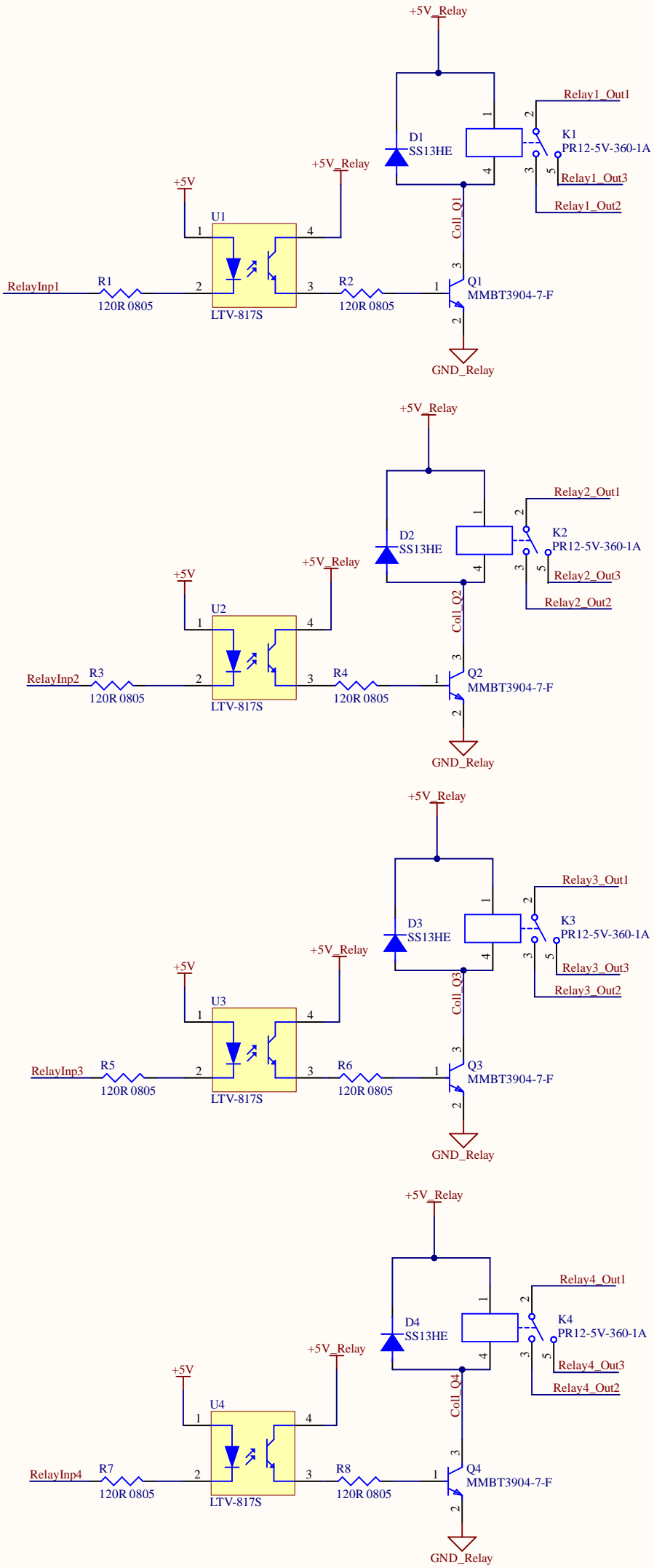
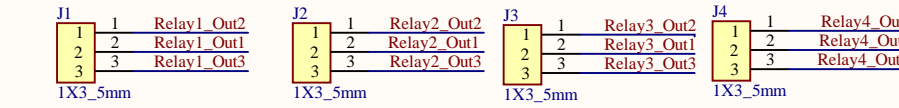


