



TEGRA LINUX DRIVER PACKAGE R23.2

RN_05071-R23 | February 25, 2016
Advance Information | Subject to Change

Release Notes



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1.0 ABOUT THIS RELEASE

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

- ▶ NVIDIA® Tegra® X1 series computer-on-a-chip
- ▶ Linux kernel 3.10.40



Note: This release of Tegra Linux Driver Package R23.2.0 is a release for the NVIDIA® Jetson™ TX1 Developer Kit (P2371-2180).

1.1 WHAT'S NEW

CPU maximum operating frequency has been adjusted lower from the preliminary value in prior software releases to enable operation of 24x7 and 4/4/16 duty cycles (personalities) for the specified operating life of the Jetson TX1 module. Please review the Jetson TX1 Module Datasheet for information on the new CPU frequency limit. Because this change enables the specified operating life of the Jetson TX1 module, all users must update software to enable this change.

1.2 LOGIN CREDENTIALS

The default login credentials are:

- ▶ Username: ubuntu
- ▶ Password: ubuntu

1.3 SOURCES FOR INCLUDED LINUX DISTRIBUTION PACKAGES

Contact your NVIDIA support representative for source code provided subject to the terms of open source licenses that require source code availability, such as the GNU General Public License.

1.4 FEATURES IN THIS RELEASE

Please refer to the R23.2 Software Feature List for features available in this release.

1.5 TOP ISSUES FIXED SINCE LAST RELEASE

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

- ▶ [1674408] Excessive overhead when starting the CUDA kernel
- ▶ [1688224] OpenMAX format conversion may result in slow performance for some pipelines
- ▶ [1693174] Wi-Fi firmware needs update
- ▶ [1696381] nvvidconv does not accept framerate=0/1
- ▶ [1707442] GPU may fail to power on with the following message:
“gk20a_pm_finalize_poweron: failed to init gk20a pmu”
- ▶ [1713210] Update DVFS table and supported CPU frequencies
- ▶ [1723046] Implement proper power down sequencing on PMIC LDO1
- ▶ [200105533] No warning message provided prior to system thermal shut down
- ▶ [200105851] g_mass_storage unsuccessful after the first successful try
- ▶ [200114050] Cannot go into Deep Sleep (LP0) mode when connected to Wi-Fi
- ▶ [200115844] CPU frequency remains above 1632 KHz while eth0 is up
- ▶ [200122520] LP switching does not work with a SATA device
- ▶ [200136901] [200146188] The device does not boot from a Network File System (NFS)
- ▶ [200138403] MMC1/Wi-Fi register dump occurs after system boot
- ▶ [200141116] Submit ioctl (NVHOST_IOCTL_CHANNEL_SUBMIT_GPFIFO) takes too long
- ▶ [200143026] Various improvements to V4L2 soc_camera driver
- ▶ [200143463] UART hang while changing VT with X running during HDMI hot-plug in/out
- ▶ [200146207] Video player (NvGstPlayer-1.0) hangs at VP9 4K video during stress test
- ▶ [200155573] CPU frequency remains at or above 953 MHz during SYSEDP CPU frequency throttling
- ▶ [200155870] Device/Host mode is reported incorrectly when changing between the USB OTG and regular cable in Deep Sleep (LP(0) state

- ▶ [200158417] Using NvGstCapture-1.0, camera failed to launch with error message "gst_nvcamera_open() failed ret=0"
- ▶ [200160629] OTG-MSD cable hot-plugged detection failed on the OTG port if hot-plug occur during LP0/LP1 state
- ▶ [200166169] Using NvGstCapture-1.0, video snapshot captured by CSI camera is upside down
- ▶ [200169583] Snapshot from a video captured by a USB camera using the camera app (NvGstPlayer-1.0) is upside down

2.0 KNOWN ISSUES

The following issues were discovered during development and QA but not resolved prior to this release of the NVIDIA® Tegra® Linux Driver Package.

Issue
<p>1. [1723265] Hard resetting the TX1 board while it is above 44° C will cause boot failure due to default system shut down value is set to 44° C. The system will boot up once cooled down to below 44° C. This issue does not occur upon warm reset.</p> <p>To fix the issue, you can download a kernel patch that will be available on nv-tegra (http://nv-tegra.nvidia.com/gitweb/?p=linux-3.10.git;a=summary). Please look for tag "tegra-l4t-r23.2.update-01"</p>
<p>2. [200088740] Time to resume from Deep Sleep (LP0) is slow</p>
<p>3. [200122163] Disabled (DSI-0) Primary HDMI display causes the following errors to display in logs</p> <pre>vgaarb: this pci device is not a vga device"</pre>
<p>4. [200134773] System intermittently becomes non-responsive during reboot stress testing with <code>reboot</code> or <code>init 6</code>.</p>
<p>5. [200141591] Intermittent failure to enter LP0 mode with an active Wi-Fi connection.</p> <p>The workaround is to close all connections before initiating LP0 transition.</p>
<p>6. [200142289] When the system is booted from NFS with the Broadcom PCIE card connected, issuing the <code>reboot</code> and <code>shutdown</code> commands cause a watchdog timeout and the system becomes non-responsive. This condition occurs with certain Broadcom firmware revisions.</p>
<p>7. [200151236] The Camera app (NvGstPlayer-1.0) invokes an out of memory killer because of memory leak when playing multiple images in a loop.</p>

Issue
8. [200170514] OSIdle power consumption is around 185mW higher when eth0 is disabled
9. [200174822] Corrupted pixels occur after the image shows up on the preview for a few minutes
10. [200175128] Resolution goes to 1440 x 576 at 52.1 Hz with warnings from tegra_dc upon idle timeout resume

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