



Elektrobit

# EB tresos<sup>®</sup> AutoCore Generic 8 Mode Management documentation

release notes update for the BswM module

product release 8.8.7



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# 1. Overview

This document provides you with the release notes to accompany an update to the BswM module. Refer to the changelog [Section 2.1, “Change log”](#) for details of changes made for this update.

## Release notes details

- ▶ EB tresos AutoCore release version: 8.8.7
- ▶ EB tresos Studio release version: 29.2.0
- ▶ AUTOSAR R4.0 Rev 3
- ▶ Build number: B577598

## 2. BswM module release notes

- ▶ AUTOSAR R4.0 Rev 3
- ▶ AUTOSAR SWS document version: 1.2.0
- ▶ Module version: 1.17.1.B577598
- ▶ Supplier: Elektrobit Automotive GmbH

### 2.1. Change log

This chapter lists the changes between different versions.

#### Module version 1.17.1

2022-11-09

- ▶ ASCBSWM-1376 Fixed known issue: BswM cannot handle Sd ports with identifiers larger than 255

#### Module version 1.17.0

2022-10-12

- ▶ Renamed BswMIdsMBlockStateRef to BswMIdsMBlockStateChangeRequestRef

#### Module version 1.16.0

2022-07-04

- ▶ Added support for IdsMBlockStateChangeRequest actions.
- ▶ Added support for prioritization of action lists

#### Module version 1.15.8

2022-03-09

- ▶ Internal module improvement. This module version update does not affect module functionality

## Module version 1.15.7

2021-10-27

- ▶ Improve Interrupt Block Time by removing ExArea in BswM\_MainFunction when queue mode arbitration is used.

## Module version 1.15.6

2021-06-25

- ▶ Internal module improvement. This module version update does not affect module functionality.

## Module version 1.15.5

2021-03-05

- ▶ Internal module improvement. This module version update does not affect module functionality.

## Module version 1.15.4

2020-10-23

- ▶ Added general support for event request ports and BswMComMInitiateReset ports
- ▶ ASCBSWM-1241 Fixed known issue: BswMSwcModeRequest and BswMSwcModeNotification ports are not considered when defining managed mode groups in the basic software module description
- ▶ ASCBSWM-1252 Fixed known issue: BswM\_CanSM\_CurrentState throws DET error if CANSM\_BSWM\_CHANGE\_BAUDRATE is reported via BswM\_CanSM\_CurrentState

## Module version 1.15.3

2020-06-19

- ▶ ASCBSWM-1201 Fixed known issue: Generation fails if a BswMSwcModeRequest port references a VariableDataPrototype that uses an ApplicationPrimitiveDataType
- ▶ Added support for J1939 mode request ports and actions

## Module version 1.15.2

2020-02-21

- ▶ Internal module improvement. This module version update does not affect module functionality

## Module version 1.15.1

2019-10-11

- ▶ ASCBSWM-1160 Fixed known issue: Unused BswMSchMSwitch actions cause an invalid configuration if IMPLEMENTATION\_CONFIG\_VARIANT is VariantPreCompile

## Module version 1.15.0

2019-06-14

- ▶ ASCBSWM-1142 Fixed known issue: Deadline monitoring cannot be disabled when BswMDeadlineMonitoringControl actions are executed before BswMPduGroupSwitch actions
- ▶ Added postbuild selectable support
- ▶ ASCBSWM-1133 Fixed known issue: Changing rule expressions at post-build time might lead to unexpected behavior
- ▶ ASCBSWM-1134 Fixed known issue: Referencing previously unused actions at post-build time leads to unexpected behavior
- ▶ Added support for queued mode arbitration
- ▶ BswM\_Dcm\_RequestCommunicationMode now uses service identifier 0xFE instead of 0x06

## Module version 1.14.5

2019-02-15

- ▶ ASCBSWM-1123 Fixed known issue: Initialization of multiple cores can lead to data corruption and unexpected behaviour

## Module version 1.14.4

2019-01-31

- ▶ ASCBSWM-1113 Fixed known issue: Incorrect allocation of the internal IpduGroupVector leads to an out-of-bounds access in Com
- ▶ ASCBSWM-1110 Fixed known issue: Invalid basic software module description if an immediate BswM-Timer port triggers the execution of a SchMSwitch action

