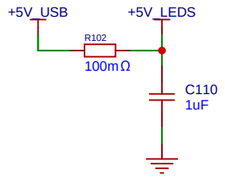
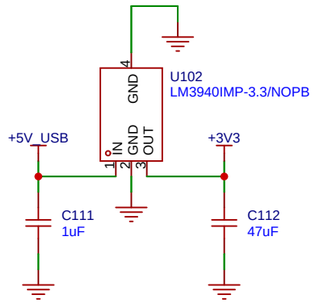
Custom Keyboard (Page 1/2)

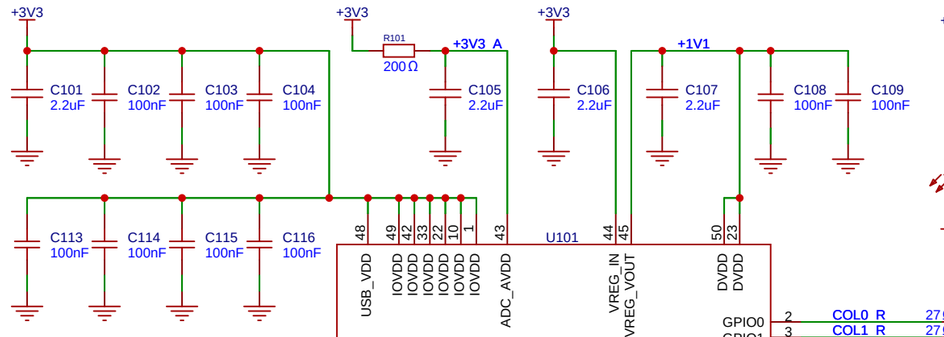
Power for LEDs



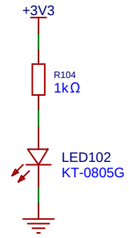
5V to 3V3



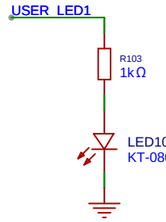
MCU



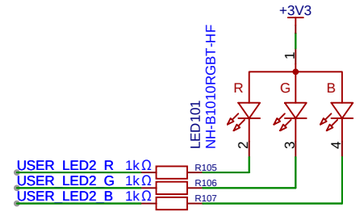
Power LED



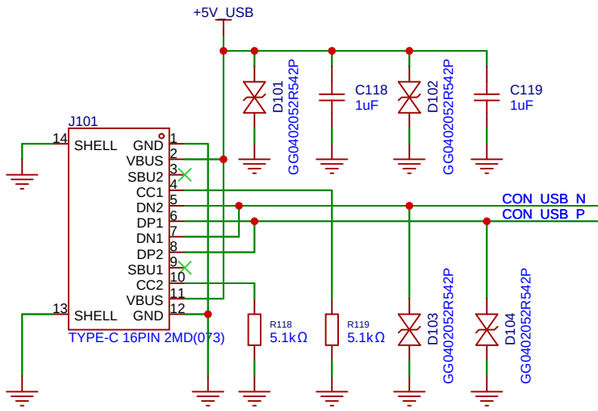
User LED

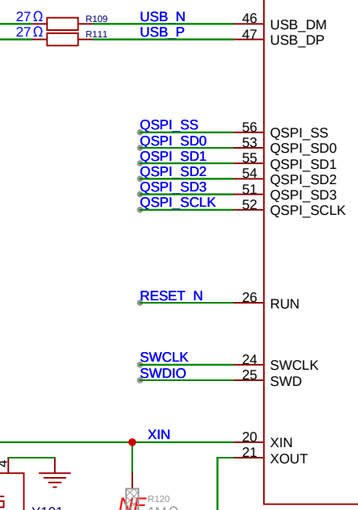


User RGB LED

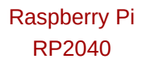


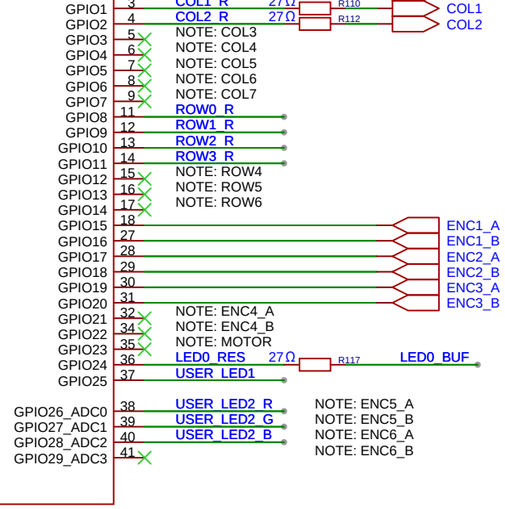
USB Connector



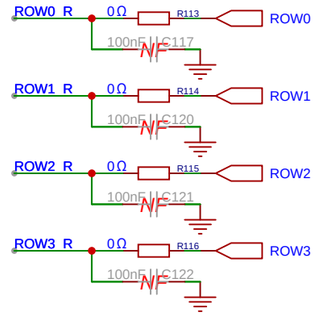


Raspberry Pi RP2040



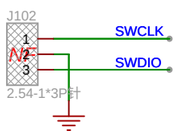


Filter (Optional)

