AM26xx MCAL 10.02.02 Release Notes

Document Version : 6
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1 Introduction

This is the release notes for **MCAL_AM26xx_10.02.02** release, done on 📅 04 Jul 2025

The MCAL package consists of MCAL Driver & Applications for **AM26xx family of devices**. The MCAL modules are compliant to AUTOSAR specification versioned **4.3.1**.

Note: This is a patch release to support new features and bug fixes. Only limited testing is performed based on regression plan, Customer should migrate to next regular release (11.00.00) when available.

1.1 Licensing

Refer to AM263x/AM263Px/AM261x manifest at top level for mcal_manifest_am263x.html/ mcal_manifest_am263px.html/mcal_manifest_am2631.html

1.2 Getting Started

The AM263x [HTML] /AM263Px [HTML] /AM261x [HTML] User Guide provides the documentation and references necessary to begin development on TI's platforms using AM263x/AM263Px/AM261x.

1.3 Datasheet

User Guide provides the Memory footprint details.

1.4 Documentation

The AM263x [HTML] /AM263Px [HTML] /AM261x [HTML] User Guide provides the documentation and references necessary to begin development on TI's platforms using AM263x/AM263Px/AM261x.

This document details about supported driver, installation, dependencies, build instructions, steps to run example applications. This release package also includes module specific User Guides, test reports, configurator User Guide and others.

1.5 Dependencies

NA

1.6 Tools and Compilers

1. Code Composer Studio: 12.8.1 or later.
2. TI ARM CLANG Compiler Version: 4.0.1
3. Elektrobit Tresos Studio: 29.3 (**EB_Tresos_ACG8.8.10_Installer.zip**). Please use link to request access to EB Tresos Studio and License: Click Here

2 What's New

2.1 New in this Release

Bold items are new in this release compared to 10.02.01 patch release

Features	Module	Supported Platforms	Fix Version
ADC-R instance support	ADC	AM263Px	10.02.01
ADC Periodic HW Trigger from PWM with DMA Transfer Example	ADC	AM263Px	10.02.01
ADC Periodic HW Trigger from PWM with DMA Transfer Example with Multi-channel	**ADC**	**AM263Px**	**10.02.02**
WDG compile time option to skip device reset when 0 timeout value is passed to Wdg_SetTriggerCondition API	WDG	AM263x, AM263Px, AM261x	10.02.01
WDG compile time option to skip device reset when 0 timeout Example	**WDG**	**AM263x, AM263Px, AM261x**	**10.02.02**
Code formatting through clang linting tool to enforce coding guidelines. This resulted in multiple whitespace changes in all source code but with no change in functionality. User need to ignore whitespace changes when comparing the package with previous release packages.	All	AM263x, AM263Px, AM261x	10.02.01
Bug Fixes	All	Please refer **Fixed Defects** section for more details.	10.02.01 and 10.02.02

*Regression testing performed for all the MCAL drivers based on regression test plan

2.2 Compatibility

Driver	Compatibility Information	Comments	Recommended update for Customer Application
None			

*Internal Files are organized in V0, V1, V2 and V3 folders. The below table lists the associated V0/V1/V2/V3 files to be used as per device.

#	Modules	AM263x	AM263Px	AM261x
1.	ADC	V0	V0	V0
2.	CAN	V0	V0	V0
3.	CDD I2C	V0	V0	V0
4.	CDD IPC	V0	V0	V2
5.	CDD UART	V0	V0	V0
6.	CDD DMA	V0	V0	V0
7.	CDD PWM	V0	V0	NA
8.	DIO	V0	V0	V0
9.	ETH	V0	V0	NA
10.	ETHTRCV	V0	V0	NA
11.	FLS	V0	V2	V2
12.	FSI	V0	V0	NA
13.	GPT	V0	V0	V0

#	Modules	AM263x	AM263Px	AM261x
14.	ICU	V0	V0	V0
15.	LIN	V0	V0	NA
16.	MCU	V0	V2	V3
17.	PORT	V0	V0	V0
18.	PWM	V0	V0	V0
19.	SPI	V0	V0	V0
20.	WDG	V0	V0	V0

2.3 Drivers Supported

Drivers	Modules
Micro controller Drivers	GPT, WDG, MCU (with PWM XBAR, Output XBAR)
Memory Driver	FLS
Communication Driver	CAN, ETH, ETHTRCV, LIN, SPI
I/O Drivers	ADC, DIO, ICU, PORT, PWM
CDD	CMPSS, DMA, FLC, FSI, I2C, IPC, PWM, UART