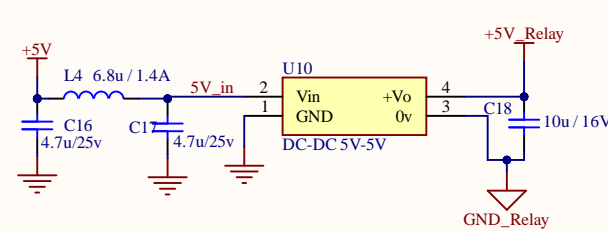
# Relay Circuit



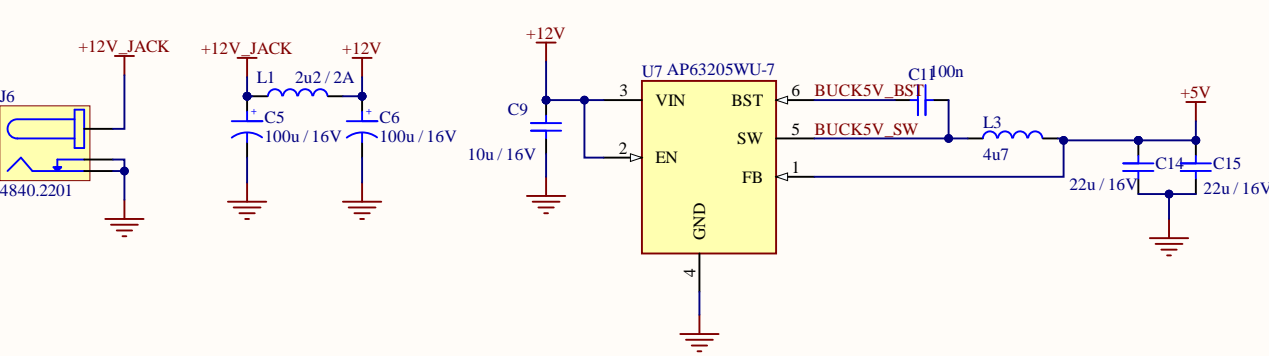
# Output Terminals



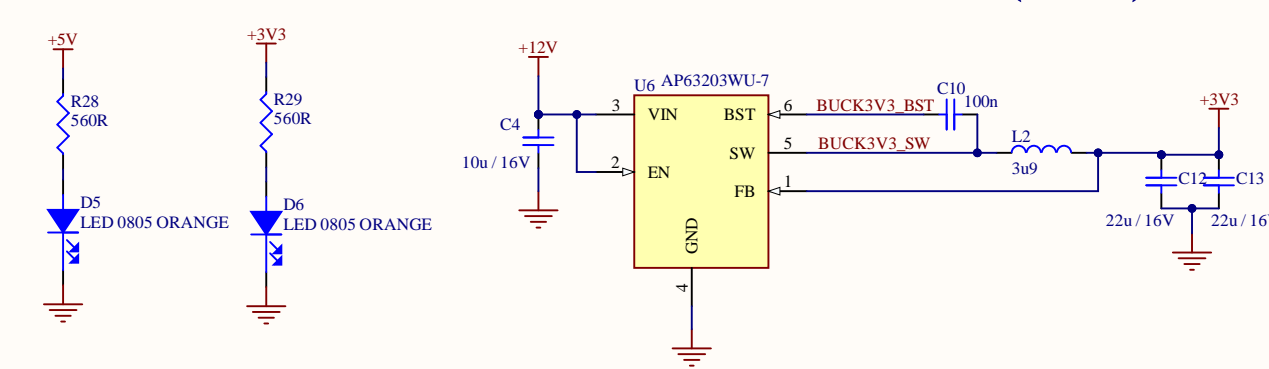
