

# Coaxlink

Coaxlink 11.2.1



**PCI**   
**EXPRESS**<sup>TM</sup>

 **PC/104**  
Embedded PC Modules

**CoaxPress**

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# 1. About This Document

1.1. Document Scope .....12  
1.2. Document Changes .....13

## 1.1. Document Scope

This reference document lists all the GenICam features publicly exposed by the Coaxlink driver version 11.2.1

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 11.1

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- Data stream module:
  - New "Scan3dSecondLineROIOffsetY" on page 447 parameter.

### Coaxlink 10.6

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- Device module:
  - New values for "EventSelector" on page 320: **StreamPacketSizeError**, **StreamPacketFifoOverflow**, **CameraTriggerOverrun**, **DidNotReceiveTriggerAck**, **TriggerPacketRetryError**, **InputStreamFifoHalfFull**, **InputStreamFifoFull**, **ImageHeaderError**, **MigAxiWriteError**, **MigAxiReadError**, **PacketWithUnexpectedTag**, **FillLevelAboveIISosRejected**, **FillLevelAboveAfEarlyEos**, **ExternalTriggerReqsTooClose**.
  - Removed values for "EventNotificationContext1" on page 323, "EventNotificationContext2" on page 326, "EventNotificationContext3" on page 329: **ConnectionDetectedCxp<A:H>EventCount**, **ConnectionUndetectedCxp<A:H>EventCount**.
  - New "EventNotificationContext1" on page 459 values for "EventNotificationContext1" on page 459: **StreamPacketSizeErrorEventCount**, **StreamPacketFifoOverflowEventCount**, **CameraTriggerOverrunEventCount**, **DidNotReceiveTriggerAckEventCount**, **TriggerPacketRetryErrorEventCount**, **InputStreamFifoHalfFullEventCount**, **InputStreamFifoFullEventCount**, **ImageHeaderErrorEventCount**, **MigAxiWriteErrorEventCount**, **MigAxiReadErrorEventCount**, **PacketWithUnexpectedTagEventCount**, **FillLevelAboveIISosRejectedEventCount**, **FillLevelAboveAfEarlyEosEventCount**, **ExternalTriggerReqsTooCloseEventCount**.
- Data stream module:
  - New "StripeOffset" on page 417 parameter.
  - New "BlockHeight" on page 416 parameter.
  - Removed values for "EventNotificationContext1" on page 459, "EventNotificationContext2" on page 462, "EventNotificationContext3" on page 465: **ConnectionDetectedCxp<A:H>EventCount**, **ConnectionUndetectedCxp<A:H>EventCount**.
  - Added values for "StripeArrangement" on page 418: **Geometry\_1X\_2YE** and **Geometry\_1X\_2YM**.

# 2. System Module

*Categorized features list of System module version 11.2.0.21*

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# SystemInformation

## Feature Info

Module	Category Path	Type	Access
System	Root	Category	RW

## Category Members

**See also:** "SystemInformation Category " on page 18



# InterfaceEnumeration

## Feature Info

Module	Category Path	Type	Access
System	Root	Category	RW

## Category Members

**See also:** "InterfaceEnumeration Category " on page 27

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# 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

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# 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 11.2.0.21*

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# InterfaceInformation

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "InterfaceInformation Category " on page 48

# DeviceEnumeration

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "DeviceEnumeration Category " on page 58

# CoaXPress

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "CoaXPress Category " on page 65

# CoaXPressAdvanced

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "CoaXPressAdvanced Category " on page 96

# DigitalIOControl

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "DigitalIOControl Category " on page 110

# IOExtensionModule

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "IOExtensionModule Category " on page 126

# UserOutputRegister

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "UserOutputRegister Category " on page 143

# IOToolbox

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "IOToolbox Category " on page 154



# PCIExpress

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "PCIExpress Category " on page 193

# InterfaceControl

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "InterfaceControl Category " on page 204

# InterfaceDetails

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "InterfaceDetails Category " on page 210

# EventControl

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "EventControl Category " on page 221

# OemSafetyKey

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "OemSafetyKey Category " on page 239

# CustomLogic

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "CustomLogic Category " on page 245

# OnboardMemory

## Feature Info

Module	Category Path	Type	Access
Interface	Root	Category	RW

## Category Members

**See also:** "OnboardMemory Category " on page 248

## 3.2. InterfaceInformation Category

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# 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

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DeviceAccessStatus .....	64

# 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" on the next page
- "DeviceVendorName" on page 62
- "DeviceModelName" on page 63
- "DeviceAccessStatus" on page 64

# 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

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# 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" on the next page
- "CxpPoCxpTurnOff" on page 68
- "CxpPoCxpTripReset" on page 69
- "CxpPoCxpConfigurationStatus" on page 70
- "CxpPoCxpStatus" on page 71
- "CxpPoCxpCurrent" on page 72
- "CxpPoCxpVoltage" on page 73

## 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 78
- ["CxpUpConnectionSpeedConfig"](#) on page 105
- ["CxpDeviceConnectionID"](#) on page 79
- ["CxpHostConnectionTestMode"](#) on page 89
- ["CxpHostConnectionTestErrorCount"](#) on page 90
- ["CxpHostConnectionTestPacketCount"](#) on page 91
- ["CxpHostConnectionTestInjectError"](#) on page 92

## 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

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# 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).

