
DESKTOP LINUX SDK 01.00.03.00 release

Release Notes

Applies to: DESKTOP LINUX SDK 01.00.03.00 release
16 October 2014

Contents

Overview	1
Label and Version Information for the Release	1
Software Label Information.....	1
Hardware Support	1
Operating System Support.....	2
Features.....	2
Release 01.00.03.00	2
Release 01.00.02.00	2
Release 01.00.01.00	2
Release 01.00.00.07	3
Release 01.00.00.06	3
Resolved Incident Reports (IR).....	3
Known Issues	3
Limitations.....	3
Licensing	3
Delivery Package.....	3
Directory Structure.....	4
Top level directory structure:.....	4
Sdk directory structure:.....	5
Demos Directory structure:	6
Required Compile Tools	6
DSP development only	7
Installation Instructions	7
Customer Documentation List.....	7

DESKTOP LINUX SDK 01.00.03.00 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.01.00.03.00](#). 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.01.00.03.00

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 01.00.03.00

Changes from the previous Maintenance release 01.00.02.00:

- Hyperlink is enabled in this release. HLNK register, configuration address and function, along with HLNK reset and control function were added.

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
00113525	Minor	Addition of Hyperlink support to Linux Desktop SDK

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	01.00.03	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_03_00_32bit_setuplinux.bin (32 bit Linux)

desktop-linux-sdk_01_00_03_00_64bit_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
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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