TEXAS INSTRUMENTS
12500 TI Boulevard, MS 8640, Dallas, Texas 75243

Notification# 20220131002.0
Functional Safety Documentation for TMS320F28004x, TMS320F2837xD,
TMS320F2837xS and TMS320F2807x
Information Only

Date: February 16, 2022
To: TOKYO ELECTRON DEVICE (DSTR) PCN

Dear Customer:

This is an information-only announcement of a change to the functional safety collateral for two C2000 family of devices that are currently offered by Texas Instruments.

The changes discussed within this notification are for your information only.

Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately.

For questions regarding this notice, contact your local Field Sales Representative or the Change Management team (PCN_ww_admin_team@list.ti.com).

Sincerely,

Change Management Team
SC Business Services

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past sixty (60) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TMS320F28377SPTPQ	null
TMS320F28379DPTPQ	null

Technical details of this Product Change follow on the next page(s).

Notification Number:	20220131002.0	Notification Date:	February 16, 2022
Title:	Functional Safety Documentation for TMS320F28004x, TMS320F2837xD, TMS320F2837xS and TMS320F2807x		
Customer Contact:	Notification Manager	**Dept:**	Quality Services
Change Type:	Functional Safety Collateral		

Notification Details

Description of Change:

Texas Instruments Incorporated is announcing an information only notification.
The product functional safety collateralis being updated as summarized below.
The following change history provides further details.

User's Guide
Functional Safety Manual for TMS320F28004x

Changes from Revision C (September 2020) to Revision D (January 2022)   **Page**
- Updated the numbering format for tables, figures and cross-references throughout the document...................3
- Update was made in Section 4.3.. 19
- Update was made in Section 4.3.4.. 22

Functional Safety Information
Detailed Functional Safety Analysis Report for TMS320F28004x C2000™ MCUs

Changes from Revision * (September 2020) to Revision A (January 2022)   **Page**
- Updated the numbering format for tables, figures and cross-references throughout the document...................2
- Updates were made in Section 4.2.. 10
- Updates were made in Section 4.3.. 11
- Updates were made in Section 4.4.. 12

User's Guide
Functional Safety Manual for TMS320F2837xD, TMS320F2837xS and TMS320F2807x

Changes from Revision C (March 2019) to Revision D (January 2022)   **Page**
- Updated the numbering format for tables, figures and cross-references throughout the document...................3
- Update was made in Section 3.4.2.. 17

Functional Safety Information

Detailed Functional Safety Analysis Report for TMS320F2837xD, TMS320F2837xS and TMS320F2807x C2000™ Microcontrollers

![Texas Instruments]

The following functional safety collaterals are impacted:

Device Family	Change From:	Change To:	Portal
TMS320F28004x (User Guide)	SPRUID8C	SPRUID8D	ti.com
TMS320F28004x (FS Analysis Report)	SPRUIV3	SPRUIV3A	MSS
TMS320F2837xD, TMS320F2837xS and TMS320F2807x (User Guide)	SPRUI78C	SPRUI78D	ti.com
TMS320F2837xD, TMS320F2837xS and TMS320F2807x (FS Analysis Report)	SPRUIO9	SPRUIO9A	MSS
C2000-SAFETI-CLA-STL	See Note 1a	See Note 1b	MSS
C2000-F28004x-SW-DIAG-LIB	See Note 2a	See Note 2a	MSS
FMEDA for F2837x and F2807x	1.01_GA	1.05_GA	MSS
FMEDA for F28004x	1p00_GA	1p02_GA	MSS