# CxpControlParameterSelector

## Feature Info

Module	Category Path	Type	Access
Interface	Root → CoaXPressAdvanced	Enumeration	RW

## Short Description

Selects a CoaXPress control parameter.

## Selected Features

- ["CxpControlParameter" on the next page](#)

## Enumeration Values

- **TransactionTimeout**: Control transaction timeout (millisecond) (default: 300).
- **TransactionMaxResendCount**: Control transaction maximum resend counter (default: 10).
- **ControlPacketSizeMax**: Control packet size max (bytes) (default: 128).

# CxpControlParameter

## Feature Info

Module	Category Path	Type	Access
Interface	Root → CoaXPressAdvanced	Integer	RW

## Value Info

**Minimum value: 0**

**Maximum value: 2147483647**

## Short Description

Value of the selected CoaXPress control parameter.

## 3.6. DigitalIOControl Category

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# 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 page 114](#)
- ["LineMode" on page 115](#)
- ["LineInverter" on page 116](#)
- ["LineFilterStrength" on page 117](#)
- ["LineFilterDelay" on page 118](#)
- ["LineStatus" on page 119](#)
- ["LineSource" on page 122](#)

## 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.
- **MIO1**: Input/output 1 of I/O extension module.
- **MIO2**: Input/output 2 of I/O extension module.
- **MIO3**: Input/output 3 of I/O extension module.
- **MIO4**: Input/output 4 of I/O extension module.
- **MIO5**: Input/output 5 of I/O extension module.
- **MIO6**: Input/output 6 of I/O extension module.
- **MIO7**: Input/output 7 of I/O extension module.
- **MIO8**: Input/output 8 of I/O extension module.
- **MIO9**: Input/output 9 of I/O extension module.
- **MIO10**: Input/output 10 of I/O extension module.
- **MIO11**: Input/output 11 of I/O extension module.
- **MIO12**: Input/output 12 of I/O extension module.
- **MIO13**: Input/output 13 of I/O extension module.
- **MIO14**: Input/output 14 of I/O extension module.
- **MIO15**: Input/output 15 of I/O extension module.
- **MIO16**: Input/output 16 of I/O extension module.
- **MIO17**: Input/output 17 of I/O extension module.
- **MIO18**: Input/output 18 of I/O extension module.
- **MIO19**: Input/output 19 of I/O extension module.
- **MIO20**: Input/output 20 of I/O extension module.
- **MIO21**: Input/output 21 of I/O extension module.
- **MIO22**: Input/output 22 of I/O extension module.
- **MIO23**: Input/output 23 of I/O extension module.



- **MIO24:** Input/output 24 of I/O extension module.
- **MIO25:** Input/output 25 of I/O extension module.
- **MIO26:** Input/output 26 of I/O extension module.
- **MIO27:** Input/output 27 of I/O extension module.
- **MIO28:** Input/output 28 of I/O extension module.
- **MIO29:** Input/output 29 of I/O extension module.
- **MIO30:** Input/output 30 of I/O extension module.
- **MIO31:** Input/output 31 of I/O extension module.
- **MIO32:** Input/output 32 of I/O extension module.
- **MIO33:** Input/output 33 of I/O extension module.
- **MIO34:** Input/output 34 of I/O extension module.
- **MIO35:** Input/output 35 of I/O extension module.
- **MIO36:** Input/output 36 of I/O extension module.
- **MIO37:** Input/output 37 of I/O extension module.
- **MIO38:** Input/output 38 of I/O extension module.
- **MIO39:** Input/output 39 of I/O extension module.
- **MIO40:** Input/output 40 of I/O extension module.

# 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 differential I/O line is RS-422 compliant.
- **TTL**: The singled-ended I/O line is TTL compliant.

# 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.

# 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 node 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.



- Bit 19: TTLIO22 GPIO line.
- Bit 20 ... Bit 59 : MIO1 ... MIO40 GPIO lines.

# 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.



- **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.

## 3.7. IOExtensionModule Category

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# IOExtensionModuleConfiguration

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Enumeration	Imposed: WO

## Description

This feature selects the I/O extension module configuration action.



