Processor SDK Automotive Audio Release Notes

Last updated: **07/06/2017**

Contents

> **NOTE**
>
> Processor SDK Automotive Audio has been renamed to Processor SDK RTOS Automotive. This page is no longer being actively maintained. Please view Processor SDK RTOS Automotive Release Notes for the latest Release Notes

> **NOTE**
>
> This Release Notes is for the latest Processor SDK Automotive Audio release. If you are using an older release, see the Archived Section below.

Overview

The **Processor Software Development Kit (Processor-SDK)** provides the core foundation and building blocks that facilitate Real-time operating system (RTOS) audio system software development on TI's DRA7xx family of automotive processors.

Licensing

Please refer to the software manifest, which outlines the licensing status for all packages included in this release. The manifest can be found on the SDK download page or in the installed directory as indicated below.

Documentation

- **Getting Started Guide**: Provides information on getting the software and running basic examples/demonstrations bundled in the SDK.
- **Software Developer Guide**: Provides information on features, functions, delivery package and, compile tools for the Processor SDK RTOS (which serves as the baseline for this release). This also provides detailed information regarding software elements and software infrastructure to allow developers to start creating applications.
- **Software Manifest**: Provides license information on software included in the SDK release. This document is in the release at `[INSTALL-DIR]/processor_sdk_rtos_dra7xx_<version>/docs` and available to view from the software download page.

Release 03.03.01

Released May 2017.

What's New

New Features

- Hardware support
  - DRA72x J6Eco device and EVM
  - See Platform support below for details
- DRA78x:
  - Added support for GPIO, QSPI, and MMCSD LLD
  - Extended support for McSPI and UART LLD to C66x core
  - Enabled FatFS stack
  - Enabled Secondary Boot Loader (SBL) support
- EVE Partitioned Fast Convolution (PFC) demonstration

What's changed

- Board naming convention
  - dra75x-evm is now named evmDRA75x
  - dra78x-evm is now named evmDRA78x
- SBL build support
  - DRA7xx devices are now natively supported by the SBL instead of using the corresponding TDAxxx device

Component Version

The following is a list of all the software components and host tools bundled into the SDK installer. See the Software Developer Guide for more information on each component.

Component	Version
CG_XML	2.41.0
CTOOLSLIB	2.2.0.0
DSPLIB	3.4.0.0
EDMA3 LLD	2.12.3.27
GNU GCC ARM	4.9-2015q3
IPC	3.44.01.01
MATHLIB	3.1.1.0
NDK	2.25.1.11
PDK	1.0.6
SYS/BIOS	6.46.4.53
TI CGT C6x	8.1.3
TI CGT ARM	16.9.1
UIA	2.0.6.52
XDAIS	7.24.0.4
XDCTOOLS	3.32.1.22

The following is a list of tools bundled into the CCS installer. If you need to install CCS, see the CCS installation section in the *Getting Started Guide*.

Component	Version
CCS	7.0.0
TI EVE Compiler	1.0.8

Fixed Issues

Record ID	Platform	Summary
PRSDK-1238	*	EMAC: Driver's documentation doesn't properly follow Doxygen rules
PRSDK-1239	*	CSL: Doxygen documentation not generated for networking related modules
PRSDK-1979	DRA75x	pdkProjectCreate.sh fails when using dra75x-evm board name
PRSDK-1984	DRA75x	UART-LLD: Callback operation tests fails with M4

This release extends upon Processor SDK RTOS 03.03.00. Please review the Processor SDK RTOS Release Notes for more information on fixed issues.

Supported Platforms

Devices and EVMs

Platform/SOC	Silicon Revision	EVM Revision
DRA72x	1.1, 2.0	Rev B
DRA74x/DRA75x	1.1, 2.0	Rev G3 or later
DRA78x	2.0	Rev E

> **NOTE**
>
> For simplicity, software and documentation use "DRA75x" nomenclature to collectively refer to all DRA74x and DRA75x variants

Drivers

The following tables show RTOS driver availability per platform and EVM. A shaded box implies that the feature is not applicable for that platform/EVM.

