TRACE FRAMEWORK LIBRARY

Release Notes

TEXAS INSTRUMENTS

Contents

TRACE FRAMEWORK LIBRARY 01.01.01.09

Overview

This document provides the release information for the latest trace framework library which can be used by application that interfaces with multiple consumers and a single producer.

Library includes:
- Compiled library (Big and Little) Endian of trace framework consumer library.
- Source code.
- API reference guide

• Library Dependencies

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

• Label and Version Information

Table 1 lists the software label and versions supported by this release.

Table 1   Label and versions supported by this release

Label/Version Information
TFWK.01.01.01.09

- ## Resolved Incident Reports (IR)

Table 2 provides information on IR resolutions incorporated into this release.

Table 2   Resolved IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description

- ## Known Issues/Limitations

Table 3   Known Issues IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description

- # Migration Information
  - Please follow any migration information for the earlier releases before following the migration changes as provided.
  - API changed in *tf_producer_HANDLE tf_prodCreate(tf_prodConfig_t *config)* to have pointer to producer configuration structure instead of passing big config structure to minimize the stack requirements as pointed out by coverity.
  - API changed in *tf_cons_HANDLE tf_consCreate (tf_prodConfig_t *config)* to have pointer to consumer configuration structure instead of passing big config structure to minimize the stack requirements as pointed out by coverity.
  - API changed in *tf_contract_HANDLE tf_contractCreate(tf_contractConfig_t *tf_contractConfig, char* name)* to have pointer to contract configuration structure (for version 1 contracts) instead of passing big config structure to minimize the stack requirements as pointed out by coverity.

    Note: the similar changes are applicable to earlier *API kept for backwards compatibility reason, tf_contract_HANDLE TF_CONTRACT_CREATE(tf_contractConfig_t *tf_contractConfig, char* name);*
  - API changed in *tf_contract_HANDLE tf_newContract(tf_contractConfig_t *tf_contractConfig)* to have pointer to contract configuration structure (for version 2 contracts) instead of passing big config structure to minimize the stack requirements as pointed out by coverity.

Note: the similar changes are applicable to earlier *API kept for backwards compatibility reason, tf_contract_HANDLE TF_NEW_CONTRACT(tf_contractConfig_t *tf_contractConfig);*

- ## New/Updated Features and Quality

Release 1.1.1.9

IRs resolved in this release

IR Parent/ Child Number	Severity Level	IR Description
PRSDK-2194	Major	RTOS Installer script to autoset SDK_INSTALL_PATH

Release 1.1.1.8

- Rename test project name to align with new rules in pdkProjectCreate script

Release 1.1.1.6

IRs resolved in this release

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00112839	Major	risk condition causes producer buffer missing write back
SDOCM00112163	Minor	trace framework projects do not run to completion on K2E EVM
SDOCM00106809	Minor	Trace framework coverity issues

Release 1.1.1.5

IRs resolved in this release

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00112406	Minor	TF ARM: unit test does not compile with LoggerStreamer and LogSnapShot dynamic libraries

Release 1.1.1.4

IRs resolved in this release:

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00108256	Major	traceframework do not compile on more strict rules

Release 1.1.1.3

IRs resolved in this release:

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00106809	Minor	Trace framework coverity issues

Release 1.1.1.2

IRs resolved in this release:

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00107209	Major	Trace framework: K2E Unit Test DSP executables do not load on to K2E EVM
SDOCM00107194	Minor	Trace framework: Warnings noticed during DSP test application

Release 1.1.1.1

IRs Resolved in this release:

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00106979	Major	Trace Framework Examples: CSL definitions supporting k2k/k2h devices from MCSDK 3.1 are used
SDOCM00106961	Major	Trace framework interface header files include tf_loc.h
SDOCM00106801	Minor	Trace Framework: Incorporate contract handle checks in library to best extent

Release 1.1.1.0

- ARM only contract create support added

- IRs fixed in this release

IR Parent/ Child Number	Severity Level	IR Description

IR Parent/ Child Number	Severity Level	IR Description
SDOCM0099362	Major	Trace framework: Requirement for local contract creation on ARM
SDOCM00106449	Major	Trace framework ARM producer unit test example is not available
SDOCM00106386	Major	trace framework user guide needs to get updated with latest API changes and examples

Release 1.1.0.0

- This is the first unified code base release of trace framework for both DSP and ARM.