**NOTE** Committing a new configuration is only possible when no conflict is detected in the current configuration (i.e. when `IOExtensionModuleErrorCount = 0`)

## Enumeration Values

- **Begin:** Enter configuration mode.
- **Commit:** Commit current configuration.
- **Abort:** Cancel current configuration.

# IOExtensionModuleLineSelector

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Enumeration	RW

## Short Description

Selects an extension module I/O line to configure.

## Selected Features

- ["IOExtensionModuleLineFormat" on page 130](#)
- ["IOExtensionModuleLineMode" on page 131](#)
- ["IOExtensionModuleLineStatus" on page 132](#)

## Enumeration Values

- **MIO1**: Input/output 1 of I/O extension module.
- **MIO2**: Input/output 2 of I/O extension module.
- **MIO3**: Input/output 3 of I/O extension module.
- **MIO4**: Input/output 4 of I/O extension module.
- **MIO5**: Input/output 5 of I/O extension module.
- **MIO6**: Input/output 6 of I/O extension module.
- **MIO7**: Input/output 7 of I/O extension module.
- **MIO8**: Input/output 8 of I/O extension module.
- **MIO9**: Input/output 9 of I/O extension module.
- **MIO10**: Input/output 10 of I/O extension module.
- **MIO11**: Input/output 11 of I/O extension module.
- **MIO12**: Input/output 12 of I/O extension module.
- **MIO13**: Input/output 13 of I/O extension module.
- **MIO14**: Input/output 14 of I/O extension module.
- **MIO15**: Input/output 15 of I/O extension module.



- **MIO16:** Input/output 16 of I/O extension module.
- **MIO17:** Input/output 17 of I/O extension module.
- **MIO18:** Input/output 18 of I/O extension module.
- **MIO19:** Input/output 19 of I/O extension module.
- **MIO20:** Input/output 20 of I/O extension module.
- **MIO21:** Input/output 21 of I/O extension module.
- **MIO22:** Input/output 22 of I/O extension module.
- **MIO23:** Input/output 23 of I/O extension module.
- **MIO24:** Input/output 24 of I/O extension module.
- **MIO25:** Input/output 25 of I/O extension module.
- **MIO26:** Input/output 26 of I/O extension module.
- **MIO27:** Input/output 27 of I/O extension module.
- **MIO28:** Input/output 28 of I/O extension module.
- **MIO29:** Input/output 29 of I/O extension module.
- **MIO30:** Input/output 30 of I/O extension module.
- **MIO31:** Input/output 31 of I/O extension module.
- **MIO32:** Input/output 32 of I/O extension module.
- **MIO33:** Input/output 33 of I/O extension module.
- **MIO34:** Input/output 34 of I/O extension module.
- **MIO35:** Input/output 35 of I/O extension module.
- **MIO36:** Input/output 36 of I/O extension module.
- **MIO37:** Input/output 37 of I/O extension module.
- **MIO38:** Input/output 38 of I/O extension module.
- **MIO39:** Input/output 39 of I/O extension module.
- **MIO40:** Input/output 40 of I/O extension module.

# IOExtensionModuleLineFormat

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Enumeration	RW

## Short Description

Electrical style of the selected I/O line.

## Enumeration Values

- **DIFF**: RS-422 compliant.
- **TTL**: TTL compliant.

# IOExtensionModuleLineMode

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Enumeration	RW

## Short Description

Direction of the selected I/O line.

## Enumeration Values

- **Input:** Input line.
- **Output:** Output line.

# IOExtensionModuleLineStatus

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Boolean	RW

## Short Description

Default status of the selected output line at power up (or after leaving the configuration mode).

# IOExtensionModuleLineToRepair

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Enumeration	RW

## Description

This feature helps the user to solve a I/O module configuration conflict by indicating the first I/O line requiring attention.



**NOTE** This feature is not available unless configuration conflicts are detected in the current configuration (i.e. when `IOExtensionModuleErrorCount > 0`)

## Enumeration Values

- **MIO1**: Input/output 1 of I/O extension module.
- **MIO2**: Input/output 2 of I/O extension module.
- **MIO3**: Input/output 3 of I/O extension module.
- **MIO4**: Input/output 4 of I/O extension module.
- **MIO5**: Input/output 5 of I/O extension module.
- **MIO6**: Input/output 6 of I/O extension module.
- **MIO7**: Input/output 7 of I/O extension module.
- **MIO8**: Input/output 8 of I/O extension module.
- **MIO9**: Input/output 9 of I/O extension module.
- **MIO10**: Input/output 10 of I/O extension module.
- **MIO11**: Input/output 11 of I/O extension module.
- **MIO12**: Input/output 12 of I/O extension module.
- **MIO13**: Input/output 13 of I/O extension module.
- **MIO14**: Input/output 14 of I/O extension module.
- **MIO15**: Input/output 15 of I/O extension module.
- **MIO16**: Input/output 16 of I/O extension module.
- **MIO17**: Input/output 17 of I/O extension module.

