MC-ISAR_AS422_TC3xx_DEMO_2.0.0

Release Notes
Product name: MC-ISAR_AS422_TC3xx
Release number: 2.0.0
Type of release: Alpha*
Release method: via Release Area
AUTOSAR specification: 4.2.2
Processor platform: TC39x BC, TC39x BD, TC38x AD, TC38x AE, TC37x AA, TC37xEXT AB, TC35x AB, TC36x AA, TC33x AA, TC33xEXT AA, TC32x AA
Date: 2021-04-09
Previous release number: 2.0.0-rc

About this document

Scope and purpose

This release notes, for the 2.0.0 delivery of MC-ISAR_AS422_TC3xx DEMO drivers, details the release contents, all known issues in the release and the changes from the last release. This document also provides information on tools, compiler options and support packages.

New issues identified since the last release of this document are detailed first, followed by all issues identified in previous versions of this release.

The modules supported in the release are:

- Hssl (20.0.1) (NA for TC32x/TC33xPD/TC33xEXT/TC35x)
- I2c (20.0.2) (NA for TC32x/TC33xPD/TC33xEXT)
- Iom (20.0.0) (NA for TC33xEXT and applicable for TC33xPD)
- Sent (20.0.1) (NA for TC35x)
- Stm (20.0.0)

Further generic references to Modules are indicated as <Mod>, where <Mod> represents the above module short names.

Note: ** This release is not intended for production use.*

Attention*: *Refer to the Limitations and deviations section before using the software for integration.

Intended audience

This document is intended for anyone using the MC-ISAR_AS422_TC3xx software.

Reference documents

None.

Table of contents

1 Package contents

1.1 Package overview

This release is of type Alpha. Section 1.4 provides module-wise quality information.

1.2 Package items

The pacakge is contained in the `MC-ISAR_AS422_TC3xx_Demo_2.0.0.zip` file. The contents of this file include MCAL software, EB tresos plugin files (BMD included), User Manuals and Release Notes.

Package contents

Note: The package also include Build Environment and Demo Application which is not attached with any quality but provided for demonstration purpose only.

Table 1 Package zip contents

Package content	Description
`MC-ISAR_AS422_TC3xx_Demo_2.0.0.exe`	Product installer to be used with AUTOSAR Version 4.2.2
User Manuals	Contains the User Manual
`Releasenote_MC-ISAR_AS422_TC3xx_Demo_2.0.0.pdf`	Contains the Release Notes
`MC-ISAR_TC3xx_<Compiler>_2.0.0.pdf`	Contains compiler specific tool information.

1.2.1 Driver files

Table 2 Driver file description

File name	Description
`<Mod>_<Ie>.c`	Contains the <Mod>_<Ie> source files located in `\McIsar\Src\Mcal\Tricore\<Mod>\ssc\src`.
`<Mod>_<Ie>.h`	Contains the <Mod>_<Ie> header files located in `\McIsar\Src\Mcal\Tricore\<Mod>\ssc\inc`.

Note: In the above table, `Ie` stands for implementation specific.

1.2.2 Common files

Refer to the `MC-ISAR_AS422_TC3xx_BASIC_<yyy>-<zzzz>` for details on the common files, where <yyy> and <zzzz> are corresponding release numbers.

1.2.3 EB tresos plugin files

Table 3 Plugin files

Folder name	Description
autosar	Contains the BMD files for the module located in `\McIsar\PluginsTresos\eclipse\Plugins\<Mod>_Aurix2G`
Config	Contains the XDM tresos plugin files for the module located in `\McIsar\PluginsTresos\eclipse\Plugins\<Mod>_Aurix2G`
Generate	Contains the template for the generated files for the module located in `\McIsar\PluginsTresos\eclipse\Plugins\<Mod>_Aurix2G`
plugin.properties	Contains the plugin property for the module located in `\McIsar\PluginsTresos\eclipse\Plugins\<Mod>_Aurix2G`
plugin.xml	Contains the plug-in information, located in `\McIsar\PluginsTresos\eclipse\Plugins\<Mod>_Aurix2G`
anchors.xml	

Package contents

Note: Resource_Aurix2G contains the properties for the TC39x BC, TC39x BD, TC38x AD, TC38x AE, TC37x AA, TC37xEXT AB, TC35x AB, TC36x AA, TC33x AA, TC33xEXT AA, TC32x AA.