# 5V-5V Isolation



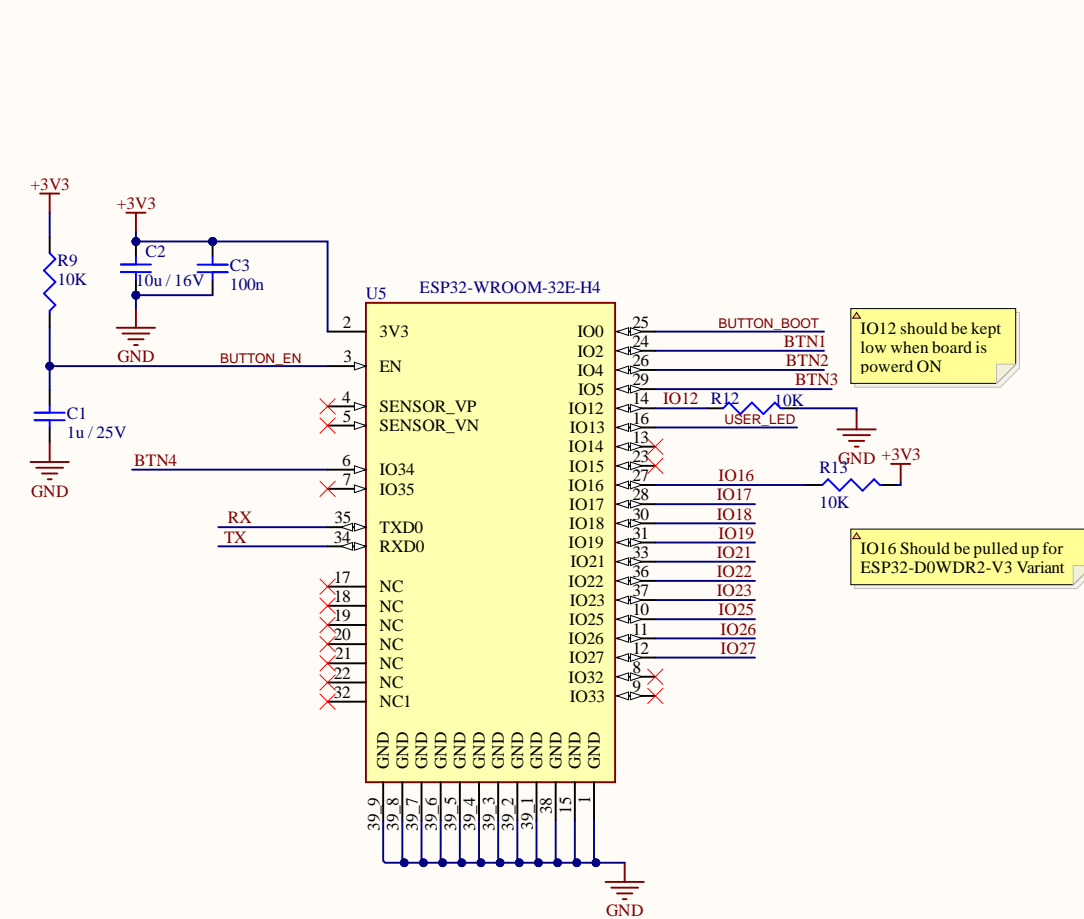
# Input Filter Buck Converter (5V)



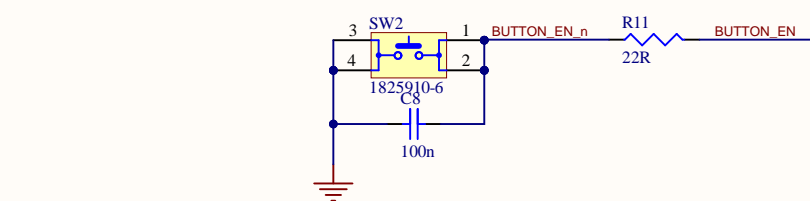
# Power ON LEDs Buck Converter (3V3)



