MC-ISAR_AS422_TC3xx_CD_2.0.0

Release Notes
Product name: MC-ISAR_AS422_TC3xx
Release number: 2.0.0
Type of release: PR*
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 complex 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 this release are:

- Dma (20.0.2)
- Dsadc (20.0.1) (NA for TC32x/TC33xPD/TC33xEXT/TC35x)
- FlsLoader (20.0.0)
- Smu (20.0.2)
- Uart (20.0.1)

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

Note: ** This release is 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 Release contents

1.1 Release overview

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

1.2 Released items

The release is contained in the `MC-ISAR_AS422_TC3xx_CD_2.0.0.zip` file. The contents of this file include MCAL software, EB tresos plugin files (BMD included), User Manuals and Release Notes.

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

Table 1 Release zip contents

Package content	Description
`MC-ISAR_AS422_TC3xx_CD_2.0.0.exe`	Product installer to be used with AUTOSAR Version 4.2.2
User Manuals	Contains the MCAL User Manual and Configuration Verification Manual.
`Releasenote_MC-ISAR_AS422_TC3xx_CD_2.0.0.pdf`	Contains the Release Notes
`MC-ISAR_TC3xx_<Compiler>_2.0.0.pdf`	Contains compiler specific tool information.
`AoUs`	Contains Assumptions of Use for SW development.

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> represent the 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	

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

For information on safety, refer to the Safety Case Report document.

1.4 Module-wise quality

Table 4 Module-wise quality

Module	Release quality
Dma	PR
Dsadc	PR (NA for TC32x/TC33xPD/TC33xEXT/TC35x)
FlsLoader	PR
Smu	PR
Uart	PR

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

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
Deleted parameters	None
Modified parameters	**Dma, Smu** • 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
Dma	0000053912-16826	Description: Interrupt event information can be missed in the Dma channel interrupt notification call. Impact: If channel interrupts for same channel occurs again while the interrupt service routine is being executed, the event information can be missed in the latter interrupt notification call, as the interrupt flags get cleared only at the end of the interrupt service routine. In such instances, the Dma driver would report 'DMA_EVENT_CH_UNKNOWN_EVENT' as the event information in the channel notification function.
	0000053912-16681	Description: Init check service reports failure if CRC is configured in linked list. Impact: The Init check service can report a failure if all of the following conditions are true: Init check service is enabled, linked list feature is enabled, the TCSes are created using the configuration tool (e.g. EB Tresos) and the first TCS of the linked list uses the CRC registers with non-zero values. Please note that there would not be any impact if the TCSes are created at runtime, instead of creating in the configuration tool.
Smu	0000053912-16142	Description: Description correction in Smu AoU on Initialization check. Impact: Smu_LockConfigRegs() need not be called immediately after Smu_InitCheck since user may require to configure the ErrorPin and Release FSP.

Summary of changes

Table 9 Summary of bugs from 2.0.0-rc to 2.0.0 (continued)

Module	Issue number	Description
	0000053912-16295	Description: Errata SMU_TC.013 - Unexpected setting of Alarm Missed Event bit xAEM in Alarm Executed Status register SMU_AEX. Impact: If the xAEM bit is not cleared while clearing xSTS, only the alarm missed event xAEM functionality will not be available for later alarm events. Please refer SMU_TC.013 for more details.
	0000053912-16345	Description: SMU unavailable alarms for TC36x devices. Impact: As per TC36x_appx_um_v1.6.pdf, SMU alarms ALM7[12:16] and ALM11[0:1] are unavailable in TC36x devices.
	0000053912-16874	Description: For TC33xED devices, SMU Group 6 ALM10 to 12 and Group 7 ALM19 are reserved. Impact: User can configure SMU alarms for these reserved bits but expected reaction will not be generated for these reserved alarms.

Table 10 Summary of enhancement from 2.0.0-rc to 2.0.0

Module	Issue number	Description
Dsadc	0000053912-16875	DSADC UM updated based on HW UM 2.0 with a note to the Gain factor parameter descriptions, to help the user to configure the parameter correctly.

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
Dma	0000053912-12349	Description: Incorrect documentation of ASIL level for Dma_ChInterruptHandler() and Dma_MEInterruptDispatcher(). Impact: No functional impact. ASIL level for Dma_ChInterruptHandler() and Dma_MEInterruptDispatcher() should be ASIL B, instead of QM.
	0000053912-10890	Description: DMA driver support for CAT2 interrupts added Impact: DMA driver can support CAT2 interrupt context when existing configuration parameter DmaRuntimeApiMode = DMA_MCAL_USER1MODE, in addition to runtime APIs being made available to User1 protection mode.
	0000053912-15686	Description: Compiler warnings observed from Dma_DeInit API of DMA driver for single core devices Impact: Compiler warnings will be observed from Dma_DeInit API of DMA driver on single core devices. This is due to the multicore error

