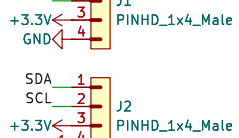
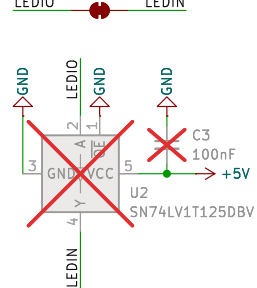




MCU (XIAO RP2040)



I²C Headers



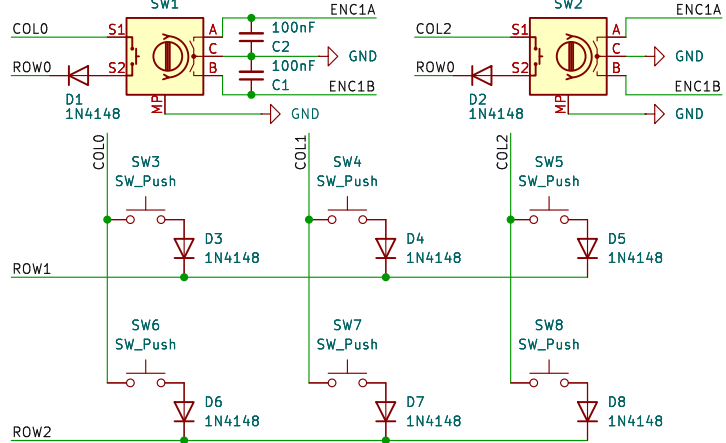
U2 and C3 are used to boost the LED DIN signal to 5V, which may be required with some LEDs. They should not be populated by default as most WS2812B style LEDs work on 3.3V logic.

If you decide to populate U2 and C3 YOU MUST CUT JP1, as JP1 bridges D10 directly to the first LED DIN pad.

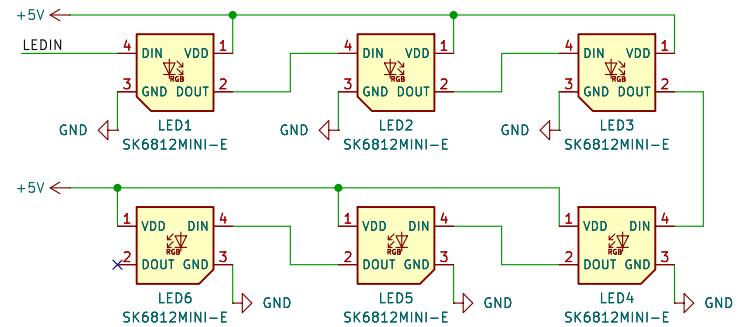
U2 can be any SOT-23 5 Pin 5V Logic Level Shifter such as:

- SN74AHCT1G125 (Fixed 5V Logic Level Shifter)
- SN74LV1T125 (1.8 to 5V Logic Level Shifter)

WARNING:
DO NOT POPULATE U2 AND C3 WITHOUT CUTTING THE JP1
JUMPER FIRST. FAILURE TO DO SO MAY FRY YOUR XIAO RP2040.



Encoders & Switches



LED Matrix

<https://lambdakb.dev/devices/lk7d>

LambdaKB.dev

Sheet: /

File: lk7d-pcb.kicad_sch

Title: LK7D

Date: 2025-04-08

Rev: v1.01

KiCad E.D.A. 9.0.1