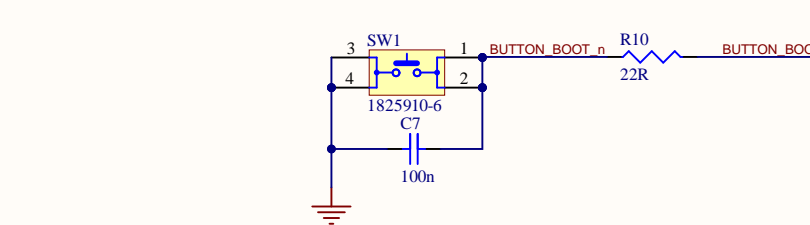
# ESP32-WROOM-32E-H4



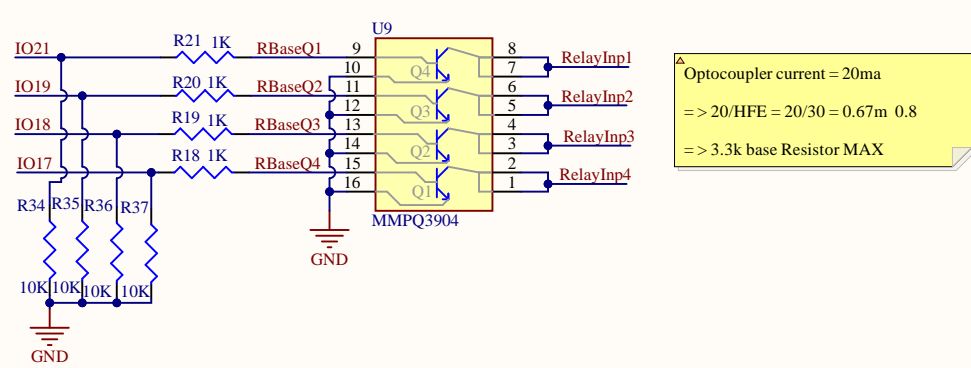
# Enable



# Boot

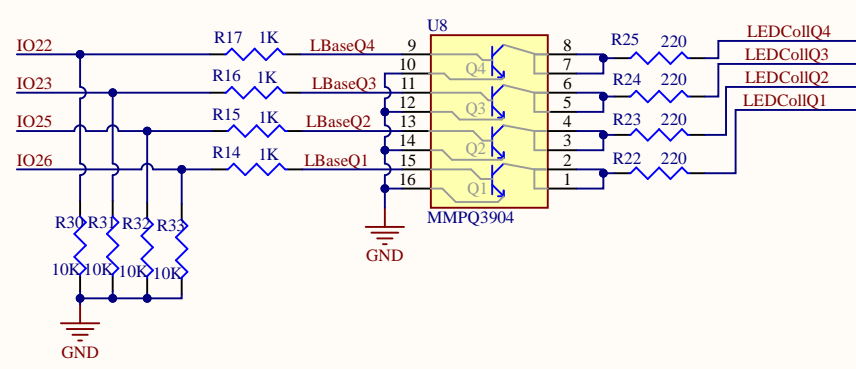


# Relay Control

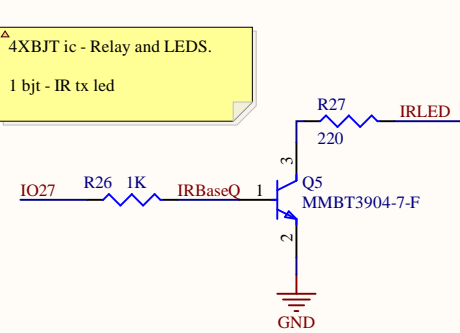


Optocoupler current = 20ma  
=> 20/HFE = 20/30 = 0.67m 0.8  
=> 3.3k base Resistor.MAX

