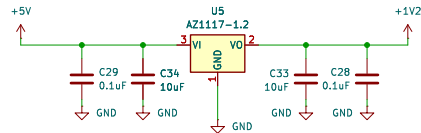
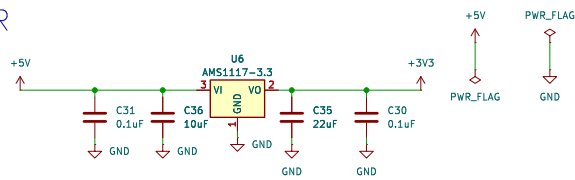
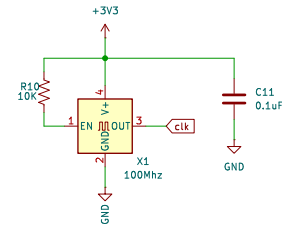


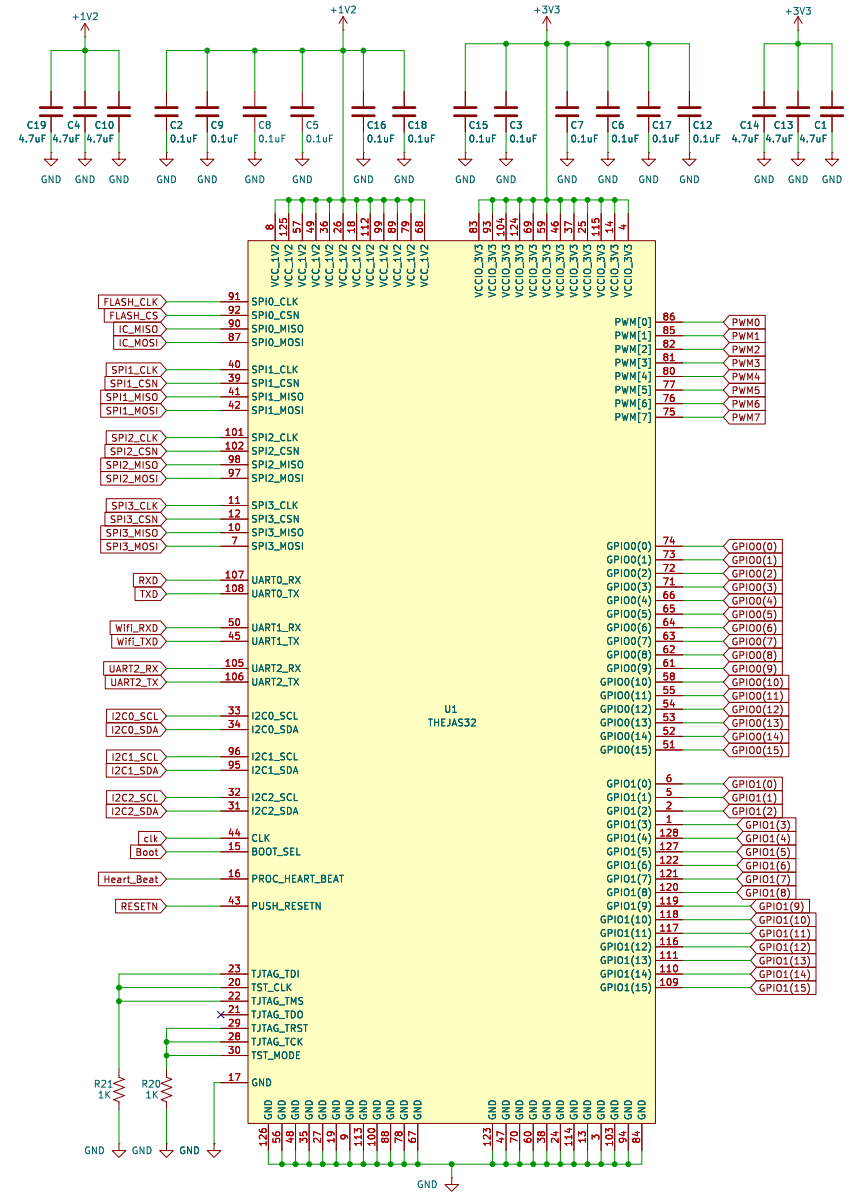
## POWER



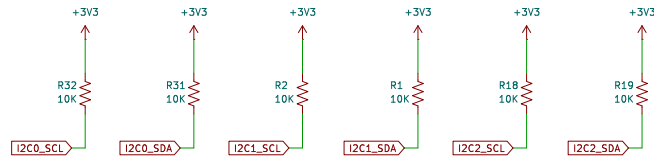
## Oscillator



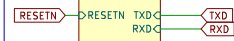
## Thejas32



## I2C Pullups



### Programming Interface



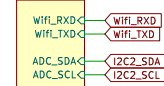
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### LEDS & Switch's