Note: The plugin is a sample for reference. The integrator shall take care of the appropriate plugin.This note applies for following plugins “Dem_Aurix2G, EcuC_Aurix2G, EcuM_Aurix2G, FrIf_Aurix2G".

Note: This package will allow the user to select TC3E7x device(s) from the target drop-down list while creating a configuration project in EB tresos. However this device is not supported for this release. Infineon recommends not to select the TC3E7x device(s).

1.3 Safety

The drivers mentioned in this Release Notes have no Safety Claim.

1.4 Module-wise quality

Table 4 Module-wise quality

Module	Release quality
Hssl	Demo (NA for TC32x/TC33xPD/TC33xEXT/TC35x)
I2c	Demo (NA for TC32x/TC33xPD/TC33xEXT)
Iom	Demo (NA for TC33xEXT)
Sent	Demo (NA for TC35x)
Stm	Demo

1.5 Compatibility

This release is tested with the following SFR packages:

- TC32xA: REG_TC33X32X_UM_V2.0.0.R0
- TC33xA: REG_TC33X32X_UM_V2.0.0.R0
- TC33xA_ED: REG_TC33XED_UM_V2.0.0.R0
- TC35xA: REG_TC35XA_UM_V2.0.0.R0
- TC36xA: REG_TC36XA_UM_V2.0.0.R0
- TC37xA: REG_TC37xPD_UM_V2.0.0.R0
- TC37xA_ED: REG_TC37xED_UM_V2.0.0.R0
- TC38xA: REG_TC38XA_UM_V2.0.0.R0
- TC39xA: REG_TC39XB_UM_V2.0.0.R0

2 Tool information

For compiler version refer release notes appendix MC-ISAR_TC3xx_<Compiler>_2.0.0.pdf available in release package where <Compiler> represent the corresponding compiler.

Table 5 Tool information

Tool description	Version details
Processor platform	TC39x BC, TC39x BD, TC38x AD, TC38x AE, TC37x AA, TC37xEXT AB, TC35x AB, TC36x AA, TC33x AA, TC33xEXT AA, TC32x AA
Evaluation hardware	TriBoard TC3x7 TriBoard TC3x9
Code configuration and generation tool	EB tresos Studio 26.2.0 Build Nr. b191017-0938

Table 6 AURIX™2G TC32xAA/TC33xAA/TC33xED AA/TC35xAB/TC36xAA/TC37xAA/TC37xED AB/ TC38x AD and AE/TC39x BC and BD umbrella device support

AURIX™ 2G umbrella device	Name displayed in the EB tresos tool	Tresos property file
SAK-TC332LP-32F300F	TC332	AURIX2G_TC332.properties
SAL-TC332LP-32F300F	TC332	AURIX2G_TC332.properties
SAK-TC333LP-32F300F	TC333	AURIX2G_TC333.properties
SAL-TC333LP-32F300F	TC333	AURIX2G_TC333.properties
SAK-TC334LP-32F300F	TC334	AURIX2G_TC334.properties
SAL-TC334LP-32F300F	TC334	AURIX2G_TC334.properties
SAK-TC336LP-32F300S	TC336	AURIX2G_TC336.properties
SAL-TC336LP-32F300S	TC336	AURIX2G_TC336.properties
SAK-TC337LP-32F300S	TC337	AURIX2G_TC337.properties
SAL-TC337LP-32F300S	TC337	AURIX2G_TC337.properties
SAK-TC356TA-64F300S	TC356_ADAS	AURIX2G_TC356_ADAS.properties
SAK-TC364DP-64F300W	TC364_LQFP	AURIX2G_TC364_LQFP.properties
SAK-TC365DP-64F300W	TC365_LQFP	AURIX2G_TC365_LQFP.properties
SAK-TC366DP-64F300S	TC366	AURIX2G_TC366.properties
SAK-TC367DP-64F300S	TC367	AURIX2G_TC367.properties
SAL-TC375TP-96F300W	TC375	AURIX2G_TC375.properties
SAL-TC377TP-96F300S	TC377	AURIX2G_TC377.properties
SAL-TC377DP-96F300S	TC377	AURIX2G_TC377.properties
SAL-TC377TX-96F300S	TC377_ED_EX	AURIX2G_TC377_ED.properties
SAL-TC387QP-160F300S	TC387	AURIX2G_TC387.properties
SAK-TC389QP-160F300S	TC389	AURIX2G_TC389.properties

