



TEGRA LINUX DRIVER PACKAGE (R15)

RN_05071-R15 | June 11, 2012
Advance Information | Subject to Change

Release Notes



TABLE OF CONTENTS

1.0 ABOUT THIS RELEASE	3
1.1 What's New	3
1.2 Top Issues Fixed Since Last Release	3
2.0 IMPLEMENTATION NOTES	5
2.1 U-Boot support is preliminary in this release	5
2.2 Must sync to the correct tag to use the source_sync.sh script	5
3.0 KNOWN ISSUES	6
3.1.1 [964626] Display corruption observed when device enters and resumes from LP0 on Ventana	6
4.0 ABOUT EARLIER RELEASES	7
18 Apr 2012	7
12 Mar 2012	8
17 Feb 2012	9

1.0 ABOUT THIS RELEASE

The NVIDIA® Tegra® Linux Driver Package supports development of platforms running:

- ▶ NVIDIA® Tegra® 3 series computer-on-a-chip
- ▶ NVIDIA® Tegra® 2 series computer-on-a-chip
- ▶ Linux kernel 3.1
- ▶ Git tag for the release: `tegra-l4t-r15-rc`



Note: This release of Tegra Linux Driver Package (R15 RC) is a release for:

- Tegra 2 devices code-named “Ventana”
- Tegra 3 devices code-named “Cardhu”

The NVIDIA binaries provided for Ventana devices may be able to support Tegra 2 devices code-named “Harmony”. Please note however that Harmony support has been deprecated. The Harmony package is available in this release but is provided as-is and is not supported.

1.1 WHAT’S NEW

This release fixes some issues that were found during continued testing and adds/enhances the following features.

- ▶ Adds Ventana kernel support for u-boot
- ▶ Adds `source_sync.sh` script to sync kernel and u-boot source code

1.2 TOP ISSUES FIXED SINCE LAST RELEASE

The following issues are assumed to have been resolved in this release but are still being verified.

System

- ▶ [965154] I2C device registration fails on Ventana
- ▶ [954564] Cardhu cannot resume after USB device is changed during LP1
- ▶ [937902] Kernel command line parameter should make serial console the default console
- ▶ [961259] VDD voltage regulator initialization error on Ventana
- ▶ [946922] Voltage regulator configuration does not succeed on Ventana
- ▶ [932086] Second modprobe of a Wi-Fi module does not succeed

Boot Loader/BDK

- ▶ [959318] U-Boot debug messages about warnings/errors from GPT and bootm are expected on Cardhu
- ▶ [930663] I2C bus errors observed during and after boot

Display

- ▶ [959676] Tegra user space graphics driver lists more video modes than are supported
- ▶ [946409] DVI display is corrupted on Cardhu and Ventana

Multimedia

- ▶ [966041] nvgstcapture does not run successfully when flashed with U-Boot on Cardhu
- ▶ [955196] Corruption observed with nvgstplayer on Ventana

Power and Performance

- ▶ [964400] Audio corruption heard when WAV file is played after device resumes from LP0
- ▶ [961907] Harmony is unable to enter LP0

2.0 IMPLEMENTATION NOTES

This section provides additional implementation and support information specific to this release of the Tegra Linux Driver Package.

2.1 U-BOOT SUPPORT IS PRELIMINARY IN THIS RELEASE

Support for U-Boot is preliminary in this release. U-Boot boot loader booting is currently only working on Cardhu and Ventana.

2.2 MUST SYNC TO THE CORRECT TAG TO USE THE SOURCE_SYNC.SH SCRIPT

In the release, the supplied `source_sync.sh` script needs to be provided a tag name to sync to the sources that were used to create the kernel `zImage` and `u-boot.bin` binary files that are included in the release. To sync to the correct sources that the sample provided kernel and u-boot binaries were built from, use the `tegra-14t-r15-rc` tag.

- ▶ Execute the above mentioned script and use the following tag when prompted :

```
tegra-14t-r15-rc
```

3.0 KNOWN ISSUES

This section provides details about issues that were discovered during development and QA but not resolved prior to this release of NVIDIA® Tegra® Linux Driver Package.

The following power and performance-related issue was noted in this release.

3.1.1 [964626] Display corruption observed when device enters and resumes from LP0 on Ventana

Display corruption (white horizontal lines) and glitches are observed when the device resumes from the Deep Sleep (LP0) state.

To reproduce

1. Flash and boot the device.
1. Check the LP state of the device by executing the following command:

```
$ cat /sys/power/suspend/mode
```

If it shows LP0, run Step 3.

2. Put the device into LP0 mode by executing the following command:

```
$ echo mem > /sys/power/state
```

3. Press the Power key to resume the device.

4.0 ABOUT EARLIER RELEASES

18 APR 2012

What's New in Linux Driver Package R15.BETA

This release fixes some issues that were found during continued testing and adds/enhances the following features.

- ▶ Preliminary U Boot support. For more information, see [U-Boot support is preliminary in this release](#) in the Implementation Notes section.
- ▶ The multimedia streaming and capture applications `nvgstplayer` and `nvgstcapture` are included in the release file instead of being provided as a separate downloadable package.
- ▶ The Tegra X Driver ABI 12 is supported.
- ▶ A version checking file has been included in `/etc/nv_tegra_release`. For more information, see “Determining the Success of a Driver Update” in *NVIDIA Tegra Linux Driver Package Developers' Guide*. [959325]

Top Issues Fixed Since Last Release

The following issues are assumed to have been resolved in this release but are still being verified.

System

- ▶ [961258] VDD regulator errors observed during initialization
- ▶ [935225] Cardhu device reboots with thermal throttle
- ▶ [946328] Driver probes fail during boot on Cardhu
- ▶ [946330] Kernel chip initialization fails with “uninitialized object...” error on Cardhu
- ▶ [915638] Volume keys are not working on Cardhu and Ventana

I/O

- ▶ [932023] USB host/device mode functionality does not work after plug-in/plug-out of USB devices to USB-1 on Cardhu

Multimedia

- ▶ [931180] Display flickers or corruption occurs during nvgstplayer video playback on Ventana
- ▶ [893571] “Non-secure read” error message may display during multimedia playback on Cardhu
- ▶ [963995] System crash observed when changing resolution to 1080p in both Video and Still mode

Power and Performance

- ▶ [942490] Suspend/resume cycles leads to file system instability on Cardhu and Ventana
- ▶ [933291] Resume after Deep Sleep or Suspend does not succeed on Harmony
- ▶ [947673] Resume fails after Deep Sleep or Suspend with dock installed on Cardhu
- ▶ [941531] Intermittent warning message after Resume from Deep Sleep (LP0) on Cardhu

12 MAR 2012

What’s New in Linux Driver Package R15.ALPHA

This release fixes some issues that were found during continued testing and adds/enhances the following features:

- ▶ Linux kernel 3.1
- ▶ Camera support + capture application

Top Issues Fixed Since Last Release

The following issues are assumed to have been resolved in this release but are still being verified.

System

- ▶ [931120] Race condition prevents kernel boot completion on Cardhu

17 FEB 2012

What's New in Linux Driver Package R15.ER2

This release fixes some issues that were found during continued testing and adds/enhances the following features:

- ▶ Camera capture application (nvgstcapture) provided.

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