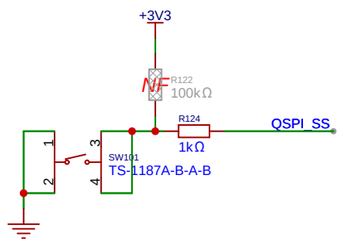


Design note: Filter is for testing and debugging.
If needed, replace 0R and fit correct C

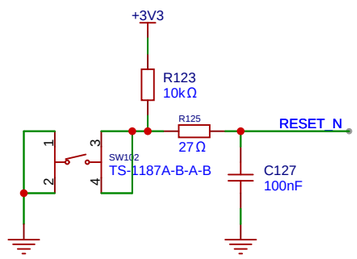
Debug Header



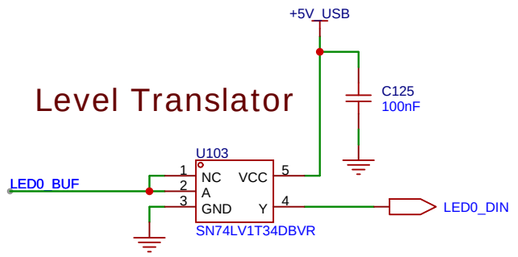
BOOT Select Button



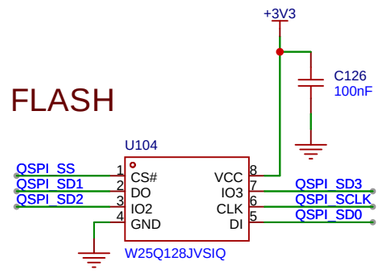
Reset Button



Level Translator



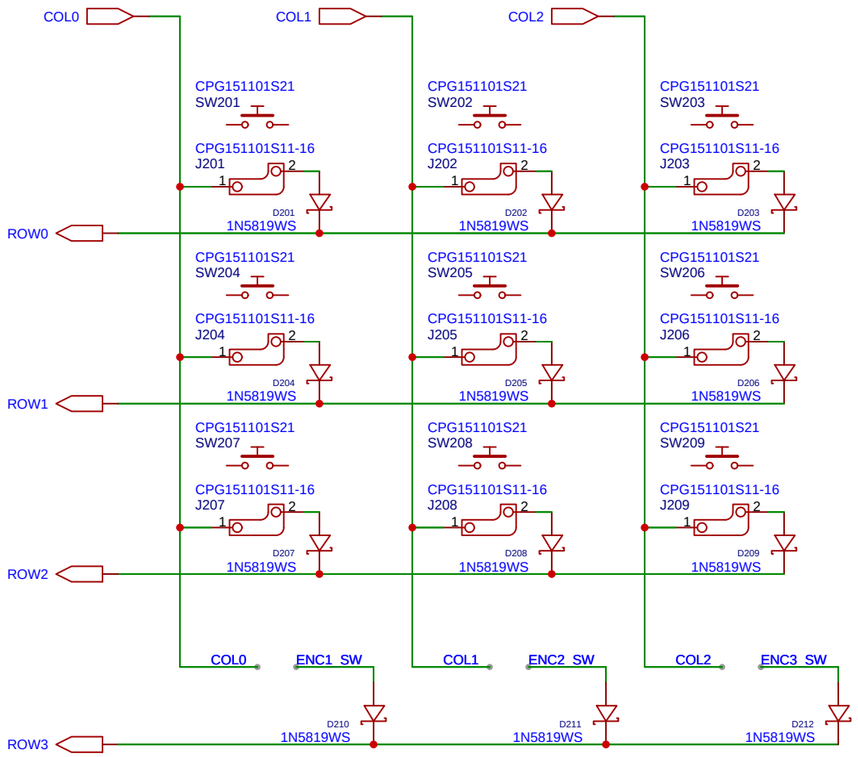
FLASH



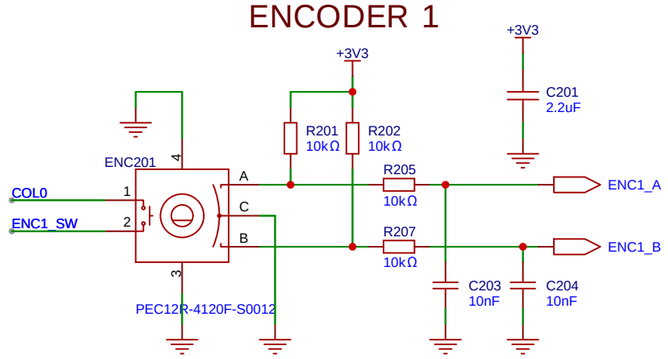
Schematic	Custom Keyboard	Update Date	2024-10-28
		Create Date	2024-10-14
Page	MCU	Part Number	
Drawn	Robert Feranec	Custom Keyboard	
Reviewed			
		VER / SIZE / PAGE 1 OF 2	
EasyEDA		V1.0 / A3	(C) FEDEVEL 2025