Tool information

Table 7 AURIX™ 2G TC32xAA/TC33xAA/TC33xED AA/TC35xAB/TC36xAA/TC37xAA/TC37xED AA/TC38x AD and AE/TC39x BC and BD marking option device support[1]

AURIX™ 2G marking option device	Name displayed in the EB tresos tool	Tresos property file
SAK-TC322LP-16F160F[2)]	TC322	AURIX2G_TC322.properties
SAL-TC322LP-16F160F[2)]	TC322	AURIX2G_TC322.properties
SAK-TC322LS-24F160F[2)]	TC322	AURIX2G_TC322.properties
SAK-TC323LP-16F160F[2)]	TC323	AURIX2G_TC323.properties
SAL-TC323LP-16F160F[2)]	TC323	AURIX2G_TC323.properties
SAK-TC323LP-24F200F[2)]	TC323	AURIX2G_TC323.properties
SAL-TC323LP-24F200F	TC323	AURIX2G_TC323.properties
SAK-TC323L-24F200F[2)]	TC323	AURIX2G_TC323.properties
SAL-TC323L-24F200F[2)]	TC323	AURIX2G_TC323.properties
SAK-TC323LS-24F160F[2)]	TC323	AURIX2G_TC323.properties
SAK-TC324LP-16F160F[2)]	TC324	AURIX2G_TC324.properties
SAL-TC324LP-16F160F[2)]	TC324	AURIX2G_TC324.properties
SAK-TC324LP-24F200F[2)]	TC324	AURIX2G_TC324.properties
SAL-TC324LP-24F200F[2)]	TC324	AURIX2G_TC324.properties
SAK-TC324L-24F200F[2)]	TC324	AURIX2G_TC324.properties
SAL-TC324L-24F200F[2)]	TC324	AURIX2G_TC324.properties
SAK-TC327LP-16F160S[2)]	TC327	AURIX2G_TC327.properties
SAL-TC327LP-16F160S[2)]	TC327	AURIX2G_TC327.properties
SAL-TC332LP-32F200F	TC332	AURIX2G_TC332.properties
SAK-TC332LP-32F200F	TC332	AURIX2G_TC332.properties
SAL-TC333LP-32F200F	TC333	AURIX2G_TC333.properties
SAK-TC333LP-32F200F	TC333	AURIX2G_TC333.properties
SAK-TC333L-32F200F	TC333	AURIX2G_TC333.properties
SAL-TC333L-32F200F	TC333	AURIX2G_TC333.properties
SAL-TC334LP-32F200F	TC334	AURIX2G_TC334.properties
SAK-TC334LP-32F200F	TC334	AURIX2G_TC334.properties
SAK-TC334L-32F200F	TC334	AURIX2G_TC334.properties
SAL-TC334L-32F200F	TC334	AURIX2G_TC334.properties
SAL-TC336LP-32F200S	TC336	AURIX2G_TC336.properties
SAK-TC336LP-32F200S	TC336	AURIX2G_TC336.properties
SAL-TC337LP-32F200S	TC337	AURIX2G_TC337.properties
SAK-TC337LP-32F200S	TC337	AURIX2G_TC337.properties

Tool information

Table 7 AURIX™ 2G TC32xAA/TC33xAA/TC33xED AA/TC35xAB/TC36xAA/TC37xAA/TC37xED AA/ TC38x AD and AE/TC39x BC and BD marking option device support[1] (continued)

