

Release Notes for P1M-C-OpenMarket / RH850:RENESAS_SW-AUTOSAR-P1M-C: MCAL Ver4.02.00.D

Beta Quality

1.1 Purpose:

To deliver AUTOSAR R4.0.3 MCAL software for P1x-C Ver4.02.00.D release using the following inputs.

Device Manual: r01uh0517ej0100_rh850p1x-c_Open.pdf

Device File: DF-RH850P1x-C-EE_E120b.zip

Operating Precautions: R01TU0087ED0101_RH850P1M-C.pdf

Modules supported: ADC, FLS, MCU, SPI and WDG.

1.2 Package information

Product	RH850/P1x-C
Variant	P1M-C
Product Release Version	Ver4.02.00.D
AUTOSAR Specification Version	4.0.3
Devices supported	<u>RH850</u> P1M-C – R7F701373, R7F701374
Release Date	28-Feb-2017

1.3 Tools

1.3.1 GHS

Tool	Version	Options
GreenHills Multi IDE – compiler	Green Hills Multi V6.1.6 Compiler Version 2015.1.7	-c -g -gsize -Wundef -Wshadow -nofloatio --short_enum --prototype_errors --diag_error 193 -dual_debug --no_commons -cpu=rh850g3m -Osize -prepare_dispose -inline_prologue -no_callt -ignore_callt_state_in_interrupts -sda=all -reserve_r2 -large_sda -shorten_loads -shorten_moves -delete

1.3.2 Configuration code generator

Tool	Version	Options
ECU Spectrum	4.0.14	-

1.3.3 Additional software

Tool	Version	Options
NA	-	-

1.4 Generic Information

1.4.1 Release Target

Processor	P1M-C - R7F701373, R7F701374
Module	Generic
Module Overview User Manual	R20UT3827EJ0100-AUTOSAR.pdf – V1.0.2
Getting Started for P1x-C MCAL User Manual	R20UT3828EJ0100-AUTOSAR.pdf – V1.0.2
Date	28-Feb-2017

1.4.2 Release Items

Filename	Version	Change Description
Generator Files		
CommonHelper	0.0.3	Following changes are made in Ver4.02.00.D:- 1. Updated macro IsBooleanParameterEnabledOrDisabled. 2. Added macro IsBooleanNonMandateParameterEnabled.
Common Files		

ComStack_Types.h	1.0.0	No changes for release Ver4.02.00.D
Std_Types.h	1.0.1	No changes for release Ver4.02.00.D
rh850_Types.h	1.0.1	No changes for release Ver4.02.00.D
Platform_Types.h	1.0.0	No changes for release Ver4.02.00.D
Compiler Files		
Compiler.h	1.0.1	No changes for release Ver4.02.00.D
Compiler_Cfg.h	1.0.1	No changes for release Ver4.02.00.D
MemMap.h	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Memory section of modules MCU, SPI, WDG and FLS are updated.
Os.h	1.0.1	No changes for release Ver4.02.00.D
Os.c	1.0.0	No changes for release Ver4.02.00.D
Getting Started for P1x-C MCAL User Manual		
R20UT3828EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Added Section 4.10 – User Environment settings. 2. Removed Description of Translation XML file from Chapter 9 3. Updated Copyright year 4. Added example for reference in section 4.4 5. In Chapter 4 Figure 4-2 has been updated as per version change 6. Compiler Option Table updated 7. In Chapter 5 Section 5.4.1 Trxml changed to Arxml format 8. Chapter 9 Section 9.1 Configuration XML file remove since not relevant 9. Document name corrected in second last and last page
Module Overview User Manual		
R20UT3827EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Updated section Configuration Parameter Dependency for GPT, ICU and PWM. 2. Added Dem for ADC, PWM, PORT, DIO, SPI and GPT. 3. Removed details regarding Dem from the section 3.1.16, ETH. 4. Updated R number

1.4.3 Fixed Issues

ID	Description
NA	Please refer to the fixed issues list as shared from Renesas Ref. P1xC_FixedIssues_Ver4.02.00.D.xlsx

1.4.4 Known Issues

ID	Description
NA	Please refer to the known issues list as shared from Renesas Ref. P1xC_OpenMarket_KnownIssues_CW09_2017.xlsx

1.5 Module Index

[2. ADC](#)

[3. FLS](#)

[4. MCU](#)

[5. SPI](#)

[6. WDG](#)

2 ADC

2.1 Target Info

Processor	P1M-C - R7F701373, R7F701374
Module	ADC
Software Version	V1.0.1
Embedded User Manual	R20UT3635EJ0100-AUTOSAR.pdf- V1.0.2
Tool User Manual	R20UT3636EJ0100-AUTOSAR.pdf – V1.0.2
Date	28-Feb-2017

2.2 Release Items

Filename	Version	Change Description
P1x-C - Parameter Definition files		
R403_ADC_P1X-C.arxml	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added Dem parameters ADC_E_DMA_FAILURE, ADC_E_INT_INCONSISTENT & ADC_E_REG_WRITE_VERIFY. 2. Added parameters AdcEnableSelfDiag, AdcEnableAdTimer, AdcEnableBufferAllocation, AdcInterruptConsistencyCheck, AdcWriteVerify, AdcDmacWriteVerify, AdcPic2cWriteVerify, AdcPullDownPulseWidth, AdcUimtLlmtErrIntEnable, AdcEnableAdTimerTriggMode, AdcTimerPeriod, AdcTimerPhaseDelay, AdcIdErrIntEnable, AdcParityErrIntEnable. 3. Modified parameter AdcSelfDiagMode. 4. Updated description of AdcChannelRangeSelect, AdcEnableChSelfDiag, AdcSelfDiagConvCktRef, AdcEnablePullUpPullDown, AdcSelfDiagPinLevel. 5. Max value of parameters AdcChannelConvTime, AdcChannelResolution, AdcChannelSampTime and AdcHwTrigTimer updated. 6. Upper Multiplicity of AdcExtMuxValue and AdcExtMuxDelayCounter modified. 7. Modified LITERALS of AdcSelfDiagConvCktRef. 8. Added DOC-REVISION in ADMIN-DATA. 9. Removed parameter AdcHwUnitMaxChannelId, AdcHwUnitTotalConvTime. 10. Copy right information updated.

		<p>11. Limit check option 'ADC_RANGE_NOT_BETWEEN' is removed from the parameter 'AdcChannelRangeSelect'.</p> <p>12. Support for device R7F701371 added.</p> <p>13. Added parameter AdcWriteVerifyErrorInterface.</p> <p>14. As per ARDAAAF-1363, Warranty Disclaimer updated</p> <p>15. Removed literals ADTIM3_SG3_SG4 and ADTIM4_SG3_SG4 from parameter AdcHwTrigger.</p>
BSWMDT		
R403_ADC_P1x-C_BSWMDT.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. CAN-ENTER-EXCLUSIVE-AREA-REF tag is added.</p> <p>2. Warranty Disclaimer updated.</p> <p>3. Software patch version incremented.</p>
Source Code		
Adc.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x branch.</p> <p>2. Copyright information updated.</p> <p>3. Comments added for traceability.</p>
Adc_Irq.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x branch.</p> <p>2. Copyright information updated.</p> <p>3. Comments added for traceability.</p>
Adc_Private.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x V4.01.01 branch.</p> <p>2. PIC register implementation modified.</p> <p>3. Copyright information updated.</p> <p>4. Comments added for traceability.</p> <p>5. Removed Misra warning Msg(4:2892) from MISRA C Rule Violations.</p> <p>6. Added volatile to LpRunTimeData in APIs Adc_GroupCompleteMode, Adc_ConfigureGroupForConversion, Adc_HwEnableHardwareTrigger and Adc_ProcessQueue.</p>
Adc_Ram.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x branch.</p> <p>2. Added volatile to Adc_GpRunTimeData.</p> <p>3. Copyright information updated.</p>
Adc_Version.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x branch.</p> <p>2. Copyright information updated.</p>

Adc.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability.
Adc_Debug.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability.
Adc_Irq.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability.
Adc_PBTypes.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability. 4. Removed variable blExtMuxEnabled from structure STag_Adc_GroupConfigType. 5. Removed ucHWTriggerType from structure STag_Adc_SgTriggType.
Adc_Private.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability.
Adc_Ram.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability. 4. Added volatile to Adc_GpRunTimeData
Adc_Types.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability. 4. Removed Unused Misra violation Msg(4:3453) from the file.
Adc_RegWrite.h	1.0.0	Initial version
Adc_Version.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x V4.01.01 branch. 2. Copyright information updated. 3. Comments added for traceability.

P1x-C TCODE file for ADC		
Adc_Hardware_c	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Corrected the elements of array T_ADCF1 and DMA_BaseAddress. 2. Copyright information updated.
Adc_Hardware_h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Arrays ADC_BaseAddress and DMA_BaseAddress updated. 2. Copyright information updated.
Adc_Cfg_h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added new macros : ADC_ENABLE_EXTERNAL_MUX, ADC_ENABLE_BUFFER_ALLOCATION, ADC_ENABLE_ERROR_INTERRUPT, ADC_ENABLE_SELF_DIAG_PIN_LVL, ADC_ENABLE_SELF_DIAG, ADC_ENABLE_SELF_DIAG_WIRE_BRK, ADC_WIRE_BRK_PIN_SELECT, ADC_ENABLE_ADTIMER, ADC_CONFIG_SETS, ADC_SG_UNITS, ADC_HW_UNITS, ADC_TOTAL_GROUPS, ADC_HW_TRIGG_GROUPS, ADC_DMA_UNIT_CONFIG, ADC_LIMIT_CHK_GROUPS, ADC_TOTAL_CHANNELS, ADC_SG_MAX_DMA_INDX, ADC_HW_UNIT_INDX, ADC_WRITE_VERIFY_ENABLE, ADC_DMAC_WRITE_VERIFY_ENABLE, ADC_PIC2C_WRITE_VERIFY_ENABLE, ADC_ENABLE_DIAGNOSTIC_SUPPORT, ADC_ALIGN_RIGHT_MASK, ADC_ALIGN_LEFT_MASK, ADC_HW_TRIGG_TYPE, ADC_ERROR_NOTIFICATION, ADC_ERROR_INTERFACE_ENABLE, ADC_ERROR_INTERFACE, ADC_INTERRUPT_CONSISTENCY_CHK. 2. Copyright information updated 3. Added macros AdcWriteVerify, AdcDmacWriteVerify, AdcUseWriteVerifyErrorInterface, AdcPic2cWriteVerify. 4. Macro IsBooleanParameterEnabledOrDisabled is replaced with IsBooleanNonMandateParameterEnabled for non-mandatory parameters.
Adc_Cbk_h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Generation of Call back function updated. 2. Copyright information updated

