CONTRACT: design–contract.json (v10). Hazard class high–current. STUDY – UNSUITABLE FOR FABRICATION until human review. No SIL/PL claim.

Gadgeteer S: 1 +3.3V (test pad only), 2 +5V (JP1 pad 3 only), 3 EN_IN, 4 STEP, 5 DIR, 6 CS, 7 MOSI, 8 MISO, 9 SCK, 10 GND. SPI mode 3 <= 2 MHz.

Grounds: PGND (bridge, bulk, buck, shunt return) and GND (logic, host, encoder) join only at NT1.

Enable truth: ENI = EN_IN AND STO_OK AND QN ; DRV_EN = ENI AND ENO AND STO_OK ; QN = NAND(EN_IN, FLT_Q) ; FLT_Q = NAND(NOFAULT, QN). EN_IN low clears the latch.

Brake rule: R_BRK >= 22 ohm and >= 47 W continuous (J4, not fitted). NO HOT–PLUG of any connector. Bus 12–28 V DC, 4.5 A rms, 9 A overload 2 s, OC trip +/–12.5 A.

CERN–OHL–S–2.0 | KiCad only | black solder mask, white silkscreen | calculated values are not measurements.

STUDY v10 – UNSUITABLE FOR FABRICATION until human review
Generated from design–contract.json by tools/create_schematic.py
Smoothieware / CERN–OHL–S–2.0
Sheet: /
File: servo–foc.kicad_sch
Title: Smoothie Servo FOC drive (leadshine–like–external–servo–drivers)
Size: A0 | Date: 2026–10–01 | Rev: v10
KiCad E.D.A. 9.0.8 | Id: 1/1