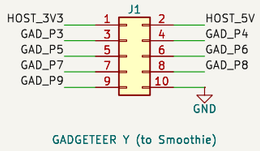
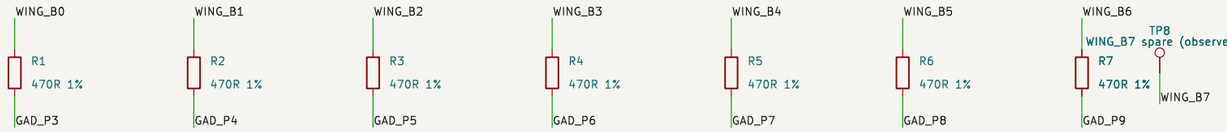
## 01 / GADGETEER Y SOCKET (HOST SIDE, TO SMOOTHIE)




GADGETEER Y (to Smoothie)

## 02 / SEVEN SERIES CHANNELS: WING_Bn – R(n+1) 470R – GAD_P(n+3), OBSERVE PADS TP1..TP8



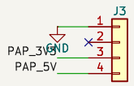

WING_B7 (spare): J2.8 straight to TP8, no resistor, no socket pin




## 03 / PAPILIO WING I/O ROW (J2, plan view bit 0 EAST) AND POWER ROW (J3, NORTH)

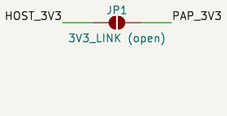


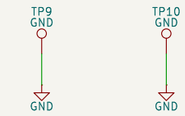

PAPILIO WING I/O 1x8 (male, bottom-mounted)




PAPILIO WING POWER 1x4 (male, bottom-mounted)

## 04 / SUPPLY-FEED LINKS (SHIPPED OPEN) AND GROUND PADS




## 05 / MOUNTING HOLES (NPTH, NO NET, 20 mm APART)







Gadgeteer Y row (D1, CLAUDE.md "Version 16"): 1 +3.3V (HOST_3V3), 2 +5V (HOST_5V), 3..9 GPIO (GAD_P3..GAD_P9), 10 GND. Pin 1 / viewing direction: top of the board, looking into the socket opening.

Mapping (D3): wing bit k = Gadgeteer pin 3+k for k = 0..6 through R(k+1) 470R; WING_B7 is spare on TP8. Wing view: top view, bit 0 and GND at the EAST end, power row NORTH of the I/O row.

Power policy (D5): GND is common. HOST_3V3/HOST_5V and PAP_3V3/PAP_5V are four separate rails. JP1 (3V3_LINK) and JP2 (5V_LINK) ship OPEN; close only with both boards unpowered. link rating assumed 100 mA. Wing pin 2 (2V5) is never connected (no-connect flag).

Reversed-plug warning: the wing plug can be inserted rotated by 180 degrees; the power row then hangs over empty board. Follow the BITO/GND arrow on the silkscreen. 3.3V LOGIC ONLY, VCCO MUST BE 3.3V, NO HOT-PLUG.

Fully passive: no IC, no level shifter, no pull-up, no chain socket (D6). Variant A fits 470R; variant B OR (fast, unprotected); variant C 1k (more protection). All lines are bidirectional GPIO.

CERN-OHL-S-2.0 | KiCad only | black solder mask, white silkscreen | v13 STUDY: not fabrication-ready, host hardware not inspected.

Generated from design-contract.json by tools/create_schematic.py; STUDY, not for fabrication

Passive 7-line GPIO adapter: Gadgeteer Y socket to Papilio 8-bit wing

**Smoothieware / CERN-OHL-S-2.0**

Sheet: /

File: papilio-adapter.kicad_sch

***Title: Smoothie Papilio wing adapter***

| Size: A3 | Date: 2026-10-11 | **Rev: v13** |
|---|---|---|
| KiCad E.D.A. 9.0.8 | | Id: 1/1 |