		3. Call back function added for AdcUseWriteVerifyErrorInterface.
Adc_PBcfg_c	1.0.1	Following changes are made in Ver4.02.00.D:- 1. Updated all structures. 2. As per ticket ARDAAAF-1659, macro IsBooleanParameterEnabledOrDisabled is replaced with IsBooleanNonMandateParameterEnabled for non-mandatory parameters. 3. Copyright information updated.
Adc_Validate	1.0.1	Following changes are made in Ver4.02.00.D:- 1. Validation for write verify is added. 2. Macro IsBooleanParameterEnabledOrDisabled is replaced with IsBooleanNonMandateParameterEnabled for non-mandatory parameters. 3. Added error code 158 and 161.
P1x-C ADC Common Sample Application Source file		
App_ADC_Common_Sample.c	1.0.0	No changes for release in Ver4.02.00.D
P1x-C ADC Common Sample Application Header file		
App_ADC_Common_Sample.h	1.0.1	Following changes are made in Ver4.02.00.D:- 1. Removed definition of AdcConfigSet0.
P1x-C ADC Sample Application P1M-C Source file		
App_ADC_P1x-C_Sample.c	1.0.1	Following changes are made in Ver4.02.00.D:- 1. Added function select_the_Table_Reference to enable interrupt control registers.
P1x-C ADC Sample Application P1M-C Header file		
App_ADC_Device_Sample.h	1.0.1	Following changes are made in Ver4.02.00.D:- 1. Added macro ADC_SET_TABLE_REF_METHOD for enabling interrupt control registers
TargetMap.h	1.0.1	Following changes are made in Ver4.02.00.D:- 1.Changed the precompile switch ADC_ENABLE_ERROR_CHECK to ADC_ENABLE_ERROR_INTERRUPT
P1x-C User Manual		
R20UT3635EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Added Table 4-10 ADC driver protected resources list. 2. Updated Section 4.1 of Chapter 4. 3. Updated Table 8-1 in Chapter 8. 4. Updated Register details of section 6 in Table 6-1. 5. Removed Section13.2 Compiler, Linker, and Assembler.

		6. Throughput, Stack depth and ROM/RAM details updated in section 13.3 7. Device names updated in Chapter 13. 8. .one and .html are removed
R20UT3636EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Error messages added in section 10.1.1 Error Messages 2. Warning messages added in section 10.1.2 Warning Messages 3. Information messages added in section 10.1.3 Information Messages 4. Section 9.3 User Environment Settings updated 5. Removed Chapter 9 and Chapter 11 6. Added Diagram Container Overview in Chapter 8

2.3 Fixed Issues

ID	Description
NA	Please refer to the fixed issues list as shared from Renesas Ref. P1xC_FixedIssues_Ver4.02.00.D.xlsx

2.4 Known Issues

ID	Description
NA	Please refer to the known issues list as shared from Renesas Ref. P1xC_OpenMarket_KnownIssues_CW09_2017.xlsx

3 FLS

3.1 Target Info

Processor	P1M-C - R7F701373, R7F701374
Module	FLS
Software Version	V1.0.2
Embedded User Manual	R20UT3641EJ0100-AUTOSAR.pdf – V1.0.2
Tool User Manual	R20UT3642EJ0100-AUTOSAR.pdf – V1.0.2
Date	28-Feb-2017

3.2 Release Items

Filename	Version	Change Description
P1x-C - Parameter Definition files		
R403_FLS_P1X-C.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. The minimum range of parameter FlsErasedValue is modified. 2. The device support for R7F701371 is added. 3. The enumeration parameter FlsWriteVerify is updated and FlsInterruptConsistencyCheck and FLS_E_INT_INCONSISTENT parameters are removed 4. The Warranty Disclaimer description is corrected. 5. Description of FlsWriteTime, FlsEraseTime are updated. 6. Default value of FlsNumberOfSectors is corrected 7. Maximum value of FlsSectorStartaddress corrected 8. FlsNumberOfSectors description updated 9. FlsMaxWriteNormalMode parameter is fixed to 4 bytes. 10. FlsMaxEraseNormalMode parameter is fixed to 64 bytes. 11. FlsAcLocationErase parameter range is updated. 12. Upper multiplicity of FlsSpiReference is updated to 1. 13. Upper multiplicity of FlsSector updated to 3072. 14. Parameter FlsFaciUnit removed.
BSWMDT		
R403_FLS_P1x-C_BSWMDT.arxml	1.0.2	<p>Following change is made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Patch version is updated. 2. Added critical section FLS_CODE_FLASH_DISABLED 3. Warranty Disclaimer updated. 4. 'EXCLUSIVE-AREA' tag is removed from Fls_Read (), Fls_Suspend (), Fls_Resume () APIs.

		<ol style="list-style-type: none"> 5. 'IS-SYNCHRONOUS tag' is updated for Fls_ReadImmediate () and Fls_MainFunction () APIs. 6. 'CAN-ENTER-EXCLUSIVE-AREA-REFS' tag is added under 'BSW-SCHEDULABLE-ENTITY' tag. 7. 'EVENTS' class for the scheduled function is added. 8. <IMPLEMENTED-ENTRY-REF> tag is added under 'BSW-SCHEDULABLE-ENTITY' tag. 9. Device support for R7F701371 is added.
Source Code		
Fls.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Fls_MainFunction API is updated. 2. Fls_Suspend API is modified to check current command. 3. Pre compile switches are corrected, removed switch FLS_INTERRUPT_MODE. 4. Fls_Suspend API is modified. 5. Justification for QAC Warnings are added. 6. DET implementation is updated. 7. 'FLS_UT_001' Tag added for the non-covered parts of the code. 8. Updated data type for "TargetAddressPtr" in Fls_Read and Fls_ReadImmediate APIs.
Fls_Internal.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected, removed switch FLS_INTERRUPT_MODE. 2. The APIs Fls_ProcessReadImm, Fls_InitiateWriteJob and Fls_InitiateBlankCheckJob are modified. 3. Added Fls_FastReadCheckECC API. 4. Check for FLS_FCU_REGBIT_FSTATR_FRDY is removed from Fls_InitiateWriteJob API. 5. Fls_InitiateEraseJob, Fls_PerformBlankCheckForReadOp, Fls_ClearIntReq function banner is updated. 6. The definition of Fls_MainRead API is corrected. 7. Fls_PerformBlankCheckForReadOp and Fls_TimeOutCheckAndProcessing are modified. 8. Missing comments are added. 9. Fls_MainErase is modified. 10. Fls_InitiateEraseJob and Fls_InitiateBlankCheckJob APIs are modified. 11. Fls_MainWrite is modified.

		<p>12. Register Write Verify Implementation is done for all registers.</p> <p>13. Justification for QAC Warnings are added.</p> <p>14. LulRegValue removed from Fls_InitiateWriteJob, Fls_InitiateEraseJob definition to fix Msg (3:3203) and misra violation Msg(4:2983).</p> <p>15. Added justifications for Msg (4:1290).</p> <p>16. DET implementation is updated.</p> <p>17. 'FLS_UT_002' Tag added for the non-covered parts of the code.</p> <p>18. Cleared the global status flag 'Fls_GblJobSuspendRequest' in Fls_ProcessSuspend.</p> <p>19. Updated the macro FLS_FCU_ERR_TIMEOUT in InitiateBlankCheckJob, Fls_ProcessRead, Fls_TimeoutCheckAndProcessing APIs.</p>
Fls_Private_Fcu.c	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected. 2. Updated Fls_FcuCheckJobStatus function to invoke Fls_ProcessSuspend function for erase and write operations 3. Fls_FcuGetDFSSize is updated. 4. Fls_FcuInitRAM function banner is updated. 5. Fls_FcuSwitchMode and Fls_FcuForcedStop APIs are modified. 6. Fls_FcuSwitchMode and Fls_FcuPerformBlankCheck APIs are modified. 7. Register write-verify is implemented for DFERSTC register in Fls_FcuDataCopy. 8. Register write-verify is implemented for all registers and FACH1 support is removed. 9. Justification for QAC Warnings are added. 10. Critical section protection for Fls_FcuGetFWParam(), Fls_FcuCopytoRam() added. 11. Fls_FcuCopytoRam, Fls_FcuSwitchBFlash, Fls_FcuClearCache and Fls_FcuGetFWParam are kept under FLS_START_SEC_PRIVATERAM_CODE memory section. 12. Code comments updated. 13. Removed switch operation #if (FLS_INTERRUPT_MODE == STD_OFF)

		<p>14. Fls_FcuClearStatus API is updated to remove error bit checking.</p> <p>15. Fls_FcuSwitchMode is improved to handle mode switch to user mode and P/E separately and</p> <p>Fls_FcuCheckSequencerStatus is added to check</p> <p>16. FENTRYR register to identify command lock state and</p> <p>Lddmode in Fls_FcuSwitchMode changed to constant.</p> <p>17. Removed variable declaration LusModeRegVal to fix</p> <p>Msg(3:3203)</p> <p>18. Added justification for qac warning (2:3892)</p> <p>19. LucLoopCount in Fls_FcuForcedStop API is updated to check for FRDY bit using</p> <p>FLS_FCU_FRDY_POOL_COUNT value.</p>
Fls_Ram.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added Fls_GblJobSuspendRequest variable. 2. Pre compile switches are corrected. 3. Justification for QAC Warnings are added.
Fls_Version.c	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected. 2. QAC Warning (2:0553) is justified.
Fls.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Return type of Fls_Suspend API is modified. 2. Pre compile switches are corrected. 3. Updated data type for "TargetAddressPtr" in Fls_Read and Fls_ReadImmediate APIs.
Fls_Debug.h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <p>Pre compile switches are corrected.</p>
Fls_Internal.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected. 2. Added extern declaration for Fls_FastReadCheckECC API. 3. Declaration of Fls_PerformBlankCheckForReadOp is modified. 4. Missing comments are added.
Fls_PBTypes.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected. 2. Write verification macros are moved to Fls_RegWrite.h 3. FACL1 supporting code parts are removed. 4. Added FLS_FCU_FRDY_POOL_COUNT macro. 5. Added type cast in macro definitions

Fls_Private_Fcu.h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected. 2. Pre compile switch added for Fls_FcuCopytoRam (), Fls_FcuSwitchBFlash (), Fls_FcuClearCache (), Fls_FcuGetFWParam (). 3. Added Fls_FcuCheckSequencerStatus API declaration and Fls_FcuSwitchMode declaration updated.
Fls_Ram.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added extern declaration of Fls_GblJobSuspendRequest variable. 2. Pre compile switches are corrected. 3. Memory class for Fls_GpConfigPtr corrected are corrected. 4. Added justification for qac warning msg(2:0862)
Fls_Types.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Pre compile switches are corrected. 2. Register Write Verify macros are removed.
Fls_Version.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>Pre compile switches are corrected.</p>
Fls_RegWrite.h	1.0.0	Initial Version
P1x-C TCODE file for FLS		
Fls_PBcfg_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. QAC Warnings are Justified. 2. Added justification for qac warning Msg(2:0862) 3. FlsJobEndNotification, FlsJobErrorNotification, FlsEccSedNotification and FlsEccDedNotification, FlsWriteVerifyErrorInterface are updated
Fls_Hardware_c	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. QAC Warnings are justified. 2. FACI1 related code removed
Fls_Cbk_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Extern declaration for user error interface function is added. 2. Validation for FlsJobEndNotification, FlsJobErrorNotification, FlsEccSedNotification and FlsEccDedNotification, FlsWriteVerifyErrorInterface are updated
Fls_Cfg_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added macro FLS_AR_VERSION.

