



# AM26xx MCAL 11.00.00 Release Notes

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# 1 Introduction

This is the release notes for **MCAL\_AM26xx\_11.00.00** release, done on  09 Sep 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**.

## 1.1 Licensing

Refer to AM263x/AM263Px/AM261x manifest at top level for mcal\_manifest\_am263x.html/  
mcal\_manifest\_am263px.html/mcal\_manifest\_am261.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\\_ACG8.8.12\\_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

<b>Features</b>	<b>Module</b>	<b>Supported Platforms</b>
ADC-R instance support and example CCS projectspec with and without DMA mode	ADC	AM263Px
ADC Periodic HW Trigger from PWM with DMA Transfer Example	ADC	AM263Px
ADC Periodic HW Trigger from PWM with DMA Transfer Example with Multi-channel	ADC	AM263Px
Support PWM APIs to change the frequency or phase shift during runtime	CDD EPWM	AM263x, AM263Px, AM261x
I2C driver redesigned to support both interrupt and polled modes (refer Compatibility section for details)	CDD I2C	AM263x, AM263Px, AM261x
Eth: Checksum Offload	ETH	AM261x
WDG compile time option to skip device reset when 0 timeout value is passed to Wdg_SetTriggerCondition API	WDG	AM263x, AM263Px, AM261x
WDG compile time option to skip device reset when 0 timeout Example	WDG	AM263x, AM263Px, AM261x



Features	Module	Supported Platforms
<p>Libraries are built along with example and example specific configuration.</p> <p>srcs.mk and inc.mk added for all modules to list the applicable source files and include paths.</p> <p>And all examples uses these .mk files to build all required files as part of application build.</p> <p>Earlier builds were based on building libraries independently and then linking the libs with examples.</p> <p>With the new approach, each examples can have different module configs as against using a single config as provided in examples_config folder.</p>	All	AM263x, AM263Px, AM261x
<p>Code formatting through clang linting tool to enforce coding guidelines.</p> <p>This resulted in multiple whitespace changes in all source code but with no change in functionality.</p> <p>User need to ignore whitespace changes when comparing the package with previous release packages.</p>	All	AM263x, AM263Px, AM261x
<p>Files and folders related to other platforms like AM273x removed from package.</p> <p>This release contains only relevant files for AM263x, AM263Px, AM261x platforms.</p>	All	AM263x, AM263Px, AM261x
Bug Fixes	All	Please refer <b>Fixed Defects</b> section for more details.

## 2.2 Compatibility

Modules	Compatibility Information	Recommended/Expected Updates in Customer Application
All	<p><a href="#">MCAL-31581</a>: Plugin generated init time configuration symbol doesn't follow AUTOSAR BSW requirement.</p> <p>All driver plugin modified to fix above issue.</p>	<ul style="list-style-type: none"><li>• Regenerate all module configuration via updated plugins.</li><li>• Use the newly generated init configuration symbols while initializing the MCALs</li></ul>

Modules	Compatibility Information	Recommended/Expected Updates in Customer Application
CDD I2C	<p>Following changes are done in I2C MCAL</p> <ul style="list-style-type: none"> <li>• Support proper queuing for polled and interrupt mode transfers             <ul style="list-style-type: none"> <li>• In earlier implementation assumptions were made                     <ul style="list-style-type: none"> <li>• On the sequence of calls between read and write</li> <li>• Read will read all applicable sequence irrespective of whether the request is made or not</li> </ul> </li> </ul> </li> <li>• Remove blocking call for polled mode transfer API - blocking calls are not a standard AUTOSAR design principle             <ul style="list-style-type: none"> <li>• With this all timeout configuration parameters are removed from plugins</li> <li>• With this Cdd_I2c_PollingModeProcessing API is no more required. User can just call Cdd_I2c_MainFunction API</li> </ul> </li> <li>• Removed Cdd_I2c_SetHandling API</li> <li>• Channels are not sharable across Sequence. Each sequence should have unique channels allocated</li> <li>• Restructured the config and internal global variables             <ul style="list-style-type: none"> <li>• In earlier implementation                     <ul style="list-style-type: none"> <li>• Multiple global variables are used resulting in complex data coupling and duplication</li> <li>• Configuration structure was having internal state machine variables</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Regenerate I2C module configuration via updated plugins.</li> <li>• Polling mode implementation is non-blocking and no timeout is implemented inside the MCAL             <ul style="list-style-type: none"> <li>• User need to call the I2C main function periodically in order to complete the polled mode transactions</li> <li>• Any timeout needs to be implemented in the upper stack</li> </ul> </li> <li>• No other changes expected in upper stack</li> </ul>



