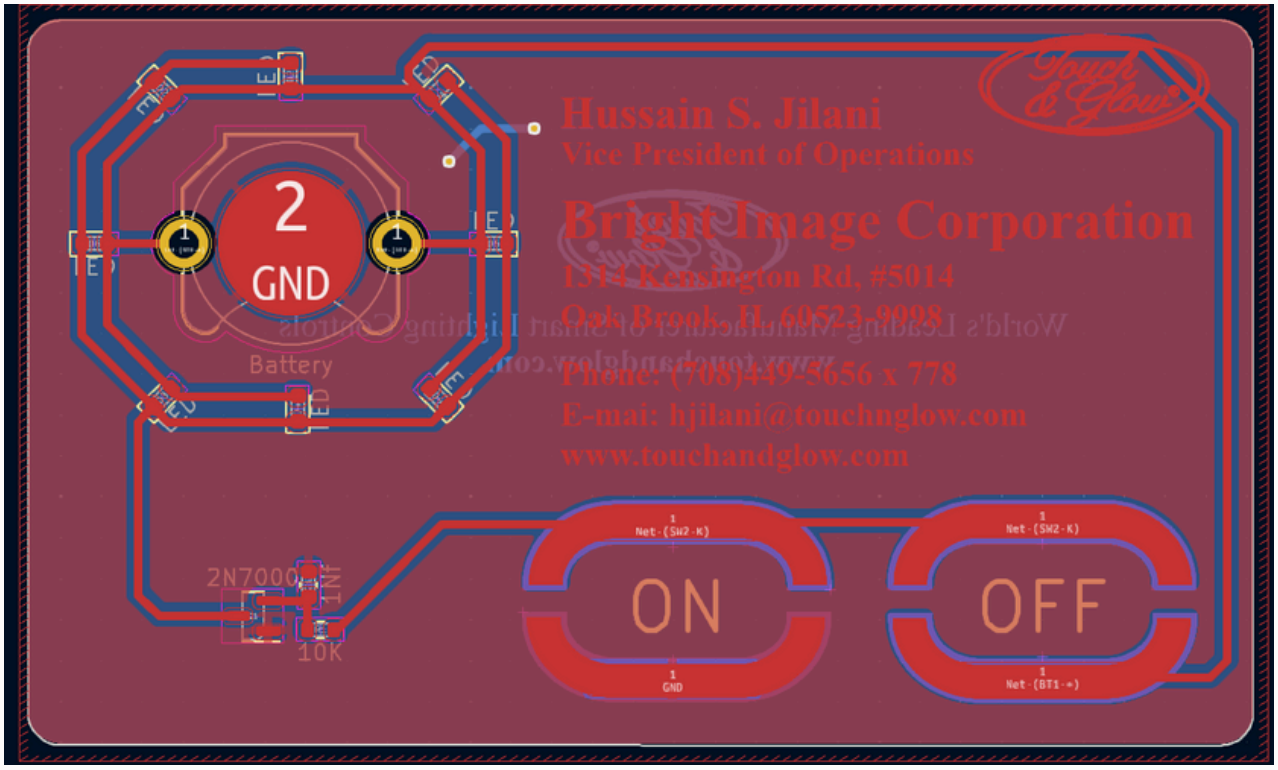
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Battery
2N7000
10K
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