2.4 Platforms Supported

SoC	Test Platform	HOST (OS)	Target (OS)	Supported CPU
AM263x	AM263x (am263x-cc)	Build: Windows / Linux EB Configurator: Only on Windows	Baremetal	R5F
AM263Px	AM263Px ControlCard (am263px-cc)			
	AM263Px Launchpad (am263px-lp)			
	AM263Px SIP Package			
AM261x	AM261x (am261x-som)			

3 Fixed Defects

Bold items are new in this release compared to 10.02.01 patch release

ID	Summary	Module	Severity	Platform	Fix Version	Brief Description of Fix
MCAL-31534	CanIf_TxConfirmation requests next CAN message without incrementing freeHwObjectCount	**CAN**	**Major**	**AM263x, AM263Px, AM261x**	**10.02.02**	Fixed by invoking CAN IF callback after updating all state machine variables
MCAL-30664	[OSPI] CSL_OSPI_CONFIG_REG_SEL_CLK_PHASE_FLD_MASK macro in MCAL_AM263Px	FLS	Major	AM263Px	10.02.01	Fixed the macro values
MCAL-30658	Multiple FLS reads fails when DMA enabled	FLS	Major	AM263Px	10.02.01	
MCAL-21653	[AM263Px]Fls Example App is not working in SBL OSPI mode	**FLS**	**Major**	**AM263x, AM263Px, AM261x**	**10.02.02**	Added flash reset sequence as part of init sequence in example. For AM263Px SIP, reset is performed as part of Fls_Init. For rest of platforms, the reset is done as part of example via board level reset via IO Mux. Reset should be performed before Fls_Init.

ID	Summary	Module	Severity	Platform	Fix Version	Brief Description of Fix
MCAL-31448	Multichannel I2C transaction failure	I2C	Major	AM263x, AM263Px, AM261x	10.02.02	Added restart configuration option to select STOP/NO-STOP operation between channels) Note: Test limitations - The testing for this bugfix is done using temperature sensor as I2C slave(on am263x and am263px boards) which supports restart mode, but the I2C line is not probed and checked, due to hardware restrictions (temperature sensor as slave is tied to I2C2 instance and the corresponding SDA line is not available for probing).
MCAL-30634	Wrong path of MCU_E_MODE_FAILURE in the mcu_plugin	MCU	Minor	AM263x, AM263Px, AM261x	10.02.01	
MCAL-31514	[AM261x] Incorrect offset for MCU_CSL_CONTROLSS_CTRL_EPWM_STATICXBAR_SEL0	MCU	Major	AM261x	10.02.02	Fixed the register offsets as per AM261x TRM. Also fixed the MCU_CSL_TOP_CTRL_ADC_REFBUF0_CTRL and MCU_CSL_TOP_CTRL_ADC_REF_COMP_CTRL offsets
MCAL-30736	EB configurator allows setting of Port_PinInitialMode as GPIO, without the need for pin mode being GPIO	PORT	Minor	AM263x, AM263Px, AM261x	10.02.01	

ID	Summary	Module	Severity	Platform	Fix Version	Brief Description of Fix
MCAL-30737	Port_GetGPIOPortAddr() return address not checked for NULL	PORT	Major	AM263x, AM263Px, AM261x	10.02.01	
MCAL-30611	Wdg Set Mode api reset the Wdg reaction and Window size register value	WDG	Major	AM263x, AM263Px, AM261x	10.02.01	
MCAL-31454	TOP RCM register for WARM RESET CONFIG accessed without unlocking the MMR	WDG	Major	AM263x, AM263Px, AM261x	10.02.01	

ID	Summary	Module	Severity	Platform	Fix Version	Brief Description of Fix
MCAL-31531	WDG issues found through code/ design review	WDG	Minor	AM263x, AM263Px, AM261x	10.02.02	Following issues were found and fixed as part of code and design review • RCM registers unlocked to reset the WDG was not locked back again • Remove stub codes used for dynamic coverage purpose - production code should not have these as by mistake the code could get enabled • Fix include file dependencies as per WDG SWS • As per WDG SWS, Wdg_Cbk.h file should be provided even though the implementation doesn't support callback implementation
MCAL-29488	AM263Px: SPI -DMA interrupt Handling is wrong when both TX and RX are selected	SPI	Minor	AM263x, AM263Px, AM261x	10.02.01	
MCAL-31488	Caches (I-cache and D-cache) are not enabling, for the first time after immediate code flashing	All Examples	Minor	AM263x, AM263Px, AM261x	10.02.02	Fixed all the example projectspec compile option to use RAM model - copy global variable from load address to run address

