Product -me	XMC Libraries (XMC Lib)
Release Version	V2.1.2
Type Of Release*	Productive
-me of the Supplier	Infineon Technologies AG
Mode of Release	Infineon Server(http://dave.infineon.com/)
Date of Release	30.10.2015
Previous Version	V2.0.0

Contents

* All types of releases -med as Alpha, Beta, Release Candidate and Patch are not intended to be used for production code.

1 Released Items

1.1 XMC Libraries (XMC Lib)

This XMC Lib package contains the following **30** peripheral drivers which supports XMC4000 and XMC1000 family microcontrollers.

No	XMC Libs	XMC48	XMC47	XMC45	XMC44	XMC42	XMC41	XMC14	XMC13	XMC12	XMC11
1	ACMP	-	-	-	-	-	-	✓	✓	✓	-
2	BCCU	-	-	-	-	-	-	✓	✓	✓	-
3	CAN	✓	✓	✓	✓	✓	✓	✓	-	-	-
4	CCU4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	CCU8	✓	✓	✓	✓	✓	✓	✓	✓	-	-
6	DAC	✓	✓	✓	✓	✓	✓	-	-	-	-
7	DMA	✓	✓	✓	✓	✓	✓	-	-	-	-
8	DSD	✓	✓	✓	✓	✓	✓	-	-	-	-
9	EBU	✓	✓	✓	-	-	-	-	-	-	-
10	ERU	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	ETH	✓	✓	✓	✓	✓	✓	-	-	-	-
12	FCE	✓	✓	✓	✓	✓	✓	-	-	-	-
13	FLASH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	GPIO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
15	HRPWM	-	-	-	✓	✓	✓	-	-	-	-
16	I2C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
17	I2S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
18	LEDTS	✓	✓	✓	✓	✓	✓	✓	-	✓	-
19	MATH	-	-	-	-	-	-	✓	✓	-	-
20	PAU	-	-	-	-	-	-	✓	✓	✓	✓
21	POSIF	✓	✓	✓	✓	✓	✓	✓	✓	-	-
22	PRNG	-	-	-	-	-	-	✓	✓	✓	✓
23	RTC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24	SCU	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25	SDMMC	✓	✓	✓	-	-	-	-	-	-	-
26	SPI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27	UART	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28	USBD	✓	✓	✓	✓	✓	✓	-	-	-	-

29	VADC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30	WDT	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

1.2 XMC Lib - Test conditions

- Libraries for the XMC4500 series are verified on all supported derivatives; fully functio-l test is applied with XMC4500-F144x1024.
- Libraries for the XMC4400 series are verified on all supported derivatives; fully functio-l test is applied with XMC4400-F100x512.
- Libraries for the XMC4200 series are verified on all supported derivatives; fully functio-l test is applied with XMC4200-Q48x256.
- Libraries for the XMC1100 series are verified on all supported derivatives; fully functio-l test is applied with XMC1100-T038F0064.
- Libraries for the XMC1200 series are verified on all supported derivatives; fully functio-l test is applied with XMC1200-T038F0200.
- Libraries for the XMC1300 series are verified on all supported derivatives; fully functio-l test is applied with XMC1302-T038F0200.
- Libraries for the XMC4800 series are verified on all supported derivatives; fully functio-l test is applied with XMC4800-F144x1024.
- Libraries for the XMC1400 series are verified on all supported derivatives; fully functio-l test is applied with XMC1404Q064x0128.
-
- Compilers used :
    - KEIL: V5.10.0.2
    - IAR: V6.50.6.4958
    - TASKING: V5.2r1 patch
    - GCC compiler version ARM-GCC-49

2 Support Packages

None

3 Tool Information

XMC Lib	XMC Libraries are provided as tool agnostic package
KEIL MDK CMSIS PACK	XMC Libraries are bundled with CMSIS PACK v4.4.0 for Keil MDK
DAVE	XMC Libraries are bundled with DAVE v4.1.4 Libraries (update site)

4 Changes from Previous Version

4.1 Changes from previous version v2.0.0

Sl.no	Description of change
1	1 New XMC Libs are added – I2S
2	12 XMC Libs are updated. Please refer the XMC Libs revision history for details.

