User Manual

for S32K1 MCL Driver

Document Number: UM2MCLASR4.4 Rev0000R1.0.1 Rev. 1.0

Chapter 1

Revision History

Revision	Date	Author	Description
1.0	24.02.2022	NXP RTD Team	Prepared for release RTD S32K1 Version 1.0.1

Chapter 2

Introduction

This User Manual describes NXP Semiconductor MCL for *platform*. MCL driver configuration parameters and deviations from the specification are described in Driver chapter of this document. MCL driver requirements and APIs are described in the MCL driver software specification document.

2.1 Supported Derivatives

The software described in this document is intended to be used with the following microcontroller devices of NXP Semiconductors:

- s32k116_qfn32
- s32k116_lqfp48
- s32k118_lqfp48
- s32k118_lqfp64
- s32k142_lqfp48
- s32k142_lqfp64
- s32k142_lqfp100
- s32k142w_lqfp48
- s32k142w_lqfp64
- s32k144_lqfp48

- s32k144_lqfp64
- s32k144_lqfp100
- s32k144_mapbga100
- s32k144w_lqfp48
- s32k144w_lqfp64
- s32k146_lqfp64
- s32k146_lqfp100
- s32k146_mapbga100
- s32k146_lqfp144
- s32k148_lqfp100
- s32k148_mapbga100
- s32k148_lqfp144
- s32k148_lqfp176

All of the above microcontroller devices are collectively named as S32K1.

2.2 Overview

AUTOSAR (AUTomotive Open System ARchitecture) is an industry partnership working to establish standards for software interfaces and software modules for automobile electronic control systems.

AUTOSAR:

- paves the way for innovative electronic systems that further improve performance, safety and environmental friendliness.
- is a strong global partnership that creates one common standard: "Cooperate on standards, compete on implementation".
- is a key enabling technology to manage the growing electrics/electronics complexity. It aims to be prepared for the upcoming technologies and to improve cost-efficiency without making any compromise with respect to quality.
- facilitates the exchange and update of software and hardware over the service life of the vehicle.

2.3 About This Manual

This Technical Reference employs the following typographical conventions:

- **Boldface** style: Used for important terms, notes and warnings.
- *Italic* style: Used for code snippets in the text. Note that C language modifiers such "const" or "volatile" are sometimes omitted to improve readability of the presented code.

Notes and warnings are shown as below:

Note

This is a note.

Warning

This is a warning

2.4 Acronyms and Definitions

Term	Definition
API	Application Programming Interface
ASM	Assembler
BSMI	Basic Software Make file Interface
CAN	Controller Area Network
C/CPP	C and C++ Source Code
CS	Chip Select
CTU	Cross Trigger Unit
DEM	Diagnostic Event Manager
DET	Development Error Tracer
DMA	Direct Memory Access
ECU	Electronic Control Unit
FIFO	First In First Out
LSB	Least Signifigant Bit
MCU	Micro Controller Unit
MIDE	Multi Integrated Development Environment
MSB	Most Significant Bit
N/A	Not Applicable
RAM	Random Access Memory
SIU	Systems Integration Unit
SWS	Software Specification
VLE	Variable Length Encoding
XML	Extensible Markup Language

2.5 Reference List

#	Title	Version
1	S32K1xx Series Reference Manual	Rev. 14, 09/2021
2	Errata S32K116_0N96V	Rev. 22/OCT/2021
3	Errata S32K118_0N97V	Rev. 22/OCT/2021
4	Errata S32K142_0N33V	Rev. 22/OCT/2021
5	Errata S32K144_0N57U	Rev. 22/OCT/2021
6	Errata S32K144W_0P64A	Rev. 22/OCT/2021
7	Errata S32K146_0N73V	Rev. 22/OCT/2021
8	Errata S32K148_0N20V	Rev. 22/OCT/2021
9	S32K1xx Data Sheet	Rev. 14, 08/2021

Chapter 3

Driver

3.1 Requirements

Requirements for this driver are detailed in the Driver Software Specification document (See Table Reference List).

For CDD: MCL Driver is a Complex Device Driver (CDD), so there are no requirements regarding this module.

It has vendor-specific requirements and implementation.

3.2 Driver Design Summary

The Mcl Driver controls the DMA(Direct Memory Access) and CACHE modules of the S32K1 device. It provides the following features:

- Configuration and initialization of the DMA.
- Configuration and initialization of the CACHE.
- Handling of the DMA interrupt requests.
- DMA Normal Transfer Mode and Scatter/Gather Mode.

3.3 Hardware Resources

The Mcl Driver consists of:

1. A DMA Peripheral which has 1 Hardware Instance with 4 Hardware Channels for S32K11X and 16 Hardware Channels for S32K14X.
2. A CACHE Memory is Local Memory Controller (LMEM).

3.4 Deviations from Requirements

The driver deviates from the Mcl Driver Software Specification in some places.

The table Status Column Description identifies the requirements that are not fully implemented, implemented differently, or out of scope for the Mcl Driver.

The table Mcl Requirements Deviations provides the "Status" column description.

Term	Definition
N/S	Not In Scope
N/F	Not Fully Implemented
N/I	Not Implemented

3.4.0.0.1 Status Column Description

Requirement	Status	Description	Notes
None	None	None	None

3.4.0.0.2 Mcl Requirements Deviations Files **Mcl_<VariantName>_PBcfg.c** and **Mcl_<VariantName>_PBcfg.h** will contain the definitions for all parameters that are variant aware, independent of the configuration class that will be selected (PC, LT, PB).

Files **Mcl_Cfg.c** and **Mcl_Cfg.h** will contain the definitions for all parameters that are not variant aware.

3.5 Driver Limitations

The Mcl Driver has the following limitations:

- When DMA is used with CACHE enabled, the user shall Invalidate/Clean the CACHE in order to synchronize the transfered data.

- When using CACHE Invalidate and Clean functionalities, the user shall take into consideration that all variables that reside in the cache, are affected.
- The Cache Invalidate function need to be called before Cache Enable function is called (make sure that Cache wasn't enabled before).
- The Cache Clean function need to be called before Cache Disable function is called.
- The DMA Driver shall have the Source Address and Destination Address configured at runtime. These two paramaters are not available in the configurator.
- When the DMA transfer has errors, user must call Mcl_SetDmaChannelCommand/Dma_Ip_SetLogic↩ ChannelCommand function to clear error state and error status.
- When using Mcl_CacheDisable/Cache_Ip_Disable and Mcl_CacheInvalidate/Cache_Ip_Invalidate, the stack shall be put into non-cacheable memory.
- When using Virtual Address Mapping feature, the user shall handle the linker file to avoid the memory address is invalid.
- For DMA hardware version 2, the ActiveId is not available in CR register.

3.6 Driver usage and configuration tips

3.6.1 MCAL MCL DMA migration guide to RTD MCL

3.6.1.1 Introduction

The RTD MCL DMA Driver brings a Generic Interface, to help the User in application development across multiple SoCs. The Generic Interface consists of software functions that are fully configurable using User defined configurations. The Generic Interface is structured into four function groups:

1. Set Command Functions
2. Get Status Functions
3. Set List Functions
4. Get Information (Parameter) Functions

The Set Command Functions shall trigger actions specific to the invoked Logic Entity. For example, the Logic Dma Instance shall be commanded to: “Stop execution”, “Stop execution with error signaling”, “Pause execution” or “Resume execution”.

The Get Status Functions shall read the status specific to the invoked Logic Entity. For example, the Logic Dma Instance shall return: “Hardware Errors specific to the IP”, “The Active Channel Id” and “Active Status”.

The Set List Functions shall configure a user defined list of settings for the invoked Logic Entity. For example, the Logic Dma Channel shall be configurable with the Transfer List of Parameters like: “Source Address”, “↩ Destination Address”, “Source Signed Offset”, “Destination Signed Offset”, “Major Loop Count”, etc... For the specific ScatterGather mode, the additional Logic Element parameter specifies the Software TCD that shall be loaded with the ScatterGather List of Parameters.

The Get Parameter Functions shall return specific parameter value. For example, the Logic Dma Channel shall return the “Destination Address” value, which contains the last accessed destination memory location.

3.6.1.2 TRESOS Configuration

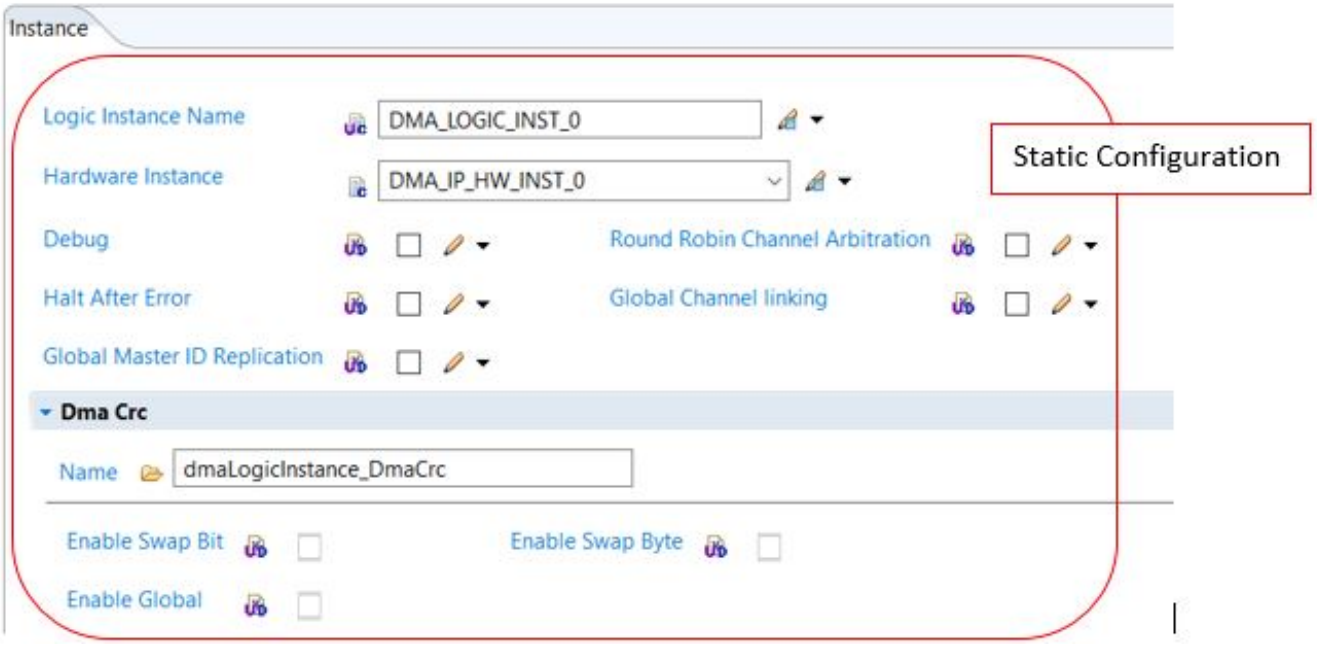

Figure 3.1 DMA Logic Instance

The DMA Logic Instance configuration presented in Figure 3.1 is static, thus it can't be changed dynamically during runtime. The "Logic Instance Name" represents the Handler(Tag) used with the DMA API. The Handler(Tag) is set by the User for the specific Application; for example the "DMA_LOGIC_INSTANCE_0" shall be changed to "DMA_LOGIC_INST_COMMUNICATION".

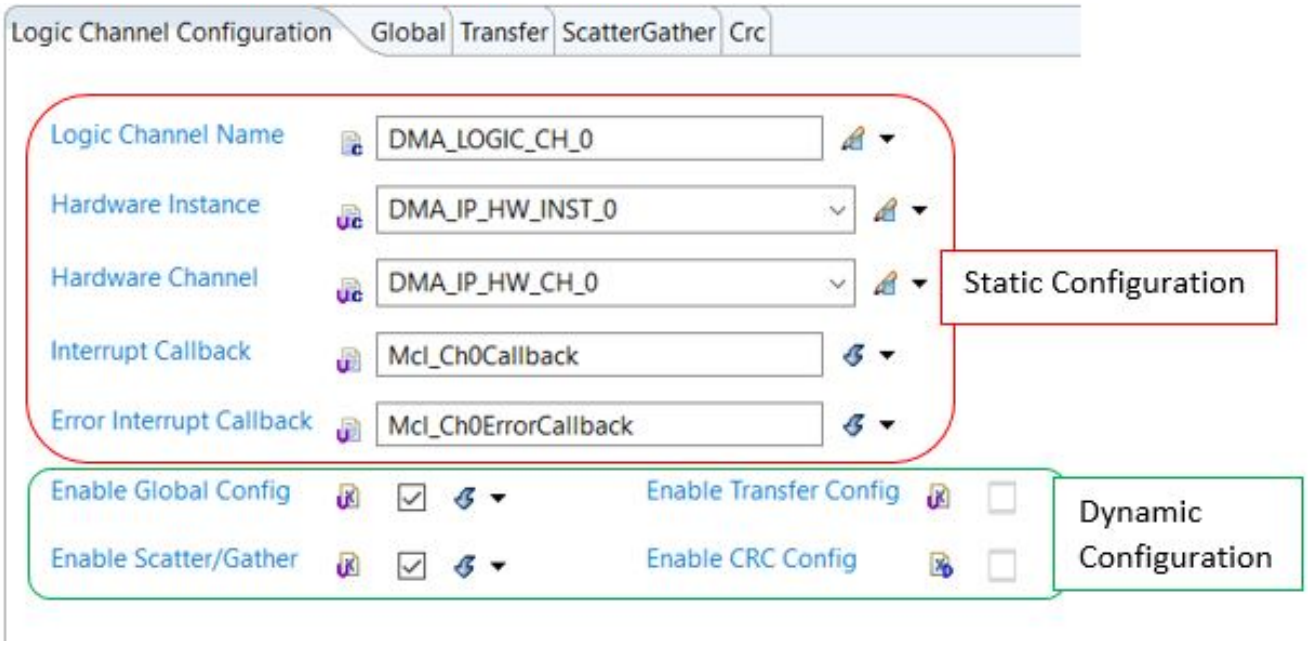

Figure 3.2 DMA Logic Channel

The DMA Logic Channel configuration in Figure 3.2 is composed of static and dynamic settings.

