

Processor SDK Linux Automotive Post Release Fixes

The following section provides details on targeted defect fixes done after GA release of Processor SDK Linux Automotive.

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3.04.00.03 : Post-Release Defect Fixes

Defects

Key	Severity	Component	Summary	Patch Details
LCPD-11567	S2-Major	Graphics	Graphics initialization does not detect both SGX cores	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-11986	S2-Major	Graphics	glReadPixels returns error with wayland-client	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-12049	S2-Major	Graphics	glReadPixels returns error with nulldrm client	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-12543	S3-Minor	Graphics	coredump in PVRSRVDestroyRecursiveMutex	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-12545	S3-Minor	Graphics	Enabling PVR_DEBUG_MUTEXES option results in a compile error	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-13427	S3-Minor	Graphics	QT Touchscreen interaction - Bear Whack crash	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-13428	S2-Major	Graphics	Init/exit sequence in GBM leads to error	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-13759	S2-Major	Graphics	QtWebengine demobrowser crashes during window resize operations	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-14626	S2-Major	Graphics	SGX HW recovery with navi application with NPOT textures	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
PSDKAA-2094	S2-Major	Graphics	gles: Fix alloc size for dummy VDM control stream	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-13320	S2-Major	Multimedia	gst-vpe: memory leak observed with gsttestplayer	Link (http://git.ti.com/glsdk/gst-plugin-vpe/commit/b9dba5a8bc7d14d55125abdce04672e3dc30bbdf)
LCPD-13250	S2-Major	Multimedia	Gsttestplayer crashes with trick-play when vpe is enabled	Link (http://git.ti.com/glsdk/gst-plugin-vpe/commit/a4e86912b52fc07622c36f647118a476e3800d22)
PSDKLA-4854	S3-Minor	Video/VPE	VPE: Stride corruption with cropping	Link (http://review.omapzoom.org/#/c/39007/1)
PSDKLA-4855	S2-Major	Video/VIP	VIP: Capture hangs randomly for vin4a ports	Link (http://review.omapzoom.org/#/c/39005/1) Link (http://review.omapzoom.org/#/c/39006/1)
PSDKLA-4856	S3-Minor	Video/VPE	VPE: Fails to process SEQ_BT fields for deinterlacing	Link (http://omapzoom.org/?p=kernel/omap.git;a=commit;h=ce834862e50ec4c5dff2ea2cf63b5bc6ebdfc6a2)
PSDKLA-4857	S3-Minor	Video/VPE	VPE: Cannot process buffers in NV21 formats	Link (http://review.omapzoom.org/#/c/39008/1)
LCPD-11955	S2-Major	Video/VIP	VIP driver multi-channel capture issue with TVP5158	Link (http://review.omapzoom.org/#/c/39009/1)

Features

Key	Severity	Component	Summary	Patch Details
1	Medium	Thermal Management	Step-wise governor is the default thermal governor in 4.4 kernel. It has one major shortcoming - Restriction on available OPPs (CPU frequency + voltage) is imposed or relaxed based on temperature trend. So, even a single degree downward change is considered as temperature drop and restrictions on higher OPPs is removed. This will result in increased heat generation when CPU switches to higher OPP due to CPU load. For a better control of the heat generation and dissipation, it's desired to restrict the CPU OPP until a target (cool-down temperature) drop in temperature before relaxing the restrictions. Refer to presentation here for further understanding File:Thermal Step wise mods TI v3.pptx Patches provided below add this feature to restrict the OPP based on a temperature band not just trend thereby giving a longer period for heat dissipation and also help reduce heat build up.	http://review.omapzoom.org/#/q/status:open+project:kernel/omap+branch:p-ti-lsk-linux-4.4.y-3.x+topic:thermal_step_wise
LCPD-14627	S2-Major	Graphics	um: wlegl: add apphnt to configure yuv CSC range	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-12133	S2-Major	Graphics	Add support for UYVY format in wl_drm	Link (http://git.ti.com/graphics/omap5-sgx-ddk-um-linux/commits/ti-img-sgx/1.14.3699939_k4.4)
LCPD-13156	S2-Major	Multimedia	gst-ducati h264dec needs a property to set display-delay	Link (http://git.ti.com/glsdk/gst-plugin-ducati/commit/19e911bb45757d8341ffd7819ca783ca04f5e3b1)

