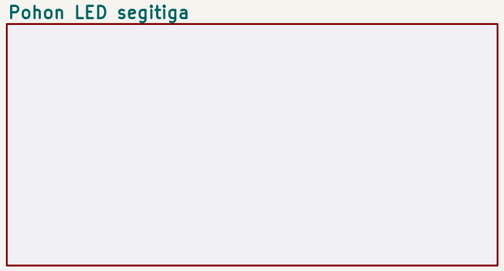
POHON LED SEGITIGA v0.1

CH32V003F4P6 · 15 LED 0603 (putih dan merah) charlieplex lewat 5 pin · USB-C 5 V · papan segitiga

Dibangkitkan oleh gen_sch.py.

Pohon LED segitiga



File: pohon-led-segitiga-papan.kicad_sch

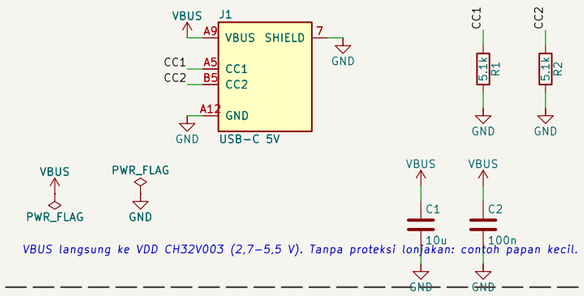
Contoh rancang.in: CH32V003 + 15 LED charlieplex + USB-C 5 V, papan segitiga

rancang.in

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File: pohon-led-segitiga.kicad_sch		
Title: POHON LED SEGITIGA v0.1		
Size: A3	Date: 2026-10-28	**Rev: 0.1**
KiCad E.D.A. 10.0.8		Id: 1/2

DAYA: USB-C 5 V

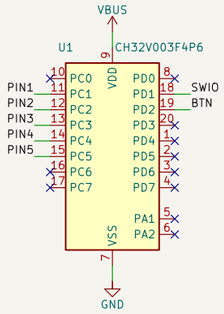
Hanya VBUS/CC/GND (TYPE-C 6P, tanpa data); CC1/CC2 5,1 k ke GND



VBUS langsung ke VDD CH32V003 (2,7–5,5 V). Tanpa proteksi lonjakan: contoh papan kecil.

MCU: CH32V003F4P6

TSSOP-20 · VDD 5 V dari USB · SWIO = PD1



PC1–PC5 (pin 11–15) = 5 jalur charlieplex; PD2 = tombol; PD1 = SWIO.

TOMBOL USER

PD2 ke GND, pull-up internal



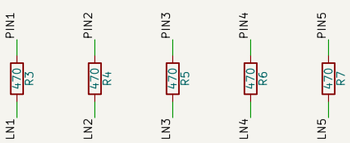
PEMROGRAMAN SWIO

3 pad: SWIO, GND, VBUS (WCH-LinkE mode SDI)



MATRIKS CHARLIEPLEX: 5 jalur, 15 LED

LED (a,b): anoda di jalur a, katoda di jalur b; resistor seri 470 ohm per jalur





470 ohm per jalur, dua resistor seri per LED (940 ohm): merah (5–1,9)/940 = 3,3 mA, putih (5–2,9)/940 = 2,2 mA (calc, Vf tipikal); maks (5,5–1,8)/940 = 3,9 mA.

Dua LED seri menjumlah Vf > 5 V (merah+putih 4,8 V tipikal, putih+putih 5,8 V): lampu hantu tidak menyala. Arus pin CH32V003: dijamin +–8 mA/pin (datasheet WCH V1.8 tabel 3–17 hal. 19).

Contoh rancang.in: CH32V003 + 15 LED charlieplex + USB-C 5 V, papan segitiga

rancang.in

Sheet: /Pohon LED segitiga/

File: pohon-led-segitiga-papan.kicad_sch

Title: Pohon LED segitiga

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