1. The static configuration is needed in order for the DMA Logic Channel to be created and used. The static configuration allocates resources for the DMA Logic Channel basic configuration. The static configuration can't be changed during runtime. The "Logic Channel Name" represents the Handler(Tag) used with the DMA API. The Handler(Tag) is set by the User based on the Application; For example the "DMA_LOGIC_CH_0" shall be changed to "DMA_CH_CAN0_RX" or "DMA_LOGIC_CH_SPI2_TX".
2. The dynamic configuration can be set in TRESOS and shall be automatically loaded in the DMA Logic Channel at initialization time. By enabling a checkbox, the respective configuration option is enabled and system memory is allocated during generation. The dynamic configuration can be set during runtime by using the specific API. By disabling a checkbox, the respective configuration option is disabled and system memory is not allocated during generation.

2.1. The "Enable Global Config" contains settings outside the Transfer Control Descriptor (TCD).

2.2. The "Enable Transfer Config" contains settings of the Transfer Control Descriptor (TCD).

2.3. The "Enable Scatter/Gather" contains settings that extend the "Transfer Config" by creating Software Transfer Control Descriptors (STCDs).

2.4. The "Enable CRC Config" contains settings for the DMA Logic Channel CRC computation functionality.

Note: The DMA Logic Channel can be configured in "Transfer Mode" or "Scatter/Gather Mode", thus only one of the 2 configurations can be set at any time. During runtime, the DMA Logic Channel can be configured between the 2 modes by calling the "SetTransfer" or "SetScatterGather" API.

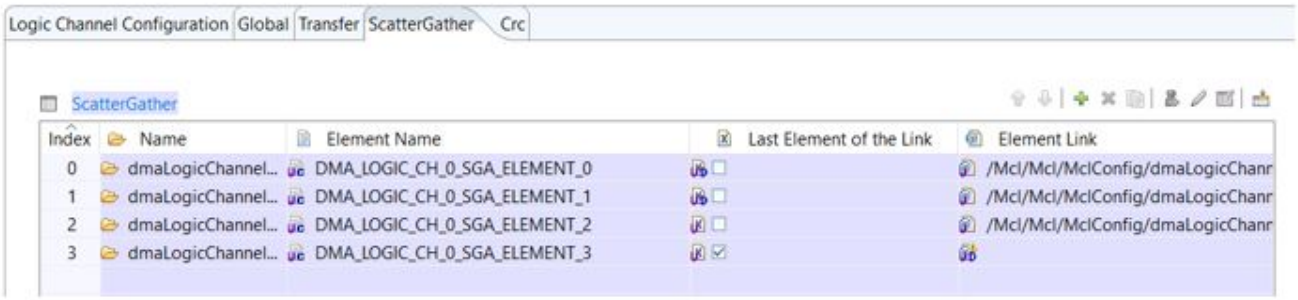

Figure 3.3 DMA Logic Channel – ScatterGather Element List

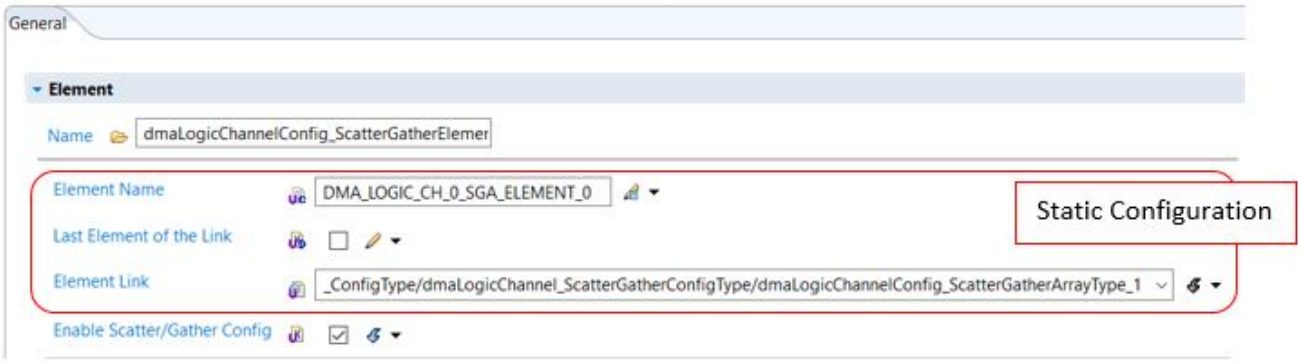

Figure 3.4 DMA Logic Channel – ScatterGather Element Configuration

The DMA Logic Channel ScatterGather Element list (Figure 3.3) shall be loaded with the required number of elements. Each element represents a STCD and is part of a linked list of elements.

The DMA Logic Channel ScatterGather Element Configuration (Figure 3.4) contains the static configuration of the element.

1. The “Element Name” represents the Handler (Tag) (static configuration).
2. The “Last Element of the Link” sets the element as the last link element (static configuration).
3. The “Element Link” points to the next element of the link (static configuration).
4. The “Enable Scatter/Gather Config” enables the element configuration.

Note1: Element can’t be added during runtime. The elements are allocated resources during generation (System memory for STCDs and configuration if set). The element linkage can’t be changed during runtime.

Note2: The DMA Logic Channel ScatterGather Element List can be configured to contain multiple independent chained lists. During runtime, the Logic Channel can be assigned a different Chained List.

Note3: Each Element is allocated 32 bytes of memory space aligned to 32 bytes, representing the STCD. Additionaly, if the configuration is enabled from TRESOS, additional 60 bytes are allocated.

3.6.2 Channel State Machine

3.6.2.1 MCL Driver

The MCL DMA Driver runs based on the presented State Machine Diagram.

The MCL DMA State Machine applies to the MCL DMA Channels and it contains 5 States.

The State Machine supports the following 21 Transitions:

```
T0: Hardware Reset

T1: Mcl_Init() with DMA Channel no Transfer or Scatter/Gather generated configurations

T2: Mcl_DeInit()

T3: Mcl_SetDmaChannelTransferList()

T4: Mcl_Init() with DMA Channel Transfer generated configuration

T5: Mcl_SetDmaChannelScatterGatherList() + Mcl_SetDmaChannelScatterGatherConfig()

T6: Mcl_SetDmaChannelTransferList()

T7: Mcl_SetDmaChannelScatterGatherList() + Mcl_SetDmaChannelScatterGatherConfig()

T8: Mcl_Init() with DMA Channel Scatter/Gather generated configuration

T9: Detection of channel error

T10: Mcl_SetDmaInstanceCommand(CHANNEL, MCL_DMA_CH_ACK_ERROR)

T11: Detection of channel error

T12: Mcl_DeInit()

T13: Mcl_DeInit()

T14: Detection of channel error

T15: Detection of channel error

T16: Mcl_DeInit()

T17: Mcl_DeInit()

T18: Mcl_SetDmaChannelCommand(CHANNEL, MCL_DMA_CH_ACK_ERROR)

T19: Mcl_SetDmaChannelTransferList()

T20: Mcl_SetDmaChannelScatterGatherList() + Mcl_SetDmaChannelScatterGatherConfig()

T21: Detection of channel error
```

When the DMA Driver detects a software or hardware error for the Logic Channel, it shall enter the "MCL_DM↩ A_CH_ERROR_STATE".

To exit from the "MCL_DMA_CH_ERROR_STATE", the application shall use the specified transitions.

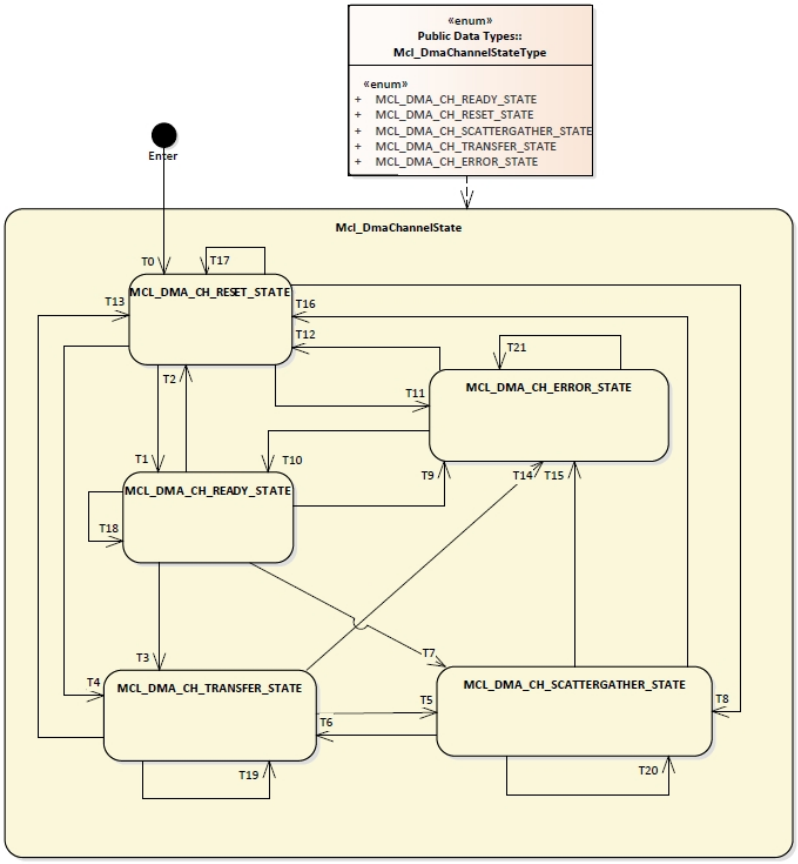

Figure 3.5 MCL DMA Channel State Machine

3.6.2.2 DMA Driver

The DMA IP Driver runs based on the presented State Machine Diagram.

The DMA State Machine applies to the DMA Logic Channels and it contains 5 States.

The State Machine supports the following 21 Transitions:

```
T0: Hardware Reset

T1: Dma_Ip_LogicChannelInit() with no Transfer or Scatter/Gather generated configurations

T2: Dma_Ip_LogicChannelDeinit()

T3: Dma_Ip_SetLogicChannelTransferList()

T4: Dma_Ip_LogicChannelInit() with Transfer generated configuration

T5: Dma_Ip_SetLogicChannelScatterGatherList() + Dma_Ip_SetLogicChannelScatterGatherConfig()

T6: Dma_Ip_SetLogicChannelTransferList()

T7: Dma_Ip_SetLogicChannelScatterGatherList() + Dma_Ip_SetLogicChannelScatterGatherConfig()
```

```
T8: Dma_Ip_LogicChannelInit() with Scatter/Gather generated configuration

T9: Detection of channel error

T10: Dma_Ip_SetLogicChannelCommand(CHANNEL, DMA_IP_CH_CLEAR_ERROR)

T11: Detection of channel error

T12: Dma_Ip_LogicChannelDeinit()

T13: Dma_Ip_LogicChannelDeinit()

T14: Detection of channel error

T15: Detection of channel error

T16: Dma_Ip_LogicChannelDeinit()

T17: Dma_Ip_LogicChannelDeinit()

T18: Dma_Ip_SetLogicChannelCommand(CHANNEL, DMA_IP_CH_CLEAR_ERROR)

T19: Dma_Ip_SetLogicChannelTransferList()

T20: Dma_Ip_SetLogicChannelScatterGatherList() + Dma_Ip_SetLogicChannelScatterGatherConfig()

T21: Detection of channel error
```

When the DMA Driver detects a software or hardware error for the Logic Channel, it shall enter the "DMA_IP_↩ CH_ERROR_STATE".

To exit from the "DMA_IP_CH_ERROR_STATE", the application shall use the specified transitions.

