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REFERENCE MANUAL

Coaxlink

Coaxlink 10.3.1

PCI EXPRESS™

CoaXPress

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This documentation is provided with Coaxlink 10.3.1 (doc build 2052).

Contents

1. About This Document

1.1. Document Scope

This reference document lists all the GenICam features publicly exposed by the Coaxlink driver version 10.3.1

Unless specified, the features described in this document are applicable to all the Coaxlink products and their firmware variants supported by the Coaxlink Driver.

1.2. Document Changes

Coaxlink 10.3

The following topics were added:

- "PixelComponentCount" on page 196
- "FlatFieldCorrection Category " on page 232
- "FfcCoefficientPartitionBase" on page 232
- "FfcCoefficientPartitionSize" on page 232
- "FfcControl" on page 233
- "FfcBypass" on page 233
- "FfcCoefficientsValid" on page 234

The following topic was revised:

- "DelayToolDelayValue" on page 91

Previous Releases

2. System Module

Categorized features list of System module version 10.3.1.127

2.1. Root Category

SystemInformation

Feature Info

Module	Category Path	Type	Access
System	Root	Category	RW

Category Members

Refer to "SystemInformation Category " on the next page

InterfaceEnumeration

Feature Info

Module	Category Path	Type	Access
System	Root	Category	RW

Category Members

Refer to "InterfaceEnumeration Category " on page 20

2.2. SystemInformation Category

TLVendorName

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	String	Imposed: RO

Short Description

Name of the GenTL Producer vendor.

TLModelName

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	String	Imposed: RO

Short Description

Name of the GenTL Producer.

TLID

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	String	Imposed: RO

Short Description

Unique identifier of the GenTL.

TLVersion

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	String	Imposed: RO

Short Description

Vendor specific version string.

TLPath

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	String	Imposed: RO

Short Description

Full path to the GenTL Producer driver including name and extension.

TLType

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	Enumeration	Imposed: RO

Short Description

Identifies the transport layer technology of the GenTL Producer implementation.

Enumeration Values

- `CXP`: This enumeration value indicates CoaXPress transport layer technology.

GenTLVersionMajor

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	IntReg	RO

Register Port: TLPort

Short Description

Major version number of the GenTL specification the GenTL Producer implementation complies with.

GenTLVersionMinor

Feature Info

Module	Category Path	Type	Access
System	Root / SystemInformation	IntReg	RO

Register Port: TLPort

Short Description

Minor version number of the GenTL specification the GenTL Producer implementation complies with.

2.3. InterfaceEnumeration Category

InterfaceUpdateList

Feature Info

Module	Category Path	Type	Access
System	Root / InterfaceEnumeration	Command	RW

Short Description

Updates the internal interface list.

InterfaceSelector

Feature Info

Module	Category Path	Type	Access
System	Root / InterfaceEnumeration	Integer	RW

Value Info

Minimum value: 0

Short Description

Selector for the different GenTL Producer interfaces.

Selected Features

- "InterfaceID" on the next page

InterfaceID

Feature Info

Module	Category Path	Type	Access
System	Root / InterfaceEnumeration	String	Imposed: RO

Short Description

GenTL Producer wide unique identifier of the selected interface.

3. Interface Module

Categorized features list of Interface module version 10.3.1.127

3.1. Root Category

InterfaceInformation

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "InterfaceInformation Category " on page 28

DeviceEnumeration

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "DeviceEnumeration Category " on page 32

CoaXPress

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "CoaXPress Category " on page 35

CoaXPressAdvanced

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "CoaXPressAdvanced Category " on page 51

DigitalIOControl

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "DigitalIOControl Category " on page 56

UserOutputRegister

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "UserOutputRegister Category " on page 65

IOToolbox

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "IOToolbox Category " on page 71

PCIExpress

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "PCIExpress Category " on page 94

InterfaceControl

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "InterfaceControl Category " on page 99

InterfaceDetails

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "InterfaceDetails Category " on page 102

EventControl

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "EventControl Category " on page 106

OemSafetyKey

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "OemSafetyKey Category " on page 120

CustomLogic

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "CustomLogic Category " on page 123

OnboardMemory

Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

Category Members

Refer to "OnboardMemory Category " on page 125

3.2. InterfaceInformation Category

InterfaceID

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	String	Imposed: RO

Short Description

GenTL Producer wide unique identifier of the selected interface.

InterfaceType

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	Enumeration	Imposed: RO

Short Description

Identifies the transport layer technology of the interface.

Enumeration Values

- `CXP`: This enumeration value indicates CoaXPress transport layer technology.

ProductCode

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	String	Imposed: RO

Short Description

Product Code.

SerialNumber

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	String	Imposed: RO

Short Description

Serial Number.

PartNumber

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	String	Imposed: RO

Short Description

Part Number.

FirmwareRevision

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	IntReg	RO

Register Port: InterfacePort

Short Description

Firmware Revision.

FirmwareVariant

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	IntReg	RO

Register Port: InterfacePort

Short Description

Firmware Variant.

FirmwareStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	Enumeration	RW

Short Description

Firmware Status.

Enumeration Values

- `OK`: OK.
- `TooRecent`: Firmware is too recent.
- `TooOld`: Firmware is too old.
- `RecoveryMode`: Firmware is in recovery mode.
- `PCIeGen1NotSupported`: PCIe gen 1 not supported.

FirmwareRecoverySwitch

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceInformation	Boolean	RW

Short Description

Position of the firmware recovery switch.

3.3. DeviceEnumeration Category

DeviceUpdateList

Feature Info

Module	Category Path	Type	Access
Interface	Root / DeviceEnumeration	Command	RW

Short Description

Updates the internal device list.

DeviceSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / DeviceEnumeration	Integer	RW

Value Info

Minimum value: 0

Short Description

Selector for the different devices on this interface.

Selected Features

- "DeviceID" below
- "DeviceVendorName" below
- "DeviceModelName" below
- "DeviceAccessStatus" on the next page

DeviceID

Feature Info

Module	Category Path	Type	Access
Interface	Root / DeviceEnumeration	String	Imposed: RO

Short Description

Interface wide unique identifier of the selected device.

DeviceVendorName

Feature Info

Module	Category Path	Type	Access
Interface	Root / DeviceEnumeration	String	Imposed: RO

Short Description

Name of the device vendor.

DeviceModelName

Feature Info

Module	Category Path	Type	Access
Interface	Root / DeviceEnumeration	String	Imposed: RO

Short Description

Name of the device model.

DeviceAccessStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / DeviceEnumeration	Enumeration	Imposed: RO

Short Description

Gives the device's access status at the moment of the last execution of DeviceUpdateList.

Enumeration Values

- `Unknown`: Unknown access.
- `ReadWrite`: Available to be opened with full access.
- `ReadOnly`: Available to be opened with read-only access.
- `NoAccess`: Not reachable.
- `Busy`: Already opened by another entity.
- `OpenReadWrite`: Opened with read-write access.
- `OpenReadOnly`: Opened with read-only access.

3.4. CoaXPress Category

CxpPoCxpHostConnectionSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	RW

Description

Selects one (or a group of) CoaXPress physical Host connection(s) for PoCXP control.

Default value: `All`.

Selected Features

- "CxpPoCxpAuto" below
- "CxpPoCxpTurnOff" on the next page
- "CxpPoCxpTripReset" on the next page
- "CxpPoCxpConfigurationStatus" on the next page
- "CxpPoCxpStatus" on page 38
- "CxpPoCxpCurrent" on page 38
- "CxpPoCxpVoltage" on page 39

Enumeration Values

- `All`: All CoaXPress physical host connections.
- `A`: CoaXPress physical host connection A.
- `B`: CoaXPress physical host connection B.
- `C`: CoaXPress physical host connection C.
- `D`: CoaXPress physical host connection D.
- `E`: CoaXPress physical host connection E.
- `F`: CoaXPress physical host connection F.
- `G`: CoaXPress physical host connection G.
- `H`: CoaXPress physical host connection H.

CxpPoCxpAuto

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Command	Imposed: WO

Description

Activates automatic control of Power over CoaXPress (PoCXP) on the CoaXPress physical Host connection(s) designated by `CxpPoCxpHostConnectionSelector`.

CxpPoCxpTurnOff

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Command	Imposed: WO

Description

Disables Power over CoaXPress (PoCXP) on the CoaXPress physical Host connection(s) designated by `CxpPoCxpHostConnectionSelector`.

CxpPoCxpTripReset

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Command	Imposed: WO

Description

Resets Power over CoaXPress (PoCXP) after an over-current trip on the CoaXPress physical Host connection(s) designated by `CxpPoCxpHostConnectionSelector`.

CxpPoCxpConfigurationStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Description

Returns the Power over CoaXPress (PoCXP) configuration of the CoaXPress physical Host connection(s) designated by `CxpPoCxpHostConnectionSelector`.

Enumeration Values

- `Off`: PoCXP is forced off.

- `Auto`: Normal automatic PoCXP operation.
- `Unknown`: PoCXP configuration is unknown.
- `Compound`: PoCXP configuration is compound.

CxpPoCxpStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Description

Returns the Power over CoaXPress (PoCXP) status on the CoaXPress physical Host connection(s) designated by `CxpPoCxpHostConnectionSelector`.

Enumeration Values

- `Off`: PoCXP is off.
- `On`: PoCXP is on.
- `Tripped`: PoCXP has shut down because of an over-current trip.
- `Compound`: PoCXP status is compound.

CxpPoCxpCurrent

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	SwissKnife	RW

Value Info

Dimension: Current

Unit: A (Ampere)

Description

Returns the current delivered by the PoCXP transmitter unit of the CoaXPress physical Host connection designated by `CxpPoCxpHostConnectionSelector`.

Unit: Ampere.

Value range: from 0.0 up to 1.020 by steps of 0.004.

CxpPoCxpVoltage

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	SwissKnife	RW

Value Info

Dimension: Voltage

Unit: V (Volt)

Description

Returns the output voltage delivered by the PoCXP transmitter unit of the CoaXPress physical Host connection designated by `CxpPoCxpHostConnectionSelector`.

Unit: Volt.

Value range: from 21.0 up to 29.16 by steps of 0.032.

CxpPoCxpPowerInputStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Description

Returns the status of the 24 V power converter delivering power to all the PoCXP transmitter units.

Enumeration Values

- `NotOK`: The 24V Power Converter is not OK.
- `OK`: The 24V Power Converter is OK.

CxpHostConnectionCount

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	IntReg	RO

Register Port: InterfacePort

Short Description

Cxp Host Connection Count.

CxpHostConnectionSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	RW

Short Description

Selects the CoaXPress physical connection.

Selected Features

- "CxpConnectionState" on the next page
- "CxpDownConnectionSpeed" on page 42
- "CxpUpConnectionSpeedConfig" on page 54
- "CxpDeviceConnectionID" on page 42
- "CxpHostConnectionTestMode" on page 47

- "CxpHostConnectionTestErrorCount" on page 48
- "CxpHostConnectionTestPacketCount" on page 48
- "CxpHostConnectionTestInjectError" on page 49

Enumeration Values

- `A`: CoaXPress physical host connection A.
- `B`: CoaXPress physical host connection B.
- `C`: CoaXPress physical host connection C.
- `D`: CoaXPress physical host connection D.
- `E`: CoaXPress physical host connection E.
- `F`: CoaXPress physical host connection F.
- `G`: CoaXPress physical host connection G.
- `H`: CoaXPress physical host connection H.

CxpConnectionState

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Description

Returns the CoaXPress connection state of the CoaXPress physical Host connection designated by `CxpHostConnectionSelector`.

Enumeration Values

- `Undetected`: Undetected.
- `Detected`: Detected.

CxpDownConnectionSpeed

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Description

Returns the CoaXPress down-connection speed of the CoaXPress physical Host connection designated by `CxpHostConnectionSelector`.

Enumeration Values

- `CXP1`: 1.250 Gbps.
- `CXP2`: 2.500 Gbps.
- `CXP3`: 3.125 Gbps.
- `CXP5`: 5.000 Gbps.
- `CXP6`: 6.250 Gbps.
- `CXP10`: 10.000 Gbps.
- `CXP12`: 12.500 Gbps.

CxpDeviceConnectionID

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Description

Returns the CoaXPress connection topology information of the CoaXPress physical Host connection designated by `CxpHostConnectionSelector`.

Enumeration Values

- `CameraW_Master`: Master Connection of Camera W.
- `CameraW_Extension1`: Extension 1 of Camera W.

- `CameraW_Extension2`: Extension 2 of Camera W.
- `CameraW_Extension3`: Extension 3 of Camera W.
- `CameraW_Extension4`: Extension 4 of Camera W.
- `CameraW_Extension5`: Extension 5 of Camera W.
- `CameraW_Extension6`: Extension 6 of Camera W.
- `CameraW_Extension7`: Extension 7 of Camera W.
- `CameraX_Master`: Master Connection of Camera X.
- `CameraX_Extension1`: Extension 1 of Camera X.
- `CameraX_Extension2`: Extension 2 of Camera X.
- `CameraX_Extension3`: Extension 3 of Camera X.
- `CameraX_Extension4`: Extension 4 of Camera X.
- `CameraX_Extension5`: Extension 5 of Camera X.
- `CameraX_Extension6`: Extension 6 of Camera X.
- `CameraX_Extension7`: Extension 7 of Camera X.
- `CameraY_Master`: Master Connection of Camera Y.
- `CameraY_Extension1`: Extension 1 of Camera Y.
- `CameraY_Extension2`: Extension 2 of Camera Y.
- `CameraY_Extension3`: Extension 3 of Camera Y.
- `CameraY_Extension4`: Extension 4 of Camera Y.
- `CameraY_Extension5`: Extension 5 of Camera Y.
- `CameraY_Extension6`: Extension 6 of Camera Y.
- `CameraY_Extension7`: Extension 7 of Camera Y.
- `CameraZ_Master`: Master Connection of Camera Z.
- `CameraZ_Extension1`: Extension 1 of Camera Z.
- `CameraZ_Extension2`: Extension 2 of Camera Z.
- `CameraZ_Extension3`: Extension 3 of Camera Z.
- `CameraZ_Extension4`: Extension 4 of Camera Z.
- `CameraZ_Extension5`: Extension 5 of Camera Z.
- `CameraZ_Extension6`: Extension 6 of Camera Z.
- `CameraZ_Extension7`: Extension 7 of Camera Z.
- `CameraS_Master`: Master Connection of Camera S.
- `CameraS_Extension1`: Extension 1 of Camera S.
- `CameraS_Extension2`: Extension 2 of Camera S.

- `CameraS_Extension3`: Extension 3 of Camera S.
- `CameraS_Extension4`: Extension 4 of Camera S.
- `CameraS_Extension5`: Extension 5 of Camera S.
- `CameraS_Extension6`: Extension 6 of Camera S.
- `CameraS_Extension7`: Extension 7 of Camera S.
- `CameraT_Master`: Master Connection of Camera T.
- `CameraT_Extension1`: Extension 1 of Camera T.
- `CameraT_Extension2`: Extension 2 of Camera T.
- `CameraT_Extension3`: Extension 3 of Camera T.
- `CameraT_Extension4`: Extension 4 of Camera T.
- `CameraT_Extension5`: Extension 5 of Camera T.
- `CameraT_Extension6`: Extension 6 of Camera T.
- `CameraT_Extension7`: Extension 7 of Camera T.
- `CameraU_Master`: Master Connection of Camera U.
- `CameraU_Extension1`: Extension 1 of Camera U.
- `CameraU_Extension2`: Extension 2 of Camera U.
- `CameraU_Extension3`: Extension 3 of Camera U.
- `CameraU_Extension4`: Extension 4 of Camera U.
- `CameraU_Extension5`: Extension 5 of Camera U.
- `CameraU_Extension6`: Extension 6 of Camera U.
- `CameraU_Extension7`: Extension 7 of Camera U.
- `CameraV_Master`: Master Connection of Camera V.
- `CameraV_Extension1`: Extension 1 of Camera V.
- `CameraV_Extension2`: Extension 2 of Camera V.
- `CameraV_Extension3`: Extension 3 of Camera V.
- `CameraV_Extension4`: Extension 4 of Camera V.
- `CameraV_Extension5`: Extension 5 of Camera V.
- `CameraV_Extension6`: Extension 6 of Camera V.
- `CameraV_Extension7`: Extension 7 of Camera V.
- `SubLink_Extension1`: Sub-Link Extension 1.
- `SubLink_Extension2`: Sub-Link Extension 2.
- `SubLink_Extension3`: Sub-Link Extension 3.
- `SubLink_Extension4`: Sub-Link Extension 4.

- `SubLink_Extension5`: Sub-Link Extension 5.
- `SubLink_Extension6`: Sub-Link Extension 6.
- `SubLink_Extension7`: Sub-Link Extension 7.
- `NotReady`: Not Ready.

CXP1Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP1Supported.

CXP2Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP2Supported.

CXP3Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP3Supported.

CXP5Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP5Supported.

CXP6Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP6Supported.

CXP10Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP10Supported.

CXP12Supported

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	Imposed: RO

Short Description

CXP12Supported.

CxpHostConnectionTestMode

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	RW

Description

Controls the Host to Device connection test mode for the CoaXPress physical Host connection designated by `CxpHostConnectionSelector`.

Default value: `Off`.

Enumeration Values

- `Off`: The test mode is disabled on the selected Host connection.
- `Mode1`: The test mode is one on the selected Host connection.

CxpHostConnectionTestErrorCount

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Integer	RW

Value Info

Minimum value: 0

Maximum value: 4294967295

Short Description

Reports the current connection error count for test packets received by the Host on the selected Host connection.

CxpHostConnectionTestPacketCount

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Integer	RW

Value Info

Minimum value: 0

Maximum value: 4294967295

Description

Returns the current count of test packets received by the CoaXPress physical Host connection designated by `CxpHostConnectionSelector`.

This feature can be read at any time. It can be written to zero to reset the count between tests.

CxpHostConnectionTestInjectError

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Command	RW

Description

Injects a single character error into the Host to Device test packet of the CoaXPress physical Host connection designated by `CxpHostConnectionSelector`.

CxpRevisionSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	RW

Description

Selects the CoaXPress Standard Revision for current support.

Default value: `CXP_1_0`.

Selected Features

- "CxpRevisionSupport" on the next page

Enumeration Values

- `CXP_1_0`: CoaXPress Standard Version 1.0.
- `CXP_1_1`: CoaXPress Standard Version 1.1.
- `CXP_1_1_1`: CoaXPress Standard Version 1.1.1.
- `CXP_2_0`: CoaXPress Standard Version 2.0.

CxpRevisionSupport

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Enumeration	Imposed: RO

Short Description

Reports the current support of the selected CoaXPress Standard Revision.

Enumeration Values

- `NotSupported`: Not supported.
- `PartiallySupported`: Partially supported.
- `Supported`: Supported.

ShowCoaXPressAdvancedFeatures

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPress	Boolean	RW

Short Description

Show CoaXPress advanced features.

3.5. CoaXPressAdvanced Category

CxpRateMask

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Integer	RW

Value Info

Minimum value: 0

Short Description

Mask of CoaXPress rates allowed to be used by the host (CXP1=0x01,CXP2=0x02,CXP3=0x04,CXP5=0x08,CXP6=0x10,CXP10=0x20,CPX12=0x40).

CxpRateMaskCXP1

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP1.

CxpRateMaskCXP2

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP2.

CxpRateMaskCXP3

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP3.

CxpRateMaskCXP5

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP5.

CxpRateMaskCXP6

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP6.

CxpRateMaskCXP10

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP10.

CxpRateMaskCXP12

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Boolean	RW

Short Description

Cxp Rate Mask CXP12.

CxpUpConnectionSpeedConfig

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Enumeration	Imposed: WO

Short Description

Configure upconnection speed on the selected Host connection.

Enumeration Values

- `Auto`: 41.667 Mbps when downconnection speed is above CXP6, 20.833 Mbps otherwise.
- `Use_20Mbps`: 20.833 Mbps.
- `Use_40Mbps`: 41.667 Mbps.
- `Off`: Disable upconnection.

CxpDiscoveryTimingSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Enumeration	RW

Short Description

Selects a CoaXPress discovery timing value.

Selected Features

- "CxpDiscoveryTiming" on the next page

Enumeration Values

- `DiscoveryPeriod`: Period of the discovery link resets on undetected connectors (default: 1100).
- `RecoveryTime`: Recovery time following an error on a connector before restarting the discovery (default: 500).
- `ExtensionSetupMaxTime`: Maximum time for extensions to be discovered by the master (default: 6000).
- `DiscoveryInitialDelay`: Initial delay following a low-level lock before accessing device registers (default: 1000).
- `LinkReconfigMaxTime`: Maximum time for link re-configuration (default: 1100).
- `DeviceLinkReconfigDelay`: Delay to allow the device to complete link re-configuration (default: 200).

CxpDiscoveryTiming

Feature Info

Module	Category Path	Type	Access
Interface	Root / CoaXPressAdvanced	Integer	RW

Value Info

Unit: ms (millisecond)

Short Description

Value of the selected CoaXPress discovery timing (millisecond).

3.6. DigitalIOControl Category

LineSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Enumeration	RW

Description

Selects one physical GPIO line.

Default value: `DIN11`.

Selected Features

- "LineFormat" on the next page
- "LineMode" on page 58
- "LineInverter" on page 58
- "LineFilterStrength" on page 59
- "LineFilterDelay" on page 59
- "LineStatus" on page 60
- "LineSource" on page 61

Enumeration Values

- `DIN11`: Differential input 1 of Internal I/O connector 1.