# LED Control

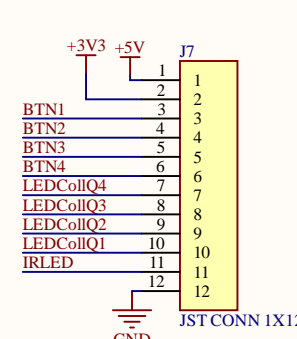


# IR LED Control

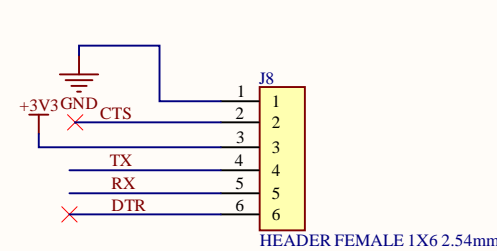


4XBjt ic - Relay and LEDs.  
1 bjt - IR tx led

# JST Connector 1X12

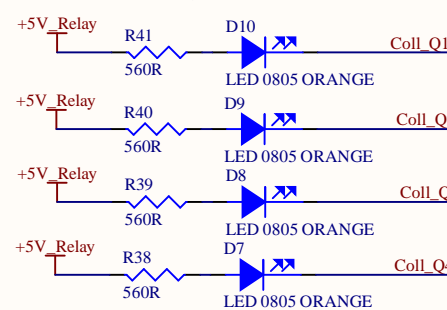


# FTDI Programmer

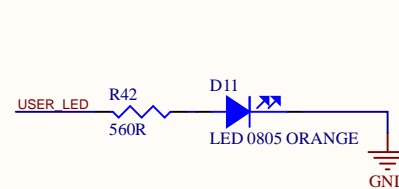


# Additional Circuit for Debugging

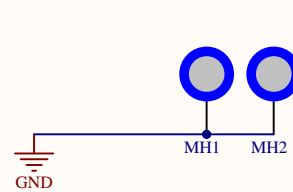
# Relay LED



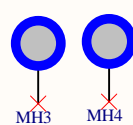
# User LED

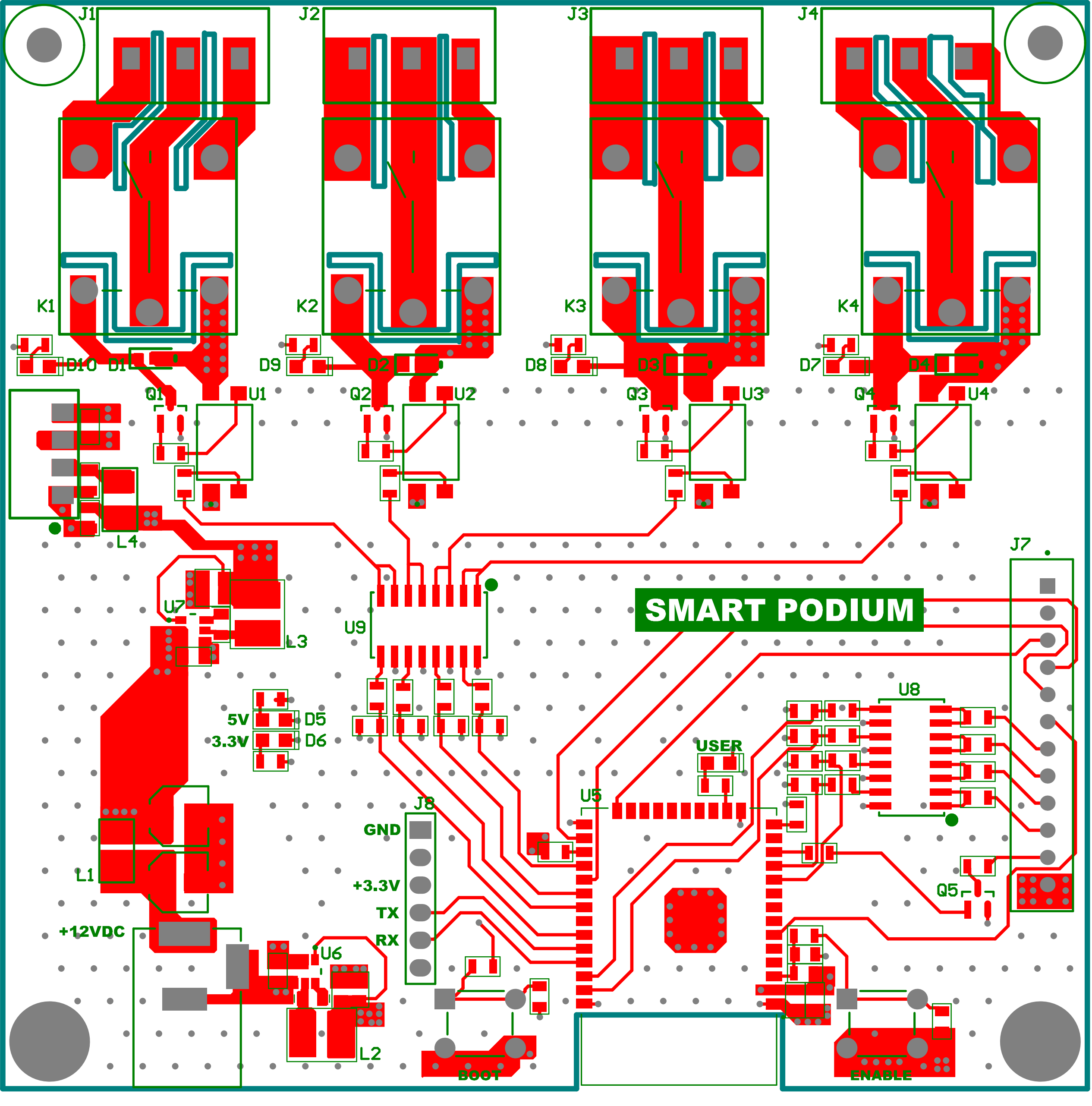


# Mounting Holes with GND



# Mounting Holes without GND





J1

J2

J3

J4

