# Processor SDK Audio

# Release Notes

TEXAS
INSTRUMENTS

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# Contents

# Processor Audio SDK 1.1.0.1

## Overview

This document provides information on the features, functions, delivery package, compile tools, and licensing incorporated in the following release of software: PASDK 1.1.0.1. 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_1.1.0.1/1.1 |

### 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 6.46.05.55

## 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.

- Passing 100% Dolby Harmony v1.3 SIDK tests at Dolby Labs.

- Bug fixes to support bootload on K2Gx High Secure device.

## Known Issues

The following is a list of all known 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.

- DCS7 needs to be updated to use the PDK 1.0.6 I2C slave mode API.

- The framework is unable to handle SRC interpolation use cases.

## 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_sdk_audio-K2G-01.01.00.01-Windows-x86-Install.exe**. PASDK is released as source code.

### Directory Structure

The following directories and/or components are included in the processor_ sdk_audio_1_01_00_01 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]
  - libarch_k2g_1_0_1_0\        [Library Architecture and Framework]
- scripts\           [Build scripts]
- tools\           [Alpha communication tools]
- pasdk_fd_k2g_01_01_00_01.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 7.1.0.00016 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.

Proper bootload of PASDK on K2Gx High Secure device depends on software updates included in PASDK 1.1.0.1, as well as updates *not included* in PASDK 1.1.0.1. The following additional software updates are required for proper bootload:

1) PrSDK SECDEV EA release

2) Update SYSBIOS file <PrSDK root>\bios_6_46_05_55\packages\ti\sysbios\family\c64p\Hwi.c, function Hwi_setupSC(), line #614 as follows:

   From: `614: if (rv < 0) {`
   To:    `614: if (rv != (Int)&Hwi_module->scw) {`

3) Add the following code to IPC file <PrSDK root>\ipc_3_46_00_02\packages\ti\sdo\ipc\GateMP.c, function ti_sdo_ipc_GateMP_attach(), starting at line #875:

```
875:
    if (entry.cacheEnable) {
```

```
                    Cache_inv(sharedAddr,
         ti_sdo_ipc_GateMP_getRegion0ReservedSize(), Cache_Type_ALL, TRUE);
         }
```

The ARM and DSP applications are configured for either K2Gx GP or HS devices using the XDC tools configuration script settings in the ARM and DSP CCS projects. Inside CCS:

- Right-click on "test_arm" or "test_dsp" CCS project, select "Properties"

- Select Build->XDCtools->Advanced Options

- In Java Properties, set HsDevBuild=0 for GP device or HsDevBuild=1 for HS device.

## 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/K2G_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 | PASDK - Reference Audio I/O Interfaces: Guidelines to port on custom hardware | docs/PASDK_Audio_IO_Porting_Guide.pdf |
| 7 | DA8x Performance Audio User's Guide | Pasdk/paf/pa/docs/pa-ug_da8xx.pdf |
| 8 | DA8x New Alpha Commands in PAF v.6.0 Providing Support for Dolby ATMOS | Pasdk/paf/pa/docs/AlphaCommands-Atmos.pdf |
| 9 | K2G Processor SDK Audio Manifest | K2G Processor SDK Audio _01.01.00.01_manifest.html |