4.2 Changes from previous version v1.0.0

Sl.no	Description of change
1	2 New XMC Libs are added – ETH and DSD.
2	15 XMC Libs are updated. Please refer the XMC Libs revision history for details.

5 Installation Requirements

- DAVE v4.1.2 or higher version should be installed or use any other compiler tool chain supporting Infineon Technologies XMC Microcontrollers, e.g. Atollic, IAR, Keil MDK, Rowley, TASKING.

6 Known Limitations

XMC Lib	Limitation / Deviation
SDMMC	SDMMC driver tested with an SD card. , It wasn't tested with an MMC card (but it is expected that it works fine on MMC interface)
USBH (USB Host)	This peripheral driver is not yet included in the XMC Lib package
SCU	Features related to power features (Hiber-te, Sleep, LPAC etc.) not supported
USIC-I2S	Channel identification whether left or right using RBUFSR is not happening. Alter-tively, user shall use the bit fields of DX2CR.DX2S, PSR.WA [IIS Mode] to identify the channel for Slave and Master respectively.
CCU	In XMC1400 devices, automatic shadow transfer feature is not supported with double module clock frequency (2MCLK).
ALL	When using Tasking compiler – recommended to use version 5.1r1 and above

7 XMC Libs Revision History

7.1 XMC Libs revision history from version v2.0.0

The XMC Lib version 2.1.2 is fully backward compatible to XMC Lib version 2.0.0

XMC Lib	Revision History
CAN	❖ New APIs Added: 1. For MultiCAN plus: XMC_CAN_GetBaudrateClockFrequency(), XMC_CAN_Init(), XMC_CAN_SetBaudrateClockSource(), XMC_CAN_GetBaudrateClockSource(),
CCU8	Structure updates: 1. selector_out0, selector_out1, selector_out2, selector_out3are added to support the XMC14 device. Enums added: 2. XMC_CCU8_SLICE_PRESCALER_t is added to help while setting the prescaler value. 3. XMC_CCU8_SLICE_MULTI_IRQ_ID_t is added to support the multi event setting APIs XMC_CCU8_SLICE_E-bleMultipleEvents(),XMC_CCU8_SLICE_DisableEvent() 4. XMC_CCU8_SLICE_SHADOW_TRANSFER_MODE_t added to support the newly added APIs XMC_CCU8_SLICE_SetShadowTransferMode() 5. XMC_CCU8_SLICE_WRITE_INTO_t is added to support the APIs XMC_CCU8_SLICE_WriteCoherentlyWithPWMCycle(),XMC_CCU8_SLICE_WriteImmediateAfterShadowTransfer(). 6. XMC_CCU8_SLICE_AUTOMAIC_SHADOW_TRANSFER_WRITE_INTO_t is added to support XMC_CCU8_SLICE_E-bleAutomaticShadowTransferRequest(),XMC_CCU8_SLICE_DisableAutomaticShadowTransferRequest() 7. XMC_CCU8_SOURCE_OUT0_t, XMC_CCU8_SOURCE_OUT1_t, XMC_CCU8_SOURCE_OUT2_t, XMC_CCU8_SOURCE_OUT3_t are added to configure the selector_out0, selector_out1, selector_out2, selector_out3 parameters in the config structure. Enums updated: 1. XMC_CCU8_SLICE_EVENT_LEVEL_SENSITIVITY_t, two new items are added to support while configuring the exter-l count direction control setting. 2. XMC_CCU8_OUT_PATH_t is updated enhance the support of XMC_CCU8_SLICE_SetOutPath() API for XMC14 device. New APIs Added: 1. XMC_CCU8_SLICE_E-bleCascadedShadowTransfer() 2. XMC_CCU8_SLICE_DisableCascadedShadowTransfer() 3. XMC_CCU8_SLICE_SetShadowTransferMode() 4. XMC_CCU8_SLICE_WriteCoherentlyWithPWMCycle() 5. XMC_CCU8_SLICE_WriteImmediateAfterShadowTransfer() 6. XMC_CCU8_SLICE_E-bleAutomaticShadowTransferRequest() 7. XMC_CCU8_SLICE_DisableAutomaticShadowTransferRequest() 8. XMC_CCU8_SLICE_SetTimerCompareMatchChannel1(), XMC_CCU8_SLICE_SetTimerCompareMatchChannel2() inline APIs are added to update the respective compare registers directly. APIs Updated: 1. XMC_CCU8_SLICE_ConfigureStatusBitOverrideEvent() updated to support the XMC14 device 2. XMC_CCU8_E-bleShadowTransfer() is made as inline.