- DIN12: Differential input 2 of Internal I/O connector 1.
- DIN21: Differential input 1 of Internal I/O connector 2.
- DIN22: Differential input 2 of Internal I/O connector 2.
- IIN11: Isolated input 1 of Internal I/O connector 1.
- IIN12: Isolated input 2 of Internal I/O connector 1.
- IIN13: Isolated input 3 of Internal I/O connector 1.
- IIN14: Isolated input 4 of Internal I/O connector 1.
- IIN21: Isolated input 1 of Internal I/O connector 2.
- IIN22: Isolated input 2 of Internal I/O connector 2.
- IIN23: Isolated input 3 of Internal I/O connector 2.
- IIN24: Isolated input 4 of Internal I/O connector 2.
- IOUT11: Isolated output 1 of Internal I/O connector 1.
- IOUT12: Isolated output 2 of Internal I/O connector 1.
- IOUT21: Isolated output 1 of Internal I/O connector 2.
- IOUT22: Isolated output 2 of Internal I/O connector 2.
- TTLIO11: TTL input/output 1 of Internal I/O connector 1.
- TTLIO12: TTL input/output 2 of Internal I/O connector 1.
- TTLIO21: TTL input/output 1 of Internal I/O connector 2.
- TTLIO22: TTL input/output 2 of Internal I/O connector 2.

LineFormat

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Enumeration	Imposed: RO

Description

Returns the electrical style of the selected physical GPIO line.

Enumeration Values

- ISO: The I/O line is opto-coupled.
- DIFF: The I/O line is accepting LVDS or RS422 level signals.
- TTL: The I/O line is accepting or sending TTL level signals.

LineMode

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Enumeration	RW

Description

Direction and line driver mode of the selected physical GPIO line.

Default value: `Input` for the input-capable GPIO lines; `Output` for the output-only GPIO lines.

Enumeration Values

- `Input`: Input line.
- `Output`: Output line.
- `DriveLow`: Driven-low output line.
- `DriveHigh`: Driven-high output line.

LineInverter

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Boolean	RW

Description

Signal inversion of the selected input or output line.

When set to `False`, the line signal is not inverted.

When set to `True`, the line signal is inverted.

> **Note:** *For bidirectional GPIO lines such as the TTL input/output lines, the settings applies equally to the signal input path and the signal output path!*

Default value: `False`.

LineFilterStrength

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Enumeration	RW

Description

Strength of the glitch removal filter of the selected physical GPIO line.

Note: *This feature is only available for input-capable GPIO lines.*

Default value: `Low`.

Enumeration Values

- `Lowest`: Lowest filter strength.
- `Low`: Low filter strength.
- `Medium`: Medium filter strength.
- `High`: High filter strength.
- `Highest`: Highest filter strength.
- `NotAvailable`: Filter strength not available on the selected I/O line.

LineFilterDelay

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	SwissKnife	RW

Description

Returns the latency delay, expressed in microseconds, introduced by the glitch removal filter of the selected physical GPIO line.

Note:
This feature is only available for input-capable GPIO lines.

LineStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Boolean	RW

Description

Returns the current status of the selected physical GPIO line.

When `False`, the logical state of the selected physical GPIO line is low.

When `True`, The logical state of the selected physical GPIO line is high.

> **Note:** *For input-capable I/O lines, the reported value is the logical state of the LineInput signal: a node in the input path of the I/O control block that is located after the Input Inverter.*

> **Note:** *For output-only I/O lines, the reported value is the logical state of the LineOutput signal, a note in the output path of the I/O control block that is located before the Output Inverter.*

LineStatusAll

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Integer	RW

Description

Returns the current state of all available GPIO line signals at time of polling in a single bit field.

Bit values:

- `0`: The logical state of the corresponding GPIO line is low.
- `1`: The logical state of the corresponding GPIO line is high.

Bit assignments:

- Bit 0: DIN11 GPIO line.
- Bit 1: DIN12 GPIO line.
- Bit 2: DIN21 GPIO line.
- Bit 3: DIN22 GPIO line.

- Bit 4: IIN11 GPIO line.
- Bit 5: IIN12 GPIO line.
- Bit 6: IIN13 GPIO line.
- Bit 7: IIN14 GPIO line.
- Bit 8: IIN21 GPIO line.
- Bit 9: IIN22 GPIO line.
- Bit 10: IIN23GPIO line.
- Bit 11: IIN24 GPIO line.
- Bit 12: IOUT11 GPIO line.
- Bit 13: IOUT12 GPIO line.
- Bit 14: IOUT21 GPIO line.
- Bit 15: IOUT22 GPIO line.
- Bit 16: TTLIO11 GPIO line.
- Bit 17: TTLIO12 GPIO line.
- Bit 18: TTLIO21 GPIO line.

LineSource

Feature Info

Module	Category Path	Type	Access
Interface	Root / DigitalIOControl	Enumeration	RW

Description

Select the internal signal sourcing the output of the selected physical GPIO line.

Note:
This feature is only available for output-capable GPIO lines.

Enumeration Values

- `UserOutput0`: Bit 0 of user output register.
- `UserOutput1`: Bit 1 of user output register.
- `UserOutput2`: Bit 2 of user output register.
- `UserOutput3`: Bit 3 of user output register.
- `UserOutput4`: Bit 4 of user output register.

- `UserOutput5`: Bit 5 of user output register.
- `UserOutput6`: Bit 6 of user output register.
- `UserOutput7`: Bit 7 of user output register.
- `Device0Strobe`: Strobe output of device 0.
- `Device1Strobe`: Strobe output of device 1.
- `Device2Strobe`: Strobe output of device 2.
- `Device3Strobe`: Strobe output of device 3.
- `Device4Strobe`: Strobe output of device 4.
- `Device5Strobe`: Strobe output of device 5.
- `Device6Strobe`: Strobe output of device 6.
- `Device7Strobe`: Strobe output of device 7.
- `Device0CameraTrigger`: Camera trigger output of device 0.
- `Device1CameraTrigger`: Camera trigger output of device 1.
- `Device2CameraTrigger`: Camera trigger output of device 2.
- `Device3CameraTrigger`: Camera trigger output of device 3.
- `Device4CameraTrigger`: Camera trigger output of device 4.
- `Device5CameraTrigger`: Camera trigger output of device 5.
- `Device6CameraTrigger`: Camera trigger output of device 6.
- `Device7CameraTrigger`: Camera trigger output of device 7.
- `Device0Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 0.
- `Device0Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 0.
- `Device0Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 0.
- `Device0Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 0.
- `Device0Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 0.
- `Device0Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 0.
- `Device0Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 0.
- `Device0Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 0.
- `Device1Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 1.
- `Device1Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 1.
- `Device1Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 1.
- `Device1Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 1.
- `Device1Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 1.
- `Device1Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 1.

- `Device1Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 1.
- `Device1Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 1.
- `Device2Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 2.
- `Device2Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 2.
- `Device2Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 2.
- `Device2Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 2.
- `Device2Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 2.
- `Device2Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 2.
- `Device2Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 2.
- `Device2Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 2.
- `Device3Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 3.
- `Device3Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 3.
- `Device3Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 3.
- `Device3Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 3.
- `Device3Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 3.
- `Device3Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 3.
- `Device3Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 3.
- `Device3Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 3.
- `Device4Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 4.
- `Device4Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 4.
- `Device4Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 4.
- `Device4Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 4.
- `Device4Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 4.
- `Device4Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 4.
- `Device4Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 4.
- `Device4Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 4.
- `Device5Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 5.
- `Device5Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 5.
- `Device5Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 5.
- `Device5Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 5.
- `Device5Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 5.
- `Device5Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 5.
- `Device5Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 5.

- `Device5Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 5.
- `Device6Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 6.
- `Device6Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 6.
- `Device6Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 6.
- `Device6Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 6.
- `Device6Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 6.
- `Device6Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 6.
- `Device6Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 6.
- `Device6Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 6.
- `Device7Stream0StartOfCameraReadout`: Start of camera readout on stream 0 of device 7.
- `Device7Stream1StartOfCameraReadout`: Start of camera readout on stream 1 of device 7.
- `Device7Stream2StartOfCameraReadout`: Start of camera readout on stream 2 of device 7.
- `Device7Stream3StartOfCameraReadout`: Start of camera readout on stream 3 of device 7.
- `Device7Stream4StartOfCameraReadout`: Start of camera readout on stream 4 of device 7.
- `Device7Stream5StartOfCameraReadout`: Start of camera readout on stream 5 of device 7.
- `Device7Stream6StartOfCameraReadout`: Start of camera readout on stream 6 of device 7.
- `Device7Stream7StartOfCameraReadout`: Start of camera readout on stream 7 of device 7.
- `Low`: Low.
- `NotAvailable`: Not available on the selected I/O line.

3.7. UserOutputRegister Category

UserOutputValueAll

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Integer	RW

Value Info

Minimum value: 0

Maximum value: 255

Description

Value of all User Output Register bits as a bit-field in a single data word.

Bit values:

- `0`: The value of the corresponding User Output Register bit is low.
- `1`: The value of the corresponding User Output Register bit is high.

Bit assignments:

- Bit 0: Value for bit 0 of the user output register.
- Bit 1: Value for bit 1 of the user output register.
- Bit 2: Value for bit 2 of the user output register.
- Bit 3: Value for bit 3 of the user output register.
- Bit 4: Value for bit 4 of the user output register.

- Bit 5: Value for bit 5 of the user output register.
- Bit 6: Value for bit 6 of the user output register.
- Bit 7: Value for bit 7 of the user output register.

UserActions

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Integer	RW

Value Info

Minimum value: 0

Maximum value: 2147483647

Description

Current set of user actions (built with `AddUserAction`) that can be executed immediately (c.f. `ExecuteUserActions`) or scheduled for execution at a specific time/position (c.f. `ScheduleUserActions`).

AddUserAction

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Enumeration	Imposed: WO

Description

Add an action to the current set of user actions (`UserActions`).

Enumeration Values

- `UserEvent1`: User Event 1.
- `UserEvent2`: User Event 2.
- `UserEvent3`: User Event 3.

- `UserEvent4`: User Event 4.
- `UserOutput0_High`: Set User Output Register bit 0 high.
- `UserOutput0_Low`: Set User Output Register bit 0 low.
- `UserOutput0_Toggle`: Toggle User Output Register bit 0.
- `UserOutput1_High`: Set User Output Register bit 1 high.
- `UserOutput1_Low`: Set User Output Register bit 1 low.
- `UserOutput1_Toggle`: Toggle User Output Register bit 1.
- `UserOutput2_High`: Set User Output Register bit 2 high.
- `UserOutput2_Low`: Set User Output Register bit 2 low.
- `UserOutput2_Toggle`: Toggle User Output Register bit 2.
- `UserOutput3_High`: Set User Output Register bit 3 high.
- `UserOutput3_Low`: Set User Output Register bit 3 low.
- `UserOutput3_Toggle`: Toggle User Output Register bit 3.
- `UserOutput4_High`: Set User Output Register bit 4 high.
- `UserOutput4_Low`: Set User Output Register bit 4 low.
- `UserOutput4_Toggle`: Toggle User Output Register bit 4.
- `UserOutput5_High`: Set User Output Register bit 5 high.
- `UserOutput5_Low`: Set User Output Register bit 5 low.
- `UserOutput5_Toggle`: Toggle User Output Register bit 5.
- `UserOutput6_High`: Set User Output Register bit 6 high.
- `UserOutput6_Low`: Set User Output Register bit 6 low.
- `UserOutput6_Toggle`: Toggle User Output Register bit 6.
- `UserOutput7_High`: Set User Output Register bit 7 high.
- `UserOutput7_Low`: Set User Output Register bit 7 low.
- `UserOutput7_Toggle`: Toggle User Output Register bit 7.

ClearUserActions

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Command	Imposed: WO

Description

Clear the current set of user actions (`UserActions`).

ExecuteUserActions

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Command	Imposed: WO

Description

Immediately execute the current set of user actions (`UserActions`).

ScheduleUserActions

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Integer	Imposed: WO

Value Info

Minimum value: 0

Maximum value: 4294967295

Description

Schedule the current set of user actions (`UserActions`) for execution at given time/position.

UserActionsSchedulerReference

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Enumeration	RW

Description

Defines the reference used by the user action scheduler; can only be changed when `ScheduledUserActionsPoolStatus` is `Empty`.

Enumeration Values

- `InternalTime`: Coaxlink card internal time.
- `QDC1Position`: Quadrature Decoder Tool 1 Position.
- `QDC2Position`: Quadrature Decoder Tool 2 Position.
- `QDC3Position`: Quadrature Decoder Tool 3 Position.
- `QDC4Position`: Quadrature Decoder Tool 4 Position.

ScheduledUserActionsPoolStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Enumeration	RW

Description

Reports the status of the pool of scheduled user actions.

Enumeration Values

- `Empty`: The pool of scheduled user actions is empty.
- `PartiallyFilled`: The pool of scheduled user actions is partially filled.
- `AlmostFull`: The pool of scheduled user actions almost full.

DiscardScheduledUserActions

Feature Info

Module	Category Path	Type	Access
Interface	Root / UserOutputRegister	Command	Imposed: WO

Short Description

Discard all scheduled user actions.

3.8. IOToolbox Category

LineInputToolSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects a Line Input Tool.

Selected Features

- "LineInputToolSource" below
- "LineInputToolActivation" on the next page

Enumeration Values

- `LIN1`: Line Input Tool 1.
- `LIN2`: Line Input Tool 2.
- `LIN3`: Line Input Tool 3.
- `LIN4`: Line Input Tool 4.
- `LIN5`: Line Input Tool 5.
- `LIN6`: Line Input Tool 6.
- `LIN7`: Line Input Tool 7.
- `LIN8`: Line Input Tool 8.

LineInputToolSource

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Description

Physical GPIO line used as input for the selected Line Input Tool.

Default value: `DIN11`.

Enumeration Values

- `DIN11`: Differential input 1 of Internal I/O connector 1.
- `DIN12`: Differential input 2 of Internal I/O connector 1.
- `DIN21`: Differential input 1 of Internal I/O connector 2.
- `DIN22`: Differential input 2 of Internal I/O connector 2.

- `IIN11`: Isolated input 1 of Internal I/O connector 1.
- `IIN12`: Isolated input 2 of Internal I/O connector 1.
- `IIN13`: Isolated input 3 of Internal I/O connector 1.
- `IIN14`: Isolated input 4 of Internal I/O connector 1.
- `IIN21`: Isolated input 1 of Internal I/O connector 2.
- `IIN22`: Isolated input 2 of Internal I/O connector 2.
- `IIN23`: Isolated input 3 of Internal I/O connector 2.
- `IIN24`: Isolated input 4 of Internal I/O connector 2.
- `IOUT11`: Isolated output 1 of Internal I/O connector 1.
- `IOUT12`: Isolated output 2 of Internal I/O connector 1.
- `IOUT21`: Isolated output 1 of Internal I/O connector 2.
- `IOUT22`: Isolated output 2 of Internal I/O connector 2.
- `TTLIO11`: TTL input/output 1 of Internal I/O connector 1.
- `TTLIO12`: TTL input/output 2 of Internal I/O connector 1.
- `TTLIO21`: TTL input/output 1 of Internal I/O connector 2.
- `TTLIO22`: TTL input/output 2 of Internal I/O connector 2.

LineInputToolActivation

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Edge activating the output of the selected Line Input Tool.

Enumeration Values

- `RisingEdge`:
- `FallingEdge`:

MultiplierDividerToolSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects a Multiplier/Divider Tool.

Selected Features

- "MultiplierDividerToolSource" below
- "MultiplierDividerToolOutputControl" on page 76
- "MultiplierDividerToolMultiplicationFactor" on page 76
- "MultiplierDividerToolDivisionFactor" on page 77
- "MultiplierDividerToolEffectiveMultiplicationFactor" on page 78
- "MultiplierDividerToolEffectiveDivisionFactor" on page 78

Enumeration Values

- `MDV1`: Multiplier/Divider Tool 1.
- `MDV2`: Multiplier/Divider Tool 2.
- `MDV3`: Multiplier/Divider Tool 3.
- `MDV4`: Multiplier/Divider Tool 4.

MultiplierDividerToolSource

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

I/O Toolbox event stream used as input for the selected Multiplier/Divider Tool.

Enumeration Values

- `NONE`: No event stream.
- `LIN1`: When an event occurs on Line Input Tool 1.
- `LIN2`: When an event occurs on Line Input Tool 2.
- `LIN3`: When an event occurs on Line Input Tool 3.
- `LIN4`: When an event occurs on Line Input Tool 4.
- `LIN5`: When an event occurs on Line Input Tool 5.
- `LIN6`: When an event occurs on Line Input Tool 6.
- `LIN7`: When an event occurs on Line Input Tool 7.
- `LIN8`: When an event occurs on Line Input Tool 8.
- `QDC1`: When an event occurs on Quadrature Decoder Tool 1.
- `QDC2`: When an event occurs on Quadrature Decoder Tool 2.
- `QDC3`: When an event occurs on Quadrature Decoder Tool 3.
- `QDC4`: When an event occurs on Quadrature Decoder Tool 4.
- `MDV1`: When an event occurs on Multiplier/Divider Tool 1.
- `MDV2`: When an event occurs on Multiplier/Divider Tool 2.
- `MDV3`: When an event occurs on Multiplier/Divider Tool 3.
- `MDV4`: When an event occurs on Multiplier/Divider Tool 4.
- `DIV1`: When an event occurs on Divider Tool 1.
- `DIV2`: When an event occurs on Divider Tool 2.
- `DIV3`: When an event occurs on Divider Tool 3.
- `DIV4`: When an event occurs on Divider Tool 4.
- `DEL1_1`: When an event occurs on Delay Tool 1 Output 1.
- `DEL1_2`: When an event occurs on Delay Tool 1 Output 2.
- `DEL2_1`: When an event occurs on Delay Tool 2 Output 1.
- `DEL2_2`: When an event occurs on Delay Tool 2 Output 2.
- `DEL3_1`: When an event occurs on Delay Tool 3 Output 1.
- `DEL3_2`: When an event occurs on Delay Tool 3 Output 2.
- `DEL4_1`: When an event occurs on Delay Tool 4 Output 1.

- `DEL4_2`: When an event occurs on Delay Tool 4 Output 2.
- `EIN1`: When an event occurs on Event Input Tool 1.
- `EIN2`: When an event occurs on Event Input Tool 2.
- `UserEvent1`: When an event occurs on User Event 1.
- `UserEvent2`: When an event occurs on User Event 2.
- `UserEvent3`: When an event occurs on User Event 3.
- `UserEvent4`: When an event occurs on User Event 4.

MultiplierDividerToolOutputControl

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Output control of the selected Multiplier/Divider Tool.

Enumeration Values

- `Enable`: Output enabled.
- `Disable`: Output disabled.

MultiplierDividerToolMultiplicationFactor

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Float	RW

Value Info

Minimum value: 0.001

Maximum value: 1000

Description

Multiplication factor of the selected Multiplier/Divider Tool.

This feature is the **numerator** of the fraction defining the Rate Conversion Ratio (RCR) of the Multiplier/Divider Tool.

RCR = M/D where:

- M = `MultiplierDividerToolMultiplicationFactor`
- D = `MultiplierDividerToolDivisionFactor`

The Multiplier/Divider Tools allows defining any RCR values in the range 0.001 to 1000.0.

> **Note:** *The user may define RCR using any of the following methods:*
>
> - *A ratio of 2 integer numbers by assigning integer values to both the numerator and the denominator.*
> - *A single non-integer number greater or smaller than 1 assigned to the numerator leaving the denominator to the default value (1.0).*
> - *A single non-integer number greater or smaller than 1 assigned to the denominator leaving the numerator to the default value (1.0).*

Default value: `1.0`.

MultiplierDividerToolDivisionFactor

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Float	RW

Value Info

Minimum value: 0.001

Maximum value: 1000

Description

Division factor of the selected Multiplier/Divider Tool.

This feature is the **denominator** of the fraction defining the Rate Conversion Ratio (RCR) of the Multiplier/Divider Tool.

RCR = M/D where:

- M = `MultiplierDividerToolMultiplicationFactor`

- D = `MultiplierDividerToolDivisionFactor`

The Multiplier/Divider Tools allows defining any RCR values in the range 0.001 to 1000.0.

Note: *The user may define RCR using any of the following methods:*

- *A ratio of 2 integer numbers by assigning integer values to both the numerator and the denominator.*
- *A single non-integer number greater or smaller than 1 assigned to the numerator leaving the denominator to the default value (1.0).*
- *A single non-integer number greater or smaller than 1 assigned to the denominator leaving the numerator to the default value (1.0).*

Default value: `1.0`.

MultiplierDividerToolEffectiveMultiplicationFactor

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Integer	RW

Description

Effective multiplication factor of the selected Multiplier/Divider Tool.

This feature is the **numerator** of the fraction defining the Effective Rate Conversion Ratio (Effective RCR) of the Multiplier/Divider Tool.

Effective RCR = Effective M/Effective D where:

- Effective M = `MultiplierDividerToolEffectiveMultiplicationFactor`
- Effective D = `MultiplierDividerToolEffectiveDivisionFactor`

MultiplierDividerToolEffectiveDivisionFactor

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Integer	RW

Description

Effective division factor of the selected Multiplier/Divider Tool.

This feature is the **denominator** of the fraction defining the Effective Rate Conversion Ratio (Effective RCR) of the Multiplier/Divider Tool.

Effective RCR = Effective M/Effective D where:

- Effective M =`MultiplierDividerToolEffectiveMultiplicationFactor`
- Effective D = `MultiplierDividerToolEffectiveDivisionFactor`

QuadratureDecoderToolSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects a Quadrature Decoder Tool.