Modules	Compatibility Information	Recommended/Expected Updates in Customer Application
	<ul style="list-style-type: none"> <li>• Separated them now based on user config and internal state machine variable</li> <li>• Removed below unused configuration parameters based on current design           <ul style="list-style-type: none"> <li>• CddlI2cArbitrationLossCheck</li> <li>• CddlI2cNackAsErrorCheck</li> <li>• CddlI2cMultipleSequenceInQueueProcessCheck</li> <li>• CddlI2cArbitrationLossParam</li> <li>• CddlI2cOsCounterRef</li> <li>• CddlI2cDefaultOSCounterId</li> <li>• CddlI2cArbitrationLossTimeout</li> <li>• CddlI2cPollTimeout</li> <li>• CddlI2cQueueTimeout</li> <li>• CddlI2cQueueSize</li> <li>• CddlI2cMaxlengthByte</li> </ul> </li> <li>• Following configuration parameters are added based on current design           <ul style="list-style-type: none"> <li>• CddlI2cOwnAddress</li> </ul> </li> <li>• MISRAC and HIS metric compliant</li> </ul>	

\*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.	<b>ADC</b>	<b>V0</b>	<b>V0</b>	<b>V0</b>
2.	<b>CAN</b>	<b>V0</b>	<b>V0</b>	<b>V0</b>
3.	<b>CDD I2C</b>	<b>V0</b>	<b>V0</b>	<b>V0</b>
4.	<b>CDD IPC</b>	<b>V0</b>	<b>V0</b>	<b>V2</b>
5.	<b>CDD UART</b>	<b>V0</b>	<b>V0</b>	<b>V0</b>



#	Modules	AM263x	AM263Px	AM261x
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

## 2.3 Drivers Supported

<b>Drivers</b>	<b>Modules</b>
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, EPWM, UART

## 2.4 Platforms Supported

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

### 3 Fixed Defects

ID	Summary	Module	Severity	Platform	Brief Description of Fix
MCAL-31581	TPS_ECUC_08011: Defining symbols used by EcuM/BswM to initialize BSW modules	All	Min or	AM263x, AM263Px, AM261x	Fixed the generated configuration to have
MCAL-31643	DMA: XBAR configuration doesn't support ADCR instances	DMA XBAR	Maj or	AM263Px	New: Added ADCR configuration parameters
MCAL-31644	DMA: Missing and wrong XBAR Interrupt sources	DMA XBAR	Maj or	AM263Px, AM261x	Fixed the mapping
MCAL-31534	CanIf_TxConfirmation requests next CAN message without incrementing freeHwObjectCount	CAN	Maj or	AM263x, AM263Px, AM261x	Fixed by invoking CAN IF callback after updating all state machine variables
MCAL-31716	Can wakeup element in plugin should be editable, not disable	CAN	Min or	AM263x, AM263Px, AM261x	Fixed in plugins by enabling the element but made it not-editable as this feature is not supported
MCAL-31522	External test in can_app example for MCAL4 is not working in AM263Px SIP board	CAN	Min or	AM263Px	Pinmux configuration change in application
MCAL-31578	CddPwm: Configuration Error for CddPwmDigitalCompareRef	CDD EPWM	Min or	AM263x, AM263Px, AM261x	Fixed in plugins



ID	Summary	Module	Severity	Platform	Brief Description of Fix
MCAL-32075	AM263Px: FSI : Invalid HwObject Mapping for Interrupts	CDD FSI	Major	AM263x, AM263Px, AM261x	Fixed in driver to search for the corresponding HW object instead of indexing. With this fix, application can now have any combination of HW instances (earlier if instance ID and the initialization index doesn't match, it will result in crash)
MCAL-32085	Cdd_Ipc: GetCounterValue function updates status instead of value in Cdd_Ipc_Clock_getTicks function	CDD IPC	Major	AM263x, AM263Px, AM261x	Fixed in driver along with proper critical section protection
MCAL-30664	[OSPI] CSL_OSPI_CONFIG_REG_SEL_CLK_PHASE_FLD_MASK macro in MCAL_AM263Px	FLS	Major	AM263Px	Fixed the macro values
MCAL-30658	Multiple FLS reads fails when DMA enabled	FLS	Major	AM263Px	
MCAL-21653	[AM263Px]Fls Example App is not working in SBL OSPI mode	FLS	Major	AM263x, AM263Px, AM261x	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	Brief Description of Fix
MCAL-31577	GPT: Different generation result possible on CLI and GUI	GPT	Major	AM263x, AM263Px, AM261x	Fixed in plugins
MCAL-31636	I2C interrupt mode rework on MCAL I2C drivers	I2C	Major	AM263x, AM263Px, AM261x	Fixed the queuing implementation
MCAL-31448	Multichannel I2C transaction failure	I2C	Major	AM263x, AM263Px, AM261x	Added restart configuration option to select STOP/NO-STOP operation between channels)
MCAL-32234	Lin.h must include EcuM_Cbk.h to avoid build error	LIN	Major	AM263x, AM263Px, AM261x	Dependency added
MCAL-29057	AM263x: LinChannelEcuMWakeupSource should not be Mandatory Parameter as per ASR 4.3.1	LIN	Minor	AM263x, AM263Px, AM261x	Fixed in plugins
MCAL-30634	Wrong path of MCU_E_MODE_FAILURE in the mcu_plugin	MCU	Critical	AM263x, AM263Px, AM261x	
MCAL-31514	[AM261x] Incorrect offset for MCU CSL CONTROLSS_CTRL_EPWM_ST ATICXBAR_SELO	MCU	Major	AM261x	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