K1

K2

K3

K4

D10 D1

D9 D2

D8 D3

D7 D4

Q1 U1

Q2 U2

Q3 U3

Q4 U4

L4

U7 L3

5V D5  
3.3V D6

L1

+12VDC

U6

GND

+3.3V

TX

RX

J8

L2

BOOT

U5

SMART PODIUM

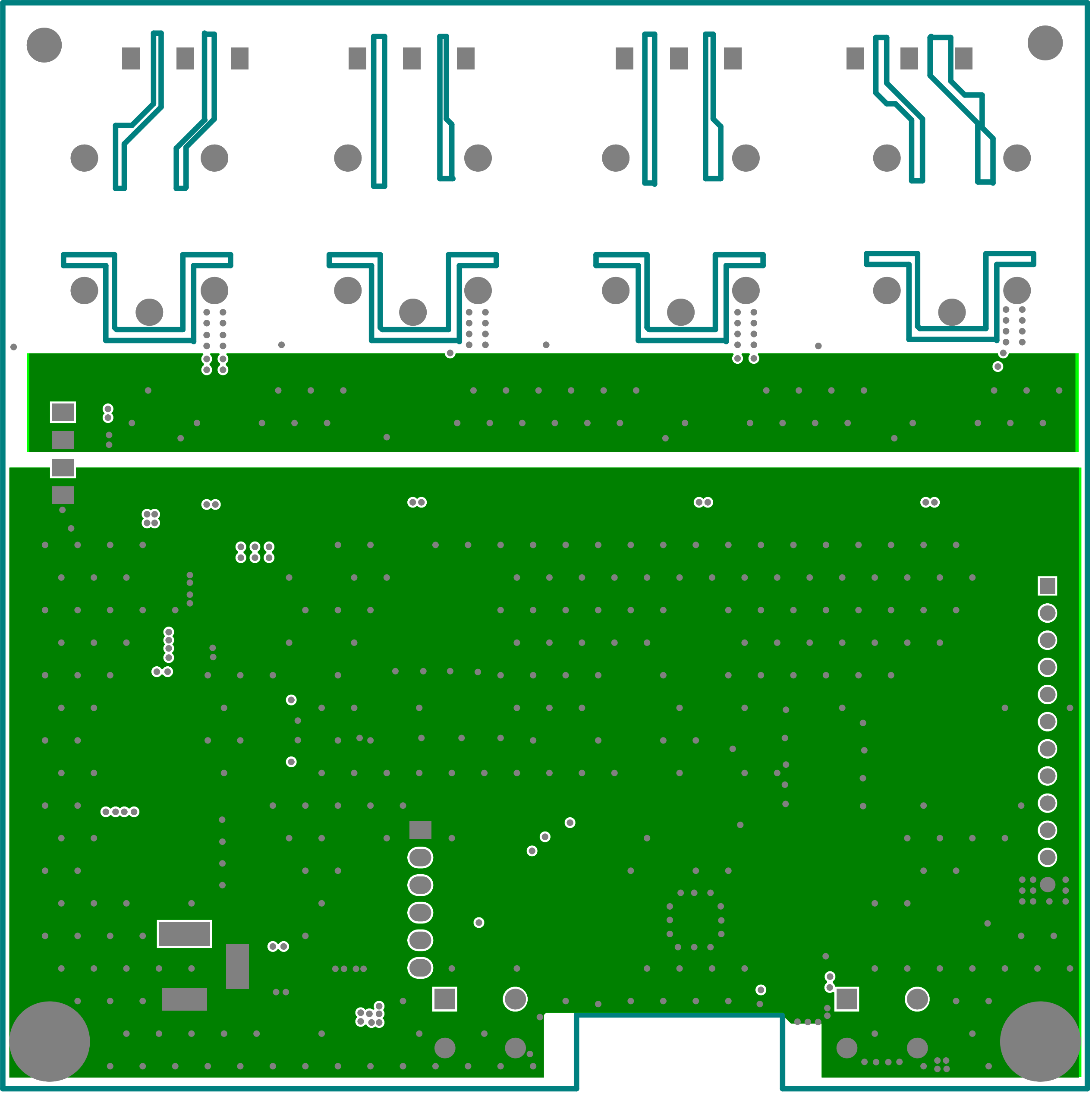
USER

U8

Q5

ENABLE

J7



Vellore Institute of Technology  
(Vellore)

## IoT Domain Analyst Project

### Group Members:

Mohit Banka  
Naman Tanwar  
Monish Kumar H.S  
Sushmit Sanskar

### Designed By:

**NAMAN TANWAR**

■ +5V  
● +3.3V  
● Button 1  
● Button 2  
● Button 3  
● Button 4  
● LED 4  
● LED 3  
● LED 2  
● LED 1  
● IR LED  
● GND