3.03.00.03 : Post-Release Defect Fixes

Kernel

Key	Severity	Summary	Patch Details
LCPD-10550	S2-Major	https://jira.itg.ti.com/browse/LCPD-10550	http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/1c7c2c4fd26c0ea437a0f89f7353ca749614fc70 http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/6ed18ac7f6e118fda146c5efd413aada199a77da http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/fd6cfe76f22cafc42945f97e05c2fd71c0495b9 http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/f05795c2509b74f43cc6aa1461f2efe902389ba6 http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/bbaebb67224b3aaca3fa5ecd165e465adcc34bc http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/453e6f19460abf34096a96340042d4026b4acadb http://git.ti.com/ti-linux-kernel/ti-linux-kernel/commit/bd331703681c42f6fc7a02860706cb186be4d8b1

3.02.00.03 : Post-Release Defect Fixes

Kernel

Key	Severity	Summary	Patch Details
LCPD-8823	S3-Minor	rpmsg: Don't Announce to Remote Core when Binding	http://review.omapzoom.org/#/c/38274
LCPD-8821	S3-Minor	rpmsg: return error from create_channel if endpoint creation fails	http://review.omapzoom.org/#/c/38272
LCPD-8822	S3-Minor	rpmsg: fix memory leak in case of announce failure in device probe	http://review.omapzoom.org/#/c/38273
PSDKLA-3753	S2-Major	Support for CMA / Non-Tiler memory	http://arago-project.org/git/projects/?p=meta-glSDK.git;a=commit;h=e5fedd8d9dbb5c963eb1886e33cf975c7cf4bcc0 http://arago-project.org/git/projects/?p=meta-glSDK.git;a=commit;h=ea8521cde689e81f118467b1fba5acfa543bff66 http://arago-project.org/git/projects/?p=meta-glSDK.git;a=commit;h=c2c93adce12d24f124ff9b8c979115227d555dce

U-Boot

Key	Severity	Summary	Patch Details
PSDKLA-3707	S2-Major	"GPMC/MMC: fix iodelay / padconf indexing issue" - Padconf/iodelay entry indexing is wrong in mmc driver which over-writes GPMC_CTRL_CORE_PAD_GPMC_AD0 pin configuration	http://review.omapzoom.org/#/q/topic:gpmc_mmc_padconf_fix

7.04.00.03 : Post-Release Updates

This page contains post-release updates to GLSDK 7.04.00.03 for DRA7xx

Post Release: Feature Additions

Feature Additions			
Feature	Description	Patch Details	Comments
Support for J6Eco-Rev-C EVM	update eeprom address for dra74x/dra72x platform	http://review.omapzoom.org/37253	This patch is needed only if eeprom address is 0x51 on J6Eco Rev-C TI-EVM. Apply the u-boot patch on GLSDK 7.04.00.03 release

Post Release: Defect Fixes and the Patch Updates

Defect Fixes and Patch Updates

Defect/ER ID	Description	Patch Details	Comments
GLSDK-2753	Coverity defect fix RESOURCE_LEAK in MMU_Initialize in SGX KM	https://git.ti.com/graphics/omap5-sgx-ddk-linux/commit/f3adf9071cc4985beec89bae108082b75cead01d	This patch is needed to address the Coverity reported RESOURCE_LEAK in an error scenario
GLSDK-2789	H.264 Video error when decoding frames with frame_cropping flag in SPS	http://git.ti.com/glsdk/gstreamer1-0-plugins-bad/commit/3a7dce1011d2ad002f9341c8f0be2e409d73ea7b	If the stream contains the frame_cropping flag, then H.264 decoder will throw an error.
GLSDK-2790	When stream eos or stop gst pipeline , ducativdec throw error() and exit the process	https://git.ti.com/glsdk/gst-plugin-ducati/commit/d201268770ffbb6a13843597d214d585757f1728	Fix for performing cleanup only during error scenario
GLSDK-2804	MJPEG frames without Huffman table in the frame outputs green colored frames	https://git.ti.com/ivimm/ipumm/commit/a55e6e7b3a8b6917155f3f7ed6c10ed6170df3e7	IPUMM patch that contains fix in the MJPEG codec to use the default Huffman table
GLSDK-2818	MPEG4 Video playback not smooth due to skipping of non-VOP coded frames	https://git.ti.com/glsdk/gst-plugin-ducati/commit/0cab49ee483613f053923fd90b7042fe059f1944	Fix only affects MPEG4

Post Release: Known Issues and Limitations

None

Maintenance Releases

- Please Refer http://www.omappedia.org/wiki/2014LTS_PostRelease_updates for post final 3.14 release Maintenance updates .
- This contains quarterly limited IVI maintenance release with stable and defect fixes in kernel and uboot.