	3. XMC_CCU8_SLICE_E-bleMultipleEvents(),XMC_CCU4_SLICE_DisableEvent() input enum is changed. 4. XMC_CCU8_StartPrescaler() is invoked in XMC_CCU4_Init() API 5. XMC_CCU8_SLICE_GetEvent() is made as inline
CCU4	Structure updates: None Enums added: 1. XMC_CCU4_SLICE_PRESCALER_t is added to help while setting the prescaler value. 2. XMC_CCU4_SLICE_MULTI_IRQ_ID_t is added to support the multi event setting APIs XMC_CCU4_SLICE_E-bleMultipleEvents(),XMC_CCU4_SLICE_DisableEvent() 3. XMC_CCU4_SLICE_SHADOW_TRANSFER_MODE_t added to support the newly added APIs XMC_CCU4_SLICE_SetShadowTransferMode() 4. XMC_CCU4_SLICE_WRITE_INTO_t is added to support the APIs XMC_CCU4_SLICE_WriteCoherentlyWithPWMCycle(),XMC_CCU4_SLICE_WriteImmediateAfterShadowTransfer(). 5. XMC_CCU4_SLICE_AUTOMAIC_SHADOW_TRANSFER_WRITE_INTO_t is added to support XMC_CCU4_SLICE_E-bleAutomaticShadowTransferRequest(),XMC_CCU4_SLICE_DisableAutomaticShadowTransferRequest() Enums updated: 1. XMC_CCU4_SLICE_EVENT_LEVEL_SENSITIVITY_t, two new items are added to support while configuring the exter-l count direction control setting. New APIs Added: (to support the XMC14 device) 1. XMC_CCU4_SLICE_E-bleCascadedShadowTransfer() 2. XMC_CCU4_SLICE_DisableCascadedShadowTransfer() 3. XMC_CCU4_SLICE_SetShadowTransferMode() 4. XMC_CCU4_SLICE_WriteCoherentlyWithPWMCycle() 5. XMC_CCU4_SLICE_WriteImmediateAfterShadowTransfer() 6. XMC_CCU4_SLICE_E-bleAutomaticShadowTransferRequest() 7. XMC_CCU4_SLICE_DisableAutomaticShadowTransferRequest() APIs Updated: 1. XMC_CCU4_SLICE_ConfigureStatusBitOverrideEvent() updated to support the XMC14 device 2. XMC_CCU4_E-bleShadowTransfer() is made as inline. 3. XMC_CCU4_SLICE_E-bleMultipleEvents(),XMC_CCU4_SLICE_DisableEvent() input enum is changed. 4. XMC_CCU4_StartPrescaler() is invoked in XMC_CCU4_Init() API 5. XMC_CCU4_SLICE_GetEvent() is made as inline
MATH	❖ XMC_MATH_ClearEvent() API is updated to set the event clear flag bit. ❖ Added SQRT functions. ❖ Calculations of trigonometric functions for negative angles are corrected.
I2C	❖ Added new APIs: 1. For exter-l input for BRG configuration:XMC_I2C_CH_ConfigExter-lInputSig-lToBRG() 2. For e-bling or disabling the ACK response to a 0x00 slave address: XMC_I2C_CH_E-bleAcknowledgeAddress0() and XMC_I2C_CH_DisableAcknowledgeAddress0(). ❖ Modified APIs: 1. XMC_I2C_CH_SetInputSource() API for avoiding complete DXCR register overwriting. 2. XMC_I2C_CH_EVENT_t enum for supporting XMC_I2C_CH_E-bleEvent() and XMC_I2C_CH_DisableEvent() for supporting multiple events configuration 3. Fix of 10bit addressing

