RENESAS

AUTOSAR MCAL R4.0.3

User's Manual

WDG Driver Component Ver.1.0.2

Generation Tool User's Manual

Target Device:
RH850/P1x-C

Renesas Electronics
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Abbreviations and Acronyms

Abbreviation / Acronym	Description
API	Application Programming Interface
AUTOSAR	AUTomotive Open System ARchitecture
BSWMDT	Basic Software Module Description Template
DEM	Diagnostic Event Manager
ECU	Electronic Control Unit
ID/Id	Identifier
MCAL	MicroController Abstraction Layer
MCU	MicroController Unit
WDG/Wdg	Watchdog Driver
WDTA	Window Watchdog Timer A
XML	eXtensible Mark-up Language

Definitions

Terminology	Description
BSWMDT File	This file is the template for the Basic Software Module Description.
Configuration XML File	This file contains the setting of command line options.
ECU Configuration Description File	Input file to WDG Driver MCAL Code Generator Tool. It is generated by ECU Configuration Editor.
Sl.No	Serial Number.

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Chapter 1 Introduction

The Watchdog Driver provides services for initialization, changing the operation mode and triggering the Watchdog.

The WDG Driver module comprises of two sections as Embedded Software and the MCAL Code Generator Tool to achieve scalability and configurability.

The document describes the WDG module specific inputs and outputs of the MCAL Code Generator Tool that is the common code generator engine used for the generation of the configuration code for all MCAL modules. MCAL Code Generator Tool is a command line tool that extracts information from ECU Configuration Description File and BSWMDT File and generates WDG Driver C Source and C Header files such as Wdg_59_Driver<A/B>_PBcfg.c, Wdg_Hardware.c, Wdg_59_Driver<A/B>_Cfg.h, Wdg_59_Driver<A/B>_Cbk .h and Wdg_Hardware.h.

Remark: Based on the value for the parameter 'VendorApiInfix', MCAL Code Generator Tool generates either Wdg_59_DriverA_Cfg.h, Wdg_59_DriverA_PBcfg.c files and Wdg_59_DriverA_Cbk or Wdg_59_DriverB_Cfg.h, Wdg_59_DriverB_PBcfg.c and Wdg_59_DriverB_Cbk files. Hence in this document 'Wdg_59_Driver<A/B>_Cfg.h, Wdg_59 _Driver<A/B>_PBcfg.c and Wdg_59_Driver<A/B>_Cbk.h' term is used.

1.1. Document Overview

This user manual is organized as given in the table below:

Section	Contents
Section 1 (Introduction)	Provides an introduction to the document and explains how information is organized in this manual.
Section 2 (Reference)	Provides a list of documents referred while developing this document.
Section 3 (Code Generation Overview)	Provides MCAL Code Generator Tool Overview.
Section 4 (Input Files)	Provides information about ECU Configuration Description File.
Section 5 (Output Files)	Explains the output files that are generated by the MCAL Code Generator Tool.
Section 6 (Precautions)	Contains precautions to be taken during configuration of ECU Configuration Description File.
Section 7 (User Configuration Validation)	Describes about user configuration validation done by the MCAL Code Generator Tool.
Section 8 (Configuration Overview)	Provides Container Overview.
Section 9 (Messages)	Describes all the Error/Warning/Information messages of R4.0.3 which helps the user to understand the probable reason for the same.

Chapter 2 Reference

2.1. Reference Documents

The following table lists the documents referred to develop this document:

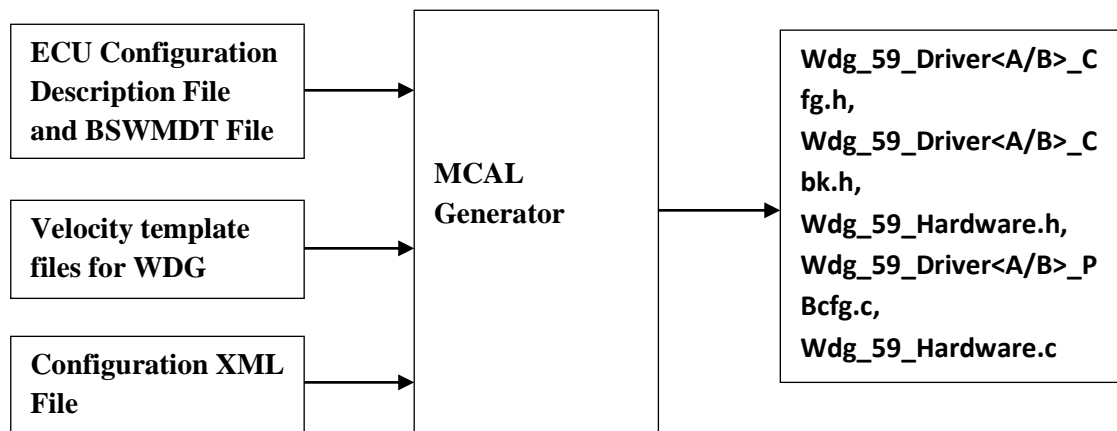| Sl. No	Title	Version
1.	AUTOSAR_SWS_WDGDriver	2.5.0
2.	MCAL_CodeGenerator_Tool_UserManual.pdf	1.0.7
3.	R20UT3828EJ0100-AUTOSAR.pdf	1.0.2

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Chapter 3 Code Generation Overview

MCAL Code Generator Tool overview is shown below.

Figure 3-1   Overview of Code Generation

- ECU Configuration Description File (.arxml):
  This file will contain WDG Driver specific configuration information.
  This file should be generated by AUTOSAR specified Configuration
  Editor.

- BSWMDT File (.arxml):
  MCAL Code Generator Tool uses "Common Published Information"
  from WDG module specific BSWMDT File. WDG module specific
  BSWMDT File should not be updated manually since it is "Static
  Configuration" file.

- Velocity template files:
  Wdg_PBcfg_c.vm, Wdg_Cfg_h.vm, Wdg_Cbk_h.vm,
  Wdg_Hardware_h.vm, Wdg_Hardware_c.vm, Wdg_Validate.vm,
  commonhelper.vm. They are interpreted by the MCAL Generator
  MCAL Code Generator Tool in order to provide user input validation
  and generate the final output file needed by the AUTOSAR
  configuration chain .They are the "logic" of the Code Generator.

- Configuration XML File (.xml):
  This file is used to specify which velocity template to use and their
  location and the name of the output file generated.

For the error free input file, the MCAL Code Generator Tool generates the
following output files: Wdg_59_Driver<A/B>_Cfg.h,
Wdg_59_Driver<A/B>_Cbk.h, Wdg_59_Driver<A/B>_PBcfg.c,
Wdg_Hardware.h and Wdg_Hardware.c and displays appropriate context
sensitive error messages for wrong input and exits.

ECU Configuration Description File can be created or edited using ECU
Configuration Editor.