AURIX™ 2G marking option device	Name displayed in the EB tresos tool	Tresos property file
SAK-TC356TD-48F300S	TC356_ADAS	AURIX2G_TC356_ADAS.properties
SAK-TC356TH-64F300S	TC356_ADAS	AURIX2G_TC356_ADAS.properties
SAK-TC357TA-64F300S	TC357_ADAS	AURIX2G_TC357_ADAS.properties
SAK-TC357TH-64F300S	TC357_ADAS	AURIX2G_TC357_ADAS.properties
SAL-TC364DP-64F300F	TC364_TQFP	AURIX2G_TC364_TQFP.properties
SAK-TC364DP-48F200F	TC364_TQFP	AURIX2G_TC364_TQFP.properties
SAK-TC364DP-48F300F	TC364_TQFP	AURIX2G_TC364_TQFP.properties
SAL-TC365DP-64F300W	TC365_LQFP	AURIX2G_TC365_LQFP.properties
SAK-TC365DP-64F200W	TC365_LQFP	AURIX2G_TC365_LQFP.properties
SAL-TC366DP-64F300S	TC366	AURIX2G_TC366.properties
SAL-TC367DP-64F300S	TC367	AURIX2G_TC367.properties
SAK-TC367DP-48F200S	TC367	AURIX2G_TC367.properties
SAK-TC367DP-48F300S	TC367	AURIX2G_TC367.properties
SAK-TC367VB-32F200S	TC367	AURIX2G_TC367.properties
SAK-TC367V0-64F300S	TC367	AURIX2G_TC367.properties
SAK-TC375TP-96F300W	TC375	AURIX2G_TC375.properties
SAK-TC377TP-96F300S	TC377	AURIX2G_TC377.properties
SAK-TC377DP-96F300S	TC377	AURIX2G_TC377.properties
SAK-TC375DP-96F300W	TC375	AURIX2G_TC375.properties
SAL-TC375DP-96F300W	TC375	AURIX2G_TC375.properties
SAK-TC375TI-96F300W	TC375	AURIX2G_TC375.properties
SAL-TC375TI-96F300W	TC375	AURIX2G_TC375.properties
SAK-TC377TX-96F300S	TC377_ED_EX	AURIX2G_TC377_ED.properties
SAK-TC377TX-64F300S	TC377_ED_EX	AURIX2G_TC377_ED.properties
SAK-TC387QP-160F300S	TC387	AURIX2G_TC387.properties
SAL-TC387TP-128F300S	TC387	AURIX2G_TC387.properties
SAK-TC387TP-128F300S	TC387	AURIX2G_TC387.properties
SAL-TC387TP-160F300S	TC387	AURIX2G_TC387.properties
SAK-TC387TP-160F300S	TC387	AURIX2G_TC387.properties
SAK-TC387QN-160F300S	TC387	AURIX2G_TC387.properties
SAL-TC389QP-160F300S	TC389	AURIX2G_TC389.properties
SAK-TC389QN-160F300S	TC389	AURIX2G_TC389.properties

Summary of changes

Table 7 AURIX™ 2G TC32xAA/TC33xAA/TC33xED AA/TC35xAB/TC36xAA/TC37xAA/TC37xED AA/TC38x AD and AE/TC39x BC and BD marking option device support[1] (continued)

AURIX™ 2G marking option device	Name displayed in the EB tresos tool	Tresos property file
SAL-TC397XP-256F300S	TC397	AURIX2G_TC397.properties
SAK-TC397XP-256F300S	TC397	AURIX2G_TC397.properties
SAK-TC397XX-256F300S	TC397	AURIX2G_TC397.properties
SAK-TC397QP-192F300S	TC397	AURIX2G_TC397.properties
SAK-TC397QP-256F300S	TC397	AURIX2G_TC397.properties
SAK-TC397XZ-256F300S	TC397	AURIX2G_TC397.properties
SAK-TC397XM-256F300S	TC397	AURIX2G_TC397.properties
SAL-TC397QP-192F300S	TC397	AURIX2G_TC397.properties
SAL-TC397QP-256F300S	TC397	AURIX2G_TC397.properties
SAL-TC397XZ-256F300S	TC397	AURIX2G_TC397.properties
SAL-TC397XX-256F300S	TC397	AURIX2G_TC397.properties
SAK-TC397XA-256F300S	TC397_ADAS	AURIX2G_TC397_ADAS.properties
SAK-TC397QA-160F300S	TC397_ADAS	AURIX2G_TC397_ADAS.properties
SAL-TC399XX-256F300S	TC399	AURIX2G_TC399.properties
SAL-TC399XP-256F300S	TC399	AURIX2G_TC399.properties
SAK-TC399XP-256F300S	TC399	AURIX2G_TC399.properties
SAK-TC399XX-256F300S	TC399	AURIX2G_TC399.properties

