MC-ISAR_AS440_TC3xx_DEMO_2.25.0

Release Notes
Product name: MC-ISAR_AS440_TC3xx
Release number: 2.25.0
Type of release: Alpha*
Release method: via Release Area
AUTOSAR specification: 4.4.0
Processor platform: TC39x BC, TC39x BD, TC38x AD, TC38x AE, TC37x AA, TC37xEXT AB, TC35x AB, TC36x AA, TC33x AA, TC33xEXT AA, TC32x AA, TC3Ex AA
Date: 2023-07-26
Previous release number: 2.20.0

About this document

Scope and purpose

This release notes, for the 2.25.0 delivery of MC-ISAR_AS440_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 (20.10.0) (NA for TC32x/TC33xPD/TC33xEXT)
- Iom (20.25.0) (NA for TC33xEXT and applicable for TC33xPD)
- Sent (20.10.0) (NA for TC35x)
- Stm (20.25.0)

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_AS440_TC3xx software.

Note: *Users of this product are expected to have knowledge of AURIX™ microcontroller (TC3xx series), AUTOSAR standards, compilers and configurations tools mentioned in release notes. They are expected to have expertise to use the product in accordance to user manual, release notes, release notes addendum and safety case report.*

Reference documents

None.

Table of contents

1 Release contents

1.1 Release overview

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

1.2 Released items

The release is contained in the `MC-ISAR_AS440_TC3xx_Demo_2.25.0.zip` file. The contents of this file include MCAL software, EB tresos plugin files (BMD included), User Manuals and Release Notes.

Table 1 Release zip contents

Package content	Description
User Manuals	Contains the User Manual
`MC-ISAR_AS440_TC3xx_Demo_2.25.0.exe`	Product installer to be used with AUTOSAR Version 4.4.0
`Releasenote_MC-ISAR_AS440_TC3xx_DEMO_2.25.0.pdf`	Release Notes
`MC-ISAR_TC3xx_<Compiler>_2.25.0.pdf`	Contains compiler specific tool information.

Note: "MCAL .c and .h files of MC-ISAR TC3xx were subject to an open source software (OSS) scan using Black Duck Software. As per report result such files do not contain any OSS."

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 `Releasenote_MC-ISAR_AS422_TC3xx_BASIC_<yyy>.pdf` for details on the common files, where <yyy> represents corresponding release number.

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`

(table continues...)

Table 3 (continued) Plugin files

Folder name	Description
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, TC3Ex 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".

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	Safety Level
Hssl	Demo (NA for TC32x/TC33xPD/TC33xEXT/ TC35x)	NA
I2c	Demo (NA for TC32x/TC33xPD/TC33xEXT)	NA
Iom	Demo (NA for TC33xEXT)	NA
Sent	Demo (NA for TC35x)	NA
Stm	Demo	NA

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
- TC39xB: REG_TC39XB_UM_V2.0.0.R0
- TC3ExA: REG_TC3EX_UM_V2.0.0.R0

2 Tool information

For compiler version refer release notes appendix MC-ISAR_TC3xx_<Compiler>_2.25.0.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, TC3Ex 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 Device Support TC39x BC/TC39x BD/TC38x AD/TC38x AE/TC37x AA/TC37xEXT AB/TC35x AB/TC36x AA/TC33x AA/TC33xEXT AA/TC32x AA/TC3Ex AA