Concept of execution for MCAL Code Generator Tool is as follows:
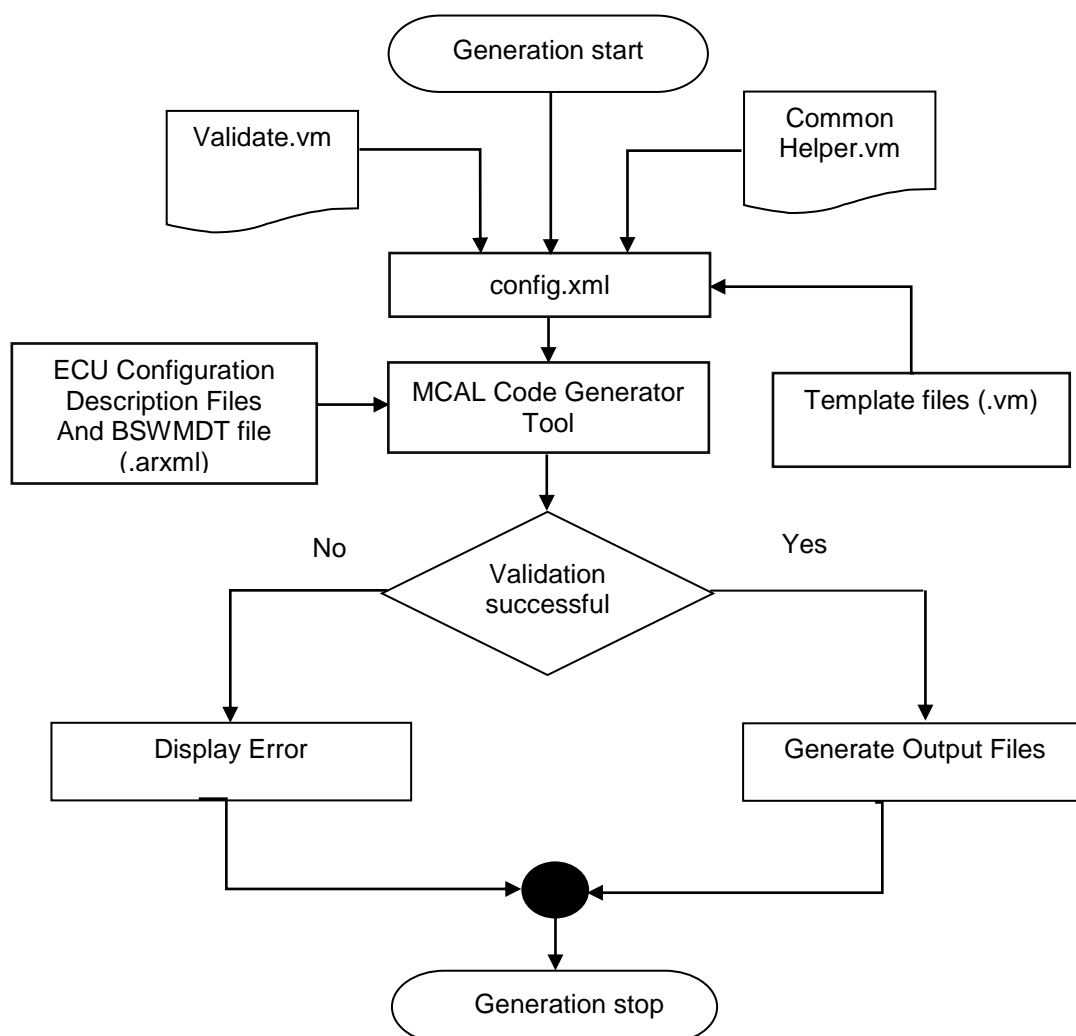
Figure 3-2   Flow-Diagram of Code Generation

The module "Validate" will validate the configuration (contents of ECU Configuration Description File(s) as input). If there are incorrect values or incorrect dependencies, the MCAL Code Generator Tool will display error, warning and information messages. In case of errors, the MCAL Code Generator Tool will abort the execution.

Wdg_Cfg_h.vm / Wdg_PBcfg_c.vm will generate compiler switch / structures necessary to the AUTOSAR Configuration chain and vendor specific parameters.

Wdg_Hardware_h.vm / Wdg_Hardware_c.vm will generate hardware related info (defines number of actual instances / channels used / structure to access to the I/O mapped peripheral).

Remark Please consult the general MCAL Code Generator Tool User Manual
(MCAL_CodeGenerator_Tool_UserManual.pdf) and
GettingStarted_MCAL_Drivers_X1x (R20UT3828EJ0100-AUTOSAR.pdf)
for details about the tool command line options.

Chapter 4 Input Files

MCAL Code Generator Tool will accept the config.xml file which has paths to the code generator template files for generating WDG Driver files. MCAL Code Generator Tool needs ECU Configuration Description File(s), BSWMDT File and WDG configuration XML File as input to generate WDG Driver specific source files. MCAL Code Generator Tool needs information about WDG Driver module. Hence WDG Configuration Description File should contain configuration of WDG Driver module. MCAL Code Generator Tool ignores any other AUTOSAR component configured in the ECU Configuration Description File. ECU Configuration Description File can be generated using configuration editor.

ECU Configuration Description File must comply with AUTOSAR standard ECU Configuration Description File format.

Remark The detailed explanation about the parameters and containers are found in Parameter Definition File.

Chapter 5 Output Files

MCAL Code Generator Tool generates configuration details in C Header and
C Source files Wdg_59_Driver<A/B>_Cfg.h, Wdg_59_Driver<A/B>_Cbk.h,
Wdg_59_Driver<A/B>_PBcfg.c Wdg_59_Hardware.c and Wdg_59_Hardware.h.