		<ol style="list-style-type: none"> 2. Comments for macros FLS_DF_POOL_SIZE, FLS_DF_TOTAL_SIZE and FLS_CPU_FREQUENCY_MHZ are improved. 3. Macro FLS_DF_TOTAL_BLOCKS generation is removed. 4. Macros FLS_WRITE_VERIFY, FLS_USE_WV_ERROR_INTERFACE are added. 5. Macro FACIFRTEINT is typecasted. 6. Validation for FlsJobEndNotification, FlsJobErrorNotification, FlsEccSedNotification and FlsEccDedNotification, FlsWriteVerifyErrorInterface are updated 7. Removed validation for parameter FLS_INTERRUPT_MODE 8. Macro FLS_DF_TOTAL_SIZE value calculation updated. 9. Removed Macro FACI_UNIT
Fls_Hardware_h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <p>FACI1 related code removed.</p>
Fls_Validate	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Validation for uniqueness of FlsCallCycle parameter across multi config set is added. 2. Validation for device 701371 is added. 3. Validation for uniqueness of FlsTimeOutCountValue parameter across multi config set is added. 4. Validation for FlsWriteVerify and FlsWriteVerifyErrorInterface are added. 5. Validation for FlsJobEndNotification, FlsJobErrorNotification, FlsEccSedNotification and FlsEccDedNotification, FlsWriteVerifyErrorInterface are updated 6. ERR-31 is added to validate 'FlsNumberOfSectors' parameter. 7. ERR-32 is added to validate 'FLS_E_REG_WRITE_VERIFY' parameter. 8. Validation for multiple configset added for FlsEccDedNotification, FlsEccSedNotification, FlsJobErrorNotification, FlsJobEndNotification, FlsNumberOfSectors, FlsSectorStartaddress. Also added validation for to check if the container FlsSector is added more than once in any

		<p>configset. For all these ERR_59_92_033 to ERR_59_92_037 were added.</p> <p>9. Validation for FlsSectorStartaddress within the range and multiple of 64 added.</p> <p>10. Code Flash related validations and FlsSectorIndex validation removed</p>
P1x-C FLS Common Sample Application Source file		
App_FLS_Common_Sample.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Sample script is updated for checking Fls_Suspend and Fls_Resume. 2. Updated data type for "TargetAddressPtr" in Fls_Read and Fls_ReadImmediate APIs. 3. Removed swith operation #if (FLS_INTERRUPT_MODE == STD_ON)
P1x-C FLS Common Sample Application Header file		
App_FLS_Common_Sample.h	1.0.0	No changes for release Ver4.02.00.D.
P1x-C Sample Application P1M-C Source file		
App_FLS_P1x-C_Sample.c	1.0.0	No changes for release Ver4.02.00.D.
P1x-C Sample Application P1M-C Header file		
App_FLS_Device_Sample.h	1.0.0	No changes for release Ver4.02.00.D.
P1x-C User Manual		
R20UT3641EJ0100-AUTOSAR.pdf	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. In chapter 4, section 4.2 Preconditions points are revised. 2. Table 4-2 is updated with Known Limitation in User Mode. 3. Table 4-1 is added to list protected resources in FLS driver. 4. Chapter 8 is updated with Stub files and Table 8-1 is updated. 5. In Chapter 6, Table 6-1 is updated with Register Files. 6. In chapter 13, added references for device 701371. 7. Chapter 12 and chapter 13.2 are updated with memory sections 8. In Chapter 4, section 4.3 Data Consistency is updated. 9. In Chapter 4.4 Deviation list updated. 10. Updated Chapter 13.2.3 added Throughput for main function and updated with Fls_BlankCheck, Fls_Suspend, Fls_Resume API details in chapter 4.1. 11. Updated Chapter 12 Memory Organization

		<p>12. Updated Chapter 6 with details of the register as per individual APIs.</p> <p>13. Chapter 13, Added Processor name along with Device variants.</p> <p>14. In section 4.5, Note added.</p> <p>15. In Chapter 12 memory organization updated and in chapter 13.2.1 memory usage updated.</p> <p>16. In chapter 4.1 General section updated with time timeout monitoring details and chapter 4.4 with timeout monitoring deviation details.</p>
R20UT3642EJ0100-AUTOSAR.pdf	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. INF_59_092_001 is added in section 9.3 2. Chapter 1, Updated Introduction. 3. Section 2.1, Updated reference document details. 4. Chapter 3, Updated the Heading Code Generation Overview with MCAL Code Generator overview 5. Chapter 5, Updated description of output files. 6. Chapter 6, Added one more point in precautions. 7. Section 8.1, Updated Pre-Compile Configurable Parameters 8. Section 8.2, Updated Post Build Time Configurable Parameters 9. Chapter 4, Updated description of Input files. 10. Removed chapter 9, MCAL Code Generator Tool 11. Removed Chapter 11 - Notes, 12. Replaced the words Tool, Generator Tool, FLS Driver Generator tool with MCAL Code Generator Tool in this document. 13. Chapter 3, Added remark for common MCAL Code Generator Tool user manual. 14. Updated Chapter 2, Chapter 3, Chapter 4 and Chapter 8 for maintaining consistency. 15. MCAL Code Generator Tool Overview to Code Generation Overview 16. Removed parameters from Figure 8-1, Configuration Overview 17. Removed Error Messages from chapter 9. 18. Added Error Messages in Chapter 9. 19. Removed parameters FlsInterruptConsistencyCheck and FlsFaciUnit from section 8.2

3.3 Fixed Issues

ID	Description
NA	Please refer to the fixed issues list as shared from Renesas Ref. P1xC_FixedIssues_Ver4.02.00.D.xlsx

3.4 Known Issues

ID	Description
NA	Please refer to the known issues list as shared from Renesas Ref. P1xC_OpenMarket_KnownIssues_CW09_2017.xlsx

4 MCU

4.1 Target Info

Processor	P1M-C - R7F701373, R7F701374
Module	MCU
Software Version	V1.1.0
Embedded User Manual	R20UT3651EJ0100-AUTOSAR.pdf – V1.0.2
Tool User Manual	R20UT3652EJ0100_AUTOSAR.pdf – V1.0.2
Date	28-Feb-2017

4.2 Release Items

Filename	Version	Change Description
P1xC - Parameter Definition files		
R403_MCU_P1X-C.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Changed the type of the parameters McuClmxMonitoringClockAccuracy and McuClmxSamplingClockAccuracy(x =0..3,5) from integer to float. 2. Added boolean parameter McuRamSectorSetting. 3. Maximum value of the parameter McuResetReason is changed to 255. 4. Support for Clock Monitor CLMA4 is added for P1H-C and P1H-CE devices. 5. 'McuInterruptConsistencyCheck' parameter is added in 'McuGeneral container and 'MCU_E_INT_INCONSISTENT' parameter is added 'McuDemEventParameterRefs' container. 6. Parameters 'McuWriteVerify', 'McuUseWriteVerifyErrorInterface', 'McuWriteVerifyErrorInterface' and 'MCU_E_REG_WRITE_VERIFY' are added. 7. Parameters McuClma0SelfDiagnosticTest, McuClma1SelfDiagnosticTest, McuClma2SelfDiagnosticTest, McuClma3SelfDiagnosticTest, McuClma4SelfDiagnosticTest are added in McuGeneralConfiguration container, parameter 'MCU_E_CLM_SELFDIAG_FAILURE' is added in 'McuDemEventParameterRefs' container and removed all

		<p>the references to CLMA5 clock monitor.</p> <p>8. Added parameter McuCvmSelfDiagnosticTest in McuGeneralConfiguration container and MCU_E_CVM_SELFDIAG_FAILURE in 'McuDemEventParameterRefs' container.</p> <p>9. Parameter McuEcmSelfDiagnosticTest is added in McuGeneralConfiguration container and MCU_E_ECM_SELFDIAG_FAILURE in 'McuDemEventParameterRefs' container.</p> <p>10. Updated the warranty disclaimer description.</p> <p>11. Parameter McuLockStepSelfDiagnosticTest is added in McuGeneralConfiguration container and MCU_E_LOCKSTEP_SELFDIAG_FAILURE in 'McuDemEventParameterRefs' container.</p> <p>12. Added parameters 'McuCvmDiagLockBit' and 'McuCvmResetEnable'.</p> <p>13. Parameter 'McuEcmInitialNotification' added in all ECM Error Source containers.</p> <p>14. Replaced the <UPPER-MULTIPLICITY> tag of the container McuResetReasonConf with <UPPER-MULTIPLICITY-INFINITE></p> <p>15. Parameter 'McuMainOsciFrequency' is updated as enumeration type with values 16Mhz, 20Mhz and 24Mhz.</p> <p>16. Description and default value for the parameter 'McuLoopCount' is updated.</p>
BSWMDT		
R403_MCU_P1x-C_BSWMDT.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Software minor version is updated. 2. IS-SYNCHRONOUS tag updated as false for ISR functions.
Source Code		
Mcu.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Updated the list of used registers in the function banner of API's. 2. Added pre-compile switch MCU_RAM_SECTOR_SETTING_CONFIGURED for Mcu_InitRamSection API and added Local and Global RAM Error Initializations in function Mcu_ConfigureEcmRamErrors(). 3. Added function call Mcu_ConfigureEcmRamErrors() in

		<p>Mcu_Init API when the parameter MCU_RAM_SECTOR_SETTING_CONFIGURED is configured as FALSE.</p> <ol style="list-style-type: none"> 4. Added CLMA4 for all device variant except P1M-C devices. 5. Added the inclusion of Mcu_RegWrite.h and Macro functions MCU_MASKED_CHECK_WRITE_VERIFY_INIT and MCU_MASKED_CHECK_WRITE_VERIFY_RUNTIME are implemented. 6. Updated the wake up condition check in Mcu_SetMode() API for Dem Error reporting. 7. Write access to IMRm register is done using RH850_SV_MODE_IMR macros to meet the requirement EAAR_PN0034_FR_0067 and also included "rh850_Types.h". 8. Added the API Mcu_ClmaSelfDiagnosticTest and removed all the references to CLMA5. 9. Added the API Mcu_CvmSelfDiagnosticTest, Mcu_CvmNormalModeSetting and Mcu_CvmSelfDiagnosticSetting. 10. Mcu_EcmResetReason API updated to add MCU_ECM_DELAY_TMR_OVF_RST. 11. Delay timer overflow control register DTMCTL is enabled in Mcu_Init(). 12. Added the API Mcu_LockStepSelfDiagnosticTest and 'Mcu_Init' API is updated to invoke Mcu_LockStepSelfDiagnosticTest. 13. Added function Mcu_ConfigureCvm and updated the switch case in Mcu_ResetReasonStore API for the addition of cases for Power on reset, Terminal reset and CVM reset. 14. Added the API 'Mcu_EcmErrorInitialNotification' and also 'Mcu_Init' API is updated to invoke Mcu_EcmErrorInitialNotification. 15. Added the UD IDs and requirements for achieving traceability. 16. Justifications added for QAC MISRA violations & QAC Warnings Msg(4:2880), Msg(4:0400), Msg(2:3204) Msg(3:3203), Msg(4:2995), Msg(2:2741), Msg(2:3206),
--	--	---

