Platform Update, Rescue and Recovery - Tegra Devices

Intro

The process to factory reset a MinION Mk1C has the following steps:

1. Download an SDCard image to your PC.
2. Copy the SDCard image to a blank Micro SDCard.
3. Insert the SDCard into the MinION Mk1C and power it on.
4. Follow the on-screen instructions.

The rest of this page will guide you through these steps.

You might already have an SDCard with the image already copied to it. In which case, steps (1.) and (2.) can be skipped.

Download the SDCard Image

SDcard images can be found at `//oxfordnanolabs.local/public/common/Platforms/SDCard Images`.

Images are named as follows:

sdcard_201111-1942_20.06.17~xenial.img.gz

The green part is the date and time of the last OS update that has been applied to the image. In this example, `201111-1942` refers to 11-Nov-2020 at 19:42.

The red part is the version number of the `ont-mk1c-release` package that is contained in the image.

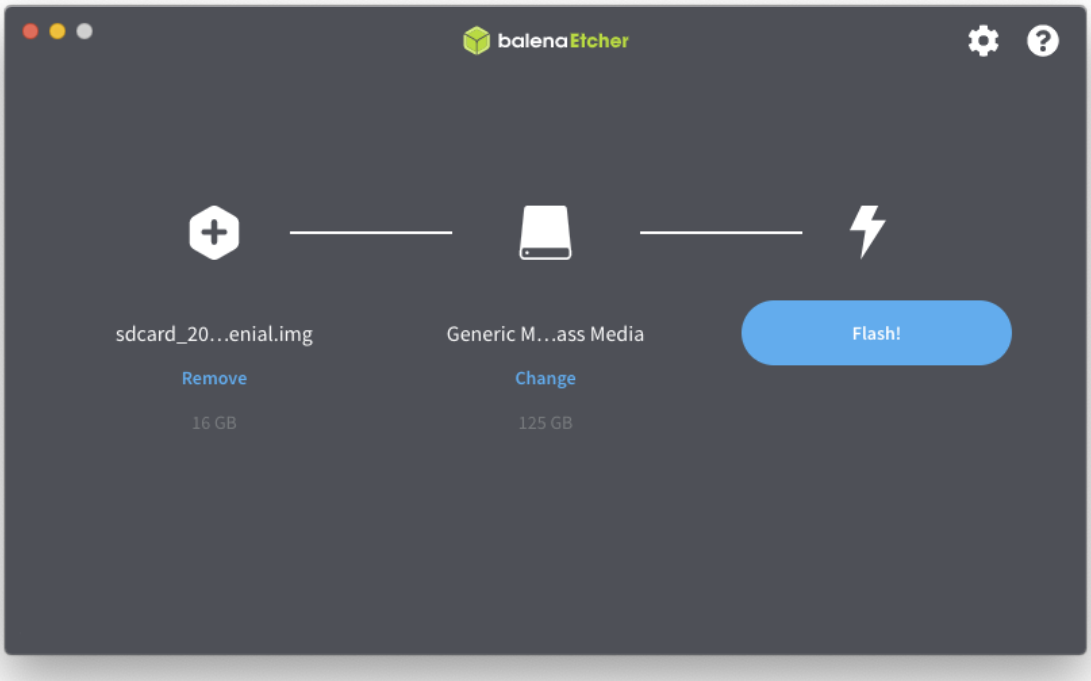
Download the version you require to your local machine.

Copy the SDCard Image to a Blank SDCard

You will need a Micro SDCard (micro SDXC) that is 16GB or larger. The faster the better. You will also need to be using a machine with an SDCard slot or have a USB SDCard adapter.

macOS

To copy the resulting image to an SDCard use a GUI tool such a balena Etcher:



The macOS implementation of dd is painfully slow so best avoided.

Linux

Linux's dd command :

```
gunzip -c <image_file>.img.gz | sudo dd of=/dev/<sdcard_device> bs=8M status=progress
```

Using the SDCard

Factory Restore

Power down the device that you wish to restore.