## Module version 1.14.3

2018-10-26

- ▶ Internal module improvement. This module version update does not affect module functionality
- ▶ ASCBSWM-1107 Fixed known issue: Infinite loop if more than 2040 I-PDU groups are configured

## Module version 1.14.2

2018-06-22

- ▶ Added support for Rte Switch Acknowledgements
- ▶ Added memory sections for the BswM software component description
- ▶ Added constraint that BswMPduGroupSwitch and BswMDeadlineMonitoringControl actions can only be configured in one BswM instance
- ▶ Added support for BswM timers
- ▶ ASCBSWM-1074 Fixed known issue: BswM\_PostBuildConfig uses different memory sections for declaration and definition

## Module version 1.14.1

2018-02-16

- ▶ ASCBSWM-967 Fixed known issue: BswM generates invalid code if a mode condition referencing a BswM-NmIfCarWakeUpIndication port doesn't have 0 as a condition value
- ▶ ASCBSWM-981 Fixed known issue: Wrong memory section used for BswM\_PtrModeRequestPortsTable
- ▶ ASCBSWM-995 Fixed known issue: BswM triggers the wrong PDUs if multiple BswMTriggerIPduSend actions exist
- ▶ ASCBSWM-1004 Fixed known issue: Generation fails if BswMGenericRequest ports are used only in some BswM configurations
- ▶ ASCBSWM-997 Fixed known issue: BswM triggers the wrong PDUs if ComIPduHandleId and PduRSourcePduHandleId have different values
- ▶ Enhanced the BSWM\_E\_WRONG\_CONTEXT Det error when BswM API's are called from an invalid partition

## Module version 1.14.0

2017-09-21



- ▶ Major code refactoring for improving RAM and ROM usage
- ▶ Added support for Ethernet Switch Port Groups
- ▶ ASCBSWM-926 Fixed known issue: BswM generator produces invalid code or crashes if cross-partition references are used
- ▶ ASCBSWM-931 Fixed known issue: Inconsistency between generated code and BSWMD when unused BswMSchMSwitch actions exist
- ▶ Added support for Car Wakeup

## Module version 1.13.0

2017-03-31

- ▶ ASCBSWM-880 Fixed known issue: Single instance BswM fails to compile in a multicore ECU

## Module version 1.12.2

2017-03-13

- ▶ Symbolic values from user defined header files can be used as initial values for mode request ports or as condition values for mode conditions
- ▶ Mode request port tables generation order is now preserved
- ▶ ASCBSWM-853 Fixed known issue: Possible data corruption if processing nested rules with triggered action list execution is interrupted
- ▶ ASCBSWM-838 Fixed known issue: Premature handling of I-PDU groups when mode control is interrupted
- ▶ ASCBSWM-859 Fixed known issue: Uncompilable code when a mode request port is initialized with a symbolic name value
- ▶ ASCBSWM-870 Fixed known issue: Disabling deadline monitoring control might be ineffective
- ▶ ASCBSWM-346 Fixed known issue: The BswM may reference a data type that is not specified in ASR-4.-0.3 Dcm SWS

## Module version 1.12.1

2016-12-15

- ▶ ASCBSWM-813 Fixed known issue: Uncompilable code when variant PostBuild and multiple instances are configured

- ▶ Headers for other BSW modules are generated only when the corresponding parameter is enabled
- ▶ Added support for DEM error reporting
- ▶ Simplified the configuration of generic request ports

## Module version 1.12.0

2016-11-04

- ▶ Added a warning message in case a BswMSwitchPort is not used by any SchMSwitch or RteSwitch action
- ▶ Added validation for the TARGET parameter of a BswMRteModeRequestPortInterfaceRef
- ▶ Added a warning message if a BswMNestedExecutionOnly rule is not referenced by any action list.
- ▶ Improve validation of the BswMRteUsage parameter
- ▶ Enhanced the basic software module description
- ▶ ASCBSWM-795 Fixed known issue: Incorrect behaviour when multiple BswM partitions are on the same core
- ▶ ASCBSWM-800 Fixed known issue: Incorrect mode arbitration if more than 2 BswM configurations exist
- ▶ Fixed issue with exporting unused configuration parameters