		<p>Msg(4:2992), Msg(4:2996) and Msg(0:2755).</p> <p>17. Added the APIs Mcu_ClearEcmErrorOutput, Mcu_EcmClearStatusRegister, Mcu_EcmSelfDiagnosticTest, Mcu_EcmPseudoErrorTest, Mcu_EcmZeroSelfTest and Mcu_EcmOneSelfTest.</p> <p>18. API Mcu_EcmReleaseErrorOutPin is added.</p> <p>19. Unreachable or bugs are pointed by added UT tags. eg : Start Tag MCU_UT_001 to Start Tag MCU_UT_008 and End with Tag MCU_UT_001 to End Tag MCU_UT_008 correspondingly.</p> <p>20. DTMCTL and ECMnEPCFG registers updated with MCU_PROTECTEDWRITE32BIT macros for protected writing.</p>
Mcu_Irq.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Delay timer overflow control register is enabled in MCU_FEINT_ISR and MCU_ECM_EIC_ISR. 2. Added the UD IDs and requirements for achieving traceability. 3. Justification added for QAC Warning Msg(0:2755) and Msg(2:2824). 4. Generated value 'MCU_NO_OF_ECM_INSTANCES' has been used to represent the total number of ECM instances to remove the ECM1 support for the P1M-C devices. 5. Unreachable code or bugs are pointed by adding UT tags. eg : Start Tag MCU_UT_004, Start Tag MCU_UT_009 and End with End Tag MCU_UT_004 and End Tag MCU_UT_009 correspondingly.
Mcu_Ram.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added the UD IDs and requirements for achieving traceability. 2. Global variable Mcu_GulTestCompValue is added to access CMPTST0 value from global ram. 3. Volatile declaration is added for Mcu_GblRAMInitStatus. 4. Memory section for boolean variable is clubbed into one section.
Mcu_Version.c	1.0.1	No changes for release Ver4.02.00.D.
Mcu.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added pre-compile switch MCU_RAM_SECTOR_SETTING_CONFIGURED for

		<p>Mcu_InitRamSection API.</p> <ol style="list-style-type: none"> Added memory mappings for functions. Added UD IDs for traceability improvement.
Mcu_Debug.h	1.0.0	No changes for release Ver4.02.00.D.
Mcu_Irq.h	1.0.1	No changes for release Ver4.02.00.D.
Mcu_PBTypes.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> The macro MCU_RAM_MASK0_VALUE and MCU_RAM_MASK1_VALUE are updated. Added CLMA4 support for all the supported device variants and added the macro GETPEID. Added structure Mcu_CLMASelfDiag and removed the CLMA5 clock monitoring elements from the Mcu_ClockSetting structure. Added CVM SelfDiagnosis Support, changed the value of MCU_CVM_FACTOR_CLEAR and added the macro MCU_CVM_UNMASKED_ERROR_CHECK. Macro MCU_NINETYTHREE is added. Macro MCU_ECM_DELAY_TIMER_START, MCU_ECM_DELAY_TIMER_STOP_STS is added. Macro MCU_LOCKSTEP_DUMMY_VALUE is added. Added macros MCU_BIST_TER_POF_RST, MCU_BIST_TER_RST, MCU_CVM_DIAG_LOCK_MASK, MCU_CVMDE_WV_MASK, MCU_BIST_CVM_RST and MCU_BIST_CVM_TER_RST. Structure Mcu_InitErrorNotification is added and Mcu_EcmSetting updated with ucEcmInitErrorCount. Added UD IDs for traceability improvement. Justification added for MISRA violation Msg(4:3458). Typecasting for macros MCU_ECM_DELAY_TIMER_STOP, MCU_ECM_DELAY_TIMER_START, MCU_ECM_DELAY_TIMER_STOP_STS, and MCU_ECM_STATIC_MODE is updated as 32 bit.
Mcu_Ram.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> Global variable Mcu_GulTestCompValue is added to access CMPTST0 value from global ram. Added UD IDs for traceability improvement. Volatile declaration is added for Mcu_GblRAMInitStatus. Memory section for boolean variable is clubbed into one

		section.
Mcu_Types.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Structure Mcu_ConfigType is updated with MCU_CLMA4_RST. 2. Added pointer to Mcu_CLMASelfDiagTest element in Mcu_ConfigType structure and removed MCU_CLMA5_RST from Mcu_ConfigType structure. 3. Structure Mcu_ConfigType is updated with ucCvmDiagMask. 4. MCU_ECM_DELAY_TMR_OVF_RST added on enumeration Mcu_ResetType. 5. Renamed the variable ulCvmIndicationReg to ucCvmIndicationReg and changed the type to uint8. 6. Updated the structure Mcu_ConfigType with pErrorInitNotification callback function. 7. Added UD IDs and Requirements for traceability improvement.
Mcu_Version.h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added UD IDs and Requirements for traceability improvement.
P1x-C TCODE file for MCU		
Mcu_PBcfg_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Included float values for the calculation of Clock Monitor values. 2. Added CLMA4 for all device variant except P1M-C device. 3. Added support for Mcu Interrupt Consistency Check. 4. Added support for Mcu Write Verify and added the inclusion of Cbk.h file. 5. Added support for CLMA Self Diagnosis Test and removed all the references of CLMA5 Clock Monitor. 6. Added support for CVM Self Diagnosis Test. 7. Added new structure Mcu_GstErrorInitNotification for ECM initial error notification. 8. Added support for parameters Mcu_CvmDiagLockBit, McuCvmResetEnable and removed the parameter McuCvmOutMaskDiag from the calculation of the CVMDEW Register value. 9. Parameter 'McuMainOsciFrequency' is updated as enumeration type with values 16Mhz, 20Mhz and 24Mhz.

Mcu_Hardware_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Structure tag is updated. 2. Structure element of Clma_BaseAddress (CLMA4) added for all device variant except P1M-C device. 3. Removed all the references to CLMA5.
Mcu_Cfg_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added pre-compile switch MCU_RAM_SECTOR_SETTING_CONFIGURED. 2. Added CLMA4 for all device variant except P1M-C device. 3. Added support for Mcu Interrupt Consistency Check. 4. Added support for Mcu Write Verify. 5. Added support for CLMA Self Diagnosis Test and removed all the references to CLMA5. 6. Added support for ECM Self Diagnosis. 7. Added support for CVM Self Diagnosis Test. 8. Added support for Compare Unit Start-up Self Diagnosis Test. 9. Added call back notification function for Initial ECM Errors. 10. Total no of ECM units for P1x-C devices is generated using the macro MCU_NO_OF_ECM_INSTANCES. 11. Generated parameter handler name for ModeSetting is updated. 12. Typecast for MCU_ECM_ERROUT_MODE is updated as 32 bit.
Mcu_Hardware_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Structure tag is updated. 2. Structure instance of Clma_BaseAddress(CLMA4) added for all device variant except P1M-C device. 3. Added support for CLMA Self Diagnosis Test. 4. Added support for CVM Self Diagnosis Test. 5. Added support for Compare Unit Start-up Self Diagnosis Test.
Mcu_Validate	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Validation is added for mandatory parameters. 2. Validation added for parameters McuExternalClock0 and McuExternalClock1 to verify if clock frequency exceeds 20MHz. 3. Mcu Interrupt Consistency Check parameter is added to

		<p>validate.</p> <ol style="list-style-type: none"> Added support for Mcu Write Verify. Added validation for the parameters McuEcmErrorMaskableInterrupt and McuEcmErrorNonMaskableInterrupt when the 'McuGetRamState' API is true and added validation for the boolean parameter McuRamSectorSetting. Added validation for CLMA Self Diagnosis Test and removed all the instances to CLMA5. Added validation for ECM Self Diagnosis Test Added validation for CVM Self Diagnosis Test. Error messages 066 and 067 added for the validation of Compare Unit Start-up Self Diagnosis Test. Added validation for parameters 'McuCvmDiagLockBit' and 'McuCvmResetEnable'. Parameter 'McuMainOsciFrequency' is updated as enumeration type, validation and error ID 029 is updated.
P1x-C Sample Application P1M-C Source file		
App_MCU_P1x-C_Sample.c	1.0.0	No changes for release Ver4.02.00.D.
P1x-C Sample Application P1M-C Header files		
App_MCU_Device_Sample.h	1.0.0	No changes for release Ver4.02.00.D
TargetMap.h	1.0.0	No changes for release Ver4.02.00.D
P1x-C User Manual		
R20UT3651EJ0100_AUTOSAR.pdf	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> Removed Section 13.1 "Compiler Linker and Assembler". Updated Section 4.4 to add note on User Mode. Chapter 6 "Register Details" is updated. Added critical section details table in section 4.3 Chapter 14 "Release Details" is updated. Chapter 8 is updated for Stub C Header files and added the description of the stub files in Table 8-1. Updated the Table 4-1 Supervisor Mode and User Mode Details. Updated Table 6-1 and Table 11-2 Section 4.6 register write verify has added. Chapter 5 Architecture Details is updated. Section 7.1 Services Provided by MCU driver component to user is updated. Section MCU driver generation tool has updated with Mcu_Cbk.h header file in chapter 8.

		<p>13. Section 13.2.1 is updated with 701371 series.</p> <p>14. Device name R7F701370A, R7F701371 and R7F701372, updated in chapter13.</p> <p>15. Section 4.1 updated with forethought on 'McuLoopCount' parameter.</p> <p>16. Os.c and SchM_Mcu.c are added in the stub files and their descriptions are included in Table 8-1</p> <p>17. Updated Table 4-1 Supervisor Mode and User Mode Details.</p> <p>18. Section 13.2.2 is updated with other device options.</p> <p>19. Section 4.1 updated with general thought regarding CLMA4 support.</p>
R20UT3652EJ0100_AUTOSAR.pdf	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. The type of the parameters McuClm0MonitoringClockAccuracy, McuClm1MonitoringClockAccuracy, McuClm2MonitoringClockAccuracy, McuClm3MonitoringClockAccuracy, McuClm0SamplingClockAccuracy, McuClm1SamplingClockAccuracy, McuClm2SamplingClockAccuracy and McuClm3SamplingClockAccuracy are changed from integer to float in section 8.1.1 2. In section 10.1, error messages ERR_59_101_017 to ERR_59_101_067 are added and ERR_59_101_029 is updated. 3. In section 8.1.1, parameters McuClm4MonitoringClockAccuracy, McuClm4SamplingClockAccuracy, McuInterruptConsistencyCheck, McuUseWriteVerifyErrorInterface, McuWriteVerifyErrorInterface, McuWriteVerify, Clma Self Diagnosis, McuCvmSelfDiagnosticTest, McuEcmSelfDiagnosticTest and McuLockStepSelfDiagnosticTest are added. 4. Updated section 8.1.2 post build configuration parameters. 5. Removed Translation XML File from Definition. 6. Updated Chapters 1,3,4,5,6,7 by rephrasing Tool and