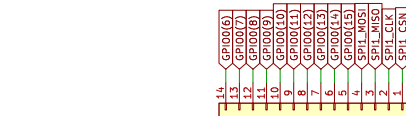
File: LED.kicad\_sch

### Wifi

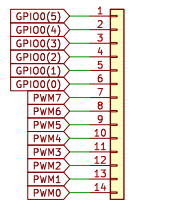


File: wifi.kicad\_sch

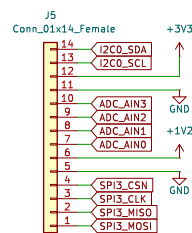
## IO Header



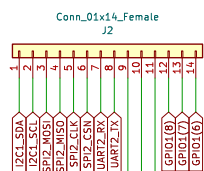
J3 Conn\_01x14\_Female



Conn\_01x14\_Female J1



J5 Conn\_01x14\_Female



Conn\_01x14\_Female J2

Reviewed by: Yatharth Agarwal  
Designed by: Kaustubh Pandey

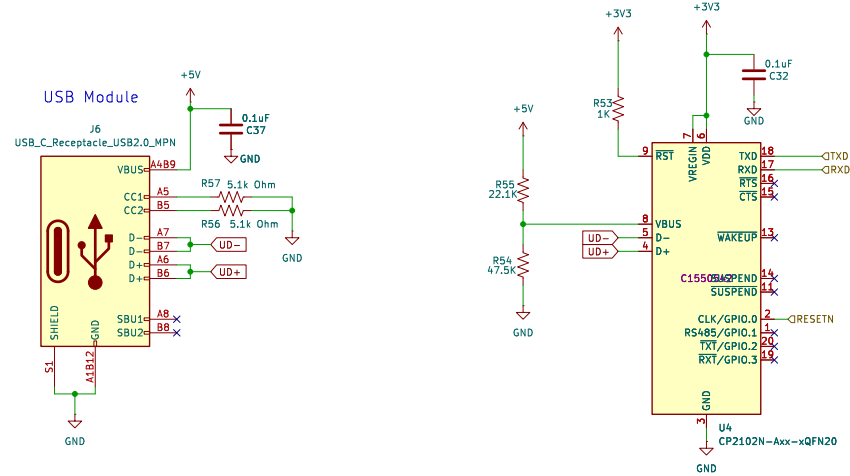
Sheet: /  
File: squadron\_ultra.kicad\_sch

**Title: VSDSquadron Ultra**

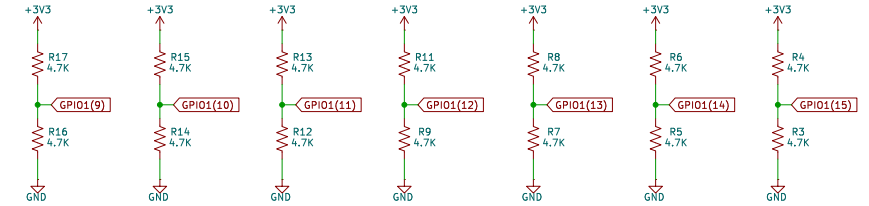
Size: A3 Date: 2025-02-28  
KiCad E.D.A. 9.0.0