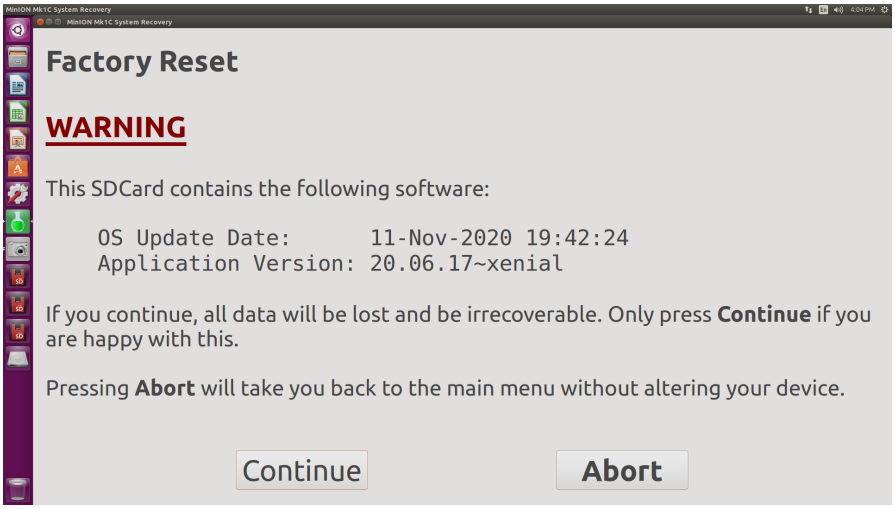
Insert the SDCard and power the device on.

It will boot from the SDCard and, after about 30s, show the following screen:

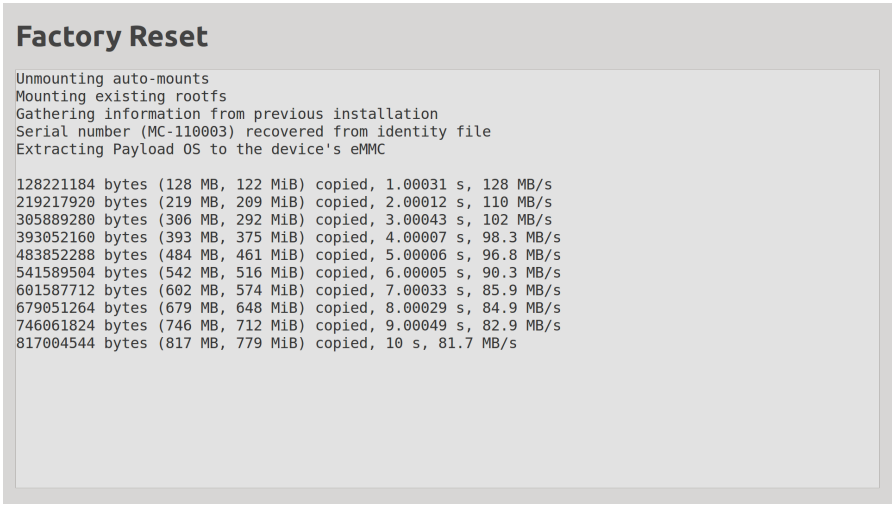
Select **Factory Reset** to re-image the device with the software on the SDCard.

⚠️ You will see the following warning advising that all data on the device will be lost. If do not want to continue, press **Abort**.