- **MIO18:** Input/output 18 of I/O extension module.
- **MIO19:** Input/output 19 of I/O extension module.
- **MIO20:** Input/output 20 of I/O extension module.
- **MIO21:** Input/output 21 of I/O extension module.
- **MIO22:** Input/output 22 of I/O extension module.
- **MIO23:** Input/output 23 of I/O extension module.
- **MIO24:** Input/output 24 of I/O extension module.
- **MIO25:** Input/output 25 of I/O extension module.
- **MIO26:** Input/output 26 of I/O extension module.
- **MIO27:** Input/output 27 of I/O extension module.
- **MIO28:** Input/output 28 of I/O extension module.
- **MIO29:** Input/output 29 of I/O extension module.
- **MIO30:** Input/output 30 of I/O extension module.
- **MIO31:** Input/output 31 of I/O extension module.
- **MIO32:** Input/output 32 of I/O extension module.
- **MIO33:** Input/output 33 of I/O extension module.
- **MIO34:** Input/output 34 of I/O extension module.
- **MIO35:** Input/output 35 of I/O extension module.
- **MIO36:** Input/output 36 of I/O extension module.
- **MIO37:** Input/output 37 of I/O extension module.
- **MIO38:** Input/output 38 of I/O extension module.
- **MIO39:** Input/output 39 of I/O extension module.
- **MIO40:** Input/output 40 of I/O extension module.

# IOExtensionModuleErrorCount

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Integer	Imposed: RO

## Short Description

Number of I/O line configuration errors.

# IOExtensionModuleInformation

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule	Category	RW

## Category Members

**See also:** "IOExtensionModuleInformation Category " on the next page



## 3.8. IOExtensionModuleInformation Category

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# IOExtensionModuleProductCode

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule → IOExtensionModuleInformation	String	Imposed: RO

## Short Description

IO Extension Module Product Code.

# IOExtensionModuleSerialNumber

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule → IOExtensionModuleInformation	String	Imposed: RO

## Short Description

IO Extension Module Serial Number.

# IOExtensionModulePartNumber

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule → IOExtensionModuleInformation	String	Imposed: RO

## Short Description

IO Extension Module Part Number.

# IOExtensionModuleRevision

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule → IOExtensionModuleInformation	IntReg	RO

**Register Port:** InterfacePort

## Short Description

IO Extension Module Revision.

# IOExtensionModuleVariant

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOExtensionModule → IOExtensionModuleInformation	IntReg	RO

**Register Port:** InterfacePort

## Short Description

IO Extension Module Variant.

## 3.9. UserOutputRegister Category

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# 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.

## 3.10. IOToolbox Category

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# LineInputToolSelector

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOToolbox	Enumeration	RW

## Short Description

Selects a Line Input Tool.

## Selected Features

- ["LineInputToolSource" on the next page](#)
- ["LineInputToolActivation" on page 159](#)

## 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.

- **MIO1:** Input/output 1 of I/O extension module.
- **MIO2:** Input/output 2 of I/O extension module.
- **MIO3:** Input/output 3 of I/O extension module.
- **MIO4:** Input/output 4 of I/O extension module.
- **MIO5:** Input/output 5 of I/O extension module.
- **MIO6:** Input/output 6 of I/O extension module.
- **MIO7:** Input/output 7 of I/O extension module.
- **MIO8:** Input/output 8 of I/O extension module.
- **MIO9:** Input/output 9 of I/O extension module.
- **MIO10:** Input/output 10 of I/O extension module.
- **MIO11:** Input/output 11 of I/O extension module.
- **MIO12:** Input/output 12 of I/O extension module.
- **MIO13:** Input/output 13 of I/O extension module.
- **MIO14:** Input/output 14 of I/O extension module.
- **MIO15:** Input/output 15 of I/O extension module.
- **MIO16:** Input/output 16 of I/O extension module.
- **MIO17:** Input/output 17 of I/O extension module.
- **MIO18:** Input/output 18 of I/O extension module.
- **MIO19:** Input/output 19 of I/O extension module.
- **MIO20:** Input/output 20 of I/O extension module.
- **MIO21:** Input/output 21 of I/O extension module.
- **MIO22:** Input/output 22 of I/O extension module.
- **MIO23:** Input/output 23 of I/O extension module.
- **MIO24:** Input/output 24 of I/O extension module.
- **MIO25:** Input/output 25 of I/O extension module.
- **MIO26:** Input/output 26 of I/O extension module.
- **MIO27:** Input/output 27 of I/O extension module.
- **MIO28:** Input/output 28 of I/O extension module.
- **MIO29:** Input/output 29 of I/O extension module.
- **MIO30:** Input/output 30 of I/O extension module.
- **MIO31:** Input/output 31 of I/O extension module.
- **MIO32:** Input/output 32 of I/O extension module.
- **MIO33:** Input/output 33 of I/O extension module.

