

**NOTE**

ramdisk\_size needs to be set if the ramdisk uncompress file size is bigger than default setting. It should be more than ramdisk uncompress file size. The file size information is printed in Yocto build log.

## 2. Booting Up the System

Execute the following commands to TFTP the images to the board, then boot into Linux.

```
=>tftp 1000000 <uImage_name>  
=>tftp 5000000 fsl-image-core-<platform>.ext2.gz.u-boot  
=>tftp 2000000 <platform_dtb_name>  
=>bootm 1000000 5000000 2000000
```

Now the board will boot into Linux using the images generated by Yocto.

### 4.4.8.6.2 Ramdisk Deployment from Flash

Programming the kernel and ramdisk into flash will allow you to boot up the board afterwards without the need to re-download images.

#### 1. Setting U-Boot Environment

The images generated by Yocto allow you to perform ramdisk deployment from flash. Before performing ramdisk deployment from flash, the U-Boot environment variables need to be configured. Refer to Configuring U-Boot Network Parameters to set the U-Boot environment variables. In addition, execute the following commands at the U-Boot prompt to prepare for NFS deployment from flash:

```
=>setenv ramargs `setenv bootargs root=/dev/ram rw console=ttyS0,115200`  
=>setenv bootcmd `run ramargs; bootm <kernel_start_addr> <ramdisk_start_addr>  
<dtb_start_addr>`  
=>saveenv
```

Now U-Boot is ready for flash deployment.

#### 2. Programming Kernel to NOR Flash

The kernel should be downloaded to the RAM using TFTP then copied to the flash address <kernel\_start\_addr>. At the U-Boot prompt, use the following commands to program the kernel to flash:

```
=>tftp 1000000 <uImage name>  
=>protect off <kernel_start_addr> +$filesize  
=>erase <kernel_start_addr> +$filesize  
=>cp.b 1000000 <kernel_start_addr> $filesize  
=>protect on <kernel_start_addr> +$filesize
```

#### 3. Programming Ramdisk to NOR Flash

The ramdisk should be downloaded to the RAM then copied to the flash address <ramdisk\_start\_addr>. At the U-Boot prompt, use the following commands to program the ramdisk to flash:

```
=>tftp 2000000 fsl-image-core-<platform>.ext2.gz.u-boot  
=>protect off <ramdisk_start_addr> +$filesize  
=>erase <ramdisk_start_addr> +$filesize  
=>cp.b 2000000 <ramdisk_start_addr> $filesize  
=>protect on <ramdisk_start_addr> +$filesize
```

#### 4. Programming Device Tree File to NOR Flash

The dtb file should be downloaded to the RAM, then copied to the flash address <dtb\_start\_addr>. At the U-Boot prompt, use the following commands to program the dtb file to flash:

```
=>tftp c00000 <platform dtb name>
=>protect off <dtb_start_addr> +$filesize
=>erase <dtb_start_addr> +$filesize
=>cp.b c00000 <dtb_start_addr> $filesize
=>protect on <dtb_start_addr> +$filesize
```

#### 5. Booting Up the System

The kernel can boot up automatically after the board is powered on, or the following command can be used to boot up the board at U-Boot prompt:

```
=>boot
```

or

```
=> bootm <kernel_start_addr> <ramdisk_start_addr> <dtb_start_addr>
```

### 4.4.8.6.3 NFS Deployment

#### 1. Generating File System with Yocto

Use Yocto to generate a tar.gz type file system, and uncompress it for NFS deployment.

#### 2. Setting Host NFS Server Environment

a. On the Linux host NFS server, add the following line in the file /etc/exports:

```
<nfs_root_path> <board_ipaddress>(rw,no_root_squash,async)
```

b. Restart the NFS service:

```
/etc/init.d/nfs restart
```

#### NOTE

nfs\_root\_path: the NFS root directory path on NFS server.

#### 3. Setting U-Boot Environment

The NFS file system generated by Yocto allows you to perform NFS deployment. Before performing NFS deployment, the U-Boot environment variables need to be configured. Refer to Configuring U-Boot Network Parameters on page 108 to set the U-Boot environment variables. In addition, execute the following commands at the U-Boot prompt to prepare for NFS deployment:

```
=>setenv bootargs root=/dev/nfs rw nfsroot=<tftp_serverip>:<nfs_root_path>
ip=<board_ipaddr>:<tftp_serverip>:
<your_gatewayip>:<your_netmask>:<board_name>:eth0:off console=ttyS0,115200
=>setenv netdev <ethx>
=>saveenv
```