Note: ***1.*** *For TC38x, TC39x, TC37x, TC37xEXT, TC36x, TC35x, TC33x, TC33xEXT marking option device support, range check has to be imposed by user, and not in the MCAL code.*

2. *TC32x marking option device support is added in MCAL through configuration.*

2.1 Compiler options

For compiler options refer release notes appendix MC-ISAR_TC3xx_<Compiler>_2.0.0.pdf available in release package where <Compiler> represent the corresponding compiler.

3 Summary of changes

Configuration changes

Table 8 Configuration changes from 2.0.0-rc to 2.0.0

Compatibility check	Result
Are there any change in parameters supplied from previous version?	Yes
Added parameters	None

Summary of changes

Table 8 Configuration changes from 2.0.0-rc to 2.0.0 (continued)

Compatibility check	Result
Deleted parameters	None
Modified parameters	**I2c** • SwPatchVersion is updated.
Can the previously saved configuration be reused?	Yes

Compatibility with 1.40.0 release

Refer to the MC-ISAR_AS422_TC3xx_BASIC_<yyy>-<zzzz> for details on the compatibility with 1.40.0 release where <yyy> and <zzzz> represent the corresponding release numbers.

3.1 Issues fixed in release 2.0.0

Table 9 Summary of bugs from 2.0.0-rc to 2.0.0

Module	Issue number	Description
Hssl	0000053912-16562	Description: Due to unreliability of the wake-up functionality, sleep mode for the HSCT is no longer supported and shall not be used. Impact:User should not invoke Hssl_SetMode API with HSSL_MODE_SLEEP mode.

Table 10 Summary of enhancement from 2.0.0-rc to 2.0.0

Module	Issue number	Description
No enhancements.		

Note: Generic ones are to be referred from BASIC Release notes.

3.2 Issues fixed in release 2.0.0-rc

Configuration changes

This is first release with AS422.

Table 11 Summary of bugs from 1.40.0 to 2.0.0-rc

Module	Issue number	Description
Hssl	0000053912-12827	Description: DET HSSL_E_NOT_INITIALIZED= 0x01 is not raised when module API services are called before successful initialization (API : Hssl_Init) Impact: Without module init, if any other API is called with valid parameter functionality will be executed and results are unpredictable.
	0000053912-15920	Description: Notification NULL_PTR check is in-complete. Impact: Pointer is not checked for NULL, instead the content of the notification is checked.

Summary of changes

Table 11 Summary of bugs from 1.40.0 to 2.0.0-rc (continued)

Module	Issue number	Description
	0000053912-15411	Description: User is not provided any notification when DMA error event occurs during Hssl Multi Write or Hssl Multi Read operation. Impact: User is not notified when error happens during DMA transaction.
	0000053912-13256	Description: DET checks for NULL pointer is missing for the HSSL API services which has channel as argument. Impact: When HSSL API services which has channel number as argument are called with NULL_PTR, trap occurs instead of reporting HSSL_E_INV_POINTER DET.
	0000053912-13067	Description: When any API service is called with HSSL ID > 1, HSSL_E_INSTANCE_NOT_CONFIGURED is reported. Impact: When any API service is called with HSSL ID > 1, instead of HSSL_E_INV_PARAM wrong DET HSSL_E_INSTANCE_NOT_CONFIGURED is reported.
Sent	0000053912-12426	Description: In TC387, 20 SENT channels are bonded out(0-14, 17/18, 20-22).However in TC387 properties file, SENT Channels 0 to 19 are considered. Holes present in sent channels are not considered in TC387 properties file. Impact: In TC387, few SENT channels (20,21,22) are not selectable in MCAL though provided in the hardware. SENT channels (15,16,19) are listed as configurable channels which should not be selected by the user.
	0000053912-13274	Description: a) In TC397, 20 SENT channels are bonded out (0-14, 17/18, 20-22). However in TC397 properties file, SENT Channels 0 to 19 are considered. Holes present in sent channels are not considered in TC397 properties file. b) In TC397_ADAS, 17 SENT channels are bonded out (0-14, 17/18). However in TC397_ADAS properties file, SENT Channels 0 to 16 are considered. Holes present in sent channels are not considered in TC397_ADAS properties file. c) In TC322,TC323,TC332 and TC333 properties file contains device interface signals which are not present in the hardware. Impact: a) In TC397, few SENT channels (20,21,22) are not selectable in MCAL though provided in the hardware. SENT channels (15,16,19) are listed as configurable channels which should not be selected by the user. b) In TC397_ADAS, few SENT channels (17,18) are not selectable in MCAL though provided in the hardware. SENT channels (15,16) are listed as configurable channels which should not be selected by the user. c) In TC322,TC323,TC332 and TC333, device interface signals which are not present in the hardware are listed as configurable interface signals. These signals should not be selected by the user.

