

Arm SystemReady IR v1.0: Errata Document

Company: Raspberry Pi**System:** Raspberry Pi 4 Model B**SoC Family:** Broadcom BCM2711**Firmware Version:** UEFI Firmware by Pi Firmware Taskforce (PFTF) Project, version 1.30**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 - Devicetree mode must be selected in firmware setup**

The UEFI firmware on the RPi4 supports both ACPI and Devicetree modes. For the device to be SystemReady IR compliant, it needs to run in Devicetree mode. This can be done by changing the following configuration in the UEFI setup menu:

```
Device Manager -> Raspberry Pi Configuration -> Advanced  
Configuration -> System Table Selection
```

List of Errata**Errata #1 - Issue in latest RPi Foundation firmware prevents OS boot in Devicetree mode**

There is a known issue in the start4/fixup4 binary files that are provided by the Raspberry Pi Foundation <https://github.com/raspberrypi/firmware>. The issue exists in the files bundled with UEFI PFTF releases 1.29 and 1.30. This issue prevents the USB XHCI controller from being initialized correctly, resulting in loss of keyboard/mouse/USB storage devices. This issue only happens in Devicetree mode.

The issue is being debugged with the RPi Foundation. Refer to Github

issues: <https://github.com/pftf/RPi4/issues/157> and
<https://github.com/raspberrypi/firmware/issues/1617>.

Workaround #1

1. Use UEFI FW release 1.31 with the temporary fix

Workaround #2

1. Download the UEFI FW release 1.30 :
<https://github.com/pftf/RPi4/releases/v1.30/> and unzip to a USB key,
per the release README instructions.
2. Replace the following files on the USB key with the ones bundled
in the 1.28 FW release (<https://github.com/pftf/RPi4/releases/v1.28>)

```
bcm2711-rpi-4-b.dtb  
bcm2711-rpi-400.dtb  
bcm2711-rpi-cm4.dtb  
fixup4.dat  
start4.elf
```