The content of each output file is given in the table below:

Table 5-1   Output Files Description

Output File	Details
Wdg_59_Driver<A/B>_Cfg.h	This file contains pre-compile time parameters.
Wdg_59_Driver<A/B>_Cbk.h	This file contains function prototype of call back functions
Wdg_59_Driver<A/B>_PBcfg.c	This file contains post-build configuration data.
Wdg_59_Hardware.c	This file contains hardware information.
Wdg_59_Hardware.h	This file contains hardware information.

Remark   Output files generated by MCAL Code Generator Tool should not be modified or
edited manually.

Chapter 6 Precautions

- ECU Configuration Description File and BSWMDT File must comply with AUTOSAR standard for R4.0.3 ECU Configuration Description File and BSWMDT File respectively.

- ECU Configuration Description File must contain WDG, MCU and DEM module description files.

- The input file must contain WDG Driver module.

- All the function names and the string values configured should follow C syntax for variables. It can only contain alphanumeric characters and "_". It should start with an alphabet.

- config.xml file should convey the [velocity template](#) file location and output file location.

- Configuration XML File should contain the file extension '.xml'.

- If the output files generated by MCAL Code Generator Tool are modified externally, then they may not produce the expected results or may lead to error/warning/Information messages.

- Short Name for a container should be unique within a name space.

- An error free ECU Configuration Description File generated from configuration editor has to be provided as input to the MCAL Code Generator Tool. Otherwise MCAL Code Generator Tool may not produce the expected results or may lead to errors/warnings/information messages.

- The description file should always be generated using AUTOSAR specified configuration editor and it should not be edited manually.

Remark   Please refer the WDG Component User Manual (R20UT3661EJ0100-AUTOSAR.pdf) for deviations from AUTOSAR.

Chapter 7 User Configuration Validation

This section provides help to analyze the error, warning and information messages displayed during the execution of Driver MCAL Code Generator Tool. It ensures conformance of input file with syntax and semantics. It also performs validation on the input file for correctness of the data.

For more details on list of Error/Warning/Information messages that are displayed as a result of input file(s) validation, refer Chapter 9 "*Messages*".

The MCAL Code Generator Tool displays error or warning or information when the user has configured incorrect inputs. The format of Error/Warning/Information message is as shown below.

<message_type>_<vendor_id>_<module_id>_<message_id>:<message_content>.

where,

- <message_type>   : ERR/WARNING/INFO

- < vendor_id >   : vendor Id = 59

- < module_id >   : 102 - WDG Driver Module id (102) for user configuration checks.

- < Message_id.>   : 001-999

- <message_content>: Message content provides information about error or warning or information displayed when the user has configured incorrect inputs.

    File Name' and 'Path' need not be present for all Error/Warning/Information messages

    File Name: Name of the file in which the error has occurred

    Path: Absolute path of the container in which the parameter is present

Chapter 8 Configuration Overview

8.1. Container Overview

The following figure represents container overview.
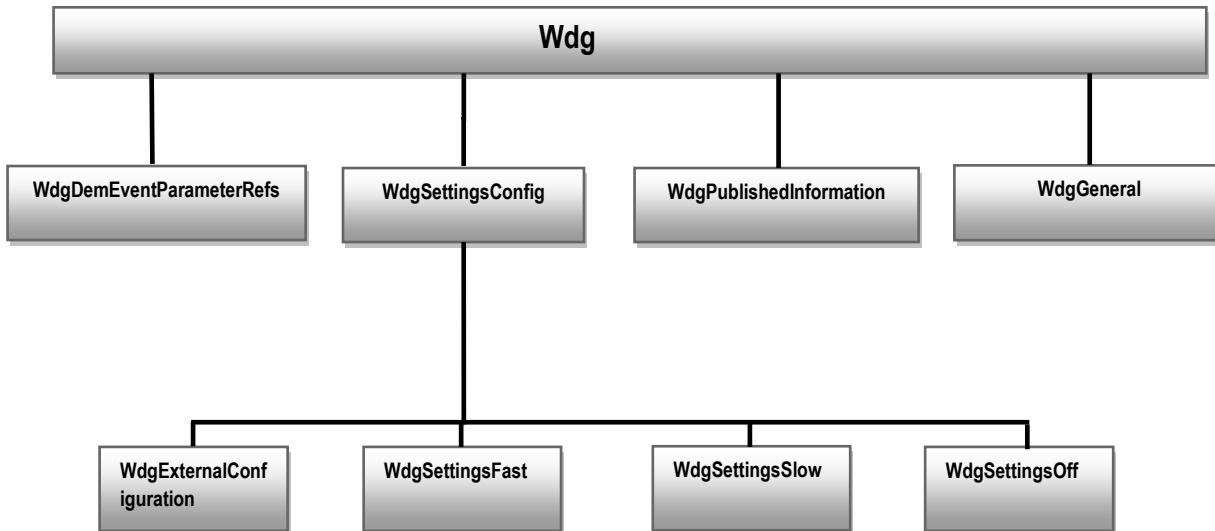