AURIX™ 2G device	Name displayed in Tresos Tool	Tresos Property File	Range check implemented in MCAL
SAL-TC3E7QX-192F300S	TC3E7	AURIX2G_TC3E7.properties	Yes
SAL-TC3E7QG-160F300S	TC3E7	AURIX2G_TC3E7.properties	No
SAK-TC332LP-32F300F	TC332	AURIX2G_TC332.properties	Yes
SAK-TC333LP-32F300F	TC333	AURIX2G_TC333.properties	Yes
SAK-TC334LP-32F300F	TC334	AURIX2G_TC334.properties	Yes
SAK-TC337LP-32F300S	TC337	AURIX2G_TC337.properties	Yes
SAK-TC336LP-32F300S	TC336	AURIX2G_TC336.properties	Yes
SAL-TC337LP-32F300S	TC337	AURIX2G_TC337.properties	Yes
SAK-TC337DA-32F200S	TC337_ED_ADAS	AURIX2G_TC337_ED_ADAS.properties	No
SAK-TC337DZ-32F200S	TC337_ED_ADAS	AURIX2G_TC337_ED_ADAS.properties	No
SAL-TC333LP-32F300F	TC333	AURIX2G_TC333.properties	Yes
SAK-TC336DA-32F200S	TC336_ED_ADAS	AURIX2G_TC336_ED_ADAS.properties	No
SAK-TC337DA-32F300S	TC337_ED_ADAS	AURIX2G_TC337_ED_ADAS.properties	Yes
SAK-TC336DA-32F300S	TC336_ED_ADAS	AURIX2G_TC336_ED_ADAS.properties	Yes
SAK-TC337DZ-32F300S	TC337_ED_ADAS	AURIX2G_TC337_ED_ADAS.properties	No
SAK-TC336DA-16F200S	TC336_ED_ADAS	AURIX2G_TC336_ED_ADAS.properties	No
SAL-TC336LP-32F300S	TC336	AURIX2G_TC336.properties	Yes
SAL-TC334LP-32F300F	TC334	AURIX2G_TC334.properties	Yes
SAK-TC377VS-96F300S	TC377	AURIX2G_TC377.properties	Yes
SAL-TC332LP-32F300F	TC332	AURIX2G_TC332.properties	Yes
SAK-TC356TA-64F300S	TC356_ADAS	AURIX2G_TC356_ADAS.properties	Yes

(table continues...)

Tool information

Table 6 (continued) AURIX™ 2G Device Support TC39x BC/TC39x BD/TC38x AD/TC38x AE/TC37x AA/TC37xEXT AB/TC35x AB/TC36x AA/TC33x AA/TC33xEXT AA/TC32x AA/TC3Ex AA

AURIX™ 2G device	Name displayed in Tresos Tool	Tresos Property File	Range check implemented in MCAL
SAK-TC365DP-64F300W	TC365_LQFP	AURIX2G_TC365_LQFP.properties	Yes
SAK-TC364DP-64F300W	TC364_LQFP	AURIX2G_TC364_LQFP.properties	Yes
SAK-TC367DP-64F300S	TC367	AURIX2G_TC367.properties	Yes
SAK-TC364DP-64F300F	TC364_TQFP	AURIX2G_TC364_TQFP.properties	Yes
SAK-TC366DP-64F300S	TC366	AURIX2G_TC366.properties	Yes
SAL-TC365DP-64F200W	TC365	AURIX2G_TC365.properties	Yes
SAL-TC367DP-64F200S	TC367	AURIX2G_TC367.properties	No
SAL-TC364DP-64F200F	TC364_TQFP	AURIX2G_TC364_TQFP.properties	No
SAL-TC366DP-64F200S	TC366	AURIX2G_TC366.properties	No
SAL-TC364DP-64F200W	TC364_LQFP	AURIX2G_TC364_LQFP.properties	No
SAL-TC364DP-64F300W	TC364_LQFP	AURIX2G_TC364_LQFP.properties	Yes
SAL-TC377TP-96F300S	TC377	AURIX2G_TC377.properties	Yes
SAL-TC375TP-96F300W	TC375	AURIX2G_TC375.properties	Yes
SAL-TC377DP-96F300S	TC377	AURIX2G_TC377.properties	No
SAL-TC377TX-96F300S	TC377_ED_EX	AURIX2G_TC377_ED_EX.properties	Yes
SAK-TC389QP-160F300S	TC389	AURIX2G_TC389.properties	Yes
SAK-TC387QP-160F300S	TC387	AURIX2G_TC387.properties	Yes
SAL-TC387QP-160F300S	TC387	AURIX2G_TC387.properties	Yes
SAL-TC389QP-160F300S	TC389	AURIX2G_TC389.properties	Yes
SAK-TC3E7QX-192F300S	TC3E7	AURIX2G_TC3E7.properties	Yes
SAK-TC3E7QG-160F300S	TC3E7	AURIX2G_TC3E7.properties	No
SAK-TC3E7QC-192F300S	TC3E7	AURIX2G_TC3E7.properties	No
SAK-TC3E7QF-192F300S	TC3E7	AURIX2G_TC3E7.properties	No
SAL-TC3E7QF-192F300S	TC3E7	AURIX2G_TC3E7.properties	No
SAK-TC334LP-32F200F	TC334	AURIX2G_TC334.properties	No
SAK-TC337LP-32F200S	TC337	AURIX2G_TC337.properties	No
SAL-TC337LP-32F200S	TC337	AURIX2G_TC337.properties	No
SAL-TC334LP-32F200F	TC334	AURIX2G_TC334.properties	No
SAK-TC333LP-32F200F	TC333	AURIX2G_TC333.properties	No
SAL-TC333LP-32F200F	TC333	AURIX2G_TC333.properties	No
SAK-TC323LP-16F160F	TC323	AURIX2G_TC323.properties	No

