

# Klipper

Klipper is an alternative firmware for 3D printers' micro-controllers. The default firmware for most 3D printers is Marlin. Klipper consists of 2 parts, the micro-controller firmware to control basic motor and print head and software running on an attached general purpose computer like a Raspberry Pi or a PC.

Details on <https://www.klipper3d.org>

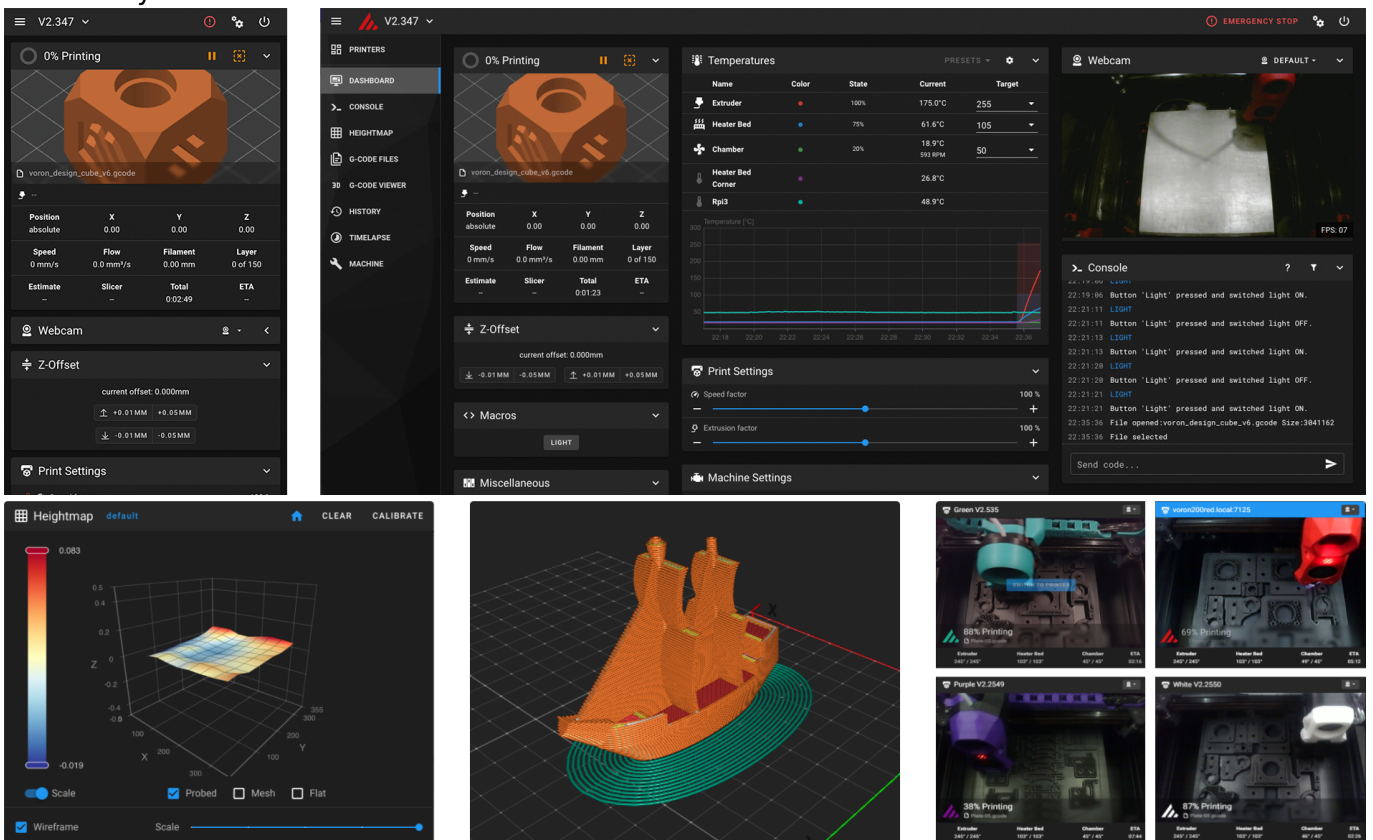
Octoprint was designed for Marlin firmwares, but can work with Klipper through a plugin: <https://all3dp.com/2/install-octoprint-klipper-single-board-computer-sbc/>

Installing Klipper and OctoPrint: The tool of our choice is [Klipper Installation And Update Helper \(KIAUH\)](#), which streamlines the installation process by reducing user inputs to the bare minimum and adding a graphical interface. It also helps manage updates and removal of every component.