First IVI Maintenance Release

- July 2016: First IVI Maintenance Release on 7.04
- http://www.omappedia.org/wiki/2014LTS_PostRelease_updates#1st_IVI_Maintenance_Release

Second IVI Maintenance Release

- Dec 2016: Second IVI Maintenance Release on 7.04
- http://www.omappedia.org/wiki/2014LTS_PostRelease_updates#2nd_IVI_Maintenance_Release

7.02.00.02 : Post-Release Updates

This page contains post-release updates to GLSDK 7.02.00.02 for DRA7xx

Post Release: Feature Additions

Feature Additions

Feature	Description	Patch Details	Comments
FPDLink	Enable support for FPDLink displays	http://review.omapzoom.org/#/c/36535/	This patch is still under review/rework. It will go through further revisions before integration into GLSDK 7.03 release.

Post Release: Defect Fixes and the Patch Updates

Defect Fixes and Patch Updates

Defect/ER ID	Description	Patch Details	Comments
OMAPS00326590	In secure boot mode device tree(dtb) authentication fails if the dtb file size is not 4 byte aligned.	secure: dra7x: non-aligned dtb size must be 4byte aligned for authentication (http://git.omapzoom.org/?p=repo/u-boot.git;a=commit;h=b02b0dbd472cfdda5684189648ed3a091affdfef)	
GLSDK-2389	DRA7x: UBOOT: QSPI :cannot access more than 16MB of address space.	qspi: dra7x: enable 32-bit addressing for higher density flash device (http://review.omapzoom.org/#/c/36895/)	
GLSDK-2386	VIP: Failed to capture from analog camera	v4l: of: Correct pclk-sample	Fixed the V4L2 framework issue - backported a

		for BT656 bus (http://review.o-mapzoom.org/#/c/36891/) arm: dtsi: jamr3: Use falling edge for embedded sync (http://review.omapzoom.org/#/c/36892/)	4.2 mainline patch
UART DMA	Fixes for some of the UART DMA issues	patch1 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=944ceccb91935c351971db28e75fd4b338b4a2d4) patch2 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=087fec34f043d0a26715960c6e1a5f3a85350b5f) patch3 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=f4b878b899f11a3181867378c88e1565eb963c35) patch4 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=ea4ce988ed5ec6752366d31f8c9e624eb82315c5) patch5 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=586beb48c1b47d3d0c85dd8457cb8729ffda6d8) patch6 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=1bd1ad770ffe444493e6c42209e733ae20557ac9) patch7 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=7df5122a0881d8c33e5c8435e933d38853517bee) patch8 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=c4a3ab9b903564a8167a3645daa47a084ce26472) patch9 (http://git.omapzoom.org/?p=kernel/omap.git;a=commit;h=d803e0eaf16383da57a734ee4fa071290bad5685)	To use Serial 8250 UART with DMA, please enable "CONFIG_SERIAL_8250_DMA"

Post Release: Known Issues and Limitations

None

6.10.00.02 : Post-Release Updates

This page contains post-release updates to GLSDK 6.10.00.02 for DRA7xx

Features Added Post GLSDK 06.10.00.02 release

- HS(High secure) boot mode support
 - Supports booting of HS devices only if authentication of u-boot/kernel/DTB binaries are successful, for more information refer to [HS-boot \(http://processors.wiki.ti.com/index.php/DRA7xx_GLSDK_Software_Developers_Guide#Booting_Secure_DRA7xx_Devices_SD.2FeMMC\)](http://processors.wiki.ti.com/index.php/DRA7xx_GLSDK_Software_Developers_Guide#Booting_Secure_DRA7xx_Devices_SD.2FeMMC).
- UART boot mode support
 - Support for UART peripheral boot mode, this requires board modification, refer to User's Guide for more detail procedure at [UART-boot \(http://processors.wiki.ti.com/index.php/DRA7xx_GLSDK_Software_Developers_Guide#Boot_Over_UART_Procedure\)](http://processors.wiki.ti.com/index.php/DRA7xx_GLSDK_Software_Developers_Guide#Boot_Over_UART_Procedure)
- SATA (Serial ATA) support
 - Support for SATA Gen-1/Gen-2/Gen-3 devices.
- DRA7xx EVM RevG and 10 inch LCD panel support
 - Added a separate dts file for EVMs with 10' LG lcd panel, to build the dtb for EVMs with 10' panel do

```
make dra7-evm-lcd10.dtb
```

update the boot.scr to use dra7-evm-lcd10.dtb

- Thermal Management
 - Temperature control support via cooling device for MPU using DVFS/CPUFreq and temperature monitoring, trip points and emulation support for all other thermal zones
- Triple Display support
 - The 3.12 kernel has been updated with the support for triple display. The third display is connected over FPDLink and driven by DPI3.

