

# MC-ISAR\_AS440\_TC3xx\_COM-E\_2.25.0

## Release Notes

Product name: MC-ISAR\_AS440\_TC3xx

Release number: 2.25.0

Type of release: MR\*

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 COM-E 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 following modules are supported in this release:

- Eth\_17\_GEthMacV2 (20.25.0) (NA for TC33xPD, TC32x and applicable for TC33xEXT)
- Fr\_17\_Eray (20.25.0) (NA for TC33xEXT, TC32x and applicable for TC33xPD)

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\_AS440\_TC3xx software.

Note: Users of this product are expected to have knowledge of AURIX™ microcontrollers (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

## Table of contents

	<b>About this document</b> .....	1
	<b>Table of contents</b> .....	2
<b>1</b>	<b>Release contents</b> .....	3
1.1	Release overview .....	3
1.2	Released items .....	3
1.2.1	Driver files .....	3
1.2.2	Common files .....	3
1.2.3	EB tresos plugin files .....	3
1.3	Safety .....	4
1.4	Module-wise quality .....	4
1.5	Compatibility .....	5
<b>2</b>	<b>Tool information</b> .....	5
2.1	Compiler options .....	10
<b>3</b>	<b>Summary of changes</b> .....	11
3.1	Issues fixed in release 2.25.0 .....	11
3.2	Issues fixed in release 2.20.0 .....	12
3.3	Issues fixed in release 2.10.0 .....	12
3.4	Issues fixed in release 2.0.0 .....	13
3.5	Issues fixed in release 2.0.0-rc .....	14
3.6	Issues fixed in release 2.0.0-alpha1 .....	16
3.7	Issues fixed in release 2.0.0-alpha .....	16
<b>4</b>	<b>Known issues</b> .....	17
<b>5</b>	<b>Limitations and deviations</b> .....	19
5.1	Limitations .....	19
5.2	Deviations .....	19
5.2.1	HIS-MISRA violations .....	19
5.2.2	Cert C violations .....	22
<b>6</b>	<b>Support packages</b> .....	23
6.1	Example demo application .....	23
	<b>Disclaimer</b> .....	24

## Release 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\_AS440\_TC3xx\_COM-E\_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 MCAL User Manual, Configuration Verification Manual and APIs & Data types (.xml format)
MC-ISAR_AS440_TC3xx_COM-E_2.25.0.exe	Product installer to be used with AUTOSAR Version 4.4.0
Releasenote_MC-ISAR_AS440_TC3xx_COM-E_2.25.0.pdf	Release Note
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\_AS440\_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...)

---

**Release contents**
**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

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

For Safety level related information, refer section 1.4

## 1.4 Module-wise quality

**Table 4** **Module-wise quality**

Module	Release quality	Safety Level
Eth_17_GEthMacV2	PR (NA for TC33xPD, TC32x and applicable for TC33xEXT)	QM
Fr_17_Eray	PR (NA for TC33xEXT, TC32x and applicable for TC33xPD)	QM

## Tool information

### 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

(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-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
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

(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-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
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

(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
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
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

(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-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
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.

---

**Tool information**

## **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.

## Summary of changes

### 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
Deleted parameters	None
Modified parameters	<b>Eth_17_GEthMacV2, Fr_17_Eray</b> SwMinorVersion default value is updated <b>Eth_17_GEthMacV2</b> EthDemEventParameterRefs* SwPatchVersion default value is updated <b>Fr_17_Eray</b> FrControllerDemEventParameterRefs*
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
No bugs.		

**Table 9 Summary of enhancement from 2.20.0 to 2.25.0**

Module	Issue number	Description
Eth_17_GEthMacV2, Fr_17_Eray	0000053912-18200	Description: Production and run time development errors are passed through a wrapper to enable better safety partitioning at system level.
Eth_17_GEthMacV2	0000053912-18840	Description: Clause 45 MDIO Frame Structure is not supported by Eth driver, only Clause 22 is supported and this limitation is not mentioned in the UM.