Selected Features

- "QuadratureDecoderToolSources" on the next page
- "QuadratureDecoderToolActivation" on the next page
- "QuadratureDecoderToolForwardDirection" on page 81
- "QuadratureDecoderToolOutputMode" on page 81
- "QuadratureDecoderToolPosition" on page 82
- "QuadratureDecoderToolDirection" on page 82
- "QuadratureDecoderToolPositionReset" on page 83

Enumeration Values

- `QDC1`: Quadrature Decoder Tool 1.
- `QDC2`: Quadrature Decoder Tool 2.
- `QDC3`: Quadrature Decoder Tool 3.
- `QDC4`: Quadrature Decoder Tool 4.

QuadratureDecoderToolSources

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Description

Selects the pair of physical GPIO lines used as A/B inputs for the selected Quadrature Decoder Tool.

Enumeration Values

- `DIN11_DIN12`: Differential inputs 1 and 2 of Internal I/O connector 1.
- `DIN21_DIN22`: Differential inputs 1 and 2 of Internal I/O connector 2.
- `IIN11_IIN12`: Isolated inputs 1 and 2 of Internal I/O connector 1.
- `IIN13_IIN14`: Isolated inputs 3 and 4 of Internal I/O connector 1.
- `IIN21_IIN22`: Isolated inputs 1 and 2 of Internal I/O connector 2.
- `IIN23_IIN24`: Isolated inputs 3 and 4 of Internal I/O connector 2.
- `TTLIO11_TTLIO12`: TTL inputs 1 and 2 of Internal I/O connector 1.
- `TTLIO21_TTLIO22`: TTL inputs 1 and 2 of Internal I/O connector 2.

QuadratureDecoderToolActivation

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Description

Edge activating the output of the selected Quadrature Decoder Tool.

> **Note:** *The A output of the quadrature encoder device connects to the first physical GPIO line of the designated pair, e.g. DIN11.*

> **Note:** *The B output of the quadrature encoder device connects to the second physical GPIO line of the designated pair, e.g. DIN12.*

Enumeration Values

- `RisingEdgeA`: The event is activated on the rising edge of the A signal.
- `FallingEdgeA`: The event is activated on the falling edge of the A signal.
- `AllEdgesA`: The event is activated on both edges of the A signal.
- `AllEdgesAB`: The event is activated on both edges of all signals.
- `None`: The event is not activated.

QuadratureDecoderToolForwardDirection

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects the A/B phase relationship corresponding to the forward direction.

Enumeration Values

- `A_Leads_B`: A leads B.
- `B_Leads_A`: B leads A.

QuadratureDecoderToolOutputMode

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects the filtering mode of the backward motion compensator.

Enumeration Values

- `Unfiltered`: All the quadrature decoder events are delivered.

- `ForwardOnly`: Only the events corresponding to the forward motion are delivered.
- `FirstPassForwardOnly`: Only the events corresponding to the first pass in the forward direction are delivered.

QuadratureDecoderToolPosition

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	IntReg	RO

Register Port: InterfacePort

Description

Position counter value of the selected Quadrature Decoder Tool.

The position counter is a 32-bit up/down counter that increments by 1 for any event corresponding to the forward direction and decrements by 1 for the backward direction.

Unit: encoder events as defined by `QuadratureDecoderToolActivation`.

Value range: from -2,147,483,648 up to 2,147,483,647.

QuadratureDecoderToolDirection

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Current direction of the selected Quadrature Decoder Tool.

Enumeration Values

- `Forward`: Forward.
- `Backward`: Backward.

QuadratureDecoderToolPositionReset

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Command	Imposed: WO

Short Description

Reset Position counter of the selected Quadrature Decoder Tool.

DividerToolSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects a Divider Tool.

Selected Features

- "DividerToolSource" on the next page
- "DividerToolEnableControl" on page 85
- "DividerToolDivisionFactor" on page 86
- "DividerToolInitialOffset" on page 86

Enumeration Values

- `DIV1`: Divider Tool 1.
- `DIV2`: Divider Tool 2.
- `DIV3`: Divider Tool 3.
- `DIV4`: Divider Tool 4.

DividerToolSource

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

I/O Toolbox event stream used as input for the selected Divider Tool.

Enumeration Values

- `NONE`: No event stream.
- `LIN1`: When an event occurs on Line Input Tool 1.
- `LIN2`: When an event occurs on Line Input Tool 2.
- `LIN3`: When an event occurs on Line Input Tool 3.
- `LIN4`: When an event occurs on Line Input Tool 4.
- `LIN5`: When an event occurs on Line Input Tool 5.
- `LIN6`: When an event occurs on Line Input Tool 6.
- `LIN7`: When an event occurs on Line Input Tool 7.
- `LIN8`: When an event occurs on Line Input Tool 8.
- `QDC1`: When an event occurs on Quadrature Decoder Tool 1.
- `QDC2`: When an event occurs on Quadrature Decoder Tool 2.
- `QDC3`: When an event occurs on Quadrature Decoder Tool 3.
- `QDC4`: When an event occurs on Quadrature Decoder Tool 4.
- `MDV1`: When an event occurs on Multiplier/Divider Tool 1.
- `MDV2`: When an event occurs on Multiplier/Divider Tool 2.
- `MDV3`: When an event occurs on Multiplier/Divider Tool 3.
- `MDV4`: When an event occurs on Multiplier/Divider Tool 4.
- `DIV1`: When an event occurs on Divider Tool 1.
- `DIV2`: When an event occurs on Divider Tool 2.
- `DIV3`: When an event occurs on Divider Tool 3.
- `DIV4`: When an event occurs on Divider Tool 4.

- `DEL1_1`: When an event occurs on Delay Tool 1 Output 1.
- `DEL1_2`: When an event occurs on Delay Tool 1 Output 2.
- `DEL2_1`: When an event occurs on Delay Tool 2 Output 1.
- `DEL2_2`: When an event occurs on Delay Tool 2 Output 2.
- `DEL3_1`: When an event occurs on Delay Tool 3 Output 1.
- `DEL3_2`: When an event occurs on Delay Tool 3 Output 2.
- `DEL4_1`: When an event occurs on Delay Tool 4 Output 1.
- `DEL4_2`: When an event occurs on Delay Tool 4 Output 2.
- `EIN1`: When an event occurs on Event Input Tool 1.
- `EIN2`: When an event occurs on Event Input Tool 2.
- `UserEvent1`: When an event occurs on User Event 1.
- `UserEvent2`: When an event occurs on User Event 2.
- `UserEvent3`: When an event occurs on User Event 3.
- `UserEvent4`: When an event occurs on User Event 4.

DividerToolEnableControl

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Output control of the selected Divider Tool.

Enumeration Values

- `Enable`: Output enabled.
- `Disable`: Output disabled.

DividerToolDivisionFactor

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Integer	RW

Value Info

Minimum value: 1

Maximum value: 65535

Default value: 2

Description

Division factor of the selected Divider Tool.

This feature is the **denominator** of the fraction defining the Rate Conversion Ratio (RCR) of the Divider Tool.

RCR = 1/D where:

- D = `DividerToolDivisionFactor`

DividerToolInitialOffset

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Integer	RW

Value Info

Minimum value: 0

Maximum value: 65535

Description

Initial offset of the selected Divider Tool.

This feature defines the number of skipped input events after enabling the Divider tool.

DelayToolSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects a Delay Tool.

Selected Features

- "DelayToolSource1" below
- "DelayToolSource2" on page 89
- "DelayToolClockSource" on page 90
- "DelayToolDelayValue" on page 91

Enumeration Values

- `DEL1`: Delay Tool 1.
- `DEL2`: Delay Tool 2.
- `DEL3`: Delay Tool 3.
- `DEL4`: Delay Tool 4.

DelayToolSource1

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

I/O Toolbox event stream used as input 1 for the selected Delay Tool.

Enumeration Values

- `NONE`: No event stream.
- `LIN1`: When an event occurs on Line Input Tool 1.
- `LIN2`: When an event occurs on Line Input Tool 2.
- `LIN3`: When an event occurs on Line Input Tool 3.
- `LIN4`: When an event occurs on Line Input Tool 4.
- `LIN5`: When an event occurs on Line Input Tool 5.
- `LIN6`: When an event occurs on Line Input Tool 6.
- `LIN7`: When an event occurs on Line Input Tool 7.
- `LIN8`: When an event occurs on Line Input Tool 8.
- `QDC1`: When an event occurs on Quadrature Decoder Tool 1.
- `QDC2`: When an event occurs on Quadrature Decoder Tool 2.
- `QDC3`: When an event occurs on Quadrature Decoder Tool 3.
- `QDC4`: When an event occurs on Quadrature Decoder Tool 4.
- `MDV1`: When an event occurs on Multiplier/Divider Tool 1.
- `MDV2`: When an event occurs on Multiplier/Divider Tool 2.
- `MDV3`: When an event occurs on Multiplier/Divider Tool 3.
- `MDV4`: When an event occurs on Multiplier/Divider Tool 4.
- `DIV1`: When an event occurs on Divider Tool 1.
- `DIV2`: When an event occurs on Divider Tool 2.
- `DIV3`: When an event occurs on Divider Tool 3.
- `DIV4`: When an event occurs on Divider Tool 4.
- `DEL1_1`: When an event occurs on Delay Tool 1 Output 1.
- `DEL1_2`: When an event occurs on Delay Tool 1 Output 2.
- `DEL2_1`: When an event occurs on Delay Tool 2 Output 1.
- `DEL2_2`: When an event occurs on Delay Tool 2 Output 2.
- `DEL3_1`: When an event occurs on Delay Tool 3 Output 1.
- `DEL3_2`: When an event occurs on Delay Tool 3 Output 2.
- `DEL4_1`: When an event occurs on Delay Tool 4 Output 1.
- `DEL4_2`: When an event occurs on Delay Tool 4 Output 2.
- `EIN1`: When an event occurs on Event Input Tool 1.
- `EIN2`: When an event occurs on Event Input Tool 2.

- `UserEvent1`: When an event occurs on User Event 1.
- `UserEvent2`: When an event occurs on User Event 2.
- `UserEvent3`: When an event occurs on User Event 3.
- `UserEvent4`: When an event occurs on User Event 4.

DelayToolSource2

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

I/O Toolbox event stream used as input 2 for the selected Delay Tool.

Enumeration Values

- `NONE`: No event stream.
- `LIN1`: When an event occurs on Line Input Tool 1.
- `LIN2`: When an event occurs on Line Input Tool 2.
- `LIN3`: When an event occurs on Line Input Tool 3.
- `LIN4`: When an event occurs on Line Input Tool 4.
- `LIN5`: When an event occurs on Line Input Tool 5.
- `LIN6`: When an event occurs on Line Input Tool 6.
- `LIN7`: When an event occurs on Line Input Tool 7.
- `LIN8`: When an event occurs on Line Input Tool 8.
- `QDC1`: When an event occurs on Quadrature Decoder Tool 1.
- `QDC2`: When an event occurs on Quadrature Decoder Tool 2.
- `QDC3`: When an event occurs on Quadrature Decoder Tool 3.
- `QDC4`: When an event occurs on Quadrature Decoder Tool 4.
- `MDV1`: When an event occurs on Multiplier/Divider Tool 1.
- `MDV2`: When an event occurs on Multiplier/Divider Tool 2.
- `MDV3`: When an event occurs on Multiplier/Divider Tool 3.
- `MDV4`: When an event occurs on Multiplier/Divider Tool 4.

- DIV1: When an event occurs on Divider Tool 1.
- DIV2: When an event occurs on Divider Tool 2.
- DIV3: When an event occurs on Divider Tool 3.
- DIV4: When an event occurs on Divider Tool 4.
- DEL1_1: When an event occurs on Delay Tool 1 Output 1.
- DEL1_2: When an event occurs on Delay Tool 1 Output 2.
- DEL2_1: When an event occurs on Delay Tool 2 Output 1.
- DEL2_2: When an event occurs on Delay Tool 2 Output 2.
- DEL3_1: When an event occurs on Delay Tool 3 Output 1.
- DEL3_2: When an event occurs on Delay Tool 3 Output 2.
- DEL4_1: When an event occurs on Delay Tool 4 Output 1.
- DEL4_2: When an event occurs on Delay Tool 4 Output 2.
- EIN1: When an event occurs on Event Input Tool 1.
- EIN2: When an event occurs on Event Input Tool 2.
- UserEvent1: When an event occurs on User Event 1.
- UserEvent2: When an event occurs on User Event 2.
- UserEvent3: When an event occurs on User Event 3.
- UserEvent4: When an event occurs on User Event 4.

DelayToolClockSource

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

I/O Toolbox event stream used as clock.

Enumeration Values

- NONE: No event stream.
- TIME8NS: Clock input 8 nanoseconds time base.
- TIME200NS: Clock input 200 nanoseconds time base.

- `TIME1US`: Clock input 1 microsecond time base.
- `LIN1`: When an event occurs on Line Input Tool 1.
- `LIN2`: When an event occurs on Line Input Tool 2.
- `LIN3`: When an event occurs on Line Input Tool 3.
- `LIN4`: When an event occurs on Line Input Tool 4.
- `LIN5`: When an event occurs on Line Input Tool 5.
- `LIN6`: When an event occurs on Line Input Tool 6.
- `LIN7`: When an event occurs on Line Input Tool 7.
- `LIN8`: When an event occurs on Line Input Tool 8.
- `QDC1`: When an event occurs on Quadrature Decoder Tool 1.
- `QDC2`: When an event occurs on Quadrature Decoder Tool 2.
- `QDC3`: When an event occurs on Quadrature Decoder Tool 3.
- `QDC4`: When an event occurs on Quadrature Decoder Tool 4.

DelayToolDelayValue

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Integer	RW

Value Info

Maximum value: 16777215

Description

Delay value of the selected Delay Tool.

Minimum value:

- 5 when `DelayToolClockSource` is `TIME8NS`
- 1 in other cases

Unit: time or event according to `DelayToolClockSource`.

EventInputToolSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Selects an Event Input Tool.

Selected Features

- "EventInputToolSource" below
- "EventInputToolActivation" on the next page

Enumeration Values

- `EIN1`: Event Input Tool 1.
- `EIN2`: Event Input Tool 2.

EventInputToolSource

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

CoaXPress connector used as input for the selected Event Input Tool.

Enumeration Values

- `A`: CoaXPress physical host connection A..

EventInputToolActivation

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	Enumeration	RW

Short Description

Signal activating the output of the selected Event Input Tool.

Enumeration Values

- `StartOfScan`: Receipt of start of scan signal.
- `EndOfScan`: Receipt of end of scan signal.

InternalTime

Feature Info

Module	Category Path	Type	Access
Interface	Root / IOToolbox	IntReg	RO

Register Port: InterfacePort

Short Description

Reports the Coaxlink card internal time.

3.9. PCIExpress Category

PCIeMaxPayloadSizeSupported

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	IntReg	RO

Register Port: InterfacePort

Description

Maximum payload size of PCIe TLPs (Transaction Layer Packets) that this interface can support (cf. PCIe Capability Structure offset 04h (Device Capabilities) bits 2:0).

> **Note:** `PCIeMaxPayloadSizeSupported` *is the max packet payload size supported by Coaxlink for data in the direction frame grabber to PC memory.*

PCIeMaxPayloadSize

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	IntReg	RO

Register Port: InterfacePort

Description

Maximum payload size of PCIe TLPs (Transaction Layer Packets) that this interface is allowed to generate (cf. PCIe Capability Structure offset 08h (Device Control) bits 7:5).

> **Note:** `PCIeMaxPayloadSize` *is the max packet payload size supported by the PC for data in the direction frame grabber to PC memory.*

PCIeMaxReadRequestSize

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	IntReg	RO

Register Port: InterfacePort

Description

Maximum size of PCIe read requests that this interface is allowed to generate (cf. PCIe Capability Structure offset 08h (Device Control) bits 14:12).

PCIeMaxLinkSpeed

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Enumeration	Imposed: RO

Short Description

Maximum PCIe transfer rate supported by this interface (cf. PCIe Capability Structure offset 0Ch (Link Capabilities) bits 3:0).

Enumeration Values

- `NotAvailable`: Not available.
- `PCIeLinkSpeed2500MTps`: 2.5 GT/s (PCIe Gen 1).
- `PCIeLinkSpeed5000MTps`: 5.0 GT/s (PCIe Gen 2).
- `PCIeLinkSpeed8000MTps`: 8.0 GT/s (PCIe Gen 3).

PCIeCurrentLinkSpeed

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Enumeration	Imposed: RO

Short Description

Negotiated PCIe transfer rate (cf. PCIe Capability Structure offset 12h (Link Status) bits 3:0).

Enumeration Values

- `NotAvailable`: Not available.
- `PCIeLinkSpeed2500MTps`: 2.5 GT/s (PCIe Gen 1).
- `PCIeLinkSpeed5000MTps`: 5.0 GT/s (PCIe Gen 2).
- `PCIeLinkSpeed8000MTps`: 8.0 GT/s (PCIe Gen 3).

PCIeMaximumLinkWidth

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Enumeration	Imposed: RO

Short Description

Maximum PCIe link width supported by this interface (cf. PCIe Capability Structure offset 0Ch (Link Capabilities) bits 9:4).

Enumeration Values

- `NotAvailable`: Not available.
- `x1`: 1 Lane.
- `x2`: 2 Lanes.
- `x4`: 4 Lanes.
- `x8`: 8 Lanes.

- `x12`: 12 Lanes.
- `x16`: 16 Lanes.
- `x32`: 32 Lanes.

PCIeNegotiatedLinkWidth

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Enumeration	Imposed: RO

Short Description

Negotiated PCIe link width (cf. PCIe Capability Structure offset 12h (Link Status) bits 9:4).

Enumeration Values

- `NotAvailable`: Not available.
- `x1`: 1 Lane.
- `x2`: 2 Lanes.
- `x4`: 4 Lanes.
- `x8`: 8 Lanes.
- `x12`: 12 Lanes.
- `x16`: 16 Lanes.
- `x32`: 32 Lanes.

PCIeLinkSpeed2500MTpsSupported

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Boolean	RW

Short Description

Reports whether this interface supports PCIe Gen 1 transfer rate (2.5 GT/s).

PCIeLinkSpeed5000MTpsSupported

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Boolean	RW

Short Description

Reports whether this interface supports PCIe Gen 2 transfer rate (5.0 GT/s).

PCIeLinkSpeed8000MTpsSupported

Feature Info

Module	Category Path	Type	Access
Interface	Root / PCIExpress	Boolean	RW

Short Description

Reports whether this interface supports PCIe Gen 3 transfer rate (8.0 GT/s).

3.10. InterfaceControl Category

FanStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceControl	Enumeration	Imposed: RO

Short Description

Fan Status.

Enumeration Values

- `OK`: Fan speed is OK.
- `NotOK`: Fan speed is not OK.

TemperatureSensorSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceControl	Enumeration	RW

Short Description

Temperature Sensor Selector.

Selected Features

- "Temperature" below

Enumeration Values

- `Grabber`: Grabber Temperature Sensor.

Temperature

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceControl	SwissKnife	RW

Description

Returns the temperature, expressed in °C measured by the selected temperature sensor.

AuxiliaryPowerInput

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceControl	Enumeration	Imposed: RO

Description

Auxiliary power input cable connection status.

> **Note:** *This status is valid only if a PEG-compliant power supply is attached to the Coaxlink auxiliary power input connector through a PEG-compliant power cable.*

Enumeration Values

- `Unconnected`: There is no PEG-compliant power cable connected to the auxiliary power input.
- `Connected`: A PEG-compliant power cable is connected to the auxiliary power input.

AuxiliaryPower12VInput

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceControl	Enumeration	Imposed: RO

Short Description

Return the status of the 12V Auxiliary Power Input.

Enumeration Values

- `NotOK`: The 12V auxiliary power input is NOK.
- `OK`: The 12V auxiliary power input is OK.

3.11. InterfaceDetails Category

BoardCapabilities

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	StringReg	RO

Short Description

Board Capabilities.

FirmwareBoardID

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntReg	RO

Register Port: InterfacePort

Short Description

Firmware Board ID.

CPLDRevision

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	Integer	RW

Short Description

CPLD Revision.

PreviousBootBank

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntSwissKnife	RW

Short Description

Flash bank used during the previous power on.

NextBootBank

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntSwissKnife	RW

Short Description

Flash bank that will be used during the next power on.

CurrentBankSelect

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntSwissKnife	RW

Short Description

Current Bank Select.

CurrentBankSelectReadback

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntSwissKnife	RW

Short Description

Current Bank Select Readback.

NextBankSelect

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntSwissKnife	RW

Short Description

Next Bank Select.

SpiBankStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntReg	RO

Register Port: InterfacePort

Short Description

Spi Bank Status.

PotBankStatus

Feature Info

Module	Category Path	Type	Access
Interface	Root / InterfaceDetails	IntReg	RO

Register Port: InterfacePort

Short Description

Pot Bank Status.

3.12. EventControl Category

EventSelector

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Enumeration	RW

Short Description

Select an event.

Selected Features

- "EventNotification" on page 109
- "EventNotificationContext1" on page 109
- "EventNotificationContext2" on page 112
- "EventNotificationContext3" on page 115
- "EventCount" on page 118
- "EventCountReset" on page 118

Enumeration Values

- `LIN1`: Line Input Tool 1.
- `LIN2`: Line Input Tool 2.
- `LIN3`: Line Input Tool 3.