## Module version 1.11.0

2016-05-25

- ▶ ASCBSWM-705 Fixed known issue: DET errors are always reported from the first partition
- ▶ ASCBSWM-709 Fixed known issue: Missing semicolon in generated SchMSwitch action functions
- ▶ R-PORT Prototype definition corresponding to a SwcModeRequest port uses its configured initial value
- ▶ Improved configuration validations for logical expressions and rules
- ▶ ASCBSWM-715 Fixed known issue: Uncompilable code is produced when BswMBswRequestedMode is empty
- ▶ ASCBSWM-716 Fixed known issue: Invalid memory access when accessing initial values
- ▶ Optimization when no BswMPduGroupSwitch actions with BswMPduGroupSwitchReinit - TRUE exist
- ▶ ASCBSWM-736 Fixed known issue: Memory access violation if multiple BswM instances are used
- ▶ ASCBSWM-775 Fixed known issue: Invalid BSWMD and SWCD if multiple BswM configurations exist
- ▶ Optimizations for the BswM\_MainFunction execution time
- ▶ DET error logged when BswM API functions are called from an invalid context
- ▶ Improved validation of BswMUserCalloutFunction

## Module version 1.10.0

2016-02-10

- ▶ ASCBSWM-698 Fixed known issue: Invalid handling of duplicate I-PDU groups in case of PduGroupSwitch or DeadlineMonitoringControl actions

## Module version 1.9.1

2016-01-15

- ▶ ASCBSWM-654 Fixed known issue: Wrong definition of BswMPduGroupSwitchActionType and BswMDeadLineMonitoringControlActionType produces invalid code
- ▶ Renamed short names of SERVICE-SW-COMPONENT-TYPE instances
- ▶ ASCBSWM-656 Fixed known issue: BswM generates uncompileable code when using Rte mode request ports
- ▶ ASCBSWM-659 Fixed known issue: Incorrect SchM and BswM headers included in a multi-core setup
- ▶ The symbols of runnable entities on different partitions need to be unique
- ▶ Configuration errors added in case actions using disabled external interfaces are configured
- ▶ Performance optimization when performing mode control
- ▶ Added support for adding a new empty BswM configuration container
- ▶ Removed unused header files BswM\_RTE.h, BswM\_COM.h and User\_Callout.h
- ▶ Added configuration check that all referenced mode declaration groups have corresponding data type mapping sets
- ▶ ASCBSWM-667 Fixed known issue: BswM disables deadline monitoring for I-PDU groups
- ▶ Fixed compiler abstraction mismatch between Rte declarations and BswM definitions
- ▶ ASCBSWM-669 Fixed known issue: Generation error when using Com, PduRControl or LinScheduleSwitch actions in a multicore configuration
- ▶ Added better configuration checks for the parameters inside the EcuMSelectShutdownTarget action
- ▶ ASCBSWM-682 Fixed known issue: No DET error check for request id in case 255 GenericRequest ports are configured
- ▶ Removed restriction that the BswMModeRequesterIds need to be 0 based consecutive

## Module version 1.9.0

2015-11-10

- ▶ Improved error handling for mode request ports during generation
- ▶ Added support for multiple instantiation
- ▶ Renamed BswM\_LinIf.h to BswM\_LinTp.h

## Module version 1.8.0

2015-06-24

- ▶ Limited the number of artifacts displayed in the Rule-Port Dependencies window
- ▶ ASCBSWM-581 Fixed known issue: Ports of type BswMDcmApplicationUpdated are reported to be unused
- ▶ Limited the options for configuring the BswM\_Dcm\_ApplicationUpdated()
- ▶ Improved generated code of logical expression states
- ▶ Implemented RfC #54616: BswM\_WdgM\_RequestPartitionReset cannot be treated like the rest of indication services
- ▶ Improved error messages related to mode request ports in the BswM Editor
- ▶ Improved error handling inside the BswM Editor
- ▶ Removed BswM.h inclusion from BswM\_ComM.h
- ▶ Moved the BswM Editor plugin to a separate repository
- ▶ ASCBSWM-617 Fixed known issue: Configuring the same BswMBswModelInitValueMode value in different ports lead to errors during generation
- ▶ Added support for using a variable data prototype reference in a BswMSwcModeRequest port

## Module version 1.7.0

2015-02-20

- ▶ Removed SwcBswMapping constraint related to the existence of a SwitchPort
- ▶ Removed generated mode conditions macros
- ▶ Improved the names of the containers generated by the BswM Editor