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

## Summary of changes

### 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?	Yes
Added parameters	None
Deleted parameters	None
Modified parameters	<b>Fr_17_Eray</b> <ul style="list-style-type: none"> <li>SwMinorVersion, SwPatchVersion default value is updated</li> </ul>
Can the previously saved configuration be reused?	Yes

**Table 11 Summary of bugs from 2.10.0 to 2.20.0**

Module	Issue number	Description
Fr_17_Eray	0000053912-18162	Description: Hw Message buffer allocation is causing issue when more than 128 LPDus are configured. Impact: Loss of messages can occur when there are shared hardware buffers between multiple Lpdus in the same communication cycle and the switching time to prepare the HW buffer for the next Lpdu is not sufficient.

**Table 12 Summary of enhancement from 2.10.0 to 2.20.0**

Module	Issue number	Description
None		

*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	<b>Fr_17_Eray</b> <ul style="list-style-type: none"> <li>SwMinorVersion, SwPatchVersion default value is updated</li> </ul>
Can the previously saved configuration be reused?	Yes

## Summary of changes

**Table 14** Summary of bugs from 2.0.0 to 2.10.0

Module	Issue number	Description
--------	--------------	-------------

No bugs.

**Table 15** Summary of enhancement from 2.0.0 to 2.10.0

Module	Issue number	Description
--------	--------------	-------------

No enhancements.

*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	<b>Eth_17_GEthMacV2</b> <ul style="list-style-type: none"> <li>SwPatchVersion is updated.</li> </ul>
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
Eth_17_GEthMacV2	0000053912-16539	Description: Additional steps to be followed while stopping and starting transmission as per Errata GETH_TC.H002  Impact: Since the queue flush operation is not performed as mentioned in the errata during stopping and starting of Tx / Rx, any packet that is still being received by the MAC when the controller mode is set to DOWN state, will be received in the MTL queue. This packet will be indicated as received when the controller mode is set to ACTIVE again.

**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.*

## Summary of changes

### 3.5 Issues fixed in release 2.0.0-rc

#### Configuration changes

**Table 19 Configuration changes from 2.0.0-alpha1 to 2.0.0-rc**

Compatibility check	Result
Are there any change in parameters supplied from previous version?	Yes
Added parameters	<b>Fr_17_Eray:</b> <ul style="list-style-type: none"> <li>FrTxConflictDetection</li> </ul>
Deleted parameters	None
Modified parameters	<b>Eth_17_GEthMacV2:</b> <ul style="list-style-type: none"> <li>SwPatch version default value is modified.</li> </ul> <b>Fr_17_Eray:</b> <ul style="list-style-type: none"> <li>FrEcucPartitionRef,FrCtrlEcucPartitionRef parameter is disabled for configuration.</li> <li>FrRxInputSelectionA,FrRxInputSelectionB Range and default value reading is modified</li> </ul>
Can the previously saved configuration be reused?	Yes

**Table 20 Summary of bugs from 2.0.0-alpha1 to 2.0.0-rc**

Module	Issue number	Description
Eth_17_GEthMacV2	0000053912-15189	<p>Description: SchM Enter/Exit invocation is not properly handled in Ethernet driver design".</p> <p>Impact: It is observed that, under certain conditions during the operation of the Ethernet driver, the call to the SchM exit function does not occur after entering the SchM enter section. This causes the software to misbehave resulting in subsequent loss of transmit / receive functionality.</p>
	0000053912-15190	<p>Description: Receive operation stops when frame larger than configured ingress FIFO buffer space is received</p> <p>Impact:</p> <p>Issue in the receive operation is observed when the total application RAM area allocated for an ingress FIFO is insufficient to hold currently receiving frame. Due to this, the Rx DMA is unable to transfer the complete frame from the internal queue (MTL queue) to application RAM and the frame transfer completion indication is not provided. After this, none of the frames are received.</p> <p>When there is enough ingress FIFO RAM space allocated for the incoming frames, then this issue is not observed.</p>

(table continues...)

