

DESKTOP LINUX SDK 01.00.00.07 release

Release Notes

Applies to Product Release: DESKTOP LINUX SDK 01.00.00.07 release
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DESKTOP LINUX SDK 01.00.00.07 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: **DESKTOP_LINUX_SDK.01.00.00.07**. 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	DESKTOP_LINUX_SDK.01.00.00.07

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.

There are no new features in the release 01.00.00.07 compared to the previous alpha release 01.00.00.06. Only bug fixes and script changes.

Here are the Major changes in the 01.00.00.06 release 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.

Here are the Major changes in the 01.00.00.05 release from the previous Alpha release of 01.00.00.04.

- Added Multi chip Barrier & lock module
- Support download of elf .out DSP image in dndlmgr
- Added support for symbol parsing from DSP image
- Command line compilation for DSP builds
- New procedures to autoload cmem driver
- Reset process changes: DSP reset made independent of platform.

Here are the Major changes in the 01.00.00.04 release from the previous Alpha release of 01.00.00.02.

- Octal C6678: 8682E platform support
- CMEM driver with support for allocation using reserved memory
- Add Boot configuration support in dnldmgr APIs.
 - Boot configuration is used to configure frequency operation set by dsp init code
- Mailbox locations init time configurable from application
- Optimization of mailbox latency
- Recognition of DSP card type using PCIe switch
- Optimized DSP download time
- Updated platform patch to support on any PDK package
- All “printfs” in SDK modules put under VERBOSE compile time option. Errors routed to STDERR.

Resolved Incident Reports (IR)

IR Parent/ Child Number	Severity Level	IR Description
00099102	Major	Mailbox query returns incorrect values
00098115	Minor	Repeated allocated of cmem buffers using Persistent type cause undesirable results
00098116	Major	mailbox overflow not detected correctly
00095459	Major	If size of transfer not multiple of 4MB & 128 bytes: Issue with multiple DMA initiated at same time

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	01.00.00	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_00_07_32bit_setuptools.bin (32 bit Linux)

desktop-linux-sdk_01_00_00_07_32bit_setuptools.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. Texas Instruments cannot guarantee 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	Desktoplinuxsdk_softwaremanifest.pdf