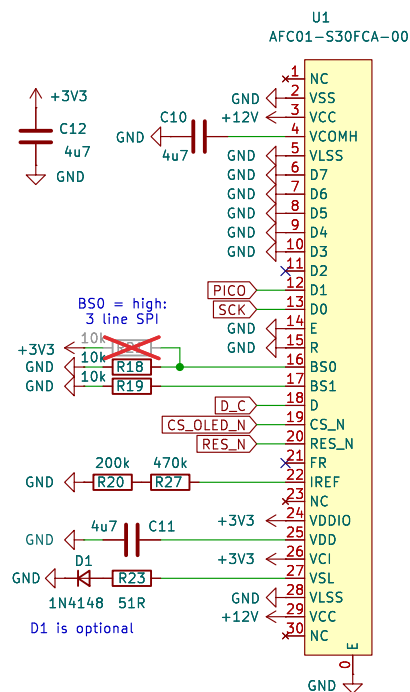


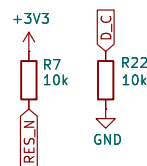
Alternative header: JLC# C9136
Ribbon cable connector: JLC# C21854

Caveat:
* when using a direct connection to a PMOD host like CMODA7 for testing, the 2 connector columns are swapped
* Use IDC ribbon cable to get a 1:1 connection to a PMOD host without swapped rows.

PICO = peripheral in controller out,
POCI = peripheral out controller in,

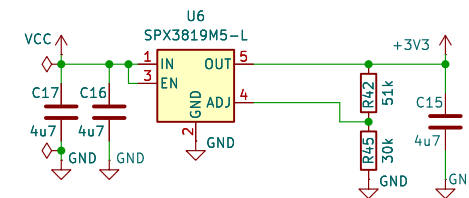


SSD1322 OLED panel

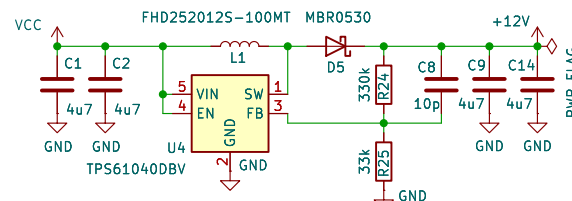


Switches and LEDs

File: switches.kicad_sch



$$3.3 \text{ V LDO} \quad V_{OUT} = 1.235 \text{ V} \cdot (1 + R1/R2) = 3.34 \text{ V}$$



$$12 \text{ V Step-up for panel} \quad V_{OUT} = 1.233 \text{ V} \cdot (1 + R1 / R2) = 13.6 \text{ V}$$