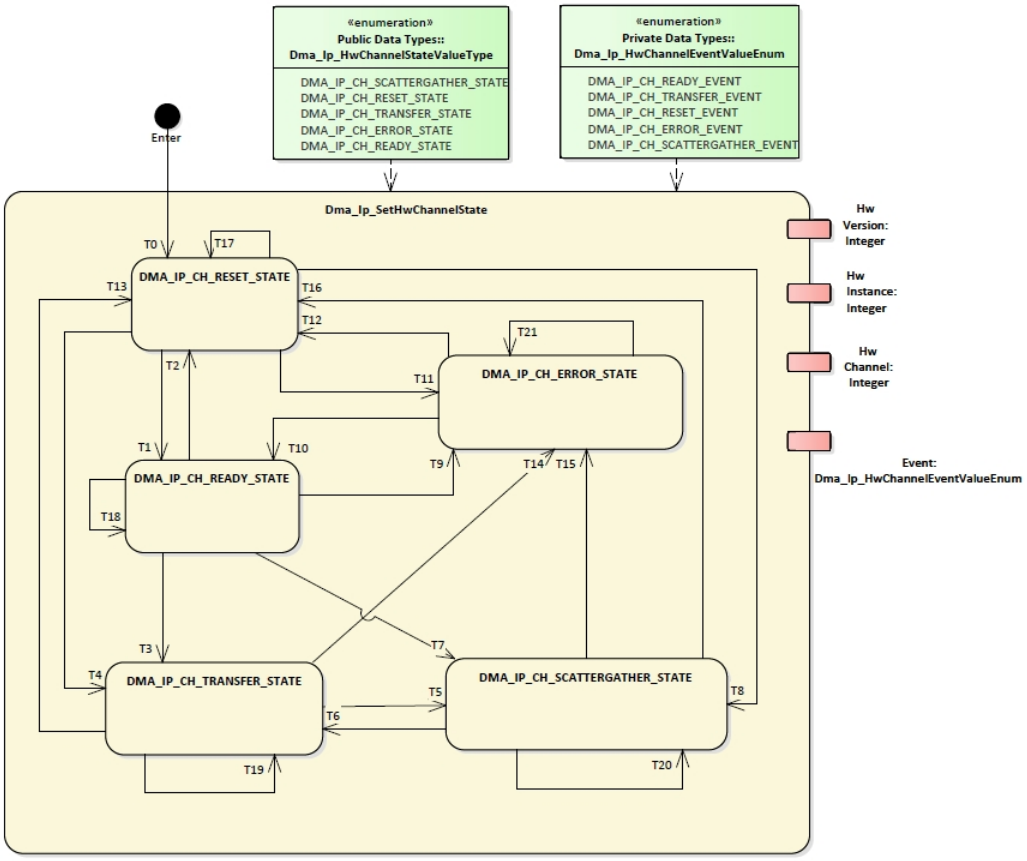

Figure 3.6 DMA IP Channel State Machine

3.7 Runtime errors

The driver generates the following DET errors at runtime.

Function	Error Code	Condition triggering the error
Mcl_Init()	MCL_E_UNINIT	API is called with a NULL pointer as parameter.
Mcl_DeInit()	MCL_E_PARAM_CONFIG	API is called with invalid configuration parameter.
Mcl_DeInit()	MCL_E_UNINIT	API is called with a NULL pointer as parameter.
Mcl_SetDmaInstanceCommand()	MCL_DET_DMA_INSTANCE↩ _COMMAND	API is called with invalid instance command.
Mcl_GetDmaInstanceStatus()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_SetDmaChannelCommand()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_SetDmaChannelCommand()	MCL_E_INVALID_COMMAND	API is called with invalid command.
Mcl_GetDmaChannelStatus()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_SetDmaChannelGlobalList()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.

Function	Error Code	Condition triggering the error
Mcl_SetDmaChannelGlobalList()	MCL_E_INVALID_PARAMETER	API is called with invalid parameter.
Mcl_SetDmaChannelTransferList()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_SetDmaChannelTransferList()	MCL_E_INVALID_PARAMETER	API is called with invalid parameter.
Mcl_SetDmaChannelScatterGatherList()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_SetDmaChannelScatterGatherList()	MCL_E_INVALID_PARAMETER	API is called with invalid parameter.
Mcl_GetDmaChannelParam()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_GetDmaChannelParam()	MCL_E_INVALID_PARAMETER	API is called with invalid parameter.
Mcl_SetDmaChannelScatterGatherConfig()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_SetDmaChannelCrcList()	MCL_E_INVALID_CHANNEL	API is called with invalid channel.
Mcl_CacheEnable()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_CacheDisable()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_CacheInvalidate()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_CacheClean()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_CacheInvalidateByAddr()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_CacheCleanByAddr()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.
Mcl_CacheCleanByAddr()	MCL_E_INVALID_INSTANCE	API is called with invalid instance.

3.8 Symbolic Names Disclaimer

All containers having symbolicNameValue set to TRUE in the AUTOSAR schema will generate defines like:

#define <Mip>Conf_<Container_ShortName>_<Container_ID>

For this reason it is forbidden to duplicate the names of such containers across the RTD configurations or to use names that may trigger other compile issues (e.g. match existing `#ifdefs` arguments).

Chapter 4

Tresos Configuration Plug-in

This chapter describes the Tresos configuration plug-in for the driver. All the parameters are described below.

- Module Mcl
  - Container MclGeneral
    - Parameter MclEnableDemReportErrorStatus
    - Parameter MclEnableDevErrorDetect
    - Parameter Mcl_VersionInfoApi
    - Parameter MclEnableUserModeSupport
    - Parameter MclEnableVirtualAddressMappingSupport
    - Container MclDma
      - Parameter MclEnableDma
    - Container MclCache
      - Parameter MclEnableCache
      - Parameter MclCacheTimeoutValue
      - Parameter MclCacheTimeoutMethod
    - Container MclTrgMux
      - Parameter MclEnableTrgMux
    - Container MclFlexioCommon
      - Parameter MclEnableFlexioCommon
    - Container MclFtmCommon
      - Parameter Mcl_FtmCommonTimebase
  - Container MclConfig
    - Container MclVirtualMemorySection
      - Parameter MclVirtualAddressStart
      - Parameter MclVirtualAddressEnd
      - Parameter MclPhysicalAddressStart
      - Parameter MclPhysicalAddressEnd
    - Container MclDemEventParameterRefs
      - Reference MCL_E_TIMEOUT_FAILURE
    - Container dmaLogicInstance_ConfigType
      - Parameter dmaLogicInstance_IdName
      - Parameter dmaLogicInstance_hwId

- Parameter dmaLogicInstance_enDebug
- Parameter dmaLogicInstance_enRoundRobin
- Parameter dmaLogicInstance_enHaltAfterError
- Parameter dmaLogicInstance_enChLinking

* Container dmaLogicChannel_Type
  - Parameter dmaLogicChannel_LogicName
  - Parameter dmaLogicChannel_HwInstId
  - Parameter dmaLogicChannel_HwChId
  - Parameter dmaLogicChannel_InterruptCallback
  - Parameter dmaLogicChannel_ErrorInterruptCallback
  - Parameter dmaLogicChannel_EnableGlobalConfig
  - Parameter dmaLogicChannel_EnableTransferConfig
  - Parameter dmaLogicChannel_EnableScatterGather
  - Container dmaLogicChannel_ConfigType
  - Container dmaLogicChannel_GlobalConfigType
  - Container dmaLogicChannelConfig_GlobalRequestType
  - Parameter dmaGlobalRequest_enDmamuxTrigger
  - Parameter dmaGlobalRequest_enDmamuxSource
  - Parameter dmaGlobalRequest_Dmamux0HwRequest
  - Parameter dmaGlobalRequest_enDmaRequest
  - Container dmaLogicChannelConfig_GlobalInterruptType
  - Parameter dmaGlobalInterrupt_enDmaErrorInterrupt
  - Container dmaLogicChannelConfig_GlobalPriorityType
  - Parameter dmaGlobalPriority_LevelPriority
  - Parameter dmaGlobalPriority_enPreemption
  - Parameter dmaGlobalPriority_disPreempt
  - Container dmaLogicChannel_TransferConfigType
  - Container dmaLogicChannelConfig_TransferControlType
  - Parameter dmaLogicChannelConfig_enStart
  - Parameter dmaLogicChannelConfig_enDmaMajorInterrupt
  - Parameter dmaLogicChannelConfig_enDmaHalfMajorInterrupt
  - Parameter dmaLogicChannelConfig_disDmaAutoHwReq
  - Parameter dmaLogicChannelConfig_bandwidthControl
  - Parameter dmaLogicChannelConfig_ScatterGatherAddressType
  - Parameter dmaLogicChannelConfig_DestinationStoreAddressType
  - Container dmaLogicChannelConfig_TransferSourceType
  - Parameter dmaLogicChannelConfig_SourceAddressType
  - Parameter dmaLogicChannelConfig_SourceSignedOffsetType
  - Parameter dmaLogicChannelConfig_SourceLastAddressAdjustmentType
  - Parameter dmaTransferConfig_TransferSizeType
  - Parameter dmaLogicChannelConfig_SourceModuloType
  - Container dmaLogicChannelConfig_TransferDestinationType
  - Parameter dmaLogicChannelConfig_DestinationAddressType
  - Parameter dmaLogicChannelConfig_DestinationSignedOffsetType
  - Parameter dmaLogicChannelConfig_DestinationLastAddressAdjustmentType
  - Parameter dmaTransferConfig_TransferSizeType
  - Parameter dmaLogicChannelConfig_DestinationModuloType

- Container dmaLogicChannelConfig_TransferMinorLoopType
- Parameter dmaLogicChannelConfig_enSourceOffset
- Parameter dmaLogicChannelConfig_enDestinationOffset
- Parameter dmaLogicChannelConfig_OffsetValueType
- Parameter dmaLogicChannelConfig_enMinorLoopLinkCh
- Parameter dmaLogicChannelConfig_MinorLoopSizeType
- Reference dynamic_dmaLogicChannelConfig_MinorLoopLinkChValueType
- Container dmaLogicChannelConfig_TransferMajorLoopType
- Parameter dmaLogicChannelConfig_enMajorLoopLinkCh
- Parameter dmaLogicChannelConfig_MajorLoopCountType
- Reference dynamic_dmaLogicChannelConfig_MajorLoopLinkChValueType
- Container dmaLogicChannel_ScatterGatherConfigType
- Container dmaLogicChannelConfig_ScatterGatherArrayType
- Container dmaLogicChannelConfig_ScatterGatherElementConfigType
- Parameter dmaLogicChannelConfig_ScatterGatherElementNameType
- Parameter dmaLogicChannelConfig_LastElementLink_ScatterGatherType
- Parameter dmaLogicChannelConfig_enScatterGatherConfig
- Reference dynamic_dmaLogicChannelConfig_BasicElementLink_ScatterGatherType
- Container dmaLogicChannelConfig_TransferControlType
- Parameter dmaLogicChannelConfig_enStart
- Parameter dmaLogicChannelConfig_enDmaMajorInterrupt
- Parameter dmaLogicChannelConfig_enDmaHalfMajorInterrupt
- Parameter dmaLogicChannelConfig_disDmaAutoHwReq
- Parameter dmaLogicChannelConfig_bandwidthControl
- Parameter dmaLogicChannelConfig_ScatterGatherAddressType
- Parameter dmaLogicChannelConfig_DestinationStoreAddressType
- Container dmaLogicChannelConfig_TransferSourceType
- Parameter dmaLogicChannelConfig_SourceAddressType
- Parameter dmaLogicChannelConfig_SourceSignedOffsetType
- Parameter dmaLogicChannelConfig_SourceLastAddressAdjustmentType
- Parameter dmaTransferConfig_TransferSizeType
- Parameter dmaLogicChannelConfig_SourceModuloType
- Container dmaLogicChannelConfig_TransferDestinationType
- Parameter dmaLogicChannelConfig_DestinationAddressType
- Parameter dmaLogicChannelConfig_DestinationSignedOffsetType
- Parameter dmaLogicChannelConfig_DestinationLastAddressAdjustmentType
- Parameter dmaTransferConfig_TransferSizeType
- Parameter dmaLogicChannelConfig_DestinationModuloType
- Container dmaLogicChannelConfig_TransferMinorLoopType
- Parameter dmaLogicChannelConfig_enSourceOffset
- Parameter dmaLogicChannelConfig_enDestinationOffset
- Parameter dmaLogicChannelConfig_OffsetValueType
- Parameter dmaLogicChannelConfig_enMinorLoopLinkCh
- Parameter dmaLogicChannelConfig_MinorLoopSizeType
- Reference dynamic_dmaLogicChannelConfig_MinorLoopLinkChValueType
- Container dmaLogicChannelConfig_TransferMajorLoopType
- Parameter dmaLogicChannelConfig_enMajorLoopLinkCh

- Parameter dmaLogicChannelConfig_MajorLoopCountType
- Reference dynamic_dmaLogicChannelConfig_MajorLoopLinkChValueType

* Container trgmuxLogicGroup
  - Parameter trgmuxLogicGroup_Name
  - Parameter trgmuxLogicGroup_Lock
  - Container trgmuxLogicTrigger
  - Parameter trgmuxLogicTrigger_Name
  - Parameter trgmuxLogicTrigger_Output
  - Parameter trgmuxLogicTrigger_Input
* Container FlexioCommon
  - Parameter FlexioMclInstances
  - Parameter FlexioDebugEnable
  - Container FlexioMclLogicChannels
  - Parameter FlexioMclChannelId
  - Parameter FlexioMclPinId
  - Parameter FlexioMclAddPinEnable
  - Parameter FlexioMclAddPinId
  - Parameter FlexioMclAddChannelEnable
  - Parameter FlexioMclAddChannelId

– Container CommonPublishedInformation

* Parameter ArReleaseMajorVersion
* Parameter ArReleaseMinorVersion
* Parameter ArReleaseRevisionVersion
* Parameter ModuleId
* Parameter SwMajorVersion
* Parameter SwMinorVersion
* Parameter SwPatchVersion
* Parameter VendorId

4.1 Module Mcl

Vendor specific: Configuration of the Mcl (MicroController Library) module.

