FAULT MANAGEMENT

Release Notes

Applies to Product Release: 01.00.01.04
Publication Date: July 17, 2018

TEXAS INSTRUMENTS

Contents

FAULT MANAGEMENT version 01.00.01.04

Overview

This document provides the release information for the latest fault management library which should be used by an application to store DSP register data upon fault detection.

Consumer Library includes:
- Compiled library (Big and Little) Endian of fault management.
- Source code.
- API reference guide

Library Dependencies

Library is dependent on following external components:
- CSL (Delivered in PDK package)

New/Updated Features and Quality

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

Release 1.0.1.4

- o Updated buildlib.xs to add RULES_MAKE macro to support build based on custom Rules.make

Release 1.0.1.3

- o Packaging changes to support makefile and device-dependent libraries

- o Added support for Keystone 2 devices (K2E/H/K/L)

Release 1.0.1.2

- o Resolved SDOCM00114919 - Fault management generates incorrect event for ARM causing MPMCL to report DSP status wrongly.

Release 1.0.1.1

- o Merged Fault Management support for Keystone I (TCI6614) and Keystone II devices into single deliverable. The Fault_Mgmt_faultCleanup API is not currently supported on Keystone II devices.
- o Cleanup now clears any pending QMSS accumulator channel pending INTD interrupts. This was preventing the cleanup from completing successfully in some cases.

Release 1.0.1.0

- o Added DSP fault cleanup feature which returns peripherals to their PoR state so that a DSP application can be reloaded without a hard or soft reset of the board. The reset of peripherals can be configured to ignore resources in use by another device master such as ARM Linux. The cleanup feature provides a cleanup utility that can be run on a DSP after a crash occurs.
- o See Resolved Incident Reports Section for resolved IRs

Release 1.0.0.2

- o Added IO halt feature allowing SoC hardware data transfer mechanisms to be disabled from an exception context. The IO halt feature allows for resources to be excluded from the halt for cases where Linux may need to stay up post exception. The "device" directory contains device specific fault management configuration parameters as well as predefined halt exclusion lists for Linux.
- o Rearranging test folder so that multiple devices could be supported from the same code base.
- o Cleaned up the API documentation

Release 1.0.0.1

- o Added PC to fault data for Host so that a call stack can be seen when the crash dump is loaded in CCS.
- o Cleaned up package deliverables and build environment setup batch file.
- o Nested exception causing code a couple functions deep in the test application to better portray the call stack generated by a loaded crash dump.

Release 1.0.0.0

- o Initial release of fault management library

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
PRSDK-2194	P2-High	RTOS Installer script to autoset SDK_INSTALL_PATH

Known Issues/Limitations

IR Parent/ Child Number	Severity Level	IR Description

Licensing

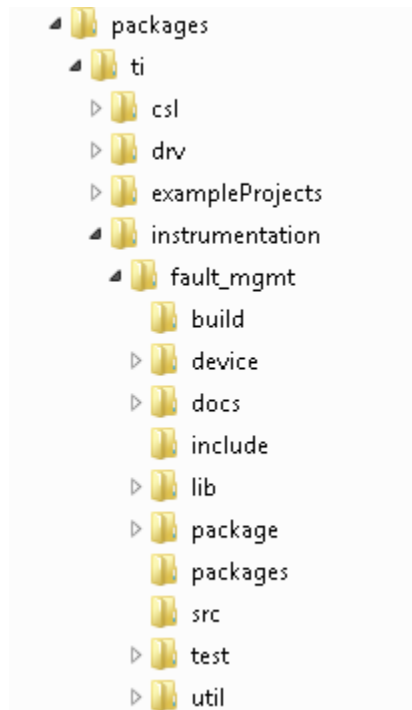Please refer to the software Manifest document for the details.

Delivery Package

There is no separate delivery package. The consumer library is being delivered as part of PDK.

Installation Instructions

The library 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 consumer library package has been installed:

The following table explains each individual directory:

Directory Name	Description
`ti/instrumentation/fault_mgmt`	The top level directory contains the following:- 1. *XDC Build and Package files* These files (`config.bld`, `package.xdc` etc) are the XDC build files which are used to create the library package. 2. *Exported Driver header file* Header files which are provided by the library and should be used by the application developers for library customization and usage.
`ti/instrumentation/fault_mgmt/build`	The directory contains internal XDC build related files which are used to create the library package.
`ti/instrumentation/fault_mgmt/device`	The directory contains the device specific files for the Fault Management module.
`ti/instrumentation/fault_mgmt/docs`	The directory contains the library documentation.
`ti/instrumentation/fault_mgmt/lib`	The "`lib`" folder has pre-built Big and Little Endian libraries for the library along with their *code/data size information*.
`ti/instrumentation/fault_mgmt/package`	Internal package files.
`ti/instrumentation/fault_mgmt/src`	Source code for the library.
`ti/instrumentation/fault_mgmt/test`	The "test" directory has unit test cases which are used by the development team to test the Fault Management Library.
`ti/instrumentation/fault_mgmt/util`	The "util" folder contains the Fault Management DSP cleanup utility images and CCS project

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/fault_mgmtlibDocs.chm