GND

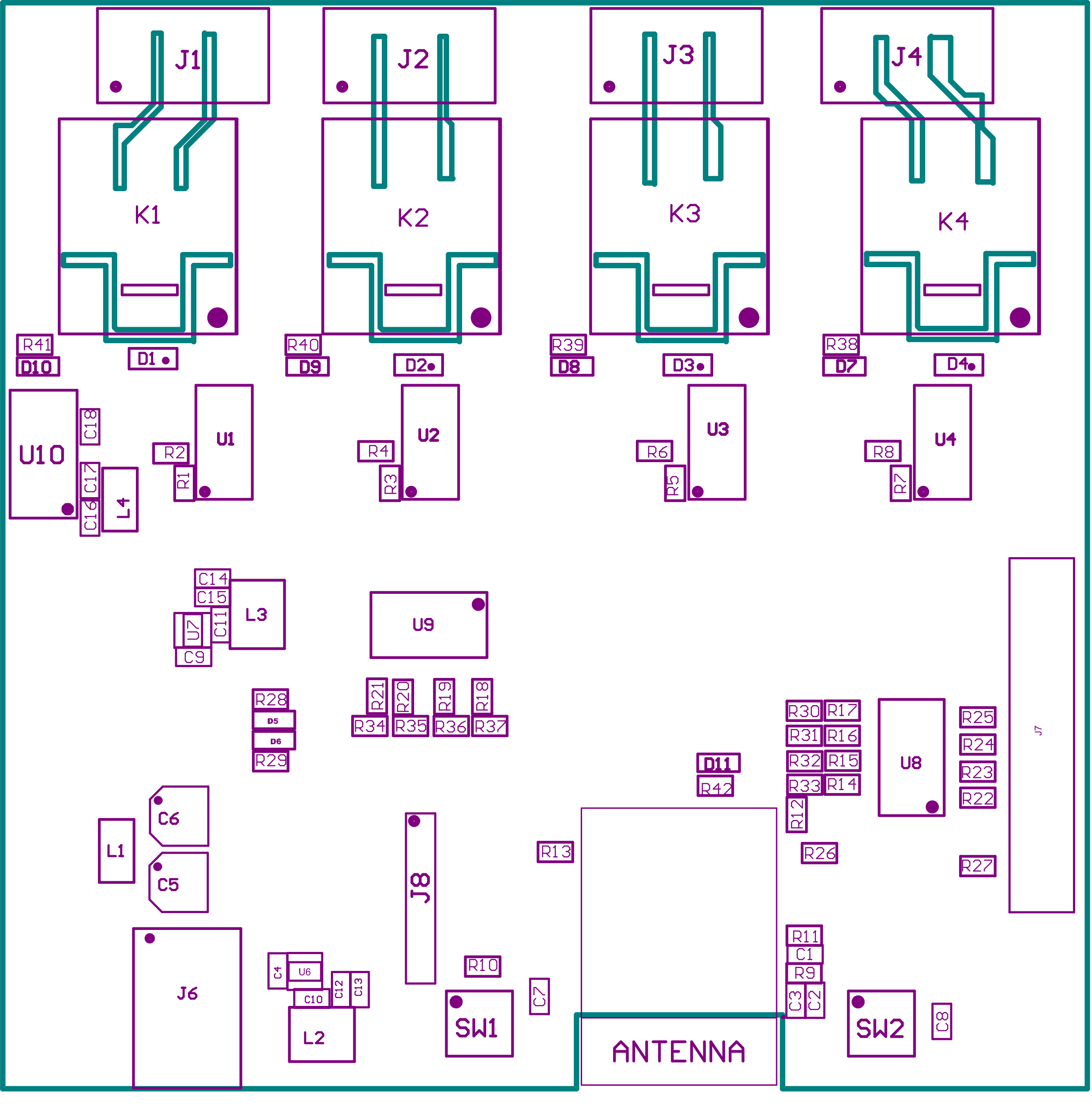
+3.3V

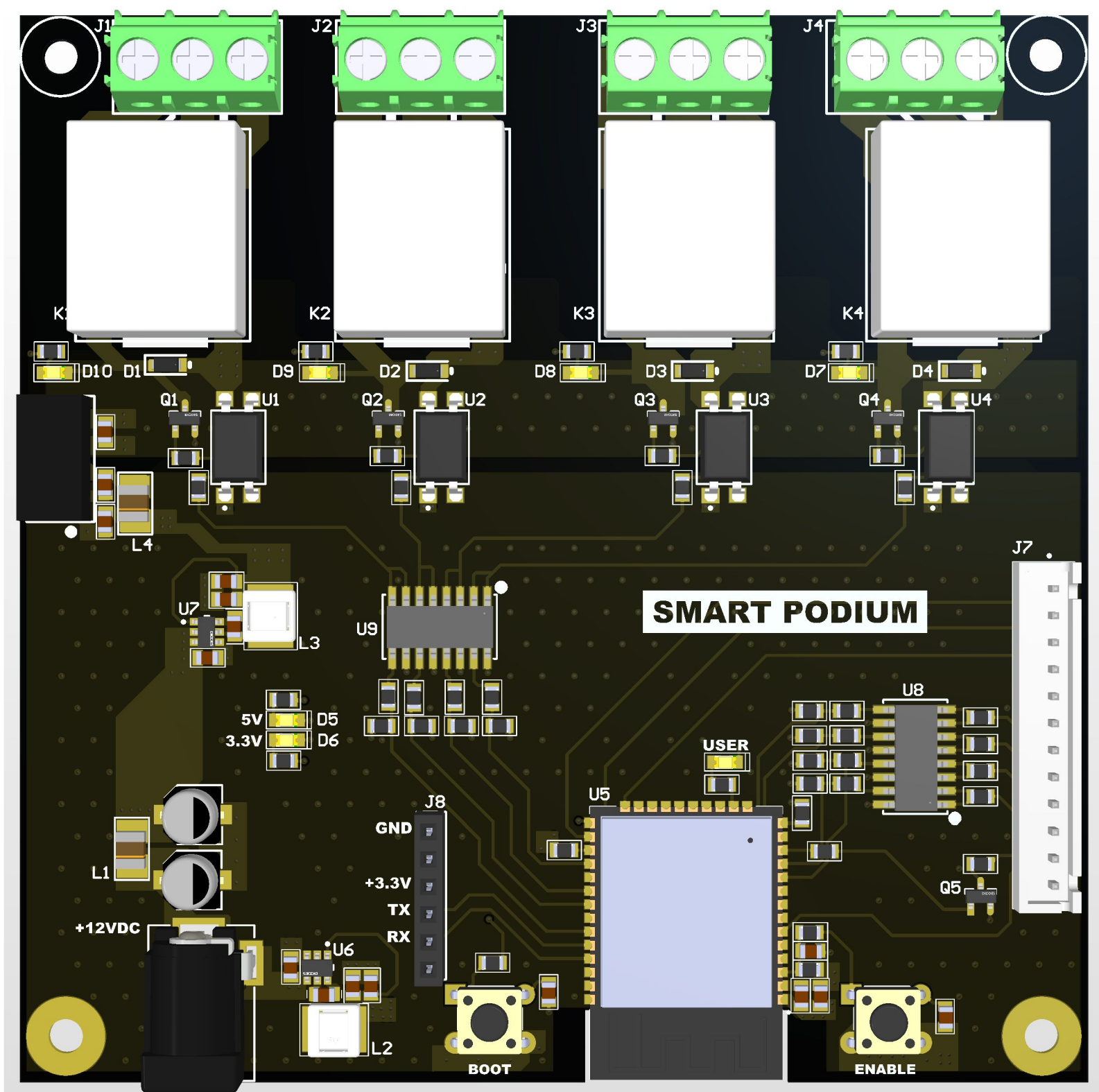
TX

RX

+5V Relay

+5V







**Vellore Institute of Technology  
(Vellore)**

**IoT Domain Analyst Project**

**Group Members:**

Mohit Banka  
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Sushmit Sanskar

- +5V
- +3.3V
- Button 1
- Button 2
- Button 3
- Button 4
- LED 4
- LED 3
- LED 2
- LED 1
- IR LED
- GND

- GND
- +3.3V
- TX
- RX

**Designed By:**

**NAMAN TANWAR**

+5V Relay

+5V