## Module version 1.6.0

2015-01-07

- ▶ Added support for CanSM enhanced bus off reporting

- ▶ Changed the default value of BswMRelocatablePbcfgEnable to true
- ▶ Moved generated header type definitions into BswM\_Generated\_Types.h
- ▶ Removed redundant code related to Pb relocatable in BswM.h
- ▶ ASCBSWM-513 Fixed known issue: The rule parameter BswMNestedExecutionOnly is ignored for mode request ports with immediate evaluation
- ▶ Introduced the BswM Editor
- ▶ Modified parameter of BswM\_ExecuteModeControl function to const
- ▶ Added BswM Editor user's guide
- ▶ Added support for BswM\_Dcm\_ApplicationUpdated() API
- ▶ Updated the module version strings within the BswM Editor source code

## Module version 1.5.0

2014-10-02

- ▶ ASCBSWM-453 Fixed known issue: A mode declaration cannot be used to define the initial value of a generic mode request port
- ▶ The EcuM can now initialize the BswM with a NULL\_PTR
- ▶ ASCBSWM-449 Fixed known issue: The inclusion of the BswM post-build header file may lead to a compiler error
- ▶ ASCBSWM-478 Fixed known issue: The configuration parameter BswMSchMEnabled contains invalid XPath expressions
- ▶ ASCBSWM-481 Fixed known issue: Invalid warning caused by the BswM configuration parameter BswME-cuMShutdownTargetRef
- ▶ Reduced the number of statements within the function BswM\_LT\_Init
- ▶ Added INVALID checks for all REF parameters
- ▶ Adapted the use of EcuM wakeup source symbolic name constants
- ▶ Added support for the Ecu configuration container BswMCompuScaleModeValue
- ▶ The BswM action BswMRteModeRequest is now supported
- ▶ Added support for symbolic constants

## Module version 1.4.0

2014-06-27

- ▶ ASCBSWM-458 Fixed known issue: The BswM module is uninitialized in case of a software reset

## Module version 1.3.15

2014-06-13

- ▶ ASCBSWM-426 Fixed known issue: Compiler error due to the multiple inclusion of application header files
- ▶ The macro BSWM\_PB\_CONFIG\_NAME is now mapped to the macro BSWM\_CONFIG\_NAME
- ▶ ASCBSWM-444 Fixed known issue: The Det check for requesting\_user in BswM\_RequestMode() is wrong
- ▶ Use of the macro BSWM\_COM\_ACTION\_USED has been replaced where the macros BSWM\_DEADLINE\_MONITORING\_CONTROL\_ACTION\_USED, BSWM\_PDU\_GROUP\_SWITCH\_ACTION\_USED, BSWM\_SWITCH\_IPDU\_MODE\_ACTION\_USED or BSWM\_TRIGGER\_IPDU\_SEND\_ACTION\_USED can be used
- ▶ The macro BSWM\_PDUR\_ACTION\_USED has been replaced with the macro BSWM\_PDU\_ROUTER\_CONTROL\_ACTION\_USED
- ▶ The function BswM\_GetVersionInfo now ignores a request when a NULL\_PTR is passed to the function
- ▶ The function BswM\_Dcm\_CommunicationMode\_CurrentState now uses the new data type BswMDcm-ComModeCurrentStatePortType

## Module version 1.3.14

2014-03-21

- ▶ Changed passing of corresponding numerical values to enumeration constants from the BswM to the Service Discovery module
- ▶ ASCBSWM-397 Fixed known issue: The generation of calls to Rte switch functions is not conform to AUTOSAR
- ▶ Implemented post-build and link-time support
- ▶ Delayed execution of mode arbitration requests is now supported
- ▶ Delayed execution of the Com\_IpduGroupControl command is now supported
- ▶ ASCBSWM-421 Fixed known issue: The BswM generator may produce an invalid warning regarding unused action lists
- ▶ ASCBSWM-422 Fixed known issue: A triggered action list may be executed when the rule's result has not changed
- ▶ ASCBSWM-423 Fixed known issue: BswMLinTpModeRequest mode request ports may be ignored or incorrectly updated

## Module version 1.3.13

2013-09-17

- ▶ Removed Det error checks for BSWM\_E\_REQ\_USER\_OUT\_OF\_RANGE for all BswM mode request sources except BswM\_RequestMode

