Printables by JOSEF PRUSA

Klipper Keys Keyboard for 3030 and 2020 profiles

Technofrikus

VIEW IN BROWSER

updated 31. 7. 2023 | published 31. 7. 2023

Summary

This is a simple keyboard with a custom PCB to control your Klipper printer in faster way

3D Printers > 3D Printers - Upgrades

Tags: vcore klipper keyboard vcore3 voron

UPDATE: Config updated below, works now as intended :) Only light switching during printing is still a bit unreliable. Not sure why yet.

This “keyboard” with 5 keys gets conneted directly to the GPIOs of the RasbperryPi. This way no MCU or anything fancy is needed. The case is tested on a vCore 3.1 400mm with 3030 profiles. Not sure about clearance on other printers. But electrically should also work for Vorons etc.

The PCB is OpenSource and all files, including production files, can be found here:

https://github.com/Technofrikus/KlipperKeys

You need:

BOM:

- Printing
  - 1x Case
  - 1x Baseplate (choose which profile size you need)
- 1x PCB
- Cable
  - 6-wire cable in your needed length
  - both ends crimped with Dupont connectors (standard 2.54mm pitch)
- Hardware
  - 1x 6-pin-header
  - 4x M3 threaded insert (5,7mm length or shorter work)
  - 4x M3x10 screw
  - For 2020 profile
    - 2x M3x8/10
    - 2x hammer nut
    - Can also use bigger screws (not longer), just have to increase the size of the hole a little with a knife.
  - For 3030 profile
    - 2x M5/6x12
    - 2x hammer nut with the same thread size
  - 5x Cherry MX-compatible switches and keycaps
    - Try these printable relegendable keycaps I used with some tips for printing: https://www.thingiverse.com/make:912979

Connecting

- The Pins are named on the PCB. Also check the picture for the marked pins. Reference: https://pinout.xyz

Configuration

- You need to make your Pi a Klipper-MCU so you can access the GPIOs from Klipper. Just follow this simple guide: https://www.klipper3d.org/RPi_microcontroller.html
- No edit of the config.txt necessary any more, if you have a current Klipper version.
- Then add these settings to your macro-file. I have a user-macro-cfg which I included from printer.cfg to have these things separate. But you can also put it directly in the printer.cfg
  - These gcodes are custom to my setup (lights) and RatOS (unload_filament). Please change these to your liking and printer setup.

```
[gcode_button button_light]
pin: ~rpi:gpio17
press_gcode: CASE_LIGHTS_TOGGLE

[gcode_button button_load]
pin: ~rpi:gpio9
press_gcode: LOAD_FILAMENT

[gcode_button button_unload]
pin: ~rpi:gpio10
press_gcode: UNLOAD_FILAMENT

[gcode_button button_PLATemp]
pin: ~rpi:gpio22
press_gcode:
SET_HEATER_TEMPERATURE HEATER=extruder TARGET=200
SET_HEATER_TEMPERATURE HEATER=heater_bed TARGET=60

[gcode_button button_cooldown]
pin: ~rpi:gpio27
press_gcode:
TURN_OFF_HEATERS
```

If you want to use a Button as an Emergency-Stop, use this code:

```
[gcode_button ESTOP_BUTTON]
pin: ...
press_gcode:
{action_emergency_stop("Impending Doom Averted!")}
```

I have not tested this, but ThaoChan provided it and it works for him. Thanks again Thao for your help with the Config! Check it out here: https://www.reddit.com/r/klippers/comments/ssj67j/comment/ju6ld9p/?utm_source=reddit&utm_medium=web2x&context=3

Model files

baseplate-3030.step

For 3030 profile

baseplate-2020.step

For 2020 profile

baseplate-2020-short.step

For 2020 profile, shorter if there is a panel in the way (see screenshot)

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pcb.step

Just a dummy for test fitting before ordering PCBs

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case.step

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