- `LIN4`: Line Input Tool 4.
- `LIN5`: Line Input Tool 5.
- `LIN6`: Line Input Tool 6.
- `LIN7`: Line Input Tool 7.
- `LIN8`: Line Input Tool 8.
- `QDC1`: Quadrature Decoder Tool 1.
- `QDC1Dir`: Quadrature Decoder Tool 1 Changed Direction.
- `QDC2`: Quadrature Decoder Tool 2.
- `QDC2Dir`: Quadrature Decoder Tool 2 Changed Direction.
- `QDC3`: Quadrature Decoder Tool 3.
- `QDC3Dir`: Quadrature Decoder Tool 3 Changed Direction.
- `QDC4`: Quadrature Decoder Tool 4.
- `QDC4Dir`: Quadrature Decoder Tool 4 Changed Direction.
- `DIV1`: Divider Tool 1.
- `DIV2`: Divider Tool 2.
- `DIV3`: Divider Tool 3.
- `DIV4`: Divider Tool 4.
- `MDV1`: Multiplier/Divider Tool 1.
- `MDV2`: Multiplier/Divider Tool 2.
- `MDV3`: Multiplier/Divider Tool 3.
- `MDV4`: Multiplier/Divider Tool 4.
- `DEL11`: Delay Tool 1 Output 1.
- `DEL12`: Delay Tool 1 Output 2.
- `DEL21`: Delay Tool 2 Output 1.
- `DEL22`: Delay Tool 2 Output 2.
- `DEL31`: Delay Tool 3 Output 1.
- `DEL32`: Delay Tool 3 Output 2.
- `DEL41`: Delay Tool 4 Output 1.
- `DEL42`: Delay Tool 4 Output 2.
- `UserEvent1`: User Event 1.
- `UserEvent2`: User Event 2.
- `UserEvent3`: User Event 3.
- `UserEvent4`: User Event 4.

- `EIN1`: Event Input Tool 1.
- `EIN2`: Event Input Tool 2.
- `CrcErrorCxpA`: Detected CRC error on CXP connector A.
- `CrcErrorCxpB`: Detected CRC error on CXP connector B.
- `CrcErrorCxpC`: Detected CRC error on CXP connector C.
- `CrcErrorCxpD`: Detected CRC error on CXP connector D.
- `CrcErrorCxpE`: Detected CRC error on CXP connector E.
- `CrcErrorCxpF`: Detected CRC error on CXP connector F.
- `CrcErrorCxpG`: Detected CRC error on CXP connector G.
- `CrcErrorCxpH`: Detected CRC error on CXP connector H.
- `ConnectionDetectedCxpA`: Low level connection lock achieved on CXP connector A.
- `ConnectionDetectedCxpB`: Low level connection lock achieved on CXP connector B.
- `ConnectionDetectedCxpC`: Low level connection lock achieved on CXP connector C.
- `ConnectionDetectedCxpD`: Low level connection lock achieved on CXP connector D.
- `ConnectionDetectedCxpE`: Low level connection lock achieved on CXP connector E.
- `ConnectionDetectedCxpF`: Low level connection lock achieved on CXP connector F.
- `ConnectionDetectedCxpG`: Low level connection lock achieved on CXP connector G.
- `ConnectionDetectedCxpH`: Low level connection lock achieved on CXP connector H.
- `ConnectionUndetectedCxpA`: Low level connection lock lost on CXP connector A.
- `ConnectionUndetectedCxpB`: Low level connection lock lost on CXP connector B.
- `ConnectionUndetectedCxpC`: Low level connection lock lost on CXP connector C.
- `ConnectionUndetectedCxpD`: Low level connection lock lost on CXP connector D.
- `ConnectionUndetectedCxpE`: Low level connection lock lost on CXP connector E.
- `ConnectionUndetectedCxpF`: Low level connection lock lost on CXP connector F.
- `ConnectionUndetectedCxpG`: Low level connection lock lost on CXP connector G.
- `ConnectionUndetectedCxpH`: Low level connection lock lost on CXP connector H.
- `Device0Ready`: CoaXPress ConnectionConfig done for Device 0.
- `Device1Ready`: CoaXPress ConnectionConfig done for Device 1.
- `Device2Ready`: CoaXPress ConnectionConfig done for Device 2.
- `Device3Ready`: CoaXPress ConnectionConfig done for Device 3.
- `Device4Ready`: CoaXPress ConnectionConfig done for Device 4.
- `Device5Ready`: CoaXPress ConnectionConfig done for Device 5.
- `Device6Ready`: CoaXPress ConnectionConfig done for Device 6.

- `Device7Ready`: CoaXPress ConnectionConfig done for Device 7.
- `Device0Lost`: Device 0 disconnected.
- `Device1Lost`: Device 1 disconnected.
- `Device2Lost`: Device 2 disconnected.
- `Device3Lost`: Device 3 disconnected.
- `Device4Lost`: Device 4 disconnected.
- `Device5Lost`: Device 5 disconnected.
- `Device6Lost`: Device 6 disconnected.
- `Device7Lost`: Device 7 disconnected.

EventNotification

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Boolean	RW

Short Description

Activate or deactivate the notification to the host application of the occurrence of the selected event.

EventNotificationContext1

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_1.

Enumeration Values

- `EventSpecific`: Event-specific context information.

- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.

- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.

- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `Device0ReadyEventCount`: Number of Device0Ready events.
- `Device1ReadyEventCount`: Number of Device1Ready events.
- `Device2ReadyEventCount`: Number of Device2Ready events.
- `Device3ReadyEventCount`: Number of Device3Ready events.
- `Device4ReadyEventCount`: Number of Device4Ready events.
- `Device5ReadyEventCount`: Number of Device5Ready events.
- `Device6ReadyEventCount`: Number of Device6Ready events.
- `Device7ReadyEventCount`: Number of Device7Ready events.
- `Device0LostEventCount`: Number of Device0Lost events.
- `Device1LostEventCount`: Number of Device1Lost events.
- `Device2LostEventCount`: Number of Device2Lost events.
- `Device3LostEventCount`: Number of Device3Lost events.
- `Device4LostEventCount`: Number of Device4Lost events.
- `Device5LostEventCount`: Number of Device5Lost events.
- `Device6LostEventCount`: Number of Device6Lost events.
- `Device7LostEventCount`: Number of Device7Lost events.

EventNotificationContext2

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_2.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.

- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.

- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `Device0ReadyEventCount`: Number of Device0Ready events.
- `Device1ReadyEventCount`: Number of Device1Ready events.

- `Device2ReadyEventCount`: Number of Device2Ready events.
- `Device3ReadyEventCount`: Number of Device3Ready events.
- `Device4ReadyEventCount`: Number of Device4Ready events.
- `Device5ReadyEventCount`: Number of Device5Ready events.
- `Device6ReadyEventCount`: Number of Device6Ready events.
- `Device7ReadyEventCount`: Number of Device7Ready events.
- `Device0LostEventCount`: Number of Device0Lost events.
- `Device1LostEventCount`: Number of Device1Lost events.
- `Device2LostEventCount`: Number of Device2Lost events.
- `Device3LostEventCount`: Number of Device3Lost events.
- `Device4LostEventCount`: Number of Device4Lost events.
- `Device5LostEventCount`: Number of Device5Lost events.
- `Device6LostEventCount`: Number of Device6Lost events.
- `Device7LostEventCount`: Number of Device7Lost events.

EventNotificationContext3

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_3.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `LIN1EventCount`: Number of LIN1 events.

- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.

- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `Device0ReadyEventCount`: Number of Device0Ready events.
- `Device1ReadyEventCount`: Number of Device1Ready events.
- `Device2ReadyEventCount`: Number of Device2Ready events.
- `Device3ReadyEventCount`: Number of Device3Ready events.
- `Device4ReadyEventCount`: Number of Device4Ready events.

- `Device5ReadyEventCount`: Number of Device5Ready events.
- `Device6ReadyEventCount`: Number of Device6Ready events.
- `Device7ReadyEventCount`: Number of Device7Ready events.
- `Device0LostEventCount`: Number of Device0Lost events.
- `Device1LostEventCount`: Number of Device1Lost events.
- `Device2LostEventCount`: Number of Device2Lost events.
- `Device3LostEventCount`: Number of Device3Lost events.
- `Device4LostEventCount`: Number of Device4Lost events.
- `Device5LostEventCount`: Number of Device5Lost events.
- `Device6LostEventCount`: Number of Device6Lost events.
- `Device7LostEventCount`: Number of Device7Lost events.

EventCount

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	IntReg	RO

Register Port: InterfacePort

Short Description

Number of occurrences of the selected event (32-bit counter).

EventCountReset

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Command	Imposed: WO

Short Description

Reset the selected EventCount.

EventNotificationAll

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Boolean	Imposed: WO

Short Description

Activate or deactivate the notification of all events.

EventCountResetAll

Feature Info

Module	Category Path	Type	Access
Interface	Root / EventControl	Command	Imposed: WO

Short Description

Reset all EventCount.

3.13. OemSafetyKey Category

OemSafetyKeyVerification

Feature Info

Module	Category Path	Type	Access
Interface	Root / OemSafetyKey	Enumeration	RW

Description

Defines which key can be compared with the programmed OEM safety key.

Acts as a selector for `CheckOemSafetyKey`.

Recommended value:`EncryptedKey`.

Default value: `ProgrammingKeyOrEncryptedKey`.

Selected Features

- "CheckOemSafetyKey" on the next page

Enumeration Values

- `ProgrammingKey`: Only the key written to ProgramOemSafetyKey can be used to verify the OEM safety key.
- `EncryptedKey`: Only the key read from EncryptedOemSafetyKey can be used to verify the OEM safety key (recommended).
- `ProgrammingKeyOrEncryptedKey`: Both the key written to ProgramOemSafetyKey and the key read from EncryptedOemSafetyKey can be used to verify the OEM safety key.

CheckOemSafetyKey

Feature Info

Module	Category Path	Type	Access
Interface	Root / OemSafetyKey	String	Imposed: WO

Description

Write-only string to use for comparing a key (the key written to `ProgramOemSafetyKey` or the key read from `EncryptedOemSafetyKey`) and the programmed OEM safety key.

ProgramOemSafetyKey

Feature Info

Module	Category Path	Type	Access
Interface	Root / OemSafetyKey	String	Imposed: WO

Short Description

Write-only string to use for programming the non-volatile OEM safety key.

EncryptedOemSafetyKey

Feature Info

Module	Category Path	Type	Access
Interface	Root / OemSafetyKey	String	Imposed: RO

Description

Read-only string that contains the encrypted version of the OEM safety key just programmed with `ProgramOemSafetyKey`.

MaximumOemKeyLength

Feature Info

Module	Category Path	Type	Access
Interface	Root / OemSafetyKey	Integer	RW

Value Info

Minimum value: 40

Maximum value: 2147483647

Description

The length of `ProgramOemSafetyKey` and `CheckOemSafetyKey` is limited by `MaximumOemKeyLength`.

Default value: `4096`.

3.14. CustomLogic Category

CustomLogicControlAddress

Feature Info

Module	Category Path	Type	Access
Interface	Root / CustomLogic	Integer	RW

Value Info

Minimum value: 0

Maximum value: 65535

Short Description

Custom Logic Control Address.

Selected Features

- "CustomLogicControlData" below

CustomLogicControlData

Feature Info

Module	Category Path	Type	Access
Interface	Root / CustomLogic	Integer	RW

Value Info

Minimum value: 0

Maximum value: 4294967295

Short Description

Custom Logic Control Data.

3.15. OnboardMemory Category

OnboardMemoryBase

Feature Info

Module	Category Path	Type	Access
Interface	Root / OnboardMemory	Integer	Imposed: RO

Short Description

Base address of the onboard memory.

OnboardMemorySize

Feature Info

Module	Category Path	Type	Access
Interface	Root / OnboardMemory	IntReg	RO

Register Port: InterfacePort

Short Description

Available size in bytes of the onboard memory.

4. Device Module

Categorized features list of Device module version 10.3.1.127

4.1. Root Category

DeviceInformation

Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

Category Members

Refer to "DeviceInformation Category " on page 130

StreamEnumeration

Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

Category Members

Refer to "StreamEnumeration Category " on page 133

CameraAndIlluminationControl

Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

Description

Set of features related to the Camera and Illumination Controller (CIC).

Category Members

Refer to "CameraAndIlluminationControl Category " on page 140

CoaXPress

Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

Category Members

Refer to "CoaXPress Category " on page 134

EventControl

Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

Category Members

Refer to "EventControl Category " on page 162

Errors

Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

Category Members

Refer to "Errors Category " on page 174

4.2. DeviceInformation Category

DeviceID

Feature Info

Module	Category Path	Type	Access
Device	Root / DeviceInformation	String	Imposed: RO

Short Description

Interface wide unique identifier of this device.

DeviceVendorName

Feature Info

Module	Category Path	Type	Access
Device	Root / DeviceInformation	String	Imposed: RO

Short Description

Name of the device vendor.

DeviceModelName

Feature Info

Module	Category Path	Type	Access
Device	Root / DeviceInformation	String	Imposed: RO

Short Description

Name of the device model.

DeviceAccessStatus

Feature Info

Module	Category Path	Type	Access
Device	Root / DeviceInformation	Enumeration	Imposed: RO

Short Description

Gives the device's access status at the moment of the last execution of DeviceUpdateList.

Enumeration Values

- `Unknown`: Unknown access.
- `ReadWrite`: Available to be opened with full access.
- `ReadOnly`: Available to be opened with read-only access.
- `NoAccess`: Not reachable.
- `Busy`: Already opened by another entity.
- `OpenReadWrite`: Opened with read-write access.
- `OpenReadOnly`: Opened with read-only access.

DeviceType

Feature Info

Module	Category Path	Type	Access
Device	Root / DeviceInformation	Enumeration	Imposed: RO

Short Description

Identifies the transport layer technology of the interface.

Enumeration Values

- `CXP`: This enumeration value indicates CoaXPress transport layer technology.

4.3. StreamEnumeration Category

StreamSelector

Feature Info

Module	Category Path	Type	Access
Device	Root / StreamEnumeration	Integer	RW

Value Info

Minimum value: 0

Short Description

Selector for the different stream channels.

Selected Features

- "StreamID" below

StreamID

Feature Info

Module	Category Path	Type	Access
Device	Root / StreamEnumeration	String	Imposed: RO

Short Description

Device unique ID for the stream.

4.4. CoaXPress Category

CxpLinkConfiguration

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Enumeration	RW

Description

Set/report the CoaXPress Link configuration.

Enumeration Values

- `CXP1_X1`: 1 connection @1.250 Gbps.
- `CXP2_X1`: 1 connection @2.500 Gbps.
- `CXP3_X1`: 1 connection @3.125 Gbps.
- `CXP5_X1`: 1 connection @5.000 Gbps.
- `CXP6_X1`: 1 connection @6.250 Gbps.
- `CXP10_X1`: 1 connection @10.000 Gbps.
- `CXP12_X1`: 1 connection @12.500 Gbps.
- `CXP1_X2`: 2 connections @1.250 Gbps.
- `CXP2_X2`: 2 connections @2.500 Gbps.
- `CXP3_X2`: 2 connections @3.125 Gbps.
- `CXP5_X2`: 2 connections @5.000 Gbps.
- `CXP6_X2`: 2 connections @6.250 Gbps.

- `CXP10_X2`: 2 connections @10.000 Gbps.
- `CXP12_X2`: 2 connections @12.500 Gbps.
- `CXP1_X3`: 3 connections @1.250 Gbps.
- `CXP2_X3`: 3 connections @2.500 Gbps.
- `CXP3_X3`: 3 connections @3.125 Gbps.
- `CXP5_X3`: 3 connections @5.000 Gbps.
- `CXP6_X3`: 3 connections @6.250 Gbps.
- `CXP10_X3`: 3 connections @10.000 Gbps.
- `CXP12_X3`: 3 connections @12.500 Gbps.
- `CXP1_X4`: 4 connections @1.250 Gbps.
- `CXP2_X4`: 4 connections @2.500 Gbps.
- `CXP3_X4`: 4 connections @3.125 Gbps.
- `CXP5_X4`: 4 connections @5.000 Gbps.
- `CXP6_X4`: 4 connections @6.250 Gbps.
- `CXP10_X4`: 4 connections @10.000 Gbps.
- `CXP12_X4`: 4 connections @12.500 Gbps.
- `CXP1_X8`: 8 connections @1.250 Gbps.
- `CXP2_X8`: 8 connections @2.500 Gbps.
- `CXP3_X8`: 8 connections @3.125 Gbps.
- `CXP5_X8`: 8 connections @5.000 Gbps.
- `CXP6_X8`: 8 connections @6.250 Gbps.
- `CXP10_X8`: 8 connections @10.000 Gbps.
- `CXP12_X8`: 8 connections @12.500 Gbps.
- `Preferred`: Camera Preferred Configuration adapted to the capabilities of the frame grabber.

CxpLinkConfigurationOption

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Enumeration	RW

Short Description

CxpLinkConfiguration option.

Selected Features

- "CxpLinkConfiguration" on page 134

Enumeration Values

- `AlwaysWrite`: Always write the link configuration to the camera.
- `WriteIfDifferent`: Write the link configuration to the camera only if it is different from the current configuration.

CxpHostConnectionBase

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Enumeration	RW

Short Description

Returns the base CoaXPress physical connection of this device.

Enumeration Values

- `A`: CoaXPress physical host connection A.
- `B`: CoaXPress physical host connection B.
- `C`: CoaXPress physical host connection C.
- `D`: CoaXPress physical host connection D.
- `E`: CoaXPress physical host connection E.
- `F`: CoaXPress physical host connection F.
- `G`: CoaXPress physical host connection G.
- `H`: CoaXPress physical host connection H.

CxpHostConnectionCount

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	IntReg	RO

Register Port: DevicePort

Short Description

Returns the number of CoaXPress physical connections of this device.

CxpTriggerMessageFormat

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Enumeration	RW

Description

Sets/gets the CoaXPress Host to Device Trigger Message Format.

When set to `Pulse`, every Camera Trigger requires two transactions on the Host to Device I/O Channel: one **rising edge trigger packet** and one **falling edge trigger packet**. This is the standard behaviour.

When set to "RisingEdge", every Camera Trigger requires a single transaction on the Host to Device I/O Channel: one **rising edge trigger packet**.

When set to `CxpTriggerMessageFormat`, every Camera Trigger generates a single message transaction on the Host to Device I/O Channel alternating rising edge or falling edge trigger messages.

Default value: `Pulse`.

Enumeration Values

- `Pulse`: Rising edge and falling edge CoaXPress trigger messages.
- `RisingEdge`: Rising edge CoaXPress trigger message.
- `Toggle`: Alternating rising edge or falling edge CoaXPress trigger message.

CxpTriggerLevel

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Enumeration	RW

Description

This feature allows to set or get the logical state of the CoaXPress Host to Device Trigger signal.

Setting the logical state is only allowed when `CxpTriggerMessageFormat` is set to `Toggle`.

Getting the logical state is allowed for any value of `CxpTriggerMessageFormat`.

Enumeration Values

- `Low`: Next trigger message format will be rising edge CoaXPress trigger message.
- `High`: Next trigger message format will be falling edge CoaXPress trigger message.

CxpTriggerAckTimeout

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Float	RW

Value Info

Minimum value: 0

Maximum value: 2097.1469999999999

Description

Acknowledge timeout value of the CoaXPress Host to Device trigger message .

Default value: 20.0 (20 microseconds).

CxpTriggerMaxResendCount

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Integer	RW

Value Info

Minimum value: 0

Maximum value: 7

Description

Sets/gets the maximum resend count of the CoaXPress Host to Device Trigger Message.

Default value: 3.

CxpPacketArbiterReset

Feature Info

Module	Category Path	Type	Access
Device	Root / CoaXPress	Command	RW

Description

CoaXPress Data Packet Arbiter Reset.

Reset the CoaXPress Data Packet Arbiter to Connection 0.

> **Note:** *This command is only useful for multi-connection cameras that unduly reset the round-Robin connection sequence order.*

4.5. CameraAndIlluminationControl Category

CameraModel

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl	Category	RW

Description

Set of features describing the behavioral model of a grabber-controlled camera.

Note: *These features defines the operating limits of the camera and are used to configure the trigger-overrun protection mechanism of the CIC.*

Note: *An incorrectly set behavioral model may prevent reaching the highest achievable camera cycle rate or, reversely, allow the grabber to assert triggers too quickly.*

Category Members

Refer to "CameraModel Category " on page 143

CycleTiming

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl	Category	RW

Description

Set of features describing the CIC Cycle timing properties.

Category Members

Refer to "CycleTiming Category " on page 148

CycleControl

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl	Category	RW

Description

Set of features describing the CIC cycle control properties.

Category Members

Refer to "CycleControl Category " on page 150

SequenceControl

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl	Category	RW

Description

Set of features describing the CIC cycle sequence control properties.

Default value: `True`.

Category Members

Refer to "SequenceControl Category " on page 155

DeviceReset

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl	Command	RW

Description

Reset the CIC.

CameraAndIlluminationControllerStream

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl	Enumeration	RW

Short Description

Defines which data stream the CIC uses to check whether a new cycle can be started.

Enumeration Values

- `Stream0`: CIC uses camera readout and frame buffer status from Stream0.
- `Stream1`: CIC uses camera readout and frame buffer status from Stream1.
- `Stream2`: CIC uses camera readout and frame buffer status from Stream2.
- `Stream3`: CIC uses camera readout and frame buffer status from Stream3.

4.6. CameraModel Category

CameraControlMethod

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Enumeration	RW

Description

Camera control method.

The `NC` camera control method is to be used with free-run or asynchronous reset cameras not controlled by the frame grabber.