H1 D2.7	H2 D2.7	H3 D2.7	H4 D2.7
H5 D2.7	H6 D2.7	H7 D2.7	H8 D2.7

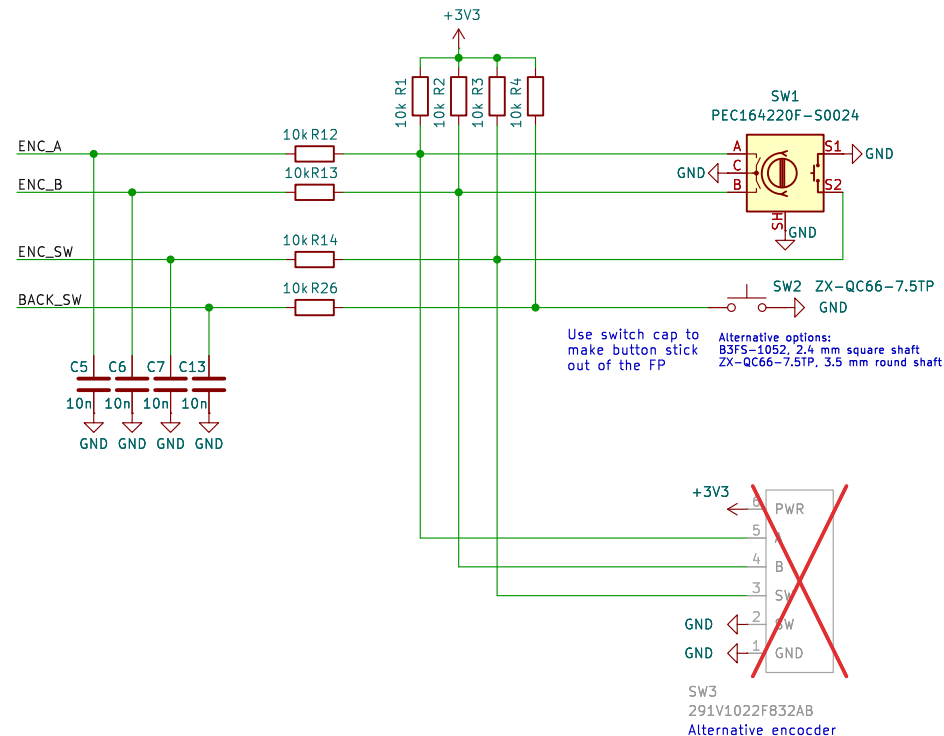
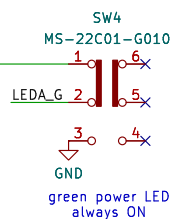
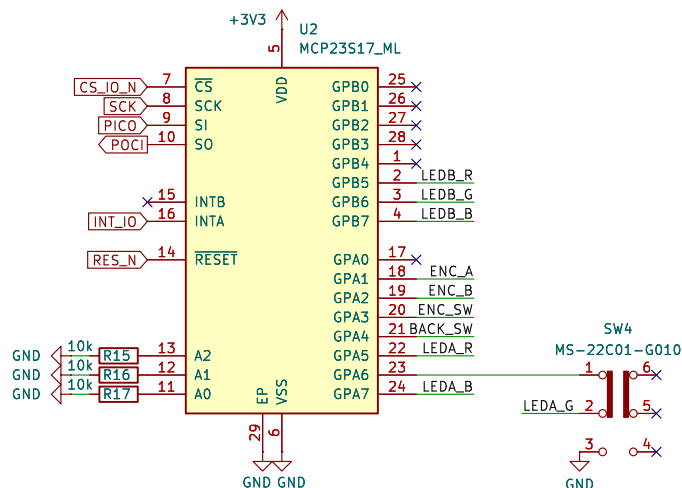
Betz Engineering

Sheet: /
File: ui_board_1u.kicad_sch

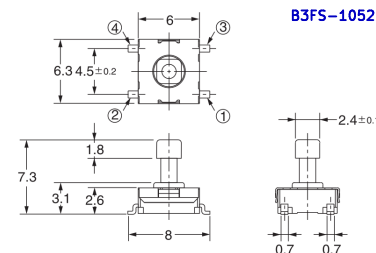
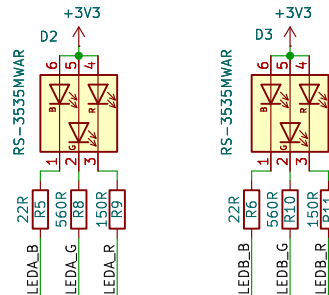
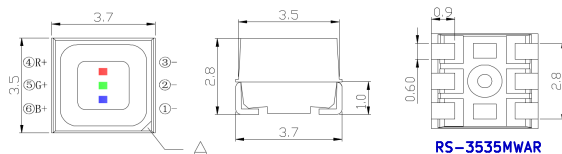
Title: ui_board_1u – User interface board

Size: A4 Date: 2025-12-07
KiCad E.D.A. 9.0.0-rc3-dirty

Rev: –
Id: 1/2



RS-3535MMWR	R	G	B
Lum @ 20 mA [mcd]	950	2200	500
Lum target [mcd]	400	400	400
I target [mA]	8.0	1.8	13.0
V FWD [V]	2.0	2.3	3.0
R [Ohm]	162.5	555.6	25.4
R chosen [Ohm]	150	560	22



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Sheet: /Switches and LEDs/
File: switches.kicad_sch

Title: ui_board_1u - User interface board

Size: A4 Date: 2025-12-07

KiCad E.D.A. 9.0.0-rc3-dirty

Rev: -

Id: 2/2