FLASHING THE COMPUTE MODULE eMMC

The Compute module has an on-board eMMC device connected to the primary SD card interface. You can use normal Raspberry Pi operating system images, such as Raspbian. This guide explains how to write data to the eMMC storage.

STEPS TO FLASH THE eMMC ON A COMPUTE MODULE

You need a host Linux system; a Raspberry Pi will do. A Mac will not, there is a bug in the BCM2835 bootloader which means we return slightly the wrong information, Windows and Linux don't care and carry on regardless (it's completely benign) but MacOS drops the packet.

On your host system:

Git may produce an error if the date is not set correctly, so on a Raspberry Pi enter the following:

```
sudo date MMDDhhmm
```

where MM is month, DD day and hh mm hours and minutes respectively.

Clone the usbboot tool repository and install libusb:

```
git clone --depth=1 https://github.com/raspberrypi/tools

cd tools/usbboot

sudo apt-get install libusb-1.0-0-dev
```


Build the usbboot tool:

```
make

sudo make install
```


Run the usbboot tool and it will wait for a connection:

```
sudo rpiboot
```


Now plug the host machine into the USB slave port of the *hasseb RaspberryPi board* and power on the device. The usbboot tool will discover the Compute Module and send boot code to allow access to the eMMC. Once complete you will see a new device appear; this is commonly /dev/sda but it could be another location such as /dev/sdb, so check in /dev/ before running rpiboot so you can see what changes.

You now need to write a raw OS image (such as Raspbian) to the device. Note the following command may take some time to complete, depending on the size of the image:

```
sudo dd if=raw_os_image_of_your_choice.img of=/dev/sda bs=4MiB
```

Once the image has been written, unplug and re-plug the USB; you should see 2 partitions appear (for Raspian) in /dev. In total you should see something similar to this:

/dev/sda   <- Device

/dev/sda1 <- First partition (FAT)

/dev/sda2 <- Second partition (Linux filesystem)

The /dev/sda1 and /dev/sda2 partitions can now be mounted normally.

Make sure nothing is plugged into the USB slave port of the *hasseb RaspberryPi board*. Power cycling the IO board should now result in the Compute Module booting from eMMC.