In the Octoprint Settings tab, navigate to the "Behavior" sub-tab and select the "Cancel any ongoing prints but stay connected to the printer" option. Click "Save".

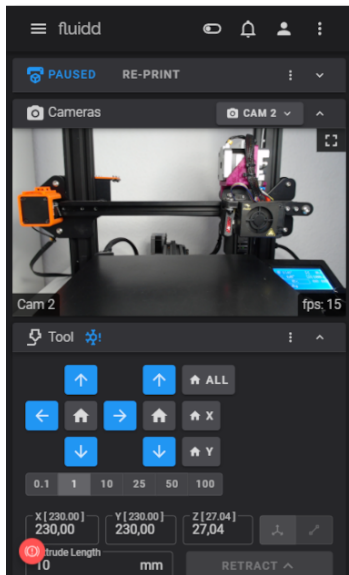
[Arksine/Moonraker](#) is a Python 3 based web server that exposes APIs which client applications can use to interact with Klipper.

There are several Web interfaces that can interact with Klipper through Moonraker's APIs: Octoprint [Mainsail](#) by Mainsail-Crew

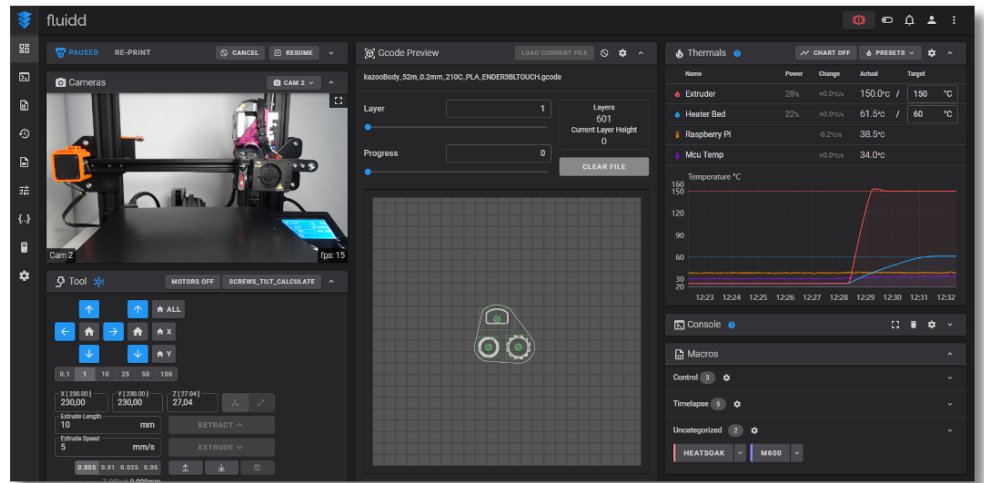


[Fluidt](#) by Cadriel

### mobile



### desktop



Touchscreen GUI: [KlipperScreen](#) by jordanruthe

[Obico for Klipper](#) is a Moonraker plugin that enables the Klipper-based 3D printers to connect to [Obico](#). This provides remote access as well as AI Failure detection.

[PrettyGCode for Klipper](#)

[OctoEverywhere](#) Octoprint Plugin for remote access/monitoring and AI Failure detection

General setup info for Klipper:

<https://www.youtube.com/watch?v=WITzVUTOGXQ&list=PLC4bOo0vesmLKXC2iWGTRBbbjXiHDJ3Xz>

3D Printer Accelerometer, very useful for improved printing speeds with Klipper: [adx1345](#)

[accelerometer https://www.klipper3d.org/Measuring\\_Resonances.html](https://www.klipper3d.org/Measuring_Resonances.html)

[https://www.reddit.com/r/klippers/comments/z38v02/adx1345\\_via\\_usb/](https://www.reddit.com/r/klippers/comments/z38v02/adx1345_via_usb/)

[https://dfh.fm/products/kusba-adx1345-accelerometer-by-xbst\\_](https://dfh.fm/products/kusba-adx1345-accelerometer-by-xbst_)

