

phyCORE-i.MX6 eMMC linux / phyCORE-i.MX6 eMMC flash linux image

- [barebox](#)
- [linuxeMMC/SD](#)
- [Linux eMMC](#)
 - [sd](#)
 - [eMMC](#)

barebox

bareboxeMMCbareboxeMMCimageeMMClinux

http://www.phytec.de/documents/l-814e-3-imx6-bsp-manual/#Updating_eMMC_from_Network

bareboxbarebox

```
barebox$ detect mmc3
barebox$ cp -v /mnt/tftp/[sdcard] /dev
/mmc3                                     # tftp
barebox$ cp -v /mnt/mmc/[sdcard] /dev
/mmc3                                     # sdcard
```

[sdcard] machinesdcard<ftp://ftp.phytec.cn/bsp>

tftp<https://wiki.phytec.com/pages/viewpage.action?pageId=66489092#id-/bootboardfromnetwork-tftp>

barebox, barebox,

barebox

```
barebox$ barebox_update -t mmc3 /mnt/tftp/barebox.
bin
barebox$ cp /dev/zero /dev/mmc3.barebox-
environment                               # barebox
```

```
barebox$ cp /mnt/tftp/[zImage] /mnt/emmc/zImage
barebox$ cp /mnt/tftp/[oftree] /mnt/emmc/oftree
```

linuxeMMC/SD

- http://www.phytec.de/documents/l-814e-3-imx6-bsp-manual/#Resize_the_ext4_Root_Fileystem

emmc/SD

```
root@phyboard-mira-imx6-5:~# parted -m /dev/mmcblk3 unit B print
BYT;
/dev/mmcblk3:7616856064B:sd/mmc:512:512:msdos:MMC Q2J55L;;
1:4194304B:12582911B:8388608B:::lba;
2:12582912B:343932927B:331350016B:ext4::;
```

mmcblk37616856064Bmmcblk

mmcblk317616856063B

```
root@phyboard-mira-imx6-5:~# parted /dev/mmcblk3 resizepart 2 7616856063B
Information: You may need to update /etc/fstab.
```

mmcblk3mmcblk3p2

```
root@phyboard-mira-imx6-5:~# resize2fs /dev/mmcblk3p2
resize2fs 1.42.9 (28-Dec-2013)
Filesystem at /dev/mmcblk3p2 is m[ 94.850593] EXT4-fs (mmcblk3p2): resizing filesystem from 323584 to 7426048
blocks
ounted on /; on-line resizing required
old_desc_blocks = 2, new_desc_blocks = 29
[ 95.055180] EXT4-fs (mmcblk3p2): resized filesystem to 7426048
[ 95.133065] random: nonblocking pool is initialized
The filesystem on /dev/mmcblk3p2 is now 7426048 blocks long.
```

```
root@phyboard-mira-imx6-5:~# df -h
Filesystem      Size      Used Available Use% Mounted on
/dev/root        6.9G    235.7M      6.3G   4% /
devtmpfs         871.0M          0      871.0M   0% /dev
tmpfs            1005.2M          0     1005.2M   0% /dev/shm
tmpfs            1005.2M      8.3M     996.9M   1% /run
tmpfs            1005.2M          0     1005.2M   0% /sys/fs/cgroup
tmpfs            1005.2M          0     1005.2M   0% /tmp
tmpfs            1005.2M      4.0K     1005.2M   0% /var/volatile
```

Linux eMMC

SDlinux, linuxeMMCbarebox, eMMCeMMClinuxeMMC

sd

eMMCeMMCftpsp

BSPbuild/conf/local.conf

```
IMAGE_INSTALL_append = " util-linux dosfstools coreutils"
```

[SD / how to make bootable sd card sd](#)

sdlinuxsdeMMCsdcardsdcard/dev/mmcblk0

eMMC

imagestftp

```
root@phyboard-mira-imx6-5:~# mkdir images
root@phyboard-mira-imx6-5:~# tftp -g -r barebox.bin 192.168.1.253
root@phyboard-mira-imx6-5:~# tftp -g -r zImage-phyboard-mira-imx6-5.bin 192.168.1.253
root@phyboard-mira-imx6-5:~# tftp -g -r zImage-imx6q-phytec-mira-rdk-emmc.dtb 192.168.1.253
root@phyboard-mira-imx6-5:~# tftp -g -r phytec-qt5demo-image-phyboard-mira-imx6-5.tar.gz 192.168.1.253
```

eMMCflash_emmc.sh

```
#!/bin/sh

if [ `expr 0 + 0${1}` -le 0 ]; then
    echo "usage $0: <sd_size in gb>"
    exit 1;
fi

# base config
export DEST=/dev/mmcblk3
export DESTP=${DEST}p
export MNTPOINT=/mnt/sd
export DEST_SIZE=`expr ${1} \* 900 \* 1024`
# images
export BASE_DIR=/home/root/images
export BARE_IMG=${BASE_DIR}/barebox.bin
export ZIMAGE=${BASE_DIR}/zImage-phyboard-mira-imx6-5.bin
export OFTREE=${BASE_DIR}/zImage-imx6q-phytec-mira-rdk-emmc.dtb
export ROOTFS=${BASE_DIR}/phytec-qt5demo-image-phyboard-mira-imx6-5.tar.gz

# start
rm -rf ${MNTPOINT}
mkdir -p ${MNTPOINT}

echo Wipe emmc device
dd if=/dev/zero of=${DEST} bs=1024 count=0 seek=${DEST_SIZE}
dd if=/dev/zero of=${DEST} bs=512k count=16 conv=fsync

echo Create Partitions
sfdisk -u S ${DEST} << EOF
    1 : start=      8192, size=  16384, Id=c
    2 : start=  24576,           Id=83
EOF

echo Flash Barebox
dd if=${BARE_IMG} of=${DEST} bs=512 skip=2 seek=2 conv=fsync
#dd if=${BARE_ENV} of=${DEST} bs=512 seek=1792

echo Flash Kernel/Devicetree
yes | mkfs.vfat ${DESTP}1
mount ${DESTP}1 ${MNTPOINT}
cp ${ZIMAGE} ${MNTPOINT}/zImage
cp ${OFTREE} ${MNTPOINT}/oftree
umount ${MNTPOINT}

echo Flash Rootfs
yes | mkfs.ext4 ${DESTP}2
mount ${DESTP}2 ${MNTPOINT}
tar xf ${ROOTFS} -C ${MNTPOINT}
umount ${MNTPOINT}
```

eMMClinux

```
root@phyboard-mira-imx6-5:~# chmod +x flash_emmc.sh
root@phyboard-mira-imx6-5:~# ./flash_emmc.sh 4 # 4GB emmc
root@phyboard-mira-imx6-5:~# ./flash_emmc.sh 8 # 8GB emmc
```

// start a service or application when boot

eMMClinux

```
root@phyboard-mira-imx6-5:~# df -h
Filesystem      Size      Used Available Use% Mounted on
/dev/root        6.8G    259.0M      6.2G   4% /
devtmpfs         871.0M          0      871.0M   0% /dev
tmpfs            1005.2M          0     1005.2M   0% /dev/shm
tmpfs            1005.2M      8.3M      996.9M   1% /run
tmpfs            1005.2M          0     1005.2M   0% /sys/fs/cgroup
tmpfs            1005.2M          0     1005.2M   0% /tmp
tmpfs            1005.2M      4.0K     1005.2M   0% /var/volatile
```