

PKTLIB

Release Notes

Applies to Product Release: 02.00.00.11
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PKTLIB version 02.00.00.11

Overview

Module expands underlying CPPI hardware descriptors for optimal usage at application layer. Functionalities include:

- Zero copy operations for:
 - Packet split/merge operations
 - Cloning operations
 - Headroom/Tail room addition through merge operation
- Allocations of packet buffer and descriptors during startup time
- Allows packet allocation by HW at Rx CPPI DMA
- Efficient recycling of data buffers including the case of buffers being referenced by multiple CPPI descriptors

Module includes:

- Pre-compiled library for DSP (Big and Little) Endian.
- Makefile infrastructure for building in ARM environment
- Source code.
- API reference guide
- Design Documentation

MODULE Dependencies

LLD is dependent on following external components delivered in PDK package:

- CPPI LLD
- QMSS LLD

New/Updated Features and Quality

Release 2.0.0.11

- Baseline update to support Keystone-1 devices
- Update to ARM makefiles to enable optimization in the case of Yocto build

- Updates to ARM makefiles to enable delivery of PKTLIB shared object libraries.

Release 2.0.0.10

- PKTLIB API like the clone and split packet were not calling the cache functions to writeback the packet after they were being modified.

Release 2.0.0.9

- Updated the pktlib build infrastructure to align for Yocto

Release 2.0.0.8

- First Release supporting KeyStone 2 K2H/K2K platforms. Unit test is verified with RM disabled mode.

Release 1.0.0.7

- Support for the `Pktlib_deleteHeap` API. This will delete a previously created heap. Please refer to the API documentation on proper usage.

Release 1.0.0.6

- Bug Fix in the packet merge which caused memory leaks.
- Enhancement to the test cases to test the behavior of packet merge and testing the memory leaks with a software free or a CPDMA free (with garbage collection)

Release 1.0.0.5

- Added support for `Pktlib_splitPacket2`
- Bug fixes to handle scenarios where heaps were created without zero heap buffer packets.

Release 1.0.0.4

- Initial release of the module in MCSDK

Resolved Incident Reports (IR)

Table 1 provides information on IR resolutions incorporated into this release.

Table 1 Resolved IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description
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IR Parent/ Child Number	Severity Level	IR Description
SDOCM00103107	Major	pktlib is not built with optimization and other flags as passed from Yocto in linux devkit
SDOCM00103929	Major	Optimization for Pktlib_freePacket()

Known Issues/Limitations

IR Parent/ Child Number	Severity Level	IR Description

Licensing

Please refer to the software Manifest document for the details.

Delivery Package

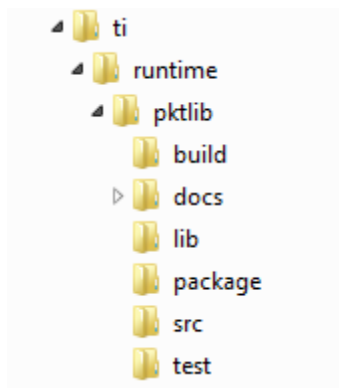
There is no separate delivery package. The Module is being delivered as part of MCSDK.

Installation Instructions

The module is currently bundled as part of Platform Development Kit (PDK). Refer installation instruction to the release notes provided for PDK.

Directory structure

The following is the directory structure after the PKTLIB Module has been installed:



The following table explains each individual directory:

Directory Name	Description
ti/runtime/pktlib	<p>The top level directory contains the following:-</p> <ol style="list-style-type: none"> 1. <u>Build environment</u> Makefiles for both ARM and DSP environment 2. <u>XDC Build and Package files</u> These files (config.bld, package.xdc etc) are the XDC build files which are used to create the package. 3. <u>Exported Driver header file</u> Header files which are provided by the module and should be used by the application developers for driver customization and usage.
ti/runtime/pktlib/build	The directory contains internal XDC build related files which are used to create the module package.
ti/runtime/pktlib/docs	The directory contains the Module's low level driver documentation.
ti/runtime/pktlib/lib	The "lib" folder has pre-built Big and Little Endian libraries for the module along with their <u>code/data size information</u> .
ti/runtime/pktlib/package	Internal Module's low level driver package files.
ti/runtime/pktlib/src	Source code for the Module low level driver.
ti/runtime/pktlib/test	The "test" directory has unit test cases which are used by the development team for testing.

Customer Documentation List

Table 2 lists the documents that are accessible through the **/docs** folder on the product installation CD or in the delivery package.

Table 2 Product Documentation included with this Release

Document #	Document Title	File Name
1	API documentation (generated by Doxygen)	docs/pktLibDocsDocs.chm
2	Software Manifest	docs/pktLib_SoftwareManifest.pdf