- API changes are backward compatible to 1.0.2.0 release.

- New feature details with API enhancements are described as below.

  - UIA Snapshot and streaming: The new feature can enable a single consumer in trace framework to trigger producer state changes to streaming, free running and freeze the ring buffer index. Following new APIs are introduced.

    - tf_consumerSetProducerState(): Sets the producer state to Streaming/Free Run/Streaming.

    - tf_consumerGetProducerState(): Gets the current producer state that is reflected in the contract.

    - tf_consumerForceFreezeProducer(): This is needed when producer does not respond to consumer's freeze request and consumer would like to start consuming the information in the ring buffer. Before consuming, it would need to force freeze producer.

  - tf_contractGetInfo(): Single API to get contract information

  - tf_consumerGetContractHandle(): API to get the contract handle associated with the local consumer

  - tf_prodGetContractHandle (): API to get the contract handle associated with the local producer

Resolved IRs in this release

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00105455	Major	Trace framework enhancement to support UIA trace streaming and snapshot

Release 1.0.2.0

o Enhancements

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00098720	S2-Major	`TraceFramework (DSP): Support multi-instance UIA` `and performance optimize for buffer exchange`

Release 1.0.1.1

o Enhancements

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00096029	S2-Major	`Provide Enum Returns to the sendFxn() API` `interface from Consumer Process`
SDOCM00097148	S2-Major	`TraceFramework: provide congestion detection API`

Release 1.0.0.3

o Single Library approach for trace framework.

IR Parent/ Child Number	Severity Level	IR Description

SDOCM00095094	S2-Major	`Traceframework: Producer (DSP/ARM) stops`
		`notifying`
		     consumers when second consumer in the contract is removed

SDOCM00093852	S2-Major	`Traceframework: C++ compilation throws up`
		`errors and`
		`warnings`

Release 1.0.0.2

o OSAL implementation for the memory allocation/free operations
o OSAL implementations for the exception handling

Release 1.0.0.1

Please refer to the doxygen generated API reference guide for details. The changes in this release mainly include the following.

o Added the consAck() API for consumer library. Application using the consumer library should acknowledge the consumer library using this API after every buffer is received from the library.
o Added a sendFxn() Glue interface to the higher layer from the consumer library.

Release 1.0.0.0

o Initial release of low level driver

- ## Resolved Incident Reports (IR)

Table 2 provides information on IR resolutions incorporated into this release.

Table 2   Resolved IRs for this Release

IR Parent/ Child Number	Severity Level	IR Description
SDOCM00098720	S2-Major	TraceFramework (DSP): Support multi-instance UIA and performance optimize for buffer exchange

- ## Known Issues/Limitations

IR Parent/ Child Number	Severity Level	IR Description

- ## Licensing

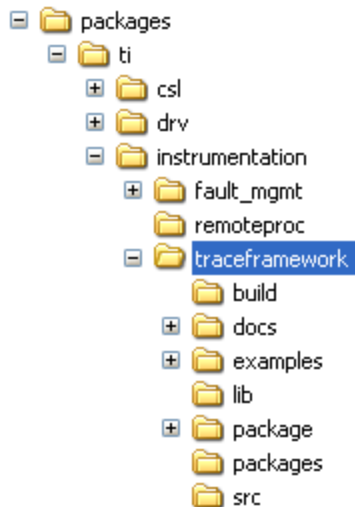Please refer to the software Manifest document for the details.

- ## Delivery Package

There is no separate delivery package. The trace framework 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/traceframework	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/traceframework/build	The directory contains internal XDC build related files which are used to create the library package.
ti/ traceframework/docs	The directory contains the library documentation.
ti/traceframework/lib	The "`lib`" folder has pre-built Big and Little Endian libraries for the library along with their *code/data size information*.
ti/traceframework/package	Internal package files.
ti/traceframework/src	Source code for the library.

- ## Customer Documentation List

Table 3 lists the documents that are accessible through the **/docs** folder on the product installation CD or in the delivery package.

Table 3   Product Documentation included with this Release

Document #	Document Title	File Name
1	API documentation (generated by Doxygen)	\docs\html\index.html
2	Release Notes (this document)	docs/ReleaseNotes_traceframework.pdf

Document #	Document Title	File Name
3	Trace framework User guide document	Docs/ traceframework_ug.pdf