Rev: 1A  
Id: 1/4

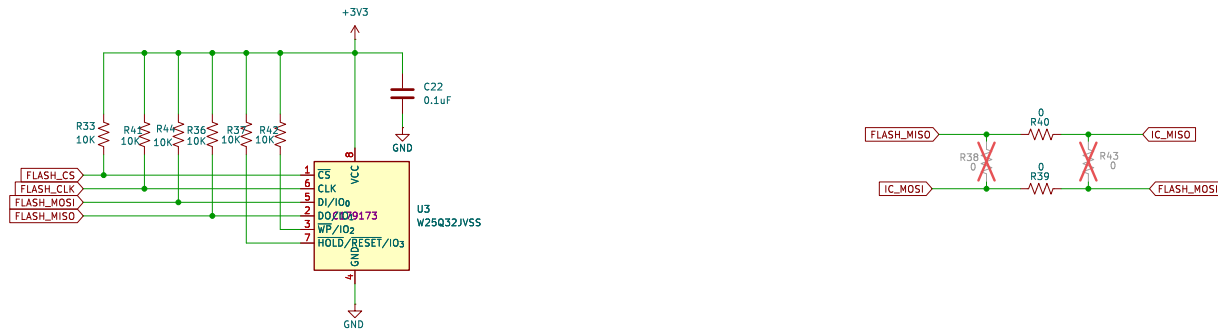
## Programming Interface



## BAUD Rate Configuration



## Flash memory



Reviewed by: Yatharth Agarwal  
Designed by: Kaustubh Pandey

Sheet: /Programming\_Interface/  
File: Programming\_Interface.kicad\_sch

**Title: VDSquadron Ultra**

Size: A3 Date: 2025-02-28  
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[illegible]

Wi-Fi and BLE Module

ADC Module

The schematic diagram illustrates the VSDSquadron Ultra PCB layout. It features two main modules: the Wi-Fi and BLE module (IC1: ESP32-C3-MINI-1-N4) and the ADC module (U2: ADS1015IDGS).

**Wi-Fi and BLE Module (IC1):** This module is connected to a +3V3 power supply. The power supply is regulated by a 10K resistor (R50) and a 1uF capacitor (C26). The module's pins are connected to various components, including a 10K resistor (R49) and a 10K resistor (R51). The module's pins are labeled: EN, RXD0, TXD0, GND\_1, GND\_2, GND\_3, GND\_4, GND\_5, GND\_6, GND\_7, GND\_8, GND\_9, GND\_10, GND\_11, GND\_12, GND\_13, GND\_14, GND\_15, GND\_16, GND\_17, GND\_18, GND\_19, GND\_20, GND\_21, GND\_22, GND\_23, GND\_24, GND\_25, GND\_26, GND\_27, GND\_28, GND\_29, GND\_30, NC\_1, NC\_2, NC\_3, NC\_4, NC\_5, NC\_6, NC\_7, NC\_8, NC\_9, NC\_10, NC\_11, NC\_12, NC\_13, NC\_14.