(table continues...)

Tool information

Table 6 (continued) AURIX™ 2G Device Support TC39x BC/TC39x BD/TC38x AD/TC38x AE/TC37x AA/TC37xEXT AB/TC35x AB/TC36x AA/TC33x AA/TC33xEXT AA/TC32x AA/TC3Ex AA

AURIX™ 2G device	Name displayed in Tresos Tool	Tresos Property File	Range check implemented in MCAL
SAK-TC324LP-16F160F	TC324	AURIX2G_TC324.properties	No
SAK-TC322LP-16F160F	TC322	AURIX2G_TC322.properties	Yes
SAK-TC332LP-32F200F	TC332	AURIX2G_TC332.properties	No
SAL-TC332LP-32F200F	TC332	AURIX2G_TC332.properties	No
SAK-TC323LP-24F200F	TC323	AURIX2G_TC323.properties	Yes
SAK-TC324LP-24F200F	TC324	AURIX2G_TC324.properties	Yes
SAK-TC323L-24F200F	TC323	AURIX2G_TC323.properties	No
SAK-TC324L-24F200F	TC324	AURIX2G_TC324.properties	No
SAK-TC336LP-32F200S	TC336	AURIX2G_TC336.properties	No
SAL-TC336LP-32F200S	TC336	AURIX2G_TC336.properties	No
SAL-TC323LP-16F160F	TC323	AURIX2G_TC323.properties	No
SAL-TC324LP-16F160F	TC324	AURIX2G_TC324.properties	No
SAL-TC322LP-16F160F	TC322	AURIX2G_TC322.properties	Yes
SAL-TC327LP-16F160S	TC327	AURIX2G_TC327.properties	Yes
SAK-TC333L-32F200F	TC333	AURIX2G_TC333.properties	No
SAK-TC334L-32F200F	TC334	AURIX2G_TC334.properties	No
SAL-TC333L-32F200F	TC333	AURIX2G_TC333.properties	No
SAL-TC334L-32F200F	TC334	AURIX2G_TC334.properties	No
SAK-TC327LP-16F160S	TC327	AURIX2G_TC327.properties	Yes
SAL-TC323LP-24F200F	TC323	AURIX2G_TC323.properties	Yes
SAL-TC324LP-24F200F	TC324	AURIX2G_TC324.properties	Yes
SAL-TC323L-24F200F	TC323	AURIX2G_TC323.properties	No
SAL-TC324L-24F200F	TC324	AURIX2G_TC324.properties	No
SAK-TC322LS-24F160F	TC322	AURIX2G_TC322.properties	No
SAK-TC323LS-24F160F	TC323	AURIX2G_TC323.properties	No
SAK-TC332LS-32F200F	TC332	AURIX2G_TC332.properties	No
SAK-TC357TA-64F300S	TC357_ADAS	AURIX2G_TC357_ADAS.properties	No
SAK-TC357TH-64F300S	TC357_ADAS	AURIX2G_TC357_ADAS.properties	No
SAK-TC356TH-64F300S	TC356_ADAS	AURIX2G_TC356_ADAS.properties	No
SAK-TC356TD-48F300S	TC356_ADAS	AURIX2G_TC356_ADAS.properties	No
SAK-TC367VB-32F200S	TC367	AURIX2G_TC367.properties	No

(table continues...)