Defect Fixes and Patch Updates

Defect/ER ID	Description	Patch Details	Comments
OMAPS00307731, OMAPS00310685	UART-DMA support	(patches not merged, apply manually) http://review.omapzoom.org/35755 http://review.omapzoom.org/35756 http://review.omapzoom.org/35757 http://review.omapzoom.org/35758 http://review.omapzoom.org/35759 http://review.omapzoom.org/35760 http://review.omapzoom.org/35761 http://review.omapzoom.org/35762 http://review.omapzoom.org/35763 http://review.omapzoom.org/35764 http://review.omapzoom.org/35765 http://review.omapzoom.org/35766 http://review.omapzoom.org/35767 http://review.omapzoom.org/35768 http://review.omapzoom.org/35769 http://review.omapzoom.org/35770 http://review.omapzoom.org/35771 http://review.omapzoom.org/35772 http://review.omapzoom.org/35773	The uart-patches are backported from 3.16-rc5 kernel 1. Apply all these patches. 2. Menuconfig -> Device Drivers -> Character devices -> Serial drivers Deselect CONFIG_SERIAL_OMAP (< > OMAP serial port support). select Select CONFIG_SERIAL_8250_OMAP [<code>< * ></code> Support for OMAP internal UART (8250 based driver)] 3. update bootargs, set console=/dev/ttyS0 4. Edit /etc/inittab replace ttyO0 to ttyS0.
	Rev G and 10 lcd panel support	Kernel (patches merged) http://review.omapzoom.org/#/c/35821/ http://review.omapzoom.org/#/c/35822/ http://review.omapzoom.org/#/c/35823/ U-Boot (patches merged) http://review.omapzoom.org/#/c/35829/	These patches enable the support to boot on Rev G board and also add support for the 10 inch LCD panel - LG101
	HS boot mode support	(patches merged) http://review.omapzoom.org/#/c/35779	ARM: OMAP4+: refactor sram allocation.
	Thermal Management: Update power off strategy to enable quick shutdown	(patches merged) http://review.omapzoom.org/#/c/35932/	This patch enables a quick shutdown procedure in case any thermal zone hits the critical temperature.
	VIP Multi channel capture support	(patches merged) http://review.omapzoom.org/35788 http://review.omapzoom.org/35789 http://review.omapzoom.org/35790	These patches enable multi channel analog capture use case (verified 4channel line-interleaved video from TVP5158)
OMAPS00314618	VIP memory corruption after streamOFF	(patches merged) http://review.omapzoom.org/#/c/35876/	This patch immediately stops active DMAs in streamOFF to avoid memory corruption
OMAPS00313628	VPE multi instance fix for NV12 source	(patches merged) http://review.omapzoom.org/#/c/35872/	This patch fixes the hang observed in multi instance VPE use cases for NV12 source
	Triple display: Enable triple display; via DPI3 and FPDLink interface.	(patches merged) http://review.omapzoom.org/#/c/35940/ http://review.omapzoom.org/#/c/35939/ http://review.omapzoom.org/#/c/35938/ http://review.omapzoom.org/#/c/35937/ http://review.omapzoom.org/#/c/35936/ http://review.omapzoom.org/#/c/35935/ http://review.omapzoom.org/#/c/35934/ http://review.omapzoom.org/#/c/35933/	This set of patches enables the triple display support in 6.10 GA release. The patches are already merged in the 3.12 kernel.
OMAPS00318757	GEM memory leak in SGX kernel module	(patches merged) https://git.ti.com/graphics/omap5-sgx-ddk-linux/commit/0f3561a47cf7a1b968fb64446a0be10abc9a15d5	This patch fixes the GEM handle leaks observed in SGX kernel module for 3.12 kernel. This issue was not present in earlier 3.8 kernel.
	MPU_DPLL Duty cycle correction issue for frequency above 1.4GHz	merge pending http://review.omapzoom.org/36327 http://review.omapzoom.org/36328 http://review.omapzoom.org/36329	This patches add support to enable Duty Cycle Correction (dcc) when MPU_DPLL goes above 1.4GHz
	DPLL_Videon may require multiple lock attempts	merge pending http://review.omapzoom.org/#/c/38833/	This patches adds a work around for errata i932, where the Videon PLL may fail to lock on the first try in very rare circumstances.

Post Release: Known Issues and Limitations

None

6.04.00.02 : Post-Release Updates

This page contains post-release updates to GLSDK 6.04.00.02 for DRA7xx

None

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