		<p>MCU Driver Generation Tool with MCAL Code Generator Tool</p> <p>7. Removed Chapter 9 Generation Tool Options, Chapter-10 Notes.</p> <p>8. Updated Chapter 3 with a remark for common MCAL Code Generator Tool user manual</p> <p>9. Renamed the Chapter 3 heading as Code Generation Overview.</p> <p>10. Chapter-4 description rephrased and Flow chart in chapter 3 updated.</p> <p>11. Updated parameter McuMainOsciFrequency in table 8-2 as enumeration type.</p> <p>12. ERR_59_101_026 and ERR_59_101_027 are removed.</p>
--	--	---

4.3 Fixed Issues

ID	Description
NA	Please refer to the fixed issues list as shared from Renesas Ref. P1xC_FixedIssues_Ver4.02.00.D.xlsx

4.4 Known Issues

ID	Description
NA	Please refer to the known issues list as shared from Renesas Ref. P1xC_OpenMarket_KnownIssues_CW09_2017.xlsx

5 SPI

5.1 Target Info

Processor	P1M-C - R7F701373, R7F701374
Module	SPI
Software Version	V2.0.0
Embedded User Manual	R20UT3659EJ0100-AUTOSAR.pdf – V1.0.2
Tool User Manual	R20UT3660EJ0100-AUTOSAR.pdf – V1.0.2
Date	28-Feb-2017

5.2 Release Items

Filename	Version	Change Description
P1x-C - Parameter Definition files		
R403_SPI_P1X-C.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. New parameter SpiInternalErrorBufferSize is added in General container for internal error buffer size configuration as a part of FUSA implementation. 2. New parameters SpiLoopBackSelfTest,SpiECCSelfTest are added in General container and SPI_E_LOOPBACK_SELFTEST_FAILURE, SPI_E_ECC_SELFTEST_FAILURE are added in SpiDemEventParameterRefs container as a part of AR_PN0063_FSR_0202 and AR_PN0063_FSR_0209 implementation. 3. New parameter SpiInterruptConsistencyCheck is added in SpiGeneral container and SPI_E_INT_INCONSISTENT is added in SpiDemEventParameterRefs container as a part of EAAR_PN0034_FSR_0008 implementation. 4. New parameters SpiCSIHWriteVerify is added in SpiGeneral container and SPI_E_REG_WRITE_VERIFY is added in SpiDemEventParameterRefs container as a part of EAAR_PN0034_FSR_0002 implementation. 5. New parameter SpiDMAWriteVerify is added in SpiGeneral container as a part of EAAR_PN0034_FSR_0002 implementation. 6. New parameters Spi_UseWriteVerifyErrorInterface and SpiWriteVerifyErrorInterface are added in SpiGeneral container as a part of EAAR_PN0034_FSR_0003 and EAAR_PN0034_FSR_0004 implementation.

		<ol style="list-style-type: none"> 7. New parameters SpiClockFrequencyRef is added in SpiExternalDevice container as a part of AR_PN0063_FR_0009 implementation. 8. Descriptions of following parameters are updated- SpiBaudrate, SpiCsHoldTiming, SpiBroadcastingPriority, SpiMemoryModeSelection, SpiCsSelection, SpiJobEndNotification and SpiBaudrateRegisterSelect. 9. Updated Warranty Disclaimer description. 10. The description for parameter 'SpiTimeClk2Cs' as per Autosar SWS. 11. Updated the lower multiplicity of container 'SpiMemoryMode' to one. 12. Port pin values removed from parameter SpiPortPinSelect.
BSWMDT		
R403_SPI_P1x-C_BSWMDT.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. SW-MAJOR-VERSION is updated. 2. Missing entities are updated in BswCalledEntity and MODULE-ENTRY container. 3. <IMPLEMENTED-ENTRY-REF> tag updated for <BSW-SCHEDULABLE-ENTITY> of Spi_MainFunction_Handling. 4. Software Major version updated. 5. Removed exclusive area parameter 'SPI_CHIP_SELECT_PROTECTION'. 6. IS-SYNCHRONOUS tag updated as false for ISR functions.
Source Code		
Spi.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. All APIs are updated with changing/adding description and QAC messages. 2. New public APIs "Spi_GetErrorInfo" and "Spi_SelfTest" are added for internal Diagnosis. 3. Spi_MainFunction_Handling is updated to exit functionality if the driver is uninitialized. 4. MISRA violation START and END msgs for Msg(2:3204) is added at respective places. 5. Added NULL pointer check for Spi_GpConfigPtr->pStatusArray and Spi_GpConfigPtr->pStsValueArray in the function Spi_AsyncTransmit.

		<ol style="list-style-type: none"> 6. Added UD ID's 'SPI_ESDD_UD_xxx' and Requirements at respective places. 7. Unit testing activity, compilation warning removed in the Api Spi_Init, when level delivered is configured as zero and HW priority is enabled. 8. Software Major version updated. 9. Updated Spi_SelfTest API to perform the Spi_GddDriverStatus busy check even when DET is off. 10. Updated Spi_ReadIB API to put the accessing of Spi_GpConfigPtr->pChannelIBRead under correct pre-compile. 11. Copyright information updated. 12. Added untraced requirements.
Spi_Driver.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. All APIs are updated with changing/adding description and QAC messages. 2. As part of Write-verify implementation, added APIID as argument for the required functions. 3. The following new functions are created: Spi_StaticInit, Spi_LoopBackSelfTest, Spi_EccSelfTest, Spi_CsihStaticInit, Spi_CsihLoopBackSelfTest, Spi_EccAllZeroTest, Spi_EccAllOneTest, Spi_EccWalkOneTest, Spi_EccTwoBitTest, Spi_InitDetCheck, Spi_SeqJobChannelInit, Spi_InitiateSyncTransmit, Spi_SyncProcessData, Spi_GetCurrentRxData, Spi_SetEojAndCsriBits, Spi_SyncRegSettings, Spi_CsihTxDataAndErrorProcessing, Spi_GetCurrentRxData, Spi_CheckRegEmpty, Spi_CheckErrorInt, Spi_ReportErrorInSyncTx, Spi_StoreErrorInfo, Spi_AsyncDetCheck, Spi_AsyncInDirAccOrFifoMod, Spi_ProcessTransmission, Spi_ProcessChannelInFifoMod, Spi_ProcessChannelInDualOrTxMod, Spi_ProcessChannelInDirAccMod, Spi_AsyncChannelRegSettings, Spi_GetTxRegValue, Spi_FifoWriteData, Spi_CfgRegSettings, Spi_ProcessDirectAccessData, Spi_ProcessCsihData, Spi_ProcessExtendedData, Spi_ProcessFifoData, Spi_CheckAndInvokeTxIsr, Spi_CheckAndInvokeRxIsr,

		<p>Spi_ProcessDualBufferData, Spi_ReceiveCsihData, Spi_ProcesSeqInDualOrTxMod, Spi_ChkCancelReqForSeq and Spi_ReceiveChannelPropSame.</p> <ol style="list-style-type: none"> 4. Removed the functions 'Spi_HWActivateCS' and 'Spi_HWDeActivateCS' since these functions are used only for CSIG hardware. 5. Removed Deactivate chip select from DeInit since functionality is used only for CSIG hardware. 6. In Spi_CsihStaticInit API the parameter 'LpHWUnitInfo' and add new parameter 'LddHWUnit'. 7. Global variable 'Spi_GusDataAccess' has been split into variables 'Spi_GusSynDataAccess' and 'Spi_GusAsynDataAccess' for Synchronous and Asynchronous transmission respectively. 8. Updated register write verification implementation as per the proposed template. 9. RH850_SV_MODE_ICR_AND is added for 'pErrorIntCntlAddress' and 'pTxCancelIntCntlAddress' in Spi_HWDisableInterrupts function. 10. In order to update all CSIHnCFGx registers for all configured chip selects, do-while loop is added in function Spi_CsihStaticInit, Spi_CfgRegSettings and Spi_SeqJobChannelInit. 11. MISRA violation START and END Msgs for Msg(4:0715) is added at respective places. 12. Spi_HWInit and Spi_HWDeInit functions are updated. 13. Updated Spi_HWWriteIB to set memory mode as Tx only or Dual buffer in register CSIHnMCTL0 before writing into CSIHnTX0W and CSIHnMRWP0 to avoid setting of bits which are prohibited in other memory modes. 14. Added NULL pointer check for Spi_GpConfigPtr->pStatusArray and Spi_GpConfigPtr->pStsValueArray in Spi_TransmitCancelISR and Spi_ChkCancelReqForSeq functions. 15. Updated functions Spi_HWMainFunction_Handling and Spi_CheckAndInvokeTxIsr for direct access mode. 16. Removed DMA_TYPE_ONE related code implementation, since P1H-C supports DMA of DMA_TYPE_TWO only. 17. Invoked Spi_CheckErrorInt function after reception to
--	--	--

		<p>check for errors in Spi_GetCsihRxData function.</p> <p>18. Check is updated in functions Spi_ProcessCsihData and Spi_ProcessChannelInDirAccMod in such a way that bit CSIHnEOJ will be set only if bLEDLEnabled is SPI_FALSE.</p> <p>19. In API 'Spi_CsihStaticInit' is updated for CSRI bit is masked for FIFO Mode when number of buffers is greater than 128 and in API 'Spi_ProcessFifoData' is updated to reset PWR bit.</p> <p>20. Added UD ID's 'SPI_ESDD_UD_xxx' and Requirements at respective places.</p> <p>21. Spi_TxDmaConfig function has been updated.</p> <p>22. As part of Unit testing activity, Compilation warning removed in Spi_ProcessCsihData When 32 bit data width and High priority HW are enabled.</p> <p>23. As part of Unit testing activity, UT ID TAGs 'SPI_UT_xxx' are added for the uncovered parts of the code.</p> <p>24. In Spi_CsihStaticInit API the parameter 'LpHWUnitInfo' removed and added new parameter 'LddHWUnit'.</p> <p>25. In order to avoid QAC warning, updated API's - Spi_HWDeInit, Spi_ProcessCsihData and Spi_InitiateJobTx.</p> <p>26. In Spi_ReportErrorInSyncTx API error buffer updated with Hardware unit Index.</p> <p>27. In Spi_CsihStaticInit API 'SPI_SET_SLIT' masking updated.</p> <p>28. Updated Spi_ProcessChannelInFifoMod, Spi_DmaISR Spi_ProcessFifoData and Spi_TxDmaConfig functions for permitting more than 128 bytes of data when DMA is enabled in FIFO mode.</p> <p>29. Updated Spi_HWTransmitSyncJob and Spi_InitiateSyncTransmit APIs to update configuration register.</p> <p>30. Initialize the register CSIHnMCTL0 with configured memory mode in Spi_CsihStaticInit API.</p> <p>31. Added untraced requirements.</p>
Spi_Irq.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Interrupt consistency check is implemented. 2. MISRA warnings justified and placed START and END

