

Arm SystemReady IR v1.0: Errata Document

Company: Lenovo**System:** Lenovo Leez P710 Gateway**SoC Family:** Rockchip RK3399**Firmware Version:** Mainline U-Boot firmware, version 2021.07**ACS Version:** ACS-IR v0.8 BETA 0**BSA Details:** BSA v1.0**EBBR Details:** EBBR v2.0.1**BBR Details:** BBR v1.0**Arm SystemReady certification:** SystemReady IR v1.0 (level 1)**Certification Notes****Note #1 - Firmware must be built from free and open source software components**

The instructions to fetch the sources and build the firmware are detailed in:

<https://gitlab.arm.com/systemready/firmware-build/rk3399-manifest/-/blob/leez-21.08/README.md>

List of Errata**Errata #1 - Debian installation necessitates specific steps**

When installing Debian from SD card, the "Device file for accessing the installation media" must be set to `/dev/mmcblk1`.

When installing Debian to eMMC, a protective partition should be created to preserve the firmware.

To do so, select "Manual" as "Partitioning method", select `mmcblk0` and confirm creation of a new empty partition table. Select the free space and create a new partition of 16 MB located at the beginning of the available space, to use as "Reserved BIOS boot area".

Desired layout:

```
MMC/SD card #1 (mmcblk0) - 31.3 GB MMC BJTD4R
>                1.0 MB      FREE SPACE
```

```
>      #1      14.7 MB      f  biosgrub
>              31.3 GB      FREE SPACE
```

To finish partitioning, select the free space below the newly created partition and select "Automatically partition the free space".

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:

```
# chroot /target
# update-grub
# cd /boot/efi/EFI
# mkdir -v BOOT
# cp -v debian/grubaa64.efi BOOT/bootaa64.efi
```

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

Errata #2 - Fedora installation necessitates specific steps

When installing Fedora, it is necessary to specify the console with GRUB on the Linux kernel command line:

```
console=ttyS2,115200n8 earlycon
```

When installing Fedora to eMMC, a protective partition should be created to preserve the firmware.

At the selection between VNC and text mode, switch to a shell with CTRL-b 2.

Start `gdisk` with:

```
# gdisk /dev/mmcb1k0
```

Confirm the creation of a blank GPT if necessary and create a new partition with `n`. It should start at the beginning of the eMMC and must have a size of at least 16 MB. Use hex code `ef02` to specify a "BIOS boot partition". Verify with `p` that the layout corresponds to what is desired:

Number	Start	End	Size	Code	Name
1	2048	34815	16.0 MiB	EF02	BIOS boot partition

Exit writing the changes with `w` then go back to the installer with `CTRL-b 1` and resume installation.

When selecting the partitioning options later on, make sure to select "Use Free Space".