---

**Summary of changes**
**Table 20 (continued) Summary of bugs from 2.0.0-alpha1 to 2.0.0-rc**

Module	Issue number	Description
	0000053912-15437	<p>Description: Configuration of RGMII mode and 1 Gbps speed is allowed in devices which do not support these features</p> <p>Impact: There are few devices (for eg. TC375, TC364, TC365, TC366, etc.) which do not support the RGMII mode and 1 Gbps speed. However, it is allowed to configure these values via the configuration parameters and the code generation tool does not report any error, thus, resulting in invalid configuration.</p>
	0000053912-15866	<p>Description: The carrier sense MII pin cannot be configured in TC364_LQFP device</p> <p>Impact:</p> <p>In TC364_LQFP device, the carrier sense MII pin cannot be configured to the correct alternate pin function and due to this, the carrier sense signal may not be detected at the carrier sense MII input pin.</p>
Fr_17_Eray	0000053912-15802	<p>Description: Incorrect wakeup channel is configured when Fr_17_Eray_SetWakeupChannel API is used in AUTOSAR 4.4.0</p> <p>Impact: In AUTOSAR 4.4.0, when Fr_17_Eray_SetWakeupChannel API is used to set the wakeup channel, it is observed that the wakeup channel is configured incorrectly. Due to this, the wakeup pattern is sent by the FlexRay controller on the incorrect channel.</p>
	0000053912-13005	<p>Description: The configuration parameters FrRxInputSelectionA &amp; FrRxInputSelectionB allow selection of unavailable receive channels also in the supported FR controllers across all the devices. For example, in TC3E7 device for ERAY1, only FR_RXSEL0 selection is possible for both the parameters FrRxInputSelectionA &amp; FrRxInputSelectionB as per HW User Manual. However, all receive channels (FR_RXSEL0, FR_RXSEL1, FR_RXSEL2 &amp; FR_RXSEL3) are made available for these configuration parameters.</p> <p>Impact: The user may select unavailable receive channels during configuration for the parameters FrRxInputSelectionA &amp; FrRxInputSelectionB. This selection is invalid and FR communication will not work.</p>
	0000053912-13063	<p>Description: Fr_17_Eray_ReconfigLPdu() API does not report development error for Invalid Fr_ChnlIdx (for value 0) in AUTOSAR 4.4.0.</p> <p>Impact: If the value 0 is passed as the input parameter Fr_ChnlIdx to the Fr_17_Eray_ReconfigLPdu() API, the development error FR_17_ERAY_E_INV_CHNL_IDX is not reported and the reconfiguration of FlexRay channel is done incorrectly for the LPdu.</p>

**Table 21 Summary of enhancement from 2.0.0-alpha1 to 2.0.0-rc**

Module	Issue number	Description
No enhancements.		

---

**Summary of changes**

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

### 3.6 Issues fixed in release 2.0.0-alpha1

This is the first Alpha delivery for Eth\_17\_GEthMacV2 module.

#### **Configuration changes**

Eth\_17\_GEthMacV2 support added.

### 3.7 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
--------	--------------	-------------

No bugs.

**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.*



## Known issues

### 4 Known issues

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

**Table 24 Known issues**

Module	Issue number	Description
Fr_17_Eray	0000053912-18338	<p>Description: Partial implementation of CLEAR_RAM Command sequence</p> <p>Impact: After power on reset some flags are not set to reset state(random behavior)and leads to signal SMU alarm if safety mechanism for FR is enabled</p> <p>Workaround: The SMU alarms for FR should be enabled only after Fr_17_Eray_ControllerInit(), since all flags are explicitly cleared in Fr_17_Eray_ControllerInit().</p>
	0000053912-18879	<p>Description: Multiple FlexRay instances are not supported in the MCAL project</p> <p>Impact: The code generator may throw error if more than one FlexRay instances are present in the MCAL project</p> <p>Workaround: None</p>
Eth_17_GEthMacV2	0000053912-18489	<p>Description: Parameter EthConfigSet for ASR440 is incorrectly set as list instead of container in xdm file.</p> <p>Impact:Non-conformance of parameter EthConfigSet with AUTOSAR AS440.</p> <p>Workaround: None</p>
	0000053912-18877	<p>Description: Multiple ETH instances are not supported in the MCAL project</p> <p>Impact: The code generator may throw error if more than one ETH instances are present in the MCAL project</p> <p>Workaround: None</p>
	0000053912-19265	<p>Description: Incorrect statement and diagram present in UM for PortPinOutputPadDriveStrength parameter value. Section 1.1.4.4 Port support incorrectly states that the value of PortPinOutputPadDriveStrength shall be configured as PORT_PIN_RGMII_DRIVER for all output and input pins. This statement is incorrect since PortPinOutputPadDriveStrength parameter is only configurable when PortPinDirection = PORT_PIN_OUT. Figure 4 also incorrectly shows PortPinOutputPadDriveStrength parameter as enabled (not greyed out) when PortPinDirection = PORT_PIN_IN.</p> <p>Impact: User may attempt to configure PortPinOutputPadDriveStrength parameter when PortPinDirection = PORT_PIN_IN, which is not possible.</p> <p>Workaround: User shall consider that the parameter PortPinOutputPadDriveStrength is enabled only when PortPinDirection = PORT_PIN_OUT.</p>

