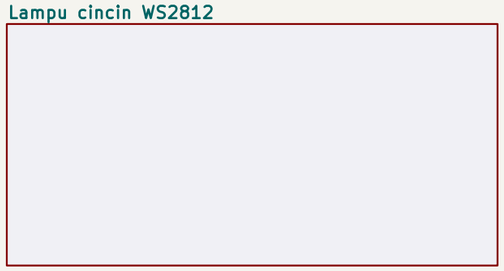
LAMPU CINCIN WS2812 v0.1

ESP32-C3-MINI-1 · 14 WS2812B-2020-V6 · mikrofon I2S ICS-43434 · USB-C 5 V · papan donat

Dibangkitkan oleh gen_sch.py.

Lampu cincin WS2812



File: lampu-cincin-ws2812-papan.kicad_sch

Contoh rancang.in: ESP32-C3 + 14 WS2812B-2020-V6 + mikrofon I2S + USB-C, papan donat

rancang.in

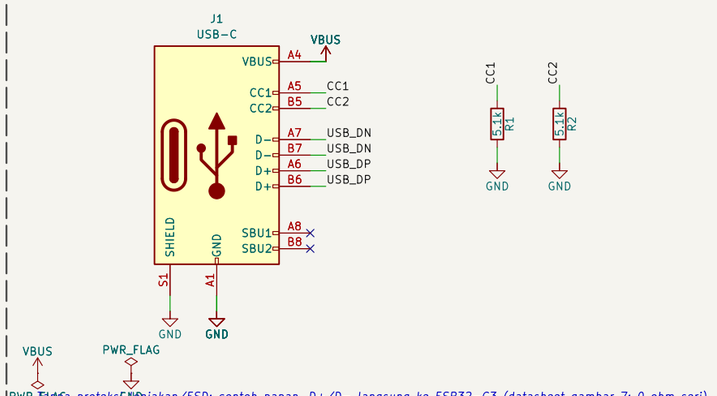
Sheet: /
File: lampu-cincin-ws2812.kicad_sch

Title: LAMPU CINCIN WS2812 v0.1

Size: A3	Date: 2026-10-28	**Rev: 0.1**
KiCad E.D.A. 10.0.8		Id: 1/2

USB-C 5 V + DATA

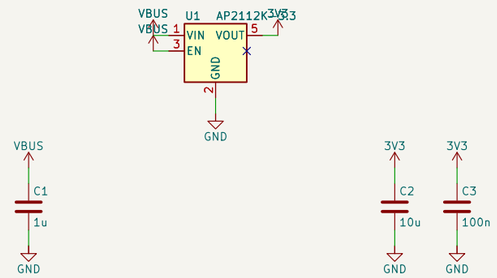
HRO TYPE-C-31-M-12 (16P): VBUS, CC1/CC2 5,1 k, D+/D- ke GPIO19/18 (USB-Serial-JTAG)



Tanpa proteksi tambahan/ESD: contoh papan. D+/D- langsung ke ESP32-C3 (datasheet gambar 7: 0 ohm seri).

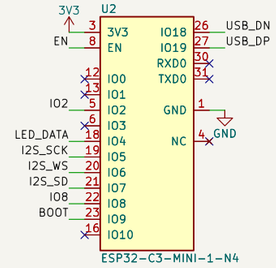
REGULATOR 3V3: AP2112K

VBUS 5 V -> 3,3 V 600 mA (ESP32-C3 + mikrofon)



MCU: ESP32-C3-MINI-1-N4

WiFi + BLE, USB-Serial-JTAG: GPIO18 = D-, GPIO19 = D+; GPIO4 = data LED; GPIO5-7 = I2S



EN: RC 10k + 1u; strapping IO2 dan IO8 pull-up 10k (UNVERIFIED: dari kebiasaan referensi Espressif, bukan dibaca di manual); BOOT = IO9 ke GND lewat SW1.

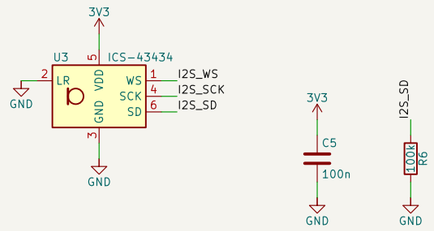
RESET + BOOT

SW1 BOOT (IO9), SW2 RESET (EN) · pull-up dan RC



MIKROFON I2S: ICS-43434

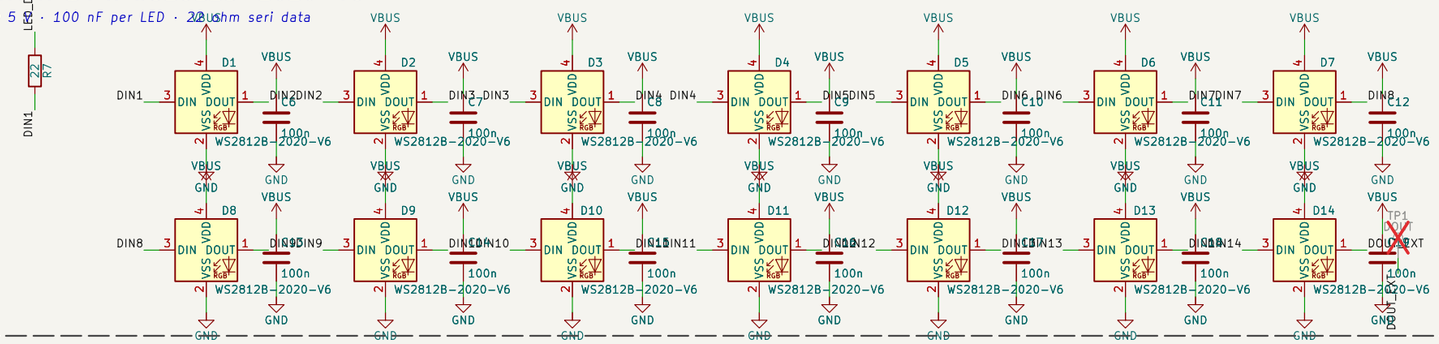
ESP32-C3 master (SCK, WS); LR = GND (kiri); lubang suara di PCB



Jauhkan dari WS2812 dan jalur clock. Tanpa solder mask/via di jalur suara.

CINCIN 14 x WS2812B-2020-V6

VDD 5 V · 100 nF per LED · 22 ohm seri data



Contoh rancang.in: ESP32-C3 + 14 WS2812B-2020-V6 + mikrofon I2S + USB-C, papan donat

rancang.in

Sheet: /Lampu cincin WS2812/
File: lampu-cincin-ws2812-papan.kicad_sch

Title: Lampu cincin WS2812

Size: A3	Date: 2026-10-28	**Rev: 0.1**
KiCad E.D.A. 10.0.8		Id: 2/2

14 LED x 36 mA (putih penuh) = 0,5 A: batas USB 0,5 A, firmware membatasi kecerahan. MSL 5a (24 jam).