Figure 8-1 Configuration overview

8.1.1. Pre-Compile Configurable Parameters

Table 8-1 Pre-Compile Configurable Parameters

Container Name	Parameter Name	Parameter Type	Parameter Range	Parameter Description
WdgGeneral	WdgDevErrorDetect	Boolean	TRUE / FALSE	This parameter compile switch to enable / disable development error detection for this module.
	WdgDisableAllowed	Boolean	TRUE / FALSE	This parameter compile switch to allow / forbid disabling the watchdog driver during runtime.
	WdgIndex	Integer	0	Represents the watchdog driver's ID so that it can be referenced by the watchdog interface.
	WdgInitialTimeout	Integer	0 – 65.535	The initial timeout (sec) for the trigger condition to be initialized during Init function. It shall be not larger than WdgMaxTimeout.
	WdgMaxTimeout	Integer	0 – 65.535	The maximum timeout (sec) to which the watchdog trigger condition can be initialized.

Container Name	Parameter Name	Parameter Type	Parameter Range	Parameter Description
WdgGeneral	WdgRunArea	Enumeration	RAM or ROM	This parameter Represents the watchdog driver execution area is either from ROM (Flash) or RAM as required with the particular microcontroller.
	WdgTriggerLocation	Function	NULL	Location (memory address) of the watchdog trigger routine. This parameter is not used for implementation.
	WdgVersionInfoApi	Boolean	TRUE / FALSE	This parameter Compile switch to enable / disable the version information API.
	WdgCriticalSectionProtection	Boolean	TRUE / FALSE	This parameter specifies if the WDG driver CPU load can be reduced by disabling the enter/exit critical section functionality by adding a precompiled configuration parameter to the ADC driver configuration.
	WdgVaryingActivationCodeMode	Boolean	ENABLE / DISABLE	This parameter enables / disables Varying Activation Code Mode.
	WdgVersionCheckExternalModules	Boolean	TRUE / FALSE	This parameter Enable / disable AUTOSAR Version check for inter-module dependencies.
	WdgDeviceName	Enumeration	R7F701370A, R7F701371, R7F701372, R7F701373, R7F701374	This parameter contains the supported device name to identify the device specific C header file through Translation XML File.
	WdgWriteVerify	Enumeration	WV_DISABLE, WV_INIT_ONLY, WV_INIT_RUNTIME	This parameter contains the supported Register read back functionality to verify the registers throughout the embedded code.
	WdgInterruptConsistencyCheck	Boolean	TRUE / FALSE	This parameter enables / disables Interrupt consistency check.
	WdgUseWriteVerifyErrorInterface	Boolean	TRUE / FALSE	This parameter enables / disables Error interface.
	WdgWriteVerifyErrorInterface	Function	NULL	Function for write verify error interface
	WdgClockRef	Reference	--	This parameter specifies assignment of WDTATCKI clock for a WDTA instance 0.