Tool information

Table 6 (continued) AURIX™ 2G Device Support TC39x BC/TC39x BD/TC38x AD/TC38x AE/TC37x AA/TC37xEXT AB/TC35x AB/TC36x AA/TC33x AA/TC33xEXT AA/TC32x AA/TC3Ex AA

AURIX™ 2G device	Name displayed in Tresos Tool	Tresos Property File	Range check implemented in MCAL
SAK-TC367V0-64F300S	TC367	AURIX2G_TC367.properties	No
SAL-TC367DP-64F300S	TC367	AURIX2G_TC367.properties	Yes
SAL-TC365DP-64F300W	TC365_LQFP	AURIX2G_TC365_LQFP.properties	Yes
SAK-TC365DP-64F200W	TC365_LQFP	AURIX2G_TC365_LQFP.properties	No
SAK-TC367DP-48F200S	TC367	AURIX2G_TC367.properties	No
SAL-TC364DP-64F300F	TC364_TQFP	AURIX2G_TC364_TQFP.properties	Yes
SAK-TC364DP-48F300F	TC364_TQFP	AURIX2G_TC364_TQFP.properties	No
SAK-TC364DP-48F200F	TC364_TQFP	AURIX2G_TC364_TQFP.properties	No
SAL-TC366DP-64F300S	TC366	AURIX2G_TC366.properties	Yes
SAK-TC367DP-48F300S	TC367	AURIX2G_TC367.properties	No
SAK-TC364DP-64F200W	TC364_LQFP	AURIX2G_TC364_LQFP.properties	No
SAK-TC367DP-64F200S	TC367	AURIX2G_TC367.properties	No
SAK-TC364DP-64F200F	TC364_TQFP	AURIX2G_TC364_TQFP.properties	No
SAK-TC366DP-64F200S	TC366	AURIX2G_TC366.properties	No
SAK-TC377TP-96F300S	TC377	AURIX2G_TC377.properties	Yes
SAK-TC375TP-96F300W	TC375	AURIX2G_TC375.properties	Yes
SAK-TC377DP-96F300S	TC377	AURIX2G_TC377.properties	No
SAK-TC375DP-96F300W	TC375	AURIX2G_TC375.properties	No
SAL-TC375DP-96F300W	TC375	AURIX2G_TC375.properties	No
SAK-TC375TI-96F300W	TC375	AURIX2G_TC375.properties	No
SAL-TC375TI-96F300W	TC375	AURIX2G_TC375.properties	No
SAK-TC377TX-96F300S	TC377_ED_EX	AURIX2G_TC377_ED_EX.properties	Yes
SAK-TC377TX-64F300S	TC377_ED_EX	AURIX2G_TC377_ED_EX.properties	No
SAK-TC387TP-128F300S	TC387	AURIX2G_TC387.properties	No
SAK-TC387QN-160F300S	TC387	AURIX2G_TC387.properties	No
SAK-TC389QN-160F300S	TC389	AURIX2G_TC389.properties	No
SAL-TC387TP-128F300S	TC387	AURIX2G_TC387.properties	No
SAK-TC387TP-160F300S	TC387	AURIX2G_TC387.properties	No
SAL-TC387TP-160F300S	TC387	AURIX2G_TC387.properties	No
SAL-TC399XX-256F300S	TC399	AURIX2G_TC399.properties	No
SAL-TC399XP-256F300S	TC399	AURIX2G_TC399.properties	No

(table continues...)