- **MIO34:** Input/output 34 of I/O extension module.
- **MIO35:** Input/output 35 of I/O extension module.
- **MIO36:** Input/output 36 of I/O extension module.
- **MIO37:** Input/output 37 of I/O extension module.
- **MIO38:** Input/output 38 of I/O extension module.
- **MIO39:** Input/output 39 of I/O extension module.
- **MIO40:** Input/output 40 of I/O extension module.

# 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**: Activate the output on the rising edge only.
- **FallingEdge**: Activate the output on the falling edge only.
- **AllEdges**: Activate the output on all edges.

# MultiplierDividerToolSelector

## Feature Info

Module	Category Path	Type	Access
Interface	Root → IOToolbox	Enumeration	RW

## Short Description

Selects a Multiplier/Divider Tool.

## Selected Features

- ["MultiplierDividerToolSource"](#) on the next page
- ["MultiplierDividerToolOutputControl"](#) on page 163
- ["MultiplierDividerToolMultiplicationFactor"](#) on page 164
- ["MultiplierDividerToolDivisionFactor"](#) on page 165
- ["MultiplierDividerToolEffectiveMultiplicationFactor"](#) on page 166
- ["MultiplierDividerToolEffectiveDivisionFactor"](#) on page 167

## 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 page 170](#)
- ["QuadratureDecoderToolForwardDirection" on page 171](#)
- ["QuadratureDecoderToolOutputMode" on page 172](#)
- ["QuadratureDecoderToolPosition" on page 173](#)
- ["QuadratureDecoderToolDirection" on page 174](#)
- ["QuadratureDecoderToolPositionReset" on page 175](#)

## 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.
- **MIO1\_MIO3**: Inputs 1 and 3 of I/O extension module.
- **MIO5\_MIO7**: Inputs 5 and 7 of I/O extension module.
- **MIO9\_MIO11**: Inputs 9 and 11 of I/O extension module.
- **MIO13\_MIO15**: Inputs 13 and 15 of I/O extension module.
- **MIO17\_MIO19**: Inputs 17 and 19 of I/O extension module.
- **MIO21\_MIO23**: Inputs 21 and 23 of I/O extension module.
- **MIO25\_MIO27**: Inputs 25 and 27 of I/O extension module.
- **MIO29\_MIO31**: Inputs 29 and 31 of I/O extension module.
- **MIO33\_MIO35**: Inputs 33 and 35 of I/O extension module.
- **MIO37\_MIO39**: Inputs 37 and 39 of I/O extension module.

# 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 179](#)
- ["DividerToolDivisionFactor" on page 180](#)
- ["DividerToolInitialOffset" on page 181](#)

## 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" on the next page](#)
- ["DelayToolSource2" on page 185](#)
- ["DelayToolClockSource" on page 187](#)
- ["DelayToolDelayValue" on page 188](#)

## 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" on the next page](#)
- ["EventInputToolActivation" on page 191](#)

## 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.



## 3.11. PCIExpress Category

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# PCleMaxPayloadSizeSupported

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	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.

# PCleMaxPayloadSize

## 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.

# PCleMaxReadRequestSize

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	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).

# PCleMaxLinkSpeed

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	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.
- **PCleLinkSpeed2500MTps**: 2.5 GT/s (PCIe Gen 1).
- **PCleLinkSpeed5000MTps**: 5.0 GT/s (PCIe Gen 2).
- **PCleLinkSpeed8000MTps**: 8.0 GT/s (PCIe Gen 3).

# PCleCurrentLinkSpeed

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	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).

# PCleMaximumLinkWidth

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	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.

# PCleNegotiatedLinkWidth

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	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.



# PCleLinkSpeed2500MTpsSupported

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	Boolean	RW

## Short Description

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

# PCleLinkSpeed5000MTpsSupported

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	Boolean	RW

## Short Description

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

# PCleLinkSpeed8000MTpsSupported

## Feature Info

Module	Category Path	Type	Access
Interface	Root → PCIeExpress	Boolean	RW

## Short Description

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

## 3.12. InterfaceControl Category

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# 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" on the next page

## 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.

## 3.13. InterfaceDetails Category

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# 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.