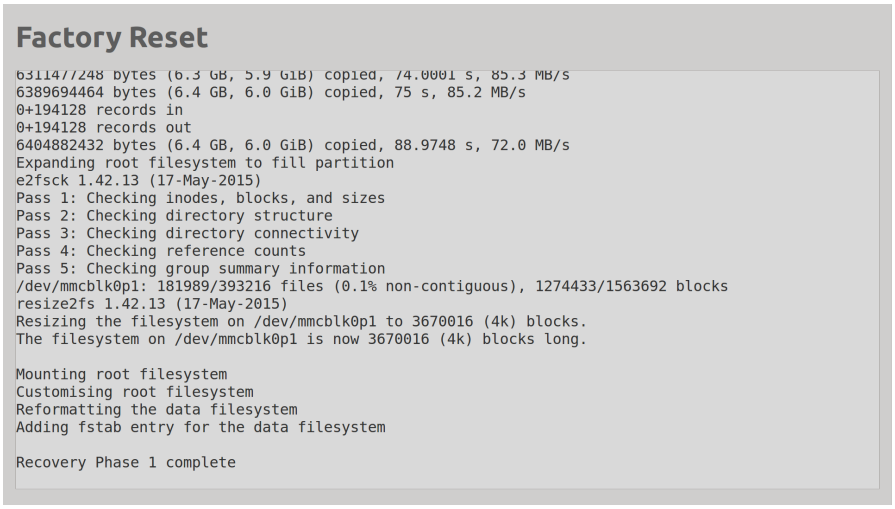
If you press **Continue**, the software versions noted will be installed on your device.



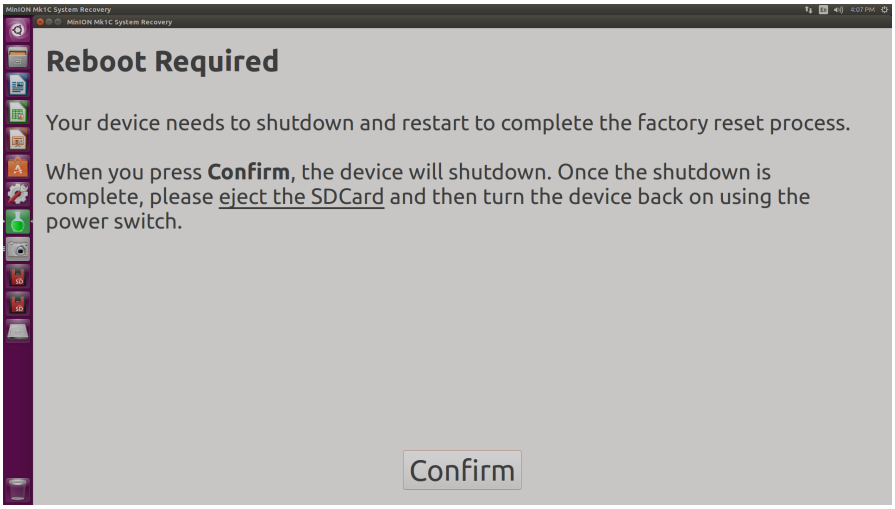
A disk image from the SDCard will be copied to the device:



When the copy is complete, you will see the following message saying *Recovery Phase 1 Complete* :



After a short time, the screen will update to:



Press **Confirm** and wait for the device to shutdown. When it has shutdown (screen and the five white LEDs are off), remove the SDCard and turn the device on again.

The device will reboot and, after about 30s, the Software Installation screen will be displayed:

ToDo

The screen shows the progress of the software installation and can take several minutes to complete.

Once it is complete, the device will automatically reboot and the MinKNOW login screen will be displayed.

Device Recovery (expert users only)

Power down the device that you wish to restore.

Connect your device to the LAN using an RJ45 cable. The LAN should provide a DHCP service for automatically configuring IP connections.

Insert the SDCard and power the device on.

It will boot from the SDCard and, after about 30s, show the following screen:

Select **Recover via SSH** to be shown information about how to connect to the device via SSH.

Use the information provided to connect to your device using SSH.

Once connected, you can mount the the device's root filesystem from `/dev/mmcblk0p1` and the `/data` filesystem from `/dev/nvme0n1`.

Project Notes and Build Instructions

You can find information on this project and how to build a new SDCard image on the Create MK1c Recovery SDCard page.