Included containers:

- MclGeneral
- MclConfig
- CommonPublishedInformation

Property	Value
type	ECUC-MODULE-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantSupport	true
supportedConfigVariants	VARIANT-POST-BUILD, VARIANT-PRE-COMPILE

4.2 Container MclGeneral

Vendor specific: Configuration of general Mcl parameters.

Included subcontainers:

- MclDma
- MclCache
- MclTrgMux
- MclFlexioCommon
- MclFtmCommon

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.3 Parameter MclEnableDemReportErrorStatus

Enable/Disable the Production Error Reporting (DEM).

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.4 Parameter MclEnableDevErrorDetect

Vendor specific:

Enable/Disable the Development Error Detection (DET).

true: Enabled.

false: Disabled.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.5 Parameter Mcl_VersionInfoApi

Vendor specific: Enables/Disables the get version info API function

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.6 Parameter MclEnableUserModeSupport

When this parameter is enabled, the MCL module will adapt to run from User Mode, with the following measures:

b) using 'call trusted function' stubs for all internal function calls that access registers requiring supervisor mode.

for more information, please see chapter 5.7 User Mode Support in IM

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.7 Parameter MclEnableVirtualAddressMappingSupport

Enable/Disable Virtual Address Mapping support

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.8 Container MclDma

Vendor specific:

Container for the Dma related configuration parameters.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.9 Parameter MclEnableDma

Vendor specific: Enable/Disable DMA support.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.10 Container MclCache

Vendor specific:

Container for the CACHE related configuration parameters.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.11 Parameter MclEnableCache

Vendor specific:

Enable/Disable all CACHE support.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.12 Parameter MclCacheTimeoutValue

Set Cache timeout value

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	4294967295
min	0

4.13 Parameter MclCacheTimeoutMethod

MclCacheTimeoutMethod

Configures the timeout method.

Based on this selection a certain timeout method from OsIf will be used in the driver.

Note: If OSIF_COUNTER_SYSTEM or OSIF_COUNTER_CUSTOM are selected make sure the corresponding timer is enabled in OsIf General configuration.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	OSIF_COUNTER_DUMMY
literals	['OSIF_COUNTER_DUMMY', 'OSIF_COUNTER_SYSTEM', 'OSIF_COU↩ NTER_CUSTOM']

4.14 Container MclTrgMux

Vendor specific:

Container for the TRGMUX related configuration parameters.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.15 Parameter MclEnableTrgMux

Vendor specific: Enable/Disable TRGMUX support.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.16 Container MclFlexioCommon

Vendor specific:

Container for the Flexio Common related configuration parameters.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.17 Parameter MclEnableFlexioCommon

Vendor specific: Enable/Disable Flexio common support.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.18 Container MclFtmCommon

Vendor specific:

Container for the FTM Common related configuration parameters.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.19 Parameter Mcl_FtmCommonTimebase

Enables/Disables the option to set the a common timebase for multiple FTM modules.

Note:

NoteThis is an Implementation Specific Parameter. Enabling this feature will allow the use of the Mcl_SelectCommonTimebase API

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.20 Container MclConfig

Vendor specific: This container is the base for a multiple configuration set

Included subcontainers:

- MclVirtualMemorySection
- MclDemEventParameterRefs
- dmaLogicInstance_ConfigType
- dmaLogicChannel_Type
- trgmuxLogicGroup
- FlexioCommon

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.21 Container MclVirtualMemorySection

Vendor specific:

Data to configure Virtual address and Physical address.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	Infinite
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE

4.22 Parameter MclVirtualAddressStart

This parameter represents the Virtual Address Start.

The address must be aligned to 4 bytes.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	4294967295
min	0

4.23 Parameter MclVirtualAddressEnd

This parameter represents the Virtual Address End.

The address must be aligned to 4 bytes.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	255
max	4294967295
min	0

4.24 Parameter MclPhysicalAddressStart

This parameter represents the Physical Address Start.

The address must be aligned to 4 bytes.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	4294967295
min	0

4.25 Parameter MclPhysicalAddressEnd

This parameter represents the Physical Address End.

The address must be aligned to 4 bytes.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	255
max	4294967295
min	0

4.26 Container MclDemEventParameterRefs

Container for the references to DemEventParameter elements which shall be invoked using the API Dem_ReportErrorStatus API in case the corresponding error occurs.

The EventId is taken from the referenced DemEventParameter's DemEventId value.

The standardized errors are provided in the container and can be extended by vendor specific error references.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE

4.27 Reference MCL_E_TIMEOUT_FAILURE

Reference to configured DEM event to report Timeout failure.

Property	Value
type	ECUC-REFERENCE-DEF
origin	NXP
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
requiresSymbolicNameValue	true
destination	/AUTOSAR/EcucDefs/Dem/DemConfigSet/DemEventParameter

4.28 Container dmaLogicInstance_ConfigType

Vendor specific: Configuration of a DMA Instance.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	2
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE

4.29 Parameter dmaLogicInstance_IdName

Vendor specific:

Logic Instance Name.

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false

Property	Value
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	DMA_LOGIC_INST_0

4.30 Parameter dmaLogicInstance_hwId

Vendor specific:

Select the Hardware DMA Instance.

NOTE: This is an Implementation Specific Parameter.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_HW_INST_0
literals	['DMA_IP_HW_INST_0']

4.31 Parameter dmaLogicInstance_enDebug

Vendor specific:

DMA_CR[EDBG].

Enable Debug.

0 - The assertion of the system debug control input is ignored.

1 - The assertion of the system debug control input causes the eDMA to stall the start of a new channel.

Executing channels are allowed to complete.

Channel execution will resume when either the system debug control input is negated or the EDBG bit is cleared.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	false

4.32 Parameter dmaLogicInstance_enRoundRobin

Vendor specific:

DMA_CR[ERCA].

Enable Round Robin Channel Arbitration.

0 - Fixed-priority arbitration is used for channel selection within each group.

1 - Round-Robin arbitration is used for channel selection within each group.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	false

4.33 Parameter dmaLogicInstance_enHaltAfterError

Vendor specific:

DMA_CR[HOE] for eDMA2 instances or DMA_CSR[HAE] for eDMA3 instances.

Halt On/After Error.

0 - Normal operation.

1 - Any error will cause the HALT bit to be set.

Subsequently, all service requests will be ignored until the HALT bit is cleared.

Note: Implementation Specific Parameter.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	false

4.34 Parameter dmaLogicInstance_enChLinking

Vendor specific:

DMA_CR[GCLC].

Global Channel Linking Control.

0 - Channel linking is disabled for all channels.

1 - Channel linking is available and controlled by each channel's link settings.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	false

4.35 Container dmaLogicChannel_Type

Vendor specific:

Logic Channel Configuration.

Included subcontainers:

- dmaLogicChannel_ConfigType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	16
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE

4.36 Parameter dmaLogicChannel_LogicName

Vendor specific:

Logic Channel Name.

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1

Property	Value
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	DMA_LOGIC_CH_0

4.37 Parameter dmaLogicChannel_HwInstId

Vendor specific:

Select the Hardware DMA Instance.

NOTE: This is an Implementation Specific Parameter.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_HW_INST_0
literals	['DMA_IP_HW_INST_0']

4.38 Parameter dmaLogicChannel_HwChId

Vendor specific:

Select the physical eDMA Channel.

NOTE: This is an Implementation Specific Parameter.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_HW_CH_0
literals	['DMA_IP_HW_CH_0', 'DMA_IP_HW_CH_1', 'DMA_IP_HW_CH_↩ 2', 'DMA_IP_HW_CH_3', 'DMA_IP_HW_CH_4', 'DMA_IP_HW_CH_↩ 5', 'DMA_IP_HW_CH_6', 'DMA_IP_HW_CH_7', 'DMA_IP_HW_CH_↩ 8', 'DMA_IP_HW_CH_9', 'DMA_IP_HW_CH_10', 'DMA_IP_HW_CH_↩ 11', 'DMA_IP_HW_CH_12', 'DMA_IP_HW_CH_13', 'DMA_IP_HW_C↩ H_14', 'DMA_IP_HW_CH_15']

4.39 Parameter dmaLogicChannel_InterruptCallback

Vendor specific:

User callback function to report that the transfer is half or complete depending on configuration.

NOTE: Use NULL_PTR w/o quotes. If the used string is different from NULL_PTR it will be used as the configured function name.

Property	Value
type	ECUC-FUNCTION-NAME-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	NULL_PTR

4.40 Parameter dmaLogicChannel_ErrorInterruptCallback

Vendor specific:

User callback function

NOTE: Use NULL_PTR w/o quotes. If the used string is different from NULL_PTR it will be used as the configured function name.

Property	Value
type	ECUC-FUNCTION-NAME-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	NULL_PTR

4.41 Parameter dmaLogicChannel_EnableGlobalConfig

Vendor specific: Enable and allocate memory for Global Configuration. Global Configuration can be configured during generation time or during runtime.

Note: If the check box is enabled, then memory space is allocated for the configuration.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.42 Parameter dmaLogicChannel_EnableTransferConfig

Vendor specific: Enable and allocate memory for Transfer Configuration. Transfer Configuration can be configured during generation time or during runtime.

Note: If the check box is enabled, then memory space is allocated for the configuration.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.43 Parameter dmaLogicChannel_EnableScatterGather

Vendor specific: Enable and allocate memory for ScatterGather Transfer Mode.

The ScatterGather Transfer Mode shall allocate memory for each Element, comprised of: Element Linkage and Element Software TCD.

The Element allocation can be done only in the configurator.

The Element Configuration can be further enabled for each individual element.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.44 Container dmaLogicChannel_ConfigType

Vendor specific: Logic Channel Configuration.

Included subcontainers:

- dmaLogicChannel_GlobalConfigType
- dmaLogicChannel_TransferConfigType
- dmaLogicChannel_ScatterGatherConfigType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.45 Container dmaLogicChannel_GlobalConfigType

Vendor specific:

Logic Channel Global Configuration.