		<p>Msg tags at respective places.</p> <ol style="list-style-type: none"> Added UD ID's 'SPI_ESDD_UD_xxx' and Requirements at respective places. Memory accessing for interrupt consistency is corrected in the Api SPI_CSIH1_TIR_ISR. Corrected the compilation issue in the Api SPI_DMA15_ISR. Type cast added for all interrupt consistency checking in all ISR Apis. Copyright information is updated.
Spi_Ram.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> Spi_GstCommErrorInfo and Spi_GucBufferIndex are added for internal Diagnosis implementation. Declaration of global variable 'Spi_GusDataAccess' has been split into variables 'Spi_GusSynDataAccess' and 'Spi_GusAsynDataAccess' for Synchronous and Asynchronous transmission respectively. START and END msgs for Msg(2:2022) and Msg(2:3211) are added at the respective places. New Global Variable 'Spi_GblCSRIMask' to check CSRI Mask Status of CSIH hardware units is added. Declarations of following variables were updated with volatile qualifier - Spi_GstFifoCurrentCommData, Spi_GstCommErrorInfo, Spi_GblQueueStatus, Spi_GaaHighPriorityCommRequest, Spi_GaaHighPriorityCommActive, Spi_GaaHighPriorityCommRequestAtIdle, Spi_GaaHighPrioritySequence, Spi_GddQueueIndex, Spi_GblInitiateJobTx, Spi_GucHwUnitStatus, Spi_GucBufferIndex, Spi_GusAllQueueSts, Spi_GusAsynDataAccess, Spi_GddDriverStatus, Spi_GucHWFifoBufferSts and Spi_GddDmaData. Updated memclass and memory sections for all the variables.
Spi_Scheduler.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> All the API's are adapted from P1x. In order to update status as 'SPI_JOB_QUEUED' of all jobs which are pushed in to job queue, updated Spi_PushWhenQueueNotEmpty and

		<p>Spi_PushRemainingJobsToQueue functions.</p> <ol style="list-style-type: none"> Fixed/Justified MISRA warnings. Added NULL pointer check for Spi_GpConfigPtr->pStatusArray and Spi_GpConfigPtr->pStsValueArray in Spi_ProcessCancelledSequence and Spi_ProcessCompletedSequence functions. Added UD ID's 'SPI_ESDD_UD_xxx' and Requirements at respective places. Unit testing activity UT ID TAGs 'SPI_UT_xxx' are added for the uncovered parts of the code. Copyright information updated. Added untraced requirements.
Spi_Version.c	1.0.1	No changes for release Ver4.02.00.D.
Spi.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> New public APIs "Spi_GetErrorInfo" and "Spi_SelfTest" are added for internal Diagnosis. For implementation of Self_Test functionality as User API, SPI_SELFTEST_SID, SPI_ALL_SELF_TEST, SPI_ECC_SELF_TEST and SPI_LOOP_BACK_SELF_TEST are added. Updated memory section declaration for Spi_GstConfiguration. Copyright information is updated.
Spi_Driver.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> As part of Write-verify implementation, added APIID as argument for the required functions. Extern function declaration for the following API's added : Spi_StaticInit, Spi_CsihStaticInit, Spi_LoopBackSelfTest, Spi_CsihLoopBackSelfTest, Spi_EccSelfTest, Spi_EccAllZeroTest, Spi_EccAllOneTest, Spi_EccWalkOneTest, Spi_EccTwoBitTest, Spi_InitDetCheck, Spi_SeqJobChannelInit, Spi_InitiateSyncTransmit, Spi_SyncProcessData, Spi_GetCurrentRxData, Spi_SetEojAndCsriBits, Spi_SyncRegSettings, Spi_CsihTxDataAndErrorProcessing, Spi_GetCurrentRxData, Spi_CheckRegEmpty, Spi_CheckErrorInt, Spi_ReportErrorInSyncTx,

		<p>Spi_StoreErrorInfo, Spi_AsyncDetCheck, Spi_AsyncInDirAccOrFifoMod, Spi_ProcessTransmission, Spi_ProcessChannelInFifoMod, Spi_ProcessChannelInDualOrTxMod, Spi_ProcessChannelInDirAccMod, Spi_AsyncChannelRegSettings, Spi_GetTxRegValue, Spi_FifoWriteData, Spi_CfgRegSettings, Spi_ProcessDirectAccessData, Spi_ProcessCsihData, Spi_ProcessExtendedData, Spi_ProcessFifoData, Spi_CheckAndInvokeTxIsr, Spi_CheckAndInvokeRxIsr, Spi_ProcessDualBufferData, Spi_ProcessSeqInDualOrTxMod, Spi_ChkCancelReqForSeq, Spi_ReceiveCsihData and Spi_ReceiveChannelPropSame</p> <p>3. Removed function declaration for Spi_ProcessChannel.</p> <p>4. Removed the function declarations for 'Spi_HWActivateCS' and 'Spi_HWDeActivateCS' since these functions are used only for CSIG hardware.</p> <p>5. In Spi_CsihStaticInit API the parameter 'LpHWUnitInfo' removed and added new parameter 'LddHWUnit'</p>
Spi_Irq.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Added macro 'SPI_EIC_EIMK_MASK' and IC register addresses were defined for all hardware units to implement interrupt consistency checks.</p> <p>2. Copyright information is updated.</p>
Spi_LTTypes.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Added SPI_IB_MODE Macro, structures and macros required for self test are added.</p> <p>2. New macro 'SPI_CSIH_CLR_STS_FLAGS' is added to access to the register CSIHnSTCR0.</p> <p>3. The macros 'SPI_LOOPBACK_ENABLE', 'SPI_LOOPBACK_CNTRL2_VALUE', 'SPI_LOOPBACK_CSIH_CNTRL2_VALUE', 'SPI_LOOPBACK_DLS_SETTING', 'SPI_LOOPBACK_CSIH_BRS0_VALUE', 'SPI_LOOPBACK_DATA', 'SPI_LOOPBACK_ERROR' are added for self test functionality.</p> <p>4. New macro SPI_OVE_ERR_CLR, SPI_PE_ERR_CLR, SPI_OFE_ERR_CLR, SPI_DCE_ERR_CLR added to clear the status bit.</p>

		<ol style="list-style-type: none"> 5. Added new element 'pEccBaseAddress' in the structure STag_Spi_HWUnitInfo. 6. Added usBufferCount to the Spi_FifoCurrentCommData. 7. Added macros SPI_CTL_32BIT_REG_VAL, SPI_CTL_16BIT_REG_DEINIT, SPI_CTL_8BIT_REG_MASK, SPI_CTL2_16BIT_REG_DEINIT, SPI_MCTL0_16BIT_REG_DEINIT, SPI_DMA_DEINIT. 8. To avoid QAC warning macros were updated with size extension. 9. Macros SPI_DMA_HARDWARE_TRIGGER and SPI_DMA_DRS_MLE_MASK were added. 10. Changed the memory section declaration for Spi_GaaJobResult and Spi_GaaSeqResult from SPI_START_SEC_VAR_NO_INIT_8 to SPI_START_SEC_VAR_NO_INIT_UNSPECIFIED. 11. Copyright information is updated.
Spi_PBTypes.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Created STag_Spi_DataFlag and STag_Spi_JobDetails structure. 2. Since P1H-C supports DMA of DMA_TYPE_TWO only, so Removed structure related to DMA_TYPE_ONE. 3. Critical section protection Macro added. 4. Added the parameter blCSRIMasked to Spi_GstJobConfig structure. 5. Updated the memory sections of following global arrays - Spi_GaaSeqStatusBitArray, Spi_GaaChannelIBWrite and Spi_GaaChannelIBRead.
Spi_Ram.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Spi_GstCommErrorInfo and Spi_GucBufferIndex are added for internal Diagnosis implementation. 2. Extern declaration of global variable 'Spi_GusDataAccess' has been split into variables 'Spi_GusSynDataAccess' and 'Spi_GusAsynDataAccess' for Synchronous and Asynchronous transmission respectively. 3. Extern declaration for new Global Variable 'Spi_GblCSRIMask' to check CSRI Mask Status of CSIH hardware units is added. 4. Extern declarations of following variables were updated with volatile qualifier - Spi_GstFifoCurrentCommData,

		<p>Spi_GstCommErrorInfo, Spi_GblQueueStatus, Spi_GaaHighPriorityCommRequest, Spi_GaaHighPriorityCommActive, Spi_GaaHighPriorityCommRequestAtIdle, Spi_GaaHighPrioritySequence, Spi_GddQueueIndex, Spi_GblInitiateJobTx, Spi_GucHwUnitStatus, Spi_GucBufferIndex, Spi_GusAllQueueSts, Spi_GusAsynDataAccess, Spi_GddDriverStatus, Spi_GucHWFifoBufferSts and Spi_GddDmaData.</p> <p>5. Updated memclass and memory sections for all the variables.</p>
Spi_Scheduler.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>Function declaration added for Spi_PushRemainingJobsToQueue, Spi_ProcessCancelledSequence, Spi_ProcessCompletedSequence, Spi_PushInterruptableSeqJobs and Spi_PopRemainingJobs functions.</p>
Spi_Types.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. As part of Write-verify user interface implementation, updated the macros for calling the error notification function when SPI_USE_WV_ERROR_INTERFACE is ON and also added macros for writing in to status clear registers. 2. Structures and macros required for self-test are added. 3. Created macros SPI_TX and SPI_RX. Added macro definitions, used as an offset value to perform the interrupt consistency checks. 4. Created file Spi_RegWrite.h to move all the macros related to register write functionality. 5. Added the macros SPI_TX_ONLY_MODE_SET, SPI_DUAL_BUFFER_MODE_SET, SPI_CHECK_BUFFER_MODE. 6. Macro 'SPI_ONE_TWENTY_EIGHT' is added for 128. 7. Following new enum tags were added - Spi_JobResultType and Spi_SeqResultType.
Spi_RegWrite.h	1.0.0	Initial Version
Spi_Version.h	1.0.1	No changes for release Ver4.02.00.D.
P1x-C TCODE file for SPI		

Spi_Lcfg_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Condition for generating element 'pEccBaseAddress' in 'Spi_GstHWUnitInfo' structure is updated. 2. QAC Warning section is updated and START and END tag for Msg(2:3211), Msg(2:3132) and Msg(2:3674) are added at respective places. 3. Software Major version updated. 4. Path dependency of job is removed for the checking of 'blIsSynchronous' in structure 'Spi_GstHWUnitInfo'. 5. Changed the memory section declaration for Spi_GaaJobResult and Spi_GaaSeqResult from SPI_START_SEC_VAR_NO_INIT_8 to SPI_START_SEC_VAR_NO_INIT_UNSPECIFIED.
Spi_PBcfg_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. QAC Warning section is updated and START and END tag for Msg(2:3211), Msg(2:3132) and Msg(2:3674) are added at respective places. 2. Check added for non mandatory parameters generation - SpiJobEndNotification in Spi_GstJobConfig array generation and SpiSeqEndNotification in Spi_GstSeqConfig array generation. 3. Software Major version updated. 4. Information messages INFO_59_83_002 and INFO_59_83_003 were added. 5. Updated the check for the generation of array 'Spi_GaaSeqStatusBitArray'. 6. Generation handling of 'blHWUnitDmaMode' in structure 'Spi_GstJobConfig' updated. 7. Short name dependency for 'SpiChannel', 'SpiExternalDevice' and 'SpiJob' were corrected. 8. Generation handling of 'ddBufferIndex' in structure 'Spi_GstChannelConfig' updated. 9. Added the generation handling of parameter 'blCSRIMasked' in 'Spi_GstJobConfig' structure. 10. Updated the generation handling of parameter 'ulMainCtl1Value' in 'Spi_GstJobConfig' structure. 11. Updated the memory sections of following global arrays - Spi_GaaSeqStatusBitArray, Spi_GaaChannelIBWrite and Spi_GaaChannelIBRead.