## 3.14. EventControl Category

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# EventSelector

## Feature Info

Module	Category Path	Type	Access
Interface	Root → EventControl	Enumeration	RW

## Short Description

Select an event.

## Selected Features

- "EventNotification" on page 225
- "EventNotificationContext1" on page 226
- "EventNotificationContext2" on page 229
- "EventNotificationContext3" on page 232
- "EventCount" on page 235
- "EventCountReset" on page 236

## 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 link configuration done for Device 0.
- **Device1Ready**: CoaXPress link configuration done for Device 1.
- **Device2Ready**: CoaXPress link configuration done for Device 2.
- **Device3Ready**: CoaXPress link configuration done for Device 3.
- **Device4Ready**: CoaXPress link configuration done for Device 4.
- **Device5Ready**: CoaXPress link configuration done for Device 5.
- **Device6Ready**: CoaXPress link configuration done for Device 6.
- **Device7Ready**: CoaXPress link configuration 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.

## 3.15. OemSafetyKey Category

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# 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.**

## 3.16. CustomLogic Category

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# 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" on the next page

# 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.

## 3.17. OnboardMemory Category

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# 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

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## 4.1. Root Category

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# DeviceInformation

## Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

## Category Members

**See also:** "DeviceInformation Category " on page 259

# StreamEnumeration

## Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

## Category Members

**See also:** "StreamEnumeration Category " on page 265

# 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

**See also:** "CameraAndIlluminationControl Category " on page 280

# CoaXPress

## Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

## Category Members

**See also:** "CoaXPress Category " on page 268



# EventControl

## Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

## Category Members

**See also:** "EventControl Category " on page 319

# Errors

## Feature Info

Module	Category Path	Type	Access
Device	Root	Category	RW

## Category Members

**See also:** "Errors Category " on page 336

## 4.2. DeviceInformation Category

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# 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

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# 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" on the next page

# 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

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# 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 269](#)

## 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 **Toggle**, 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.

# CxpPortAlignment

## Feature Info

Module	Category Path	Type	Access
Device	Root → CoaXPress	Integer	RW

## Value Info

**Minimum value: 1**

**Maximum value: 8**

**Unit:** B (byte)

## Short Description

When accessing the GenTL remote port, the driver adapts the GenTL remote port address (and size) to meet the alignment constraint. By default the alignment is set to 4 bytes; in this case if an application reads 2 bytes at 0x6009, the driver accesses 3 bytes at 0x6008 (or 4 bytes at 0x6008 if the camera refuses the 3-byte read) and only returns the requested bytes. If CxpPortAlignment is set to 1, the driver does not adapt any GenTL remote port address (or size) when accessing the port.

## 4.5. CameraAndIlluminationControl Category

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# 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

**See also:** "CameraModel Category " on page 287

# 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

**See also:** "CycleTiming Category " on page 295

# 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

**See also:** "CycleControl Category " on page 299

# 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

**See also:** "SequenceControl Category " on page 308

# 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

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# 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 a C2C-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.

When 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:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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.



**WARNING** 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:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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.



**WARNING** 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:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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.



**WARNING** 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:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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.



**WARNING** A too small value may cause missed triggers.

## 4.7. CycleTiming Category

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# ExposureTime

## Feature Info

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

## Value Info

**Dimension:** Time

**Unit:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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:**  $\mu\text{s}$

**Increment:** 0.008  $\mu\text{s}$  (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

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# 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

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# 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

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# EventSelector

## Feature Info

Module	Category Path	Type	Access
Device	Root → EventControl	Enumeration	RW

## Short Description

Select an event.

## Selected Features

- "EventNotification" on page 322
- "EventNotificationContext1" on page 323
- "EventNotificationContext2" on page 326
- "EventNotificationContext3" on page 329
- "EventCount" on page 332
- "EventCountReset" on page 333

## 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.
- **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.
- **FillLevelAboveIosRejected:** Start of scan skipped (caused by internal exception: image buffer almost full).
- **FillLevelAboveAfeEarlyEos:** End of scan (caused by internal exception: image buffer almost full).
- **ExternalTriggerReqsTooClose:** External trigger requests too close together.