Summary of changes

Table 6 (continued) AURIX™ 2G Device Support TC39x BC/TC39x BD/TC38x AD/TC38x AE/TC37x AA/TC37xEXT AB/TC35x AB/TC36x AA/TC33x AA/TC33xEXT AA/TC32x AA/TC3Ex AA

AURIX™ 2G device	Name displayed in Tresos Tool	Tresos Property File	Range check implemented in MCAL
SAL-TC397XP-256F300S	TC397	AURIX2G_TC397.properties	No
SAK-TC399XP-256F300S	TC399	AURIX2G_TC399.properties	No
SAK-TC399XX-256F300S	TC399	AURIX2G_TC399.properties	No
SAK-TC397XP-256F300S	TC397	AURIX2G_TC397.properties	No
SAK-TC397XA-256F300S	TC397_ADAS	AURIX2G_TC397_ADAS.properties	No
SAK-TC397QA-160F300S	TC397_ADAS	AURIX2G_TC397_ADAS.properties	No
SAK-TC397QP-192F300S	TC397	AURIX2G_TC397.properties	No
SAK-TC397QP-256F300S	TC397	AURIX2G_TC397.properties	No
SAK-TC397XZ-256F300S	TC397	AURIX2G_TC397.properties	No
SAK-TC397XM-256F300S	TC397	AURIX2G_TC397.properties	No
SAL-TC397QP-192F300S	TC397	AURIX2G_TC397.properties	No
SAL-TC397QP-256F300S	TC397	AURIX2G_TC397.properties	No
SAL-TC397XZ-256F300S	TC397	AURIX2G_TC397.properties	No
SAL-TC397XX-256F300S	TC397	AURIX2G_TC397.properties	No
SAK-TC399QP-192F300S	TC399	AURIX2G_TC399.properties	No
SAK-TC397XX-256F300S	TC397	AURIX2G_TC397.properties	No

Note: For those devices for which range check is not implemented in MCAL plugins, the integrator needs to select the specified device from the drop down list and additionally ensure that the configuration parameters are entered within the range and only available features are selected as specified in the device specific data sheet.

2.1 Compiler options

For compiler options refer release notes appendix MC-ISAR_TC3xx_<Compiler>_2.25.0.pdf available in release package where <Compiler> represent the corresponding compiler.

3 Summary of changes

Configuration changes

Table 7 Configuration changes from 2.20.0 to 2.25.0

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

(table continues...)

Table 7 (continued) Configuration changes from 2.20.0 to 2.25.0

Compatibility check	Result
Deleted parameters	None
Modified parameters	**Iom**, **Stm** SwMinorVersion default value is updated **Iom** IomDemEventParameterRefsConf* **Stm** StmDemEventParameterRefsConf*
Can the previously saved configuration be reused?	Yes

*Note: * For these parameters, the parameter description only changed related to Mcal_Wrapper.*

3.1 Issues fixed in release 2.25.0

Table 8 Summary of bugs from 2.20.0 to 2.25.0

Module	Issue number	Description
Hssl, Sent	0000053912-19157	Description: User Manual template for HSSL and Sent does not have Safety level Tag. Impact: No functional impact. Only Inconsistency in template .

Table 9 Summary of enhancement from 2.20.0 to 2.25.0

Module	Issue number	Description
Iom, Stm	0000053912-18200	Description: Production and runtime development errors are passed through a wrapper to enable better safety partitioning at system level.

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

3.2 Issues fixed in release 2.20.0

Table 10 Configuration changes from 2.10.0 to 2.20.0

Compatibility check	Result
Are there any change in parameters supplied from previous version?	No
Added parameters	None
Deleted parameters	None
Modified parameters	None
Can the previously saved configuration be reused?	Yes

Summary of changes

Table 11 Summary of bugs from 2.10.0 to 2.20.0

Module	Issue number	Description
No new bugs fixed		

Table 12 Summary of enhancement from 2.10.0 to 2.20.0

Module	Issue number	Description
No enhancement in this release		

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

3.3 Issues fixed in release 2.10.0

Table 13 Configuration changes from 2.0.0 to 2.10.0

Compatibility check	Result
Are there any change in parameters supplied from previous version?	Yes
Added parameters	None
Deleted parameters	None
Modified parameters	**I2c, Sent** • SwMinorVersion, SwPatchVersion default value is updated **Sent** • SentChanBaudDiv parameter range is modified • SentConfigSet container multiplicity attribute is updated
Can the previously saved configuration be reused?	Yes

