MCAL_AM26xx_10.02.00 Release Notes

MCAL Release Notes

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Introduction

This is the release notes for **MCAL_AM26xx_10.02.00** release, done on 2025-04-30.

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**.

Licensing

Refer to AM263x/AM263Px/AM261x manifest at top level for MCAL_AM263_10.02.00_manifest.html/MCAL_AM263P_10.02.00_manifest.html/MCAL_AM261_10.02.00_manifest.html

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.

Datasheet

User Guide provides the Memory footprint details.

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.

Dependencies

NA

What's New

1. New in this Release:

Features	Platforms(AM263/AM263p/AM261)
CDD for CMPSS	AM263, AM263p, AM261
MCU: PWM XBAR and Output XBAR	AM263, AM263p, AM261
I2C Multiple channel support in a sequence	AM263, AM263p, AM261
WDG set mode implementation	AM263, AM263p, AM261
Port to provide core ownership of GPIO at pin level	AM263, AM263p, AM261
AUTOSAR Integration Guide	AM263, AM263p, AM261
CDD for FLC	AM263p, AM261
OSPI Flash switching to 3 byte addressing(required by RBL)	AM263p, AM261
FLS+DMA Support	AM263p, AM261
ETH and ETHTRCV	AM261
Bug Fixes. Please refer **Fixed Defects** section for more details.	AM263, AM263p, AM261

2. Full functional testing performed for all the MCAL drivers mentioned in below table
3. Drivers Supported:

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

Device Support

SoC	HOST (OS)	Target (OS)	Supported CPU	Test Platform
AM263x	Windows / Linux, EB configurator only on Windows	Baremetal	R5F	AM263x
AM263Px	Windows / Linux, EB configurator only on Windows	Baremetal	R5F	am263px ControlCard(am263px-cc)
AM263Px	Windows / Linux, EB configurator only on Windows	Baremetal	R5F	am263px Launchpad(am263px-lp)
AM263Px	Windows / Linux, EB configurator only on Windows	Baremetal	R5F	am263px SIP Package
AM261x	Windows / Linux, EB configurator only on Windows	Baremetal	R5F	am261x

Tools and Compilers

1. Code Composer Studio: 12.5.0 or later.
2. TI ARM CLANG Compiler Version: 4.0.0
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

Compatibility

Driver	Compatibility Information	Comments	Recommended update for Customer Application

Cdd Ipc	Ipc driver is compatible with MCU_SDK 10.02.00	MCU+SDK version 10.02.00 available at ti.com	None
Cdd I2c	I2C Multiple channel support in a sequence, previously not there	None	Customer to take the latest changes from the release
Wdg	WDG set mode implementation	Previously only used as a stub	Updated the API definition, customer to take the driver change
Port	Port to provide core ownership of GPIO at pin level	None	Customer to accommodate with the latest change in the configuration as well as driver
Mcu	GPIO interrupt XBar for VIM is registered wrong	Fix the GPIO interrupt in am261x	Customer to accommodate with the change to get GPIO interrupt working
Uart	UART compatibility with multiple instances	None	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**
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**

Validation

Examples are validated with SBL Prebuilt binary of MCU+SDK 10.02.00

#	**Module**	**Validation Scope**	**Remarks (Refer to *Open Defects* for details)**
1.	ADC	Unit Functional Testing	None
2.	CAN	Unit Functional Testing	None
3.	CDD FSI	Unit Functional Testing	None
4.	CDD I2C	Unit Functional Testing	None
5.	CDD IPC	Unit Functional Testing	None
6.	CDD UART	Unit Functional Testing	None

7.	CDD PWM	Unit Functional Testing	None
8.	DIO	Unit Functional Testing	None
9.	DMA	Unit Functional Testing	None
10.	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.
11.	ETHTRCV	Unit Functional Testing	None
12.	FLS	Unit Functional Testing	None
13.	GPT	Unit Functional Testing	None
14.	ICU	Unit Functional Testing	None
15.	MCU	Unit Functional Testing	Reset Reason tested only for Power on Reset, SW Warm Reset and Watchdog reset
16.	PORT	Unit Functional Testing	None

17.	PWM	Unit Functional Testing	None
18.	SPI	Unit Functional Testing	None
19.	WDG	Unit Functional Testing	None
20.	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
21	CDD CMPSS	Unit Functional Testing	None
22	CDD FLC	Unit Functional Testing	None