		<p>12. Update the generation handling of parameter 'aaChipSelect' in 'Spi_GstConfiguration' structure.</p> <p>13. Updated the generation handling of parameter 'ucChannelBufferType' in 'Spi_GstChannelConfig' structure.</p>
Spi_Hardware_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Structure tag for Ecc_BaseAddress is added. 2. QAC Warning START and END Msgs for Msg(2:3211) is added at respective places.
Spi_Cbk_h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. As part of Write-verify user interface implementation, updated the template to add the generation of SPI_WV_ERROR_NOTIFICATION and added Dem.h header file. 2. Check added for following non mandatory parameters generation - SpiJobEndNotification, SpiSeqEndNotification and SpiWriteVerifyErrorInterface. 3. Check updated for following parameters generation- SpiSeqStartNotification and SpiSeqEndNotification. 4. Software major version updated.
Spi_Cfg_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. As part of Write-verify user interface implementation, following pre compiler macros and error notifications are added: SPI_WRITE_VERIFY, SPI_DMA_WRITE_VERIFY, SPI_USE_WV_ERROR_INTERFACE, SPI_E_REG_WRITE_VERIFY and SPI_ERROR_NOTIFICATION 2. As part of implementation of the Self_Test functionality, following pre compiler macros and error notifications are added: SPI_LOOPBACK_SELFTEST, SPI_ECC_SELFTEST, SPI_SELF_TEST_API, SPI_E_LOOPBACK_SELFTEST_FAILURE and SPI_E_ECC_SELFTEST_FAILURE 3. Pre compiler macro 'SPI_INTERRUPT_CONSISTENCY_CHECK' and DEM error 'SPI_E_INT_INCONSISTENT' is added to implement interrupt consistency checks. 4. EIC register addresses are defined for all hardware units to

		<p>implement interrupt consistency checks.</p> <ol style="list-style-type: none"> Updated the macro name SPI_WRITE_VERIFY to SPI_CSIH_WRITE_VERIFY and renamed the parameters SpiWriteVerify and SpiDmaWriteVerify to SpiCSIHWriteVerify and SpiDMAWriteVerify respectively. Check added for following non mandatory parameters generation - SpiInternalErrorBufferSize, Spi_UseWriteVerifyErrorInterface and SpiWriteVerifyErrorInterface. Conditional check for the macro generation 'SPI_INTERNAL_RW_BUFFERS' updated. Handling of 'CSIH interrupt switches' updated. The generation of Tx channel DMA ISR disabled.
Spi_Hardware_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>Global variable declaration for structure tag Ecc_BaseAddress is added.</p>
Spi_Validate	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> Validation added for repeated Jobs configured same sequence in Dual Buffer / Tx Only Mode with error message ERR_59_83_065. Validation added for Jobs configured same sequence as Dual Buffer / Tx Only Mode are have same SpiHwUnit with error message ERR_59_83_066. Validation added for number of Jobs configured same hardware unit as Dual Buffer / Tx Only Mode are exceeded with error message ERR_59_83_067 and ERR_59_83_068. Validation added for Channel width configured for any channel not with in the permitted range with error message ERR_59_83_069. Validation added for Hardware units configured in DMA container are repeated with error message ERR_59_83_081. Validation added for Hardware units configured in DMA container are configured for at least one job with error message ERR_59_83_070. Validation added for following parameter are configured same number in multiple configsets: Sequences, Jobs, Channels, External Devices and DMA with error message ERR_59_83_072, ERR_59_83_073, ERR_59_83_007, ERR_59_83_074 and ERR_59_83_082.

		<p>8. Validation added for following parameter are configured same value in multiple configsets: SpiChannelType in container SpiChannel and SpiHWUnit in container SpiExternalDevices with error message ERR_59_83_006, and ERR_59_83_075.</p> <p>9. Validation added for values of following parameter are configured are according to C syntax – SpiSeqStartNotification, SpiSeqEndNotification and SpiJobEndNotification with error message ERR_59_83_024, and ERR_59_83_076.</p> <p>10. Validation added for SpiSeqEndNotification in Synchronous Jobif SpiSyncSeqEndNotificationEnable is Disabled with error message ERR_59_83_077.</p> <p>11. Validation added for SpiSeqStartNotification, SpiSeqEndNotification and SpiJobEndNotification are unique with error messages ERR_59_83_083, ERR_59_83_079 and ERR_59_83_077.</p> <p>12. Validation added for Spi_UseWVErrorInterface and SpiWVErrorNotification with error messages ERR_59_83_084 and ERR_59_83_085.</p> <p>13. Validation added for SpiClockFrequencyRef is configured and has correct value with error messages ERR_59_83_086 and ERR_59_83_087.</p> <p>14. Validation added for SpiLoopBackSelfTest and SPI_E_LOOPBACK_SELFTEST_FAILUR is configured and has correct value with error messages ERR_59_83_088 and ERR_59_83_089.</p> <p>15. Validation added for SpiECCSelfTest and SPI_E_ECC_SELFTEST_FAILURE is configured and has correct value with error messages ERR_59_83_090 and ERR_59_83_091.</p> <p>16. Validation added for SpiInterruptConsistencyCheck and SPI_E_INT_INCONSISTENT is configured and has correct value with error messages ERR_59_83_092 and ERR_59_83_093.</p> <p>17. Validation added for SpiCSIHWriteVerify, SpiDMAWriteVerify and SPI_E_REG_WRITE_VERIFY is configured and has correct value with error messages ERR_59_83_094 and ERR_59_83_095.</p> <p>18. Validation added for repeated dem path configured in</p>
--	--	---

		<p>container SpiDemEventParameterRefswith error messages ERR_59_83_096.</p> <p>19. Write verify parameter updated as SpiCSIHWriteVerify, SpiDMAWriteVerify, SpiWriteVerifyErrorInterface and Spi_UseWriteVerifyErrorInterface.</p> <p>20. Validation for HW property check added with error message ERR_59_83_097.</p> <p>21. Validation for DMA check in Level delivered added with error message ERR_59_83_106.</p> <p>22. Validation for mandatory parameter added with error message ERR_59_83_004.</p> <p>23. Validation for device check added with error message ERR_59_83_104.</p> <p>24. To implement AR_PN0063_FSR_0213 updated with error messages ERR_59_83_098.</p> <p>25. To implement INFO_59_83_002 message, new macro 'Power' added to calculate power of number.</p> <p>26. Short name dependency for "SpiChannel", "SpiExternalDevice" and "SpiJob" were corrected.</p> <p>27. Validation added for baud rate calculations with error messages ERR_59_83_107, ERR_59_83_108 and ERR_59_83_109.</p> <p>28. Validation for 'SpiLevelDelivered' and 'SpiHwUnitSynchronous' added with error message ERR_59_83_110.</p> <p>29. Validation for CSL pin selection added with error message ERR_59_83_111.</p> <p>30. Removed the error message ERR_59_83_005.</p> <p>31. Copyright information is updated</p>
P1x-C SPI Common Sample Application Source file		
App_SPI_Common_Sample.c	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <p>Global buffer size updated.</p>
P1x-C SPI Common Sample Application Header file		
App_SPI_Common_Sample.h	1.0.1	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Removed the macro 'SPI_CSIH0' 2. Copyright information updated.
P1x-C Sample Application P1M-C Source file		
App_SPI_P1x-C_Sample.c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Copyright information updated

P1x-C Sample Application P1M-C Header file		
App_SPI_Device_Sample.h	1.0.1	Following changes are made in Ver4.02.00.D:- 1. Updated macro details.
TargetMap.h	1.0.0	No changes for release Ver4.02.00.D.
P1x-C User Manual		
R20UT3659EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Removed Section 13.2, Compiler, Linker and Assembler. 2. In section 4.3, Note about entries for User mode dependency of Critical Section added. 3. In section 4.5, Critical section details are updated by adding Table 4-6. 4. In section 4.1, Note added regarding the DMA access for local RAM area. 5. In section 12, Memory Organization is updated by adding information about SPI_START_SEC_CODE_FAST. 6. Section 6, Register access details are updated. 7. Updated section 13.2.1 Sample Application Structure to add details about Spi_GetErrorInfo API. 8. Added Spi_GetErrorInfo API in section 11.1 under Related API(s) corresponding to the error SPI_E_UNINIT. 9. Section 3 updated R number in remarks. 10. Folder Structure updated in the section 3.1.1. 11. Table 4-4 User mode and Supervisory mode is updated. 12. Section 8 updated for file information. 13. Section 9 updated for R number. 14. Table 10-1 updated with API name. 15. Memory, Throughput and stack depth Details are updated in section 13.3. 16. Release details updated in section 14. 17. Chapter 13, Added Processor name along with Device variants. 18. Figure 12-1 SPI Driver Component Driver Organization has been updated in Chapter 12. 19. Removed traces of .one and .html from the section 13.2 Sample Application.
R20UT3660EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Introduction updated in section 1. 2. Updated Chapters 1,3,4,5,6,7 by rephrasing Tool and SPI Driver Generation Tool with MCAL Code Generator Tool 3. Precaution and remark updated in section 6.