Driver	Platform/SOC/Core								EVM		
	DRA72x			DRA75x			DRA78x		evmDRA72x	evmDRA75x	evmDRA78x
	A15	M4	C66	A15	M4	C66	M4	C66			
CSL	X	X	X	X	X	X	X	X	X	X	X
EMAC	X	X		X	X		X		X	X	X
EDMA3	X	X	X	X	X	X	X	X	X	X	X
GPIO	X	X	X	X	X	X	X	X	X	X	X
I2C	X	X	X	X	X	X	X	X	X	X	X
McASP	X	X	X	X	X	X	X	X	X	X	
McSPI	X	X	X	X	X	X	X	X	X	X	X
MMC-SD	X	X	X	X	X	X	X	X	X	X	X
QSPI	X	X	X	X	X	X	X	X	X	X	X
UART	X	X	X	X	X	X	X	X	X	X	X

Other Features

The following table shows other feature availability per platform and EVM:

Feature	Platform/SOC			EVM		
	DRA72x	DRA75x	DRA78x	evmDRA72x	evmDRA75x	evmDRA78x
Board Support	X	X	X	X	X	X
Boot (SBL)	X	X	X	X	X	X
FATFS	X	X	X	X	X	X
Network (CPSW)	X	X	X	X	X	X

Demonstrations

The following table shows demonstrations availability per platform and EVM. A shaded box implies that the feature is not applicable for that platform/EVM:

Demo	Platform/SOC			EVM		
	DRA72x	DRA75x	DRA78x	evmDRA72x	evmDRA75x	evmDRA78x
EVE FFT		X	X		X	X
EVE PFC		X	X		X	X
Multicore Streaming		X	X		X	X

Known Issues

This section contains the list of known issues at the time of making the release and any known workaround.

Record ID	Platform	Summary	Workaround
	DRA72x	Various tests fail on Rev C EVM	Rev C DRA72x is not officially supported in this release. Please use Rev B.
AUTOAUDIO-46	DRA72x	NIMU: Unable to ping target	The issue only occurs with a 1000Mbps link. Use 100Mbps link for any connections to RGMII.

This release extends upon Processor SDK RTOS 03.03.00. Please review the Processor SDK RTOS Release Notes for more information on known issues.

Installation and Usage

The Getting Started Guide provides instructions on how to setup up your development environment, install the SDK and start your development.

To uninstall the SDK, remove the individual component directories from the installed path. This is safe to do even in Windows since these components do not modify the Windows registry.

Host Support

The recommended development host is

- **Windows**: Windows 7 on 64-bit machine
- **Linux**: Ubuntu 16.04 on 64-bit machine

To support legacy 32-bit machines, the installers are 32-bit. For Linux, run the below command to install the required 32-bit libraries needed by the Processor-SDK and Code Composer Studio v7.0.0:

```
sudo apt-get install libc6:i386 libx11-6:i386 libasound2:i386 libatk1.0-0:i386 libcairo2:i386 libcups2:i386 libdbus-glib-1-2:i386 libgconf-2-4:i386
libgdk-pixbuf2.0-0:i386 libgtk-3-0:i386 libice6:i386 libncurses5:i386 libsm6:i386 liborbit2:i386 libudev1:i386 libusb-0.1-4:i386 libstdc++6:i386
libxt6:i386 libxtst6:i386 libgnomeui-0:i386 libusb-1.0-0-dev:i386 libcanberra-gtk-module:i386 gtk2-engines-murrine:i386
```

Technical Support and Product Updates

For further information or to report any problems, contact TI E2E:

- DRA7xx Infotainment SoCs Forum (http://e2e.ti.com/support/arm/automotive_processors/f/1020)

Archived

Processor SDK Automotive Audio 3.2.1 (http://processors.wiki.ti.com/index.php?title=Processor_SDK_Automotive_Audio_Release_Notes&oldid=224840)

Processor SDK Automotive Audio 3.1.1 (http://processors.wiki.ti.com/index.php?title=Processor_SDK_Automotive_Audio_Release_Notes&oldid=223508)

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This page was last edited on 6 July 2017, at 12:18.

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