Table 14 Summary of bugs from 2.0.0 to 2.10.0

Module	Issue number	Description
I2c	0000053912-17032	Description: When I2C driver is in receive mode the PIRQSS.RX bit will be set as normal behavior. But the I2C driver report this normal behavior as error "I2C_ERR_OTHER" to the application. Impact: Normal case of receive data is indicated as error condition "I2C_ERR_OTHER".
Sent	0000053912-17311	Description: In Sent.xdm, SentConfigSet container type is wrongly mentioned as 'MULTIPLE-CONFIGURATION-CONTAINER' instead of 'IDENTIFIABLE'. So, it is possible for the user to add multiple configurations in Tresos. But SENT plugin supports only one SentConfigSet. Impact: It is possible for the user to add multiple SentConfigSets in Tresos.

Summary of changes

Table 15 Summary of enhancement from 2.0.0-rc to 2.0.0

Module	Issue number	Description
Hssl	0000053912-15559	HSSL UM is updated that switching to high speed mode is not possible.

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

3.4 Issues fixed in release 2.0.0

Configuration changes

Table 16 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	**I2c** • SwPatchVersion is updated.
Can the previously saved configuration be reused?	Yes

Table 17 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 18 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.

3.5 Issues fixed in release 2.0.0-rc

Configuration changes

Table 19 Configuration changes from 2.0.0-alpha to 2.0.0-rc

Compatibility check	Result
Are there any change in parameters supplied from previous version?	Yes

(table continues...)

Summary of changes

Table 19 (continued) Configuration changes from 2.0.0-alpha to 2.0.0-rc

Compatibility check	Result
Added parameters	None
Deleted parameters	None
Modified parameters	**Sent:** • SentRxInput parameter default value is modified. **I2c:** • I2cDevErrorDetect parameter default value is modified. **Hssl, I2C, Sent:** • SwPatchVersion default value is updated.
Can the previously saved configuration be reused?	Yes

Table 20 Summary of bugs from 2.0.0-alpha to 2.0.0-rc

Module	Issue number	Description
Hssl	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.
	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.

(table continues...)

Summary of changes

Table 20 (continued) Summary of bugs from 2.0.0-alpha to 2.0.0-rc

Module	Issue number	Description
	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 21 Summary of enhancement from 2.0.0-alpha to 2.0.0-rc

Module	Issue number	Description
No enhancements.		

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

3.6 Issues fixed in release 2.0.0-alpha

Configuration changes

This is first release with AS440.

Table 22 Summary of bugs from 1.40.0 to 2.0.0-alpha

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.

Table 23 Summary of enhancement from 1.40.0 to 2.0.0-alpha

Module	Issue number	Description
No enhancements.		

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 24 Known issues

Module	Issue number	Description
Iom, I2c, Sent	0000053912-18845	Description: Post build variant supported only with Infineon EcuC plugin Impact: The postbuild variants cannot be generated without Infineon EcuC plugin and the plugin is not conforms to Autosar Standard Workaround: The EcuC plugin can be adapted in reference with the Infineon provided EcuC plugin stub and utilized for generation of MCAL modules
Hssl, I2c, Iom, Sent, Stm	0000053912-19300	Description: Demo modules source file marked as Non editable Impact: User can not edit the source files as per the source file banner. Workaround: User can edit the source files for their use cases. RNA update will be provided
I2c	0000053912-18651	Description: Interrupt priority configuration information is not clearly specified in the User Manual. Impact: The data loss happens in Async read operations. Workaround: The interrupt priority shall be configured as **Data Interrupt>Error Interrupt >Protocol Interrupt**

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 `Releasenote_MC-ISAR_AS440_TC3xx_BASIC_<yyy>.pdf` for details on the bmd deviations, where <yyy> represents corresponding release number.