Custom Keyboard (Page 2/2)

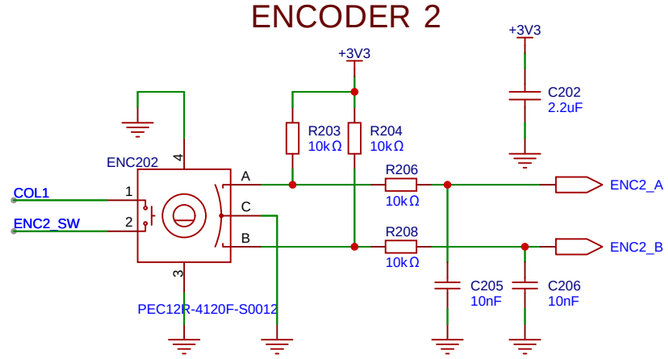
KEYS



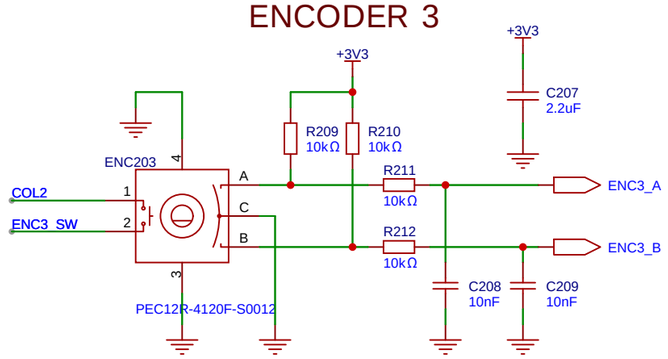
ENCODER 1



ENCODER 2



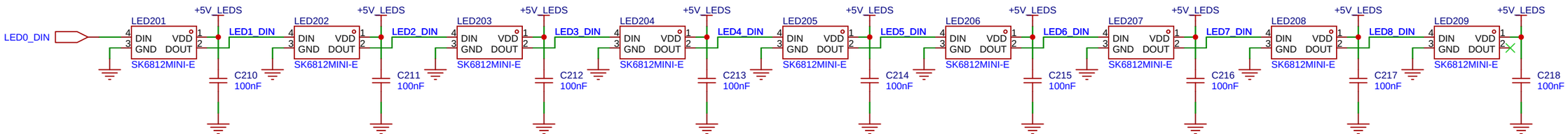
ENCODER 3



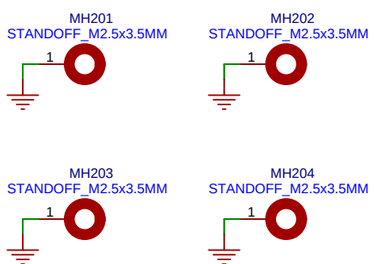
Watch the full step-by step tutorial about how to design this board on my youtube channel:
https://www.youtube.com/robertferanec

Download all the mechanical parts from my thingiverse:
https://www.thingiverse.com/robertferanec/designs

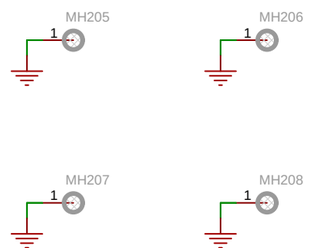
KEY LEDs



Metal plate holders



Mounting holes



NOTES:
What else you need to build this keyboard

Buy:
- 9x Keycaps e.g. Mouser 474-PRT-15305
- 4x Feet, Farnell 2494552
- 2x M3x10 self-tapping screw
- 2x M3x12 self-tapping screw
- 4x M2.5x8 black machine screw
- Gorilla Super Glue Gel, Farnell 3532524

3D printed parts (color #1):
- 1x box bottom
- 1x box top
- 1x plate (CNC or 3D printed)
- 3x encoder knob

3D printed parts (color #2):
- 1x frame around buttons
- 3x frame around encoders
- 3x encoder knob top

3D transparent filament:
- 3x short pieces as a LED light guide

Optional:
- Use color 3D printing with custom picture
- Tools to remove caps and switches

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Schematic	Custom Keyboard	Update Date	2024-10-30
		Create Date	2024-10-14
Page	OTHER	Part Number	
Drawn	Robert Feranec	Custom Keyboard	
Reviewed			
		VER	V1.0
		SIZE	A3
		PAGE 2 OF 2	(C) FEDEVEL 2025

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