The `RC`camera control method is to be used with asynchronous reset cameras having the camera cycle start controlled by the grabber CIC and the exposure time controlled by the camera.

The `RG` camera control method is to be used with asynchronous reset cameras having the camera cycle start and the exposure duration controlled by the grabber CIC.

The `EXTERNAL` camera control method is to be used with asynchronous reset cameras having the camera cycle start and the exposure duration controlled by a hardware signal applied by an external controller to any GPIO input port of the grabber.

Note: *The NC and the EXTERNAL camera control methods doesn't use the CIC.*

Enumeration Values

- `NC`: Not Controlled.
- `RC`: Grabber-controlled cycle start, Camera-controlled exposure time.
- `RG`: Grabber-controlled cycle start and exposure time.
- `EXTERNAL`: Externally-controlled cycle start and exposure time.

C2CLinkConfiguration

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Enumeration	RW

Description

Sets/gets the C2C-Link configuration.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Default value: `Disconnected`.

Enumeration Values

- `Disconnected`: Disconnected from the C2C-Link.
- `Master`: Connected to the C2C-Link as the C2C-Link Master Device.
- `Slave`: Connected to the C2C-Link as aC2C-Link Slave Device.

ExposureReadoutOverlap

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Boolean	RW

Description

Declares the exposure overlapping capability of the camera.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

When set to true, it indicates that the camera allows overlapping. The exposure phase of a new camera cycle is allowed to begin during the readout phase.

Wen set to false, it indicates that the camera doesn't allow overlapping. The exposure phase of a new camera cycle is not allowed to begin before the completion of the readout phase.

ExposureRecoveryTime

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Float	RW

Value Info

Minimum value: 0

Maximum value: 17179869.179000001

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Minimum time interval between two consecutive exposure phases.

When `CameraControlMethod` is `RG`, the CIC ensure that the time interval between two consecutive camera trigger pulses is not lower than the specified value in case of large exposure time (exposure time > readout time).

Directive

Only when `CameraControlMethod` is `RG`, set this value to the minimum time interval allowed by the camera.

> **Important:** *A too small value may cause missed triggers.*
>
> **Warning:** *An excessive value prevents reaching the highest achievable camera cycle rate.*

ExposureTimeMin

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Float	RW

Value Info

Minimum value: 3.3599999999999999

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Minimum exposure time.

When `CameraControlMethod` is `RG`, the CIC ensure that the camera trigger pulse width is not lower than the specified value.

Directive

Only when `CameraControlMethod` is `RG`, set this value to the minimum exposure time allowed by the camera.

Important: *A too small value may cause missed triggers.*

ExposureTimeMax

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Float	RW

Value Info

Maximum value: 562949953421.30701

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Maximum exposure time.

When `CameraControlMethod` is `RG`, the CIC ensure that the camera trigger pulse width is not larger than the specified value.

Directive

Only when `CameraControlMethod` is `RG`, set this value to the maximum exposure time allowed by the camera.

Important: *An excessive value may cause missed triggers.*

CycleMinimumPeriod

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CameraModel	Float	RW

Value Info

Minimum value: 3.3599999999999999

Maximum value: 562949953421.30701

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Minimum camera cycle period.

When `CameraControlMethod` is `RC` or `RG`, the CIC ensure that the camera cycle period is not smaller than the specified value.

Note: *was named `CycleTargetPeriod` in Coaxlink driver versions prior to 9.4*

Note: *was named `CyclePeriodTarget` in Coaxlink driver versions prior to 4.1*

Directive

Only when `CameraControlMethod` is `RC` or `RG`, set this value to the minimum cycle period allowed by the camera.

Important: *A too small value may cause missed triggers.*

4.7. CycleTiming Category

ExposureTime

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleTiming	Float	RW

Value Info

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Sets/gets the exposure time.

Applies only when `CameraControlMethod` is `RG`.

Note: *Avoid using exposure time settings outside the exposure time range of the camera.*

Note: *The upper limit is very high: > 150 hours!*

Default value: 1,000.0. (1 millisecond)

StrobeDelay

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleTiming	Float	RW

Value Info

Minimum value: -8589934.5869999994

Maximum value: 8589934.5869999994

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Sets/gets the strobe pulse delay.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Default value: 0

StrobeDuration

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleTiming	Float	RW

Value Info

Minimum value: 0

Maximum value: 562949953421.30701

Dimension: Time

Unit: µs

Increment: 0.008 µs (8 ns)

Description

Sets/gets the strobe pulse duration.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Note: *The upper limit is very high: > 150 hours!*

Default value: 1,000.0. (1 millisecond)

4.8. CycleControl Category

CycleTriggerSource

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleControl	Enumeration	RW

Description

Sets/gets the start-of-camera-cycle trigger conditions and selects a hardware or software trigger source.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Default value: `CyclePeriodTarget`.

Enumeration Values

- `Immediate`: Immediately after the start of the sequence and then repeatedly every CycleMinimumPeriod period.
- `StartCycle`: On execution of the StartCycle command.
- `C2C`: Synchronized with the C2C-Link master device. This value is enforced when C2CLinkConfiguration = Slave.
- `LIN1`: When an event occurs on Line Input Tool 1 or on execution of the StartCycle command.
- `LIN2`: When an event occurs on Line Input Tool 2 or on execution of the StartCycle command.
- `LIN3`: When an event occurs on Line Input Tool 3 or on execution of the StartCycle command.

- LIN4: When an event occurs on Line Input Tool 4 or on execution of the StartCycle command.
- LIN5: When an event occurs on Line Input Tool 5 or on execution of the StartCycle command.
- LIN6: When an event occurs on Line Input Tool 6 or on execution of the StartCycle command.
- LIN7: When an event occurs on Line Input Tool 7 or on execution of the StartCycle command.
- LIN8: When an event occurs on Line Input Tool 8 or on execution of the StartCycle command.
- QDC1: When an event occurs on Quadrature Decoder Tool 1 or on execution of the StartCycle command.
- QDC2: When an event occurs on Quadrature Decoder Tool 2 or on execution of the StartCycle command.
- QDC3: When an event occurs on Quadrature Decoder Tool 3 or on execution of the StartCycle command.
- QDC4: When an event occurs on Quadrature Decoder Tool 4 or on execution of the StartCycle command.
- MDV1: When an event occurs on Multiplier/Divider Tool 1 or on execution of the StartCycle command.
- MDV2: When an event occurs on Multiplier/Divider Tool 2 or on execution of the StartCycle command.
- MDV3: When an event occurs on Multiplier/Divider Tool 3 or on execution of the StartCycle command.
- MDV4: When an event occurs on Multiplier/Divider Tool 4 or on execution of the StartCycle command.
- DIV1: When an event occurs on Divider Tool 1 or on execution of the StartCycle command.
- DIV2: When an event occurs on Divider Tool 2 or on execution of the StartCycle command.
- DIV3: When an event occurs on Divider Tool 3 or on execution of the StartCycle command.
- DIV4: When an event occurs on Divider Tool 4 or on execution of the StartCycle command.
- DEL1_1: When an event occurs on Delay Tool 1 Output 1 or on execution of the StartCycle command.
- DEL1_2: When an event occurs on Delay Tool 1 Output 2 or on execution of the StartCycle command.
- DEL2_1: When an event occurs on Delay Tool 2 Output 1 or on execution of the StartCycle command.
- DEL2_2: When an event occurs on Delay Tool 2 Output 2 or on execution of the StartCycle command.

- DEL3_1: When an event occurs on Delay Tool 3 Output 1 or on execution of the StartCycle command.
- DEL3_2: When an event occurs on Delay Tool 3 Output 2 or on execution of the StartCycle command.
- DEL4_1: When an event occurs on Delay Tool 4 Output 1 or on execution of the StartCycle command.
- DEL4_2: When an event occurs on Delay Tool 4 Output 2 or on execution of the StartCycle command.
- EIN1: When an event occurs on Event Input Tool 1 or on execution of the StartCycle command.
- EIN2: When an event occurs on Event Input Tool 2 or on execution of the StartCycle command.
- UserEvent1: When an event occurs on User Event 1 or on execution of the StartCycle command.
- UserEvent2: When an event occurs on User Event 2 or on execution of the StartCycle command.
- UserEvent3: When an event occurs on User Event 3 or on execution of the StartCycle command.
- UserEvent4: When an event occurs on User Event 4 or on execution of the StartCycle command.

StartCycle

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleControl	Command	RW

Description

Starts a camera cycle.

Applies only when the CIC is used (i.e., when CameraControlMethod is RC or RG).

Note: *was named CycleSoftwareTrigger in Coaxlink driver versions prior to 4.1.*

CycleMaxPendingTriggerCount

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleControl	Integer	RW

Value Info

Minimum value: 0

Maximum value: 7

Description

The Camera and Illumination Controller is fitted with a trigger latching mechanism capable of recording triggers that cannot be served immediately and postponing their execution.

This feature determines the capacity of the latch :

- When 0, the trigger latch mechanism is disabled. Any cycle trigger that cannot be served immediately is rejected and increments `CycleLostTriggerCount`.
- When set to any value ranging from 1 to 7, the trigger latch mechanism is enabled. Providing that `CyclePendingTriggerCount` is below `CycleMaxPendingTriggerCount`, any cycle trigger that cannot be served immediately is latched and increments `CyclePendingTriggerCount`.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Default value: 0 (Disabled)

CyclePendingTriggerCount

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleControl	IntReg	RO

Register Port: DevicePort

Description

Returns the count of pending CIC cycle trigger events.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

CycleLostTriggerCount

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleControl	IntReg	RO

Register Port: DevicePort

Description

Returns the count of lost CIC cycle trigger events.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Value range: from 0 up to 4,294,967,295.

CycleLostTriggerCountReset

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / CycleControl	Command	RW

Description

Resets the count of lost CIC cycle trigger events.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

4.9. SequenceControl Category

StartOfSequenceTriggerSource

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / SequenceControl	Enumeration	RW

Description

Sets/gets the start-of-sequence trigger conditions and selects a hardware or software trigger source.

- When set to `Immediate`, the sequence starts immediately.
- When set to `StartSequence`, the sequence starts only on execution of the `StartSequence` command.
- When set to <any-event-source>, the sequence starts on the next occurrence of an event on the specified event source or on execution of the `StartSequence` command. Possible event sources include any available LIN*, QDC*, MDV*, DIV*, DEL*, EIN*, User Event* event source.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Enumeration Values

- `Immediate`: Immediate.
- `StartSequence`: StartSequence command.
- `LIN1`: When an event occurs on Line Input Tool 1 or on execution of the StartSequence command.
- `LIN2`: When an event occurs on Line Input Tool 2 or on execution of the StartSequence command.

- LIN3: When an event occurs on Line Input Tool 3 or on execution of the StartSequence command.
- LIN4: When an event occurs on Line Input Tool 4 or on execution of the StartSequence command.
- LIN5: When an event occurs on Line Input Tool 5 or on execution of the StartSequence command.
- LIN6: When an event occurs on Line Input Tool 6 or on execution of the StartSequence command.
- LIN7: When an event occurs on Line Input Tool 7 or on execution of the StartSequence command.
- LIN8: When an event occurs on Line Input Tool 8 or on execution of the StartSequence command.
- QDC1: When an event occurs on Quadrature Decoder Tool 1 or on execution of the StartSequence command.
- QDC2: When an event occurs on Quadrature Decoder Tool 2 or on execution of the StartSequence command.
- QDC3: When an event occurs on Quadrature Decoder Tool 3 or on execution of the StartSequence command.
- QDC4: When an event occurs on Quadrature Decoder Tool 4 or on execution of the StartSequence command.
- MDV1: When an event occurs on Multiplier/Divider Tool 1 or on execution of the StartSequence command.
- MDV2: When an event occurs on Multiplier/Divider Tool 2 or on execution of the StartSequence command.
- MDV3: When an event occurs on Multiplier/Divider Tool 3 or on execution of the StartSequence command.
- MDV4: When an event occurs on Multiplier/Divider Tool 4 or on execution of the StartSequence command.
- DIV1: When an event occurs on Divider Tool 1 or on execution of the StartSequence command.
- DIV2: When an event occurs on Divider Tool 2 or on execution of the StartSequence command.
- DIV3: When an event occurs on Divider Tool 3 or on execution of the StartSequence command.
- DIV4: When an event occurs on Divider Tool 4 or on execution of the StartSequence command.
- DEL1_1: When an event occurs on Delay Tool 1 Output 1 or on execution of the StartSequence command.

- DEL1_2: When an event occurs on Delay Tool 1 Output 2 or on execution of the StartSequence command.
- DEL2_1: When an event occurs on Delay Tool 2 Output 1 or on execution of the StartSequence command.
- DEL2_2: When an event occurs on Delay Tool 2 Output 2 or on execution of the StartSequence command.
- DEL3_1: When an event occurs on Delay Tool 3 Output 1 or on execution of the StartSequence command.
- DEL3_2: When an event occurs on Delay Tool 3 Output 2 or on execution of the StartSequence command.
- DEL4_1: When an event occurs on Delay Tool 4 Output 1 or on execution of the StartSequence command.
- DEL4_2: When an event occurs on Delay Tool 4 Output 2 or on execution of the StartSequence command.
- EIN1: When an event occurs on Event Input Tool 1 or on execution of the StartSequence command.
- EIN2: When an event occurs on Event Input Tool 2 or on execution of the StartSequence command.
- UserEvent1: When an event occurs on User Event 1 or on execution of the StartSequence command.
- UserEvent2: When an event occurs on User Event 2 or on execution of the StartSequence command.
- UserEvent3: When an event occurs on User Event 3 or on execution of the StartSequence command.
- UserEvent4: When an event occurs on User Event 4 or on execution of the StartSequence command.

EndOfSequenceTriggerSource

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / SequenceControl	Enumeration	RW

Description

Sets/gets the end-of-sequence trigger conditions and selects a hardware or software trigger source.

- When set to `SequenceLength`, the sequence stops automatically after having executed a number of camera cycles specified by `SequenceLength`. The sequence can be stopped anticipatively on execution of the `StopSequence` command.
- When set to `StopSequence`, the sequence stops only on execution of the `StopSequence` command.
- When set to <any-event-source>, the sequence stops on the next occurrence of an event on the specified event source or on execution of the `StopSequence` command. Possible event sources include any available LIN*, QDC*, MDV*, DIV*, DEL*, EIN*, User Event* event source.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

Enumeration Values

- `SequenceLength`: SequenceLength.
- `StopSequence`: StopSequence command.
- `LIN1`: When an event occurs on Line Input Tool 1 or on execution of the StopSequence command.
- `LIN2`: When an event occurs on Line Input Tool 2 or on execution of the StopSequence command.
- `LIN3`: When an event occurs on Line Input Tool 3 or on execution of the StopSequence command.
- `LIN4`: When an event occurs on Line Input Tool 4 or on execution of the StopSequence command.
- `LIN5`: When an event occurs on Line Input Tool 5 or on execution of the StopSequence command.
- `LIN6`: When an event occurs on Line Input Tool 6 or on execution of the StopSequence command.
- `LIN7`: When an event occurs on Line Input Tool 7 or on execution of the StopSequence command.
- `LIN8`: When an event occurs on Line Input Tool 8 or on execution of the StopSequence command.
- `QDC1`: When an event occurs on Quadrature Decoder Tool 1 or on execution of the StopSequence command.
- `QDC2`: When an event occurs on Quadrature Decoder Tool 2 or on execution of the StopSequence command.
- `QDC3`: When an event occurs on Quadrature Decoder Tool 3 or on execution of the StopSequence command.
- `QDC4`: When an event occurs on Quadrature Decoder Tool 4 or on execution of the StopSequence command.
- `MDV1`: When an event occurs on Multiplier/Divider Tool 1 or on execution of the StopSequence command.

- `MDV2`: When an event occurs on Multiplier/Divider Tool 2 or on execution of the StopSequence command.
- `MDV3`: When an event occurs on Multiplier/Divider Tool 3 or on execution of the StopSequence command.
- `MDV4`: When an event occurs on Multiplier/Divider Tool 4 or on execution of the StopSequence command.
- `DIV1`: When an event occurs on Divider Tool 1 or on execution of the StopSequence command.
- `DIV2`: When an event occurs on Divider Tool 2 or on execution of the StopSequence command.
- `DIV3`: When an event occurs on Divider Tool 3 or on execution of the StopSequence command.
- `DIV4`: When an event occurs on Divider Tool 4 or on execution of the StopSequence command.
- `DEL1_1`: When an event occurs on Delay Tool 1 Output 1 or on execution of the StopSequence command.
- `DEL1_2`: When an event occurs on Delay Tool 1 Output 2 or on execution of the StopSequence command.
- `DEL2_1`: When an event occurs on Delay Tool 2 Output 1 or on execution of the StopSequence command.
- `DEL2_2`: When an event occurs on Delay Tool 2 Output 2 or on execution of the StopSequence command.
- `DEL3_1`: When an event occurs on Delay Tool 3 Output 1 or on execution of the StopSequence command.
- `DEL3_2`: When an event occurs on Delay Tool 3 Output 2 or on execution of the StopSequence command.
- `DEL4_1`: When an event occurs on Delay Tool 4 Output 1 or on execution of the StopSequence command.
- `DEL4_2`: When an event occurs on Delay Tool 4 Output 2 or on execution of the StopSequence command.
- `EIN1`: When an event occurs on Event Input Tool 1 or on execution of the StopSequence command.
- `EIN2`: When an event occurs on Event Input Tool 2 or on execution of the StopSequence command.
- `UserEvent1`: When an event occurs on User Event 1 or on execution of the StopSequence command.
- `UserEvent2`: When an event occurs on User Event 2 or on execution of the StopSequence command.

- `UserEvent3`: When an event occurs on User Event 3 or on execution of the StopSequence command.
- `UserEvent4`: When an event occurs on User Event 4 or on execution of the StopSequence command.

SequenceLength

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / SequenceControl	Integer	RW

Value Info

Minimum value: 1

Maximum value: 16777215

Short Description

Sequence Length.

StartSequence

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / SequenceControl	Command	RW

Description

Starts a CIC sequence.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`) and `StartOfSequenceTriggerSource` is not set to `Immediate`.

StopSequence

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / SequenceControl	Command	RW

Description

Stops a CIC sequence.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`).

AbortSequence

Feature Info

Module	Category Path	Type	Access
Device	Root / CameraAndIlluminationControl / SequenceControl	Command	RW

Description

Abort a CIC sequence.

Applies only when the CIC is used (i.e., when `CameraControlMethod` is `RC` or `RG`) and `StartOfSequenceTriggerSource` is not set to `Immediate`.

4.10. EventControl Category

EventSelector

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Enumeration	RW

Short Description

Select an event.

Selected Features

- "EventNotification" on the next page
- "EventNotificationContext1" on the next page
- "EventNotificationContext2" on page 166
- "EventNotificationContext3" on page 169
- "EventCount" on page 172
- "EventCountReset" on page 172

Enumeration Values

- `CameraTriggerRisingEdge`: Start of camera trigger.
- `CameraTriggerFallingEdge`: End of camera trigger.
- `StrobeRisingEdge`: Start of light strobe.

- `StrobeFallingEdge`: End of light strobe.
- `AllowNextCycle`: CIC is ready for next camera cycle.
- `DiscardedCicTrigger`: Ignored CIC trigger because CIC is not ready for next camera cycle.
- `PendingCicTrigger`: Delayed CIC trigger until CIC is ready for next camera cycle.
- `CxpTriggerAck`: Received acknowledgement for previous CXP trigger message.
- `CxpTriggerResend`: Resent CXP trigger message (acknowledgement to previous CXP trigger message not received).
- `Trigger`: CIC trigger.

EventNotification

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Boolean	RW

Description

Activate or deactivate the notification to the host application of the occurrence of the selected event.

When true, activate the notification.

When false, deactivate the notification.

Default value: `False`.

EventNotificationContext1

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_1.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `PendingCicTriggerCount`: Number of currently pending CIC triggers.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.

- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.

- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `CameraTriggerRisingEdgeEventCount`: Number of CameraTriggerRisingEdge events.
- `CameraTriggerFallingEdgeEventCount`: Number of CameraTriggerFallingEdge events.
- `StrobeRisingEdgeEventCount`: Number of StrobeRisingEdge events.
- `StrobeFallingEdgeEventCount`: Number of StrobeFallingEdge events.
- `AllowNextCycleEventCount`: Number of AllowNextCycle events.
- `DiscardedCicTriggerEventCount`: Number of DiscardedCicTrigger events.
- `PendingCicTriggerEventCount`: Number of PendingCicTrigger events.
- `CxpTriggerAckEventCount`: Number of CxpTriggerAck events.
- `CxpTriggerResendEventCount`: Number of CxpTriggerResend events.
- `TriggerEventCount`: Number of Trigger events.

EventNotificationContext2

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_2.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.

- `PendingCicTriggerCount`: Number of currently pending CIC triggers.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.

- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `CameraTriggerRisingEdgeEventCount`: Number of CameraTriggerRisingEdge events.
- `CameraTriggerFallingEdgeEventCount`: Number of CameraTriggerFallingEdge events.
- `StrobeRisingEdgeEventCount`: Number of StrobeRisingEdge events.

- `StrobeFallingEdgeEventCount`: Number of StrobeFallingEdge events.
- `AllowNextCycleEventCount`: Number of AllowNextCycle events.
- `DiscardedCicTriggerEventCount`: Number of DiscardedCicTrigger events.
- `PendingCicTriggerEventCount`: Number of PendingCicTrigger events.
- `CxpTriggerAckEventCount`: Number of CxpTriggerAck events.
- `CxpTriggerResendEventCount`: Number of CxpTriggerResend events.
- `TriggerEventCount`: Number of Trigger events.

