

PXE Client configuration

The clients have to be set up in order to boot from the PXE server and not from the internal flash storage or HDD.

For CXP modules the network boot option in the BIOS has to be activated. In most cases that is enough.

The Apalis and Colibri modules must have an u-boot that supports booting over network (version and higher). And some things have to be set in the u-boot environmentals as described below.

The u-boot can be reached by connecting a serial console to the module and then pressing any key when starting the module to abort the booting process.

Christmann Apalis Exynos

Tested with **U-Boot 2015.07-rc1-00408-g012681b-dirty**

The following variables have to be set in u-boot:

```
setenv usbethaddr
setenv nfsboot 'usb reset; dhcp; mmc dev 1; mmc read 22000000 3000 100;
bootm 23e00000 - 22000000'
setenv bootcmd 'run nfsboot; usb start; mmc dev 1; mmc read 0x20008000 600
2700; mmc read 0x22000000 3000 100; bootm 0x20008000 - 0x22000000'
setenv bootargs 'root=/dev/nfs rw netdevwait console=ttySAC2,115200n8 init -
-no-log'
```




But it is necessary at the moment to have an SD card with the original image, or with the flattened device tree blob at sector 3000 of the SD card.



At the moment the kernel stops booting with `drm_kms_helper: panic occurred, switching back to text console`

Toradex Apalis T30

Tested with **U-Boot 2014.10**

Only the option for `nfsboot` has to be added to the `bootcmd` in u-boot. Note that in the following steps the MAC address has to be replaced with the actual address of the module. 

If only network boot is desired the following commands have to be executed in the u-boot environment:

```
setenv serverip
```

```
setenv ipaddr
setenv ethaddr 00:14:2D:00:00:00
setenv nfsboot 'run setup; setenv bootargs ${defargs} ${nfsargs}
${setupargs} ${vidargs}; echo Booting via DHCP/TFTP/NFS...; dhcp
${kernel_addr_r} && bootm ${kernel_addr_r} - ${dtbparam}'
setenv bootcmd 'run nfsboot; echo; echo nfsboot failed'
saveenv
```

If the original bootorder should not be replaced the commands are the following:

```
setenv serverip
setenv ipaddr
setenv ethaddr 00:14:2D:00:00:00
setenv bootcmd 'run nfsboot; echo; echo nfsboot failed; run emmcboot; echo;
echo emmcboot failed'
saveenv
```

But this will result in one error message *** ERROR: `serverip' not set because the module then tries to load a flash image from a server whos IP is not set in serverip.

Toradex Colibri T20

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