Table 12 Summary of enhancement from 1.40.0 to 2.0.0-rc

Module	Issue number	Description
No enhancements.		

Note: Generic ones are to be referred from BASIC Release notes.

4 Known issues

Table 13 Known issues

Module	Issue number	Description
No known issues.		

Note: Generic ones are to be referred from BASIC Release notes.

5 Limitations and deviations

This chapter describes the limitations and deviations due to software/hardware design constraints.

5.1 Limitations

Refer to the *Deviation and limitations* section in the respective MCAL User Manual.

5.2 Deviations

Refer to the `MC-ISAR_AS422_TC3xx_BASIC_<yyy>-<zzzz>` for details on the bmd deviations, where <yyy> and <zzzz> represent the corresponding release numbers.

5.2.1 HIS-MISRA violations

Table 14 MISRA violations

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
4.9	A function should be used in preference to a function-like macro where they are interchangeable	Allowed violations in cases where function like macro, '*_GetVersionInfo', and intrinsic macros.	Iom, Stm
4.10	Precautions shall be taken in order to prevent the contents of a header file being included more than once	Allowed violations in case where Mod_Memmap.h is repeatedly included without include guard. This is as per AUTOSAR.	Hssl, I2c, Iom, Sent, Stm
5.1	External identifiers shall be distinct	Allowed violations in cases where external identifiers are going beyond 32 chars (some due to AS naming conventions, some due to module design, but mostly in the generated code.)	Sent, Stm
5.2	Identifers declared in the same scope and name space shall be distinct	Allowed violations in cases where external identifiers are going beyond 32 chars (some due to AS naming conventions, some due to module design, but mostly in the generated code.)	Sent, Stm
5.4	Macro identifiers shall be distinct	Allowed violations in cases where external identifiers are going beyond 32 chars (some due to AS naming conventions, some due to module design, but mostly in the generated code.)	Sent, Stm

Limitations and deviations

Table 14 MISRA violations (continued)

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
5.5	Identifiers shall be distinct from macro names	Allowed violations in cases where external identifiers are going beyond 32 chars (some due to AS naming conventions, some due to module design, but mostly in the generated code.)	Sent, Stm
8.4	A compatible declaration shall be visible when an object or function with external linkage is defined	Allowed violations for the following intrinsic functions: IMASKLDMST, EXTRACT.	Stm
8.9	An object should be defined at block scope if its identifier only appears in a single function	Global constants not declared within block scope, but used only in one function. Declaring const in an API scope may lead to confusion.	Iom, Stm
20.1	#include directives should only be preceded by preprocessor directives or comments	Allowed violations in cases where declaration before #include memap.h as per AUTOSAR.	I2c, Iom, Sent, Stm

6 Support packages

Attention**: **The following information is given for evaluation purposes only. Modifications to these packages are made at your own risk.

6.1 Example demo application

These files contain the TC3xx demo routines. The following table describes different folders/files.

Table 15 Demo workspace

Folder / file name	Description
`\DemoWorkspace\McalDemo\<device>\0_Src`	Contains the source files needed to run the Demo application
`\DemoWorkspace\McalDemo\<device>\1_ToolEnv`	Contains the tools necessary to build the Demo application

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