EventNotificationContext3

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_3.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `PendingCicTriggerCount`: Number of currently pending CIC triggers.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.

- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.

- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `CameraTriggerRisingEdgeEventCount`: Number of CameraTriggerRisingEdge events.
- `CameraTriggerFallingEdgeEventCount`: Number of CameraTriggerFallingEdge events.
- `StrobeRisingEdgeEventCount`: Number of StrobeRisingEdge events.
- `StrobeFallingEdgeEventCount`: Number of StrobeFallingEdge events.
- `AllowNextCycleEventCount`: Number of AllowNextCycle events.
- `DiscardedCicTriggerEventCount`: Number of DiscardedCicTrigger events.
- `PendingCicTriggerEventCount`: Number of PendingCicTrigger events.
- `CxpTriggerAckEventCount`: Number of CxpTriggerAck events.
- `CxpTriggerResendEventCount`: Number of CxpTriggerResend events.
- `TriggerEventCount`: Number of Trigger events.

EventCount

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	IntReg	RO

Register Port: DevicePort

Short Description

Number of occurrences of the selected event (32-bit counter).

EventCountReset

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Command	Imposed: WO

Short Description

Reset the selected EventCount.

EventNotificationAll

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Boolean	Imposed: WO

Short Description

Activate or deactivate the notification of all events.

EventCountResetAll

Feature Info

Module	Category Path	Type	Access
Device	Root / EventControl	Command	Imposed: WO

Short Description

Reset all EventCount.

4.11. Errors Category

ErrorSelector

Feature Info

Module	Category Path	Type	Access
Device	Root / Errors	Enumeration	RW

Short Description

Error Selector.

Selected Features

- "ErrorCount" on the next page
- "ErrorCountReset" on page 176

Enumeration Values

- `All`: All errors.
- `StreamPacketSizeError`: Stream packet size error.
- `StreamPacketFifoOverflow`: Stream packet FIFO overflow.
- `CameraTriggerOverrun`: New trigger sent to remote device even though readout of previous frame has not started yet.
- `DidNotReceiveTriggerAck`: Trigger ignored because ACK to previous trigger has not been received yet.
- `TriggerPacketRetryError`: Trigger packet resend not successful.
- `InputStreamFifoHalfFull`: Input stream FIFO half full.
- `InputStreamFifoFull`: Input stream FIFO full.
- `ImageHeaderError`: Image header error.

- `MigAxiWriteError`: MIG AXI write error.
- `MigAxiReadError`: MIG AXI read error.
- `PacketWithUnexpectedTag`: Received a CXP packet with unexpected tag.
- `StreamPacketCrcError0`: Stream packet CRC error on connector A.
- `StreamPacketCrcError1`: Stream packet CRC error on connector B.
- `StreamPacketCrcError2`: Stream packet CRC error on connector C.
- `StreamPacketCrcError3`: Stream packet CRC error on connector D.
- `StreamPacketCrcError4`: Stream packet CRC error on connector E.
- `StreamPacketCrcError5`: Stream packet CRC error on connector F.
- `StreamPacketCrcError6`: Stream packet CRC error on connector G.
- `StreamPacketCrcError7`: Stream packet CRC error on connector H.
- `StartOfScanSkipped`: Start of scan skipped (caused by internal exception: image buffer almost full).
- `PrematureEndOfScan`: End of scan (caused by internal exception: image buffer almost full).
- `ExternalTriggerReqsTooClose`: External trigger requests too close together.
- `Unknown`: Unknown errors.

ErrorCount

Feature Info

Module	Category Path	Type	Access
Device	Root / Errors	IntReg	RO

Register Port: DevicePort

Short Description

Error Count.

ErrorCountReset

Feature Info

Module	Category Path	Type	Access
Device	Root / Errors	Command	Imposed: WO

Short Description

Reset the selected ErrorCount.

5. Data Stream Module

Categorized features list of Data Stream module version 10.3.1.127

5.1. Root Category

StreamInformation

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "StreamInformation Category " on page 184

ImageFormatControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "ImageFormatControl Category " on page 185

PixelProcessing

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "PixelProcessing Category " on page 198

LUTControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "LUTControl Category " on page 200

TransportLayerControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "TransportLayerControl Category " on page 205

BufferHandlingControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "BufferHandlingControl Category " on page 206

LineScanAcquisitionControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "LineScanAcquisitionControl Category " on page 208

StreamControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "StreamControl Category " on page 215

Errors

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "Errors Category " on page 219

StreamStatistics

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "StreamStatistics Category " on page 222

LinearFilter

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "LinearFilter Category " on page 226

Threshold

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "Threshold Category " on page 228

LaserLineExtractor

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "LaserLineExtractor Category " on page 229

Bayer

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "Bayer Category " on page 231

FlatFieldCorrection

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "FlatFieldCorrection Category " on page 232

EventControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

Category Members

Refer to "EventControl Category " on page 235

5.2. StreamInformation Category

StreamID

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamInformation	String	Imposed: RO

Short Description

Device unique ID for the data stream.

StreamType

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamInformation	Enumeration	Imposed: RO

Short Description

Identifies the transport layer technology of the interface.

Enumeration Values

- `CXP`: This enumeration value indicates CoaXPress transport layer technology.

5.3. ImageFormatControl Category

PixelFormat

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / ImageFormatControl	Enumeration	Imposed: RO

Short Description

Pixel format of the image.

Enumeration Values

- `BayerBG10pmsb`: BayerBG10pmsb.
- `BayerBG12pmsb`: BayerBG12pmsb.
- `BayerBG14pmsb`: BayerBG14pmsb.
- `BayerGB10pmsb`: BayerGB10pmsb.
- `BayerGB12pmsb`: BayerGB12pmsb.
- `BayerGB14pmsb`: BayerGB14pmsb.
- `BayerGR10pmsb`: BayerGR10pmsb.
- `BayerGR12pmsb`: BayerGR12pmsb.
- `BayerGR14pmsb`: BayerGR14pmsb.
- `BayerRG10pmsb`: BayerRG10pmsb.
- `BayerRG12pmsb`: BayerRG12pmsb.
- `BayerRG14pmsb`: BayerRG14pmsb.
- `Mono10pmsb`: Mono10pmsb.

- `Mono12pmsb`: Mono12pmsb.
- `Mono14pmsb`: Mono14pmsb.
- `RGB10pmsb`: RGB10pmsb.
- `RGB12pmsb`: RGB12pmsb.
- `RGB14pmsb`: RGB14pmsb.
- `RGBa10pmsb`: RGBa10pmsb.
- `RGBa12pmsb`: RGBa12pmsb.
- `RGBa14pmsb`: RGBa14pmsb.
- `YCbCr601_10pmsb`: YCbCr601_10pmsb.
- `YCbCr601_12pmsb`: YCbCr601_12pmsb.
- `YCbCr601_14pmsb`: YCbCr601_14pmsb.
- `YCbCr601_16`: YCbCr601_16.
- `YCbCr601_411_10pmsb`: YCbCr601_411_10pmsb.
- `YCbCr601_411_12pmsb`: YCbCr601_411_12pmsb.
- `YCbCr601_411_14pmsb`: YCbCr601_411_14pmsb.
- `YCbCr601_411_16`: YCbCr601_411_16.
- `YCbCr601_411_8`: YCbCr601_411_8.
- `YCbCr601_422_10pmsb`: YCbCr601_422_10pmsb.
- `YCbCr601_422_12pmsb`: YCbCr601_422_12pmsb.
- `YCbCr601_422_14pmsb`: YCbCr601_422_14pmsb.
- `YCbCr601_422_16`: YCbCr601_422_16.
- `YCbCr601_8`: YCbCr601_8.
- `YCbCr709_10pmsb`: YCbCr709_10pmsb.
- `YCbCr709_12pmsb`: YCbCr709_12pmsb.
- `YCbCr709_14pmsb`: YCbCr709_14pmsb.
- `YCbCr709_16`: YCbCr709_16.
- `YCbCr709_411_10pmsb`: YCbCr709_411_10pmsb.
- `YCbCr709_411_12pmsb`: YCbCr709_411_12pmsb.
- `YCbCr709_411_14pmsb`: YCbCr709_411_14pmsb.
- `YCbCr709_411_16`: YCbCr709_411_16.
- `YCbCr709_411_8`: YCbCr709_411_8.
- `YCbCr709_422_10pmsb`: YCbCr709_422_10pmsb.
- `YCbCr709_422_12pmsb`: YCbCr709_422_12pmsb.

- `YCbCr709_422_14pmsb`: YCbCr709_422_14pmsb.
- `YCbCr709_422_16`: YCbCr709_422_16.
- `YCbCr709_8`: YCbCr709_8.
- `YUV10pmsb`: YUV10pmsb.
- `YUV12pmsb`: YUV12pmsb.
- `YUV14pmsb`: YUV14pmsb.
- `YUV16`: YUV16.
- `YUV411_10pmsb`: YUV411_10pmsb.
- `YUV411_12pmsb`: YUV411_12pmsb.
- `YUV411_14pmsb`: YUV411_14pmsb.
- `YUV411_16`: YUV411_16.
- `YUV411_8`: YUV411_8.
- `YUV422_10pmsb`: YUV422_10pmsb.
- `YUV422_12pmsb`: YUV422_12pmsb.
- `YUV422_14pmsb`: YUV422_14pmsb.
- `YUV422_16`: YUV422_16.
- `YUV8`: YUV8.
- `B10`: Blue 10-bit.
- `B12`: Blue 12-bit.
- `B16`: Blue 16-bit.
- `B8`: Blue 8-bit.
- `BayerBG10`: Bayer Blue-Green 10-bit unpacked.
- `BayerBG10p`: Bayer Blue-Green 10-bit packed.
- `BayerBG10Packed`: Bayer Blue-Green 10-bit packed.
- `BayerBG12`: Bayer Blue-Green 12-bit unpacked.
- `BayerBG12p`: Bayer Blue-Green 12-bit packed.
- `BayerBG12Packed`: Bayer Blue-Green 12-bit packed.
- `BayerBG14`: Bayer Blue-Green 14-bit.
- `BayerBG14p`: Bayer Blue-Green 14-bit packed.
- `BayerBG16`: Bayer Blue-Green 16-bit.
- `BayerBG4p`: Bayer Blue-Green 4-bit packed.
- `BayerBG8`: Bayer Blue-Green 8-bit.
- `BayerGB10`: Bayer Green-Blue 10-bit unpacked.

- `BayerGB10p`: Bayer Green-Blue 10-bit packed.
- `BayerGB10Packed`: Bayer Green-Blue 10-bit packed.
- `BayerGB12`: Bayer Green-Blue 12-bit unpacked.
- `BayerGB12p`: Bayer Green-Blue 12-bit packed.
- `BayerGB12Packed`: Bayer Green-Blue 12-bit packed.
- `BayerGB14`: Bayer Green-Blue 14-bit.
- `BayerGB14p`: Bayer Green-Blue 14-bit packed.
- `BayerGB16`: Bayer Green-Blue 16-bit.
- `BayerGB4p`: Bayer Green-Blue 4-bit packed.
- `BayerGB8`: Bayer Green-Blue 8-bit.
- `BayerGR10`: Bayer Green-Red 10-bit unpacked.
- `BayerGR10p`: Bayer Green-Red 10-bit packed.
- `BayerGR10Packed`: Bayer Green-Red 10-bit packed.
- `BayerGR12`: Bayer Green-Red 12-bit unpacked.
- `BayerGR12p`: Bayer Green-Red 12-bit packed.
- `BayerGR12Packed`: Bayer Green-Red 12-bit packed.
- `BayerGR14`: Bayer Green-Red 14-bit.
- `BayerGR14p`: Bayer Green-Red 14-bit packed.
- `BayerGR16`: Bayer Green-Red 16-bit.
- `BayerGR4p`: Bayer Green-Red 4-bit packed.
- `BayerGR8`: Bayer Green-Red 8-bit.
- `BayerRG10`: Bayer Red-Green 10-bit unpacked.
- `BayerRG10p`: Bayer Red-Green 10-bit packed.
- `BayerRG10Packed`: Bayer Red-Green 10-bit packed.
- `BayerRG12`: Bayer Red-Green 12-bit unpacked.
- `BayerRG12p`: Bayer Red-Green 12-bit packed.
- `BayerRG12Packed`: Bayer Red-Green 12-bit packed.
- `BayerRG14`: Bayer Red-Green 14-bit.
- `BayerRG14p`: Bayer Red-Green 14-bit packed.
- `BayerRG16`: Bayer Red-Green 16-bit.
- `BayerRG4p`: Bayer Red-Green 4-bit packed.
- `BayerRG8`: Bayer Red-Green 8-bit.
- `BGR10`: Blue-Green-Red 10-bit unpacked.

- `BGR10p`: Blue-Green-Red 10-bit packed.
- `BGR12`: Blue-Green-Red 12-bit unpacked.
- `BGR12p`: Blue-Green-Red 12-bit packed.
- `BGR14`: Blue-Green-Red 14-bit unpacked.
- `BGR16`: Blue-Green-Red 16-bit.
- `BGR565p`: Blue-Green-Red 5/6/5-bit packed.
- `BGR8`: Blue-Green-Red 8-bit.
- `BGR8a32`: BGR8a32.
- `BGRa10`: Blue-Green-Red-alpha 10-bit unpacked.
- `BGRa10p`: Blue-Green-Red-alpha 10-bit packed.
- `BGRa12`: Blue-Green-Red-alpha 12-bit unpacked.
- `BGRa12p`: Blue-Green-Red-alpha 12-bit packed.
- `BGRa14`: Blue-Green-Red-alpha 14-bit unpacked.
- `BGRa16`: Blue-Green-Red-alpha 16-bit.
- `BGRa8`: Blue-Green-Red-alpha 8-bit.
- `BiColorBGRG10`: Bi-color Blue/Green - Red/Green 10-bit unpacked.
- `BiColorBGRG10p`: Bi-color Blue/Green - Red/Green 10-bit packed.
- `BiColorBGRG12`: Bi-color Blue/Green - Red/Green 12-bit unpacked.
- `BiColorBGRG12p`: Bi-color Blue/Green - Red/Green 12-bit packed.
- `BiColorBGRG8`: Bi-color Blue/Green - Red/Green 8-bit.
- `BiColorRGBG10`: Bi-color Red/Green - Blue/Green 10-bit unpacked.
- `BiColorRGBG10p`: Bi-color Red/Green - Blue/Green 10-bit packed.
- `BiColorRGBG12`: Bi-color Red/Green - Blue/Green 12-bit unpacked.
- `BiColorRGBG12p`: Bi-color Red/Green - Blue/Green 12-bit packed.
- `BiColorRGBG8`: Bi-color Red/Green - Blue/Green 8-bit.
- `Confidence1`: Confidence 1-bit unpacked.
- `Confidence16`: Confidence 16-bit.
- `Confidence1p`: Confidence 1-bit packed.
- `Confidence32f`: Confidence 32-bit floating point.
- `Confidence8`: Confidence 8-bit.
- `Coord3D_A10p`: 3D coordinate A 10-bit packed.
- `Coord3D_A12p`: 3D coordinate A 12-bit packed.
- `Coord3D_A16`: 3D coordinate A 16-bit.

- `Coord3D_A32f`: 3D coordinate A 32-bit floating point.
- `Coord3D_A8`: 3D coordinate A 8-bit.
- `Coord3D_ABC10p`: 3D coordinate A-B-C 10-bit packed.
- `Coord3D_ABC10p_Planar`: 3D coordinate A-B-C 10-bit packed planar.
- `Coord3D_ABC12p`: 3D coordinate A-B-C 12-bit packed.
- `Coord3D_ABC12p_Planar`: 3D coordinate A-B-C 12-bit packed planar.
- `Coord3D_ABC16`: 3D coordinate A-B-C 16-bit.
- `Coord3D_ABC16_Planar`: 3D coordinate A-B-C 16-bit planar.
- `Coord3D_ABC32f`: 3D coordinate A-B-C 32-bit floating point.
- `Coord3D_ABC32f_Planar`: 3D coordinate A-B-C 32-bit floating point planar.
- `Coord3D_ABC8`: 3D coordinate A-B-C 8-bit.
- `Coord3D_ABC8_Planar`: 3D coordinate A-B-C 8-bit planar.
- `Coord3D_AC10p`: 3D coordinate A-C 10-bit packed.
- `Coord3D_AC10p_Planar`: 3D coordinate A-C 10-bit packed planar.
- `Coord3D_AC12p`: 3D coordinate A-C 12-bit packed.
- `Coord3D_AC12p_Planar`: 3D coordinate A-C 12-bit packed planar.
- `Coord3D_AC16`: 3D coordinate A-C 16-bit.
- `Coord3D_AC16_Planar`: 3D coordinate A-C 16-bit planar.
- `Coord3D_AC32f`: 3D coordinate A-C 32-bit floating point.
- `Coord3D_AC32f_Planar`: 3D coordinate A-C 32-bit floating point planar.
- `Coord3D_AC8`: 3D coordinate A-C 8-bit.
- `Coord3D_AC8_Planar`: 3D coordinate A-C 8-bit planar.
- `Coord3D_B10p`: 3D coordinate B 10-bit packed.
- `Coord3D_B12p`: 3D coordinate B 12-bit packed.
- `Coord3D_B16`: 3D coordinate B 16-bit.
- `Coord3D_B32f`: 3D coordinate B 32-bit floating point.
- `Coord3D_B8`: 3D coordinate B 8-bit.
- `Coord3D_C10p`: 3D coordinate C 10-bit packed.
- `Coord3D_C12p`: 3D coordinate C 12-bit packed.
- `Coord3D_C16`: 3D coordinate C 16-bit.
- `Coord3D_C32f`: 3D coordinate C 32-bit floating point.
- `Coord3D_C8`: 3D coordinate C 8-bit.
- `CustomBayerBG14`: CustomBayerBG14.

- `CustomBayerGB14`: CustomBayerGB14.
- `CustomBayerGR14`: CustomBayerGR14.
- `CustomBayerRG14`: CustomBayerRG14.
- `G10`: Green 10-bit.
- `G12`: Green 12-bit.
- `G16`: Green 16-bit.
- `G8`: Green 8-bit.
- `Mono10`: Monochrome 10-bit unpacked.
- `Mono10p`: Monochrome 10-bit packed.
- `Mono10Packed`: Monochrome 10-bit packed.
- `Mono12`: Monochrome 12-bit unpacked.
- `Mono12p`: Monochrome 12-bit packed.
- `Mono12Packed`: Monochrome 12-bit packed.
- `Mono14`: Monochrome 14-bit unpacked.
- `Mono14p`: Monochrome 14-bit packed.
- `Mono16`: Monochrome 16-bit.
- `Mono1p`: Monochrome 1-bit packed.
- `Mono2p`: Monochrome 2-bit packed.
- `Mono32`: Monochrome 32-bit.
- `Mono4p`: Monochrome 4-bit packed.
- `Mono8`: Monochrome 8-bit.
- `Mono8s`: Monochrome 8-bit signed.
- `R10`: Red 10-bit.
- `R12`: Red 12-bit.
- `R16`: Red 16-bit.
- `R8`: Red 8-bit.
- `RGB10`: Red-Green-Blue 10-bit unpacked.
- `RGB10_Planar`: Red-Green-Blue 10-bit unpacked planar.
- `RGB10p`: Red-Green-Blue 10-bit packed.
- `RGB10p32`: Red-Green-Blue 10-bit packed into 32-bit.
- `RGB10V1Packed`: Red-Green-Blue 10-bit packed - variant 1.
- `RGB12`: Red-Green-Blue 12-bit unpacked.
- `RGB12_Planar`: Red-Green-Blue 12-bit unpacked planar.

- `RGB12p`: Red-Green-Blue 12-bit packed.
- `RGB12V1Packed`: Red-Green-Blue 12-bit packed - variant 1.
- `RGB14`: Red-Green-Blue 14-bit unpacked.
- `RGB16`: Red-Green-Blue 16-bit.
- `RGB16_Planar`: Red-Green-Blue 16-bit planar.
- `RGB565p`: Red-Green-Blue 5/6/5-bit packed.
- `RGB8`: Red-Green-Blue 8-bit.
- `RGB8_Planar`: Red-Green-Blue 8-bit planar.
- `RGB8a32`: RGB8a32.
- `RGBa10`: Red-Green-Blue-alpha 10-bit unpacked.
- `RGBa10p`: Red-Green-Blue-alpha 10-bit packed.
- `RGBa12`: Red-Green-Blue-alpha 12-bit unpacked.
- `RGBa12p`: Red-Green-Blue-alpha 12-bit packed.
- `RGBa14`: Red-Green-Blue-alpha 14-bit unpacked.
- `RGBa16`: Red-Green-Blue-alpha 16-bit.
- `RGBa8`: Red-Green-Blue-alpha 8-bit.
- `SCF1WBWG10`: Sparse Color Filter #1 White-Blue-White-Green 10-bit unpacked.
- `SCF1WBWG10p`: Sparse Color Filter #1 White-Blue-White-Green 10-bit packed.
- `SCF1WBWG12`: Sparse Color Filter #1 White-Blue-White-Green 12-bit unpacked.
- `SCF1WBWG12p`: Sparse Color Filter #1 White-Blue-White-Green 12-bit packed.
- `SCF1WBWG14`: Sparse Color Filter #1 White-Blue-White-Green 14-bit unpacked.
- `SCF1WBWG16`: Sparse Color Filter #1 White-Blue-White-Green 16-bit unpacked.
- `SCF1WBWG8`: Sparse Color Filter #1 White-Blue-White-Green 8-bit.
- `SCF1WGWB10`: Sparse Color Filter #1 White-Green-White-Blue 10-bit unpacked.
- `SCF1WGWB10p`: Sparse Color Filter #1 White-Green-White-Blue 10-bit packed.
- `SCF1WGWB12`: Sparse Color Filter #1 White-Green-White-Blue 12-bit unpacked.
- `SCF1WGWB12p`: Sparse Color Filter #1 White-Green-White-Blue 12-bit packed.
- `SCF1WGWB14`: Sparse Color Filter #1 White-Green-White-Blue 14-bit unpacked.
- `SCF1WGWB16`: Sparse Color Filter #1 White-Green-White-Blue 16-bit.
- `SCF1WGWB8`: Sparse Color Filter #1 White-Green-White-Blue 8-bit.
- `SCF1WGWR10`: Sparse Color Filter #1 White-Green-White-Red 10-bit unpacked.
- `SCF1WGWR10p`: Sparse Color Filter #1 White-Green-White-Red 10-bit packed.
- `SCF1WGWR12`: Sparse Color Filter #1 White-Green-White-Red 12-bit unpacked.