See Note 1a: F2837x_07x_CLA_Self_Test_Library_1_00_00_setup.exe

See Note 1b: F2837x_07x_CLA_Self_Test_Library_1_00_01_setup.exe

See Note 2a: F28004x_CLA_Self_Test_Library_1_00_00_setup.exe

F28004x_C28x_Self_Test_Library_1_00_00_setup.exe

F28004x_Software_Compliance_Support_Package_1_00_00_setup.exe

See Note 2b: F28004x_CLA_Self_Test_Library_1_00_00_setup.exe

F28004x_C28x_Self_Test_Library_1_00_00_setup.exe

F28004x_Software_Compliance_Support_Package_1_00_00_setup.exe

Reason for Change:
To accurately reflect the revised Diagnostic Coverage (DC) information that is applicable to functional safety applications.
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):
Impact Summary:

1. DC values for different safety mechanisms are updated in the FMEDA for F28004x, F2807x and F2837x family of devices. These DC changes should not impact the overall safety

concept or achievable safety goals as validated by TUV SUD. However, system integrator needs to incorporate the updated DC values and ascertain the impact at system level.
2. FS Analysis Report revised to reflect the updated safety metrics from FMEDA.
3. The DC for the CLA_STL has been reduced from 90% to 60% for F28004x, F2807x and F2837x family of devices. This is only a documentation update, and there are no functional changes made to the CLA_STL software.
4. The DC for the C28x_STL remains 60%, however, an additional test vector is required to be integrated into the end application, in order to meet the 60% coverage requirement. This is only applicable to the F28004x. C28x_STL is not supported on the F2837x family.
5. The Compliance Support Package (CSP) has been updated to reflect all the updates made to all documentation and to the software.

Product Revision Updates:

Summary of updates for CLA_STL for F2837x and F2807x:
1. Available in **version 1.00.01** C2000-SAFETI-CLA-STL.
2. This software update must be requested as before via My Secure Server (MSS).
3. Installed using self-extracting executable:
   F2837x_07x_CLA_Self_Test_Library_1_00_01_setup.exe
4. For additional details, see Release Notes located as shown below:
   a. **Filename**: SafeTI-CLA-STL-release-notes_1-00-01.html
   b. **Location**: <installation_dir>\C2000Ware_1_00_01_00\libraries\diagnostic\cla_stl
5. This update relates to the documentation only and there are no functional changes to the software itself. See the Software Safety Requirements Specification for further details:
   a. **Filename**: CLA_STL_SPS-v2.3.docx
   b. **Location**: <installation_dir>\C2000Ware_1_00_01_00\libraries\diagnostic\cla_stl\compliance_support_package\software_safety_requirements_specification

Summary of updates for CLA_STL for F28004x:
1. Available in **version 1.00.01** C2000-F28004x-SW-DIAG-LIB.
2. This software update must be requested as before via My Secure Server (MSS).
3. Installed using self-extracting executable:
   F28004x_CLA_Self_Test_Library_1_00_01_setup.exe
4. For additional details, see Release Notes, located as shown below:
   a. **Filename**: release_notes.html
   b. **Location**: <installation_dir>\ C2000Ware_3_01_00_00\libraries\cla_stl\f28004x
5. The release_notes also contain links to the revised user guides and the revised safety manual

Summary of updates for C28x_STL for F28004x:
1. Available in **version 1.00.01** C2000-F28004x-SW-DIAG-LIB.
2. This software update must be requested as before via My Secure Server (MSS).
3. Installed using self-extracting executable:
   F28004x_C28x_Self_Test_Library_1_00_01_setup.exe
4. For additional details, see Release Notes, located as shown below:
   a. **Filename**: release_notes.html
   b. **Location**: <installation_dir>\ C2000Ware_3_01_00_00\libraries\c28x_stl\f28004x
5. The release_notes also contain links to the revised user guides and the revised safety manual

Summary of updates to the Compliance Support Package (CSP) for F28004x:
1. Available in **version 1.00.01** C2000-F28004x-SW-DIAG-LIB.
2. This software update must be requested as before via My Secure Server (MSS).
3. Installed using self-extracting executable:
   F28004x_Software_Compliance_Support_Package_1_00_01_setup.exe
4. For additional details, first see the CSP user's guide, located as shown below:
   a. **Filename**: F28004x_Compliance_Support_Package_User's_Guide.docx
   b. **Location**: <installation_dir>\ C2000Ware_3_01_00_00\libraries\ compliance_support_package \f28004x