8.1.2. Post Build Time Configurable Parameters

Table 8-2   Post Build Time Configurable Parameters

Container Name	Parameter Name	Parameter Type	Parameter Range	Parameter Description
WdgSettingsConfig	WdgDefaultMode	Enumeration	WDGIF_FAST_MODE: Default watchdog mode is "fast". WDGIF_OFF_MODE: Default watchdog mode is "off". WDGIF_SLOW_MODE: Default watchdog mode is "slow".	Default mode for watchdog driver initialization.
	WdgClkSettingsFast	Enumeration	TWO_POWOF_9_ DIVBY_ WDGCLK to TWO_POWOF_16_ DIVBY_ WDGCLK	These parameters contain hardware dependent clock settings for the watchdog driver's "fast" mode.
	WdgSettingsSlow	Enumeration	TWO_POWOF_9_ DIVBY_ WDGCLK to TWO_POWOF_16_ DIVBY_ WDGCLK	These parameters contain hardware dependent clock settings for the watchdog driver's "slow" mode.
WdgDemEvent ParameterRefs	WDG_E_DISABLE_R EJECTED	Symbolic Name	NA	This parameter specifies the reference to the DemEventParameter which shall be issued when the error "Initialization or mode switch failed because it would disable the watchdog" has occurred.
	WDG_E_MODE_FAIL ED	Symbolic Name	NA	This parameter specifies the reference to the DemEventParameter which shall be issued when the error "Setting a watchdog mode failed (during initialization or mode switch)" has occurred.
	WDG_E_INT_INCON SISTENT	Symbolic Name	NA	Reference to the DemEventParameter which shall be issued when Interrupt consistency error was detected.
	WDG_E_REG_WRIT E_VERIFY	Symbolic Name	NA	Reference to the DemEventParameter which shall be issued when a register write-verify failure was detected. If the reference is not configured the error shall not be reported.

Chapter 9 Messages

The messages help to identify the syntax or semantic errors in the ECU Configuration Description File. Hence it ensures validity and correctness of the information available in the ECU Configuration Description File.

The following section gives the list of error, warning and information messages displayed by the MCAL Code Generator Tool.

9.1   Error Messages

ERR_59_102_001: parsing of <Module Name> module is incorrect.

This error occurs, if the parameters are not parsed for the corresponding modules

ERR_59_102_004: References path of Parameter WDG_E_DISABLE_REJECTED is not correct in <Wdg/WdgDemEventParameterRefs/WDG_E_DISABLE_REJECTED>.

This error occur when the path configured for WDG_E_DISABLE_REJECTED is incorrect.

ERR_59_102_005: References path of Parameter WDG_E_MODE_FAILED is not correct in <Wdg/WdgDemEventParameterRefs/WDG_E_MODE_FAILED>.

This error occur when the path configured for WDG_E_MODE_FAILED is incorrect.

ERR_59_102_006: Minimum instances of LowerMultiplicity for container should be configured <Wdg/WdgGeneral>.

This error occur when minimum instances of container WdgGeneral are not configured.

ERR_59_102_008: References WdgClockRef is not configured in <Wdg/WdgGeneral/WdgClockRef>.

This error occur when WdgClockRef path is not configured.

ERR_59_102_009: References path of Parameter WdgClockRef is not correct in <Wdg/WdgGeneral/WdgClockRef>.

This error occur when WdgClockRef path configured is not correct.

ERR_59_102_013: Parameter WDG_E_INT_INCONSISTENT is not configured in <WdgDemEventParameterRefs>.

This error will occur, if the parameter 'WDG_E_INT_INCONSISTENT' is not configured in WdgDemEventParameterRefs and WdgInterruptConsistencyCheck' in container 'WdgGeneral' is configured as true.

ERR_59_102_014: References path of Parameter WDG_E_INT_INCONSISTENT is not correct in <WdgDemEventParameterRefs>.

This error will occur, if References path of Parameter 'WDG_E_INT_INCONSISTENT' in container 'WdgDemEventParameterRefs'is not correct.

ERR_59_102_015: WdgWriteVerifyErrorInterface should configured with other than NULL because WdgUseWriteVerifyErrorInterface is configured as true.

This error will occur, if Parameter 'WdgWriteVerifyErrorInterface' is configured as NULL while parameter 'WdgUseWriteVerifyErrorInterface' is configured as true.

ERR_59_102_016: Parameter WDG_E_REG_WRITE_VERIFY is not configured in <WdgDemEventParameterRefs>.

