

User Guide for FW Upgrade Tool on a Mac

A) Creating a bootable USB Disk

1. Requirements

- a. A 1GB or larger USB stick/flash drive
- b. An Apple computer or laptop running macOS
- c. An ISO file: Seagate_DLMC_ST7S1031_v1.iso

2. Prepare the USB stick

To ensure maximum compatibility with Apple hardware, we're going to first blank and reformat the USB stick using Apple's 'Disk Utility'.

- a. Launch Disk Utility from Applications>Utilities or Spotlight search
- b. Insert your USB stick and observe the new device added to Disk Utility
- c. Select the USB stick device and select Erase from the tool bar (or right-click menu)
- d. Set the format to MS-DOS (FAT) and the scheme to GUID Partition Map
- e. Check you've chosen the correct device and click Erase

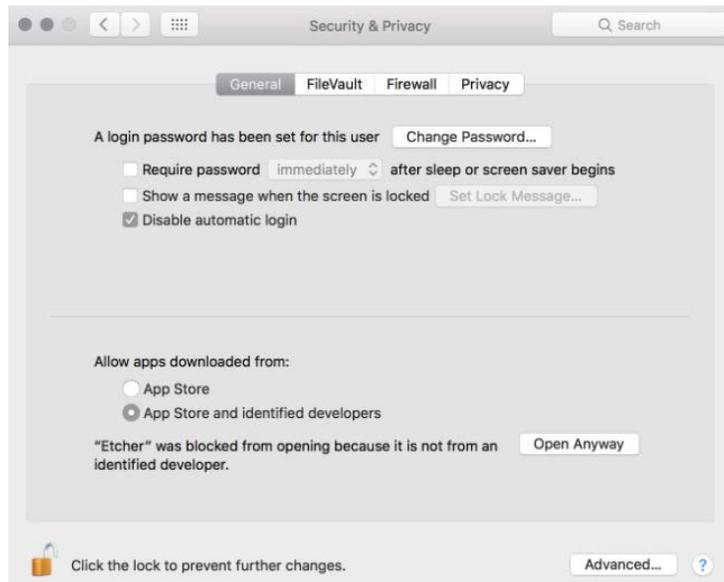


Warning: Disk Utility needs to be used with caution as selecting the wrong device or partition can result in data loss.

3. Install and run Etcher

To write the ISO file to the USB stick, we're going to use a free and open source application called Etcher (<https://github.com/resin-io/etcher>). After downloading this and clicking to mount the package, Etcher can either be run in-place or dragged into your Applications folder.

By default, recent versions of macOS block the running of applications from unidentified developers. To side-step this issue, enable 'App Store and identified developers' in the 'Security & Privacy' pane of System Preferences. If you are still warned against running the application, click 'Open Anyway' in the same pane.



4. Etcher configuration

Etcher will configure and write to your USB device in three stages, each of which needs to be selected in turn:

- Select image will open a file requester from which should navigate to and select the ISO file (Seagate_DLMC_ST7S1031_v1.iso).
- Select drive, replaced by the name of your USB device if one is already attached, lets you select your target device. You will be warned if the storage space is too small for your selected ISO.
- Flash! will activate when both the image and the drive have been selected. As with Disk Utility, Etcher needs low-level access to your storage hardware and will ask for your password after selection.



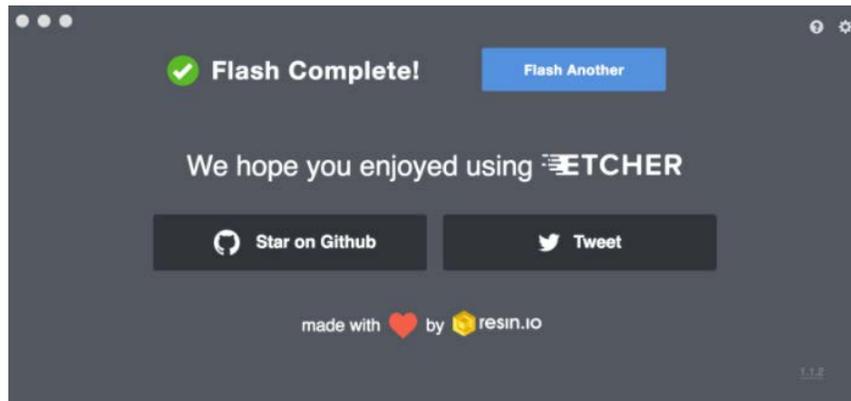
5. Write to device

After entering your password, Etcher will start writing the ISO file to your USB device.

The Flash stage of the process will show progress, writing speed and an estimated duration until completion. This will be followed by a validation stage that will ensure the contents of the USB device are identical to the source image.