# 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.

- **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.
- **StreamPacketSizeErrorEventCount:** Number of StreamPacketSizeError events.
- **StreamPacketFifoOverflowEventCount:** Number of StreamPacketFifoOverflow events.
- **CameraTriggerOverrunEventCount:** Number of CameraTriggerOverrun events.
- **DidNotReceiveTriggerAckEventCount:** Number of DidNotReceiveTriggerAck events.
- **TriggerPacketRetryErrorEventCount:** Number of TriggerPacketRetryError events.
- **InputStreamFifoHalfFullEventCount:** Number of InputStreamFifoHalfFull events.
- **InputStreamFifoFullEventCount:** Number of InputStreamFifoFull events.
- **ImageHeaderErrorEventCount:** Number of ImageHeaderError events.
- **MigAxiWriteErrorEventCount:** Number of MigAxiWriteError events.
- **MigAxiReadErrorEventCount:** Number of MigAxiReadError events.
- **PacketWithUnexpectedTagEventCount:** Number of PacketWithUnexpectedTag events.
- **FillLevelAboveIIsosRejectedEventCount:** Number of FillLevelAboveIIsosRejected events.
- **FillLevelAboveAfEarlyEosEventCount:** Number of FillLevelAboveAfEarlyEos events.
- **ExternalTriggerReqsTooCloseEventCount:** Number of ExternalTriggerReqsTooClose 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.

- **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.
- **StreamPacketSizeErrorEventCount:** Number of StreamPacketSizeError events.
- **StreamPacketFifoOverflowEventCount:** Number of StreamPacketFifoOverflow events.
- **CameraTriggerOverrunEventCount:** Number of CameraTriggerOverrun events.
- **DidNotReceiveTriggerAckEventCount:** Number of DidNotReceiveTriggerAck events.
- **TriggerPacketRetryErrorEventCount:** Number of TriggerPacketRetryError events.
- **InputStreamFifoHalfFullEventCount:** Number of InputStreamFifoHalfFull events.
- **InputStreamFifoFullEventCount:** Number of InputStreamFifoFull events.
- **ImageHeaderErrorEventCount:** Number of ImageHeaderError events.
- **MigAxiWriteErrorEventCount:** Number of MigAxiWriteError events.
- **MigAxiReadErrorEventCount:** Number of MigAxiReadError events.
- **PacketWithUnexpectedTagEventCount:** Number of PacketWithUnexpectedTag events.
- **FillLevelAboveIIsRejectedEventCount:** Number of FillLevelAboveIIsRejected events.
- **FillLevelAboveAfEarlyEosEventCount:** Number of FillLevelAboveAfEarlyEos events.
- **ExternalTriggerReqsTooCloseEventCount:** Number of ExternalTriggerReqsTooClose 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.

- **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.
- **StreamPacketSizeErrorEventCount:** Number of StreamPacketSizeError events.
- **StreamPacketFifoOverflowEventCount:** Number of StreamPacketFifoOverflow events.
- **CameraTriggerOverrunEventCount:** Number of CameraTriggerOverrun events.
- **DidNotReceiveTriggerAckEventCount:** Number of DidNotReceiveTriggerAck events.
- **TriggerPacketRetryErrorEventCount:** Number of TriggerPacketRetryError events.
- **InputStreamFifoHalfFullEventCount:** Number of InputStreamFifoHalfFull events.
- **InputStreamFifoFullEventCount:** Number of InputStreamFifoFull events.
- **ImageHeaderErrorEventCount:** Number of ImageHeaderError events.
- **MigAxiWriteErrorEventCount:** Number of MigAxiWriteError events.
- **MigAxiReadErrorEventCount:** Number of MigAxiReadError events.
- **PacketWithUnexpectedTagEventCount:** Number of PacketWithUnexpectedTag events.
- **FillLevelAboveIIsRejectedEventCount:** Number of FillLevelAboveIIsRejected events.
- **FillLevelAboveAfEarlyEosEventCount:** Number of FillLevelAboveAfEarlyEos events.
- **ExternalTriggerReqsTooCloseEventCount:** Number of ExternalTriggerReqsTooClose 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

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# ErrorSelector

## Feature Info

Module	Category Path	Type	Access
Device	Root → Errors	Enumeration	RW

## Short Description

Error Selector.

## Selected Features

- "ErrorCount" on page 339
- "ErrorCountReset" on page 340

## 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 11.2.0.21*

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## 5.1. Root Category

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# StreamInformation

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "StreamInformation Category " on page 359

# ImageFormatControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "ImageFormatControl Category " on page 362



# PixelProcessing

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "PixelProcessing Category " on page 379

# LUTControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "LUTControl Category " on page 384

# TransportLayerControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "TransportLayerControl Category " on page 393

# BufferHandlingControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "BufferHandlingControl Category " on page 395

# LineScanAcquisitionControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "LineScanAcquisitionControl Category " on page 400

# StreamControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "StreamControl Category " on page 409

# Errors

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "Errors Category " on page 424

# StreamStatistics

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "StreamStatistics Category " on page 429



# LinearFilter

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "LinearFilter Category " on page 436

# Threshold

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "Threshold Category " on page 441

# LaserLineExtractor

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "LaserLineExtractor Category " on page 444

# Bayer

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "Bayer Category " on page 448

# FlatFieldCorrection

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "FlatFieldCorrection Category " on page 450

# EventControl

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root	Category	RW

## Category Members

**See also:** "EventControl Category " on page 456

## 5.2. StreamInformation Category

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# 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

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# 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.
- **CustomJFIF**: CustomJFIF.
- **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

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# 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.

