

Company: NXP

SoC Family: NXP i.MX8M Quad

ACS Version: ACS-IR v23.03_2.0.0

BSA details: BSA v1.0c

BBSR details: BBSR v1.2

Arm SystemReady certification: SystemReady IR v2.0 (level 1) with Security Interface Extension v1.2

Note #1 - Firmware setup

https://www.nxp.com/webapp/sps/download/license.jsp?colCode=L6.1.1_1.0.0_BOOT_8M

Clear the RPMB from U-Boot prompt with:

```
u-boot=> mw 0x60000000 0xc33eebd3;mw 0x60000004 0x9f4c336e
u-boot=> mw 0x60000008 0xc0e28c98;mw 0x6000000c 0x615459b8
u-boot=> mw 0x60000010 0x86cf2b0d;mw 0x60000014 0xf24d8464
u-boot=> mw 0x60000018 0xc6e656ab;mw 0x6000001c 0xe401b71b
u-boot=> mw.b 0x50000000 0 0x400000
u-boot=> mmc rpmb write 0x50000000 0 0x2000 0x60000000
```

Setup the U-Boot environment:

[illegible]

Format the eMMC and create:

- A protective partition of at least 4MB at the start of eMMC user data with attribute bit 0 (required partition) set, to protect U-Boot environment
- An ESP

Example layout:

Num	Start (sector)	End (sector)	Size	Code	Name
1	2048	34815	16.0 MiB	B000	U-Boot boot loader
2	34816	2131967	1024.0 MiB	EF00	EFI system partition

Note #2 - Fedora Server 37 1.7 installation

Install from iso on SD card to eMMC. Linux console must be specified manually from GRUB menu; see the errata.

It is easier to install Fedora when there is only the protective partition and no ESP. To modify the partitions manually:

- Switch from the installer to a shell with `CTRL-b 2`.
- Partition the eMMC with `gdisk /dev/mmcblk0`. Keep the protective partition.

<https://download.fedoraproject.org/pub/fedora/linux/releases/37/Server/aarch64/iso/Fedora-Server-dvd-aarch64-37-1.7.iso>

Note #3 - Debian 11.7.0 bullseye installation

Install from SD card to USB stick. Select `/dev/mmcblk1` as source medium. GRUB must be installed manually; see the errata.

<https://cdimage.debian.org/mirror/cdimage/archive/11.7.0/arm64/iso-dvd/debian-11.7.0-arm64-DVD-1.iso>

Note #4 - OpenSUSE Leap 15.4 Build31.185 installation

Install from iso on SD card to USB stick.

<https://download.opensuse.org/distribution/leap/15.4/iso/openSUSE-Leap-15.4-DVD-aarch64-Media.iso>

Note #5 - Rocky Linux 9.2 Blue Onyx installation

Install from iso on SD card to eMMC. Linux console must be specified manually from GRUB menu; see the errata.

<http://download.rockylinux.org/pub/rocky/9/isos/aarch64/Rocky-9.2-aarch64-minimal.iso>

Note #6 - Fedora IoT 38 20230419.2 installation

Install from iso on SD card to eMMC. Linux console must be specified manually from GRUB menu; see the errata.

<https://download.fedoraproject.org/pub/alt/iot/38/iot/aarch64/iso/Fedora-IoT-ostree-aarch64-38-20230419.2.iso>

Note #7 - Fedora Workstation 37 1.7 (live) installation

Run from iso on SD card.

<https://download.fedoraproject.org/pub/fedora/linux/releases/37/Workstation/aarch64/iso/Fedora-Workstation-Live-aarch64-37-1.7.iso>

Note #8 - openSUSE Tumbleweed Rescue CD Snapshot20230506 (live) installation

Run from iso on SD card.

<https://download.opensuse.org/ports/aarch64/tumbleweed/iso/openSUSE-Tumbleweed-Rescue-CD-aarch64-Current.iso>

List of Errata**Errata #1 - Debian GRUB installation must be finalized manually**

During Debian installation, the "Install the GRUB boot loader" step will fail and manual intervention is necessary to make the installed system bootable.

Select "Execute a shell" and do:

```
# in-target grub-install --no-nvram --force-extra-removable
# in-target update-grub
```

Exit the chroot and the shell to return to the installer and select the "Continue without boot loader" step to finish installation.

See <https://lists.debian.org/debian-boot/2021/11/msg00100.html>.

Errata #2 - Fedora and Rocky Linux console must be specified manually

The Fedora and Rocky Linux installers will not detect the console automatically and it must therefore be specified manually.

From the GRUB menu, edit the boot entry by pressing `e` and add the following to the Linux kernel command line:

```
console=ttymxc0,115200n8
```

Boot the modified entry with `CTRL-x`.