Fixed Defects

ID	Summary	Platform
MCAL-30323	ETH: need to enable E1 and ProcA variants on am263px-cc	AM263P
MCAL-30266	ETH: SchM need release before call upper API	AM263, AM263P
MCAL-30256	[Cdd_PWM] Cdd_Pwm_ChannelNotificationTzISR array indexes are not correct	AM261
MCAL-29665	Missing information on how to get the Device plugins for EB Tresos	AM263P
MCAL-29438	[Spi] Data Receive mismatch if datawidth is 16bit and 32bit and number of words not aligned to fifodepth	AM263, AM263P, AM261
MCAL-29402	AM261: MCU: GPIO interrupt XBar for VIM is registered wrong	AM261
MCAL-29160	Eth: GetCurrentTime() causes an abort when called before SetControllerMode()	AM263, AM263P
MCAL-29058	Eth: example: Multicast TX test shouldn't add address to RX filter	AM263, AM263P
MCAL-29054	Eth: Multicast packets are not transmitted unless added to RX filter	AM263, AM263P
MCAL-28777	Build: Parallel build with -j is not working	AM263, AM263P, AM261
MCAL-28584	AM26xx: I2c: Feature of Multiple channel support in a sequence is not supported	AM263, AM263P, AM261
MCAL-28415	Dma: Redefinition of certain CSL MACROs	AM263, AM263P, AM261
MCAL-28413	Eth: Eth_Cfg.h does not include Std_Types.h	AM263

MCAL-28362	Exclusive area in Icu_GetVersionInfo	AM263, AM263P, AM261
MCAL-27722	UART: Multiple UART instances are not working	AM263, AM263P, AM261
MCAL-27501	[Wdg] WDG doesn't follow SWS_Wdg_00140 completely	AM263, AM263P, AM261

Open Defects

ID	Summary	Platform	Workaround
MCAL-30601	[AM261] FlsTestMultiSectorlistInterruptFunctionTestCase getting stuck in Blank_check	AM261	Customer can use polling mode
MCAL-29248	[UserGuide] Enablement steps for ADC DMA are incomplete	AM263	ADC with interrupt mode can be used.
MCAL-25969	Connecting Multiple Interrupt sources to single Interrupt Xbar line is not supported	AM263, AM263P, AM261	Use single interrupt source to a XBar
MCAL-30398	[Wdg] Wdg_SetTriggerCondition API does not follow AUTOSAR specification	AM263, AM263P, AM261	Timeout value provided as part of initial config for both fast and slow mode will only be taken as part of SetTriggerCondition. So customer need to configure accordingly.
MCAL-13434	[Spi]Dma mode is not working with Cache Writeback enabled	AM263, AM263P, AM261	Customer to use Cache Write through in case if they are using SPI+DMA
MCAL-26385	[AM263Px] Can Tx/Rx not working for BitRate=125 KBPS	AM263P, AM261	Customer to use BitRate other then 125KBPS

MCAL-27007	[AM261]: UART(DMA): Uart read/write with DMA enabled is not working	AM261	Customer to use UART without DMA
MCAL-29747	AM263Px : Confirm Adc_PollingMainFunction() is a runnable or not	AM263, AM263P, AM261	Customer should treat this as an api and should be called periodically by application
MCAL-29157	AM263Px: AdcApp_GroupEndNotification not working for polling mode	AM263, AM263P, AM261	Customer to use ADC in Interrupt Mode
MCAL-26721	[AM263Px] WDG Example App is not working in SBL OSPI mode	AM263P, AM261	No-Boot mode can be used.
MCAL-29488	AM263Px: SPI -DMA interrupt Handling is wrong	AM263, AM263P, AM261	Configure Tx-Rx Mode as Tx-Only or Rx-Only.
MCAL-29057	AM263x: LinChannelEcuMWakeupSource should not be Mandatory Parameter as per ASR 4.3.1	AM263, AM263P, AM261	Customer should configure atleast one wakeup source in EcuM, which can be linked.
MCAL-21653	[AM263Px]Fls Example App is not working in SBL OSPI mode	AM263P, AM261	No-Boot mode can be used.

Known Limitations

ID	Description	Workaround	Comments
NA	NA	NA	NA

Note: Driver specific limitation can be seen in the user guide of the respective module.

Support

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

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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