When false, the pixel component order remains unchanged.

**Default value: False.**

# ImageScaling

## Feature Info

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

## Short Description

Image scaling.

## Enumeration Values

- **Off**: No image scaling.
- **Scaling\_1\_8**: 1:8 image down-scaling.

# JpegQuality

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root → PixelProcessing	Integer	RW

## Value Info

**Minimum value: 1**

**Maximum value: 100**

## Short Description

JPEG quality.

## 5.5. LUTControl Category

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# 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 page 390

## 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" on the next page

# 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

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# 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

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# 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

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# 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

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# 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.

# BlockHeight

## Feature Info

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

## Value Info

**Minimum value: 0**

## Short Description

Block height in lines.



# StripeOffset

## Feature Info

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

## Value Info

**Minimum value: 0**

## Short Description

Stripe offset 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.
- **Geometry\_1X\_2YE**: 2 taps arranged top-down and bottom-up.
- **Geometry\_1X\_2YM**: 2 taps arranged middle-up and middle-down.

# SyncMarker

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root → StreamControl	Category	RW

## Category Members

**See also:** "SyncMarker Category " on the next page

## 5.10. SyncMarker Category

SyncMarkerBusAddress .....	421
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SyncMarkerValueIncrement .....	423

# SyncMarkerBusAddress

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root → StreamControl → SyncMarker	Integer	RW

## Short Description

When a buffer is announced (with one of DSAnnounceBuffer, DSAllocAndAnnounceBuffer, or EuresysDSAnnounceBusBuffer), if SyncMarkerBusAddress is non-zero, the driver will setup DMA operations so that a 4-byte synchronization marker (value SyncMarkerValue) is written to PCIe address SyncMarkerBusAddress as soon as the DMA transfer is complete. Note that the value of SyncMarkerBusAddress is only used when the buffer is announced, while the value of SyncMarkerValue is used (and adjusted by SyncMarkerValueIncrement) each time the buffer is queued.

# SyncMarkerValue

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root → StreamControl → SyncMarker	Integer	RW

## Value Info

**Minimum value: 0**

**Maximum value: 4294967295**

## Short Description

32-bit value of sync marker that will be written upon DMA transfer completion.

# SyncMarkerValueIncrement

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root → StreamControl → SyncMarker	Integer	RW

## Value Info

**Minimum value: 0**

**Maximum value: 4294967295**

## Short Description

32-bit value that will be added to SyncMarkerValue each time a buffer is queued.

## 5.11. Errors Category

ErrorSelector .....	425
ErrorCount .....	427
ErrorCountReset .....	428



# ErrorSelector

## Feature Info

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

## Short Description

Error Selector.

## Selected Features

- "ErrorCount" on page 427
- "ErrorCountReset" on page 428

## 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.

## 5.12. StreamStatistics Category

StatisticsSamplingSelector .....	430
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StatisticsStartSampling .....	434
StatisticsStopSampling .....	435

# 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 page 432
- "StatisticsDataRate" on page 433

## 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 `DSSstartAcquisition()` function call until now, if the acquisition is still active otherwise until the last `DSSstopAcquisition()` 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)

## 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)

## 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)

## 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.

## 5.13. LinearFilter Category

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LinearFilterCoefficientA .....	438
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# 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.



## 5.14. Threshold Category

ThresholdControl .....	442
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# 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.

## 5.15. LaserLineExtractor Category

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# 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.

# Scan3dSecondLineROIOffsetY

## Feature Info

Module	Category Path	Type	Access
Data Stream	Root → LaserLineExtractor	Integer	RW

## Value Info

**Minimum value: 0**

**Maximum value: 65535**

## Short Description

Scan3d Second Line ROI Offset Y.

## 5.16. Bayer Category

BayerMethod ..... 449



# 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.

## 5.17. FlatFieldCorrection Category

FfcCoefficientPartitionBase .....	451
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# 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.

## 5.18. EventControl Category

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# 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 page 459
- "EventNotificationContext2" on page 462
- "EventNotificationContext3" on page 465
- "EventCount" on page 468
- "EventCountReset" on page 469

## 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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.
- **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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.

- **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:** Low 32-bit part of LineStatusAll.
- **LineStatusAllHi:** High 32-bit part 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.

- **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.