

## How to Flash Sparky eMMC with the help of linux loaded SD card

**This instruction useful for users who are aware of basic Linux commands.**

Also care should be taken while inserting SD card in to the Alu Case slot. Align it properly and insert.

- 1) First boot the sparky with dietpi or any linux version of Sparky, working eMMC should be available on emmc slot of Sparky.

**Note :** by default sparky boots from SD card if SD and eMMC are present on sparky.

- 2) Check the devices with fdisk -l command.

/dev/mmcblk0 is the first boot device , here it is SD card

/dev/mmcblk1 is the 2<sup>nd</sup> device (emmc) available on system

- 3) Copy the New downloaded image to the SD card /home folder.

With the help of winscp or from USB pen drive or use below linux command ( remove old version file if any downloaded)

```
root@DietPi:/home# wget http://dietpi.com/downloads/images/DietPi_SparkySBC-ARMv7-Stretch_AlloGUI.7z
```

Normal extracted size of dietpi images are nearly 2GB. Assume on SD card >5GB free size available normally.

Extract the 7z file

```
root@DietPi:/home# 7z e DietPi_SparkySBC-ARMv7-Stretch_AlloGUI.7z
```

Example shows sparky unit booted from 8GB Sd card , and inside system used 8GB eMMC, (actual units uses 16GB or higher size eMMC). So **from the size you can differentiate the eMMC and SD card.**

```
root@DietPi:~# fdisk -l
Disk /dev/mmcblk0: 7.4 GiB, 7948206080 bytes, 15523840 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x3cad75b6

Device            Boot    Start        End    Sectors    Size Id Type
/dev/mmcblk0p1          16384     114687     98304      48M  6 FAT16
/dev/mmcblk0p2       114688  15523839  15409152    7.4G  83 Linux

Disk /dev/mmcblk1: 7.2 GiB, 7734296576 bytes, 15106048 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x3cad75b6

Device            Boot    Start        End    Sectors    Size Id Type
/dev/mmcblk1p1          16384     114687     98304      48M  6 FAT16
/dev/mmcblk1p2       114688  15106047  14991360    7.2G  83 Linux
```

- 4) Using linux dd command copy the Image to emmc (mmcblk1)

Example : command below to flash the OS image to the mmcblk1 ( type the correct OS version file name)

```
root@DietPi:/home# dd if=DietPi_v6.11_SparkySBC-ARMv7-Stretch_AlloGUI.img of=/dev/mmcblk1
```

```
root@DietPi:/home# ls
dietpi  DietPi_SparkySBC-ARMv7_V6.7z  DietPi v6.1 SparkySBC-ARMv7-Stretch_AlloGUI-v5.img
root@DietPi:/home# dd if=DietPi_v6.1_SparkySBC-ARMv7-Stretch_AlloGUI-v5.img of=/dev/mmcblk1
3801088+0 records in
3801088+0 records out
1946157056 bytes (1.9 GB, 1.8 GiB) copied, 290.145 s, 6.7 MB/s
root@DietPi:/home#
```

Switch off the unit , remove sd card and boot with eMMC.