(table continues...)

---

**Known issues****Table 24** (continued) **Known issues**

Module	Issue number	Description
Eth_17_GEthMacV2 , Fr_17_Eray	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

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

## Limitations and deviations

# 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
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, <code>'*_GetVersionInfo'</code> , and intrinsic macros.	Eth_17_GEthMacV2, Fr_17_Eray
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 <code>Mod_Memmap.h</code> is repeatedly included without include guard. This is as per AUTOSAR.	Eth_17_GEthMacV2, Fr_17_Eray
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.)	Eth_17_GEthMacV2, Fr_17_Eray
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.)	Eth_17_GEthMacV2, Fr_17_Eray
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.)	Eth_17_GEthMacV2, Fr_17_Eray

(table continues...)

## Limitations and deviations

**Table 25 (continued) MISRA violations**

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.)	Eth_17_GEthMacV2, Fr_17_Eray
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.	Eth_17_GEthMacV2, Fr_17_Eray
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.	Fr_17_Eray
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.	Fr_17_Eray
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.	Eth_17_GEthMacV2

**(table continues...)**

## Limitations and deviations

**Table 25 (continued) MISRA violations**

MISRA_2012_Rule	Rule description	Justification for deviation	Modules applicable
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.	Eth_17_GEthMacV2
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.	Eth_17_GEthMacV2
11.6	A cast shall not be performed between pointer to void and an arithmetic type	Allowed violations for SFR access only.	Eth_17_GEthMacV2
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.	Eth_17_GEthMacV2
13.5	The right hand operand of a logical && or    operator shall not contain persistent side effects	SFR register which is volatile is used to check for condition directly. It is checked in the timeout count while loop. The checked value does not keep changing. It is checked only for transition from 0 to 1. Hence, it is not an issue.	Eth_17_GEthMacV2
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.	Fr_17_Eray
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.	Eth_17_GEthMacV2, Fr_17_Eray
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.	Eth_17_GEthMacV2, Fr_17_Eray

---

**Limitations and deviations****5.2.2 Cert C violations****Table 26 Cert C violations**

<b>CertC_2016_Rule</b>	<b>Rule description</b>	<b>Justification for deviation</b>	<b>Modules applicable</b>
EXP36-C	Do not cast pointers into more strictly aligned pointer types	Conversion between pointers of different object types due to SFR access.	Eth_17_GEthMacV2
EXP39-C	Do not access a variable through a pointer of an incompatible type	Conversion between pointers to different object type is performed for SFR access. This is done to access the HIGH and LOW MAC address SFRs via the memory address of the HIGH MAC address SFR. There are no side effects seen by violating this rule	Eth_17_GEthMacV2

---

**Support packages**

## 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 Release zip contents with no quality associated**

Package content	Description
MC-ISAR_AS440_TC3xx_Package_Integrity_COM-E_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_COM-E_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

## Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

**Edition 2023-07-26**

**Published by**

**Infineon Technologies AG**  
**81726 Munich, Germany**

**© 2023 Infineon Technologies AG**  
**All Rights Reserved.**

**Do you have a question about any aspect of this document?**

**Email:** [erratum@infineon.com](mailto:erratum@infineon.com)

**Document reference**  
**IFX-rrk1562043729196**

## Important notice

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenhheitsgarantie").

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of Infineon Technologies in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

## Warnings

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.