		<p>4. User Configuration Validation information updated in section 7.</p> <p>5. Notes updated in section 11.</p> <p>6. Remarks added in section 3.</p> <p>7. Table header name updated in Table 8.1 and Table 8.2.</p> <p>8. Removed Section 9.1 Common Messages.</p> <p>9. Error messages and information messages updated in the section 9.1 and 9.3.</p> <p>10. Removed Chapter 9 SPI Driver Generation Tool Options, Chapter-11 Notes.</p> <p>11. Chapter 3, Added remark for common MCAL Code Generator Tool user manual.</p> <p>12. Chapter 3, Updated Figure 3-2 Flowchart of MCAL Code Generator Tool.</p> <p>13. Chapter 3, Renamed chapter name MCAL Code Generator Tool Overview to Code Generation Overview.</p> <p>14. Removed parameters from Figure 8-1, Configuration Overview.</p>
--	--	---

5.3 Fixed Issues

ID	Description
NA	<p>Please refer to the fixed issues list as shared from Renesas</p> <p>Ref. P1xC_FixedIssues_Ver4.02.00.D.xlsx</p>

5.4 Known Issues

ID	Description
NA	<p>Please refer to the known issues list as shared from Renesas</p> <p>Ref. P1xC_OpenMarket_KnownIssues_CW09_2017.xlsx</p>

6 WDG

6.1 Target Info

Processor	P1M-C - R7F701373, R7F701374
Module	WDG
Software Version	V1.0.2
Embedded User Manual	R20UT3661EJ0100-AUTOSAR.pdf – V1.0.2
Tool User Manual	R20UT3662EJ0100-AUTOSAR.pdf – V1.0.2
Date	28-Feb-2017

6.2 Release Items

Filename	Version	Change Description
P1x-C - Parameter Definition files		
R403_WDG_DriverA_P1X-C.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added parameters WdgInterruptConsistencyCheck, WdgUseWriteVerifyErrorInterface, WdgWriteVerifyErrorInterface and WdgWriteVerify. 2. Added WdgExternalConfiguration container. 3. Removed the parameters WdgRegReadBackEnable and WDG_E_READBACK_FAILURE. 4. WdgClkSettingsSlow and WdgClkSettingsFast value name and description are made in-line with the device user manual.
R403_WDG_DriverB_P1X-C.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Added parameters WdgInterruptConsistencyCheck, WdgUseWriteVerifyErrorInterface, WdgWriteVerifyErrorInterface and WdgWriteVerify. 2. Added WdgExternalConfiguration container. 3. Removed the parameters WdgRegReadBackEnable and WDG_E_READBACK_FAILURE. 4. WdgClkSettingsSlow and WdgClkSettingsFast value name and description are made in-line with the device user manual.
BSWMDT		
R403_WDG_P1x-C_BSWMDT.arxml	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. Software patch version is updated.
Source Code		
Wdg_59_DriverA.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. File adapted from P1x.

		<ol style="list-style-type: none"> 2. Comments added for traceability. 3. QAC and MISRA warnings are fixed/Justified. 4. usSlowTimeValue, usFastTimeValue, DefaultTimeValue and Wdg_59_DriverA_GusTiggerCounter are changed to ulSlowTimeValue, ulFastTimeValue, ulDefaultTimeValue and Wdg_59_DriverA_GulTiggerCounter respectively. 5. QAC warning tag corrected.
Wdg_59_DriverA_Irq.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. File adapted from P1x. 2. Comments added for traceability. 3. QAC and MISRA warnings fixed/Justified. 4. Wdg_59_DriverA_GusTiggerCounter is changed to uint32. 5. Added MISRA warning description and changed compiler switch condition check format.
Wdg_59_DriverA_Private.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. File adapted from P1x. 2. Comments added for traceability. 3. QAC and MISRA warnings fixed/Justified. 4. Changed compiler switch condition check format.
Wdg_59_DriverA_Ram.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. File adapted from P1x. 2. Comments added for traceability. 3. QAC and MISRA warnings fixed/Justified. 4. Variable Wdg_59_DriverA_GusTiggerCounter and Wdg_59_DriverA_GddDriverState are declared volatile. 5. Wdg_59_DriverA_GusTiggerCounter is changed to uint32.
Wdg_59_DriverA_Version.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. File adapted from P1x. 2. QAC and MISRA warnings fixed/Justified.
Wdg_59_DriverB.c	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 1. File adapted from P1x. 2. Comments added for traceability. 3. QAC and MISRA warnings fixed/Justified. 4. usSlowTimeValue, usFastTimeValue,DefaultTimeValue and Wdg_59_DriverB_GusTiggerCounter are changed to ulSlowTimeValue,ulFastTimeValue,DefaultTimeValue and Wdg_59_DriverB_GulTiggerCounter respectively. 5. QAC warning tag corrected.

Wdg_59_DriverB_Irq.c	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. Comments added for traceability. 3. QAC and MISRA warnings fixed/Justified. 4. Wdg_59_DriverB_GusTiggerCounter is changed to uint32. 5. Added MISRA warning description and changed compiler switch condition check format.
Wdg_59_DriverB_Private.c	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. Comments added for traceability. 3. QAC and MISRA warnings fixed/Justified. 4. Changed compiler switch condition check format.
Wdg_59_DriverB_Ram.c	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. QAC and MISRA warnings fixed/Justified. 3. Variable Wdg_59_DriverB_GusTiggerCounter and Wdg_59_DriverB_GddDriverState are declared volatile. 4. Wdg_59_DriverB_GusTiggerCounter is changed to uint32.
Wdg_59_DriverB_Version.c	2.0.0	Following changes are made in Ver4.02.00.D:- 1. Comments added for traceability. 2. QAC warnings Justified.
Wdg_59_DriverA.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. Comments added for traceability. 3. Protected all the macros defined by appending U, UL accordingly.
Wdg_59_DriverA_Debug.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. Comments added for traceability.
Wdg_59_DriverA_Irq.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. Comments added for traceability.
Wdg_59_DriverA_PBTypes.h	2.0.0	Following changes are made in Ver4.02.00.D:- 1. File adapted from P1x. 2. Comments added for traceability. 3. Critical memory section macros are added. 4. Macro WDG_59_DRIVER_A_DBTOC_VALUE updated to avoid QAC warning. 5. QAC and MISRA warnings fixed/Justified. 6. Macro value WDG_59_DRIVER_A_COUNTER_ZERO

		<p>changed to UL.</p> <p>7. Protected all the macros defined by appending U, UL accordingly.</p>
Wdg_59_DriverA_Private.h	2.0.0	<p>Following change is made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p>
Wdg_59_DriverA_Ram.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Variable Wdg_59_DriverA_GusTiggerCounter and Wdg_59_DriverA_GddDriverState declared volatile.</p> <p>2. Variable Wdg_59_DriverA_GusTiggerCounter is changed to Wdg_59_DriverA_GulTiggerCounter.</p>
Wdg_59_DriverA_RegWrite.h	1.0.0	Initial Version.
Wdg_59_DriverA_Types.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p> <p>3. Type of SlowTimeValue, FastTimeValue, InitTimerCountValue, DefaultTimeValue are changed to uint32.</p>
Wdg_59_DriverA_Version.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p>
Wdg_59_DriverB.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p> <p>3. Protected all the macros defined by appending U, UL accordingly.</p>
Wdg_59_DriverB_Debug.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p>
Wdg_59_DriverB_Irq.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p>
Wdg_59_DriverB_PBTypes.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p> <p>3. Critical memory section macros are added.</p> <p>4. Macro WDG_59_DRIVERB_DBTOC_VALUE updated to avoid QAC warning.</p> <p>5. QAC and MISRA warnings fixed/Justified.</p> <p>6. Macro value WDG_59_DRIVERB_COUNTER_ZERO</p>

		<p>changed to UL.</p> <p>7. Protected all the macros defined by appending U, UL accordingly.</p>
Wdg_59_DriverB_Private.h	2.0.0	<p>Following change is made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p>
Wdg_59_DriverB_Ram.h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Variable Wdg_59_DriverB_GusTiggerCounter and Wdg_59_DriverB_GddDriverState declared volatile.</p> <p>2. Variable Wdg_59_DriverB_GusTiggerCounter is changed to Wdg_59_DriverB_GulTiggerCounter.</p>
Wdg_59_DriverB_RegWrite.h	1.0.0	Initial Version.
Wdg_59_DriverB_Types.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p> <p>3. Type of SlowTimeValue, FastTimeValue, InitTimerCountValue, DefaultTimeValue are changed to uint32.</p>
Wdg_59_DriverB_Version.h	2.0.0	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. File adapted from P1x.</p> <p>2. Comments added for traceability.</p>
P1x-C TCODE file for WDG		
Wdg_Hardware_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Typedef declarations for structure is followed as per the coding guidelines.</p>
Wdg_PBcfg_c	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Precision of time value has been updated with values to be in microseconds for better accuracy.</p> <p>2. Memory section in the global data has been changed from SEC_DBTOC_DATA_UNSPECIFIED to SEC_CONFIG_DATA_UNSPECIFIED.</p> <p>3. Updated WdgClkSettingsFast/Slow parameters value extraction in accordance with the new naming convention.</p> <p>4. Type of InitTimerCountValue, DefaultTimeValue and SlowTimeValue is changed to uint32.</p>
Wdg_Cfg_h	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <p>1. Replaced the Register ReadBack with WDG Write Verify.</p> <p>2. Added the macro WDG_USE_WV_ERROR_INTERFACE, WDG_E_REG_WRITE_VERIFY and WDG_E_INT_INCONSISTENT.</p>

		3. WDG_59_\$(PaName)_E_MODE_FAILED_REPORTING and WDG_59_\$(PaName)_E_DISABLE_REJECTED_REPOR TING are added for reporting DEM Errors.
Wdg_Hardware_h	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Typedef declarations for structure is followed as per the coding guidelines.
Wdg_Cbk_h	1.0.0	Initial Version.
Wdg_Validate	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Added Reference Parameter Check for WDG_E_MODE_FAILED, and validation of WdgWriteVerify. 2. Added ERR_59_102_041 for the Parameter WDG_E_INT_INCONSISTENT.
P1x-C WDG Common Sample Application Source file		
App_WDG_Common_Sample.c	1.0.0	No changes for release Ver4.02.00.D.
P1x-C WDG Common Sample Application Header file		
App_WDG_Common_Sample.h	1.0.0	No changes for release Ver4.02.00.D.
P1x-C Sample Application P1M-C Source file		
App_WDG_P1x-C_Sample.c	1.0.0	No changes for release Ver4.02.00.D.
P1x-C Sample Application P1M-C Header file		
App_WDG_Device_Sample.h	1.0.0	No changes for release Ver4.02.00.D.
TargetMap.h	1.0.0	No changes for release Ver4.02.00.D.
P1x-C User Manual		
R20UT3661EJ0100-AUTOSAR.pdf	1.0.2	Following changes are made in Ver4.02.00.D:- 1. Section 13.2.4 Precautions is added. 2. Chapter 8 stub C header file is replaced with the port specific C header files and added the stub files. 3. Added a 'Note' and updated the table 'Supervisor mode And User mode' details. 4. Section 13.2.1, naming convention of WdgClkSettingsFast and WdgClkSettingsSlow values are changed. 5. Section 13.2 Memory and Throughput updated. 6. R-number updated for the document. 7. Device name updated. 8. Section 13.1 Compiler, Linker and Assembler removed. 9. Updated Section 4.3 for Critical section details and added table WDG Driver Protected Resources List.

		<p>10. Reference for .one and .html are removed.</p> <p>11. In Section 4.7 updated Note to Note2 and added Note1.</p> <p>12. Added new errors in Table 11-2 DEM Errors Of WDG Driver Component and added Notes to Table 11-2 and Table 11-1.</p> <p>13. Updated Section 8 with a Note.</p> <p>14. Updated Content of Section 13.2.4.</p>
R20UT3662EJ0100-AUTOSAR.pdf	1.0.2	<p>Following changes are made in Ver4.02.00.D:-</p> <ol style="list-style-type: none"> 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.
--	--	--

6.3 Fixed Issues

ID	Description
NA	Please refer to the fixed issues list as shared from Renesas Ref. P1xC_FixedIssues_Ver4.02.00.D.xlsx

6.4 Known Issues

ID	Description
NA	Please refer to the known issues list as shared from Renesas Ref. P1xC_OpenMarket_KnownIssues_CW09_2017.xlsx