Included subcontainers:

- dmaLogicChannelConfig_GlobalRequestType
- dmaLogicChannelConfig_GlobalInterruptType
- dmaLogicChannelConfig_GlobalPriorityType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.46 Container dmaLogicChannelConfig_GlobalRequestType

Vendor specific:

TCD Request Control.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.47 Parameter dmaGlobalRequest_enDmamuxTrigger

Vendor specific: Enable the Dma Channel Mux Trigger.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.48 Parameter dmaGlobalRequest_enDmamuxSource

Vendor specific: Enable the Dma Channel Mux Source.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.49 Parameter dmaGlobalRequest_Dmamux0HwRequest

Vendor specific: DMAMUX0 Source

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_REQ_MUX0_DISABLED

Property	Value
literals	['DMA_IP_REQ_MUX0_DISABLED', 'DMA_IP_REQ_MUX0_ENET_↩ TIMER_CH0_CH3', 'DMA_IP_REQ_MUX0_LPUART0_RX', 'DMA_IP↩ _REQ_MUX0_LPUART0_TX', 'DMA_IP_REQ_MUX0_LPUART1_RX', 'DMA_IP_REQ_MUX0_LPUART1_TX', 'DMA_IP_REQ_MUX0_LPU↩ ART2_RX', 'DMA_IP_REQ_MUX0_LPUART2_TX', 'DMA_IP_REQ↩ _MUX0_LPI2C1_RX', 'DMA_IP_REQ_MUX0_LPI2C1_TX', 'DMA_I↩ P_REQ_MUX0_FLEXIO_SHIFTER0', 'DMA_IP_REQ_MUX0_FLEXI↩ O_SHIFTER1', 'DMA_IP_REQ_MUX0_FLEXIO_SHIFTER2_SAI1_RX', 'DMA_IP_REQ_MUX0_FLEXIO_SHIFTER3_SAI1_TX', 'DMA_IP_RE↩ Q_MUX0_LPSPI0_RX', 'DMA_IP_REQ_MUX0_LPSPI0_TX', 'DMA_I↩ P_REQ_MUX0_LPSPI1_RX', 'DMA_IP_REQ_MUX0_LPSPI1_TX', 'D↩ MA_IP_REQ_MUX0_LPSPI2_RX', 'DMA_IP_REQ_MUX0_LPSPI2_TX', 'DMA_IP_REQ_MUX0_FTM1_CHANNEL_0', 'DMA_IP_REQ_MUX0↩ _FTM1_CHANNEL_1', 'DMA_IP_REQ_MUX0_FTM1_CHANNEL_2', 'DMA_IP_REQ_MUX0_FTM1_CHANNEL_3', 'DMA_IP_REQ_MUX0↩ _FTM1_CHANNEL_4', 'DMA_IP_REQ_MUX0_FTM1_CHANNEL_5', 'DMA_IP_REQ_MUX0_FTM1_CHANNEL_6', 'DMA_IP_REQ_MUX0↩ _FTM1_CHANNEL_7', 'DMA_IP_REQ_MUX0_FTM2_CHANNEL_0', 'DMA_IP_REQ_MUX0_FTM2_CHANNEL_1', 'DMA_IP_REQ_MUX0↩ _FTM2_CHANNEL_2', 'DMA_IP_REQ_MUX0_FTM2_CHANNEL_3', 'DMA_IP_REQ_MUX0_FTM2_CHANNEL_4', 'DMA_IP_REQ_MUX0↩ _FTM2_CHANNEL_5', 'DMA_IP_REQ_MUX0_FTM2_CHANNEL_6', 'DMA_IP_REQ_MUX0_FTM2_CHANNEL_7', 'DMA_IP_REQ_MUX0↩ _FTM0_OR_CH0_CH7', 'DMA_IP_REQ_MUX0_FTM3_OR_CH0_CH7', 'DMA_IP_REQ_MUX0_FTM4_OR_CH0_CH7', 'DMA_IP_REQ_MUX0↩ _FTM5_OR_CH0_CH7', 'DMA_IP_REQ_MUX0_FTM6_OR_CH0_CH7', 'DMA_IP_REQ_MUX0_FTM7_OR_CH0_CH7', 'DMA_IP_REQ_MUX0↩ _ADC0', 'DMA_IP_REQ_MUX0_ADC1', 'DMA_IP_REQ_MUX0_LPI2↩ C0_RX', 'DMA_IP_REQ_MUX0_LPI2C0_TX', 'DMA_IP_REQ_MUX0↩ _PDB0', 'DMA_IP_REQ_MUX0_PDB1', 'DMA_IP_REQ_MUX0_CMP0', 'DMA_IP_REQ_MUX0_PORTA', 'DMA_IP_REQ_MUX0_PORTB', 'DMA_IP_REQ_MUX0_PORTC', 'DMA_IP_REQ_MUX0_PORTD', 'D↩ MA_IP_REQ_MUX0_PORTE', 'DMA_IP_REQ_MUX0_FLEXCAN0', 'D↩ MA_IP_REQ_MUX0_FLEXCAN1', 'DMA_IP_REQ_MUX0_FLEXCAN2', 'DMA_IP_REQ_MUX0_SAI0_RX', 'DMA_IP_REQ_MUX0_SAI0_TX', 'DMA_IP_REQ_MUX0_LPTMR0', 'DMA_IP_REQ_MUX0_QUADSPI_↩ RX', 'DMA_IP_REQ_MUX0_QUADSPI_TX', 'DMA_IP_REQ_MUX0_↩ ALWAYS_ON0', 'DMA_IP_REQ_MUX0_ALWAYS_ON1']

4.50 Parameter dmaGlobalRequest_enDmaRequest

Vendor specific: Enable the Dma Channel Hardware Request.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1

Property	Value
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.51 Container dmaLogicChannelConfig_GlobalInterruptType

Vendor specific:

TCD Global Interrupt.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.52 Parameter dmaGlobalInterrupt_enDmaErrorInterrupt

Vendor specific: Enable the Dma Channel Error Interrupt.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE

Property	Value
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.53 Container dmaLogicChannelConfig_GlobalPriorityType

Vendor specific:

TCD Global Interrupt.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.54 Parameter dmaGlobalPriority_LevelPriority

Vendor specific: Set the Dma Channel Level Priority.

Note:

- If you want to change this value, you must Enable Global Config on "Logic Channel Configuration" tag.

- When have larger than one configured channel, the selected priority shall be from the pool of the configured channels, maintaining priority uniqueness. Ex: the user configures 3 channels: 0, 5, 15, by default the channel priority: 0-0, 5-5, 15-15. But the user wants to changes their channel priorities, the value only is selected one of 3 values(0, 5, 15) and they must be unique.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A

Property	Value
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_LEVEL_PRIO0
literals	['DMA_IP_LEVEL_PRIO0', 'DMA_IP_LEVEL_PRIO1', 'DMA_IP_LEV↩EL_PRIO2', 'DMA_IP_LEVEL_PRIO3', 'DMA_IP_LEVEL_PRIO4', 'DM↩A_IP_LEVEL_PRIO5', 'DMA_IP_LEVEL_PRIO6', 'DMA_IP_LEVEL_P↩RIO7', 'DMA_IP_LEVEL_PRIO8', 'DMA_IP_LEVEL_PRIO9', 'DMA_IP↩_LEVEL_PRIO10', 'DMA_IP_LEVEL_PRIO11', 'DMA_IP_LEVEL_PRI↩O12', 'DMA_IP_LEVEL_PRIO13', 'DMA_IP_LEVEL_PRIO14', 'DMA_I↩P_LEVEL_PRIO15']

4.55 Parameter dmaGlobalPriority_enPreemption

Vendor specific: Enable the Dma Channel Preemption.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.56 Parameter dmaGlobalPriority_disPreempt

Vendor specific: Disable the Dma Channel Preempt.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1

Property	Value
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.57 Container dmaLogicChannel_TransferConfigType

Vendor specific:

Logic Channel Transfer Configuration.

Included subcontainers:

- dmaLogicChannelConfig_TransferControlType
- dmaLogicChannelConfig_TransferSourceType
- dmaLogicChannelConfig_TransferDestinationType
- dmaLogicChannelConfig_TransferMinorLoopType
- dmaLogicChannelConfig_TransferMajorLoopType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.58 Container dmaLogicChannelConfig_TransferControlType

Vendor specific:

TCD Global Interrupt.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.59 Parameter dmaLogicChannelConfig_enStart

Vendor specific: Enable the Dma Channel start service request (software request).

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.60 Parameter dmaLogicChannelConfig_enDmaMajorInterrupt

Vendor specific: Enable the Dma Channel major interrupt.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.61 Parameter dmaLogicChannelConfig_enDmaHalfMajorInterrupt

Vendor specific: Enable the Dma Channel half major interrupt.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.62 Parameter dmaLogicChannelConfig_disDmaAutoHwReq

Vendor specific: Disable the Dma Channel automatic request.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.63 Parameter dmaLogicChannelConfig_bandwidthControl

Vendor specific: Set the Dma Channel bandwidth control.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_BWC_ENGINE_NO_STALL
literals	['DMA_IP_BWC_ENGINE_NO_STALL', 'DMA_IP_BWC_ENGINE_4C↩ YCLE_STALL', 'DMA_IP_BWC_ENGINE_8CYCLE_STALL']

4.64 Parameter dmaLogicChannelConfig_ScatterGatherAddressType

Vendor specific: ScatterGather Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0U

4.65 Parameter dmaLogicChannelConfig_DestinationStoreAddressType

Vendor specific: Destination Store Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false

Property	Value
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0U

4.66 Container dmaLogicChannelConfig_TransferSourceType

Vendor specific: Transfer Source

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.67 Parameter dmaLogicChannelConfig_SourceAddressType

Vendor specific: Source Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0

4.68 Parameter dmaLogicChannelConfig_SourceSignedOffsetType

Vendor specific: Set the Dma Channel source signed offset value.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	32767
min	-32767

4.69 Parameter dmaLogicChannelConfig_SourceLastAddressAdjustmentType

Vendor specific: Set the Dma Channel source signed last address adjustment.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	2147483647
min	-2147483647

4.70 Parameter dmaTransferConfig_TransferSizeType

Vendor specific: Set the Dma Channel source transfer size.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_TRANSFER_SIZE_1_BYTE
literals	['DMA_IP_TRANSFER_SIZE_1_BYTE', 'DMA_IP_TRANSFER_SIZE_↩ 2_BYTE', 'DMA_IP_TRANSFER_SIZE_4_BYTE', 'DMA_IP_TRANSFE↩ R_SIZE_16_BYTE', 'DMA_IP_TRANSFER_SIZE_32_BYTE']

4.71 Parameter dmaLogicChannelConfig_SourceModuloType

Vendor specific: Set the Dma Channel source modulo.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	31
min	0

4.72 Container dmaLogicChannelConfig_TransferDestinationType

Vendor specific: Transfer Destination

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.73 Parameter dmaLogicChannelConfig_DestinationAddressType

Vendor specific: Destination Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0

4.74 Parameter dmaLogicChannelConfig_DestinationSignedOffsetType

Vendor specific: Set the Dma Channel destination signed offset value.

Property	Value
type	ECUC-INTEGER-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	32767
min	-32767

4.75 Parameter dmaLogicChannelConfig_DestinationLastAddressAdjustmentType

Vendor specific: Set the Dma Channel destination signed last address adjustment.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	2147483647
min	-2147483647

4.76 Parameter dmaTransferConfig_TransferSizeType

Vendor specific: Set the Dma Channel destination transfer size.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_TRANSFER_SIZE_1_BYTE
literals	['DMA_IP_TRANSFER_SIZE_1_BYTE', 'DMA_IP_TRANSFER_SIZE_↩ 2_BYTE', 'DMA_IP_TRANSFER_SIZE_4_BYTE', 'DMA_IP_TRANSFE↩ R_SIZE_16_BYTE', 'DMA_IP_TRANSFER_SIZE_32_BYTE']

4.77 Parameter dmaLogicChannelConfig_DestinationModuloType

Vendor specific: Set the Dma Channel destination modulo.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	31
min	0

4.78 Container dmaLogicChannelConfig_TransferMinorLoopType

Vendor specific: Transfer Minor Loop

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.79 Parameter dmaLogicChannelConfig_enSourceOffset

Vendor specific: Enable the Dma Channel minor loop source offset.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.80 Parameter dmaLogicChannelConfig_enDestinationOffset

Vendor specific: Enable the Dma Channel minor loop destination offset.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.81 Parameter dmaLogicChannelConfig_OffsetValueType

Vendor specific: Set the Dma Channel minor loop signed offset.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	1048575
min	-1048575

4.82 Parameter dmaLogicChannelConfig_enMinorLoopLinkCh

Vendor specific: Enable the Dma Channel minor loop logic channel linking.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.83 Parameter dmaLogicChannelConfig_MinorLoopSizeType

Vendor specific: Set the Dma Channel minor loop transfer size.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	1073741823
min	0

4.84 Reference dynamic_dmaLogicChannelConfig_MinorLoopLink↩ ChValueType

Vendor specific: Set the Dma Channel minor loop logic channel link.

Property	Value
type	ECUC-REFERENCE-DEF
origin	NXP
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
requiresSymbolicNameValue	true
destination	/AUTOSAR/EcucDefs/Mcl/MclConfig/dmaLogicChannel_Type

4.85 Container dmaLogicChannelConfig_TransferMajorLoopType

Vendor specific: Transfer Major Loop

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.86 Parameter dmaLogicChannelConfig_enMajorLoopLinkCh

Vendor specific: Enable the Dma Channel major loop logic channel linking.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.87 Parameter dmaLogicChannelConfig_MajorLoopCountType

Vendor specific: Sets the Dma Channel major loop count.

If minor loop channel linking is enabled, the major loop count limit is between 0 and 511.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE

Property	Value
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	1
max	32767
min	0

4.88 Reference dynamic_dmaLogicChannelConfig_MajorLoopLink↩ ChValueType

Vendor specific: Set the Dma Channel major loop logic channel link.

Property	Value
type	ECUC-REFERENCE-DEF
origin	NXP
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
requiresSymbolicNameValue	true
destination	/AUTOSAR/EcucDefs/Mcl/MclConfig/dmaLogicChannel_Type

4.89 Container dmaLogicChannel_ScatterGatherConfigType

Vendor specific:

Logic Channel ScatterGather Configuration.

Included subcontainers:

- dmaLogicChannelConfig_ScatterGatherArrayType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.90 Container dmaLogicChannelConfig_ScatterGatherArrayType

Vendor specific: Logic Channel ScatterGather Configuration.

