
Processor SDK Audio

Release Notes

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Processor SDK Audio for Beta-3

Overview

This document provides information on the features, functions, delivery package, compile tools, and licensing incorporated in the following release of software: Beta-3. It includes a list of the known issues that are present at the time of this release.

Label and Version Information for the Release

This release supports the following software and hardware versions.

Software Label Information

Table 1 lists the software label and code versions applicable to this release.

Table 1 Labels and Versions Supported by this Release

Release	Label/Version Information
PASDK	PASDK_1.0.0.5/1.0

Hardware Support

This release is supported on the following hardware platform:

- Mistral K2G Rev. D EVM (SPRW274).
- Mistral K2G EVM Audio Daughter Card Rev. B (SPRW279).
- MDS HSR41P HDMI Repeater module Rev. A.
- MDS DA10X Interface board (IFB) Rev. A.

Operating System Support

This release is supported on the following operating system version:

- SYS/BIOS 6.45.01.29

New and Updated Features

This release provides support for the following new and updated features.

New Features

The following new features are supported in this release.

- Added support for Dolby Harmony v1.3 MAT-THD high-sampling rate (> 48 kHz) input stream streams.
- Updated framework so Audio Stream Output Task (ASOT) only executes when decoded data is present in the Decoder Output Circular Buffer located between the ARM and DSP, i.e. ASOT only executes when an input stream is actively being decoded.
- Partially updated of framework to use PrSDK-RTOS 4.0.0.4 components:
 - (1) replaced PrSDK 2.00.02.11 EDMA LLD 2.12.01.23 with EDMA LLD 2.13.04.28.
 - (2) replaced PASDK PDK 1.0.1.2_eng Platform library with PDK 1.0.6 Board/Addon libraries.
 - (3) replaced PASDK PDK 1.0.2.1_eng UART LLD with PDK 1.0.6 UART LLD.
- Passing 100% Dolby Harmony v1.3 CIDK tests at Dolby Labs.
- Passing 98% Dolby Harmony v1.3 SIDK tests at TI. Verification in progress at Dolby Labs.

Known Issues

The following is a list of all known issues:

- For all decoders there are random minor audio quality issues
- Dynamic IOS Switching works for many use cases, but it is not completely debugged/reliable
- The DCS7 framework component for alpha communication needs to be updated for SPI in EDMA mode, 16-bit word transfers.
- The DCS7 framework component for alpha communication needs to be updated to use SPI LLD in 16-bit word length, EDMA mode.
- DCS7 currently uses I2C LLD customizations from PASDK PDK 1.0.1.2_eng for I2C slave mode which aren't present in PDK 1.0.6. DCS7 needs to be updated to use the PDK 1.0.6 I2C slave mode API.

Licensing

See the provided Software Manifest for licensing information (see Table 5 at the end of this documentation).

Delivery Package

The delivery package from Texas Instruments will be delivered as a self-extracting executable. The PASDK package installer: **processor_audio_sdk-DA10x-01.00.00.05-Windows-x86-Install.exe**. PASDK is released as source code.

Directory Structure

The following directories and/or components are included in the processor_audio_sdk_1_00_00_05 package directory.

- docs\ [documentation]
- pasdk\ [PASDK]
 - common\ [Common code between DSP and ARM apps]
 - paf\ [PASDK OS dev]
 - shared\ [DSP and ARM shared IPC and memory configurations]
 - test_arm\ [ARM application]
 - test_dsp\ [DSP application]
- psdk_cust\ [TI PrSDK packages customized for PASDK]
 - ipc_3_43_00_00_eng\ [Customized IPC release 3.43]
 - libarch_k2g_1_0_1_0\ [Library Architecture and Framework]
- scripts\ [Build scripts]
- tools\ [Alpha communication tools]
- pasdk_fd_da10x_01_00_00_05.zip [FD package]

Required Compile Tools

Specific tools and patches must be used to compile and/or deploy Texas Instruments software. Texas Instruments cannot guarantee product performance when other tools are used.

Tools Supplied by Texas Instruments

- Code Composer Studio 6.1.2.00015 for Windows
- C6000 v8 Compiler Tools: 8.1.0

Tools Not supplied by Texas Instruments

- GNU ARM Tools 4.8.0.2014q3-20140805

Installation Instructions

See the PASDK Setup Guide (doc. 1) for installation instructions and implementation guidelines.

Note BR3 requires installation of both PrSDK 2.00.02.11 and PrSDK 4.0.0.4. This is a temporary measure, and only PrSDK 4.0.0.4 installation will be required for the GA release.

Customer Documentation List

Table 2 lists the documents that are accessible in the package.

Table 2 Product Documentation included with this Release

Document #	Document Title	File Name
1	PASDK Setup Guide	docs/PASDK_setup_guide.pdf
2	PASDK Getting Started Guide	docs/PASDK_getting_started_guide.pdf
3	ASP Example	docs/DA10x_UG_AspExample.pdf
4	TI_PA Filter Library/Framework (FIL)	docs/pa-asp-fil.pdf
5	Creating new ASP algorithms using FIL	docs/pa-fil-fe.pdf
6	DA8x Performance Audio User's Guide	Pasdk/paf/pa/docs/pa-ug_da8xx.pdf
7	DA8x New Alpha Commands in PAF v.6.o Providing Support for Dolby ATMOS	Pasdk/paf/pa/docs/AlphaCommands-Atmos.pdf
8	Pre-Release DA10x Processor Audio SDK Manifest	DA10x Processor Audio SDK_01.00.00.03_manifest.html