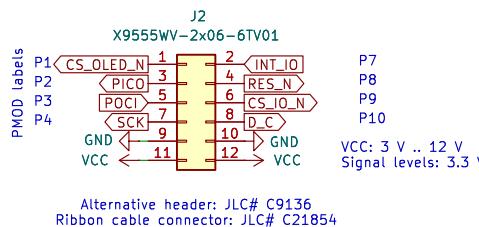
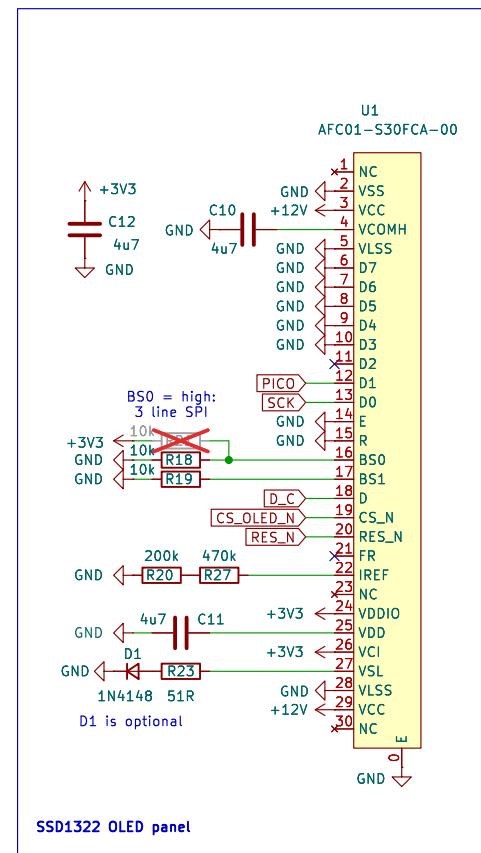


A

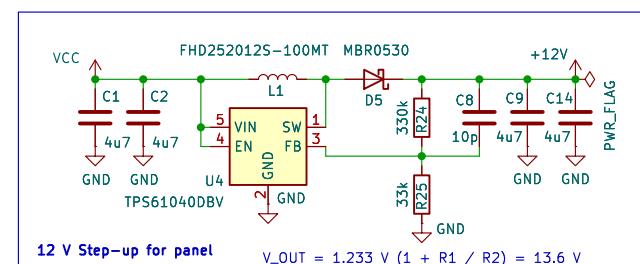
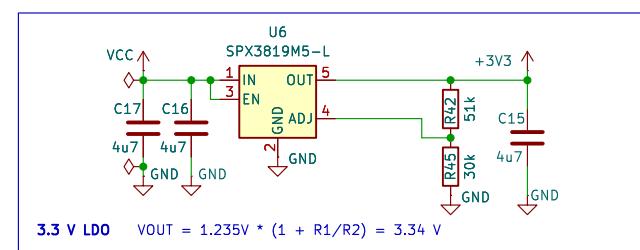


PICO = peripheral in controller out.  
POCI = peripheral out controller in.

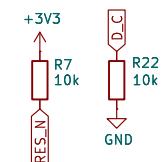
Caveat:  
\* when using a direct connection to a PMOD host like CMODA7 for testing, the 2 connector columns are swapped  
\* Use IDC ribbon cable to get a 1:1 connection to a PMOD host without swapped rows.



Switches and LEDs



C



D



Betz Engineering

Sheet: /  
File: ui\_board\_1u.kicad\_sch

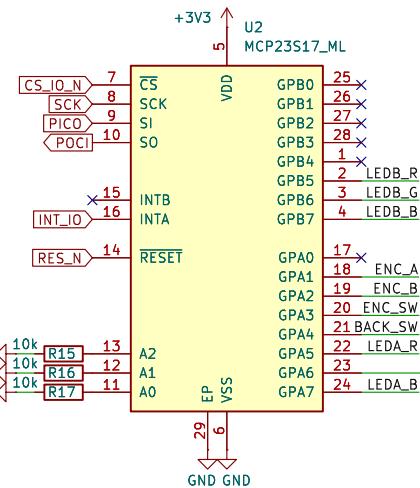
Title: ui\_board\_1u – User interface board

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

Rev: –  
Id: 1/2

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

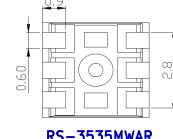
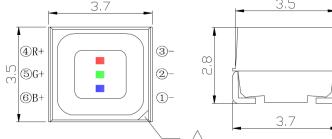
+3V3  
C4  
4u7



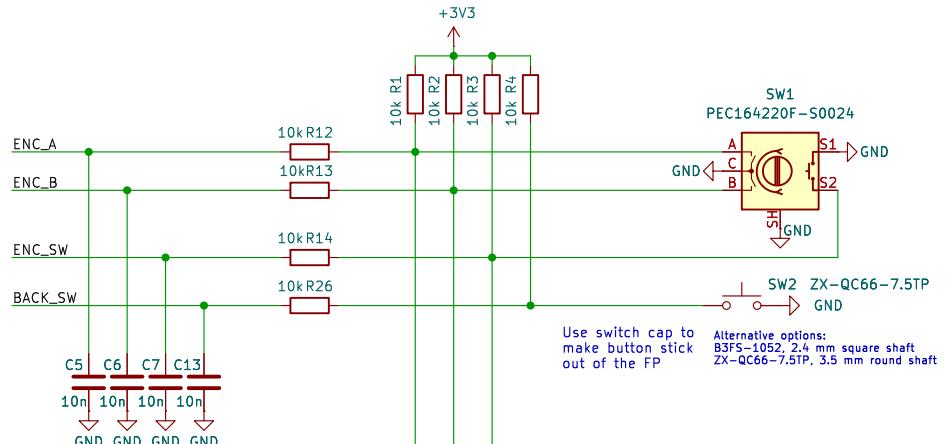
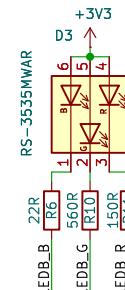
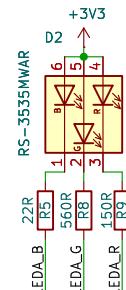
SW4  
MS-22C01-G010  
LEDA\_G 2 0 5  
LEDA\_R 1 6  
LEDA\_B 3 4  
GND

green power LED  
always ON

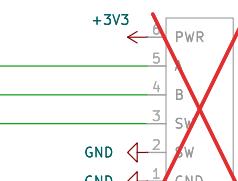
RS-3535MWAR	R	G	B
Lum @ 20 mA [mcd]	950	2200	500
Lum target [mcd]	400	400	400
I target [mA]	8.0	1.8	1.30
V FWD [V]	2.0	2.3	3.0
R [Ohm]	162.5	555.6	25.4
R chosen [Ohm]	150	560	22



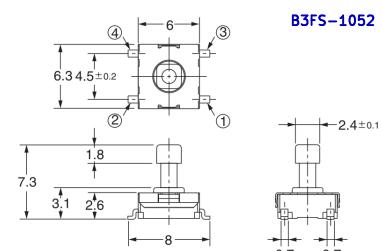
RS-3535MWAR



Use switch cap to  
make button stick  
out of the FP  
Alternative options:  
B3FS-1052, 2.4 mm square shaft  
ZX-QC66-7.5TP, 3.5 mm round shaft



SW3  
291V1022F832AB  
Alternative encoder



Betz Engineering

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