This error will occur, if the parameter 'WDG_E_REG_WRITE_VERIFY' is not configured in container 'WdgDemEventParameterRefs' and WdgWriteVerify is not WV_DISABLE.

ERR_59_102_018: References path of Parameter WDG_E_REG_WRITE _VERIFY is not correct in <WdgDemEventParameterRefs>.

This error will occur, if References path of Parameter 'WDG_E_REG_WRITE _VERIFY ' is not correct in container ' WdgDemEventParameterRefs'.

ERR_59_102_019: The value of the parameter WdgDisableAllowed should not be <false> since the value of the parameter WdgDefaultMode is configured as <WDGIF_OFF_MODE>.

This error occurs when the parameter WdgDisableAllowed is false and WdgDefaultMode is configured as WDGIF_OFF_MODE.

ERR_59_102_020: Minimum instances of LowerMultiplicity for sub container should be configured <Wdg/WdgSettingsConfig/WdgSettingsFast>.

This error occur when minimum instances of sub container WdgSettingsFast are not configured.

ERR_59_102_021: Maximum possible instances of UpperMultiplicity exceeds sub container <Wdg/WdgSettingsConfig/WdgSettingsFast>.

This error occur when number of instances exceeds the maximum possible instances of WdgSettingsFast sub container.

ERR_59_102_022: The value configured for the parameter WdgClkSettingsSlow in the container <WdgSettingsSlow> is faster than the value of the parameter WdgClkSettingsFast in the container <WdgSettingsFast>

This error occur when the value of the parameter WdgClkSettingsSlow in the container 'WdgSettingsSlow' faster than the value of parameter WdgClkSettingsFast in the container 'WdgSettingsFast'

ERR_59_102_023: Minimum instances of LowerMultiplicity for sub container should be configured <Wdg/WdgSettingsConfig/WdgSettingsOff>.

This error occur when minimum instances of sub container WdgSettingsOff are not configured.

ERR_59_102_024: Maximum possible instances of UpperMultiplicity exceeds sub container <Wdg/WdgSettingsConfig/WdgSettingsOff>.

This error occur when number of instances exceeds the maximum possible instances of WdgSettingsOff sub container.

ERR_59_102_025: Minimum instances of LowerMultiplicity for sub container should be configured <Wdg/WdgSettingsConfig/WdgSettingsSlow>.

This error occur when minimum instances of sub container WdgSettingsSlow are not configured.

ERR_59_102_026: Maximum possible instances of UpperMultiplicity exceeds sub container <Wdg/WdgSettingsConfig/WdgSettingsSlow>.

This error occur when number of instances exceeds the maximum possible instances of WdgSettingsSlow sub container.

ERR_59_102_033: Minimum 1 WdgPublishedInformation instance is needed.

This error occur when minimum instances of container WdgPublishedInformation are not configured.

ERR_59_102_037: Minimum instances of LowerMultiplicity for container should be configured <Wdg/WdgSettingsConfig>.

This error occur when minimum instances of container WdgSettingsConfig are not configured.

ERR_59_102_038: Maximum possible instances of UpperMultiplicity exceeds container <Wdg/WdgSettingsConfig>.

This error occur when number of instances exceeds the maximum possible instances of WdgSettingsConfig container.

ERR_59_102_039: The variant <WdgDeviceVariant> is not supported currently

This error will occur, if device variant other than P1X-C variants are configured.

ERR_59_102_040: The container WdgDemEventParameterRefs should be configured, since the value of parameter 'WdgInterruptConsistencyCheck' is configured as true.

This error will occur, if WdgDemEventParameterRefs is not configured and 'WdgInterruptConsistencyCheck' is configured as true.

ERR_59_102_041: The container WdgDemEventParameterRefs should be configured, since the value of parameter 'WdgWriteVerify' is <WV_INIT_RUNTIME>./ <WV_INIT_ONLY>.

This error will occur, if WdgDemEventParameterRefs is not configured and if 'WdgWriteVerify' is configured as either <WV_INIT_RUNTIME> or <WV_INIT_ONLY>.