- `SCF1WGWR12p`: Sparse Color Filter #1 White-Green-White-Red 12-bit packed.
- `SCF1WGWR14`: Sparse Color Filter #1 White-Green-White-Red 14-bit unpacked.
- `SCF1WGWR16`: Sparse Color Filter #1 White-Green-White-Red 16-bit.
- `SCF1WGWR8`: Sparse Color Filter #1 White-Green-White-Red 8-bit.
- `SCF1WRWG10`: Sparse Color Filter #1 White-Red-White-Green 10-bit unpacked.
- `SCF1WRWG10p`: Sparse Color Filter #1 White-Red-White-Green 10-bit packed.
- `SCF1WRWG12`: Sparse Color Filter #1 White-Red-White-Green 12-bit unpacked.
- `SCF1WRWG12p`: Sparse Color Filter #1 White-Red-White-Green 12-bit packed.
- `SCF1WRWG14`: Sparse Color Filter #1 White-Red-White-Green 14-bit unpacked.
- `SCF1WRWG16`: Sparse Color Filter #1 White-Red-White-Green 16-bit.
- `SCF1WRWG8`: Sparse Color Filter #1 White-Red-White-Green 8-bit.
- `YCbCr10_CbYCr`: YCbCr 4:4:4 10-bit unpacked.
- `YCbCr10p_CbYCr`: YCbCr 4:4:4 10-bit packed.
- `YCbCr12_CbYCr`: YCbCr 4:4:4 12-bit unpacked.
- `YCbCr12p_CbYCr`: YCbCr 4:4:4 12-bit packed.
- `YCbCr2020_10_CbYCr`: YCbCr 4:4:4 10-bit unpacked BT.2020.
- `YCbCr2020_10p_CbYCr`: YCbCr 4:4:4 10-bit packed BT.2020.
- `YCbCr2020_12_CbYCr`: YCbCr 4:4:4 12-bit unpacked BT.2020.
- `YCbCr2020_12p_CbYCr`: YCbCr 4:4:4 12-bit packed BT.2020.
- `YCbCr2020_411_8_CbYYCrYY`: YCbCr 4:1:1 8-bit BT.2020.
- `YCbCr2020_422_10`: YCbCr 4:2:2 10-bit unpacked BT.2020.
- `YCbCr2020_422_10_CbYCrY`: YCbCr 4:2:2 10-bit unpacked BT.2020.
- `YCbCr2020_422_10p`: YCbCr 4:2:2 10-bit packed BT.2020.
- `YCbCr2020_422_10p_CbYCrY`: YCbCr 4:2:2 10-bit packed BT.2020.
- `YCbCr2020_422_12`: YCbCr 4:2:2 12-bit unpacked BT.2020.
- `YCbCr2020_422_12_CbYCrY`: YCbCr 4:2:2 12-bit unpacked BT.2020.
- `YCbCr2020_422_12p`: YCbCr 4:2:2 12-bit packed BT.2020.
- `YCbCr2020_422_12p_CbYCrY`: YCbCr 4:2:2 12-bit packed BT.2020.
- `YCbCr2020_422_8`: YCbCr 4:2:2 8-bit BT.2020.
- `YCbCr2020_422_8_CbYCrY`: YCbCr 4:2:2 8-bit BT.2020.
- `YCbCr2020_8_CbYCr`: YCbCr 4:4:4 8-bit BT.2020.
- `YCbCr411_8`: YCbCr 4:1:1 8-bit.
- `YCbCr411_8_CbYYCrYY`: YCbCr 4:1:1 8-bit.

- `YCbCr420_8_YY_CbCr_Semiplanar`: YCbCr 4:2:0 8-bit YY/CbCr Semiplanar.
- `YCbCr420_8_YY_CrCb_Semiplanar`: YCbCr 4:2:0 8-bit YY/CrCb Semiplanar.
- `YCbCr422_10`: YCbCr 4:2:2 10-bit unpacked.
- `YCbCr422_10_CbYCrY`: YCbCr 4:2:2 10-bit unpacked.
- `YCbCr422_10p`: YCbCr 4:2:2 10-bit packed.
- `YCbCr422_10p_CbYCrY`: YCbCr 4:2:2 10-bit packed.
- `YCbCr422_12`: YCbCr 4:2:2 12-bit unpacked.
- `YCbCr422_12_CbYCrY`: YCbCr 4:2:2 12-bit unpacked.
- `YCbCr422_12p`: YCbCr 4:2:2 12-bit packed.
- `YCbCr422_12p_CbYCrY`: YCbCr 4:2:2 12-bit packed.
- `YCbCr422_8`: YCbCr 4:2:2 8-bit.
- `YCbCr422_8_CbYCrY`: YCbCr 4:2:2 8-bit.
- `YCbCr422_8_YY_CbCr_Semiplanar`: YCbCr 4:2:2 8-bit YY/CbCr Semiplanar.
- `YCbCr422_8_YY_CrCb_Semiplanar`: YCbCr 4:2:2 8-bit YY/CrCb Semiplanar.
- `YCbCr601_10_CbYCr`: YCbCr 4:4:4 10-bit unpacked BT.601.
- `YCbCr601_10p_CbYCr`: YCbCr 4:4:4 10-bit packed BT.601.
- `YCbCr601_12_CbYCr`: YCbCr 4:4:4 12-bit unpacked BT.601.
- `YCbCr601_12p_CbYCr`: YCbCr 4:4:4 12-bit packed BT.601.
- `YCbCr601_411_8_CbYYCrYY`: YCbCr 4:1:1 8-bit BT.601.
- `YCbCr601_422_10`: YCbCr 4:2:2 10-bit unpacked BT.601.
- `YCbCr601_422_10_CbYCrY`: YCbCr 4:2:2 10-bit unpacked BT.601.
- `YCbCr601_422_10p`: YCbCr 4:2:2 10-bit packed BT.601.
- `YCbCr601_422_10p_CbYCrY`: YCbCr 4:2:2 10-bit packed BT.601.
- `YCbCr601_422_12`: YCbCr 4:2:2 12-bit unpacked BT.601.
- `YCbCr601_422_12_CbYCrY`: YCbCr 4:2:2 12-bit unpacked BT.601.
- `YCbCr601_422_12p`: YCbCr 4:2:2 12-bit packed BT.601.
- `YCbCr601_422_12p_CbYCrY`: YCbCr 4:2:2 12-bit packed BT.601.
- `YCbCr601_422_8`: YCbCr 4:2:2 8-bit BT.601.
- `YCbCr601_422_8_CbYCrY`: YCbCr 4:2:2 8-bit BT.601.
- `YCbCr601_8_CbYCr`: YCbCr 4:4:4 8-bit BT.601.
- `YCbCr709_10_CbYCr`: YCbCr 4:4:4 10-bit unpacked BT.709.
- `YCbCr709_10p_CbYCr`: YCbCr 4:4:4 10-bit packed BT.709.
- `YCbCr709_12_CbYCr`: YCbCr 4:4:4 12-bit unpacked BT.709.

- `YCbCr709_12p_CbYCr`: YCbCr 4:4:4 12-bit packed BT.709.
- `YCbCr709_411_8_CbYYCrYY`: YCbCr 4:1:1 8-bit BT.709.
- `YCbCr709_422_10`: YCbCr 4:2:2 10-bit unpacked BT.709.
- `YCbCr709_422_10_CbYCrY`: YCbCr 4:2:2 10-bit unpacked BT.709.
- `YCbCr709_422_10p`: YCbCr 4:2:2 10-bit packed BT.709.
- `YCbCr709_422_10p_CbYCrY`: YCbCr 4:2:2 10-bit packed BT.709.
- `YCbCr709_422_12`: YCbCr 4:2:2 12-bit unpacked BT.709.
- `YCbCr709_422_12_CbYCrY`: YCbCr 4:2:2 12-bit unpacked BT.709.
- `YCbCr709_422_12p`: YCbCr 4:2:2 12-bit packed BT.709.
- `YCbCr709_422_12p_CbYCrY`: YCbCr 4:2:2 12-bit packed BT.709.
- `YCbCr709_422_8`: YCbCr 4:2:2 8-bit BT.709.
- `YCbCr709_422_8_CbYCrY`: YCbCr 4:2:2 8-bit BT.709.
- `YCbCr709_8_CbYCr`: YCbCr 4:4:4 8-bit BT.709.
- `YCbCr8`: YCbCr 4:4:4 8-bit.
- `YCbCr8_CbYCr`: YCbCr 4:4:4 8-bit.
- `YUV411_8_UYYVYY`: YUV 4:1:1 8-bit.
- `YUV422_8`: YUV 4:2:2 8-bit.
- `YUV422_8_UYVY`: YUV 4:2:2 8-bit.
- `YUV8_UYV`: YUV 4:4:4 8-bit.

PixelFormatNamespace

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / ImageFormatControl	Enumeration	Imposed: RO

Short Description

Namespace of the pixel format.

Enumeration Values

- `Unknown`: Unknown.
- `GEV`: GEV.

- `IIDC`: IIDC.
- `PFNC_16BIT`: PFNC 16-bit.
- `PFNC_32BIT`: PFNC 32-bit.

PixelSize

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / ImageFormatControl	IntReg	RO

Register Port: StreamPort

Short Description

Pixel size in bits.

PixelComponentCount

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / ImageFormatControl	IntReg	RO

Register Port: StreamPort

Short Description

Number of components per pixel.

Width

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / ImageFormatControl	Integer	Imposed: RO

Short Description

Width of the image.

Height

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / ImageFormatControl	Integer	Imposed: RO

Short Description

Height of the image.

5.4. PixelProcessing Category

UnpackingMode

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / PixelProcessing	Enumeration	RW

Description

Unpacking Mode of multi-byte pixel components.

When set to Lsb, each pixel component is unpacked to the least significant bit. Padding '0' bits are put as necessary in the most significant bits to reach the next 8-bit boundary. 16-bit data are delivered using the little-endian convention.

When set to Msb, each pixel component is unpacked to the most significant bit. Padding '0' bits are put as necessary in the least significant bits to reach the next 8-bit boundary. 16-bit data are delivered using the little-endian convention.

When set to Off, the pixel components are not unpacked. The pixel data stream is left unchanged.

Default value: `Lsb`.

> **Note:** *The default value was Msb for Coaxlink driver versions prior to 4.3.*

Enumeration Values

- `Lsb`: Unpacking to lsb.
- `Msb`: Unpacking to msb.
- `Off`: No unpacking.

RedBlueSwap

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / PixelProcessing	Boolean	RW

Description

Red-Blue component swapping.

When true, the first (Red) and the last (Blue) color components of an RGB packed pixel are swapped before being delivered.

Wen false, the pixel component order remains unchanged.

Default value: `False`.

5.5. LUTControl Category

LUTConfiguration

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	Enumeration	RW

Short Description

Configuration of the LUT processor.

Enumeration Values

- `M_8x8`: Monochrome 8-bit to 8-bit.
- `M_10x8`: Monochrome 10-bit to 8-bit.
- `M_10x10`: Monochrome 10-bit to 10-bit.
- `M_10x16`: Monochrome 10-bit to 16-bit.
- `M_12x8`: Monochrome 12-bit to 8-bit.
- `M_12x12`: Monochrome 12-bit to 12-bit.
- `M_12x16`: Monochrome 12-bit to 16-bit.

LUTLength

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	IntReg	RO

Register Port: StreamPort

Short Description

Number of table entries in a LUT device.

LUTMaxValue

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	IntReg	RO

Register Port: StreamPort

Short Description

Highest value of a table entry.

LUTSet

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	Enumeration	RW

Short Description

LUT set to access.

Selected Features

- "LUTValue" on the next page

Enumeration Values

- `Set1`: Select LUT set 1 for access.
- `Set2`: Select LUT set 2 for access.
- `Set3`: Select LUT set 3 for access.
- `Set4`: Select LUT set 4 for access.
- `Set5`: Select LUT set 5 for access.
- `Set6`: Select LUT set 6 for access.
- `Set7`: Select LUT set 7 for access.
- `Set8`: Select LUT set 8 for access.
- `Set9`: Select LUT set 9 for access.
- `Set10`: Select LUT set 10 for access.
- `Set11`: Select LUT set 11 for access.
- `Set12`: Select LUT set 12 for access.
- `Set13`: Select LUT set 13 for access.
- `Set14`: Select LUT set 14 for access.
- `Set15`: Select LUT set 15 for access.
- `Set16`: Select LUT set 16 for access.

LUTIndex

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	Integer	RW

Value Info

Minimum value: 0

Short Description

Index of the first entry to access.

Selected Features

- "LUTValue" below

LUTValue

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	StringReg	RW

Short Description

String of value(s) to read from- or to write to- the accessed LUT at location LUTIndex.

LUTReadBlockLength

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	Integer	RW

Value Info

Minimum value: 1

Short Description

Number of consecutive table entries to read.

LUTEnable

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LUTControl	Enumeration	RW

Short Description

Enables the LUT processor with a specific LUT set..

Enumeration Values

- `Off`:
- `Set1`: Enables the LUT processor with LUT set 1.
- `Set2`: Enables the LUT processor with LUT set 2.
- `Set3`: Enables the LUT processor with LUT set 3.
- `Set4`: Enables the LUT processor with LUT set 4.
- `Set5`: Enables the LUT processor with LUT set 5.
- `Set6`: Enables the LUT processor with LUT set 6.
- `Set7`: Enables the LUT processor with LUT set 7.
- `Set8`: Enables the LUT processor with LUT set 8.
- `Set9`: Enables the LUT processor with LUT set 9.
- `Set10`: Enables the LUT processor with LUT set 10.
- `Set11`: Enables the LUT processor with LUT set 11.
- `Set12`: Enables the LUT processor with LUT set 12.
- `Set13`: Enables the LUT processor with LUT set 13.
- `Set14`: Enables the LUT processor with LUT set 14.
- `Set15`: Enables the LUT processor with LUT set 15.
- `Set16`: Enables the LUT processor with LUT set 16.

5.6. TransportLayerControl Category

PayloadSize

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / TransportLayerControl	IntReg	RO

Register Port: StreamPort

Short Description

Provides the number of bytes transferred for each image on the stream channel.

5.7. BufferHandlingControl Category

StreamAnnouncedBufferCount

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / BufferHandlingControl	Integer	Imposed: RO

Short Description

Number of announced buffers on the stream.

StreamBufferHandlingMode

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / BufferHandlingControl	Enumeration	RW

Short Description

Available buffer handling modes of this Stream.

Enumeration Values

- `Default`: Default Buffer Handling Mode.

StreamAnnounceBufferMinimum

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / BufferHandlingControl	Integer	Imposed: RO

Short Description

Minimal number of buffers to announce to enable selected buffer handling mode.

StreamAcquisitionModeSelector

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / BufferHandlingControl	Enumeration	RW

Short Description

Available buffer handling modes of this Stream. Deprecated.

Enumeration Values

- `Default`: Default Buffer Handling Mode.

5.8. LineScanAcquisitionControl Category

StartOfScanTriggerSource

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LineScanAcquisitionControl	Enumeration	RW

Description

Start-of-scan trigger conditions and trigger source.

Default value: `Immediate`.

Enumeration Values

- `Immediate`: Immediate.
- `StartScan`: StartScan command.
- `LIN1`: When an event occurs on Line Input Tool 1 or on execution of the StartScan command.
- `LIN2`: When an event occurs on Line Input Tool 2 or on execution of the StartScan command.
- `LIN3`: When an event occurs on Line Input Tool 3 or on execution of the StartScan command.
- `LIN4`: When an event occurs on Line Input Tool 4 or on execution of the StartScan command.
- `LIN5`: When an event occurs on Line Input Tool 5 or on execution of the StartScan command.

- LIN6: When an event occurs on Line Input Tool 6 or on execution of the StartScan command.
- LIN7: When an event occurs on Line Input Tool 7 or on execution of the StartScan command.
- LIN8: When an event occurs on Line Input Tool 8 or on execution of the StartScan command.
- QDC1: When an event occurs on Quadrature Decoder Tool 1 or on execution of the StartScan command.
- QDC2: When an event occurs on Quadrature Decoder Tool 2 or on execution of the StartScan command.
- QDC3: When an event occurs on Quadrature Decoder Tool 3 or on execution of the StartScan command.
- QDC4: When an event occurs on Quadrature Decoder Tool 4 or on execution of the StartScan command.
- MDV1: When an event occurs on Multiplier/Divider Tool 1 or on execution of the StartScan command.
- MDV2: When an event occurs on Multiplier/Divider Tool 2 or on execution of the StartScan command.
- MDV3: When an event occurs on Multiplier/Divider Tool 3 or on execution of the StartScan command.
- MDV4: When an event occurs on Multiplier/Divider Tool 4 or on execution of the StartScan command.
- DIV1: When an event occurs on Divider Tool 1 or on execution of the StartScan command.
- DIV2: When an event occurs on Divider Tool 2 or on execution of the StartScan command.
- DIV3: When an event occurs on Divider Tool 3 or on execution of the StartScan command.
- DIV4: When an event occurs on Divider Tool 4 or on execution of the StartScan command.
- DEL1_1: When an event occurs on Delay Tool 1 Output 1 or on execution of the StartScan command.
- DEL1_2: When an event occurs on Delay Tool 1 Output 2 or on execution of the StartScan command.
- DEL2_1: When an event occurs on Delay Tool 2 Output 1 or on execution of the StartScan command.
- DEL2_2: When an event occurs on Delay Tool 2 Output 2 or on execution of the StartScan command.
- DEL3_1: When an event occurs on Delay Tool 3 Output 1 or on execution of the StartScan command.
- DEL3_2: When an event occurs on Delay Tool 3 Output 2 or on execution of the StartScan command.

- `DEL4_1`: When an event occurs on Delay Tool 4 Output 1 or on execution of the StartScan command.
- `DEL4_2`: When an event occurs on Delay Tool 4 Output 2 or on execution of the StartScan command.
- `EIN1`: When an event occurs on Event Input Tool 1 or on execution of the StartScan command.
- `EIN2`: When an event occurs on Event Input Tool 2 or on execution of the StartScan command.
- `UserEvent1`: When an event occurs on User Event 1 or on execution of the StartScan command.
- `UserEvent2`: When an event occurs on User Event 2 or on execution of the StartScan command.
- `UserEvent3`: When an event occurs on User Event 3 or on execution of the StartScan command.
- `UserEvent4`: When an event occurs on User Event 4 or on execution of the StartScan command.

EndOfScanTriggerSource

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LineScanAcquisitionControl	Enumeration	RW

Description

End-of-scan trigger conditions and trigger source.

Default value: `ScanLength`.

Enumeration Values

- `ScanLength`: ScanLength.
- `StopScan`: StopScan command.
- `LIN1`: When an event occurs on Line Input Tool 1 or on execution of the StopScan command.
- `LIN2`: When an event occurs on Line Input Tool 2 or on execution of the StopScan command.
- `LIN3`: When an event occurs on Line Input Tool 3 or on execution of the StopScan command.
- `LIN4`: When an event occurs on Line Input Tool 4 or on execution of the StopScan command.
- `LIN5`: When an event occurs on Line Input Tool 5 or on execution of the StopScan command.

- LIN6: When an event occurs on Line Input Tool 6 or on execution of the StopScan command.
- LIN7: When an event occurs on Line Input Tool 7 or on execution of the StopScan command.
- LIN8: When an event occurs on Line Input Tool 8 or on execution of the StopScan command.
- QDC1: When an event occurs on Quadrature Decoder Tool 1 or on execution of the StopScan command.
- QDC2: When an event occurs on Quadrature Decoder Tool 2 or on execution of the StopScan command.
- QDC3: When an event occurs on Quadrature Decoder Tool 3 or on execution of the StopScan command.
- QDC4: When an event occurs on Quadrature Decoder Tool 4 or on execution of the StopScan command.
- MDV1: When an event occurs on Multiplier/Divider Tool 1 or on execution of the StopScan command.
- MDV2: When an event occurs on Multiplier/Divider Tool 2 or on execution of the StopScan command.
- MDV3: When an event occurs on Multiplier/Divider Tool 3 or on execution of the StopScan command.
- MDV4: When an event occurs on Multiplier/Divider Tool 4 or on execution of the StopScan command.
- DIV1: When an event occurs on Divider Tool 1 or on execution of the StopScan command.
- DIV2: When an event occurs on Divider Tool 2 or on execution of the StopScan command.
- DIV3: When an event occurs on Divider Tool 3 or on execution of the StopScan command.
- DIV4: When an event occurs on Divider Tool 4 or on execution of the StopScan command.
- DEL1_1: When an event occurs on Delay Tool 1 Output 1 or on execution of the StopScan command.
- DEL1_2: When an event occurs on Delay Tool 1 Output 2 or on execution of the StopScan command.
- DEL2_1: When an event occurs on Delay Tool 2 Output 1 or on execution of the StopScan command.
- DEL2_2: When an event occurs on Delay Tool 2 Output 2 or on execution of the StopScan command.
- DEL3_1: When an event occurs on Delay Tool 3 Output 1 or on execution of the StopScan command.
- DEL3_2: When an event occurs on Delay Tool 3 Output 2 or on execution of the StopScan command.
- DEL4_1: When an event occurs on Delay Tool 4 Output 1 or on execution of the StopScan command.

