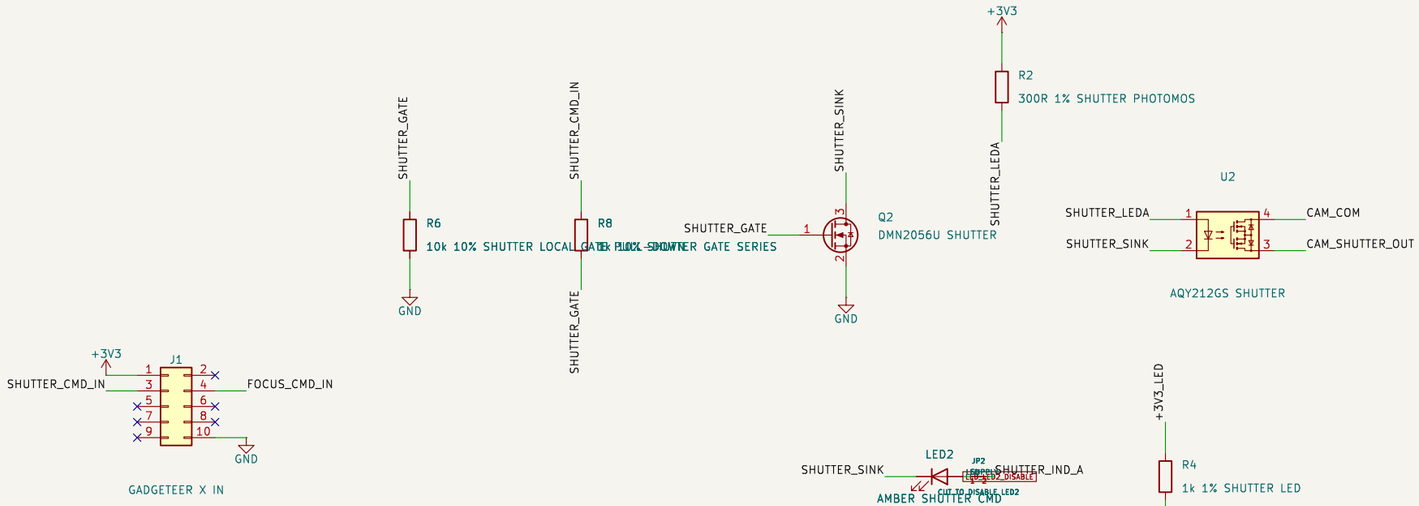
01 / SHUTTER CHANNEL (north on the PCB): U2 closes CAM_SHUTTER_OUT (jack tip) to CAM_COM

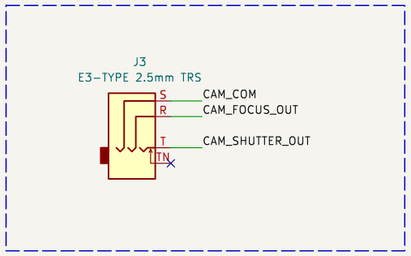
HOST DOMAIN (3.3 V, GND)



CAMERA DOMAIN (isolated dry contacts, no power)

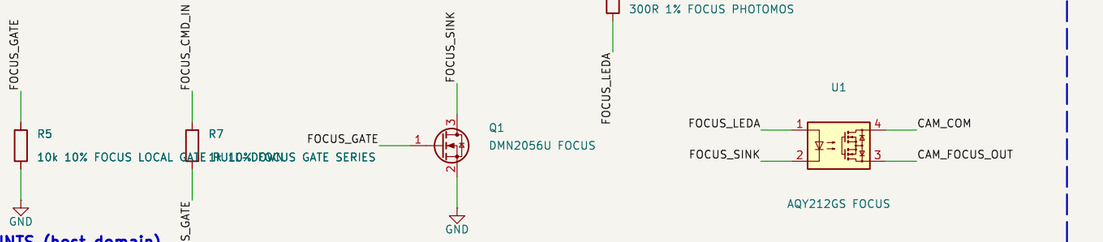
AQY212GS: 1500 Vrms I/O isolation, functional only



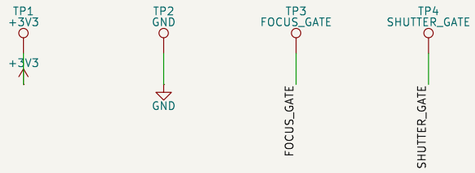


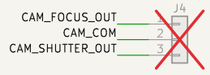
camera: assumed >=10k, <=12V; R/threshold unqualified

02 / FOCUS CHANNEL (south on the PCB): U1 closes CAM_FOCUS_OUT (jack ring) to CAM_COM



03 / GADGETEER X SOCKET, JUMPER AND TEST POINTS (host domain)





CAM BREAKOUT FOCUS COM SHUT

Intent: high command closes its channel; low/floating/reset response remains unqualified (R5/R6 1k, actual host bias unknown).

Host socket X (type X, 3 GPIO): 1 +3V3, 2 +5V (not connected), 3 SHUTTER_CMD_IN, 4 FOCUS_CMD_IN, 5–9 not connected, 10 GND.

View: mating face, notch at the bottom. No chain socket: both command pins are consumed locally (documented exception).

Camera jack J3 (E3-type 2.5 mm): sleeve = CAM_COM, ring = CAM_FOCUS_OUT, tip = CAM_SHUTTER_OUT; pad TN (tip switch) not connected.

J4 (CAM BREAKOUT, DNP): 1 FOCUS, 2 COM, 3 SHUTTER, for DIY adapters; use J3 or J4, not both. JP1 LED_EN shipped bridged.

External camera pull-up (not on this board, dashed): open-circuit at most 12 V DC, closure at most 10 mA, pull-up at least 10 kohm (assumed, to be measured).

Firmware sequence: FOCUS first, SHUTTER while FOCUS is held, release SHUTTER first. Minimum command 20 ms. CMD LEDs show the host command, not the contact.

Host budget <=38.74mA with VF>=0 and10%1k corners; request40mA, allocation unknown. PhotoMOS IF>=5.39mA at25C low corner. Reset-open/temperature unqualified.

NO HOT-PLUG. Functional isolation only, no safety claim. CERN-OHL-S-2.0 | KiCad only | unqualified native candidate; not fabrication ready.

Generated from design-contract.json by tools/create_schematic.py

UNQUALIFIED NATIVE CANDIDATE: camera/reset/drive/fit unresolved; not fabrication ready

Smoothieware / CERN-OHL-S-2.0

Sheet: /

File: camera-trigger.kicad_sch

Title: Camera trigger board v10

Size: A3	Date: 2026-10-11	**Rev: v10**
KiCad E.D.A. 9.0.8		Id: 1/1