## Module version 1.3.12

2013-08-28

- ▶ ASCBSWM-373 Fixed known issue: A compiler error occurs because of missing MemMap macro

## Module version 1.3.11

2013-08-09

- ▶ Added a unique short name for required mode declaration group prototypes

## Module version 1.3.10

2013-07-30

- ▶ Changed to correct the implementation configuration class of several BswM Ecu configuration parameters

## Module version 1.3.9

2013-07-23

- ▶ Added an initial value definition of SwcModeRequest ports for the BswM service component description
- ▶ ASCBSWM-341 Fixed known issue: The basic software module description contains an invalid reference to its SwcBswMapping
- ▶ Added Intra Module Checks to avoid integration of incompatible files
- ▶ ASCBSWM-345 Fixed known issue: If only one mode request port is defined for a mode request source that accepts multiple channels, the BswM may assign the status of different channels to the mode request port
- ▶ ASCBSWM-348 Fixed known issue: A Det parameter check within the function BswM\_EcuM\_Current-Wakeup does not recognize an out of range parameter
- ▶ Added configuration parameter for queue length of mode switch ports

## Module version 1.3.8

2013-06-18

- ▶ ASCBSWM-283 Fixed known issue: Only the first IPdu will be sent for a BswMTriggerIPduSend action
- ▶ Added Debug and Trace support for the BswM

## Module version 1.3.7

2013-05-14

- ▶ ASCBSWM-224 Fixed known issue: The file BswM\_Cfg.h may not conform to the ISO C90 standard
- ▶ Removed the validation of constants passed to the BswM in separate functions
- ▶ Added support for the AUTOSAR Service Discovery module

## Module version 1.3.6

2013-04-15

- ▶ ASCBSWM-209 Fixed known issue: The BswM generator may produce duplicate mode switch point declarations
- ▶ ASCBSWM-212 Fixed known issue: Multiple wakeup sources passed to the BswM API function BswM\_EcuM\_CurrentWakeup will not be evaluated
- ▶ ASCBSWM-214 Fixed known issue: The BswM does not generate mode declaration initial values correctly
- ▶ ASCBSWM-198 Fixed known issue: The BswM may reference undefined mode declaration identifiers

## Module version 1.3.5

2013-03-15

- ▶ ASCBSWM-96 Fixed known issue: The parameter CurrentState of the function BswM\_FrSM\_CurrentState may be validated incorrectly when compiler options are enabled
- ▶ ASCBSWM-202 Fixed known issue: The generation order of certain BswM code fragments is not constant
- ▶ Implemented BswMActions as functions
- ▶ Removed the definition of a default value if no initial value has been defined for a mode request port
- ▶ Changed the validation of constants passed to the BswM into separate functions
- ▶ Changed the data types of BswM variables which store boolean values to be explicitly defined as the standard type "boolean"
- ▶ Removed unnecessary calls to the macro TS\_PARAM\_UNUSED
- ▶ Changed the BswM service component description to define a queue length for each BswMSwitchPort



## Module version 1.3.4

2013-02-11

- ▶ The BswM actions BswMEcuMSelectShutdownTarget, BswMEcuMGoDown and BswMPduRouterControl are now supported
- ▶ The BswM now supports BswMSchMSwitch actions
- ▶ The BswM now supports BswMBswModeNotification mode request ports
- ▶ Added XPath validation checks for the Ecu parameters BswMArgumentRef and BswMRuleExpressionRef
- ▶ ASCBSWM-171 Fixed known issue: The generated BswM will not compile if a triggered action list is executed from a conditional action list
- ▶ Updated config structure (reference paths) of BswM-ComM channel reference for the introduction of ComMConfigSet container in ComM
- ▶ Removed SvcAs request for SchM exclusive areas since they are no longer used

## Module version 1.3.3

2013-01-11

- ▶ Mode arbitration is now disabled after BswM\_Deinit has been executed

## Module version 1.3.2

2012-12-14

- ▶ ASCBSWM-86 Fixed known issue: If one or more unused RteSwitchActions exist a null pointer exception may be thrown during the generation of the BswM