Included subcontainers:

- dmaLogicChannelConfig_ScatterGatherElementConfigType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	256
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD

4.91 Container dmaLogicChannelConfig_ScatterGatherElementConfigType

Vendor specific: Element

Included subcontainers:

- dmaLogicChannelConfig_TransferControlType
- dmaLogicChannelConfig_TransferSourceType
- dmaLogicChannelConfig_TransferDestinationType
- dmaLogicChannelConfig_TransferMinorLoopType
- dmaLogicChannelConfig_TransferMajorLoopType

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.92 Parameter dmaLogicChannelConfig_ScatterGatherElementNameType

Vendor specific: Element Name

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0_SGA_ELEMENT_0

4.93 Parameter dmaLogicChannelConfig_LastElementLink_ScatterGatherType

Vendor specific: For non-circular lists, the last element shall have this checkbox set.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.94 Parameter dmaLogicChannelConfig_enScatterGatherConfig

Vendor specific: Enable Scatter/Gather Configuration

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.95 Reference dynamic_dmaLogicChannelConfig_BasicElement↩ Link_ScatterGatherType

Vendor specific: Element Link. Elements shall be part of the same Logic Channel.

Property	Value
type	ECUC-REFERENCE-DEF
origin	NXP
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
requiresSymbolicNameValue	true
destination	/AUTOSAR/EcucDefs/Mcl/MclConfig/dmaLogicChannel_Type/dmaLogic↩ Channel_ConfigType/dmaLogicChannel_ScatterGatherConfigType/dma↩ LogicChannelConfig_ScatterGatherArrayType

4.96 Container dmaLogicChannelConfig_TransferControlType

Vendor specific:

TCD Global Interrupt.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.97 Parameter dmaLogicChannelConfig_enStart

Vendor specific: Enable the Dma Channel start service request (software request).

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.98 Parameter dmaLogicChannelConfig_enDmaMajorInterrupt

Vendor specific: Enable the Dma Channel major interrupt.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.99 Parameter dmaLogicChannelConfig_enDmaHalfMajorInterrupt

Vendor specific: Enable the Dma Channel half major interrupt.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.100 Parameter dmaLogicChannelConfig_disDmaAutoHwReq

Vendor specific: Disable the Dma Channel automatic request.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.101 Parameter dmaLogicChannelConfig_bandwidthControl

Vendor specific: Set the Dma Channel bandwidth control.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_BWC_ENGINE_NO_STALL
literals	['DMA_IP_BWC_ENGINE_NO_STALL', 'DMA_IP_BWC_ENGINE_4C↩ YCLE_STALL', 'DMA_IP_BWC_ENGINE_8CYCLE_STALL']

4.102 Parameter dmaLogicChannelConfig_ScatterGatherAddressType

Vendor specific: ScatterGather Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0U

4.103 Parameter dmaLogicChannelConfig_DestinationStoreAddressType

Vendor specific: Destination Store Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0U

4.104 Container dmaLogicChannelConfig_TransferSourceType

Vendor specific: Transfer Source

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.105 Parameter dmaLogicChannelConfig_SourceAddressType

Vendor specific: Source Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true

Property	Value
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0

4.106 Parameter dmaLogicChannelConfig_SourceSignedOffsetType

Vendor specific: Set the Dma Channel source signed offset value.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	32767
min	-32767

4.107 Parameter dmaLogicChannelConfig_SourceLastAddressAdjustmentType

Vendor specific: Set the Dma Channel source signed last address adjustment.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD

Property	Value
defaultValue	0
max	2147483647
min	-2147483647

4.108 Parameter dmaTransferConfig_TransferSizeType

Vendor specific: Set the Dma Channel source transfer size.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_TRANSFER_SIZE_1_BYTE
literals	['DMA_IP_TRANSFER_SIZE_1_BYTE', 'DMA_IP_TRANSFER_SIZE_↩ 2_BYTE', 'DMA_IP_TRANSFER_SIZE_4_BYTE', 'DMA_IP_TRANSFE↩ R_SIZE_16_BYTE', 'DMA_IP_TRANSFER_SIZE_32_BYTE']

4.109 Parameter dmaLogicChannelConfig_SourceModuloType

Vendor specific: Set the Dma Channel source modulo.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0

Property	Value
max	31
min	0

4.110 Container dmaLogicChannelConfig_TransferDestinationType

Vendor specific: Transfer Destination

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.111 Parameter dmaLogicChannelConfig_DestinationAddressType

Vendor specific: Destination Address

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0

4.112 Parameter dmaLogicChannelConfig_DestinationSignedOffsetType

Vendor specific: Set the Dma Channel destination signed offset value.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	32767
min	-32767

4.113 Parameter dmaLogicChannelConfig_DestinationLastAddressAdjustmentType

Vendor specific: Set the Dma Channel destination signed last address adjustment.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	2147483647
min	-2147483647

4.114 Parameter dmaTransferConfig_TransferSizeType

Vendor specific: Set the Dma Channel destination transfer size.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	DMA_IP_TRANSFER_SIZE_1_BYTE
literals	['DMA_IP_TRANSFER_SIZE_1_BYTE', 'DMA_IP_TRANSFER_SIZE_↩ 2_BYTE', 'DMA_IP_TRANSFER_SIZE_4_BYTE', 'DMA_IP_TRANSFE↩ R_SIZE_16_BYTE', 'DMA_IP_TRANSFER_SIZE_32_BYTE']

4.115 Parameter dmaLogicChannelConfig_DestinationModuloType

Vendor specific: Set the Dma Channel destination modulo.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	31
min	0

4.116 Container dmaLogicChannelConfig_TransferMinorLoopType

Vendor specific: Transfer Minor Loop

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.117 Parameter dmaLogicChannelConfig_enSourceOffset

Vendor specific: Enable the Dma Channel minor loop source offset.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.118 Parameter dmaLogicChannelConfig_enDestinationOffset

Vendor specific: Enable the Dma Channel minor loop destination offset.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.119 Parameter dmaLogicChannelConfig_OffsetValueType

Vendor specific: Set the Dma Channel minor loop signed offset.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	1048575
min	-1048575

4.120 Parameter dmaLogicChannelConfig_enMinorLoopLinkCh

Vendor specific: Enable the Dma Channel minor loop logic channel linking.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1

Property	Value
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.121 Parameter dmaLogicChannelConfig_MinorLoopSizeType

Vendor specific: Set the Dma Channel minor loop transfer size.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	0
max	1073741823
min	0

4.122 Reference dynamic_dmaLogicChannelConfig_MinorLoopLink↩ ChValueType

Vendor specific: Set the Dma Channel minor loop logic channel link.

Property	Value
type	ECUC-REFERENCE-DEF
origin	NXP
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE

Property	Value
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
requiresSymbolicNameValue	true
destination	/AUTOSAR/EcucDefs/Mcl/MclConfig/dmaLogicChannel_Type

4.123 Container dmaLogicChannelConfig_TransferMajorLoopType

Vendor specific: Transfer Major Loop

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.124 Parameter dmaLogicChannelConfig_enMajorLoopLinkCh

Vendor specific: Enable the Dma Channel major loop logic channel linking.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	false

4.125 Parameter dmaLogicChannelConfig_MajorLoopCountType

Vendor specific: Set the Dma Channel major loop count.

If minor loop channel linking is enabled, the major loop count limit is between 0 and 511.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD
defaultValue	1
max	32767
min	0

4.126 Reference dynamic_dmaLogicChannelConfig_MajorLoopLink↩ ChValueType

Vendor specific: Set the Dma Channel major loop logic channel link.

Property	Value
type	ECUC-REFERENCE-DEF
origin	NXP
lowerMultiplicity	0
upperMultiplicity	1
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
postBuildVariantValue	false
valueConfigClasses	VARIANT-POST-BUILD: POST-BUILD
	VARIANT-PRE-COMPILE: PRE-COMPILE
requiresSymbolicNameValue	true
destination	/AUTOSAR/EcucDefs/Mcl/MclConfig/dmaLogicChannel_Type

4.127 Container trgmuxLogicGroup

List of Logic Trigger Groups.

Included subcontainers:

- trgmuxLogicTrigger

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	25
postBuildVariantMultiplicity	true
multiplicityConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE

4.128 Parameter trgmuxLogicGroup_Name

Logic Trigger Group.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	TRGMUX_IP_DMA
literals	['TRGMUX_IP_DMA', 'TRGMUX_IP_EXTOUT0', 'TRGMUX_IP_EXT↩ OUT1', 'TRGMUX_IP_ADC0', 'TRGMUX_IP_ADC1', 'TRGMUX_IP_C↩ MP0', 'TRGMUX_IP_FTM0', 'TRGMUX_IP_FTM1', 'TRGMUX_IP_FT↩ M2', 'TRGMUX_IP_FTM3', 'TRGMUX_IP_PDB0', 'TRGMUX_IP_PDB1', 'TRGMUX_IP_FLEXIO', 'TRGMUX_IP_LPIT0', 'TRGMUX_IP_LPUAR↩ T0', 'TRGMUX_IP_LPUART1', 'TRGMUX_IP_LPI2C0', 'TRGMUX_IP_↩ LPSPI0', 'TRGMUX_IP_LPSPI1', 'TRGMUX_IP_LPTMR0', 'TRGMUX_↩ IP_LPI2C1', 'TRGMUX_IP_FTM4', 'TRGMUX_IP_FTM5', 'TRGMUX_I↩ P_FTM6', 'TRGMUX_IP_FTM7']

4.129 Parameter trgmuxLogicGroup_Lock

Logic Trigger Lock.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	false

4.130 Container trgmuxLogicTrigger

List of Logic Triggers.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	58
postBuildVariantMultiplicity	true
multiplicityConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE

4.131 Parameter trgmuxLogicTrigger_Name

Logic Trigger Name.

Property	Value
type	ECUC-STRING-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	TRGMUX_LOGIC_GROUP_0_TRIGGER↩ _0

4.132 Parameter trgmuxLogicTrigger_Output

Logic Trigger Output.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	TRGMUX_IP_OUTPUT_FLEXIO_TRG_TIM0

Property	Value
literals	['TRGMUX_IP_OUTPUT_DMA_CH0', 'TRGMUX_IP_OUTPUT_DMA_CH1', 'TRGMUX_IP_OUTPUT_DMA_CH2', 'TRGMUX_IP_OUTPUT_DMA_CH3', 'TRGMUX_IP_OUTPUT_EXTOUT0_TRGMUX_OUT0', 'TRGMUX_IP_OUTPUT_EXTOUT0_TRGMUX_OUT1', 'TRGMUX_IP_OUTPUT_EXTOUT0_TRGMUX_OUT2', 'TRGMUX_IP_OUTPUT_EXTOUT0_TRGMUX_OUT3', 'TRGMUX_IP_OUTPUT_EXTOUT1_TRGMUX_OUT4', 'TRGMUX_IP_OUTPUT_EXTOUT1_TRGMUX_OUT5', 'TRGMUX_IP_OUTPUT_EXTOUT1_TRGMUX_OUT6', 'TRGMUX_IP_OUTPUT_EXTOUT1_TRGMUX_OUT7', 'TRGMUX_IP_OUTPUT_ADC0_ADHWT_TRIG_0', 'TRGMUX_IP_OUTPUT_ADC0_ADHWT_TRIG_1', 'TRGMUX_IP_OUTPUT_ADC0_ADHWT_TRIG_2', 'TRGMUX_IP_OUTPUT_ADC0_ADHWT_TRIG_3', 'TRGMUX_IP_OUTPUT_ADC1_ADHWT_TRIG_0', 'TRGMUX_IP_OUTPUT_ADC1_ADHWT_TRIG_1', 'TRGMUX_IP_OUTPUT_ADC1_ADHWT_TRIG_2', 'TRGMUX_IP_OUTPUT_ADC1_ADHWT_TRIG_3', 'TRGMUX_IP_OUTPUT_CMP0_SAMPLE_INPUT', 'TRGMUX_IP_OUTPUT_FTM0_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM0_FAULT0', 'TRGMUX_IP_OUTPUT_FTM0_FAULT1', 'TRGMUX_IP_OUTPUT_FTM0_FAULT2', 'TRGMUX_IP_OUTPUT_FTM1_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM1_FAULT0', 'TRGMUX_IP_OUTPUT_FTM1_FAULT1', 'TRGMUX_IP_OUTPUT_FTM1_FAULT2', 'TRGMUX_IP_OUTPUT_FTM2_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM2_FAULT0', 'TRGMUX_IP_OUTPUT_FTM2_FAULT1', 'TRGMUX_IP_OUTPUT_FTM2_FAULT2', 'TRGMUX_IP_OUTPUT_FTM3_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM3_FAULT0', 'TRGMUX_IP_OUTPUT_FTM3_FAULT1', 'TRGMUX_IP_OUTPUT_FTM3_FAULT2', 'TRGMUX_IP_OUTPUT_PDB0_TRIGGER_IN0', 'TRGMUX_IP_OUTPUT_PDB1_TRIGGER_IN0', 'TRGMUX_IP_OUTPUT_FLEXIO_TRG_TIM0', 'TRGMUX_IP_OUTPUT_FLEXIO_TRG_TIM1', 'TRGMUX_IP_OUTPUT_FLEXIO_TRG_TIM2', 'TRGMUX_IP_OUTPUT_FLEXIO_TRG_TIM3', 'TRGMUX_IP_OUTPUT_LPIT0_TRG_CH0', 'TRGMUX_IP_OUTPUT_LPIT0_TRG_CH1', 'TRGMUX_IP_OUTPUT_LPIT0_TRG_CH2', 'TRGMUX_IP_OUTPUT_LPIT0_TRG_CH3', 'TRGMUX_IP_OUTPUT_LPUART0_TRG', 'TRGMUX_IP_OUTPUT_LPUART1_TRG', 'TRGMUX_IP_OUTPUT_LPI2C0_TRG', 'TRGMUX_IP_OUTPUT_LPSPI0_TRG', 'TRGMUX_IP_OUTPUT_LPSPI1_TRG', 'TRGMUX_IP_OUTPUT_LPTMR0_ALT0', 'TRGMUX_IP_OUTPUT_LPI2C1_TRG', 'TRGMUX_IP_OUTPUT_FTM4_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM5_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM6_HWTRIG0', 'TRGMUX_IP_OUTPUT_FTM7_HWTRIG0']