ID	Summary	Module	Severity	Platform	Brief Description of Fix
MCAL-30736	EB configurator allows setting of Port_PinInitialMode as GPIO, without the need for pin mode being GPIO	POR T	Minor	AM263x, AM263Px, AM261x	
MCAL-30737	Port_GetGPIOPortAddr() return address not checked for NULL	POR T	Major	AM263x, AM263Px, AM261x	
MCAL-31715	Spi_Cbk.h included as part of Spi_Cfg.h should not be in autosar_include folder	SPI	Major	AM263x, AM263Px, AM261x	There is no required for this file. Removed this dependency from SPI MCAL and file is removed
MCAL-31480	Multiple Watchdog instance support in EB Tresos	WDG	Major	AM263x, AM263Px, AM261x	With this fix, customer can have other Watchdog drivers like external PMIC WDG along with AM26xx WDG MCAL. Earlier the plugin assumed AM26xx WDG MCAL is the only WDG present in the project (index hard coded to 1)
MCAL-30611	Wdg Set Mode api reset the Wdg reaction and Window size register value	WDG	Major	AM263x, AM263Px, AM261x	
MCAL-31454	TOP RCM register for WARM RESET CONFIG accessed without unlocking the MMR	WDG	Critical	AM263x, AM263Px, AM261x	



ID	Summary	Module	Severity	Platform	Brief Description of Fix
MCAL-31531	WDG issues found through code/design review	WDG	Minor	AM263x, AM263Px, AM261x	<p>Following issues were found and fixed as part of code and design review</p> <ul style="list-style-type: none"><li>• RCM registers unlocked to reset the WDG was not locked back again</li><li>• Remove stub codes used for dynamic coverage purpose - production code should not have these as by mistake the code could get enabled</li><li>• Fix include file dependencies as per WDG SWS</li><li>• As per WDG SWS, Wdg_Cbk.h file should be provided even though the implementation doesn't support callback implementation</li></ul>



ID	Summary	Module	Severity	Platform	Brief Description of Fix
MCAL-31488	Caches (I-cache and D-cache) are not enabling, for the first time after immediate code flashing	All Examples	Min or	AM263x, AM263Px, AM261x	Fixed all the example projectspec compile option to use RAM model - copy global variable from load address to run address
MCAL-31711	Build failure when mcspi_app build using multicore "-j" for AM263Px package	All	Min or	AM263x, AM263Px, AM261x	Fixed dependency in makefile. Build now supports "-j" without any issues

## 4 Open Defects

ID	Summary	Module	Severity	Platform	Workaround
MCAL-32 431	Memmap section configuration issues: Wrong section mapping, some symbols not mapped to any section	All	Major	AM263x, AM263Px, AM261x	None. This will be fixed in next MCAL release.
MCAL-29 157	AdcApp_GroupEndNotification not working for polling mode	ADC	Minor	AM263x, AM263Px, AM261x	Customer to use ADC in Interrupt Mode
MCAL-26 385	Can Tx/Rx not working for BitRate=125 KBPS	CAN	Minor	AM263Px, AM261x	Customer to use BitRate other than 125KBPS
MCAL-28 276	Unable to transmit Extended CAN ID and Standard CAN ID simultaneously in one channel	CAN	Major	AM263x, AM263Px, AM261x	None. This will be fixed in next MCAL release.
MCAL-31 560	CAN: Configuration doesn't check if the allocated buffers are more than RAM size	CAN	Major	AM263x, AM263Px, AM261x	User need to manually ensure that the allocated buffer sizes are within RAM size of 1024 words across RX and TX buffers
MCAL-27 007	UART read/write with DMA enabled is not working	CDD UART	Minor	AM261x	Customer to use UART without DMA
MCAL-32 445	FLS Incorrect configuration for 4S-4S-4S and 4S-4D-4D modes	FLS	Major	AM263Px, AM261x	None. This will be fixed in next MCAL release



ID	Summary	Module	Severity	Platform	Workaround
MCAL-31 669	LIN not able to transmit master response frame after slave response frame	LIN	Major	AM263x, AM263Px, AM261x	None. Debug in progress with silicon design team.
MCAL-25 969	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-13 434	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-30 398	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	<p>ADC-R instance in AM263Px supports only 4 channels (other instances supports 6 channels). Also this ADC instance doesn't support HW triggers.</p> <p>These checks are not performed in the EB configurator. User need to ensure they select the right configuration based on the AM263Px TRM</p>	ADC	NA	NA



## 6 Validation

Examples are validated with SBL Prebuilt binary of MCU+SDK 11.00.00 available at [ti.com](http://ti.com)

For details refer test reports available in mcal\_docs/csp/<platform> folder.



## 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.

<b>Digit</b>	<b>Meaning</b>	<b>Description</b>
1 ( <b>M</b> =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 ( <b>m</b> =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 ( <b>p</b> =patch)	Patch number	Incremented for all other source code changes. This includes any packaging support code.
4 ( <b>b</b> =build)	Build number	Incremented for each release delivery to CM. Reset for any change to M, m or p

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