5.2.1 HIS-MISRA violations

Table 25 MISRA violations

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
1.3	There shall be no occurrence of undefined or critical unspecified behavior	This rule violation is agreed as we need to store the address passed in the called function in many scenarios.	Hssl
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
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.	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.)	Hssl, I2c, Iom, Sent, Stm
5.2	Identifiers 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.)	Hssl, I2c, Iom, Sent, Stm

(table continues...)

Table 25 (continued) MISRA violations

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
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.)	Hssl, I2c, Iom, Sent, Stm
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.)	Hssl, I2c, Iom, 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.	Hssl, Iom, Stm
10.3	The value of an expression shall not be assigned to an object with a narrower essential type or of a different essential type category	DataType is defined as enum to differentiate between type of data NORMAL DATA and IMMEDIATE DATA. It is defined as enum to increase the readability of the code such that the values being used could be identified. Changing this will compromise the code maintainability and readability.	Sent

(table continues...)

Table 25 (continued) MISRA violations

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
10.5	The value of an expression should not be cast to an inappropriate essential type	DataType is defined as enum to differentiate between type of data NORMAL DATA and IMMEDIATE DATA. It is defined as enum to increase the readability of the code such that the values being used could be identified. Changing this will compromise the code maintainability and readability.	Sent
10.8	The value of a composite expression shall not be cast to a different essential type category or a wider essential type	Impermissible cast of composite expression used for hardware descriptor access. Hence no issues are seen.	I2c, Sent
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.	Hssl, Stm
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.	Hssl
11.6	A cast shall not be performed between pointer to void and an arithmetic type	Allowed violations for SFR access only.	Hssl
11.8	A cast shall not remove any const or volatile qualification from the type pointed to by a pointer	Allowed violation for SFR access only and the solution gives compile time warning with different compilers.	Stm
14.3	Controlling expressions shall not be invariant	The maximum number for instance is two i.e, HSSL0 and HSSL1 hence this convention does not cause any issue.	Hssl

(table continues...)

Table 25 (continued) MISRA violations

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
18.1	A pointer resulting from arithmetic on a pointer operand shall address an element of the same array as that pointer operand	The timer values are read from status register and, therefore, the value of timer is within range.	Iom
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.	Stm
19.2	The union keyword should not be used	Allowed violation in cases where pointer arithmetic other than array indexing is used for SFR access.	Hssl, 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.	Hssl, I2c, Iom, Sent, Stm
20.5	#undef should not be used	DISABLE is undefined here to resolve the conflict between macro 'DISABLE' (ObjectAccessType) used in OS module and 'DISABLE' SFR definitions. This is to be done before including "IfxHsct_reg.h"	Hssl

5.2.2 Cert C violations

Table 26 Cert C violations

CertC_2016_Rule	Rule description	Justification for deviation	Modules applicable
DCL39-C	Avoid information leakage in structure padding	MCAL is a single trusted domain. Dma_ConfigUpdateType structure is passed from users of DMA (like SPI, CRC, HSSL) to DMA driver for channel update (Dma_ChUpdate) within the MCAL domain. Hence, there is no information leakage across a trust boundary.	Hssl

(table continues...)

Limitations and deviations

Table 26 (continued) Cert C violations

CertC_2016_Rule	Rule description	Justification for deviation	Modules applicable
EXP39-C	Do not access a variable through a pointer of an incompatible type	Hssl: Data is retrieved from HsslReadDataBuffer using validated channel parameter. Hence it is not an issue. STM: SFR access through MCALLIB library. The library interface uses "volatile void * const" for register access intentionally and then typecasts back to uint32 during write access. No incompatible type access seen	Hssl, Stm

6 Support packages

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

The package also includes Demo Application which is not attached with any quality but provided for demonstration purpose only.

Table 27 Package zip contents with no quality associated

Package content	Description
`MC-ISAR_AS440_TC3xx_Package_Integrity_Demo_2.25.0.txt`	This file contains information about the package integrity checksum with instructions to the user on how to check the package integrity.
`MC-ISAR_AS440_TC3xx_Demo_2.25.0_File_Version.html`	Version information for files provided in package executable.

6.1 Example demo application

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

Table 28 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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