## Module version 1.3.1

2012-11-16

- ▶ ASCBSWM-79 Fixed known issue: The function BswM\_WdgM\_RequestPartitionReset incorrectly validates the range of the parameter "Application"
- ▶ ASCBSWM-107 Fixed known issue: If multiple BswMComMIndication mode request ports reference the same ComMChannel only one mode request port will be evaluated
- ▶ ASCBSWM-88 Fixed known issue: The function BswM\_LinSM\_CurrentSchedule references the undefined macro BSWM\_LINIF\_SCHEDULE\_TABLE\_MAX
- ▶ ASCBSWM-83 Fixed known issue: If a BswMSwcModeNotification is incorrectly configured the BswM generation will terminate with a null pointer exception

- ▶ ASCBSWM-80 Fixed known issue: The BswM basic software module description contains an invalid reference to the to BswM EcuC module definition
- ▶ ASCBSWM-145 Fixed known issue: The function BswM\_LinSM\_CurrentSchedule incorrectly evaluates Lin network schedule indication requests
- ▶ ASCBSWM-148 Fixed known issue: BswMFrSMIndication mode request sources are not recognized by the BswM generator

## Module version 1.3.0

2012-10-24

- ▶ The top-level structure of the software-component description in the ARXML files changed from /AUTOSAR/BswM to /AUTOSAR\_BswM
- ▶ ASCBSWM-109 Fixed known issue: BswM generation fails with a Java null pointer exception when a Mode-Type-Request-Map is not complete
- ▶ ASCBSWM-84 Fixed known issue: The BswM does not support a EthSM Channel selection for mode switch ports
- ▶ ASCBSWM-76 Fixed known issue: The verification of EcuM wakeup sources is carried out with incorrect identifiers
- ▶ ASCBSWM-112 Fixed known issue: The generated code for BswMCanSMIndication request port is wrong if more than one CanSMIndication is used

## Module version 1.2.1

2012-06-27

- ▶ Internal module improvement. This module version update does not affect module functionality

## Module version 1.2.0

2012-03-23

- ▶ Updating configuration and functionality to 4.0.3, preserving AR 4.0.2 paths to other module configurations

## Module version 1.1.1

2011-10-14

- ▶ Integrated SWS enhancements and clarifications; other minor enhancements

## Module version 1.1.0

2011-09-09

- ▶ AUTOSAR 4.0 version (full)

## 2.2. New features

- ▶ Support for EthernetWakeupOnDataLine

BswM now supports configuration of BswMEthIfSwitchPortGroupRequestMode actions with BswMEthTrcvMode set to BSWM\_ETHTRCV\_MODE\_ACTIVE\_WITH\_WAKEUP\_REQUEST. Also, it supports the new PNC\_REQUESTED\_WITH\_WAKEUP\_REQUEST state reported by ComM via BswM\_ComM\_CurrentPNCMode.

## 2.3. Elektrobit-specific enhancements

This chapter lists the enhancements provided by the module.

- ▶ This module provides no Elektrobit-specific enhancements.

## 2.4. Deviations

This chapter lists the deviations of the module from the AUTOSAR standard.

- ▶ BswMMainFunctionPeriod can be configured up to 255 seconds

In order to optimize the BswMTimer implementation, the BswMMainFunctionPeriod parameter has been restricted to a maximum value of 255 seconds.

This should not affect any project as this value is sufficiently high.

- ▶ Unsupported actions

Description:

The following actions are not supported.

- ▶ BswMTriggerSlaveRTEStop
- ▶ BswMTriggerStartUpPhase2

Requirements:

BswM0919\_Conf, BswM0921\_Conf, BswM0920\_Conf,

- The short-names of the BswM service component description artifacts

Description:

The short-names of the following BswM service component description artifacts are not generated according to the requirement BswM0137: - RequirePort - ProvidePort - RunnableEntity - DataReceiveEvent

Requirements:

BswM0137

- BswMDcmComMChannelRef in place of BswMDcmComMNetwork

Description:

The configuration parameter BswMDcmComMNetwork has been replaced with a reference-parameter BswMDcmComMChannelRef which references a ComMChannel.

Rationale:

References to ComM channel is much less error-prone than allowing arbitrary strings to be entered as ComM-channel-identifiers. This is the topic of AUTOSAR bugzilla issue [http://www.autosar.org/bugzilla/show\\_bug.cgi?id=53057](http://www.autosar.org/bugzilla/show_bug.cgi?id=53057)

Requirements:

BswM0876\_Conf

- The parameter BswMEcuMSleepModeRef in place of BswMEcuMShutdownTargetRef

Description:

The configuration parameter BswMEcuMShutdownTargetRef has been replaced with a reference-parameter BswMEcuMSleepModeRef.