- `DEL4_2`: When an event occurs on Delay Tool 4 Output 2 or on execution of the StopScan command.
- `EIN1`: When an event occurs on Event Input Tool 1 or on execution of the StopScan command.
- `EIN2`: When an event occurs on Event Input Tool 2 or on execution of the StopScan command.
- `UserEvent1`: When an event occurs on User Event 1 or on execution of the StopScan command.
- `UserEvent2`: When an event occurs on User Event 2 or on execution of the StopScan command.
- `UserEvent3`: When an event occurs on User Event 3 or on execution of the StopScan command.
- `UserEvent4`: When an event occurs on User Event 4 or on execution of the StopScan command.

ScanLength

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LineScanAcquisitionControl	Integer	RW

Value Info

Minimum value: 1

Maximum value: 16777215

Unit: lines

Default value: 512

Description

Sets/gets the number of captured lines before stopping the scanning.

Note: *Applies only when `EndOfScanTriggerSource` = `ScanLength`.*

BufferHeight

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LineScanAcquisitionControl	Integer	RW

Value Info

Unit: lines

Short Description

Height of the image in line-scan mode. This feature is only used in line-scan acquisition scenarios to compute PayloadSize

StartScan

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LineScanAcquisitionControl	Command	RW

Short Description

Starts a scan.

StopScan

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LineScanAcquisitionControl	Command	RW

Short Description

Stops a scan.

5.9. StreamControl Category

StreamReset

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Command	RW

Short Description

Stream Reset.

DmaEngineOptimization

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Enumeration	RW

Short Description

Dma Engine Optimization.

Enumeration Values

- `Default`: DMA operations are optimized for low latency and maximum PCIe throughput.
- `LowMemoryUsage`: DMA operations are optimized for low memory usage; this may lead to higher latency and reduced PCIe throughput.

LineWidth

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Integer	RW

Value Info

Minimum value: 0

Short Description

Line width in bytes.

LinePitch

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Integer	RW

Value Info

Minimum value: 0

Short Description

Line pitch in bytes.

StripeHeight

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Integer	RW

Value Info

Minimum value: 0

Short Description

Stripe height in lines.

StripePitch

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Integer	RW

Value Info

Minimum value: 0

Short Description

Stripe pitch in lines.

StripeArrangement

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamControl	Enumeration	RW

Short Description

The stripe arrangement defines how image data is arranged in user buffers.

Enumeration Values

- `Geometry_1X_1Y`: Regular (top-down) image.
- `Geometry_1X_1YE`: Vertically flipped (bottom-up) image.

5.10. Errors Category

ErrorSelector

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / Errors	Enumeration	RW

Short Description

Error Selector.

Selected Features

- "ErrorCount" on the next page
- "ErrorCountReset" on page 221

Enumeration Values

- `All`: All errors.
- `StreamPacketSizeError`: Stream packet size error.
- `StreamPacketFifoOverflow`: Stream packet FIFO overflow.
- `CameraTriggerOverrun`: New trigger sent to remote device even though readout of previous frame has not started yet.
- `DidNotReceiveTriggerAck`: Trigger ignored because ACK to previous trigger has not been received yet.
- `TriggerPacketRetryError`: Trigger packet resend not successful.
- `InputStreamFifoHalfFull`: Input stream FIFO half full.
- `InputStreamFifoFull`: Input stream FIFO full.
- `ImageHeaderError`: Image header error.

- `MigAxiWriteError`: MIG AXI write error.
- `MigAxiReadError`: MIG AXI read error.
- `PacketWithUnexpectedTag`: Received a CXP packet with unexpected tag.
- `StreamPacketCrcError0`: Stream packet CRC error on connector A.
- `StreamPacketCrcError1`: Stream packet CRC error on connector B.
- `StreamPacketCrcError2`: Stream packet CRC error on connector C.
- `StreamPacketCrcError3`: Stream packet CRC error on connector D.
- `StreamPacketCrcError4`: Stream packet CRC error on connector E.
- `StreamPacketCrcError5`: Stream packet CRC error on connector F.
- `StreamPacketCrcError6`: Stream packet CRC error on connector G.
- `StreamPacketCrcError7`: Stream packet CRC error on connector H.
- `StartOfScanSkipped`: Start of scan skipped (caused by internal exception: image buffer almost full).
- `PrematureEndOfScan`: End of scan (caused by internal exception: image buffer almost full).
- `ExternalTriggerReqsTooClose`: External trigger requests too close together.
- `Unknown`: Unknown errors.

ErrorCount

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / Errors	IntReg	RO

Register Port: StreamPort

Short Description

Error Count.

ErrorCountReset

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / Errors	Command	Imposed: WO

Short Description

Reset the selected ErrorCount.

5.11. StreamStatistics Category

StatisticsSamplingSelector

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamStatistics	Enumeration	RW

Description

Selects the stream statistics sampling method.

Default value: `LastSecond`.

Selected Features

- "StatisticsFrameRate" on the next page
- "StatisticsLineRate" on the next page
- "StatisticsDataRate" on page 224

Enumeration Values

- `LastSecond`: During the last second.
- `LastTenSeconds`: During the last 10 seconds.
- `Last2Buffers`: For the last 2 buffers.
- `Last10Buffers`: For the last 10 buffers.
- `Last100Buffers`: For the last 100 buffers.
- `Last1000Buffers`: For the last 1000 buffers.

- `LastAcquisition`: During the last acquisition activity period. Namely since the last DSStartAcquisition() function call until now, if the acquisition is still active otherwise until the last DSStopAcquisition() function call.
- `Custom`: Custom sampling using StatisticsStartSampling and StatisticsStopSampling commands.

StatisticsFrameRate

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamStatistics	FloatReg	RO

Register Port: StreamPort

Value Info

Unit: Fps (Frames per second)

Unit: fps (frames per second)

Description

Average frame delivery rate using the selected sampling method.

> **Note:** *This feature is only available for area-scan firmware variants.*
>
> **Note:** *The statistics measures the frame rate at the level of the PCI Express interface, NOT at the level of the CoaXPress interface!*

StatisticsLineRate

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamStatistics	FloatReg	RO

Register Port: StreamPort

Value Info

Unit: Lps (Lines per second)

Unit: lps (lines per second)

Description

Average line delivery rate using the selected sampling method.

Note: *This feature is only available for line-scan firmware variants.*

Note: *The statistics measures the line rate at the level of the PCI Express interface, NOT at the level of the CoaXPress interface!*

StatisticsDataRate

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamStatistics	FloatReg	RO

Register Port: StreamPort

Value Info

Unit: MBps (Megabytes per second)

Unit: MB/s (1,000,000 bytes per second)

Short Description

Get the average PCI data delivery rate using the selected sampling method.

StatisticsStartSampling

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamStatistics	Command	RW

Short Description

Start sampling the stream data. Applies only when StatisticsSamplingSelector = Custom.

StatisticsStopSampling

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / StreamStatistics	Command	RW

Short Description

Stop sampling the stream data. Applies only when StatisticsSamplingSelector = Custom.

5.12. LinearFilter Category

LinearFilterControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LinearFilter	Enumeration	RW

Short Description

Linear Filter Control.

Enumeration Values

- `Disable`: Disable.
- `Enable`: Enable.

LinearFilterCoefficientA

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LinearFilter	Integer	RW

Value Info

Minimum value: 0

Maximum value: 512

Short Description

Linear filter coefficient A.

LinearFilterCoefficientB

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LinearFilter	Integer	RW

Value Info

Minimum value: 0

Maximum value: 512

Short Description

Linear filter coefficient B.

LinearFilterCoefficientC

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LinearFilter	Integer	RW

Value Info

Minimum value: 0

Maximum value: 512

Short Description

Linear filter coefficient C.

5.13. Threshold Category

ThresholdControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / Threshold	Enumeration	RW

Short Description

Threshold Control.

Enumeration Values

- `Disable`: Disable.
- `Enable`: Enable.

ThresholdLevel

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / Threshold	Integer	RW

Value Info

Minimum value: 0

Maximum value: 255

Short Description

Threshold level.

5.14. LaserLineExtractor Category

Scan3dExtractionMethod

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LaserLineExtractor	Enumeration	RW

Short Description

Scan3d Extraction Method.

Enumeration Values

- `Disable`: Disable extraction.
- `MaxDetection_8`: Maximum detection, 8-bit integer coordinates.
- `MaxDetection_16`: Maximum detection, 16-bit integer coordinates.
- `PeakDetection_11_5`: Peak detection, UQ11.5 fixed-point coordinates (fx11.16).
- `PeakDetection_8_8`: Peak detection, UQ8.8 fixed-point coordinates (fx8.16).
- `CenterOfGravity_11_5`: Center of gravity, UQ11.5 fixed-point coordinates (fx11.16).
- `CenterOfGravity_8_8`: Center of gravity, UQ8.8 fixed-point coordinates (fx8.16).

Scan3dOutputMode

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / LaserLineExtractor	Enumeration	RW

Short Description

Scan3d Output Mode.

Enumeration Values

- `UncalibratedC`: Uncalibrated 2.5D Depth map.

5.15. Bayer Category

BayerMethod

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / Bayer	Enumeration	RW

Short Description

Bayer Decoder method.

Enumeration Values

- `Disable`: Disable.
- `Legacy`: Legacy.
- `Advanced`: Advanced.

5.16. FlatFieldCorrection Category

FfcCoefficientPartitionBase

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / FlatFieldCorrection	Integer	Imposed: RO

Short Description

Base address of the flat field correction coefficient partition.

FfcCoefficientPartitionSize

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / FlatFieldCorrection	IntReg	RO

Register Port: StreamPort

Short Description

Flat field correction coefficient partition size in bytes.

FfcControl

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / FlatFieldCorrection	Enumeration	RW

Short Description

Ffc Control.

Enumeration Values

- `Disable`: Disable.
- `Enable`: Enable.

FfcBypass

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / FlatFieldCorrection	Enumeration	RW

Short Description

Ffc Bypass.

Enumeration Values

- `Disable`: Disable.
- `Enable`: Enable.

FfcCoefficientsValid

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / FlatFieldCorrection	Boolean	Imposed: RO

Short Description

Flat field correction coefficients are valid.

5.17. EventControl Category

EventSelector

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Enumeration	RW

Short Description

Select an event.

Selected Features

- "EventNotification" on the next page
- "EventNotificationContext1" on the next page
- "EventNotificationContext2" on page 239
- "EventNotificationContext3" on page 242
- "EventCount" on page 245
- "EventCountReset" on page 245

Enumeration Values

- `StartOfCameraReadout`: Starts acquiring data of a new image frame (area-scan only).
- `EndOfCameraReadout`: Stops acquiring data of an image frame (area-scan only).
- `StartOfScan`: Starts acquiring data of a new image scan (line-scan only).

- `EndOfScan`: Stops acquiring data of an image scan (line-scan only).
- `RejectedFrame`: Dropped image frame data (area-scan only).
- `RejectedScan`: Dropped image scan data (line-scan only).

EventNotification

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Boolean	RW

Description

Activate or deactivate the notification to the host application of the occurrence of the selected event.

Default value: `True`.

EventNotificationContext1

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Enumeration	RW

Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_1 (context information value is latched when the event occurs).

Default value: `EventSpecific`.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.

- `PendingCicTriggerCount`: Number of currently pending CIC triggers.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.

- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `CameraTriggerRisingEdgeEventCount`: Number of CameraTriggerRisingEdge events.
- `CameraTriggerFallingEdgeEventCount`: Number of CameraTriggerFallingEdge events.
- `StrobeRisingEdgeEventCount`: Number of StrobeRisingEdge events.

- `StrobeFallingEdgeEventCount`: Number of StrobeFallingEdge events.
- `AllowNextCycleEventCount`: Number of AllowNextCycle events.
- `DiscardedCicTriggerEventCount`: Number of DiscardedCicTrigger events.
- `PendingCicTriggerEventCount`: Number of PendingCicTrigger events.
- `CxpTriggerAckEventCount`: Number of CxpTriggerAck events.
- `CxpTriggerResendEventCount`: Number of CxpTriggerResend events.
- `TriggerEventCount`: Number of Trigger events.
- `StartOfCameraReadoutEventCount`: Number of StartOfCameraReadout events.
- `EndOfCameraReadoutEventCount`: Number of EndOfCameraReadout events.
- `StartOfScanEventCount`: Number of StartOfScan events.
- `EndOfScanEventCount`: Number of EndOfScan events.
- `RejectedFrameEventCount`: Number of RejectedFrame events.
- `RejectedScanEventCount`: Number of RejectedScan events.

EventNotificationContext2

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_2.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `PendingCicTriggerCount`: Number of currently pending CIC triggers.
- `LIN1EventCount`: Number of LIN1 events.

- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.
- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.

- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.
- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `CameraTriggerRisingEdgeEventCount`: Number of CameraTriggerRisingEdge events.
- `CameraTriggerFallingEdgeEventCount`: Number of CameraTriggerFallingEdge events.
- `StrobeRisingEdgeEventCount`: Number of StrobeRisingEdge events.
- `StrobeFallingEdgeEventCount`: Number of StrobeFallingEdge events.
- `AllowNextCycleEventCount`: Number of AllowNextCycle events.

- `DiscardedCicTriggerEventCount`: Number of DiscardedCicTrigger events.
- `PendingCicTriggerEventCount`: Number of PendingCicTrigger events.
- `CxpTriggerAckEventCount`: Number of CxpTriggerAck events.
- `CxpTriggerResendEventCount`: Number of CxpTriggerResend events.
- `TriggerEventCount`: Number of Trigger events.
- `StartOfCameraReadoutEventCount`: Number of StartOfCameraReadout events.
- `EndOfCameraReadoutEventCount`: Number of EndOfCameraReadout events.
- `StartOfScanEventCount`: Number of StartOfScan events.
- `EndOfScanEventCount`: Number of EndOfScan events.
- `RejectedFrameEventCount`: Number of RejectedFrame events.
- `RejectedScanEventCount`: Number of RejectedScan events.

EventNotificationContext3

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Enumeration	RW

Short Description

Select context information reported in EVENT_DATA_CUSTOM_CONTEXT_3.

Enumeration Values

- `EventSpecific`: Event-specific context information.
- `LineStatusAll`: Value of LineStatusAll.
- `QDC1Position`: Position of Quadrature Decoder Tool 1.
- `QDC2Position`: Position of Quadrature Decoder Tool 2.
- `QDC3Position`: Position of Quadrature Decoder Tool 3.
- `QDC4Position`: Position of Quadrature Decoder Tool 4.
- `PendingCicTriggerCount`: Number of currently pending CIC triggers.
- `LIN1EventCount`: Number of LIN1 events.
- `LIN2EventCount`: Number of LIN2 events.
- `LIN3EventCount`: Number of LIN3 events.

- `LIN4EventCount`: Number of LIN4 events.
- `LIN5EventCount`: Number of LIN5 events.
- `LIN6EventCount`: Number of LIN6 events.
- `LIN7EventCount`: Number of LIN7 events.
- `LIN8EventCount`: Number of LIN8 events.
- `QDC1EventCount`: Number of QDC1 events.
- `QDC1DirEventCount`: Number of QDC1Dir events.
- `QDC2EventCount`: Number of QDC2 events.
- `QDC2DirEventCount`: Number of QDC2Dir events.
- `QDC3EventCount`: Number of QDC3 events.
- `QDC3DirEventCount`: Number of QDC3Dir events.
- `QDC4EventCount`: Number of QDC4 events.
- `QDC4DirEventCount`: Number of QDC4Dir events.
- `DIV1EventCount`: Number of DIV1 events.
- `DIV2EventCount`: Number of DIV2 events.
- `DIV3EventCount`: Number of DIV3 events.
- `DIV4EventCount`: Number of DIV4 events.
- `MDV1EventCount`: Number of MDV1 events.
- `MDV2EventCount`: Number of MDV2 events.
- `MDV3EventCount`: Number of MDV3 events.
- `MDV4EventCount`: Number of MDV4 events.
- `DEL11EventCount`: Number of DEL11 events.
- `DEL12EventCount`: Number of DEL12 events.
- `DEL21EventCount`: Number of DEL21 events.
- `DEL22EventCount`: Number of DEL22 events.
- `DEL31EventCount`: Number of DEL31 events.
- `DEL32EventCount`: Number of DEL32 events.
- `DEL41EventCount`: Number of DEL41 events.
- `DEL42EventCount`: Number of DEL42 events.
- `UserEvent1EventCount`: Number of UserEvent1 events.
- `UserEvent2EventCount`: Number of UserEvent2 events.
- `UserEvent3EventCount`: Number of UserEvent3 events.
- `UserEvent4EventCount`: Number of UserEvent4 events.

- `EIN1EventCount`: Number of EIN1 events.
- `EIN2EventCount`: Number of EIN2 events.
- `CrcErrorCxpAEventCount`: Number of CrcErrorCxpA events.
- `CrcErrorCxpBEventCount`: Number of CrcErrorCxpB events.
- `CrcErrorCxpCEventCount`: Number of CrcErrorCxpC events.
- `CrcErrorCxpDEventCount`: Number of CrcErrorCxpD events.
- `CrcErrorCxpEEventCount`: Number of CrcErrorCxpE events.
- `CrcErrorCxpFEventCount`: Number of CrcErrorCxpF events.
- `CrcErrorCxpGEventCount`: Number of CrcErrorCxpG events.
- `CrcErrorCxpHEventCount`: Number of CrcErrorCxpH events.
- `ConnectionDetectedCxpAEventCount`: Number of ConnectionDetectedCxpA events.
- `ConnectionDetectedCxpBEventCount`: Number of ConnectionDetectedCxpB events.
- `ConnectionDetectedCxpCEventCount`: Number of ConnectionDetectedCxpC events.
- `ConnectionDetectedCxpDEventCount`: Number of ConnectionDetectedCxpD events.
- `ConnectionDetectedCxpEEventCount`: Number of ConnectionDetectedCxpE events.
- `ConnectionDetectedCxpFEventCount`: Number of ConnectionDetectedCxpF events.
- `ConnectionDetectedCxpGEventCount`: Number of ConnectionDetectedCxpG events.
- `ConnectionDetectedCxpHEventCount`: Number of ConnectionDetectedCxpH events.
- `ConnectionUndetectedCxpAEventCount`: Number of ConnectionUndetectedCxpA events.
- `ConnectionUndetectedCxpBEventCount`: Number of ConnectionUndetectedCxpB events.
- `ConnectionUndetectedCxpCEventCount`: Number of ConnectionUndetectedCxpC events.
- `ConnectionUndetectedCxpDEventCount`: Number of ConnectionUndetectedCxpD events.
- `ConnectionUndetectedCxpEEventCount`: Number of ConnectionUndetectedCxpE events.
- `ConnectionUndetectedCxpFEventCount`: Number of ConnectionUndetectedCxpF events.
- `ConnectionUndetectedCxpGEventCount`: Number of ConnectionUndetectedCxpG events.
- `ConnectionUndetectedCxpHEventCount`: Number of ConnectionUndetectedCxpH events.
- `CameraTriggerRisingEdgeEventCount`: Number of CameraTriggerRisingEdge events.
- `CameraTriggerFallingEdgeEventCount`: Number of CameraTriggerFallingEdge events.
- `StrobeRisingEdgeEventCount`: Number of StrobeRisingEdge events.
- `StrobeFallingEdgeEventCount`: Number of StrobeFallingEdge events.
- `AllowNextCycleEventCount`: Number of AllowNextCycle events.
- `DiscardedCicTriggerEventCount`: Number of DiscardedCicTrigger events.
- `PendingCicTriggerEventCount`: Number of PendingCicTrigger events.

- `CxpTriggerAckEventCount`: Number of CxpTriggerAck events.
- `CxpTriggerResendEventCount`: Number of CxpTriggerResend events.
- `TriggerEventCount`: Number of Trigger events.
- `StartOfCameraReadoutEventCount`: Number of StartOfCameraReadout events.
- `EndOfCameraReadoutEventCount`: Number of EndOfCameraReadout events.
- `StartOfScanEventCount`: Number of StartOfScan events.
- `EndOfScanEventCount`: Number of EndOfScan events.
- `RejectedFrameEventCount`: Number of RejectedFrame events.
- `RejectedScanEventCount`: Number of RejectedScan events.

EventCount

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	IntReg	RO

Register Port: StreamPort

Short Description

Number of occurrences of the selected event (32-bit counter).

EventCountReset

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Command	Imposed: WO

Short Description

Reset the selected EventCount.

EventNotificationAll

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Boolean	Imposed: WO

Short Description

Activate or deactivate the notification of all events.

EventCountResetAll

Feature Info

Module	Category Path	Type	Access
Data Stream	Root / EventControl	Command	Imposed: WO

Short Description

Reset all EventCount.