DSD	❖ Added APIs "XMC_DSD_SetResultEventFlag()" "XMC_DSD_ClearResultEventFlag()" "XMC_DSD_SetAlarmEventFlag()" “XMC_DSD_ClearAlarmEventFlag()”
SCU	❖ Device specific APIs, enums and data structure elements are added (for XMC1400 and XMC47/800 devices) ❖ Device specific pre-processor conditions are added (for XMC1400 and XMC47/800 devices) ❖ Added new APIs (For XMC1 devices): 1. For temperature related: XMC_SCU_SetTempLowLimit(),XMC_SCU_SetTempHighLimit(),XMC_SCU_CalcTemperature(), XMC_SCU_CLOCK_CalibrateOscillatorOnTemperature(). 2. For clock related: XMC_SCU_CLOCK_SetMCLKFrequency(),XMC_SCU_CLOCK_ScaleMCLKFrequency() ❖ Modified APIs: (For XMC1 devices): 1. XMC_SCU_HighTemperature(),XMC_SCU_LowTemperature(),XMC_SCU_CLOCK_lFrequency UpScaling(),XMC_SCU_CLOCK_lFrequencyDownScaling()
SPI	❖ Added new APIs: 1. For e-bling/disabling delay compensation XMC_SPI_CH_DisableDelayCompensation() and XMC_SPI_CH_E-bleDelayCompensation() 2. For exter-l input for BRG configuration: XMC_SPI_CH_ConfigExter-lInputSig-lToBRG() 3. For configuring the receiving clock phase in the slave: XMC_SPI_CH_DataLatchedInTrailingEdge() and XMC_SPI_CH_DataLatchedInLeadingEdge() ❖ Modified APIs: 1. XMC_SPI_CH_SetInputSource() for avoiding complete DXCR register overwriting. 2. Modified XMC_SPI_CH_EVENT_t enum for supporting XMC_SPI_CH_E-bleEvent() and XMC_SPI_CH_DisableEvent() for supporting multiple events configuration
UART	❖ Modified APIs: 1. XMC_UART_CH_SetInputSource() for avoiding complete DXCR register overwriting. 2. XMC_UART_CH_EVENT_t enum for supporting XMC_UART_CH_E-bleEvent() and XMC_UART_CH_DisableEvent() for supporting multiple events configuration
USIC	❖ Added new APIs: 1. For e-bling/disabling delay compensation XMC_USIC_CH_DisableDelayCompensation() and XMC_USIC_CH_DisableDelayCompensation() 2. For defining if the data shift unit input is derived from the input data path DXn or from the selected protocol pre-processors: XMC_USIC_CH_ConnectInputDataShiftToPPP() and XMC_USIC_CH_ConnectInputDataShiftToDataInput() 3. For direct TBUF access: XMC_USIC_CH_WriteToTBUF() and XMC_USIC_CH_WriteToTBUFTCI() 4. For exter-l input for BRG configuration:XMC_USIC_CH_ConfigExter-lInputSig-lToBRG() and XMC_USIC_CH_SetBRGInputClockSource() 5. For e-bling the transfer trigger unit to set bit TCSR.TE if the trigger sig-l DX2T becomes active. Feature used for RS-232 Clear to Send (CTS) sig-l: XMC_USIC_CH_E-bleTBUFDataValidTrigger() and XMC_USIC_CH_DisableTBUFDataValidTrigger(). ❖ Modified APIs: 1. XMC_USIC_CH_SetTransmitBufferStatus API. OR operator removed. 2. Fixed bug in XMC_USIC_CH_BRG_CLOCK_SOURCE_DX1T value.
FLASH	1. XMC1 flash: Erase Page API implementation change for the NVM Errata. NVM routine API called inside XMC_FLASH_ErasePages API. 2. XMC4 flash: Added new APIs XMC_FLASH_Reset XMC_FLASH_ErasePhysicalSector

	XMC_FLASH_EraseUCB XMC_FLASH_ResumeProtection XMC_FLASH_RepairPhysicalSector
VADC	1. Added new APIs XMC_VADC_GLOBAL_SetIndividualBoundary XMC_VADC_GROUP_SetIndividualBoundary XMC_VADC_GROUP_GetAlias XMC_VADC_GROUP_GetInputClass XMC_VADC_GROUP_ChannelSetIclass XMC_VADC_GROUP_ChannelGetResultAlignment XMC_VADC_GROUP_ChannelGetInputClass XMC_VADC_GROUP_SetResultSubtractionValue XMC_VADC_GROUP_ScanRemoveChannel 2. Added new structure XMC_VADC_DETAILED_RESULT_t
ALL	