Summary of changes

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

Module	Issue number	Description
		check to ensure other cores are de-initialized before master core is de-initialized. This is redundant check for single core devices.
	0000053912-15430	Description: DMA does not fulfill the requirement for Spurious interrupt handling Impact: DMA driver does not validate the interrupt and report spurious interrupt error. Dma driver will gracefully exit if invalid interrupt occurs.
	0000053912-15678	Description: Unnecessary re-generation even if configuration has not changed for DMA, PORT, FEE and PWM configuration plugins Impact: Plugins for DMA, PORT, FEE and PWM will re-generate the configuration even though configuration has not changed. No functional impact, only extra time for re-generation.
	0000053912-12685	Description: When an DMA error occurs during asynctransfer, sequence status if read to be SPI_SEQ_FAILED recommendation is to perform a DmaChDeInit and DmaChInit before successive SPI communication. Impact: Successive SPI asynchronous transfers fails.
Dsadc	0000053912-13279	Description: Incorrect compiler error string is reported when Dsadc_Isr function is called and the corresponding pre compile switch is disabled. Impact: Since compiler error text does not contain function name, user will not be able to find the invalid function call.
Smu	0000053912-8818	Description: A2GT-REQ_AoU_SW-15' in MCAL user manual is not inline with 'ESM[SW]:SMU:ALIVE_ALARM_TEST' AoU in safety manual. Impact: Information related to frequency of the "SMU Alive Test" execution is not mentioned. This may lead to incorrect deployment of the safety measure.
	0000053912-12189	Description: Smu_SetAlarmAction() does not support disable of FSP action Impact: User cannot disable FSP action at runtime using Smu_SetAlarmAction() API
	0000053912-15058	Description: Smu_ClearAlarmStatus will incorrectly disable SMU_stdby Impact: Smu_ClearAlarmStatus will disable SMU_stdby Module (SMUEN bit = 0) in addition to clearing the SMU alarm
Uart	0000053912-15350	Description: module header files SHALL NOT include the prototype declarations of MainFunctions Impact: AUTOSAR violation in file inclusion structure in upper layers.
	0000053912-15516	Description: Irrelevant information related to PortPinControllerSelect parameter is present in Uart UM document. Impact: As per UM, User will expect this parameter needs to be configured in the port section though not needed by UART driver.

Summary of changes

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

Module	Issue number	Description
	0000053912-15740	Description: Inconsistent default values given for UartAutoCalcBaudParams, UartChanBaudPrescalar and UartRunTimeErrorDetect parameters in xdm and SAS. Inconsistent ranges given for UartParityBit parameter in xdm and SAS Impact: Tresos does not generate expected code for the default settings of the parameters.

Table 12 Summary of enhancement from 1.40.0 to 2.0.0-rc

Module	Issue number	Description
Dsadc	0000053912-8483	DSADC Timestamp feature is added for the window close event
	0000053912-8482	Dsadc_RestartDemodulator service added to support parallel start of DSADC channels
	0000053912-15852	Enhancement in gate level & polarity details in UM
Dma	0000053912-643	DMA plugin update for allocation and association of DMA Channels to Application/MCAL drivers
	0000053912-1966	Pattern matching and Conditional Linked list feature added in DMA driver
	0000053912-11099	DMA driver de-intialization feature is added.
Smu	0000053912-7291	Configuration parameter SmuAGStatusTimeout removed

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

4 Known issues

This chapter describes the prescribed workarounds for all the open issues identified.

Table 13 Known issues

Module	Issue number	Description
Dma	0000053912-16902	Description: DMA UM unused error code DMA_E_NOT_IN_FREEZE_STATE for Dma_ChEnableHardwareTrigger(). Impact: Wrong documentation in DMA UM of unused error code DMA_E_NOT_IN_FREEZE_STATE for Dma_ChEnableHardwareTrigger(). Workaround: User shall ignore the DMA_E_NOT_IN_FREEZE_STATE error code for Dma_ChEnableHardwareTrigger().

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
2.7	There should be no unused parameters in functions	Parameters are used in assembly instructions. Therefore, they are actually used.	Dsadc
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.	Dma, Dsadc, Smu, Uart
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.	Dma, Dsadc, FlsLoader, Smu, Uart
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.)	Dma, Dsadc, FlsLoader
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.)	Dma, Dsadc, FlsLoader
5.4	Macro identifiers shall be distinct	Allowed violations in cases where external identifiers are going beyond 32 chars (some due to AS naming	Dma, Dsadc, FlsLoader

Table 14 MISRA violations (continued)

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
		conventions, some due to module design, but mostly in the generated code.)	
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.)	Dma, Dsadc, FlsLoader
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.	FlsLoader
11.3	A cast shall not be performed between a pointer to object type and a pointer to a different object type	Cast performed between a pointer to object type and a pointer to a different object type due to SFR access.	Dma
11.4	A conversion should not be performed between a pointer to object and an integer type	Allowed violations in cases where rule is violated for SFR access only.	Dma
11.6	A cast shall not be performed between pointer to void and an arithmetic type	Allowed violations for SFR access only.	Dma
18.4	The +, -, += and -= operators should not be applied to an expression of pointer type	Allowed violation in cases where pointer arithmetic other than array indexing is used.	Dsadc
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.	Dma, Dsadc, FlsLoader, Smu, Uart

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 the 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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