Report
of the
Functional Safety
Audit

Manufacturer:
Texas Instruments Incorporated
12500 TI Boulevard
Dallas, Texas 75243
USA

Report No.: TD88390T

Revision 1.2 of 2016-03-24

TÜV SÜD Rail GmbH
Ridlerstraße 57
D-80339 München

Certification Body:
TÜV SÜD Product Service GmbH
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Revision Log

Revision	Name	Date	Changes/History
0.9	P. Weiß, M. Ramold	2013-02-25	Initial draft
1.0	P. Weiß, J. Blum	2013-02-28	-
1.1	P. Weiß, J. Blum	2013-03-15	Chapter 6.2
1.2	P. Weiß, A. Köhnen	2013-03-24	Update after re-audit

Type of the Audit:	Functional Safety Audit
Audit based on:	IEC 61508:2010 and ISO 26262:2011
Contact person of Texas Instruments Incorporated:	Mr. Abhishek Arora
Lead-Auditor/Auditor:	Peter Weiß, Axel Köhnen, Matthias Ramold
Scope of the Audit:	SafeTI™ Functional Safety Hardware Development
Locations of the Audit:	Texas Instruments 12500 TI Boulevard Dallas, Texas 75243

Table 1: Scope of the FSM

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1 Purpose of the Report and Subject of the Assessment

1.1 General

The present report includes the generic result of the audit on the Functional Safety Development System documentation of the Texas Instruments Incorporated carried in March 2016. The Project No. related to this assessment was as follows: 717512483.

1.2 Scope of the Assessment

The scope of the assessment was a basic Functional Safety development process for hardware components to be compliant with the standards listed in chapter 2. This generic process is a companywide valid approach that specifies the procedure for the Functional Safety development for hardware components marketed as SafeTI-61508 or SafeTI-26262.

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2 Basis of the Assessment

The assessment and the audit were based on the following standards:

IEC 61508-1: 2010	Functional Safety of electrical/electronic/programmable electronic safety-related systems Part 1: General requirements
IEC 61508-2: 2010	Functional Safety of electrical/electronic/programmable electronic safety-related systems Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems
ISO 26262-2:2011	Road vehicles - Functional safety - Part 2: Management of functional safety
ISO 26262-5:2011	Road vehicles - Functional safety - Part 5: Product development at the hardware level
ISO 26262-7:2011	Road vehicles - Functional safety - Part 7:Production and operation
ISO 26262-8:2011	Road vehicles - Functional safety - Part 8:Supporting processes

Table 2: Standards Functional Safety

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3 Documents provided for the Audit

The audit was based on the following documents:

No.	Title	Document-No./ File identifier	Revision	Date
[D1]	QRAS AP00210 Rev. B SafeTI™ Functional Safety Hardware	AP00210.pdf	B	2013-02-14

Table 3: Audit Documents provided from Texas Instruments Incorporated

TÜV SÜD Rail GmbH
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4 Related documents

No.	Title	Document-No./ File identifier	Revision	Date
[D2]	-	-	-	-

Table 4: Related Documents

TÜV SÜD Rail GmbH
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5 Performance and result of the audit

The results of the audit were documented by the following documents:

No.	Title	Document-No./ File identifier	Revision	Date
[R1]	Checklist FSM IEC 61508	Checklist_FSM_IEC61508 _2016_03_23.docx	1.2	2016-03-23
[R2]	Checklist Lifecycle IEC 61508	Checkliste_Lifecycle_IEC6 1508_2016_03_23.docx	2.0	2016-03-23
[R3]	Checklist IC Development according to IEC 61508	Checklist_IC_Development _61508_2016_03_23.docx	3.0	2016-03-23
[R4]	ISO26262 Checklist FSM general	ISO26262_Checklist_FSM _general_2016_03_23.xls m	3.0	2016-03-23

Table 5: Audit Organization Documents

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6 Execution of the Audit

6.1 General approach

The audit was executed according to the audit agenda using the checklists [R1] - [R4] as guidance. The Functional Safety Development aspects as described by the standards listed in chapter 2 were audited. The technical inspection of safety-related products or product documentation was not part of the audit.

6.2 Overall Result

The SafeTI-61508 and / or SafeTI-26262 Functional Safety development process for hardware as defined in [D1] is assessed suitable for development of IEC 61508 compliant items up to SIL 3 and ISO 26262 hardware components up to ASIL D.

The correct implementation and compliance of the Functional Safety development process has to be verified for each safety related product or project.

The Functional Safety Development certificate is valid for three years. An annual re-audit is necessary for the duration of the certificate. The re-audit can be compensated if a new or ongoing safety-related program/project is executed together with TÜV SÜD. Changes in the certified Functional Safety Development System must be reported to TÜV SÜD.

München, 2016-03-24

A. Köhnen

Project Manager

P. Weiß

Review

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