When everything has finished, Etcher will declare the process a success.

Congratulations! You now have Ubuntu on a USB stick, bootable and ready to go.



Warning: After the write process has completed, macOS may inform you that 'The disk you inserted was not readable by this computer'. Don't select Initialise. Instead, select Eject and remove the USB device.

Alternate macOS command lines to make USB Bootable Disk for a more manual approach:

Note: this procedure requires an .img file that you will be required to create from the .iso file provided.

TIP: Drag and Drop a file from Finder to Terminal to 'paste' the full path without typing and risking type errors.

1. Download the desired file
2. Open the Terminal (in /Applications/Utilities/ or query Terminal in Spotlight)
3. Convert the .iso file to .img using the convert option of hdiutil
`hdiutil convert /path/to/Seagate_DLMC_ST7S1031_v1.iso -format UDRW -o /path/to/Seagate_DLMC_ST7S1031_v1.img`
*Note: OS X tends to put the .dmg ending on the output file automatically.
4. Run
`diskutil list`
to get the current list of devices
5. Insert your flash media
6. Run
`diskutil list`
again and determine the device node assigned to your flash media (e.g. /dev/disk2)
7. Run
`diskutil unmountDisk /dev/diskN`
(replace N with the disk number from the last command; in the previous example, N would be 2)
*If you see the error "Unmount of diskN failed: at least one volume could not be unmounted", start Disk Utility.app and unmount the volume (don't eject).
8. Execute
`sudo dd if=/path/to/Seagate_DLMC_ST7S1031_v1_.img of=/dev/diskN bs=1m`
(replace /path/to/downloaded.img with the path where the image file is located; for example, ./ubuntu.img or ./ubuntu.dmg).
*Using /dev/rdisk instead of /dev/disk may be faster.
*If you see the error dd: Invalid number '1m', you are using GNU dd. Use the same command but replace bs=1m with bs=1M.
*If you see the error dd: /dev/diskN: Resource busy, make sure the disk is not in use. Start Disk Utility.app and unmount the volume (don't eject).

9. Run `diskutil eject /dev/diskN` and remove your flash media when the command completes
10. Restart your Mac and press alt while the Mac is restarting to choose the USB-Stick

Reference tutorial clip: <https://www.youtube.com/watch?v=mndO508xq08>

B) Boot from USB Disk

1. If you want to use your USB stick with an Apple Mac, you will need to restart or power-on the Mac with the USB stick inserted while the Option/alt(⌥) key is pressed. This will launch Apple's 'Startup Manager' which shows bootable devices connected to the machine. Your USB stick should appear as gold/yellow and labelled 'EFI Boot'. Selecting this will lead you to the standard Ubuntu boot menu.



C) After booting up from USB disk

1. After Firmware Upgrade Tool is automatically launched, a list of SSD is shown and automatically identifies drives using FW STxS1030 with a "v" in front of the device number.

```
test1234@test1234: ~
-----
                Seagate Firmware Upgrade Tool V1.0
-----
v(1)/dev/sdb  FW:ST0S1030  SN:110607810C0207378F00
v(2)/dev/sdc  FW:ST0S1030  SN:11CD07810C020D1B1F0C
v(3)/dev/sdd  FW:ST7S1030  SN:113107810C02042D8F02
v(4)/dev/sde  FW:ST7S1030  SN:115407811F020E331F07
(5)

                (1)(2)(3)(4)(5) Select Device
                (S)can Device
                (R)un Firmware Upgrade
                (E)xit

selection : █
```

Enter command following "selection:"

1~5: select or deselect target SSD

S: rescan device

R: start to run FW upgrade

E: exit & shutdown

- When FW Upgrade process completed, new FW revision will be updated, and pass/fail results will be displayed

```
test1234@test1234: ~
-----
                Seagate Firmware Upgrade Tool V1.0
-----
v(1)/dev/sdb  FW:ST0S1031  SN:110607810C0207378F00  [PASS]
v(2)/dev/sdc  FW:ST0S1031  SN:11CD07810C020D1B1F0C  [PASS]
v(3)/dev/sdd  FW:ST7S1031  SN:113107810C02042D8F02  [PASS]
v(4)/dev/sde  FW:ST7S1031  SN:115407811F020E331F07  [PASS]
(5)

                (1)(2)(3)(4)(5) Select Device
                (S)can Device
                (R)un Firmware Upgrade
                (E)xit

Message : Run Device 4...
1: [PASS] done !
2: [PASS] done !
3: [PASS] done !
4: [PASS] done !
                << press and key to continue >>
```

- If all SSDs have completed and new FW revision shown as STxS1031, type "E" to exit the program.
- Remove USB Disk and then restart your Mac System.