# PKTLIB

# Release Notes

Applies to Product Release: 02.00.00.10
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**TEXAS INSTRUMENTS**

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# Contents

# PKTLIB  version 02.00.00.10

## 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

This is an **engineering release**, tested by the development team.

**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**

- o Updated the pktlib build infrastructure to align for Yocto

**Release 2.0.0.8**

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

**Release 1.0.0.7**

- o 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**

- o Bug Fix in the packet merge which caused memory leaks.
- o 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**

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

**Release 1.0.0.4**

- o 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/<br>Child Number | Severity<br>Level | IR Description |
|---|---|---|
| SDOCM00102248 | Major | PKTLIB does not writeback the descriptors |
|  |  |  |
|  |  |  |

# 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:
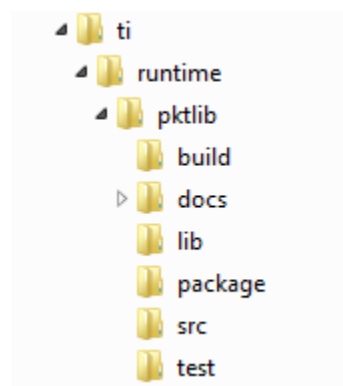


The following table explains each individual directory:

| Directory Name | Description |
|---|---|
| ti/runtime/pktlib | The top level directory contains the following:-<br>1. *Build environment*<br>Makefiles for both ARM and DSP environment<br>2. *XDC Build and Package files* |

| | |
|---|---|
| | These files (`config.bld`, `package.xdc` etc) are the XDC build files which are used to create the package.<br><br>3. *Exported Driver header file*<br>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 *code/data size information*. |
| `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 |