Extruder/bed mount design: <https://www.thingiverse.com/thing:5276353/comments>

docker setup for klipper/moonraker/mainsail (outdated)

[https://www.reddit.com/r/klippers/comments/lv3pxx/docker\\_setup\\_for\\_klippermoonrakermainsail/](https://www.reddit.com/r/klippers/comments/lv3pxx/docker_setup_for_klippermoonrakermainsail/)

Docker setup for klipper/moonraker and various frontends: <https://github.com/mkuf/prind>

<https://hub.docker.com/r/mkuf/klipper>

Cura plugin for improved printing of circular areas with Klipper: [arcwelder cura plugin](#)

Klipper config file for the Creality Ender 3 S1:

<https://raw.githubusercontent.com/Klipper3d/klipper/master/config/printer-creality-ender3-s1-2021.cfg>



```
wget
https://raw.githubusercontent.com/mkuf/prind/main/docker-compose.extra.make.
yaml -O docker-klipper-make.yaml
mkdir config
touch config/build.config
alias make="docker compose -f docker-klipper-make.yaml run --rm make"
make menuconfig
make
#make flash FLASH_DEVICE=/dev/serial/by-id/<my printer>
```

```
# This file contains pin mappings for the stock 2021 Creality Ender 3
# S1 & S1 Pro. To use this config, check the STM32 Chip on the
# Mainboard, during "make menuconfig" select accordingly either the
```

```
# STM32F103 with "28KiB bootloader" or the STM32F401 with
# "64KiB bootloader" and serial (on USART1 PA10/PA9) for both.

# For a direct serial connection, in "make menuconfig" select
# "Enable extra low-level configuration options" and Serial
# (on USART2 PA3/PA2), which is on the 10 pin IDC cable used
# for the LCD module as follows: 3: Tx, 4: Rx, 9: GND, 10: VCC

# Flash this firmware by copying "out/klipper.bin" to a SD card and
# turning on the printer with the card inserted. The filename
# must be changed to "firmware.bin"

# With STM32F401, you might need to put "firmware.bin" in a
# folder on the SD card called "STM32F4_UPDATE" in order to flash.

# See docs/Config_Reference.md for a description of parameters.
```

## Configuring Klipper/Moonraker

All Runtime Configs are stored within config of this Repo.

Update config/printer.cfg with your Klipper config, set the serial device and make sure to not remove the existing Macros as they are required by fluidd/mainsail. See Klipper3d Docs for Reference

Make sure to update cors\_domains and trusted\_clients within moonraker.cfg to secure your moonraker api from unwanted access. See Moonraker Docs for Reference

```
https://github.com/mkuf/prind#advanced-topics
https://github.com/mkuf/prind#input-shaper-calibration
```

```
mount /dev/sdc1 /mnt/usb
cp out/klipper.bin /mnt/usb
mkdir /mnt/usb/STM32F4_UPDATE
cp out/klipper.bin /mnt/usb/STM32F4_UPDATE/firmware.bin
umount /mnt/usb
```

## Links

<https://github.com/Klipper3d/klipper/blob/master/config/printer-creality-ender3-s1-2021.cfg>  
<https://3dprintbeginner.com/how-to-install-klipper-on-ender-3-s1/>  
[https://github.com/zellneralex/klipper\\_config/blob/master/moonraker.conf](https://github.com/zellneralex/klipper_config/blob/master/moonraker.conf)  
<https://moonraker.readthedocs.io/en/latest/configuration/>  
[https://plugins.octoprint.org/plugins/arc\\_welder/](https://plugins.octoprint.org/plugins/arc_welder/)  
<https://github.com/FormerLurker/ArcWelderPlugin/#arc-welder-anti-stutter>

<https://github.com/mkuf/prind/blob/main/docker-compose.yaml>

<https://github.com/mkuf/prind#input-shaper-calibration> <https://hub.docker.com/r/mkuf/klipper>

<https://raw.githubusercontent.com/Klipper3d/klipper/master/config/printer-creality-ender3-s1-2021.cfg>

From:

<http://wuff.dyndns.org/> - **Wulf's Various Things**

Permanent link:

<http://wuff.dyndns.org/doku.php?id=3dprinter:klipper>

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