7.2 XMC Libs revision history from version v1.0.0

XMC Lib	Revision History
ACMP	3. Additio-l call to XMC_ACMP_E-bleComparator() API needed to start Comparator after Init. a. Removed return type variable and by default comparator e-ble from XMC_ACMP_Init() API. 4. Divided XMC_ACMP_SetInput into two 3 APIs to reduce the code size and complexity as stated below a. XMC_ACMP_E-bleReferenceDivider() b. XMC_ACMP_DisableReferenceDivider() c. XMC_ACMP_SetInput() 5. XMC_ACMP_t typedef changed to structure which overrides the standard header file structure.
BCCU	6. Minor bug fixes in the following APIs: a. XMC_BCCU_ClearEventFlag() b. XMC_BCCU_ConcurrentStartDimming() c. XMC_BCCU_ConcurrentAbortDimming() d. XMC_BCCU_SetGlobalDimmingLevel() 7. Added new APIs: a. XMC_BCCU_DIM_ReadDimDivider() b. XMC_BCCU_DIM_GetDimCurve() c. XMC_BCCU_IsDitherE-ble()
CAN	8. New elements have added in XMC_CAN_MO_t data structure. 9. XMC_CAN_MO_Config() sig-ture has changed. 10. XMC_CAN_STATUS_t enum structure has updated. 11. New APIs are added: a. XMC_CAN_NODE_ClearStatus() b. XMC_CAN_MO_ReceiveData() c. XMC_CAN_GATEWAY_InitDesObject() d. XMC_CAN_NODE_E-ble() 12. Minor fix in XMC_CAN_TXFIFO_ConfigMOSlaveObject().
CCU4	13. In XMC_CCU4_SLICE_StartConfig(), Options in XMC_ASSERT check for start mode is corrected.

CCU8	14. Added XMC_CCU8_SLICE_LoadSelector() API, to select which compare register value has to be loaded during exter-l load event. 15. In XMC_CCU8_SLICE_CHECK_INTERRUPT macro, fixed the missing item for compare match down for channel 2
DMA	16. Added the declarations for the following APIs: a. XMC_DMA_DisableRequestLine b. XMC_DMA_ClearRequestLine, c. XMC_DMA_CH_ClearSourcePeripheralRequest d. XMC_DMA_CH_ClearDesti-tionPeripheralRequest 17. Removed PRIOARRAY
HRPWM	18. XMC_HRPWM_CSG_SelClampingInput() API is added to select the clamping input. 19. Enum XMC_HRPWM_SHADOW_TX_t is re-med to XMC_HRPWM_SHADOW_TX_DAC_t to represent that shadow transfer is for DAC. 20. In XMC_HRPWM_Init() api macros used to check 'ccu_clock' frequency are re-med for readability. 21. 80MHz HRC operation would need a minimum of 70 Mhz CCU clock. 22. CSG trimming data assignment is corrected. 23. Redundant code removed in XMC_HRPWM_HRC_ConfigSourceSelect0() and XMC_HRPWM_HRC_ConfigSourceSelect1() API's. 24. Enums and masks are type casted to uint32_t type.
I2C	25. Modified XMC_I2C_CH_Stop() API for not setting to IDLE the channel if it is busy
POSIF	26. XMC_POSIF_E-ble and XMC_POSIF_Disable APIs updated for POSIF1 peripheral check. 27. XMC_POSIF_QD_GetDirection API is updated to read direction bit correctly.
RTC	28. XMC_RTC_Init() function is modified by adding RTC running condition check
SCU	29. Removed STATIC_INLINE property for the below APIs and declared as void: a. XMC_SCU_INTERRUPT_E-bleEvent() b. XMC_SCU_INTERRUPT_DisableEvent() c. XMC_SCU_INTERRUPT_TriggerEvent() d. XMC_SCU_INTERUPT_GetEventStatus() e. XMC_SCU_INTERUPT_ClearEventStatus() 30. XMC_SCU_INTERRUPT_EVENT enum elements are typecasted to int64_t 31. Added new APIs for both XMC4 and XMC1 devices: a. XMC_SCU_INTERRUPT_E-bleEvent() b. XMC_SCU_INTERRUPT_DisableEvent() c. XMC_SCU_INTERRUPT_TriggerEvent() d. XMC_SCU_INTERUPT_GetEventStatus() e. XMC_SCU_INTERRUPT_ClearEventStatus() 32. Added Weak implementation for OSCHP_GetFrequency().
SPI	33. Documentation improved 34. Added new APIs a. XMC_SPI_CH_SetSlaveSelectDelay b. XMC_SPI_CH_TriggerServiceRequest c. XMC_SPI_CH_SelectInterruptNodePointer d. XMC_SPI_CH_SetInterwordDelaySCLK
UART	35. xmc_uart_ch_stop API implementation corrected. 36. Modified XMC_UART_CH_Stop() API for not setting to IDLE if the channel is busy. 37. Added new APIs: a. XMC_UART_CH_TriggerServiceRequest() and XMC_UART_CH_SelectInterruptNodePointer()
USBD	38. Updated the XMC_USBD_EndpointStall() to fix issue on USB clear stall. 39. Updated the XMC_USBD_EndpointConfigure() to fix issue in EP0 configuration. 40. Updated the XMC_USBD_IRQHandler() (Removed the DAVE_CE check on SOF event). 41. Updated the XMC_USBD_Disable() API to gate the clock after programming the SCU registers.

