

3D printer server/Cabinet docs

- [The server itself\(repetier\)](#)
 - [Adding a Klipper based 3D Printer](#)
 - [Initial set up of server](#)
 - [Adding a Marlin based printer](#)
- [The Cabinet](#)
 - [Smart features](#)
 - [Advanced Material Systes\(AMS\)](#)
 - [Human interface](#)
 - [Construction](#)
- [Editing Klipper and settings for custom commands](#)
 - [Klipper firmware adjustments](#)
 - [Klipper custom G-code commands](#)
- [Current klipper setup](#)
 - [current troubleshooting](#)

The server itself(repetier)

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Adding a Klipper based 3D Printer

using Katapult or formerly known as CanBoot.

List of do not's

failing to follow this list means a new requirement to write very low level code for the board from scratch.

- turn of SWD(this is a last resort option that is untested(stated by their github!))

List of do's

Recommened directly from katapult github or from experience

- DO have a backup method of reovery such as DFU, uart backing up stock bootloader.

For our specific set up we used the SKR mini E3 V3 that has an STM32G0B1

That last portion G0B1 dictates if it can be flashed via USB or CANbus

G0B1 our version is only 'Flashable' via CANbus

both are able to be reflashed via SD card so that was our solution.

Regular install via Repetier

We installed a general config for the board that came from the klipper github(they aslo describe how to install with a generic if there the specific board is not on there) placed in SD or ready to transmit to board

when you add a printer give it the version capable labeled no repetier.

Install via Update

Find the serial port you will be using the printer on first.

ls /dev/serial/by-id/ while ssh'ed into the computer that is meant to control the klipper based printer.

This will find us the USB port.

dmesg -wH can help you find if the printer is being connected at all as faulty USB's might make it hard to tell from time to time.

go to klipper config on repetier

triple dots on the side and hit build microcontroller

download .bin from repetier at the klipper config section

send ur .bin file and rename it to firmware.bin

then plug it into generic printer

power on the printer

(an optional sanity check test)

power down printer remove the printer and open it on a windows computer the filetype should now be .cur file meaning it implemented the firmware to the board.

reference to github [here](#) - *NOTE: Prior to flashing Katapult it is recommended to do a full chip erase. Doing so allows Katapult to detect that no application is present and enter the bootloader. This is required to enter the bootloader if you have not configured an alternative method of entry.*

The server itself(repetier)

Initial set up of server

The server itself(repetier)

Adding a Marlin based printer

The Cabinet

designed by gianni ;)

The Cabinet

Smart features

List of smart features

The Cabinet

Advanced Material System(AMS)

The Cabinet

Human interface

The Cabinet

Construction

Editing Klipper and settings for custom commands

This is to help someone who wants to add custom G-code or commands that will allow for further control of the printers.

When it comes to Klipper this can be a lot more low level and thus can create just about any situation as we can go as far as adding a whole other axis to a printer.

So this should be a short guide on how to start editing commands and klipper firmware to just make adjustments. see the Klipper set up guide for guides on how to set up new instances, printers or even lower level control settings.

there will be a section for doing this in another firmware if we still access different firmwares on the server.

Klipper:

Editing Klipper and settings for custom commands

Klipper firmware adjustments

Editing Klipper and settings for custom commands

Klipper custom G-code commands

Current klipper setup

currently how we have the printers set up.

Modifcations testing automattions etc.

Current klipper setup

current troubleshooting

Filament runout sensor-

The runout sensor triggers once and pauses the print. seemingly this does not occur again when it triggers a second time.

We need to test if we can still pause the print after the initial runout sensor in the case of longer prints. (this is currently inconclusive)