ERR_59_102_042: The error notification configured for the parameter 'WdgWriteVerifyErrorInterface' should follow C syntax < [a-z A-Z][a-z A-Z 0-9_]>

This error will occur if the parameter WdgWriteVerifyErrorInterface in container WdgGeneral0 does not follow C syntax <[a-zA-Z][a-zA-Z0-9_]>.

ERR_59_102_053: The value of the parameter WdgInitialTimeout is greater than the value of the parameter WdgMaxTimeout.

This error occurs when the initial WdgInitialTimeout value exceeds WdgMaxTimeout value.

9.2   Warning Messages

WARNING_59_102_001: The value of the parameter 'WdgInitialTimeout' is configured as <0> and WdgDefaultMode is not configured as <WDGIF_OFF_MODE>.Hence, Watchdog hardware will be enabled directly after Wdg Module initialization and WDG counter will expire after <calculated_value in msec>

This warning occurs when parameter WdgInitialTimeout is configured as 0 and WdgDefaultMode is configured as either WDGIF_FAST_MODE or WDGIF_SLOW_MODE

9.3   Information Messages

INFO_59_102_001/2: The duration of 75% of one WDG trigger cycle for slow/fast mode is < calculated_value in msec > msec

This message provides information about the 75% time duration of one WDG trigger cycle

INFO_59_102_103: WdgUseWriteVerifyErrorInterface functionality has no effect when WdgWriteVerify parameter is DISABLED.

This information occurs if WdgWriteVerify parameter is DISABLED and WdgUseWriteVerifyErrorInterface is configured TRUE.

INFO_59_102_104: Parameter WDG_E_MODE_FAILED/ WDG_E_DISABLE_REJECTED is not configured in <WdgDemEventParameterRefs>.
This message provides information when WDG_E_MODE_FAILED / WDG_E_DISABLE_REJECTED is not configured in the container 'WdgDemEventParameterRefs'

Revision History

Sl.No.	Description	Version	Date
1.	Initial Version	1.0.0	10-Aug-2015
2.	The following changes are made: 1. Added R-number for the document. 2. Added parameter WdgRegReadBackEnable in Figure 8-1 Configuration overview. 3. Added parameter WdgRegReadBackEnable in 8.1.1 Pre-Compile Configurable Parameters. 4. Note added for error/warning/info messages in Chapter 10	1.0.1	16-Feb-2016
3.	The following changes are made: 1. In section 8.1.2, replaced the old naming convention with TWO_POWOF_9_ DIVBY_ WDGCLK and TWO_POWOF_9_ DIVBY_ WDGCLK. 2. R-number updated for the document. 3. In section 9.1, ERR_59_102_003, ERR_59_102_007, ERR_59_102_034, ERR_59_102_041, ERR_59_102_042, ERR_59_102_045, ERR_59_102_046, ERR_59_102_047, ERR_59_102_048, ERR_59_102_052 & ERR_59_102_054 are removed. 4. In section 9.1, ERR_59_102_013, ERR_59_102_014, ERR_59_102_015, ERR_59_102_016, ERR_59_102_018, ERR_59_102_019, ERR_59_102_020, ERR_59_102_021, ERR_59_102_022, ERR_59_102_023, ERR_59_102_024, ERR_59_102_025, ERR_59_102_026 & ERR_59_102_039 are added. 5. In section 9.3, INFO_59_102_103 & INFO_59_102_104 are added. 6. Removed chapters Section 9 Generation Tool Options, Section11 Notes and replaced the phrases Tool, Generator Tool, WDG Driver Generator tool with MCAL Code Generator Tool in this document. 7. Updated Reference Document details in Chapter 2. 8. Figure 3-2 of Chapter 3 is updated and added Remark in the same chapter. 9. Updated chapter 6 by adding two more points. 10. Updated Figure 8-1, Table 8-1 and Table 8-2 in chapter 8. 11. Figure 3-2 is renamed from Flow-Diagram of MCAL Code Generator Tool to Flow-Diagram of Code Generation 12. Updated section 9.1 Error Messages with new errors ERR_59_102_040, ERR_59_102_041, ERR_59_102_042, ERR_59_102_043. 13. Table 8-2 updated with WdgDemEventParameterRefs.	1.0.2	22-Feb-2017

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