Rationale:

The Ecu configuration parameters for the shutdown target selection were not complete. BswMEcuMShutdownTargetRef could only reference a sleep target and not a reset target. The shutdown target selection has been adapted here: [http://www.autosar.org/bugzilla/show\\_bug.cgi?id=54134](http://www.autosar.org/bugzilla/show_bug.cgi?id=54134)

Requirements:

BswM0962\_Conf

- Unsupported APIs BswM\_TriggerStartUpPhase2 and BswM\_TriggerSlaveRTEStop

Description:

The APIs `BswM_TriggerStartUpPhase2()` and `BswM_TriggerSlaveRTEStop()` are related to Multicore feature whose functionality is to trigger (start or stop) the RTE/SchM on slave core is not supported.

Requirements:

BswM0140, BswM0142, BswM0145, BswM0141, BswM0143, BswM0144

- Removed Det checks for `BSWM_E_REQ_USER_OUT_OF_RANGE`

Description:

The Development Error Tracer checks associated to `BSWM_E_REQ_USER_OUT_OF_RANGE` have been removed since the BswM does not know the valid ranges of the user parameter.

Requirements:

BswM0092, BswM0094, BswM0096, BswM0100, BswM0102, BswM0108, BswM0111, BswM0151, BswM0155, BswM0114, BswM0098

- Optional element `BswMConditionValue`

Description:

The BswM requires that the ECU configuration parameter `BswMConditionValue` be always defined. It is not optional.

Requirements:

BswM0816\_Conf

- Disabled parameter `BswMWdgMRequestPartitionResetRef`

Description:

The `BswMWdgMRequestPartitionResetRef` parameter cannot be used to indicate the partition for which the reset request is made for. This is due to the fact the Os module does not have the `OsAppEcucPartitionRef` parameter enabled. As a result, this functionality is broken. In order to correctly provide the partition for which the reset request is made for, the new EB specific parameter `BswMWdgMOsApplicationRef` must be used.

Requirements:

BswM0917\_Conf

- BswM doesn't provide the declaration for `BswM_MainFunction`

Description:

The BswM will not provide the declaration of the BswM\_MainFunction anymore. In case the BswM has only one instance the declaration of BswM\_MainFunction will be provided by the Schm. In case of multiple instantiation, each partition will have its own BswM\_1\_{Partition}\_MainFunction.

Requirements:

BswM0053, BswM0075, BswM.Impl.Api.BswM\_MainFunction\_Partition

- ▶ BswMPartitionRef references an OsApplication instead of a EcucPartition

Description:

The BswMPartitionRef parameter doesn't reference an EcucPartition but an OsApplication due to Os restrictions.

Requirements:

ECUC\_BswM\_00984

- ▶ BswM always requires the SchM interface

Description:

The BswMSchMEnabled parameter will be disabled and it's default value shall be 'true'. The rationale is that the SchM interface is always needed by the BswM.

Requirements:

BswM00947\_Conf

- ▶ BswM provides the header files for other modules only if BswM<mod> is set to TRUE

Description:

The newer version of this requirement (from Autosar 4.2) is preferred because it reduces the number of header files which are provided by the BswM.

Requirements:

BswM0026

- ▶ BswM\_UserType and BswM\_ModeType types are not configuration dependent.

Description:

According to BswM0041, the range of the BswM\_UserType and BswM\_ModeType types should be configuration dependent. Instead, the current implementation defines these types as uint16 to simplify the implementation. BswM0041 also mentions BswM\_ConfigType but this is already covered by BswM0042.

Requirements:



BswM0041

- BswMRequestedModeMax is not used by the BswM.

Description:

As the BswM\_ModeType is now fixed at uint16, it doesn't make any sense for the user to configure the BswMRequestedModeMax anymore.

Requirements:

BswM0875\_Conf

## 2.5. Limitations

This chapter lists the limitations of the module. Refer to the module references chapter *Integration notes*, subsection *Integration requirements* for requirements on integrating this module.

- For this module no limitations are known.

## 2.6. Open-source software

BswM does not use open-source software.