DESKTOP LINUX SDK 01.00.02.00 release

Release Notes

Applies to: DESKTOP LINUX SDK 01.00.02.00 release
10 March 2014

Texas Instruments

Contents

Release Notes

DESKTOP LINUX SDK 01.00.02.00 release

Overview

This document provides information on the features, functions, delivery package, compile tools, licensing, and incident report (IR) resolutions incorporated in the following release of software: DEV_DESKTOP_LINUX_SDK.01.00.02.00. 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
Source Code Label	DEV_DESKTOP_LINUX_SDK.01.00.02.00

Hardware Support

This release is supported on the following hardware platform:

Linux Desktop with

- Single C6678 EVM - TMDSEVM6678 with TMDXEVMPCI (AMC to PCIe Adapter Card) or

- QUAD C6678 BRD – ADVANTECH (LIGHTNING DSPC-8681E) or
- Octal C6678 BRD – ADVANTECH (LIGHTNING DSPC-8682E)

Operating System Support

This release is supported on the following operating system versions:

- Ubuntu Linux 12.04 LTS

Features

The desktop Linux SDK is provided to help in offloading Compute intensive processing from a desktop Linux PC to the Multicore DSP cores through PCIE interface.

Release 01.00.02.00

Changes from the previous Maintenance release 01.00.01.00:

- Data structure of host buffer descriptor is enhanced to include a handle to associate with the buffer descriptor.
- Variable "TOOLCHAIN_PREFIX" is defined in top level Makefile and used by component/demo Makefiles. This facilitates easy switch to a different tool chain.
- Bug fix to correctly handle mailbox read when mailbox is full

Release 01.00.01.00

Changes from the previous Product release 01.00.00.07:

- Two different BAR windows are used for DSP to DSP mapping, so that chip configuration space and one of DDR/MSMC/Local_L2 memory regions can be mapped across chips simultaneously
- Bug fixes

Release 01.00.00.07

Changes from the previous Alpha release 01.00.00.06:

- Bug fixes and script changes

Release 01.00.00.06

Changes from the previous Alpha release of 01.00.00.05:

- Added APIs to map DSP memory to another DSP memory map
- Added support for Advantech Lightning DSPC-8682E with Samsung DDR.

Resolved Incident Reports (IR)

IR Parent/ Child Number	Severity Level	IR Description
00106818	Major	Mailbox read at mailbox full is not handled correctly
00106608	Minor	Need Void Ptr field in cmem_host_buf_desc_t strict
00106613	Minor	Enhancing Desktop Demo Build System by export MakeFile variable to top level makefile

Known Issues

None

Limitations

None

Licensing

The following table outlines the licensing status for all packages included in this release.

Table 2 Software Licensing Manifest

Software Name	Version	License Type	Delivered As	Modified by TI		
DESKTOP_LINUX_SDK	01.00.02	BSD	Source and Binary	NA	**Location**	/desktop_linux_sdk_<versionNo>
					Obtained from	TI

Delivery Package

The delivery package from Texas Instruments will be delivered as a .bin file.

desktop-linux-sdk_01_00_02_00_32bit_setuplinux.bin (32 bit Linux)

desktop-linux-sdk_01_00_02_00_32bit_setuplinux.bin (64 bit Linux)

Directory Structure

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

Top level directory structure:

Directory / Subdirectory name		Remarks
desktop-linux-sdk		
	sdk	Core Sdk files
	demos	Demo application files
	platform_patch	Patch files for PDK part of MCSDK
	utils	Utilities.
	docs	Documents: Software manifest

Sdk directory structure:

NOTE: The API header files for the modules are located at the individual module base directory. (For example the pciedrv.h which is the API header file is located at "/sdk/pciedrv "directory)

Directory / Subdirectory name				Remarks
sdk				Includes all the modules part of the SDK
	pciedrv			Quad Shannon PCIe card basic driver
		src		PCIE driver source files
		inc		PCIE driver local header files
	bufmgr			Buffer manager module
		src		Buffer manager source file
	dnldmgr			DSP download manager module – DSP download and reset
		src		DSP manager source files
		inc		DSP manager header files
	mailBox			Mailbox module
		src		Mailbox source files
		inc		Mailbox header files
		c66x		c66x DSP specific Mailbox files
			src	c66x DSP specific Mailbox source files
		host		Host specific Mailbox files
			src	Host specific Mailbox source files
	cmem			Host Contiguous memory driver
		module		Kernel driver module for cmem
		src		cmem memory driver API source
	inc			common interface files used by multiple modules in SDK
	dsp_projects			DSP Projects
		dsp_init		Project for DSP init (Includes platform init and DDR initialization)
			build	CCS Project
			src	Source files
		dsp_reset		Project for DSP init (Includes platform init and DDR initialization)
			build	CCS Project
			src	Source files
	sync			Sync module which provides lock/barrier functions
		src		Source files

Demos Directory structure:

Directory / Subdirectory name					Remarks
demos					Demo application files
	scripts				Common demo related scripts
	filetestdemo				File test demo
		host			File test Host files
			src		File test host source files
			inc		File test host header files
		c66x			C66x specific files
			demo_loopback		Demo loopback dsp build
				build	CCS project for DSP test code
				src	Demo loopback Source files
		inc			File test demo header files
		scripts			File test demo specific scripts
	dsp_utils				Utilities for DSP related operations: Currently demonstrates dsp reset, download and global shared memory set operations
		src			DSP utilities source files
		inc			DSP utilities Local header files

Required Compile Tools

Specific tools and patches must be used to compile and/or deploy Texas Instruments software. For host code compilation, desktop-linux-sdk uses the native "gcc" tools, which are part of the Ubuntu distribution for compilation of the modules and executables.

DSP development only

(For running the demo the DSP images are included in the package. Only if you want to modify the code you need to rebuild.)

To rebuild the DSP images, the following packages are needed.

1. CCS 5.1 or higher (which includes the compilation tools)
2. TI MCSDK for TMS320C66x Processors V.2.1.2.5 or V 2.0.9 Refer to website:

   http://focus.ti.com/docs/toolsw/folders/print/bioslinuxmcsdk.html

Installation Instructions

See the Getting started guide at:

http://processors.wiki.ti.com/index.php/Desktop-linux-sdk_01.00.00_Getting_Started_Guide

See the Development Guide at:

http://processors.wiki.ti.com/index.php/Desktop-linux-sdk_01.00.00_Development_Guide

See Guide to rebuilding DSP binaries.

http://processors.wiki.ti.com/index.php/Desktop-linux-sdk_01.00.00_DSP_Rebuild_Guide

See Guide about Hardware setup.

http://processors.wiki.ti.com/index.php/Desktop_Linux_SDK_Hardware_setup_guide

Customer Documentation List

Table 3 lists the documents that are accessible through the **/docs** folder in the delivery package.

Table 3 Product Documentation included with this Release

Document #	Document Title	File Name
	Desktop linux sdk software manifest	DESKTOP_LINUX_SDK_Software_manifest.pdf