

## Arm SystemReady IR v1.0: Errata Document

**Company:** PINE64**System:** PINE64 ROCKPro64**SoC Family:** Rockchip RK3399**Firmware Version:** Based on mainline U-Boot, version 2021.07**ACS Version:** ACS-IR v0.9 BETA 1**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/rockpro64-21.09/README.md>

**Note #2 - Firmware setup**

For functional Capsule Update with firmware on SD card, the `dfu_alt_info` U-Boot variable must be set to:

```
mmc 1=idbloader-img raw 0x40 0x2000;u-boot-itb raw 0x4000
0x2000
```

With firmware on SD card, a 16MB protective partition should be created at the beginning of the storage space to preserve the firmware and an EFI System Partition (ESP) should be created after the protective partition:

Part	Start LBA	End LBA	Name
1	0x00000800	0x00007fff	"BIOS boot partition"
2	0x00008000	0x00207fff	"EFI system partition"

The ESP should be formatted with the FAT32 filesystem.

## List of Errata

### Errata #1 - Debian installation necessitates specific steps

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=ttyS2,1500000 earlycon
```

### Errata #3 - Cannot install OS to NVMe

Installed GRUB will fail to boot from NVMe drive on PCIe slot.  
Install OS to USB flash drive.