Summary of updates for FMEDA for F2837x and F2807x
1. Available in **version 1.05_GA** of TMS320F28x7x_Quantitative_FMEDA.xlsx
2. Updated FMEDA must be requested as before via My Secure Server (MSS).
3. FMEDA Diagnostic Coverage (DC) values are updated based on fault injection data <mark>as a result of update in the fault model</mark>.

Summary of updates for FMEDA for F28004x:
1. Available in **version 1p02_GA** of TMS320F28004x_Quantitative_FMEDA.xlsx
2. Updated FMEDA must be requested as before via My Secure Server (MSS).
3. FMEDA Diagnostic Coverage (DC) values are updated based on fault injection data <mark>as a result of update in the fault model</mark>.

Changes to product identification resulting from this notification:

None.

Product Affected:

F280047PZQR	F280049CPMSR	F280049PMS	F280049PZS
F280048CPMQR	F280049CPZQR	F280049PMSR	F280049PZSR
F280048PMQR	F280049CPZS	F280049PZQ	F280049RSHSR
F280049CPMS	F280049CRSHSR	F280049PZQR	TMS320F28377SPZPS
TMS320F28075PTPQ	TMS320F28374SZWTT	TMS320F28376SPTPS	TMS320F28377SPZPT
TMS320F28075PTPQR	TMS320F28374SZWTTR	TMS320F28376SPTPT	TMS320F28377SZWTQ
TMS320F28075PTPS	TMS320F28375DPTPS	TMS320F28376SPZPS	TMS320F28377SZWTS
TMS320F28075PTPT	TMS320F28375DPTPT	TMS320F28376SPZPT	TMS320F28377SZWTT
TMS320F28075PZPQ	TMS320F28375DPZPS	TMS320F28376SZWTS	TMS320F28378DPTPS
TMS320F28075PZPS	TMS320F28375DZWTS	TMS320F28376SZWTT	TMS320F28378SPTPS
TMS320F28075PZPT	TMS320F28375DZWTT	TMS320F28377DGWTEP	TMS320F28378SPZPS
TMS320F28076PTPS	TMS320F28375SPTPS	TMS320F28377DPTPEP	TMS320F28379DPTPQ
TMS320F28076PZPS	TMS320F28375SPTPT	TMS320F28377DPTPQ	TMS320F28379DPTPS
TMS320F28374DPTPS	TMS320F28375SPZPQ	TMS320F28377DPTPS	TMS320F28379DPTPT
TMS320F28374DPTPT	TMS320F28375SPZPQR	TMS320F28377DPTPT	TMS320F28379DZWTQR
TMS320F28374DZWTS	TMS320F28375SPZPS	TMS320F28377DZWTQ	TMS320F28379DZWTS
TMS320F28374DZWTT	TMS320F28375SPZPT	TMS320F28377DZWTQR	TMS320F28379DZWTT
TMS320F28374SPTPS	TMS320F28375SZWTS	TMS320F28377DZWTS	TMS320F28379SPTPS
TMS320F28374SPTPSR	TMS320F28375SZWTT	TMS320F28377DZWTT	TMS320F28379SPTPT
TMS320F28374SPTPT	TMS320F28376DPTPS	TMS320F28377SPTPQ	TMS320F28379SPZPS
TMS320F28374SPZPS	TMS320F28376DPTPT	TMS320F28377SPTPS	TMS320F28379SPZPT
TMS320F28374SPZPT	TMS320F28376DZWTS	TMS320F28377SPTPT	TMS320F28379SZWTS
TMS320F28374SZWTS	TMS320F28376DZWTT	TMS320F28377SPZPQ	TMS320F28379SZWTT

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

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