4 Open Defects

ID	Summary	Module	Severity	Platform	Workaround
MCAL-29157	AdcApp_GroupEndNotification not working for polling mode	ADC	Minor	AM263x, AM263Px, AM261x	Customer to use ADC in Interrupt Mode
MCAL-26385	Can Tx/Rx not working for BitRate=125 KBPS	CAN	Minor	AM263Px, AM261x	Customer to use BitRate other then 125KBPS
MCAL-29057	LinChannelEcuMWakeupSource should not be mandatory parameter as per ASR 4.3.1	LIN	Minor	AM263x, AM263Px, AM261x	Customer should configure at least one wakeup source in EcuM which can be linked.
MCAL-25969	Connecting Multiple Interrupt sources to single Interrupt Xbar line is not supported	MCU	Minor (Limitation)	AM263x, AM263Px, AM261x	Use single interrupt source to a XBar
MCAL-13434	DMA mode is not working with Cache Writeback enabled	SPI	Minor	AM263x, AM263Px, AM261x	Customer to use Cache Write through in case if they are using SPI+DMA
MCAL-27007	UART read/write with DMA enabled is not working	UART	Minor	AM261x	Customer to use UART without DMA
MCAL-26721	[AM263Px] WDG Example App is not working in SBL OSPI mode	WDG	Minor	AM263Px, AM261x	No-Boot mode can be used.

ID	Summary	Module	Severity	Platform	Workaround
MCAL-30398	[Wdg] Wdg_SetTriggerCondition API does not follow AUTOSAR specification	WDG	Minor (Limitation)	AM263x, AM263Px, AM261x	Timeout value provided as part of initial config for both fast and slow mode will only be taken as part of SetTriggerCondition - runtime change of timeout is not supported. So customer need to configure accordingly.

5 Known Limitations

Summary	Description	Module	Workaround	Comments
ADC-R specific checks in configurator	ADC-R instance in AM263Px supports only 4 channels (other instances supports 6 channels). Also this ADC instance doesn't support HW triggers. These checks are not performed in the EB configurator. User need to ensure they select the right configuration based on the AM263Px TRM	ADC	NA	NA

6 Validation

Examples are validated with SBL Prebuilt binary of MCU+SDK 10.02.00 available at ti.com

#	Module	Validation Scope	Remarks (Refer to *Open Defects* for details)
1	ADC	Unit Functional Testing	None
2	CAN	Unit Functional Testing	None
3	CDD CMPSS	Unit Functional Testing	None
4	CDD EPWM	Unit Functional Testing	None
5	CDD FLC	Unit Functional Testing	None
6	CDD FSI TX/RX	Unit Functional Testing	None
7	CDD I2C	Unit Functional Testing	None
8	CDD IPC	Unit Functional Testing	None
9	CDD UART	Unit Functional Testing	None
10	DIO	Unit Functional Testing	None
11	DMA	Unit Functional Testing	None
12	ETH	Unit Functional Testing	ETH is not tested on RMII mode because of the limitation in current ETHTRCV, as it won't support RMII mode.
13	ETHTRCV	Unit Functional Testing	None

#	Module	Validation Scope	Remarks (Refer to *Open Defects* for details)
14	FLS	Unit Functional Testing	None
15	GPT	Unit Functional Testing	None
16	ICU	Unit Functional Testing	None
17	LIN	Unit Functional Testing	Tested: 1. Internal sleep wakeup functionality. 2. Transmission types tested by connecting two simulated slaves on network: · Master Response · Slave Response · Slave to Slave Not Tested: 1. Network level sleep wakeup functionality
18	MCU	Unit Functional Testing	Reset Reason tested only for Power on Reset, SW Warm Reset and Watchdog reset
19	PORT	Unit Functional Testing	None
20	PWM	Unit Functional Testing	None
21	SPI	Unit Functional Testing	None
22	WDG	Unit Functional Testing	None

7 Support

For technical support and additional assistance, visit E2E or contact local TI Field Application Engineer.

8 Versioning

Each package version is composed of 4 period-delimited numbers - represented here by the letters M, m, p and b **[M.m.p.b]**. The table below provides a descriptive reference regarding package version numbering.

Digit	Meaning	Description
1 (**M**=Major)	Major revision	Incremented when the new version is substantially different from the previous for example, a new module added or an existing modules algorithm significantly altered.
2 (**m**=minor)	Minor revision	Incremented when the new version has changed but not in a major way. For example, some minor changes in the API or feature set.
3 (**p**=patch)	Patch number	Incremented for all other source code changes. This includes any packaging support code.
4 (**b**=build)	Build number	Incremented for each release delivery to CM. Reset for any change to M, m or p

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