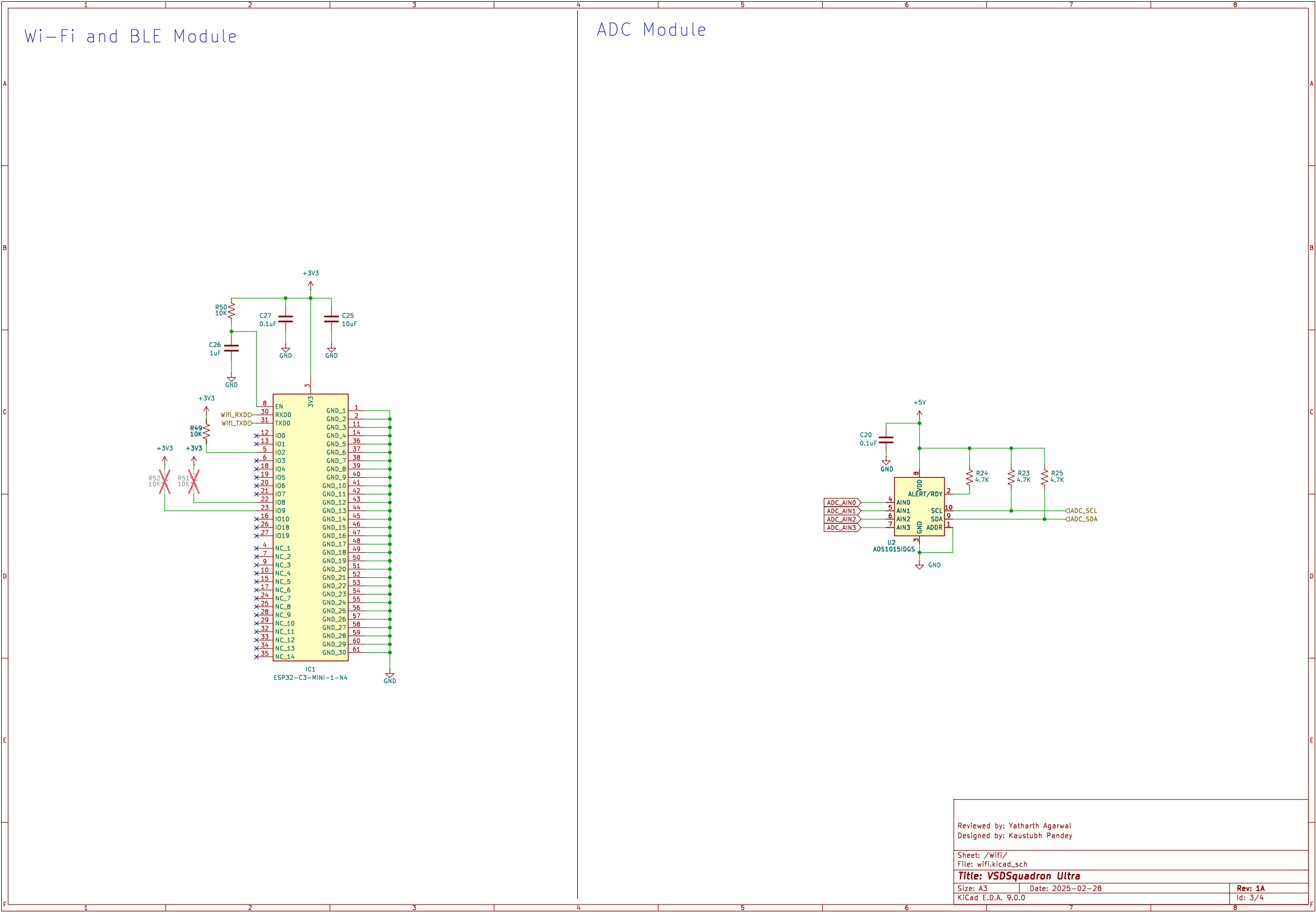
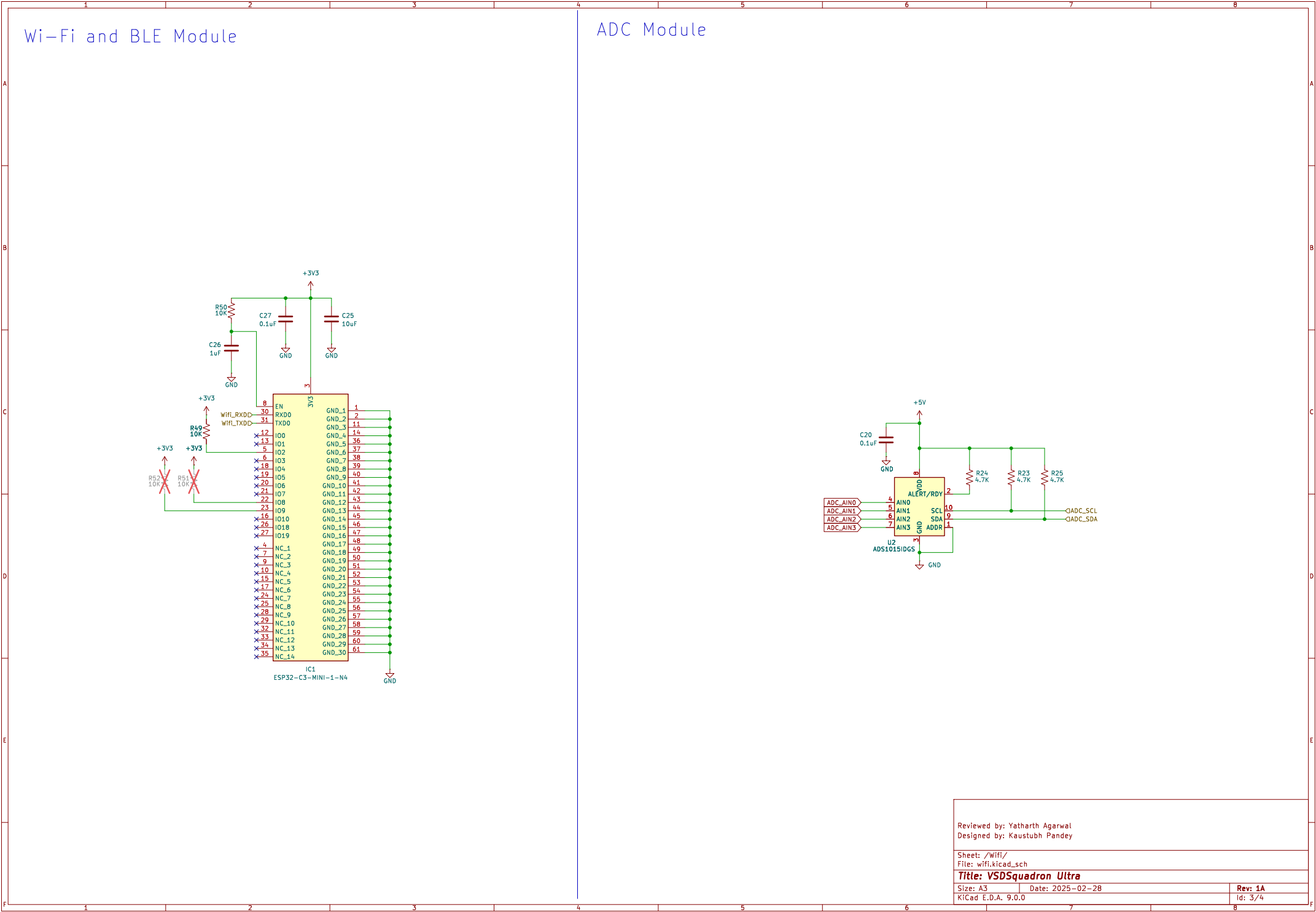
**ADC Module (U2):** This module is connected to a +5V power supply. The power supply is regulated by a 0.1uF capacitor (C20). The module's pins are connected to various components, including a 4.7K resistor (R24), a 4.7K resistor (R23), and a 4.7K resistor (R25). The module's pins are labeled: AIN0, AIN1, AIN2, AIN3, ALERT/RDY, SCL, SDA, ADDR, GND.