4.133 Parameter trgmuxLogicTrigger_Input

Logic Trigger Input.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP

Property	Value
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-POST-BUILD: PRE-COMPILE
	VARIANT-PRE-COMPILE: PRE-COMPILE
defaultValue	TRGMUX_IP_INPUT_LOGIC0_VSS
literals	['TRGMUX_IP_INPUT_LOGIC0_VSS', 'TRGMUX_IP_INPUT_LOGIC1_VDD', 'TRGMUX_IP_INPUT_TRGMUX_IN0', 'TRGMUX_IP_INPUT_TRGMUX_IN1', 'TRGMUX_IP_INPUT_TRGMUX_IN2', 'TRGMUX_IP_INPUT_TRGMUX_IN3', 'TRGMUX_IP_INPUT_TRGMUX_IN4', 'TRGMUX_IP_INPUT_TRGMUX_IN5', 'TRGMUX_IP_INPUT_TRGMUX_IN6', 'TRGMUX_IP_INPUT_TRGMUX_IN7', 'TRGMUX_IP_INPUT_TRGMUX_IN8', 'TRGMUX_IP_INPUT_TRGMUX_IN9', 'TRGMUX_IP_INPUT_TRGMUX_IN10', 'TRGMUX_IP_INPUT_TRGMUX_IN11', 'TRGMUX_IP_INPUT_CMP0_OUT', 'TRGMUX_IP_INPUT_LPIT_CH0', 'TRGMUX_IP_INPUT_LPIT_CH1', 'TRGMUX_IP_INPUT_LPIT_CH2', 'TRGMUX_IP_INPUT_LPIT_CH3', 'TRGMUX_IP_INPUT_LPTMR0', 'TRGMUX_IP_INPUT_FTM0_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM0_EXT_TRIG', 'TRGMUX_IP_INPUT_FTM1_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM1_EXT_TRIG', 'TRGMUX_IP_INPUT_FTM2_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM2_EXT_TRIG', 'TRGMUX_IP_INPUT_FTM3_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM3_EXT_TRIG', 'TRGMUX_IP_INPUT_ADC0_COCO_0', 'TRGMUX_IP_INPUT_ADC0_COCO_1', 'TRGMUX_IP_INPUT_ADC1_COCO_0', 'TRGMUX_IP_INPUT_ADC1_COCO_1', 'TRGMUX_IP_INPUT_PDB0_ADCH0_TRIG', 'TRGMUX_IP_INPUT_PDB0_PULSE_OUT', 'TRGMUX_IP_INPUT_PDB1_ADCH0_TRIG', 'TRGMUX_IP_INPUT_PDB1_PULSE_OUT', 'TRGMUX_IP_INPUT_RTC_ALARM', 'TRGMUX_IP_INPUT_RTC_SECOND', 'TRGMUX_IP_INPUT_FLEXIO_TRIG0', 'TRGMUX_IP_INPUT_FLEXIO_TRIG1', 'TRGMUX_IP_INPUT_FLEXIO_TRIG2', 'TRGMUX_IP_INPUT_FLEXIO_TRIG3', 'TRGMUX_IP_INPUT_LPUART0_RX_DATA', 'TRGMUX_IP_INPUT_LPUART0_TX_DATA', 'TRGMUX_IP_INPUT_LPUART0_RX_IDLE', 'TRGMUX_IP_INPUT_LPUART1_RX_DATA', 'TRGMUX_IP_INPUT_LPUART1_TX_DATA', 'TRGMUX_IP_INPUT_LPUART1_RX_IDLE', 'TRGMUX_IP_INPUT_LPI2C0_MASTER_TRIG', 'TRGMUX_IP_INPUT_LPI2C0_SLAVE_TRIG', 'TRGMUX_IP_INPUT_LPSPI0_FRAME', 'TRGMUX_IP_INPUT_LPSPI0_RX_DATA', 'TRGMUX_IP_INPUT_LPSPI1_FRAME', 'TRGMUX_IP_INPUT_LPSPI1_RX_DATA', 'TRGMUX_IP_INPUT_SIM_SW_TRIG', 'TRGMUX_IP_INPUT_LPI2C1_MASTER_TRIG', 'TRGMUX_IP_INPUT_LPI2C1_SLAVE_TRIG', 'TRGMUX_IP_INPUT_FTM4_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM4_EXT_TRIG', 'TRGMUX_IP_INPUT_FTM5_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM5_EXT_TRIG', 'TRGMUX_IP_INPUT_FTM6_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM6_EXT_TRIG', 'TRGMUX_IP_INPUT_FTM7_INIT_TRIG', 'TRGMUX_IP_INPUT_FTM7_EXT_TRIG']

4.134 Container FlexioCommon

List of Flexio instances available on the platform.

Included subcontainers:

- FlexioMclLogicChannels

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	0
upperMultiplicity	8
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: POST-BUILD

4.135 Parameter FlexioMclInstances

Select one of the Flexio instance available on the platform.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	FLEXIO_0
literals	['FLEXIO_0']

4.136 Parameter FlexioDebugEnable

Enable Debug Mode

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.137 Container FlexioMclLogicChannels

Flexio Logic Channel Configuration

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	4
postBuildVariantMultiplicity	false
multiplicityConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE

4.138 Parameter FlexioMclChannelId

Select one of the Flexio channels available on the platform for selected instance.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

Property	Value
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	CHANNEL_0
literals	['CHANNEL_0', 'CHANNEL_1', 'CHANNEL_2', 'CHANNEL_3']

4.139 Parameter FlexioMclPinId

Select one of the Flexio pins available on the platform for selected instance.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	PIN_0
literals	['PIN_0', 'PIN_1', 'PIN_2', 'PIN_3', 'PIN_4', 'PIN_5', 'PIN_6', 'PIN_7']

4.140 Parameter FlexioMclAddPinEnable

Enable feature to select one more Flexio pin.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.141 Parameter FlexioMclAddPinId

Select one of the Flexio pins available on the platform for selected instance.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	PIN_1
literals	['PIN_0', 'PIN_1', 'PIN_2', 'PIN_3', 'PIN_4', 'PIN_5', 'PIN_6', 'PIN_7']

4.142 Parameter FlexioMclAddChannelEnable

Enable feature to select one more Flexio channel.

Property	Value
type	ECUC-BOOLEAN-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	false

4.143 Parameter FlexioMclAddChannelId

Select one of the Flexio channels available on the platform for selected instance.

Property	Value
type	ECUC-ENUMERATION-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	true
valueConfigClasses	VARIANT-PRE-COMPILE: PRE-COMPILE
	VARIANT-POST-BUILD: PRE-COMPILE
defaultValue	CHANNEL_0
literals	['CHANNEL_0', 'CHANNEL_1', 'CHANNEL_2', 'CHANNEL_3']

4.144 Container CommonPublishedInformation

Vendor specific:

Common container, aggregated by all modules. It contains published information about vendor and versions.

Included subcontainers:

- None

Property	Value
type	ECUC-PARAM-CONF-CONTAINER-DEF
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A

4.145 Parameter ArReleaseMajorVersion

Vendor specific:

Major version number of AUTOSAR specification on which the appropriate implementation is based on.

Property	Value
type	ECUC-INTEGER-PARAM-DEF

Property	Value
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	4
max	4
min	4

4.146 Parameter ArReleaseMinorVersion

Vendor specific:

Minor version number of AUTOSAR specification on which the appropriate implementation is based on.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	4
max	4
min	4

4.147 Parameter ArReleaseRevisionVersion

Vendor specific:

Revision version number of AUTOSAR specification on which the appropriate implementation is based on.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	0
max	0
min	0

4.148 Parameter ModuleId

Vendor specific:

Module ID of this module from Module List.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	255
max	255
min	255

4.149 Parameter SwMajorVersion

Vendor specific:

Major version number of the vendor specific implementation of the module. The numbering is vendor specific.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	1
max	1
min	1

4.150 Parameter SwMinorVersion

Vendor specific:

Minor version number of the vendor specific implementation of the module. The numbering is vendor specific.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	0
max	0
min	0

4.151 Parameter SwPatchVersion

Vendor specific:

Patch level version number of the vendor specific implementation of the module. The numbering is vendor specific.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	1
max	1
min	1

4.152 Parameter VendorId

Vendor specific:

Vendor ID of the dedicated implementation of this module according to the AUTOSAR vendor list.

Property	Value
type	ECUC-INTEGER-PARAM-DEF
origin	NXP
symbolicNameValue	false
lowerMultiplicity	1
upperMultiplicity	1
postBuildVariantMultiplicity	N/A
multiplicityConfigClasses	N/A
postBuildVariantValue	false
valueConfigClasses	VARIANT-PRE-COMPILE: PUBLISHED-INFORMATION
	VARIANT-POST-BUILD: PUBLISHED-INFORMATION
defaultValue	43
max	43
min	43

This chapter describes the Tresos configuration plug-in for the *driver* Driver. The most of the parameters are described below.

Chapter 5

Module Index

5.1 Software Specification

Here is a list of all modules:

Chapter 6

Module Documentation

6.1 CACHE IP Driver

6.1.1 Detailed Description

6.2 MCL Driver

6.2.1 Detailed Description

Data Structures

- struct Mcl_ConfigType

  This type contains the Mcl Configuration. *More...*

Macros

- #define MCL_DET_INIT

  API service ID for Mcl_Init function.
- #define MCL_DET_DEINIT

  API service ID for Mcl_DeInit function.
- #define MCL_E_UNINIT

  All API's having pointers as parameters shall return this error if called with with a NULL value.
- #define MCL_E_PARAM_POINTER

  All API's having pointers as parameters shall return this error if called with with a NULL value.
- #define MCL_E_INVALID_INSTANCE

  All API's called with wrong instance shall return this error.
- #define MCL_E_INVALID_CHANNEL

  All API's called with wrong channel shall return this error.
- #define MCL_E_INVALID_COMMAND

  All API's called with wrong instance shall return this error.
- #define MCL_E_INVALID_PARAMETER

  All API's called with wrong read parameter shall return this error.
- #define MCL_E_INVALID_STATE

  All API's called in wrong sequence shall return this error.
- #define MCL_E_INCONSISTENCY

  All API's called while hardware has error status shall return this error.
- #define MCL_E_TIMEOUT

  All API's called with a timeout value shall return this error if execution is not finished in the allocated timeframe.
- #define MCL_E_PROTECTED

  If DET error reporting is enabled, the MCL will check if registers are protected.
- #define MCL_E_INIT_FAILED

  If VariantPreCompile is used, the configuration pointer shall have a NULL_PTR value. If VariantPostBuild is used, the configuration pointer shall be different from NULL_PTR. And in case of violate will return MCL_E_INIT_↩ FAILED.

Enum Reference

- enum Mcl_ReturnType

  This type contains the Mcl Return Type.

Function Reference

- void Mcl_Init (const Mcl_ConfigType *const ConfigPtr)
  This function initializes the Mcl Driver.
- void Mcl_DeInit (void)
  This function deinitializes the Mcl Driver.

6.2.1.1 MISRA-C:2012 violations

6.2.2 Data Structure Documentation

6.2.2.1 struct Mcl_ConfigType

This type contains the Mcl Configuration.

The Mcl Configuration structure contains pointers to the Ip's configuration structure. Based on the available support, specific configurations shall be stored.

Definition at line 289 of file Mcl_Types.h.

6.2.3 Macro Definition Documentation

6.2.3.1 MCL_DET_INIT

```
#define MCL_DET_INIT
```

API service ID for Mcl_Init function.

Parameters used when raising an error/exception

Definition at line 155 of file CDD_Mcl.h.