VADC	42. Added new APIs for SHS. a. XMC_VADC_GLOBAL_SHS_SetStepperSequence b. XMC_VADC_GLOBAL_SHS_IsConverterReady c. XMC_VADC_GLOBAL_SHS_E-bleAcceleratedMode d. XMC_VADC_GLOBAL_SHS_DisableAcceleratedMode e. XMC_VADC_GLOBAL_SHS_SetShortSampleTime f. XMC_VADC_GLOBAL_SHS_SetClockDivider g. XMC_VADC_GLOBAL_SHS_SetGainFactor h. XMC_VADC_GLOBAL_SHS_SetMaxCalTime i. XMC_VADC_GLOBAL_SHS_E-bleGai-ndOffsetCalibrations j. XMC_VADC_GLOBAL_SHS_DisableGai-ndOffsetCalibrations k. XMC_VADC_GLOBAL_SHS_GetOffsetCalibrationValue l. XMC_VADC_GLOBAL_SHS_SetOffsetCalibrationValue m. XMC_VADC_GLOBAL_SHS_SetSigmaDeltaLoop n. XMC_VADC_GLOBAL_SHS_E-bleSigmaDeltaLoop o. XMC_VADC_GLOBAL_SHS_DisableSigmaDeltaLoop 43. Added new APIs for trigger edge selection. a. XMC_VADC_GROUP_ScanSelectTriggerEdge b. XMC_VADC_GROUP_QueueSelectTriggerEdge c. XMC_VADC_GROUP_BackgroundSelectTriggerEdge 44. Added new APIs for Queue flush entries, boundary selection, Boundary node pointer. a. XMC_VADC_GROUP_QueueFlushEntries b. XMC_VADC_GROUP_ChannelSetBoundarySelection c. XMC_VADC_GROUP_SetBoundaryEventInterruptNode 45. Updated GatingMode APIs and EMUX Control Init APIs for bug fixes. 46. BFL configuration in channel initialization bug fixed.
ALL	47. GetDriverVersion API is removed from all XMC Libs

7.3 XMC Libs backward compatibility break from version v1.0.0

XMC Lib	Change category	Project upgrade steps
ACMP	1. API functio-lities changed. 2. Splitting of API's and sig-ture changes done.	Use DAVE's "APPs upgrade" feature and change API sig-ture as in PR version of XMC Lib Verify the functio-l correctness
CAN	1. API sig-ture changed 2. Data type and enum item changed	Use DAVE's "APPs upgrade" feature and change enum item and API sig-ture as in PR version of XMC Lib Verify the functio-l correctness
DMA	Data type item changed	Use DAVE's "APPs upgrade" feature and change the usage of data type as in PR version of XMC Lib Verify the functio-l correctness
HRPWM	Enum item is re-med	Use DAVE's "APPs upgrade" feature and change enum item as in PR version of XMC Lib Verify the functio-l correctness
SCU	API sig-ture changed	Use DAVE's "APPs upgrade" feature and change API sig-ture as in PR version of XMC Lib Verify the functio-l correctness