**Legend:**

- EN: Enable
- RX: Receive
- TX: Transmit
- NC: No Connection
- AIN: Analog Input
- ALERT/RDY: Alert/Ready
- SCL: Serial Clock
- SDA: Serial Data
- ADDR: Address

**Metadata:**

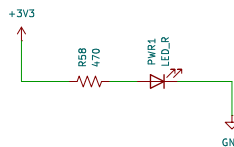
Reviewed by: Yatharth Agarwal	
Designed by: Kaustubh Pandey	
Sheet: /Wifi/	
File: wifi.kicad_sch	
<b>Title: VSDSquadron Ultra</b>	
Size: A3	Date: 2025-02-28
KiCad E.D.A. 9.0.0	Rev: 1A
Id: 3/4	



Sheet: /Wifi/		
File: wifi.kicad_sch		
<b>Title: VSDSquadron Ultra</b>		
Size: A3	Date: 2025-02-28	Rev: 1A
KiCad E.D.A. 9.0.0	Id: 3/4	

Sheet: /Wifi/		
File: wifi.kicad_sch		
<b>Title: VSDSquadron Ultra</b>		
Size: A3	Date: 2025-02-28	Rev: 1A
KiCad E.D.A. 9.0.0	Id: 3/4	

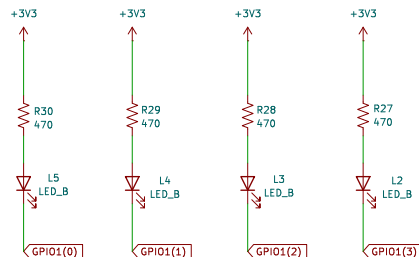
## POWER LED



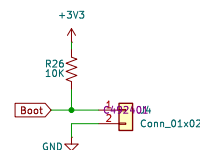
## Heart\_Beat LED



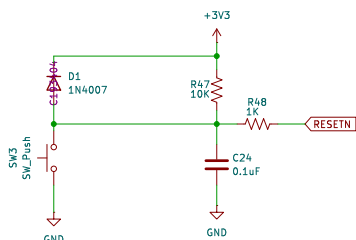
## USER GPIO LED



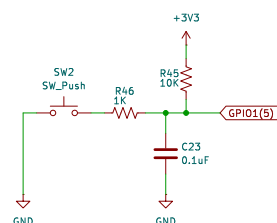
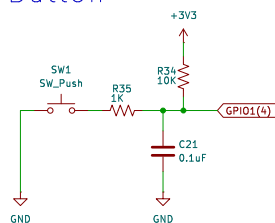
## Boot Select



## Power on Reset



## USER Push Button



Reviewed by: Yatharth Agarwal  
Designed by: Kaustubh Pandey

Sheet: /LEDS & Switch's/  
File: LED.kicad\_sch

**Title: VSDSquadron Ultra**

Size: A3 Date: 2025-02-28  
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Rev: 1A  
Id: 5/4