6.2.3.2 MCL_DET_DEINIT

```
#define MCL_DET_DEINIT
```

API service ID for Mcl_DeInit function.

Parameters used when raising an error/exception

Definition at line 221 of file CDD_Mcl.h.

6.2.3.3 MCL_E_UNINIT

```
#define MCL_E_UNINIT
```

All API's having pointers as parameters shall return this error if called with with a NULL value.

Definition at line 303 of file CDD_Mcl.h.

6.2.3.4 MCL_E_PARAM_POINTER

```
#define MCL_E_PARAM_POINTER
```

All API's having pointers as parameters shall return this error if called with with a NULL value.

Definition at line 310 of file CDD_Mcl.h.

6.2.3.5 MCL_E_INVALID_INSTANCE

```
#define MCL_E_INVALID_INSTANCE
```

All API's called with wrong instance shall return this error.

Definition at line 316 of file CDD_Mcl.h.

6.2.3.6 MCL_E_INVALID_CHANNEL

```
#define MCL_E_INVALID_CHANNEL
```

All API's called with wrong channel shall return this error.

Definition at line 322 of file CDD_Mcl.h.

6.2.3.7 MCL_E_INVALID_COMMAND

```
#define MCL_E_INVALID_COMMAND
```

All API's called with wrong instance shall return this error.

Definition at line 328 of file CDD_Mcl.h.

6.2.3.8 MCL_E_INVALID_PARAMETER

```
#define MCL_E_INVALID_PARAMETER
```

All API's called with wrong read parameter shall return this error.

Definition at line 334 of file CDD_Mcl.h.

6.2.3.9 MCL_E_INVALID_STATE

```
#define MCL_E_INVALID_STATE
```

All API's called in wrong sequence shall return this error.

Definition at line 340 of file CDD_Mcl.h.

6.2.3.10 MCL_E_INCONSISTENCY

```
#define MCL_E_INCONSISTENCY
```

All API's called while hardware has error status shall return this error.

Definition at line 346 of file CDD_Mcl.h.

6.2.3.11 MCL_E_TIMEOUT

```
#define MCL_E_TIMEOUT
```

All API's called with a timeout value shall return this error if execution is not finished in the allocated timeframe.

Definition at line 353 of file CDD_Mcl.h.

6.2.3.12 MCL_E_PROTECTED

```
#define MCL_E_PROTECTED
```

If DET error reporting is enabled, the MCL will check if registers are protected.

Definition at line 359 of file CDD_Mcl.h.

6.2.3.13 MCL_E_INIT_FAILED

```
#define MCL_E_INIT_FAILED
```

If VariantPreCompile is used, the configuration pointer shall have a NULL_PTR value. If VariantPostBuild is used, the configuration pointer shall be different from NULL_PTR. And in case of violate will return MCL_E_INIT_↩ FAILED.

Definition at line 366 of file CDD_Mcl.h.

6.2.4 Enum Reference

6.2.4.1 Mcl_ReturnType

```
enum Mcl_ReturnType
```

This type contains the Mcl Return Type.

The Return Type give information for the execution of interfaces.

Definition at line 259 of file Mcl_Types.h.

6.2.5 Function Reference

6.2.5.1 Mcl_Init()

```
void Mcl_Init (
            const Mcl_ConfigType *const ConfigPtr )
```

This function initializes the Mcl Driver.

This service is a non reentrant function that shall initialize the Mcl driver. The initialization is applied for the enabled IPs, configured statically.

Parameters

in	*ConfigPtr*	Pointer to the configuration structure.

Returns

void

6.2.5.2 Mcl_DeInit()

```
void Mcl_DeInit (
             void  )
```

This function deinitializes the Mcl Driver.

This service is a non reentrant function that shall deinitialize the Mcl driver. The deinitialization is applied for the enabled IPs, configured statically.

Returns

void

6.3 DMA IP Driver

6.3.1 Detailed Description

6.4 FLEXIO IP Driver

6.4.1 Detailed Description

Enum Reference

- enum Flexio_Mcl_Ip_TimerPolarityType
- enum Flexio_Mcl_Ip_PinPolarityType
- enum Flexio_Mcl_Ip_PinConfigType
- enum Flexio_Mcl_Ip_TriggerPolarityType
- enum Flexio_Mcl_Ip_TriggerSourceType
- enum Flexio_Mcl_Ip_TimerModeType
- enum Flexio_Mcl_Ip_TimerOutputType
- enum Flexio_Mcl_Ip_TimerDecrementType
- enum Flexio_Mcl_Ip_TimerResetType
- enum Flexio_Mcl_Ip_TimerDisableType
- enum Flexio_Mcl_Ip_TimerEnableType
- enum Flexio_Mcl_Ip_TimerStopType
- enum Flexio_Mcl_Ip_TimerStartType

6.4.2 Enum Reference

6.4.2.1 Flexio_Mcl_Ip_TimerPolarityType

`enum Flexio_Mcl_Ip_TimerPolarityType`

Enumerator

FLEXIO_TIMER_POLARITY_POSEDGE	Shift on positive edge of Shift clock
FLEXIO_TIMER_POLARITY_NEGEDGE	Shift on negative edge of Shift clock

Definition at line 123 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.2 Flexio_Mcl_Ip_PinPolarityType

`enum Flexio_Mcl_Ip_PinPolarityType`

Enumerator

FLEXIO_PIN_POLARITY_HIGH	Pin is active high
FLEXIO_PIN_POLARITY_LOW	Pin is active low

Definition at line 131 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.3 Flexio_Mcl_Ip_PinConfigType

enum Flexio_Mcl_Ip_PinConfigType

Enumerator

FLEXIO_PIN_CONFIG_DISABLED	Shifter pin output disabled
FLEXIO_PIN_CONFIG_OPEN_DRAIN	Shifter pin open drain or bidirectional output enable
FLEXIO_PIN_CONFIG_BIDIR_OUTPUT	Shifter pin bidirectional output data
FLEXIO_PIN_CONFIG_OUTPUT	Shifter pin output

Definition at line 138 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.4 Flexio_Mcl_Ip_TriggerPolarityType

enum Flexio_Mcl_Ip_TriggerPolarityType

Enumerator

FLEXIO_TRIGGER_POLARITY_HIGH	Trigger is active high
FLEXIO_TRIGGER_POLARITY_LOW	Trigger is active low

Definition at line 171 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.5 Flexio_Mcl_Ip_TriggerSourceType

enum Flexio_Mcl_Ip_TriggerSourceType

Enumerator

FLEXIO_TRIGGER_SOURCE_EXTERNAL	External trigger selected
FLEXIO_TRIGGER_SOURCE_INTERNAL	Internal trigger selected

Definition at line 178 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.6 Flexio_Mcl_Ip_TimerModeType

enum Flexio_Mcl_Ip_TimerModeType

Enumerator

FLEXIO_TIMER_MODE_DISABLED	Timer Disabled.
FLEXIO_TIMER_MODE_8BIT_BAUD	Dual 8-bit counters baud/bit mode.
FLEXIO_TIMER_MODE_8BIT_PWM	Dual 8-bit counters PWM mode.
FLEXIO_TIMER_MODE_16BIT	Single 16-bit counter mode.
FLEXIO_TIMER_MODE_16BIT_DIS	Single 16-bit counter disable mode.
FLEXIO_TIMER_MODE_8BIT_DUAL	Dual 8-bit counters word mode.
FLEXIO_TIMER_MODE_8BIT_DUAL_PWM	Dual 8-bit counters PWM low mode.
FLEXIO_TIMER_16BIT_INPUT_CAPTURE_MODE	Single 16-bit input capture mode.

Definition at line 185 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.7 Flexio_Mcl_Ip_TimerOutputType

enum Flexio_Mcl_Ip_TimerOutputType

Enumerator

FLEXIO_TIMER_INITOUT_ONE	Timer output is logic one when enabled, unaffected by timer reset.
FLEXIO_TIMER_INITOUT_ZERO	Timer output is logic zero when enabled, unaffected by timer reset.
FLEXIO_TIMER_INITOUT_ONE_RESET	Timer output is logic one when enabled and on timer reset.
FLEXIO_TIMER_INITOUT_ZERO_RESET	Timer output is logic zero when enabled and on timer reset.

Definition at line 198 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.8 Flexio_Mcl_Ip_TimerDecrementType

enum Flexio_Mcl_Ip_TimerDecrementType

Enumerator

FLEXIO_TIMER_DECREMENT_CLK_SHIFT↩ _TMR	Decrement counter on FlexIO clock, Shift clock equals Timer output.
FLEXIO_TIMER_DECREMENT_TRG_SHIFT↩ _TMR	Decrement counter on Trigger input (both edges), Shift clock equals Timer output.
FLEXIO_TIMER_DECREMENT_PIN_SHIFT_↩ PIN	Decrement counter on Pin input (both edges), Shift clock equals Pin input.
FLEXIO_TIMER_DECREMENT_TRG_SHIFT↩ _TRG	Decrement counter on Trigger input (both edges), Shift clock equals Trigger input.

Definition at line 207 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.9 Flexio_Mcl_Ip_TimerResetType

enum Flexio_Mcl_Ip_TimerResetType

Enumerator

FLEXIO_TIMER_RESET_NEVER	Timer never reset.
FLEXIO_TIMER_RESET_PIN_OUT	Timer reset on Timer Pin equal to Timer Output.
FLEXIO_TIMER_RESET_TRG_OUT	Timer reset on Timer Trigger equal to Timer Output.
FLEXIO_TIMER_RESET_PIN_RISING	Timer reset on Timer Pin rising edge.
FLEXIO_TIMER_RESET_TRG_RISING	Timer reset on Trigger rising edge.
FLEXIO_TIMER_RESET_TRG_BOTH	Timer reset on Trigger rising or falling edge.

Definition at line 216 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.10 Flexio_Mcl_Ip_TimerDisableType

enum Flexio_Mcl_Ip_TimerDisableType

Enumerator

FLEXIO_TIMER_DISABLE_NEVER	Timer never disabled.
FLEXIO_TIMER_DISABLE_TIM_DISABLE	Timer disabled on Timer N-1 disable.
FLEXIO_TIMER_DISABLE_TIM_CMP	Timer disabled on Timer compare.
FLEXIO_TIMER_DISABLE_TIM_CMP_TRG_↩ LOW	Timer disabled on Timer compare and Trigger Low.
FLEXIO_TIMER_DISABLE_PIN	Timer disabled on Pin rising or falling edge.
FLEXIO_TIMER_DISABLE_PIN_TRG_HIGH	Timer disabled on Pin rising or falling edge provided Trigger is high.
FLEXIO_TIMER_DISABLE_TRG	Timer disabled on Trigger falling edge.

Definition at line 227 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.11 Flexio_Mcl_Ip_TimerEnableType

enum Flexio_Mcl_Ip_TimerEnableType

Enumerator

FLEXIO_TIMER_ENABLE_ALWAYS	Timer always enabled.
FLEXIO_TIMER_ENABLE_TIM_ENABLE	Timer enabled on Timer N-1 enable.
FLEXIO_TIMER_ENABLE_TRG_HIGH	Timer enabled on Trigger high.
FLEXIO_TIMER_ENABLE_TRG_PIN_HIGH	Timer enabled on Trigger high and Pin high.
FLEXIO_TIMER_ENABLE_PIN_POSEDGE	Timer enabled on Pin rising edge.
FLEXIO_TIMER_ENABLE_PIN_POSEDGE_TRG↩ _HIGH	Timer enabled on Pin rising edge and Trigger high.
FLEXIO_TIMER_ENABLE_TRG_POSEDGE	Timer enabled on Trigger rising edge.
FLEXIO_TIMER_ENABLE_TRG_EDGE	Timer enabled on Trigger rising or falling edge.

Definition at line 239 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.12 Flexio_Mcl_Ip_TimerStopType

enum Flexio_Mcl_Ip_TimerStopType

Enumerator

FLEXIO_TIMER_STOP_BIT_DISABLED	Stop bit disabled.
FLEXIO_TIMER_STOP_BIT_TIM_CMP	Stop bit is enabled on timer compare.
FLEXIO_TIMER_STOP_BIT_TIM_DIS	Stop bit is enabled on timer disable.
FLEXIO_TIMER_STOP_BIT_TIM_CMP_DIS	Stop bit is enabled on timer compare and disable.

Definition at line 252 of file Flexio_Mcl_Ip_HwAccess.h.

6.4.2.13 Flexio_Mcl_Ip_TimerStartType

enum Flexio_Mcl_Ip_TimerStartType

Enumerator

FLEXIO_TIMER_START_BIT_DISABLED	Start bit disabled.
FLEXIO_TIMER_START_BIT_ENABLED	Start bit enabled.

Definition at line 278 of file Flexio_Mcl_Ip_HwAccess.h.

6.5 FTM IP Driver

6.5.1 Detailed Description

6.6 TRGMUX IP Driver

6.6.1 Detailed Description

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